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About the Expert Group on Non-sampling Errors and the Study

An Expert Group under the chairmanship of Prof. Nikhilesh Bhattacharya was constituted by the Ministry of Statistics and Programme Implementation, Government of India, to study some of the aspects of non-sampling errors in the survey of household consumer expenditure and informal non-agricultural enterprises (manufacturing and trade). The other members of the Expert Group included Prof. T.J. Rao and Prof. A.K. Adhikari, Indian Statistical Institute and the heads of all the four Divisions of National Sample Survey Organisation.

As part of the work of the Expert Group, the Cross-Validation Study of Estimates of Private Consumption Expenditure Available from Household Survey and National Accounts was prepared during 2001 by the National Sample Survey Organisation and the Central Statistical Organisation with contributions mainly from S/Shri Aloke Kar, D.P. Mondal and P.D. Gupta under the technical direction of Dr. A.C. Kulshreshtha. Comments on the report were obtained from Prof. B.S. Minhas, Prof. S.D. Tendulkar, Mrs. Uma Dutta Roychoudhury and Dr. Vaskar Saha. Most of these comments have been incorporated in the report. However, the discussion and comments of the experts are also presented as part of the report. Prof. Nikhilesh Bhattacharya has not been able to go through the present version of the report due to his health condition.

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PART - I

TECHNICAL PAPERS

Report on Cross-Validation Study of Estimates of Private Consumption Expenditure Available from Household Survey and National Accounts

by

Expert Group on Non-sampling Errors

Report on Cross- Validation Study of Estimates of Private Consumption Expenditure Available from Household Survey and National Accounts*

1. Introduction

Estimates of *private final consumption expenditure* in India are generated as a part of the National Accounts Statistics (NAS) compiled annually by the Central Statistical Organisation (CSO). A different set of estimates of household consumption expenditure is also available from the Household Consumer Expenditure Surveys (HCES) of the National Sample Survey Organisation (NSSO). As one would expect, the estimates from the two sources fail to agree closely. More importantly, a recent study by Sundaram and Tendulkar (2001) and similar studies undertaken in the past reveal that the gap between the two sets of estimates is widening over time. The present study is an attempt to (a) understand the magnitude and nature of the divergence between the two sets of estimates, (b) identify the underlying reasons for the divergence and (c) suggest measures for improvements in compilation of NAS and conduct of HCES in the light of the identified sources for the difference.

The CSO's estimate of *private final consumption expenditure* is derived following what is called the "commodity flow" approach. This approach consists of obtaining the quantum and value of different commodities flowing finally into the consumption process of the households and the private non-profit institutions serving households (NPISH), from the quantum and value of the commodities produced and available during the accounting year, which is generally a financial year, extending from beginning of April of one calendar year to end of March of the next. For the commodities obtained from agriculture proper (i.e. excluding animal husbandry), however, the output of the agricultural year is taken as such to represent the production of the accounting year. Generally speaking, in this approach, the following are netted out from the quantum and value of the total output of a commodity or a commodity-group to arrive at the estimate of its *net availability* in the domestic economy:

(i) The part used up in the process of further production (*intermediate consumption*),

(ii) Change in stocks and

(iii) Exports, net of imports.

An amount is also discounted for the wastage of agricultural produce.

Having thus arrived at the estimate of *net availability*, the part used for capital formation and that used by the general government administration for current consumption are deducted from it to arrive at the commodity-wise estimates of the quantum and value of *private final consumption expenditure* (PFCE) at current market prices. The sum of all the commodity-wise estimates of value gives the aggregate estimate of PFCE, which in fact represents the value of goods and ser-

* Prepared by NAD of the CSO and SDRD of the NSSO for the Expert Group on Non-sampling Errors, with contributions mainly from S/Shri Aloke Kar, D.P.Mondal, and Sh. P.D.Gupta, under the technical direction of Dr. A.C. Kulshreshtha.

vices consumed by the households and NPISHs.

The NSSO, on the other hand, employs the technique of survey sampling, in which the consumption expenditure of a random sample of households is ascertained directly by canvassing a well-designed schedule of enquiry whose coverage is broad enough to include every item of household consumption expenditure. But the surveys conducted for this purpose, called Household Consumption Expenditure Surveys (HCES), are required to cover only the households and not the NPISHs. Moreover, these surveys are usually carried out over a period of one year that generally corresponds to an agricultural year, i.e. beginning of July of one calendar year to end of June of the next.

Evidently, the two data sets are not strictly comparable. Apart from the differences in the coverage and reference time-frames that are apparent, comparability of the two sets of estimates are constrained by the differences in the concepts[1] and methods of estimation inherent in the very approaches employed by the two agencies. Nevertheless, a number of studies comparing the two sets of estimates conducted in the past reveal that the estimates for the individual years of 1950s, 1960s and 1970s were in fairly close agreement, in spite of the entirely different approaches and the databases used for estimation by the two agencies. Most of these studies pertain to the estimates for the individual years of 1950s and 1960s and contain comparisons at broad levels of aggregation. Only two of the latest studies (Minhas *et. al.*, 1986, and Minhas, 1988) deal with the estimates for two years of the 1970s and one (Minhas et. al., 1989) with the estimates of 1983. These contain comprehensive disaggregated level comparison of the two sets of estimates.

The estimates given in *Table 1* are partly quoted from the studies mentioned above and partly worked out for the present study. The NSS estimates given in the table are arrived at as the product of the estimates of annual per capita consumption expenditure obtained from the HCES and the population projections based on the Population Census (RGI, 1996). The product is obtained separately for the rural and urban populations and the sum is taken as the estimate for total household consumption expenditure of the domestic economy. The NAS estimates for different years quoted in the table are the current-price estimates taken from the latest series of NAS estimates with base year proceeding the current year.[2] The present study uses the NAS estimates for 1993-94 released in 2000 (CSO, 2000).

It is seen from *Table 1* that till the 1970s the difference between the two estimates of total consumption expenditure was of the order of 13 per cent or less. Considering the differences in approach, coverage, concept and data sources used, the order of difference of about 10 per cent is indeed not surprising. But, what appears to be a matter of serious concern is that the gap between the two sets of estimates has been widening pro-

[1] For example, the definition of household consumption expenditure followed in by the NSS does not include the imputed components of PFCE as defined in the System of National Accounts.

[2] The CSO revises its estimates periodically - generally once every ten years. This enables it to use more recent and representative benchmark estimates of productivity and workforce for estimation of macro-economic aggregates. Each revision results in a different series of estimates of PFCE, among other macro-economic aggregates, which is referred to by the corresponding base year. The revision exercise is usually taken up a few years after the base year. As a result, two (sometimes more than two) sets of estimates of the macro-economic aggregates - pre-revised and revised - become available for the years common to two consecutive series.

gressively since the 1980s, in spite of the exposition of shortcomings of both the estimates contained in the studies mentioned above and the measures taken to overcome them.

Table 1: Divergence between the NSS and NAS estimates of consumption expenditure for selected years (Rs. Crore)*

Year	Source	Food	Non-food	Total
1957-58	NSS	6626	3241	9867
	NAS	6920	3461	10381
	% difference	*-4.25*	*-6.36*	*-4.95*
1960-61	NSS	8118	4130	12247
	NAS	8594	4302	12896
	% difference	*- 5.54*	*- 4.00*	*- 5.03*
1967-68	NSS	16373	5537	22695
	NAS	17238	9017	26255
	% difference	*- 5.02*	*- 16.55*	*-13.56*
1972-73	NSS	23420	9790	33210
	NAS	22214	12946	35160
	% difference	*5.43*	*-24.38*	*-5.55*
1977-78	NSS	36500	20030	56530
	NAS	38157	24923	63080
	% difference	*-4.34*	*-19.63*	*-10.38*
1983-84	NSS	69739	38934	108668
	NAS	85613	60471	146084
	% difference	-18.55	-35.62	-25.61
1987-88	NSS	106205	67560	173765
	NAS	122805	101256	224061
	% difference	-13.52	-33.28	-22.45
1993-94	NSS	224066	131704	355770
	NAS	315243	259529	574772
	% difference	-28.92	-49.25	-38.10

Notes:
1. % difference stands for (NSS – NAS) / NAS expressed in percentage.
2. The estimates for 1957-58 and 1960-61 are quoted from Srinivasan *et. al.* (1974), who in turn have used the estimates for 1957-58 compiled by Kansal and Saluja (1961) for the NAS estimates.
3. The estimates for 1972-73 and 1977-78 are based on Minhas *et. al.* (1986), appropriately adjusting the food-nonfood composition for comparability.
4. Sources for NAS estimates for 1983-84, 1987-88 and 1993-94 are the National Accounts Statistics of 1990, 1992 and 2000 respectively.
5. The NSS estimates for 1983-84, 1987-88 and 1993-94 are obtained by simply as the product of population and per capita consumption based on HCES of 1983, 1987-88 and 1993-94 respectively.

* 1 Crore = 10 million

Table 1 shows that the divergence between the estimates of total consumption, which was about 10 per cent in 1977-78, had soared to a level of about 25 per cent by 1983-84, remained at almost the same level in 1987-88, and then mounted to as high as 38 per cent in 1993-94. So far as the expenditure on food consumption is concerned, the estimates from the two sources varied by only about 5 per cent, that too either way, till the 1970s. But during the following period the increment in the NAS estimate has been at a much faster rate than that in the NSS estimate. So much so, the difference between the NSS and NAS estimates rose to a level of 19 per cent by the 1980s and by 1993-94 the difference was about 29 per cent. Much in the same way, the divergence between the estimates of non-food consumption, which was of the order of 5 per cent till 1960-61, has grown manifold to a shade below 50 per cent in 1993-94. A divergence as wide as this is indeed surprising. It is necessary to mention here that the NSS estimates of all the years of 1970s, 1980s and 1990s given in the table are based on quinquennial surveys, which were conducted on a larger second-stage sample than the other years for which the estimates are available.

The present study is an attempt to investigate the underlying sources for the widening gap between the two sets of estimates. For this purpose, it utilises the unpublished disaggregated item-level estimates from the Consumption Expenditure Survey of NSSO (50th Round) 1993-94, and the disaggregated item-level data used for compiling the Private Final Consumption Expenditure (PFCE) for the National Accounts Statistics. It is essentially an extension of the study undertaken by Minhas *et. al.* (1986) for the years 1972-73 and 1977-78. The present study contains a disaggregated comparison of the estimates of food and non-food consumption in 1993-94 and attempts a comprehensive analysis for understanding the underlying reasons for divergence.[3] To begin with, it deals with the known causes of divergence between the two sets of estimates in the next section. Much of these causes are inherent in the different approaches adopted by the two agencies and have been discussed extensively in the earlier studies. Next, in the two following sections, detailed item-wise comparison of the estimates on food and non-food consumption is taken up to identify the components principally responsible for the high order of difference between the aggregate estimates and the underlying reasons for the divergence. The report ends with summary findings of the analysis and a few suggestions for improvement.

2. Comparability of the Estimates

The comparison of the two sets of estimates is constrained by certain differences inherent in the approaches adopted by the two agencies. A number of studies taken up in the past have dealt with these causes. Particularly, Minhas (1988) provides a comprehensive account of the limitations of comparing the two sets of estimates. The following is a brief discussion on the identified possible reasons for differences that are inherent in the methods of estimation used by the two agencies.

Coverage: As observed in the earlier studies like those by Mukherjee and Chaterjee

[3] The present study is confined to comparison of only the revised (for 1993-94 series) NAS estimates and NSS estimates. Minhas and Kansal (1990) have attempted appraisal of the margins of uncertainty in the NAS estimates by comparing the pre-revised and revised estimates of PFCE for the early years of 1980. More recently, Sundaram and Tendulkar (2001) have compared the NAS and NSS estimates, using the pre-revised and revised estimates of PFCE for 1993-94. The present study makes no such attempt.

(1974) and Minhas (1988), the Household Consumer Expenditure Surveys (HCES) of the NSSO excludes the houseless and the institutional population like the inhabitants of orphanages, prison and hospitals, while the consumption of these persons are included in NAS estimate. Also included in the NAS estimate is the consumption expenditure of NPISHs, which are not covered by the HCES. Nevertheless, the NSS estimates of average per capita consumption expenditure, in conjunction with the estimated total population of the country, provides a valid aggregate estimate of the consumption expenditure of the households, despite being subject to the limitation of non-coverage of the houseless and the institutional population in the HCES. So far as the comparability between the two sets of estimates is concerned, this limitation is virtually of no consequence, as the proportion of the houseless and the institutional population in the total population is negligibly small. As for the consumption expenditure of NPISHs, though it is not possible to derive any reasonable estimate of its share in the NAS estimate of PFCE owing to absence of data, there are reasons to believe that it is rather small. In some recent studies like those by Ravallion (2000) and Bhalla (2000), the share of NPISHs in the estimate of PFCE has been assumed to be 10 per cent. This, it appears, is distinctly on the higher side.

Table 2: Production of Food Grains, Oilseeds and Sugarcane during Agricultural Years 1992-93 and 1993-94 (in million tonnes)

Crop	1992-93	1993-94
Rice	72.86	80.30
Wheat	57.21	59.84
Coarse cereals	36.59	30.81
Pulses	12.82	13.31
Food Grains	179.48	184.26
Nine major oilseeds	20.11	21.50
Sugarcane	228.03	229.66

Source: *Agricultural Statistics at a Glance*, 1999, Directorate of Economics and Statistics, Ministry of Agriculture.

Reference Time-frame: The NAS estimates of final consumption expenditure are worked out from the production data of various goods and services, which are compiled primarily for estimation of gross domestic product for the current (financial: April-March) accounting year. Since, the data on agricultural production used for national accounting pertain to agricultural (July–June) year, the NAS estimates of consumption expenditure on agricultural produce essentially represent the consumption out of the current agricultural year's production rather than the actual consumption during the financial year, notwithstanding the adjustments made for production flow into non-consumption uses in the commodity-flow approach. For the HCES, on the other hand, the NSSO normally uses an agricultural year[4] as the survey period, and thus the NSS estimates represent the actual consumption during the agricultural year. But, since the production and consump

[4] Exceptions being the first (Oct.72 – Sept.73) and the third (Jan. – Dec. 1983) NSS quinquennial surveys.

tion of goods, particularly of agricultural produce, are events usually separated in time by considerable gaps, whatever is produced during the agricultural year is not necessarily consumed during the same period, nor is the current year's consumption drawn entirely from the current year's production. For reasons such as these, the NAS estimates are strictly not comparable with the NSS estimates. The comparability, however, should not be seriously affected if the output of food crops in two successive years differs little. Since that was not so, Minhas *et. al.* (1986) made an attempt to assess the magnitude of discrepancy accounted for by the different reference time-frames of the NAS and NSS estimates by using the crop season-wise data of food grains production of the current and the preceding agricultural years. For the present study, however, no such attempt has been made, particularly because the growth in production of food grains between 1992-93 and 1993-94 was too low (*Table 2*), in the aggregate, to significantly affect the comparability in this respect. Moreover, such adjustments for reference period involve too many strong assumptions to render validity to their results as possible explanation for the divergence.

Unmatched classification schemes : The classification schemes for grouping commodities and services adopted by the two agencies both at the data collection and compilation stages as well as those used for presentation of results differ considerably in many respects. This makes item-wise comparison difficult. Prior to the 1980-81 series of the NAS, the classification schemes differed in respect of expenditure on 'hotels & restaurants', which was classified under non-food consumer services in the NAS, while it was included in the food group in the NSS estimate (Minhas, 1988). Since the 1980-81 series, however, the consumption expenditure on 'hotels & restaurants' is classified in the 'food' group in the NAS as well. Yet, the classification schemes used by the two agencies at present differ in a number of other respects. For example:

- In the NAS, the 'rice' retained by the farmers for their self-consumption is put entirely under 'rice' consumption, whether or not a part of it is converted into rice products. In contrast, rice products like *murmure*, *cheera / poha* and *khoi* are not included in the NSS estimate of 'rice', even when they are made out of 'home-grown stock'.

- Expenditure on purchase and repairs of transport equipment is classified under 'durables' in the NSS estimates, while it is included in the transport-group in the NAS estimates of PFCE.

- The expenditure on cooked food given to the domestic servants (whether full-time or part-time) is included in the 'food' group in the NSS. In the NAS, on the other hand, all payments (whether in cash or kind) made to the domestic help are, in principle, taken as expenses incurred for consumption of 'personal services'.

Treatment of cooked meals: In the HCES, the meals served to a domestic help who is not a member of the employer household are included *only* in the consumption expenditure of the serving households and *not* in that of the recipient households. In the national accounting framework, the "cooked meals" consumed by the domestic help is taken as a

part of the remuneration she/he receives for the services provided to the employer household, which, in turn, is used up as final consumption by the latter. Thus, the value of the "cooked meals" served to a domestic help by an employer household forms a part of 'food' consumption of the former and that of consumption of 'services' of the latter. But, in order to avoid double counting of the expenditure on 'food', the value of 'cooked meals' is recorded as consumption expenditure of only the employer household in the HCES. As a result, in the aggregate, the HCES fails to include the part of the value of services provided by domestic helps that is remunerated for by "cooked meals". Thus, the NSS method of collection of data on "cooked meals" served to domestic helps as part of their remuneration leads to underestimation of the total value of services consumed by the households, and thus the total consumption expenditure incurred by them.

The value of "cooked meals" is notionally included in the income of the domestic helps as part of their income and thus forms part of their final consumption, according to the approach followed for the NAS estimates. In the Enterprise Survey whose results are taken to represent the estimates of GVA of 'personal services' sub-sector, the payments 'in kind' are also included in the earnings of the enterprises. Moreover, since the services produced by the domestic helps, which are evaluated as the wages, in cash or kind, earned by them, are taken as final consumption of the employer households, the value of the "cooked meals" gets included in consumption expenditure of the former.

Notional components in NAS estimate of PFCE: Only the rent on dwellings actually paid is included in the NSS estimate, while the NAS estimate includes all imputed rentals of owner-occupied dwellings. This accounts for a substantial part of the divergence observed between the two estimates. Other such notional component in the NAS estimate is the *Financial Intermediation Services Indirectly Measured* (FISIM). This is being included in PFCE since the 1980-81 series of national accounts. Thus, the NSS and NAS estimates of consumption do not suffer from non-comparability in this respect for the earlier years. Inclusion of these notional components in the NAS estimate of private consumption is, however, in strict adherence to the standards set by the internationally accepted system of national accounts. *Table 3* illustrates how these notional components of the NAS estimates affect the comparability. In the table, the figures given in col.(2) are the unadjusted NSS estimates, while those given in col.(7), called 'adjusted NSS estimates', are the NSS estimates including the notional components of rent and FISIM.

Table 3: Comparison between the NSS estimates and NAS estimates adjusted for rent on dwellings and FISIM (Rs. crore)

Year	Unadjusted NSS	NAS	% diff. Cols. (2) & (3)	Imputed rentals	FISIM	Adjusted NSS	% diff. Cols. (7) & (3)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1983-84	108668	146084	-25.61	10478	758	119904	-17.92
1987-88	173765	224061	-22.45	15416	1513	190694	-14.89
1993-94	355771	574772	-38.10	37297	11801	404869	-29.59

Note: 1. % difference stands for (NSS – NAS) / NAS expressed in percentage.
2. Sources same as those for *Table 1*.

3. Comparison of Estimates of Food Consumption for 1993-94

As the classification schemes followed by the two agencies differ, the individual items have been regrouped suitably to make their estimates from the two sources comparable. For this purpose, the sub-groups like those of gram products, pulses product, cereal products, cereal substitutes, vegetables, vegetable products, and confectionary items have been regrouped suitably taking individual item-level estimates which are available from both the sources. The regrouping involves both the sets of estimates. For the present study, expenditure on pan, tobacco & beverages is included in the estimates of food consumption.

For obtaining the NAS estimate of private consumption of food items by commodity flow approach, data on output, seed, feed, wastage, imports and exports, changes in stock, government final consumption and intermediate consumption are required. The basic data on output, based on crop estimation, are available from the Directorate of Economics and Statistics, Ministry of Agriculture (DESAg). The seed and feed ratios used are based on current cost of cultivation studies. The wastage ratios for most of the commodities are based on estimates available from the Directorate of Market Intelligence (DMI), but these have not been updated. The estimated wastage ratios used at present pertain to 1968-69. The main source of data on intermediate consumption for a

Table 4: Comparison between the NAS and NSS estimates for different item-groups of food consumption for 1993-94 (Rs. crore)

Item-group	NSS estimate	NAS estimate	NSS - NAS	% difference
1. Cereals & Cereal Products	72188	77655	-5467	-7.04
2. Bread	560	554	6	1.08
3. Gram (Whole)	530	265	265	100.00
4. Pulses & pulses product	12665	11993	672	5.60
5. Cereal substitute (tapioca etc.)	309	1024	-715	-69.82
6. Sugar and *Gur*	9956	19881	-9925	-49.92
7. Milk & milk products	33737	46594	-12857	-27.59
8. Edible oils & oilseeds	15674	23204	-7530	-32.45
9. Meat, egg & fish	11923	21737	-9814	-45.15
10. Fruits, vegetables & their products	28851	68036	-39185	-57.59
11. Salt	595	595	0	0.00
12. Spices	8015	8015	0	0.00
13. Non-alcoholic Beverages	9156	6422	2734	42.57
14. Processed / Other food	5910	5436	474	8.72
15. Pan	1830	2988	-1158	-38.76
16. Tobacco	5877	12309	-6432	-52.25
17. Alcoholic beverages and other intoxicants	2525	2393	132	5.52
18. Hotel & restaurant / cooked meals	3765	6142	-2377	-38.70
Food: Total	**224066**	**315243**	**- 91177**	**- 28.92**

number of commodities is again DMI report for the year 1968-69. The data on exports and imports are available on a regular basis from the Director General of Commercial Intelligence and Statistics (DGCI&S) and the estimates of Government consumption expenditure are based on the rates obtained from the latest Input-Output tables.

Table 4 gives the NAS and NSS estimates for the different food sub-groups made comparable by suitably regrouping the food items. The estimates differ by over Rs. 91 thousand crore, the NSS estimate being smaller than the NAS estimate by about 29 per cent of the latter. The main contributor, it is seen, is the "fruits, vegetables and their products" item-group, which alone accounts for Rs. 39 thousand crore out of the total difference of Rs. 91 thousand crore between the estimates of food consumption. This is followed by the "milk & milk products" and "sugar & gur" item-groups, accounting for Rs. 13 thousand and Rs. 10 thousand crore respectively. The NSS estimates are higher than the NAS estimates for only a few item-groups like 'pulses & pulses products', 'non-alcoholic beverages' and 'gram (whole)'. The differences between the estimates for such groups are much smaller in comparison. The estimates for the item-groups 'salt' and 'spices', it is seen, do not vary at all. This is because the NAS estimate for both the item-groups is directly taken from the HCES. The NAS and NSS estimates for the item-group 'processed / other food', which includes expenditure on items like biscuits, confectionery and other processed food, do not differ much. It is interesting to note that despite the known reluctance of the respondents in reporting consumption of alcoholic beverages and other intoxicants in the HCES, the NSS estimate for this item-group is marginally higher than the NAS estimate. It appears that consumption of these items is under-estimated by both the CSO and NSSO. Possibly, underestimation in the NAS owes to non-reporting of illegal production in the registered manufacturing or failure of the surveys to capture production in the unorganised segment of the economy.

The divergence between the two sets of estimates, at a more disaggregated level, is discussed in the following paragraphs. The attempt here is to identify the items within an item-group that are mainly responsible for the divergence between the two estimates for the item-group. The NAS and NSS estimates of quantity consumed are compared for the items for which quantity estimates are available from both the sources. For a valid comparison between the estimates of consumption expenditure (henceforth called 'value estimates') for the item-groups, the NAS value estimates have been adjusted for prices to eliminate the effect of differential implicit prices in the divergence between the two sets of estimates. For the items for which quantity and value estimates are available from both the sources, the adjusted NAS value estimates are arrived at by evaluating the NAS quantity estimates at NSS implicit prices. For the other items, the adjusted NAS estimates are taken same as the unadjusted value. The item-groups 'salt', 'spices' and 'pan', for which the NAS estimates are based on the NSS estimates, and those like 'beverages and intoxicants' and 'processed / other food' for which the estimates differ little are excluded from the following discussion.

Food grains

The NSS estimate of expenditure on food grains consumption has always been higher than that of the NAS. The difference between the two estimates, it is seen from *Table 5*, varied from 10 per cent to 29 per cent for

Table 5: Difference Between the NSS and NAS Estimates (in Rs. crore) of Consumption of Food grains in Different Years

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1957-58*	3974	3436	15.66	538	-294
1960-61*	4411	3942	11.90	469	-476
1972-73	13418	10362	29.49	3056	1206
1977-78	19302	17560	9.92	1742	-1657
1993-94	85943	90467	- 5.00	- 4524	- 91177

Note: (i) Sources: Same as those for *Table 1*.
(ii) * The estimates for the years 1957-58 and 1960-61 include "cereal substitutes".

the years 1957-58, 1960-61, 1972-73 and 1977-78. What is important to note is that unlike the estimates for earlier years presented in the table, the NAS estimate for 1993-94 exceeds the corresponding NSS estimate. Moreover, the growth rate implicit in the NAS estimates is higher than that in the NSS estimates.

Since the sub-groups 'cereals & cereal products' and 'pulses & pulses products' have major shares in total consumption expenditure on food, it is necessary to undertake a disaggregated-level comparison of NAS and NSS estimates of cereals and pulses consumption. The following paragraphs contain a detailed comparison of the quantity and value estimates of consumption of individual constituents of food grains in 1993-94. Besides the cereals and pulses, food grains comprise cereals and pulses products and whole grams. Breads produced in bakeries, being principally a wheat product, are also included in this group of food items.

Cereals and cereal products

Table 6 gives a comparison of the NSS and NAS estimates of consumption of cereals and its products for 1993-94. It also provides comparable estimates for the item 'gram (whole grain)' and 'bread'. Both the NAS and NSS value estimates for the items in the rice and wheat groups represent the expenditure actually incurred on the items. The quantity available from the Public Distribution System (PDS) is evaluated at the administered price in the NAS, while the cost actually paid by the households for the quantity obtained from the PDS are recorded in the HCES. Thus, the implicit prices that can be worked out from the NAS and NSS estimates of value and quantity given in the table represent the (weighted) average of the open-market and administered prices. The implicit prices derived from the NAS estimates for all the cereal-group (a type of cereal and its products) of this group, except rice, are found to be higher than the respective implicit prices derived from the NSS estimates. (A comparison of implicit prices derived from the NAS and NSS estimates is given in *Appendix I* for different items). The adjusted NAS value estimates too are given in the table alongside the unadjusted NAS estimates of value.

The estimates of quantity of wheat product are not worked out separately in the NAS. To segregate the NAS estimate of quantity of wheat products, the estimates of *suji* and *maida* have been taken directly from the ASI.

Table 6: Itemwise comparison between NAS and NSS estimates of quantity (000 tonnes) and value (Rs. crore) of consumption of 'Cereals and Cereal Products' for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Rice: total	68840	43670	67873	41066	2605	43031	639
Cheera / poha	542	419	1310*	1900	-1481	1900	-1481
Khoi-Lawa	80	51	426*	572	-521	572	-521
Muri	1100	1087	1479*	1705	-619	1705	-619
Other Rice Products	593	357	—	—	357	0	357
Rice products: total	*2315*	1914	*3115**	4177	-2263	4177	-2263
Rice & Rice products	**71104**	**45584**	**71088***	**45243**	**341**	**47209**	**-1625**
Wheat	1917	811	374	170	641	158	653
Atta	45259	19397	42112	18522	876	18066	1331
Maida	246	149	3412@	1854	-1705	1854	-1705
Suji,Rawa	577	402	624@	339	64	339	64
Sewai, Noodles	29	58	—	—	58	—	58
Other Wheat Products	108	51	—	—	51	—	51
Wheat & its products	**48056**	**20867**	**46522**	**20885**	**-18**	**20417**	**450**
Jowar & its products	7814	2417	11369	4247	-1830	3513	-1096
Bajra & its products	4198	1514	4778	1745	-231	1725	-211
Maize & its products	3114	1012	9073	3588	-2576	2949	-1937
Barley & its products	80	35	1213	693	-658	363	-328
Small Millets & its products	159	67	868	249	-182	218	-151
Ragi & its products	2171	692	2507	860	-168	800	-108
Other cereals	—	—	—	32	-32	32	-32
Change in Stock	—	—	—	113	-113	113	-113
Total Cereals	**136748**	**72188**	**147418**	**77655**	**-5467**	**77338**	**-5150**
Bread(Bakery)	—	560	—	554	5	554	5
Gram (Whole Grain)	354	530	206	265	265	308	222

Note: 1. * The NAS quantity figures quoted for rice products (marked with asteriks) are in terms of quantity of rice used for production of the rice product.

2. @ The NAS quantity estimates of output for *Suji* and *Maida* are taken directly from the ASI, for the study. The quantity and value of *atta*, given above, is derived from the estimates of NAS and the ASI results for *suji* and *maida*.

The estimate of quantity of *atta* has been obtained by deducting the ASI quantity estimates of *suji* and *maida* from the NAS estimate of total quantity of wheat products.

The following observations emerge from the estimates presented in *Table 6*:

i. The unadjusted NAS estimate of total

cereals consumption is higher than the NSS estimate by Rs.5467 crore, which reduces by about three hundred crores once the NAS quantity estimates are evaluated at NSS implicit prices. The unadjusted NSS and NAS estimates for the major cereal items like rice, wheat and *atta* compare closely both in terms of quantity and value. The NSS estimates for these items are higher than the corresponding estimates of NAS.

ii. The NSS estimate of quantity of rice consumption is higher than the NAS estimate, in spite of the fact that no provision for intermediate consumption of rice or its products in hotels and restaurants or other industries has been made while working out the NAS estimate. The difference between the value estimates reduces substantially by adjusting the NAS estimates for prices.

iii. Unlike the estimate for rice consumption, the NAS estimates for the consumption of rice products are higher than the corresponding NSS estimates, with the only exception of 'other rice products'. In fact, the method adopted for the NAS estimates has no provision of estimating 'other rice products'. As a result, the NAS estimate for rice, obtained by commodity flow approach, should be on the higher side as the rice consumed in the process of production of 'other rice products' would not have been deducted from the output of rice. On the other hand, NAS estimate of rice products would obviously be on the lower side owing to exclusion of 'other rice products' from the NAS estimate. Moreover, the NAS value estimate for the sub-group 'rice and rice product' as a whole would have been underestimated as the price of rice is expected to be lower than its products. However, the magnitude of underestimation owing to this reason is not expected to be very significant.

iv. For the items of the wheat group, though the NAS estimates of value and quantity are lower than the NSS estimates in most cases. Only for *maida*, the NAS estimate is much higher than the NSS estimate. This item alone is responsible for the NAS estimates being higher than the NSS estimates for the sub-group 'wheat and its product'. It may be noted that the implicit price of *atta* in the NAS is higher than that of the NSS estimate, since a simple average price of *atta*, *suji* and *maida* was taken to represent the price of all wheat products while working out the NAS estimate. Since the prices of *suji* and *maida* are higher than that of *atta* and since the share of *atta* in the wheat products is much higher than the other two taken together, the composite price of wheat products thus arrived at should certainly be higher than the price of *atta*.

v. The NSS and NAS estimates also differ appreciably for the minor cereals and their products and in most of these cases the NAS estimates are found to be higher than the NSS estimates. A substantial part of the difference between the two sets of value estimates for these items may be attributed to the differential implicit prices. Adjustment for prices brings about a considerable reduction in the discrepancy between the estimates of value.

Pulses and Pulses Products

Table 7 gives a comparison of the NSS and NAS estimates of consumption of pulses and its products for 1993-94. This is the only major item-group of food consumption for which the NSS estimates are found to be higher than the NAS estimates. In fact, it is seen that except for the items like 'other pulses products', 'other pulses' and 'split gram', the NSS estimates are higher than the NAS estimates.

Much of the difference between the two sets of estimates owes to higher implicit price in NSS estimates. Adjustment for prices of the NAS estimates of value substantially reduces the gap between the estimates for 'pulses: total'. In fact, the adjusted NAS estimate for 'pulses and pulses products' exceeds the NSS estimate.

There is another reason for which the NAS value estimates for pulses are affected by a downward bias. The mark-ups applied on *ex farm* prices of grains retained by the producers, particularly for *arhar*, *moong*, *urad* and *masur*, to arrive at the value of *dal* appear to be low. So much so, that the derived values of *dals* obtained from the retained grains are found to be less than the respective values of the grains themselves, if evaluated at *ex farm* prices. On the other hand, both the NAS quantity and value estimates without doubt suffer from an upward bias, as the present method makes no provision for intermediate consumption of the *dals* in hotels and restaurants or in other industries.

Table 7: Itemwise comparison between NAS and NSS estimates of quantity (000 tonnes) and value (Rs. crore) of consumption of 'Pulses and Pulses Products' for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Arhar	2860	4783	2159	2626	2157	3606	1177
Gram split	679	1070	1171	1752	-682	1803	-733
Moong	1170	1839	853	1324	515	1329	511
Masur	1243	1648	532	669	979	695	953
Urd	1084	1433	1023	1339	94	1334	99
Other Pulses	752	920	1547	1540	-620	1894	-973
Pulses: total	**7788**	**11694**	**7285**	**9250**	**2444**	**10660**	**1033**
Besan	383	632	619	985	-353	1021	-389
Other Pulses Products	—	—	1105	1749	-1409	1749	-1409
Pulses & Products: total	**—**	**12665**	**—**	**11993**	**672**	**13430**	**-764**

The NSS estimate for 'other pulses' includes *Khesari*, Peas and Soyabeans. Both the NAS and NSS estimates for 'Other pulses products' include gram products.

Sugar and Gur

This item-group has always been a major contributor towards the difference between the two sets of estimates of consumption expenditure on food. For 1993-94, the NSS estimate of consumption of sugar and *gur* is only about a half of that of the NAS estimate. The difference was as much more pronounced in the earlier years for which the estimates are given in *Table 8*. Further, the estimates for 1972-73 and 1977-78 indicate, that the divergence between the two sets of estimates has been more pronounced for *gur* than for sugar. Yet, for 1993-94, the gap between the estimates of *gur* consumption is much higher as compared to earlier years.

The NSS and NAS estimates of different comparable components of this group for 1993-94 are given in *Table 9*. The NSS estimate of 'Sugar & *khandsari'* includes sugar candy (*Misri*) and other sugars, which are not covered specifically in the NAS. The contribution of sugar candy (*Misri*) and other sugars in the difference between the value estimates for the item-group is, however, virtually negligible. In spite of the larger coverage and the higher implicit price, the NSS estimate for 'Sugar & *khandsari*' is substantially lower than the NAS estimate, both in terms of value and quantity. The gap between the value estimates of 'Sugar & *khandsari'* consumption, therefore, widens when the NAS estimate of production is evaluated at NSS implicit prices. However, for the item-group as a whole, adjustment for price reduces the gap, though only marginally.

Table 8: Difference Between the NSS and NAS Estimates of Consumption of "Sugar, Gur etc." in Different Years (Rs. Crore)

Year	Item	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1957-58	Sugar & *gur*: total	222	378	-41.27	-156	-294
1960-61	Sugar & *gur*: total	325	524	-37.98	-199	-476
1972-73	*Sugar*	*705*	*943*	*- 25.24*	*- 238*	—
	gur	529	1316	- 59.80	- 787	—
	Sugar & *gur*: total	1234	2259	-45.37	-1025	1206
1977-78	*Sugar*	*935*	*1066*	*-12.29*	*- 131*	—
	Gur	593	1411	- 57.97	- 818	—
	Sugar & *gur*: total	1528	2477	-38.31	- 949	-1657
1993-94	*Sugar*	*8545*	*11282*	*- 32.03*	*- 2737*	—
	Gur	1411	7995	- 82.35	- 6584	—
	Sugar & *gur*: total	9956	19881	- 49.92	- 9925	- 91177

Source: Same as those for *Table 5*.
Note: The NAS estimate for 1993-94 excludes sugarcane, but includes changes in stock.

The major factor responsible for the inter-agency difference in the estimate for the group as a whole, as it appears from the present as well as the earlier studies, is the divergence between the estimates of *gur* consumption. In 1972-73 and 1977-78 the NAS estimate for *gur* consumption was about 2.5 times of NSS estimate. By 1993-94, the difference between the two estimates is found to have widened further - the NAS estimate is more than five times of the NSS estimate. The NAS estimates for this group are prepared separately for *gur*, refined sugar and palm *gur*. From the production estimates of sugarcane, available from the DESAg, the estimated amount (i) retained as seed, (ii) used for chewing, (iii) used in production of *Burra* and *Khandsari* and (iv) going as input to sugar factories are deducted to arrive at an estimate of sugarcane available for *gur* making. The estimates of quantity used for chewing and that used for *Burra* and *Khandsari* are obtained by applying certain norms, which vary from State to State. The quantity of sugarcane consumed by the sugar factories and production of sugar are available from the Directorate of *Vanaspati* and Sugar, M/o Agriculture. The conversion rate of sugarcane to sugar implicit in the figures available from the Directorate works out to about 10.3 per cent, which is fairly consistent with the conversion rate of 11 per cent implicit in the estimates available from the ASI (CSO, 1998).

On the derived estimates of sugarcane available for *gur* making in different States, varying State-specific conversion rates are applied to arrive at an estimate of *gur* production. Though the conversion rates, varying from 9 to 11 per cent over the States, used at present are based on old DMI Report of 1961, they cannot be said to be unreasonably high, considering that a sugarcane-to-sugar conversion rate of about 11 per cent is also implicit in the ASI estimates. As it appears, the production estimates of *gur* and sugar used in the NAS are quite consistent with the estimate of sugarcane production and the concerned technological ratios. The only possible reasons for high difference between NAS and NSS estimates of sugar and *gur* consumption can therefore be (i) low ratio (5%) of intermediate consumption of *gur* and sugar used for deriving the NAS estimates, (ii) under-reporting of consumption of sugar and *gur* in the HCES and (iii) overestimation of sugarcane production.

Table 9: Itemwise comparison between NAS and NSS estimates of quantity and value (Rs. crore) of consumption of 'Sugar, Gur etc.' for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity (000 ton)	Value	Quantity (000 ton)	Value			
Sugar & *khandsari*	7525	8501	10293	11282	-2780	11629	-3127
Gur: Cane	1339	1293	8567	7867	-6574	8273	-6980
Gur Others	108	119	—	128	-9	128	-9
Sugar Candy(Misri)	—	11	—	—	11	—	11
Sugar (Others)	—	33	—	—	33	—	33
Change in stock	—	—	604	604	—	—	604
Sugar & *Gur*: Total	**—**	**9956**	**—**	**19881**	**-9924**	**19748**	**-9792**

The last two reasons appear to be less likely. It is hard to find a definite reason for under-reporting of sugar or *gur* consumption in the HCES. Likewise, the regular crop reporting system, which covers sugarcane as a principal crop, is not expected to produce overestimates of sugarcane production consistently over the years. Thus, it appears that taking 5 per cent of *gur* and sugar production as intermediate consumption is unrealistic.

Milk and Milk products

This item-group is only next to 'fruits and vegetable' group in its contribution towards the discrepancy between the estimates of food consumption. It is seen from *Table 10* that the NAS estimate is higher by about Rs. 12 thousand crore than the NSS estimate – a difference of about 28 per cent. The difference between the estimates for this item-group was much smaller (6% and 9% respectively) in both 1972-73 and 1977-78, though it was high in the earlier years.

Table 10: Difference Between the NSS and NAS Estimates of Consumption of "Milk & Milk Products" in Different Years (Rs. crore)

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1957-58	543	1123	-51.65	-580	-294
1960-61	978	1247	-21.57	-269	-476
1972-73	2606	2765	-5.75	-159	1206
1977-78	4749	5227	-9.14	-478	-1657
1993-94	33737	46594	-27.59	-12857	-91177

Sources: Same as those for *Table 1*.

Table 11 gives the comparable item-wise estimates for 1993-94, as available from the two sources. The NAS and NSS estimates of consumption of liquid milk, both in terms of quantity and value, compare closely with each other. However, while the NSS estimate of quantity is higher by about 2 per cent, that for value is less by about 5 per cent than the respective NAS estimates. The implicit price of liquid milk worked out from the NAS estimates (Rs. 7.26 per lt.) is higher than that from the NSS estimates (Rs. 6.84 per lt.). For evaluating the quantity of liquid milk consumed by the households, the NAS had used an *ex farm* price of Rs. 7.17 and a retail price of Rs. 8.30 per litre, both of which are higher than the implicit price derived from the NSS estimates. Thus, after adjustment for prices, the NSS estimate turns out to be higher than NAS estimate. It may be noted here that, unlike the years for which the earlier comparative studies were conducted, the NSS and NAS estimates of consumption of milk, both in liquid form and otherwise, are in principle comparable for 1993-94, so far as the method of data collection in the HCES and that of compilation of NAS are concerned.

Estimation of value of consumption of milk products poses a more serious problem. In fact, this sub-group alone contributes Rs. 12 thousand crore in an overall discrepancy of Rs. 91 thousand crore between the estimates for the 'food' group as a whole. The NSS

estimate for 'milk products' (Rs. 3 thousand crore) is found to be only a fifth of that of the NAS estimate (Rs. 15 thousand crore).

The NAS estimate for milk products is arrived at as the sum of the ASI value estimate of output of dairy products[5], marked up by 20 per cent for 'trade and transport margin' (TTM), and the estimated value of production of butter and *lassi* in the unorganised sector. For the production in the organized segment, CSO takes the ASI estimate for only the enterprises falling in the NIC (1987) activity group 201, i.e. manufacturing of dairy products, which includes production of pasteurised and other forms of liquid milk apart from all kinds of milk products. Thus, the output of the enterprises falling in NIC 201 includes not just milk products but also liquid milk. It is seen from the detailed results of ASI 1994-95 (CSO 1998), that only a part (about 40 per cent) of the ASI estimate of output of NIC activity group 201 is actually milk product and the rest liquid milk. On the other hand, the present procedure altogether ignores intermediate consumption in the unorganised-sector enterprises like *halwais*, tea shops, hotels and restaurants. But for the quantity forming intermediate consumption in the organised manufacturing and that consumed as liquid milk by the households, the entire volume of milk coming to the market is assumed to be converted only into butter and *lassi*. Thus, the NAS estimate of consumption of liquid milk does not include pasteurised milk output of the factories at the one hand, and includes that which goes in as intermediate consumption in the unorganised sector enterprises on the other. The NAS estimate of liquid milk consumption is, therefore, subject to both upward and downward bias and its close agreement with the NSS estimate appears to be merely a coincidence.

Table 11: Itemwise comparison between NAS and NSS estimates of quantity and value (Rs. crore) of consumption of 'milk & milk products' for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Liquid Milk (000 Ltrs.)	45439	31059	44661	32407	-1348	30528	532
Milk product (from ASI)	—	—	—	7950	-7950	7950	-7950
Butter & Lassi	—	—	—	7178	-7178	7178	-7178
Milk products: Total	—	2678	—	15128	-12450	15128	-12450
CIS	—	—	—	-34	34	-34	34
GFCE	—	—	—	-908	908	-908	908
Milk & Milk Products	**—**	**33737**	**—**	**46594**	**-12857**	**44714**	**-10977**

The NAS estimate of value for 'milk & milk products' are net of government final consumption and changes in stock, which are included in the estimates of the individual components.

[5] This represents the production of dairy products in the organised segment of the economy.

What appears likely from the above discussion is that the consumption of milk products is overestimated by the CSO. A part of the volume of milk assumed to be used for butter and *lassi* production may in fact be used as intermediate consumption in enterprises producing other commodities like sweetmeat, tea and coffee, hotel and restaurant services, consumption of which are estimated separately in the NAS. In addition, the entire output of ASI (NIC 201) is not milk product – a large part of it is in fact pasteurised milk or other forms of processed milk.

Edible oil and Oilseeds

The NSS estimate of consumption expenditure of 'edible oils and oilseeds' for 1993-94 is lower than the NAS estimate by 32 per cent. For 1977-78 too, the NSS estimate is lower than the NAS estimates by almost a similar margin of 27 per cent, and its share in the overall divergence between the estimates of food consumption is found to be substantial. But, in the years prior to that, as seen from *Table 12*, the gap between the two estimates was much narrower - of the order of about 10 per cent.

Table 12: Difference Between the NSS and NAS Estimates of Consumption of Edible Oil and oilseeds in different years (Rs. crore)

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1957-58	274	322	-14.91	-48	-294
1960-61	364	406	-10.34	-42	-476
1972-73	1286	1465	-12.22	-179	1206
1977-78	2243	3077	-27.10	-834	-1657
1993-94	15674	23204	- 32.45	- 7530	- 91177

For the present study, the estimates of edible oils for 1993-94 available from the two sources have been re-grouped to make the estimates comparable. For this purpose, the oils used less commonly have been clubbed together in the 'others' category for the NSS estimates. The comparable estimates thus arrived at from the two sources are presented in *Table 13*. The estimates of oilseeds consumption are also given in the table.

For the two most commonly used edible oils, mustard oil and groundnut oil, the estimates from the two sources are fairly close to each other. The major part of the big difference between the estimates for the group as a whole is caused by *vanaspati* and oilseeds. In the earlier study (Minhas *et. al.*, 1986) too it was found that the estimates for the edible oils other than *vanaspati* differed little in the year 1972-73, though for the year 1977-78 the difference was substantial.

For the NAS estimates, the CSO uses the estimates of oilseeds production available from the DESAg and those of edible oils production from Ministry of Food and Civil Supplies. These estimates of edible oils are in fact derived on the basis of certain assumptions on utilisation of oilseeds for different purposes like seed, feed, waste etc. and oil extraction rates.

For deriving the NAS estimates, varying ratios of intermediate consumption are used for the edible oils, but for *vanaspati* no adjustment is made for its use in other industries. This appears to be an important rea-

son for the difference between the estimates of *vanaspati* consumption, since it is used extensively in commercial establishments like *halwais*, hotels and restaurants. As for the edible oils other than *vanaspati*, though the estimates for the entire sub-group compare closely, the estimates for individual oils are found to differ substantially in some cases. The difference is most pronounced for coconut oil. The estimates of both quantity and value differ widely. In particular, the NSS estimate of value is only a fourth of that of the NAS estimate. This is mainly due to the varying prices implicit in the two sets of estimates. The gap between the two estimates of 'edible oils: total' reduces substantially by adjusting the NAS estimates for prices.

Table 13: Itemwise comparison between NAS and NSS estimates of quantity (000 tonnes) and value (Rs. Crore) of consumption of 'Edible Oils and Oilseeds' for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Vanaspati	411	1533	919	3526	-1994	3322	-1790
Mustard Oil	1785	5558	1584	5249	308	4882	676
Groundnut Oil	1645	6125	1445	5420	705	5303	822
Coconut Oil	108	462	347	1948	-1486	1275	-812
Gingili (*Til*) Oil	108	363	101	482	-119	326	36
Linseed Oil: total	80	173	22	98	75	45	127
Edible Oil (Others)	411	1429	497	2091	-662	1339	90
Edible Oils: Total	**—**	**15642**	—	**18814**	**-3173**	**16493**	**-851**
Oilseeds	—	33	—	3508	-3475	3508	-3475
Edible oil and oilseeds	**—**	**15674**	**—**	**23204**	**-7530**	**20001**	**-4327**

Note: 1. The NSS estimate for the group 'other edible oils' includes those for Margarine, 'Refined oil', Palm oil and Rapeseed Oil.
2. NAS estimate for the entire group "Edible oils and oilseeds" include imports and change in stock which are not shown separately in the table.

The difference in the estimates of consumption is most pronounced for the oilseeds. The NSS estimate is found to be less than 1 per cent of that of the NAS. It may be noted that groundnuts used as such are not included here. Notwithstanding the possibility of underreporting in the NSS, the NAS estimate for oilseeds appears to be on the higher side, particularly because the latter is based on the assumption that the entire amount of oilseeds retained by the producers is consumed as oilseeds.

Meat, fish and eggs

This is another item-group of food items for which the estimates for 1993-94 from the two sources vary widely. The value estimates for this item-group differ by about Rs. 10 thousand crores, the NSS estimate being lower than the NAS estimate by as much as 45 per cent. The difference between the estimates for this item-group has never been as high in the earlier years. Of the earlier years for which the comparable estimates are given

Table 14:Difference Between the NSS and NAS Estimates of Consumption of "Meat, Fish and Egg" in Different Years (Rs. crore)

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1957-58	280	311	-9.97	-31	-294
1960-61	330	385	-14.29	-55	-476
1972-73	891	915	-2.62	-24	1206
1977-78	1677	1690	-0.77	-13	-1657
1993-94	11923	21737	-45.15	-9814	- 91177

Sources: Same as those for *Table 1*.

in *Table 14*, the estimates differ by more than 10 per cent only for the year 1960-61. In fact, the difference observed for 1993-94 is in sharp contrast to the findings of the earlier study (Minhas *et. al.*, 1986) for the years 1972-73 and 1977-78, for which the difference between the two estimates were found to be of order of 3 and 1 per cent respectively.

Table 15 gives the comparable NSS and NAS estimates of consumption of individual items of the item-group for 1993-94. For the meat sub-group, the table shows, the estimates from the two sources are fairly close to each other. The NAS estimate exceeds the NSS estimates by only about four hundred crore, even as the NSS estimate is higher than the NAS estimate for 'goat meat and mutton'. The quantity estimates and the implicit prices of goat meat and mutton indicate presence of classification error - the NSS estimates are more likely to be affected in this case. Taking the two together, it is seen that the NSS estimates both in terms of value and quantity are higher than the NAS estimates, though the combined implicit price is higher in the NAS. Thus, the gap between the two value estimates widens when the NAS value estimate is adjusted for prices.

The problem evidently is in the rest of the items of this item-group. The NSS estimate for 'chicken' is only about a fourth of that of the NAS estimate, that for eggs & egg products is only about half and for fish about 60 per cent. The NSS estimates of egg consumption were also found to be lower than the NAS estimates by similar proportions for 1972-73 and 1977-78. For 'fish', however, the estimates were much closer in 1972-73 and 1973-74.

The sub-group 'other meat products' comprises glands, other poultry killed and other meat product in the NAS. In the NSS survey no data is collected separately for these items. The expenditure on these items is embodied in the expenditure on meat. In the NAS, this sub-group contributes about Rs.1422 crore and is a major factor for the discrepancy between the two sets of estimates.

The other reason for the discrepancy may be that the intermediate consumption for most of the items of this group is taken as nil in the NAS. This appears to be the main reason for the wide divergence between the two sets of estimates, particularly for eggs and chicken since a large volume of these is actually used as input in the food processing industries, hotels and restaurants.

Table 15: Itemwise comparison between NAS and NSS estimates of quantity (000 tonnes) and value (Rs. crore) of consumption of 'Meat, Egg And Fish' item-group for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Goat Meat	657	3315	538	2932	383	2714	601
Mutton	137	886	165	871	15	1067	-181
Goat meat *plus* mutton	794	4201	703	3803	398	3781	420
Beef	246	503	286	633	-130	585	-82
Pork	80	208	150	546	-338	389	-182
Buffalo Meat	246	302	331	643	-341	407	-104
Other Meat	—	51	—	—	51	—	51
Meat: total	**—**	**5265**	**—**	**5625**	**- 360**	**5162**	**103**
Other Meat (by product)	—	—	—	1422	-1422	1422	-1422
Chicken	—	994	—	4133	-3139	4133	-3139
Other Birds (No.)	—	48	—	499	-450	499	-450
Eggs & egg products	—	1146	—	2487	-1341	2487	-1341
Fish	—	4437	—	7450	-3013	7450	-3013
Meat Egg Fish : total	**—**	**11923**		**21737**	**-9814**	**21153**	**-9229**

Fruits and Vegetables

In terms of magnitude, the divergence between the NAS and NSS estimates of consumption expenditure is the widest for "fruits and vegetables and their products" among the item-groups of food consumption. Of the inter-agency difference of about Rs. 91 thousand crore in the estimates of consumption of all food items in 1993-94, about Rs. 39 thousand crore owes to the difference between the estimates for this item-group. Consistent with the observations made in the earlier studies (Minhas *et. al.*, 1988; Srinivasan *et. al.*, 1974) on the estimates for 1957-58, 1972-73 and 1977-78, the NSS estimate for this sub-group is found to be considerably lower than the corresponding NAS estimate for 1993-94. But, it can be seen from *Table 16* that the difference between the estimates for this group has widened substantially, particularly after 1977-78. The gap between the estimates from the two sources was of the order of 40 per cent of the NAS estimate till the 1970s. For 1993-94, the NSS estimate for this group is less than the NAS estimate by about 58 per cent of the latter.

The different classification schemes used by the two agencies render the NAS and NSS estimates of expenditure on fruits and vegetables directly non-comparable. In order to make them comparable, the item-wise estimates for 1993-94 available from both the sources have been suitably re-grouped. The items of fruits and vegetables for which separate estimates are available from the two agencies have been reclassified into comparable groups. The redefined group consists of "fruits & vegetables (including their prod

Table 16:Difference between the NSS and NAS Value Estimates of Consumption of 'fruits & vegetables' in different years (Rs. crore)

Year	NSS	NAS	% Difference (NSS-NAS)/ NAS	Difference (fruits & vegetables)	Difference " all food"
1957-58	359	592	- 39.36	- 233	- 294
1972-73	1835	3097	- 40.75	- 1262	1206
1977-78	3228	5517	- 41.49	- 2289	- 1657
1993-94	28851	68036	- 57.59	- 39185	- 91177

i. The estimates for 1957-58 are quoted from Srinivasan *et. al.* (1974), who in turn have used the estimates compiled by Kansal and Saluja (1961) for the NAS estimates.

ii. The estimates for 1972-73 and 1977-78 are quoted from Minhas *et. al.* (1988)

Table 17: Itemwise comparison between NAS and NSS estimates of quantity (000 tonnes) and value (Rs. crore) of consumption of 'fruits & vegetables and their products' for 1993-94

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Potato	12983	4290	11840	4698	-408	3907	383
Onion	5274	2588	3555	2132	456	1746	843
sweet potato	188	48	—	487	-439	487	-439
other vegetables	—	13823	—	8044	5779	8044	5779
Flowers	—	286	—	1093	-807	1093	-807
Kitchen garden	—	—	—	1396	-1396	1396	-1396
Total vegetables	**—**	**21035**	**—**	**17850**	**3185**	**16673**	**4362**
Banana	—	1720	—	4067	-2347	4067	-2347
Coconut (mill.)	3871	1523	8118	3299	-1776	3190	-1667
Mango	823	692	3638	3115	-2423	3060	-2368
Grapes	195	327	482	689	-362	809	-482
Copra	108	296	—	660	-364	660	-364
Groundnut	354	609	1892	3232	-2623	3256	-2647
Cashew nut	—	101	57	1343	-1242	1343	-1242
Other fruits	—	2191	—	31673	-29482	31673	-29482
Total fruits (dry & fresh)	—	7459	—	48078	-40619	48057	-40598
Total fruits & vegetables	**—**	**28494**	**—**	**65928**	**- 37434**	**64731**	**- 36237**
Fruits & vegetable products	—	357	—	2108	-1751	2108	-1751
Fruits & vegetables and their products	**—**	**28851**	**—**	**68037**	**- 39186**	**66839**	**- 37988**

Note: The category 'other fruits and vegetables', other than horticulture, classified in the NAS has been distributed to 'other vegetables' and 'other fruits' of the table in proportion to the value of their gross value of output.The NAS estimate for the item-group "other fruits" includes that for the "horticulture crops not elsewhere covered".

ucts)" group, and the items potato, sweet potato and sugarcane for chewing appearing in the classification scheme of the NAS. The NAS estimate for this group includes fruit products like pickles, sauce, jam and jelly. The estimates for these items are usually put in the 'miscellaneous food products' by the NSSO. The NSS estimates for these items have been added to its estimates of fruits(fresh), fruits(dry), and vegetables to arrive at a comparable estimate. Further, the estimated consumption of green coconut, which is classified under 'non-alcoholic beverages' by the NSSO, has also been included in the NSS estimate, as it is included in the NAS estimate of fruit consumption. It may also be noted that, to make the NSS estimate comparable with the NAS estimate for the 'vegetable' group, which includes consumption of floriculture produce, the NSS estimate for consumption of flowers has been included in this group. The NAS estimate also includes consumption of the produce of the kitchen gardens, since kitchen gardens are used mostly for growing of vegetables. *Table 17* presents an item-by-item comparison between the estimates of quantities and values of consumption, to the extent the classification schemes adopted by the two agencies permit.

The item-specific estimates from the two sources reveal that the big difference between the estimates for this group owes chiefly to the diverging estimates of fruit consumption. For the 'fruit' sub-group, as a whole, the NSS estimate falls shorter than the NAS estimate by a long way. In sharp contrast, for the 'vegetable' group, not only is the difference between the NSS and NAS estimates smaller but also the former is higher than the latter.

Item-wise comparison within the vegetable group shows that the NSS estimate of quantity of potato consumed, though higher, compare closely with that of the NAS, even as the implicit prices in the NAS estimates are higher than that in NSS estimates by about 20 per cent. In case of onion consumption, the NSS estimates of both quantity and value are substantially higher than those of the NAS.

Clearly, the 'fruits' sub-group is principally responsible for the major part of the big inter-agency difference between the estimates of quantity and value of consumption of 'fruits and vegetables and their products'. The relative standard errors (RSEs) for this sub-group, based on 28th Round data, were found to be rather high by Minhas (1988), but the divergence between the estimates from the two sources cannot be attributed to sampling error. The NSS estimates for mango, banana and cashew nut are by far less than the NAS estimates. For the NAS estimates, however, it is assumed that only 30 per cent of the market supplies for mango and none at all for the other two fruits are used in other industries as intermediate consumption.

For the NAS, the National Horticulture Board (NHB) is the main source for the production and price data for the fruits not covered in area and production statistics of the DESAg. The NHB compiles data on area, production and productivity through the State Horticulture Boards (SHB). It has, however, been noticed that there is a sizeable divergence between the figures the SHBs supply to the DES and those to the NHB. The primary data on prices of these fruits are collected by the NHB through 33 Market Information Centres spread over the wholesale markets of the country. But the price data the NBH thus collects relate to

wholesale prices rather than the prices representing the first point of sale. However, it is seen from the table in *Appendix I* that the implicit prices worked out from the NSS and NAS estimates of value and quantity do not vary significantly for mango.

The NAS estimates of 'fruits' consumption certainly deserves a closer scrutiny, particularly because it appears to be rather high as compared to estimates of cereals and pulses consumption, or, for that matter, those of vegetables and 'meat, fish and eggs' group. While the cereal and pulses consumption is estimated to be Rs. 78 thousand crore and Rs. 12 thousand crore respectively in the NAS, that for 'fruits' alone is Rs. 48 thousand crore. Moreover, the estimated consumption of fruits alone is found to exceed the consumption of vegetables and 'meat, fish and eggs' taken together.

On the other hand, apart from that the after-purchase wastages are not recorded in the HCES, there is a possibility that the reporting of fruits suffers severely from recall lapse in the HCES. Fruits consumed outside home, whether purchased or collected free, are most likely not captured in the HCES. As evidence one can take the example of banana, for which the production estimate used for deriving the NAS estimate is based on the data available from regular crop reporting scheme and thus is expected to be fairly reliable. But even for this fruit crop, the NSS consumption estimate is less than half of the NAS estimate. Apprehending the possibility of non-reporting of fruits consumption, a set of probing question: 'whether some specific fruits were consumed by any member of household' was introduced in the schedule of enquiry of the HCES, 43rd round. This was included in the HCES of the 50th round as well. There was, however, hardly any improvement in the NSS estimate of fruits consumption owing to introduction of these questions. Thus, on the one hand the NAS estimate of fruits consumption appears to be on the higher side, while on the other the NSS estimate seems to suffer from underestimation.

Tobacco

This is another item-group for which the NAS consumption estimates has always been substantially higher than the NSS estimates (*Table 18*). In fact, for 1993-94, the NSS estimate is only about a half of the NSS estimate for this item-group. The comparative study taken up earlier for the years 1972-73 and 1977-78 had also produced a similar observation. *Table 18*, however, reveals that the gap between the estimates for the year 1957-58 is a good deal narrower.

Table 18: Difference Between the NSS and NAS Estimates of Consumption of Tobacco in Different Years (Rs. Crore)

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1957-58	202	237	-14.77	-35	-294
1972-73	612	1117	-45.21	-505	1206
1977-78	1000	1533	-34.77	-533	-1657
1993-94	5877	12309	-52.25	-6432	- 97254

Table 19 gives the item-wise estimates of tobacco consumption from the two sources for the year 1993-94. Clearly, *'bidi'* and 'cigarettes' have major shares in the divergence between the estimates for this item-group. Of the total difference of about Rs. 6.5 crore owing to this sub-group, '*bidi*' and 'cigarettes' together account for Rs. 5.5 crore. Needless to say, the NSS estimates are likely to be on the lower side, as the data collected through interviews are expected to be adversely affected by under-reporting resulting from the inhibitions against consumption of tobacco. Moreover, in the HCES, information is usually collected from a member of the household, who is often unaware of tobacco consumption habits of the other members of the household.

Table 19:Itemwise comparison between NAS and NSS estimates of value of tobacco consumption (Rs. crore)

Item	NSS	NAS
Bidi	3750	6195
Cigarettes	1062	5350
Leaf Tobacco	508	1449
Snuff	33	456
Cheroot	140	139
Other Tobacco Products (incld. that for hookah and zarda)	385	572
Change in stocks	—	- 1852
Tobacco : total	**5877**	**12309**

Hotels and Restaurants

Till the 1970-71 series of the NAS, the item-group was classified in the category of services. Since the 1980-81 series this is taken as a part of the food consumption, as the receipts from sale of food constitutes a major share of the total receipts by the hotel and restaurant industry.

The NAS estimate for hotel and restaurant is obtained from the estimate of gross value added (GVA), which is based on the results of Enterprise Survey on hotel and restaurants. For estimating private consumption for this item, first, an estimate of output of hotel and restaurants is derived from the estimate of GVA. Out of the estimate of output thus arrived at, 33 per cent is assumed to form part of private consumption. Thus, the NAS estimate obviously includes the accommodation charges in addition to the value of food served by the hotels and restaurants. Moreover, hotels and restaurants not only serve meals to the consumers but also a variety other food items like tea, snacks and beverages. The NSSO, on the other hand, does not provide any estimate of consumption for this item-group as such. Instead it provides separate estimates of value of "cooked meals", snacks, beverages and "other processed food" purchased by the households. But, the entire value of the snacks, beverages and "other processed food" consumed by the households cannot be attributed to the restaurants. Thus the comparison here is restricted to the NAS estimate for 'hotels and restaurants' and the NSS estimate of purchased 'cooked meals',

Table 20: Difference Between the NSS estimate for purchased 'cooked meals' and NAS estimates for Hotel and Restaurant in Different Years (Rs. Crore)

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all food"
1972-73	839	444	88.96	395	1206
1977-78	1125	757	48.61	368	- 1657
1993-94	3765	6142	-38.70	-2377	- 91177

bearing in mind that comparability of these two estimates is severely constrained by the difference in coverage. These estimates for different years are placed alongside in *Table 20* to illustrate how the two estimates differ from each other.

It is seen that NSS estimate for this group was higher than the NAS estimate in both 1972-73 and 1977-78. But, for 1993-94 it is to the contrary. It is true that, owing to the larger coverage, the NAS estimate is expected to be higher. But difference of the order of 39 per cent cannot be explained by the receipts from accommodation charges. The results of the Enterprise Survey on hotel and restaurants, 1993-94, published by the CSO (1999) reveal that only about 9 per cent of the total receipts of hotels and restaurants were for accommodation charges and the rest largely for food served. However, the food served includes snacks and beverages that are not counted as "cooked meals" in the HCES. Thus, it is difficult to interpret the difference between the two estimates.

According to the general instructions for the HCES, all expenses incurred by the households are required to be recorded against one or the other item of the schedule of enquiry. Thus, it appears that the expenditure incurred by the households on accommodation in hotels and snacks and beverages served in restaurants as well as hotels are supposed to be captured respectively under the heads of 'other consumer services' and 'other processed food'. The 'Instructions for Field Staff' for the HCES of the 50th Round, however, do not contain any specific instructions about recording charges paid for accommodation in hotels.

4. Comparison of Estimates of Non-Food Consumption for 1993-94

Private final consumption expenditure other than that on 'food, pan, tobacco and intoxicants' constitutes consumption on fuel, 'clothing and footwear', 'other manufactured goods' and services. This is referred to as 'non-food consumption' through out the present study. Services and manufactured goods, in national accounting, are further classified according to their nature and use. In the HCES, household non-food consumer goods and services, other than fuel and 'clothing and footwear' are, by convention, classified into 'durable goods' and 'miscellaneous goods and services'. Using the detailed and disaggregated item-level NAS and NSS estimates for 1993-94, the individual items have been appropriately regrouped into comparable item-groups. The NSS estimates used for this purpose are based on the data collected in the HCES with 30 days reference period. *Table 21* presents the item-group

Table 21:Comparison of NAS and NSS estimates of consumption expenditure on different non-food item-groups for 1993-94 (Rs. Crore)

Item-group	NSS	NAS	NSS - NAS	% difference
1. Clothing & footwear	21382	34999	-13617	-38.91
2. Gross (house) rent & water charges	8179	46854	-38675	-82.54
3. Fuel & power	24527	21385	3142	14.69
4. Furniture, furnishings, appliances & services	6007	17610	-11603	-65.89
5. Medical care & health services	18221	19543	-1322	-6.76
6. Transport equipment & operational cost	7178	24592	-17414	-70.31
7. Transport services	8450	36143	-27693	-76.62
8. Communication	1048	4258	-3210	-75.39
9. Recreation, Education & Cultural services	11811	17626	-5815	-32.99
10. Misc. goods & services	24901	36519	-11618	-31.81
Total non-food	**131704**	**259529**	**-127825**	**-49.25**
Total consumption expenditure	**355771**	**574772**	**-219001**	**-38.10**

level magnitude of divergence in terms of the extent by which the NSS estimate exceeds the NAS estimate and the difference expressed as percentage of the latter.

Apparently, the NSS estimate for non-food consumption is only about a half of the NAS estimate. But, as discussed in Section 2, the NAS estimate includes two important components of consumption that cannot be obtained directly from the reported consumption of the households, and are thus called 'notional' in the present study. The NAS estimate of 'gross rent' includes the notional element of imputed rent of owner-occupied dwellings, that of 'furniture, furnishings, appliances and services' includes the notional element of non-life insurance services and the residual category 'miscellaneous goods and services' includes the notional element of FISIM embodied in the banking and insurance services. Evidently, a valid comparison between the two sets of estimates requires adjustment of the NSS estimate for the notional elements that are not included in the NSS-based estimate of aggregate consumption.

Having adjusted the NSS estimates for the items house rent, banking services and insurance services by replacing them by the NAS estimates (*Table 22*), it is seen that the NSS estimate for non-food adjusted for the notional elements is less than the NAS estimate by only Rs. 79 thousand crore, which is 30.33 per cent of the latter. The difference between the estimates for total consumption expenditure reduces from Rs. 219 thousand crore to Rs.170 thousand crore, i.e. from 38.10 per cent to 29.56 per cent, as a result of the adjustment. The difference between NAS and NSS estimates for the item-group 'Gross rent & water charges' comes down from 83 per cent to just 3 per cent and that for the item-group 'Miscellaneous goods and services' gets virtually wiped out.

Table 22: Comparison of NAS and NSS estimates of different items of non-food consumption for 1993-94 adjusted for the notional elements (Rs. Crore)

Item-group	Adjusted NSS	NAS	NSS - NAS	% difference
1. Clothing & footwear	21382	34999	-13617	-38.91
2. Gross (house) rent & water charges	45476	46854	-1378	-2.94
3. Fuel & power	24527	21385	3142	14.69
4. Furniture, furnishings, appliances & services	6055	17610	-11555	-65.62
5. Medical care & health services	18221	19543	- 1322	- 6.76
6. Transport equipment & operational cost	7178	24592	-17414	-70.81
7. Transport services	8450	36143	-27693	-76.62
8. Communication	1048	4258	-3210	-75.39
9. Recreation, Education & Cultural services	11811	17626	-5815	-32.99
10. Misc. goods & services	36655	36519	136	0.37
Total non-food	**180803**	**259529**	**-78726**	**- 30.33**
Total consumption expenditure	**404869**	**574772**	**- 169903**	**- 29.56**

Comparison of individual item-groups reveals that for all item-groups, except 'fuel and light', the NAS estimate is much higher than the NSS estimate. The two item-groups that account for the major part of the divergence between the NAS and the adjusted NSS estimates are the 'transport services' and 'transport equipment & operational cost'. Together they account for Rs. 45 thousand crore out of a total difference of Rs. 79 thousand crore for the non-food consumption, i.e. about 57 per cent of the excess of NAS estimate over the NSS estimate. The two item-groups 'clothing and footwear' and 'furniture, furnishings, appliances & services' also contribute substantial amounts of about Rs. 14 thousand crore and Rs. 12 thousand crore respectively towards the divergence between the two estimates.

Table 22 reveals that the NAS and NSS estimates for the item-group 'medical care & health services' differ little. This is because, the NAS estimate for this item-group is derived from the per capita consumption expenditure available from the HCES of the NSS 50th Round (1993-94). To the aggregate household consumption expenditure based on NSS estimate, the receipts of Central Government on account of Central Government Health Scheme (CGHS) are also added to arrive at the NAS estimate. The addition of CGHS contribution, however, appears to be duplication, since the monthly CGHS contribution of the Central Government employees is included in the NSS estimate, according to the 'Instruction to Field Staff' for the 50th Round. The NAS estimate for this item-group could be overestimated in this respect. Even so, the private consumption expenditure on health and medical services is likely to be actually higher than the NAS estimate, as the consumption of the NPISHs is not included in it. The share of NPISHs in the PFCE is expected to be substantial in the fields of health and education.

Before turning our attention to comparison of the estimates of individual item-groups, it is necessary to describe the general method of deriving the NAS estimate of private consumption of manufactured goods. For NAS estimates on non-food consumption, varying approaches are adopted for different item-groups. The estimates for the manufactured goods are obtained by the commodity flow approach, while those for fuel and services are derived by varying other approaches. The commodity-wise value of consumption of manufactured goods is derived from the estimate of value of production, by applying various ratios and norms representing (i) percentage share of consumables, (ii) gross distributive margins, (iii) percentage shares used for fixed capital formation and inter-industry consumption and (iv) Government consumption. For the registered manufacturing, the commodity-wise shares of consumable items in the total output (of product and by-product) have been obtained from the detailed results of ASI for the year 1993-94. For the unregistered manufacturing, product and by-product ratio to value added have been worked out from the Enterprise Survey on Unorganised Manufacturing, 1994-95. The percentage shares of capital formation are based on the norms worked out on the basis of the results of All India Debt and Investment Survey, 1981-82. Lastly, the data on government consumption are available every year from the budget documents.

Clothing and Footwear

The difference between the estimates for 'clothing & footwear' group account for a difference of more than Rs. 13.5 thousand

Table 23:Difference Between the NSS and NAS Estimates (Rs. crore) of Consumption of clothing and footwear in Different Years

Year	item	NSS	NAS	% Difference	Difference for the group	Difference for "all non-food"
1957-58	Clothing & Footwear	941	997	-5.62	-56	273
1960-61	Clothing & Footwear	971	1064	-8.74	-93	561
1967-68	Clothing	1148	1592	-27.89	-444	—
	Footwear	114	168	-32.14	-54	—
	Clothing & Footwear	1262	1760	-28.30	-498	- 3480
1972-73	Clothing	2319	2563	-9.52	-244	—
	Footwear	163	192	-15.10	-29	—
	Clothing & Footwear	2482	2755	-9.91	-273	- 2823
1977-78	Clothing	5068	5888	-13.93	-820	—
	Footwear	407	353	15.30	54	—
	Clothing & Footwear	5475	6241	-12.27	-766	- 4645
1993-94	Clothing	18203	30937	-41.16	-12734	—
	Footwear	3179	4062	-21.74	-883	—
	Clothing & Footwear	21382	34999	-38.91	-13617	- 78726

Note: Sources are same as that for *Table 1*.

crore, out of a difference of Rs. 79 thousand crore for non-food consumption as a whole for 1993-94. The NSS estimate of clothing and footwear has always been less than the NAS estimate (*Table 23*). Initially, in 1957-58 and 1960-61, when the NSS estimate of non-food consumption exceeded the corresponding NAS estimate, the NSS estimate for 'clothing and footwear' was less than the NAS estimate by about 7 and 9 per cent respectively. In 1967-68, the gap between the estimates for the group as a whole widened to 28 per cent. In the following decade, the gap closed substantially, only to grow wider to about as high as 39 per cent in 1993-94.

In national accounting, the estimates for clothing are prepared separately for cotton, silk and woollen fabrics and miscellaneous textiles. In the 1980-81 series of NAS estimates, the data of the Office of the Textile Commissioner was used for estimation of private consumption. In the present 1993-94 series, the estimates of private consumption of textile products, consistent with the GDP estimates, are based on the results of ASI, Enterprise Survey and the Second All India Census of Small Scale Industrial Units, 1987-88.

Fuel and Light

For this item-group the difference between the NAS and NSS estimate for 1993-94 is higher than NAS estimate by Rs. 3142 crore. The item sub-groups 'firewood & chips', 'electricity', 'kerosene' and 'L.P.G' are mainly responsible for the difference between the two estimates of 'fuel & light'. The NSS estimate of consumption expenditure on fuel and light has always been higher than that of the NAS. The gap between the two estimates, it is seen from *Table 24*, has progressively closed from 130 per cent in 1957-58 to just 15 per cent in 1993-94. In 1972-73, the NSS estimate was higher than the NAS estimate by about 49 per cent and in 1977-78 by about 62 per cent.

Separate estimates of consumption of different items of fuel and light in 1993-94 are available from both the sources. These are given in *Table 25*, in which the item 'others' stands for 'other fuel & light' for the NSS estimate and 'vegetable wastes and bagasse' for the NAS. Vegetable waste, in the NAS estimate, consists of the estimated private consumption cotton sticks, jute sticks and *arhar* sticks. A detailed comparison of the estimates for the constituents of domestic fuel consumption for 1993-94 is taken up in the following paragraphs.

It is seen from *Table 25*, that, as in 1972-73 and 1977-78 (Minhas *et al*, 1986), 'firewood and chips' is still the single major fuel item that accounts for about 40 per cent of the total expenditure of the group as a whole. Out of the difference of Rs. 3142 crore for 'fuel & light', Rs. 1290 owes to the difference between the estimates for this item of fuel consumption. The estimates of firewood consumption in the NAS series earlier to 1980-81 were based on the firewood production data available from the offices of the Chief Conservator of Forests in various states, adjusted upwards for the illegal felling not reported by the official sources. Since the 1980-81 series, however, the NAS consumption estimates of firewood are based on the consumption data available from the HCES of the NSSO. In the 1993-94 series, the NAS estimate firewood production is derived from the NSS estimate of household fuel wood consumption by deducting from it the value of agricultural waste and bagasse used as fuel wood (since it is included in the agricultural production as by-products) and

Table 24:Difference Between the NSS and NAS Estimates (Rs. crore) of Consumption of Fuel and light in Different Years

Year	item	NSS	NAS	% Difference	Difference for the group	Difference for "all non-food"
1957-58*	Total fuel & light	597	260	129.62	337	273
1960-61*	Total fuel & light	721	284	153.87	437	561
1972-73	*Electricity*	*102*	*82*	*24.39*	*20*	
	L.P.G	26	17	52.94	9	
	Kerosene	308	401	-23.19	-93	
	Other fuel	1370	715	91.61	655	
	Total fuel & light	1806	1215	48.64	591	- 2823
1977-78	*Electricity*	*233*	*272*	*-14.34*	*-39*	
	L.P.G	64	67	-4.48	-3	
	Kerosene	655	538	21.75	117	
	Other fuel	2471	1238	99.60	1233	
	Total fuel & light	3423	2115	61.84	1308	- 4645
1993-94	*Electricity*	*4797*	*3926*	*22.19*	*871*	
	L.P.G	1961	1521	28.93	440	
	Kerosene	3648	2906	25.53	742	
	Other fuel	14121	13032	8.36	1089	
	Total fuel & light	24527	21385	14.69	3142	- 78726

adding the estimated value of firewood used in the funerals. The difference between the estimates of firewood consumption owes to the adjustments made for the NAS estimate under the assumption that vegetable wastes, bagasse are included, while fire wood used in funerals are not included in the NSS estimate for 'firewood & chips'. But, it is not clear from the 'Instructions to Field Staff' for the 50th Round, whether the value of vegetable wastes and bagasse used as fuel for domestic purposes is included in the NSS estimate for 'firewood & chips' or 'other fuel and light'. Moreover, whatever is deducted from the NSS estimate of 'firewood & chips', for arriving at the estimate of firewood production, ought to be added back as 'vegetable waste and bagasse' to the estimate of consumption of 'fuel and light'. But, while deriving the NAS estimate of private consumption of 'vegetable waste and bagasse', a part of the value that is deducted for estimating the production of firewood is taken as intermediate consumption and thus is not added back.

The other items having large shares in the difference between the estimates of 'fuel and light' are electricity, kerosene and L.P.G. For all these items, the NSS estimates of quantity consumed are substantially higher than the NAS estimates. Differences between the estimates of values of consumption are more pronounced for the items 'electricity' and 'L.P.G.', the implicit prices in the NSS estimates being higher than the price at which

Table 25: Comparison between NAS Estimates and NSS Adjusted and Unadjusted Estimates of Consumption of Fuel and Light in 1993-94 (Rs. Crore)

Item	NSS		NAS		Difference (NSS - NAS)	NAS adjusted by NSS price	Adjusted difference
	Quantity	Value	Quantity	Value			
Coke (000 tonnes)	1594	166	175	22	144	18	148
Firewood, chips	—	10053	—	8763	1290	8763	1290
Electricity (MKwh)	45856	4797	43344	3926	871	4551	246
Dung cake	—	2835	—	2797	38	2797	38
Kerosene (Mlt.)	9496	3648	7294	2906	742	2801	847
Coal (mill. Tonnes)	2809	274	2659	379	-105	261	13
Coal gas / gas coke	—	6	—	6	0	6	0
L.P.G (000 tonnes)	2846	1961	2503	1521	440	1725	236
Charcoal (000 tonnes)	195	28	580	294	-266	84	-56
Other oils for lighting	—	33	—	—	33	—	33
Candles	—	92	—	—	92	—	92
Gobar gas	—	43	—	412	-369	412	-369
Others	—	591	—	359	232	359	232
Total fuel & light	**—**	**24527**	**—**	**21385**	**3142**	**21776**	**2751**

Note: 'Others' stands 'other fuel & light' for the NSS estimate and 'vegetable wastes, bagasse, etc.' for the NAS.

the NAS estimates of quantity consumed are evaluated. The NAS estimates of quantity and value of private electricity consumption are based on the data on electricity sold to domestic consumers and average electricity rates available from the Central Electricity Authority. For L.P.G and kerosene, the data on quantity and retail prices are taken from "Indian Petroleum and Petrochemicals Statistics" by Ministry of Petroleum and Natural Gas. The prices used for evaluating the consumption in NAS are obtained from the official sources and thus represent the prices set by the regulatory authorities, rather than the prices actually paid by the consumers. The prices implicit in the NSS estimates of quantity and value of electricity and L.P.G, on the other hand, are expected to be closer estimates of average prices actually paid by the customers, which vary not only between States but also from one area to another. Evaluating the NAS estimates for quantities, where ever possible, by the implicit prices of the NSS estimates brings the two sets of estimates of value a little closer.

Furniture, Furnishing, Appliances and Services

This item-group consists of a wide variety of consumer goods and services. In the NAS, this is further classified into the sub-groups of 'furniture, furnishing & repairs', 'refrigerator, cooking and washing appliances', 'glassware, tableware and utensils' a residual category of 'other goods' and 'services consumed at the household level'. For 1993-94, the NAS estimate for this group as a whole is found to be substantially higher than the NSS estimate. In 1972-73 and 1977-78 too the NAS estimate for this group was higher than the NSS estimate, but the difference between the two was less pronounced (*Table 26*).

Table 26: Difference Between the NSS and NAS Estimates (Rs. Crore) of Consumption of furniture, furnishing, appliances and services in Different Years

Year	NSS	NAS	% Difference	Difference for the group	Difference for "all non-food"
1972-73	652	1003	-35.00	-351	- 2823
1977-78	1480	1984	-25.40	-504	- 4645
1993-94	6007	17610	-65.89	-11603	- 78726

From the detailed item-wise comparison of the estimates for 1993-94 given in *Table 27*, it is seen that the sub-group of 'glassware, tableware and utensils' is the main contributor towards the group-level divergence between the two sets of estimates. More than a half of the group-level difference of Rs. 11.6 thousand crore is accounted for by this sub-group, with the item 'other metal / household utensils' contributing about Rs. 3.7 thousand crore. The residual sub-group of 'other goods' too has a significant contribution to the group-level divergence between the estimates.

The sub-group 'services' of this group covers two categories of services, viz. (i) domestic and laundry services and (ii) non-life insurance services. The latter is not covered in the HCES, as its worth cannot be directly evaluated from the data collected from the customer households. Among the domestic services, the value of services provided by the domestic helps is clearly underestimated in the NSS, owing to two distinct reasons. First, the "cooked meals" served to the domestic servants are not recorded as consumption of services in the HCES but as expenditure on food in the employer household. Second, even the wages paid in cash to the whole-time domestic servants, who in the NSS surveys are treated as household members of the employer households, were not recorded as consumption expenditure of the latter.[6] The large difference between the estimates for domestic services, at least partially, owes to the omissions in the HCES mentioned above. In the NAS, the estimates for domestic services are based on the results of the Enterprise Survey on Services, 1991-92. This survey did not provide separate estimates for the domestic services, thus the Enterprise Survey estimate for the entire group of personal services was applied for obtaining the estimates of its value added and consumption. The NAS estimate for domestic services may thus be on the higher side, as the domestic servants are likely to earn less than the workers engaged in providing personal services.

[6] The salary & wages paid in cash to the full-time domestic servent have, however, been included in the consumption expenditure of the employer household, for the first time, in the HCES is the 55th round (1999-2000) of NSSO.

Table 27: Comparison between NAS and NSS Estimates of Consumption of Furniture, furnishings, appliances and services in 1993-94 (Rs. Crore)

Items	NSS	NAS	difference	% difference
Carpet	581	14	-567	-97.59
Coir product	4	54	50	1250.00
Wooden & steel furniture	727	648	-79	-10.87
Furniture, furnishing & repairs	1312	716	-596	-45.43
Non-electrical mach.	248	235	-13	-5.24
Electrical mach.	782	667	-115	-14.71
Refg'tr & AC	529	336	-193	-36.48
Freeze, cooking, washing appliances	1559	1238	-321	-20.59
Glass & glass product	514	44	-470	-91.44
Earthenware & chinaware	1864	157	-1707	-91.58
Metal utensils	1543	978	-565	-36.62
other metal / household utensils	3758	90	-3668	-97.61
Glassware, tableware & utensils	7679	1269	-6410	-83.47
Matches	1917	619	-1298	-67.71
Misc. personal goods	376	594	218	57.98
Plastic products	580	113	-467	-80.52
Rubber products	122	14	-108	-88.52
Batteries	694	100	-594	-85.59
Other goods	3689	1440	-2249	-60.97
Domestic services	2051	813	-1238	-60.36
Laundries, dry cleaners	1272	531	-741	-58.25
Insurance	48	x	—	—
Services	3371	1344	-2027	-60.13
Furniture, furnishings, appliances & services	**17610**	**6007**	**-11603**	**-65.89**

Transport

This head includes two item-groups, viz. (i) purchase and repairs of transport equipment and (ii) consumption of transport services, and accounts for a major part of the difference between the NAS and NSS estimates of non-food consumption. Of the difference of Rs. 77 thousand crore between the two estimates for the non-food consumption in 1993-94, Rs. 45 thousand crore is due to the difference between the estimates for this head. Divergence between the estimates for this head has been high even in the past. *Table 28* shows that the divergence, which was of the order of 32 per cent in late 1950s, had widened to over 60 per cent by the early 1970s, and then continued to grow from 71 per cent in 1977-78 to a shade under 75 per cent in 1993-94.

Table28: Difference Between the NSS and NAS Estimates (Rs. Crore) of Consumption of transport in Different Years

Year	item	NSS	NAS	% Difference	Difference for the group	Difference for "all non-food"
1957-58	**Transport: total**	**160**	**236**	**-32.20**	**-76**	**273**
1972-73	transport equipment	117	381	-69.29	-264	—
	transport services	489	1257	-61.10	-768	—
	Transport: total	**606**	**1638**	**-63.00**	**-1032**	**- 2825**
1977-78	transport equipment	211	853	-75.26	-642	—
	transport services	900	2971	-69.71	-2071	—
	Transport: total	**1111**	**3824**	**-70.95**	**-2713**	**- 4645**
1993-94	transport equipment	7178	24592	-70.81	-17414	—
	transport services	8450	36143	-76.62	-27693	—
	Transport: total	**15628**	**60735**	**-74.27**	**-45107**	**- 78726**

For all the years since 1972-73 presented in the table, the percentage difference between the estimates for the two item-groups was of similar order. But, the share of 'transport services' in the estimates of non-food consumption as a whole being higher, its contribution to the divergence too is of greater significance. The item-group 'transport services' alone is responsible for over a third of the divergence observed between the NAS and NSS estimates of total non-food consumption for 1993-94.

Transport Services

Table 29 gives a detailed comparison between the NAS and NSS estimates of consumption of different types of transport services for 1993-94. It is seen that the NSS estimate for this group falls short of the corresponding NAS estimate by about 77 per cent. Of the nominal difference of Rs. 28 thousand crore between the two estimates, expenditure on account of bus (including tram) fare account for Rs. 12 thousand crore and that on account of taxi and auto-rickshaw fare Rs. 11 thousand crore. In fact, the estimates of taxi and auto-rickshaw fare available from the sources are so different that the NSS estimate is only about one-twentieth of the NAS estimate.

Table 29:Comparison between NAS and NSS Estimates (Rs. Crore) of Consumption of Transport Services in 1993-94

Items	NSS	NAS	difference	% difference
Air fare	31	170	-139	-81.76
Rail fare	1030	3913	-2883	-73.68
Bus (including tram) fare	6058	18296	-12238	-66.89
Taxi, auto-rickshaw fare etc.	596	11447	-10851	-94.79
Others with incidental services	735	2317	-1582	-68.28
Transport services: Total	**8450**	**36143**	**-27693**	**-76.62**

In national accounting, estimates of total passenger earnings are worked out separately for each mode and a proportion of each is attributed to private consumption. For rail, air and organised water transport the data are directly available from the annual reports. Of the gross passenger earnings, 80 per cent for rail, 15 per cent for air are taken as private consumption. For the other modes of mechanised road transport, the gross passenger earnings are estimated as the product of an estimated average 'earnings per vehicle' and total number of vehicles available from the Ministry of Surface Transport (MoST). Of the gross passenger earnings, 50 per cent for taxi, 90 per cent each for auto rickshaws and buses are taken as private consumption.

The NSS estimate includes expenditure incurred on account of journeys undertaken and transportation of goods made by air, rail, bus, steamer, car, taxi, and other mechanised and non-mechanised means of conveyance. It includes all expenses on account of conveyance for the households' domestic purposes and excludes that incurred for official and business purposes. Thus, leaving aside the consumption of NPISHs, the NSS estimate are in principle exactly comparable with the NAS estimate, but for the fact that the NAS does not include transportation of goods made by the private consumption units, which undeniably forms an insignificant part of the whole.

Yet, the NSS estimates are by far lower than the corresponding NAS estimates. Clearly, the NSS estimates for air and rail appear to be on the lower side, as the NAS estimates are based on reliable accounting data of gross receipts. The earlier study for the years 1972-73 and 1977-78 (Minhas, 1988) also recognised the possibility of underestimation of conveyance charges in the HCES. Consequently, in an attempt to ensure that the expenses under this head are not missed during the interviews, an additional set of questions relating to journeys undertaken during the reference period by the household members was introduced in the schedule of enquiry of the HCES of 43rd Round (1987-88), which was continued in the 50th Round HCES as well. On the other side, the ratios used for arriving at the NAS estimates of private consumption from the gross earnings were revised to make them more realistic. Despite that, the gap between the two sets of estimates has not only persisted but also widened over the years. Thus, besides investigating for the reasons for under-reporting in the HCES, the following issues needs to be investigated further to validate the NAS estimates:

- The estimates of number of vehicles available from the MoST are based on registration of vehicles. Do they represent the actual number in operation?
- Validity of the estimates of per vehicle earnings used at present for the NAS estimate?
- Validity of the assumed ratios of private consumption of these services used for deriving the NAS estimates.

Transport equipment and operational cost

Table 30 gives the comparable item-wise estimates of 'transport equipment and operational costs', as available from the two sources for 1993-94. It is seen that the NSS estimate for this group is less than one-third of the corresponding NAS estimate. Of the nominal difference of Rs. 17 thousand crore between the two estimates, the fuel costs account for Rs. 12 thousand crore. The NSS

Table 30: Comparison between NAS and NSS Estimates of expenditure on Transport equipment & operational costs in 1993-94 (Rs. Crore)

Items	NSS	NAS	difference	% difference
purchase	*222*	*825*	*-603*	*-73.09*
repairs	*87*	*552*	*-465*	*-84.24*
Motor vehicles & parts: total	309	1377	-1068	-77.56
purchase	*1352*	*1469*	*-117*	*-7.96*
repairs	*1416*	*2318*	*-902*	*-38.91*
Mobike, scooter & cycle: total	2768	3787	-1019	-26.91
Other transport equipment including repairs	29	—	29	—
Repairs services	247	3489	-3242	-92.92
equipment & repairs	***3353***	***8653***	***- 5300***	**- 61.25**
Tyres & tubes	209	735	-526	-71.56
Road tax	* 663	102	561	550.00
Petrol & diesel	2953	15102	-12149	-80.45
Operational costs: total	***3825***	***15939***	***-12114***	***-76.00***
Transport equipment & operational cost	**7178**	**24592**	**- 17414**	**- 70.81**

Note *: This includes all consumer taxes and cess

estimate of fuel costs is only about a fifth of the NAS estimate.

This group includes expenses incurred for purchase and repairs of owned transport equipment and their operational costs, viz. expenses incurred for replacement of tyres and tubes, purchase of fuel and taxes. The NSS estimate of taxes, however, includes all consumer taxes, besides the road tax. On the other hand, the NAS estimate does not include the purchase and operation of animal- and man-driven transport equipment and animals used exclusively or partially for conveyance for non-productive domestic purposes, which are included in the NSS estimate. The NSS estimate of purchase and operation of such transport equipment is given in the table against 'other transport equipment including repairs', which, as it can be seen, is a relatively small amount. As for the mechanised transport equipment, it is seen that the estimates of purchase of two-wheelers (including bicycle) compare closely with each other, but those of motor cars and their parts differ by about 75 per cent. From the persistent differences between the NAS and NSS estimates observed in the past, it was suspected that the household expenditure on durables was not fully captured in the NSS estimates, as the expensive durables were purchased more by the relatively affluent households, which were not adequately represented in the NSS sample. To improve the efficiency of consumer expenditure estimates, therefore, a sampling design oriented towards capturing larger proportion of the affluent households in sample was adopted for the HCES both in the 43rd Round (1987-88) and the 50th Round (1993-94). In spite of that, the difference between the estimates of purchase of car continues to remain high.

In addition to repair costs of the owned vehicles, the NAS estimate includes "repair

services" (NIC 97). This appears to be a duplication of repair costs of owned vehicles, since NIC 97 includes repairs of mechanised transport equipment as well. The PFCE for repair services (activity division code 97 of NIC 1987) is estimated as Rs. 3489 crore and it includes repairs of transport equipment. In addition, the repair costs for each type of mechanised transport equipment is also included in the NAS estimate, which together amounts to Rs. 2,870 crore. Had the entire contribution of NIC division 97 in NAS estimate not been included in this group, the percentage difference between two estimates for 'Transport equipment & operational cost' would have been 67 per cent rather than 72 per cent.

Transport equipment in the NSS is covered under the broad group of items called 'durables' used for household purposes. Expenditures incurred on first-hand purchase, repair, construction and construction of durables used for domestic purposes are included under this head. On the other hand, the expenditure on tyres, tubes and fuel are covered in the broad group called 'conveyance'. For the present study, the items have been appropriately regrouped to make the estimates comparable with theNAS estimates. The NSS estimate of total value of transport equipment (in fact, for all household durables) includes the value of raw materials, services and labour charges spent for construction and their repairs. There is, however, a little ambiguity in the "Instruction to Field Staff, Vol. I' of the 50th Round in this respect. While it clearly instructs that all costs of repairs of vehicle should be recorded under the head of transport equipment, it also states that the expenditure incurred on account of servicing of owned conveyance should be recorded as 'repair charges', which is a head mainly meant for recording the service charges paid to artisans for repairing of all items used as domestic consumption. Thus, the 'repair charges' in the NSS estimate is likely to include a small part of repair charges for the transport equipment as well.

In national accounting, the estimate of purchase of vehicles by the private households and NPISHs are derived by commodity flow approach, while those of repair services and maintenance costs pertaining to owned transport are derived as the product of per vehicle average cost per year and number of vehicles. The per vehicle average cost is estimated on the basis of the allowance prescribed for computing rebate on income tax in respect of repairs and maintenance of different vehicles. The average costs are estimated separately for repairs and fuel consumption. The estimates of number of cars and two-wheelers other than bicycles are available from the MoST. The estimate of number of bicycles is derived from the production data under the assumption of an average road life of ten years.

Table 31: Comparison between the Estimated number of Transport Equipment for Own Use possessed by the Households

vehicle	NSS estimate of average number of vehicles per 1000 hhs.		estimated number of vehicles (000) possessed	
	rural	urban	NSS	MoST
Motor Cycle, Scooter	22	127	8,876	18,899
Motor Car, Jeep	2	13	876	2,654

Evidently, the reliability of the NAS estimate depends not only on the validity of the assumptions made regarding share of the private consumption in the total production of motor vehicles and the per vehicle average costs of repairs and fuel, but also on the reliability of the estimates of number of different kinds of vehicles on which the NAS estimate is based. The average number of vehicles of different kinds of vehicles possessed by the households is also estimated from the HCES. *Table 31* gives the comparable estimates of the number of vehicles as estimated from the HCES of the 50th Round (July 1993- June 1994) and those based on the official figures made available by the MoST. The latter are used for deriving the estimates of repairs and fuel costs in the NAS. The NSS estimates for mechanised transport equipments for private domestic use, it is seen, are much lower than the corresponding estimates available from the MoST.

Recreation, Education and Cultural Services

This group includes a wide variety of goods like equipment for sports and entertainment, stationery, books and other reading materials and musical instrument on the one hand and educational, recreational and cultural services on the other. It is seen (*Table 32*) that the NSS estimate of expenditure on this item-group as a whole in 1993-94 is only about two-thirds of the NAS estimate. For the group as a whole, the NSS estimates for 1972-73 and 1977-78 were also substantially lower than the corresponding NAS estimates.

***Table 32*: Difference Between the NSS and NAS Estimates (*Rs. crore*) of Consumption of Recreation, Education and Cultural services in Different Years**

Year	item	NSS	NAS	% Difference	Difference for the group	Difference for "all non-food"
1972-73	education	347	790	-56.08	-443	—
	others	256	612	-58.17	-356	—
	total	603	1402	-56.99	-799	-2823
1977-78	education	492	1214	-59.47	-722	—
	others	808	870	-7.13	-62	—
	total	1300	2084	-37.62	-784	-4645
1993-94	education	5362	10092	-46.87	-4730	—
	others	6449	7534	-14.40	-1085	—
	total	11811	17626	-32.99	-5815	-78726

For recreation and entertainment services, the estimates are built up on the basis of rates of entertainment taxes and revenues of the State Governments under this head. In the above table these items are included in 'others', and the difference between the estimates for which is relatively low. The main contributor to the divergence between the NAS and NSS estimate for this item-group is 'education'. The NSS estimate for education includes expenses incurred on tuition fees, private tuition, books etc. by the households. The NAS estimate, in addition, covers the expenses of the NPISHs on education and

related activities. The difference between the estimates on education is thus expected to be substantial, as the NPISHs have fairly large share in educational activities.

5. Concluding Remarks and Suggestions

While summing up the findings of the comparison of NAS and NSS estimates of food and non-food consumption, first it is worth stressing that a substantial part of the apparent divergence owes to the 'notional' elements like imputed rent and FISIM in the NAS estimate. Inclusion of these elements in the NSS estimate, it may be recalled, brings about a reduction of nearly 8.5 percentage points out of the overall difference of 38 per cent.

The other important factor responsible for the divergence is the differential implicit prices. As observed by Minhas *et. al.* (1986), a substantial part of the difference between the NAS and NSS estimates for the years 1972-73 and 1977-78 could be explained by the differences in implicit prices of various consumer goods. For 1993-94, however, only a small part (0.67 percentage points) of the difference between the estimates of total consumption expenditure is attributable to the differential implicit prices of food items and fuel. The NSS estimates adjusted for the 'notional' elements and the NAS estimates adjusted for prices are given in *Appendix II*. It is seen that the adjustment, on the whole, closes the gap by about 9.21 percentage points, leaving a difference of about 29 per cent unreconciled. The detailed item-by-item comparison of the NAS and NSS estimates undertaken in the preceding sections reveals other underlying reason for the divergence between the two sets of adjusted estimates.

What emerges from the detailed comparison of the two sets of adjusted estimates is that the divergence between the aggregate estimates of consumption expenditure owes principally to the divergence between the estimates for a few specific sub-groups of food and non-food items. The major contributors towards the divergence between the estimates of expenditure on food are the 'fruits', 'milk products', 'chicken', 'eggs' and 'fish', minor cereals and their products, '*vanaspati*', oilseeds and the sub-group 'tobacco'. The other significant difference between the NAS and NSS estimates is in the sub-group 'sugar and *gur*'. These items together account for 27.16 percentage points out of the total difference for food items of 27.58 per cent.

More significantly, the NAS and NSS estimates for the important sub-groups of food items like major cereals, more commonly used pulses and edible oils, liquid milk and vegetables do not differ much. The gaps between the NSS and NAS estimates for these sub-groups are so narrow that they could as well be caused by the differences in coverage, sampling errors and those relating to differences in reference time-frames.

As for the divergence between the estimates for non-food consumption, two item-groups, viz. 'transport services' and 'transport equipment and operational cost' account for the major part of the divergence between the adjusted NAS and NSS estimates. Together they account for Rs. 45 thousand crore out of a total difference of Rs. 164 thousand crore between the NAS and NSS estimates of consumption expenditure in 1993-94. The two item-groups 'clothing and footwear' and 'furniture, furnishings, appliances & services' also contribute substantial amounts of

about Rs. 14 thousand crore and Rs. 12 thousand crore respectively towards the divergence between the two sets of estimates. Apart from the item-groups for which estimates have been adjusted or the NAS estimate is based on the NSS estimate, for most of the item-groups the estimates from the two sources differ by about 70 per cent. Only for 'clothing & footwear' and 'recreation, education and cultural services' the difference between the estimates, though still large, is not as wide - the NSS estimate is less than the NAS estimate by 39 and 33 per cent respectively.

Comparison between the item-wise estimates made in the earlier sections help to identify a multiplicity of underlying factors responsible for the wide divergence between the two sets of estimates. It also leaves differences between estimates for some of the item-groups unreconciled, thereby demarcating the relatively weak areas of the statistical system. That some items are being under-reported in the HCES appears to be quite a conceivable possibility, though it requires to be substantiated by adequate evidences. Some errors are also possibly inherent in the NAS estimates as they depend on an assortment of direct and indirect estimates of output along with various rates and ratios, some of which are based on the results of studies carried out in distant past. Needless to say, these need to be updated so that they represent the changed technological / physiological conditions more appropriately. The following are some suggestions for improvement in the methods of deriving NAS estimates and data collection in the HCES. Besides the suggestions for improvement, certain studies on validity of the available database and exploring for alternative methods are also proposed below:

1. The available estimates of average prices, whether peak-season or wholesale or retail, are based on the data collected in the regular price collection schemes. Commodities transacted in the market vary in quality over a wide range. But, for each commodity, prices of only a fixed set of specified qualities are collected in the price collection schemes, notwithstanding the changes in the market shares of different qualities that take place over time. The NSS implicit prices, on the other hand, represent the average price of the commodities appropriately weighted by the actual shares of different qualities in the current consumption basket. Apart from the price data available from the regular price collection system, the CSO uses price data from various other sources while deriving the NAS value estimates. For example, the data source like CEA is used for price of electricity, Ministry of Petroleum and Natural Gas for price of L.P.G. and kerosene and the NHB for prices of non-forecast fruit crops. Often, just a marking-up rate (for example, for the price of *dal* obtained from 'retained' grains) is applied on the price of a product to estimate the price of its derivatives. Thus, the prices used for NAS estimates may often not be appropriate for evaluating the value of consumption. Instead, use of NSS implicit prices for deriving NAS value estimates would be more appropriate. For this purpose, the NSS implicit prices can be generated from the data collected in the HCES, separately for consumption out of home-grown stock and that out of quantity purchased. The feasibility of deriving NAS value esti-

mates using NSS implicit prices requires a comprehensive study.

2. The accuracy of the NAS estimates, being derived by commodity flow approach, depends heavily on the accuracy of rates, ratios and norms applied on the production estimates for netting out the amounts used for further production in the form of seeds, feeds and inter-industry consumption. The NAS estimates also depend on the estimated ratio of marketable surplus. The rates used for allocating the production of durables to the households and industry are largely based on subjective judgements. For example, the ratios assumed for estimating private consumption of rail and bus services is based entirely on subjective judgements. These need to be replaced by proper estimates based on objective studies.

3. The data on change in stock used at present are not appropriate on two counts. First relates to nonconformity of the reference periods. While the reference period of production data for all agricultural produce is the agricultural year, the data on change in stock for the public sector are based on the data on stocks at the beginning and end of the financial year available from the budget documents and annual reports. Second, there is hardly any data on change in stock for the household sector. So far the enterprise surveys have failed to provide useable estimates of change in stock. Thus, special studies need to be undertaken to explore alternative ways of estimating the change in stock in the household sector.

4. At present, no provision is made for intermediate consumption of food items like cereals, pulses, *gur* and sugar, chickens, eggs, milk and milk products, *vanaspati* etc. in hotels, restaurants and other food processing industries. The inter-industry consumption rates of these food items need to be estimated from the latest input-output table or appropriate studies.

5. That the NSS underestimates the consumption of durables has been suggested by a number of scholars in the past. Minhas (1988) while commenting on the possibility of underestimation of durable consumption in the HCES, noted that non-cooperation from the affluent households could be the main reason for the downward bias. Recently, Lal, Mohan and Natarajan (2001) have compared the NSS estimates of consumption of certain durables with the figures of their sales published in various newspapers and business magazines. They have observed that the NSS estimates of private consumption are as low as one-fourth of the production of durables like televisions, tape recorder, electric fan and two-wheelers. This calls for a further investigation for identifying the possible reasons for discrepancy between the NAS and NSS estimates.

6. The NSS estimates of travelling expenses incurred by the households also appear to suffer from gross underestimation. A study is required to be undertaken to explore alternative means of collecting data particularly on rail and bus fares paid by the households.

7. The inclusion of 'repair services' (activity-group 97 according to NIC

1987) in the NAS leads to duplication of operational cost of owned transport equipment. The procedure needs to be corrected in this respect.

8. The entire amount of output of NIC (1987) activity group of 201, i.e. manufacturing of dairy products, is at present assumed to be milk products, whereas a large part (about 40%) of it is in fact liquid milk of different kinds. Though this does not affect the aggregate estimate for the item-group 'milk & milk products', it understates the consumption of liquid milk. The estimates of milk products like butter and *lassi* are based on norms worked out in the past for the practices prevalent at that time. These too require revision, as the methods of disposal of milk produce have undergone vast changes in the recent past.

9. The NAS estimate on 'medical and health care', being based entirely on the NSS estimate, excludes the consumption of the NPISHs. The consumption expenditure of the NPISHs is not expected to be distributed over all the food and non-food item-groups as the household consumption expenditure. In fact, NPISHs, being more active in the fields of health and education, are expected to have proportionately larger shares in these two item-groups. To estimate the magnitude and distribution of consumption expenditure of the NPISHs, it is necessary to take up a special study to start with, and carry out surveys on a continuing basis for regular flow of data.

10. The exact definition of 'firewood & chips' used for the HCES is not clear from the 'Instructions to Field Staff, 50th Round'. The CSO uses the NSS estimate of consumption of 'firewood & chips' under the assumption that while it includes vegetable wastes like jute, cotton and *arhar* sticks, it excludes the wood used in the funerals. The exact definition of 'firewood & chips' is required to be specified clearly in the instructions for the future CESs.

11. A mechanism is required to be devised in the HCES for collecting the data on cooked meals received, as part of wages, by workers engaged in providing services for household consumption from the employer household, so that the necessary correction for the omission in the NSS estimate may be made.

12. The NSS estimates of fruit consumption fall far short of the NAS estimates. Possibly, non-cooperation of the affluent is one of the reasons for underestimating fruit consumption in the HCES. Besides, investigating for other possible reasons for underestimation in the HCES, reconciliation of the difference between the differences between the estimates of fruits consumption requires a comprehensive study of the estimation procedure followed by the SHBs for obtaining area, production and productivity estimates of different fruits.

13. Lastly, for quite a few item-groups belonging mostly to the service sector, the NAS estimates of gross value added (GVA) and private consumption are based on independent sources of data. The NAS estimate for consump-

tion of road transport services by bus, taxi and auto-rickshaw as well as that of repair services of owned conveyance is derived using the data on number of vehicles available from the MoST. For the item-group 'medical and health services', 'salt', 'spices' and 'pan', the NAS estimates are derived from the NSS estimates, since the latter are known to represent the household consumption better. Thus, for these item-groups, the estimates of output, which are required for PFCE estimates, are not expected to be necessarily consistent with the estimates of GVA. In other words, it is a possible source of statistical discrepancy in the NAS. It is therefore felt that the feasibility of using a common data set for both GVA and PFCE estimates for these item-groups needs to be explored further.

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Appendix I

Implicit Prices (Rs.) of food and fuel items/item-groups Derived from the NAS and NSS Estimates of Quantity and Value of Consumption

Item / item-group	NSS	NAS	Item / item-group	NSS	NAS
Rice	6.34	6.05	*Vanaspati*	36.15	38.37
			Mustard Oil	30.82	33.14
Wheat	4.23	4.55	Groundnut Oil	36.70	37.51
Atta	4.29	4.40	Coconut Oil	36.73	56.14
Maida	6.04	5.43	Gingili (*Til*) Oil	32.30	47.72
Suji,Rawa	6.97	5.43	Linseed Oil	20.60	44.52
Wheat & its products	4.34	4.49	Edible Oil (Others)	26.95	41.97
Jowar & its products	3.09	3.74	Goat Meat	50.45	54.50
Bajra & its products	3.61	3.65	Mutton	64.66	52.78
Maize & its products	3.25	3.92	Goat meat plus mutton	52.90	54.09
Barley & its products	2.99	5.71	Beef	20.47	22.14
Small Millets & its products	2.51	2.89	Pork	25.94	36.40
Ragi & its products	3.19	3.43	Buffalo Meat	12.29	19.43
Gram(Whole Grain)	14.97	12.85			
			Potato	3.30	3.97
Arhar	16.70	12.20	Onion	4.91	6.00
Gram split	15.40	14.96	Coconut	3.93	4.06
Moong	15.58	15.76	Mango	8.41	8.56
Masur	13.06	12.58	Grapes	16.78	14.29
Urd	13.04	13.09	Groundnut	17.21	17.08
Other Pulses	12.24	9.96			
Besan	16.49	15.91	Coke	1.04	1.26
			Electricity	1.05	0.91
Sugar & khandsari	11.30	10.96	Kerosene	3.84	3.98
Gur: Cane	9.66	9.18	Coal	0.98	1.43
			L.P.G	6.89	6.08
Liquid Milk (Litre)	6.84	7.26	Charcoal	1.44	5.07

Note: 1. The prices given in the table are for one kilogram of the item / item-group, unless otherwise specified in parentheses.
2. Prices for the item-groups like 'barley and its products' and 'goat meat plus mutton' given in the table represent the weighted average of the prices of the constituent individual items.

Appendix II

Comparison between Estimates of Private Consumption Expenditure - NSS Estimates Adjusted for the 'Notional' Elements and NAS Estimates Adjusted for Prices

Rs. Crore

Item-group	NAS	NSS	% difference	difference
1. Cereals & Cereal Products	77338	72188	-6.66	-5150
2. Bread	554	560	1.08	6
3. Gram (Whole)	308	530	72.08	222
4. Pulses & pulses product	13430	12665	-5.70	-765
5. Cereal substitute (tapioca etc)	1024	309	-69.82	-715
6. Sugar and *Gur*	19748	9956	-49.58	-9792
7. Milk & milk products	44714	33737	-24.55	-10977
8. Edible oils & oilseeds	20001	15674	-21.63	-4327
9. Meat, egg & fish	21153	11923	-43.63	-9230
10. Fruits, vegetables & their products	66839	28851	-56.84	-37988
11. Salt	595	595	0.00	0
12. Spices	8015	8015	0.00	0
13. Non-alcoholic Beverages	6422	9156	42.57	2734
14. Processed / Other food	5436	5910	8.72	474
15. Pan	2988	1830	-38.76	-1158
16. Tobacco	12309	5877	-52.25	-6432
17. Alcoholic beverages and other intoxicants	2393	2525	5.52	132
18. Hotel & restaurant / cooked meals	6142	3765	-38.70	-2377
Food: Total	**309409**	**224066**	**-27.58**	**-85343**
1. Clothing & footwear	34999	21382	-38.91	-13617
2. Gross (house) rent & water charges	46854	45476	-2.94	-1378
3. Fuel & power	21776	24527	14.69	3142
4. Furniture, furnishings, appliances & services	17610	6055	-65.62	-11555
5. Medical care & health services	19543	18221	-6.76	-1322
6. Transport equipment & operational cost	24592	7178	-70.81	-17414
7. Transport services	36143	8450	-76.62	-27693
8. Communication	4258	1048	-75.39	-3210
9. Recreation, Education & Cultural services	17626	11811	-32.99	-5815
10. Misc. goods & services	36519	36655	0.37	136
Non-food: Total	**259920**	**180803**	**-30.33**	**-78726**
Total consumption expenditure	**569329**	**404869**	**-28.89**	**-164460**

Appendix III

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

	Item	NSS	NAS	% difference
Food Items				
1.	Cereals & Cereal Products	72188	77655	-7.04
1.1	Rice & Rice Products	45584	45243	0.75
1.1.1	Rice	43670	41066	6.34
1.1.2	Rice products	1914	4177	-54.18
1.2	Wheat & wheat products	20867	20885	-0.09
1.2.1	Wheat	811	170	377.06
1.2.2	Atta	19397	18522	4.72
1.2.3	Maida	149	1854	-91.96
1.2.4	Suji, Rawa	402	339	18.58
1.2.5	Sewai, noodles	58	—	—
1.2.6	Other wheat products	50	—	—
1.3.1	Jowar & its products	2417	4247	-43.09
1.4.1	Bajra & its products	1514	1745	-13.24
1.5.1	Maize & its products	1012	3588	-71.79
1.6.1	Barley & its products	35	693	-94.95
1.7.1	Small millets & their products	67	249	-73.09
1.8.1	Ragi & its products	692	860	-19.53
1.9.1	Other cereals	—	32	—
1.10.1	Change in stock	—	113	—
2.	Bread	560	554	1.08
3.	Gram (Whole)	530	265	100.00
4.	Pulses & pulses product	12665	11993	5.60
4.1	Pulse: total	11693	9250	26.41
4.1.1	Arhar **	4783	2626	82.14
4.1.2	Gram split	1070	1752	-38.93
4.1.3	Moong **	1839	1324	38.90
4.1.4	Masur	1648	669	146.34
4.1.5	Urd	1433	1339	7.02
4.1.6	Other pulses	920	1540	-40.26
4.2	Pulses products	972	2734	-64.45

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

	Item	NSS	NAS	% difference
4.2.1	Besan	632	985	-35.84
4.2.2	Other pulses products	340	1749	-80.56
4.3	CIS of pulses	—	9	—
5.	Cereal substitute (tapioca etc)	309	1024	-69.82
5.1	Tapioca & its products	290	1024	-71.68
5.1.1	Tapioca (green)	102	926	-88.98
5.1.2	Products / sago	188	98	91.84
5.2	Mahua	8	—	—
5.3	Others	11	—	—
6.	Sugar and Gur	9956	19881	-49.92
6.1	Sugar & Khandsari	8501	11282	-24.65
6.1.1	Sugar	8415	11282	-25.41
6.1.2	Khandsari	86	—	—
6.2.1	Gur : Cane	1293	7867	-83.56
6.2.2	Gur: others	118	128	-7.81
6.3	Sugar (candy)	11	—	—
6.4	Sugar: others	33	—	—
6.5	CIS	—	604	—
7.	Milk & milk products	33737	46594	-27.59
7.1	Milk - liquid	31059	32407	-4.16
7.2	Milk products	2678	15128	-82.30
7.3	CIS	—	-34	-100.00
7.4	GFCE	—	-908	-100.00
8.	Edible oils & oilseeds	15674	23204	-32.45
8.1	Edible Oils	15641	18814	-16.87
8.1.1	Vanaspati	1533	3526	-56.52
8.1.2	Mustard oil	5558	5249	5.89
8.1.3	Groundnut oil	6125	5420	13.01
8.1.4	Coconut oil	462	1948	-76.28

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

Item		NSS	NAS	% difference
8.1.5	Gingili (Til) Oil	363	482	-24.69
8.1.6	Linseed oil	173	98	76.53
8.1.7	Edible oils (others)	1427	2091	-31.76
8.2	Oilseeds	33	3508	-99.06
8.3	Imported oils	—	210	—
8.4	CIS	—	672	—
9.	Meat, egg & fish	11923	21737	-45.15
9.1	Meat: Total	6259	11180	-44.02
9.1.1	Goat meat	3315	2932	13.06
9.1.2	Mutton	886	871	1.72
9.1.3	Beef	503	633	-20.54
9.1.4	Pork	208	546	-61.90
9.1.5	Buffalo Meat	302	643	-53.03
9.1.6	Other Meat	51	—	—
9.1.7	Other meat - by product	—	1422	-100.00
9.1.8	Chicken	994	4133	-75.95
9.2	Other birds	48	499	-90.38
9.3	Eggs & egg products	1146	2487	-53.92
9.4	Fish	4448	7450	-40.30
9.5	Others	22	—	—
9.5	CIS	—	122	—
10.	Fruits, vegetables & their products	28851	68036	-57.59
10.1	Vegetables	21035	17850	17.84
10.1.1	Potato	4290	4698	-8.68
10.1.2	Onion	2588	2132	21.39
10.1.3	Sweet potato	48	487	-90.14
10.1.4	Other vegetables	13823	8044	71.84
10.1.5	Flowers	286	1093	-73.83
10.1.6	Kitchen garden	—	1396	—
10.2	Total fruits	7459	48078	-84.49

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

Item	NSS	NAS	% difference
10.2.1 Banana	1720	4067	-57.71
10.2.2 Coconut	1523	3299	-53.83
10.2.3 Mango	692	3115	-77.78
10.2.4 Grapes	327	689	-52.54
10.2.5 Copra	296	660	-55.15
10.2.6 Groundnut	609	3232	-81.16
10.2.7 Cashew nut	101	1343	-92.48
10.2.8 Other fruits	2191	31673	-93.08
10.3 Fruits & vege. Products	357	2108	-83.06
10.3.1 Pickles	283	—	—
10.3.2 Sauce	34	—	—
10.3.3 Jam, Jelly	40	—	—
10.3.9 fruit products	—	2108	—
11. Salt	595	595	0.00
12. Spices	8015	8015	0.00
13. Non-alcoholic Beverages	9156	6422	42.57
13.1 Tea	8024	4445	80.52
13.2 Coffee	589	747	-21.15
13.3 Ice	6	—	—
13.4 Cold beverages	104	—	—
13.5 Fruit juice & shakes	93	—	—
13.6 Others	340	571	-40.46
13.7 CIS of Tea, coffee	—	659	—
14. Processed / Other food	5910	5436	8.72
14.1 Biscuits & confec.	1586	3602	-55.97
14.1.1 Biscuits	1586	1793	-11.54
14.1.2 Sugar confectionery	—	1809	—
14.2 Salted refreshment	1780	—	—

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

Item	NSS	NAS	% difference
14.3 Prepared sweets	1179	—	—
14.4 Cake & pastry	42	—	—
14.5 Other/ processed food	876	1269	-30.97
14.5.1 other processed	873	1269	-31.21
14.5.2 Honey	3	—	—
14.6 baby food, powder milk, ice cream	447	—	—
14.6.1 Baby food	125	—	—
14.6.2 Powder / condensed	285	—	—
14.6.3 ice cream	37	—	—
14.7 CIS of other food	—	565	-100.00
15. Pan & its ingredients	1830	2988	-38.76
15.1 Pan	1070	637	67.97
15.1.1 Pan leaf	433	—	—
15.1.2 Pan Finished	637	637	0.00
15.2 Ingredients	760	2351	-67.67
15.2.1 Areca nut	564	2351	-76.01
15.2.2 Lime	40	—	—
15.2.3 Kattha	54	—	—
15.2.4 Others	102	—	—
16. Tobacco	5877	12309	-52.25
16.1 Bidi	3749	6195	-39.48
16.2 Cigarettes	1062	5350	-80.15
16.3 Leaf Tobacco	508	1449	-64.94
16.4 Snuff	33	456	-92.76
16.5 Cheroot	140	139	0.72
16.6 Other Tobacco Products	385	572	-32.69
16.7 Change in stocks	—	-1852	—
17. Alcoholic beverages and other intoxicants	2525	2393	5.52
17.1 Alcoholic beverages	2389	1550	54.13

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

Item	NSS	NAS	% difference
17.1.1 Toddy	362	—	—
17.1.2 Country liquor	1546	—	—
17.1.3 Beer	78	—	—
171.4 Foreign / refined liquor	403	—	—
17.1.9 all		1550	-100.00
17.2 Opium / other drugs	136	16	750.00
17.2.1 Opium / opium etc.	30	16	87.50
17.2.2 Ganja	19	—	—
17.2.3 Other drugs & intoxicants	87	—	—
17.3 CIS of Beverages	—	827	—
18. Hotel & restaurant / cooked meals	3765	6142	-38.70
Food Total	**224066**	**315243**	-28.92
Non-Food Items			
1. Clothing & footwear	21382	34999	-38.91
1.1 Clothing	18203	30937	-41.16
1.2 Footwear	3179	4062	-21.74
2. Gross (house) rent & water charges	8179	46854	-82.54
2.1 Gross (house) rent	6210	43507	-85.73
2.2 repairs & Maintenance	1641	2609	-37.10
2.3 Water charges	328	738	-55.56
3. Fuel & power	24527	21385	14.69
3.1 coke	166	22	654.55
3.2 Firewood, chips	10053	8763	14.72
3.3 Electricity	4797	3926	22.19
3.4 Dung cake	2835	2797	1.36
3.5 kerosene	3648	2906	25.53
3.6 coal	274	379	-27.70
3.7 coal gas / gas coke	6	6	0.00
3.8 L.P.G	1961	1521	28.93
3.9 Charcoal	28	294	-90.48

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

	Item	NSS	NAS	% difference
3.10	other oils	33	—	—
3.11	Candles	92	—	—
3.12	Methylated spirit	0	—	—
3.13	Gobar gas	43	412	-89.56
3.14	other fuel & light / veg. waste, bagasse	591	359	64.62
4.	Furniture, furnishings, appliances & services	6007	17610	-65.89
4.1	furniture, furnishing & repairs	716	1312	-45.43
4.1.1	Carpet	14	581	-97.59
4.1.2	Coir product	54	4	1250.00
4.1.3	Wooden & steel furniture	648	727	-10.87
4.2	Freeze, cooking, washing appliances	1238	1559	-20.59
4.2.1	Non-electrical mach.	235	248	-5.24
4.2.2	Electrical mach.	667	782	-14.71
4.2.3	Refg'tr & AC	336	529	-36.48
4.3	Glassware, tableware & utensils	1269	7679	-83.47
4.3.1	Glass & glass product	44	514	-91.44
4.3.2	Earthenware & china	157	1864	-91.58
4.3.3	Metal utensils	978	1543	-36.62
4.3.4	other metal / hh. Utensils	90	3758	-97.61
4.4	Other goods	1440	3689	-60.97
4.4.1	Matches	619	1917	-67.71
4.4.2	Misc. personal goods	594	376	57.98
4.4.3	Plastic products	113	580	-80.52
4.4.4	Rubber products	14	122	-88.52
4.4.5	Batteries	100	694	-85.59
4.5	Services	1344	3371	-60.13
4.5.1	Domestic services	813	2051	-60.36
4.5.2	Laundries, dry cleaners	531	1272	-58.25
4.5.3	Insurance	—	48	—
5.	Medical care & health services	18221	19543	-6.76

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

	Item	NSS	NAS	% difference
6.	Transport equipment & operational cost	7178	24592	-70.81
6.1	equipment & repairs	3353	8653	-61.25
6.1.1	Motor vehicles & parts	309	1377	-77.56
6.1.2	Mobike, scooter & cycle	2768	3787	-26.91
6.1.3	Other transport equipment	29	—	—
6.1.4	Repairs services	247	3489	-92.92
6.2	Tyres & tubes	209	735	-71.56
6.3	Road tax	663	102	550.00
6.4	Petrol & diesel	2953	15102	-80.45
7.	Transport services	8450	36143	-76.62
7.1	Air fare	31	170	-81.76
7.2	Rail fare	1030	3913	-73.68
7.3	Bus (tram) fare	6058	18296	-66.89
7.4	Taxi, auto rickshaw	596	11447	-94.79
7.5	Others with incidental services	735	2317	-68.28
8.	Communication	1048	4258	- 75.39
8.1	Postage, telegram and others	359	864	- 58.45
8.2	Telephone charges	689	3393	- 79.69
9.	Recreation, Education & cultural services	11811	17626	-32.99
9.1	Equipment, paper & stationery	5093	6330	-19.54
9.1.1	TV & Radio	1331	1883	-29.31
9.1.2	Other musical Instrument	3	18	-83.33
9.1.3	Photographic goods	117	119	-1.68
9.1.4	Office machinery	—	31	—
9.1.5	Sports & athletic goods	173	48	260.42
9.1.6	Books, journals, newspaper, periodicals	2245	2670	-15.92
9.1.7	Stationery & fountain pen	1224	95	1188.42
9.1.8	Fireworks	—	1466	—
9.2	Recreation & Cultural services	1356	1204	12.62
9.2.1	Cinema, Theatre	867	—	—

Appendix III (contd.)

A Disaggregated-Level Comparison between Unadjusted NAS and NSS Estimates of Private Consumption Expenditure

Rs. Crore

Item	NSS	NAS	% difference
9.2.2 Mela, fare, picnic	155	—	—
9.2.3 club fees	22	—	—
9.2.4 other amusements	276	—	—
9.2.5 Library charges	36	—	—
9.2.6 all	—	1204	—
9.3 Education	5362	10092	- 46.87
9.3.1 Private tuition fees	1360	582	133.68
9.3.2 Others	4002	9510	-57.92
10. Misc. goods & services	24901	36519	-31.81
10.1 Personal care & effects	7290	10897	-33.10
10.1.1 Barber, beautician etc.	1631	1186	37.52
10.1.2 Religious services	183	1359	-86.53
10.1.3 other personal services / other consumer services	2712	618	338.83
10.1.4 Sanitary services	148	939	-84.24
10.1.5 Services n.e.c.	1193	1691	-29.45
10.1.6 Tailoring services	1423	5058	-71.87
10.1.7 TV & Radio services	—	46	—
10.2 Personal goods n.e.c	17462	11697	49.29
10.2.1 Jewellery goods	1175	3806	-69.13
10.2.2 Watches, clock	185	421	-56.06
10.2.3 Leather products	79	405	-80.49
10.2.4 Non-metallic mineral pro.	163	140	16.43
10.2.5 Toilet product	15860	6925	129.03
10.3 Other misc. services	149	13925	-98.93
10.3.1.Banking charges	x	9081	—
10.3.2 Legal services	81	1452	-94.42
10.3.3 Business services	68	719	-90.54
10.3.4 Life insurance	x	2673	—
Total non-food	**131704**	**259529**	**-49.25**
Total consumption expenditure	**355770**	**574772**	**-38.10**

Discussion on the Report "Cross Validation Study of Estimates of Private Consumption Expenditure available from Household Survey and National Accounts"

S.D. Tendulkar (Delhi School of Economics, Delhi University): In the 50th Round of the NSS (1993-94), the data were collected for both 30 days and 365 days reference period, for the item-groups like clothing, footwear, durables, transport equipment, education and health services. For such item-groups, it would be useful to undertake comparison of NAS estimates with the corresponding NSS estimates based on the data collected with 365 days reference period. Also, for the item-groups food grains and 'clothing and footwear', a comparison of the 1993-94 series of the NAS estimates with the pre-revised 1980-81 series of the NAS estimates may be included.

Regarding the observations made on the basis of the validation exercise undertaken by the authors, I have the following comments to offer:

1. The statement that the estimate of 10 per cent share of the NPISHs in NAS estimate of PFCE is on the higher side made in the paragraph on "Coverage" is based on subjective judgement.

2. In the context of the "cooked meals" served to domestic helps as a part of their remuneration, contained in the paragraph on "cooked meals", authors claim that the method followed in the NSS leads to underestimation. The argument is not clear.

3. On the observations made in respect of 'Hotel and Restaurant': (a) What is the basis for assuming that 33 per cent of the output of hotels and restaurants forms part of private consumption? (b) Does the NAS estimate for private consumption of hotel and restaurant services include a part of non-alcoholic beverages? [Third paragraph of the section on 'Hotel and Restaurant']

4. Some more detailed analysis is required on the difference between the estimates for "clothing and footwear."

5. Some more detailed analysis is required on the difference between the estimates for "Glassware, tableware & utensils" and if possible also provide quantity-price comparison. [*Table 27*]

6. What are the bases of taking 80 per cent of rail fare, 15 per cent of airfare, 50 per cent of taxi fare and 90 per cent of auto-rickshaw and bus fare as private final consumption? [Second paragraph of the section on 'transport Services']

7. The estimated number of vehicles available from the MoST can at best be underestimates and hence would not explain the divergence between the NSS and NAS estimate of transport fares. [*Table 29*]

U. Dutta Roychoudhury (Retired from Central Statistical Organisation): My comments on the report are as follows:

1. The study shows it very clearly that for some of the items like milk and milk products and manufactured articles NAS estimates need looking into. In

these cases NAS estimates of quantity consumed need looking into and perhaps need revision.

2. Unless the price problem is solved there is no point in undertaking a comparison. From the revaluation by the NSSO prices the difference goes down in many of the cases. When the estimates are derived by the commodity flow method the prices have to be the same as for other estimates of National Accounts. It is impossible to solve this problem except to say that the problem may be pointed out to the Commission and give them the alternative derived estimates and its total pointing out very specifically that it has been derived independently and are not the same as the NAS estimates. They should therefore preferably use them. On the other hand, the NSS estimates of rent and taxes must be adjusted. Also the difference in coverage between NAS and NSS estimates must definitely be highlighted.

3. For some of the items like hotels and restaurants, durables, travelling expenses, the NSS estimates need looking into. This is also true of cooked meals used as wages by workers engaged in providing services for employers households. There are several other items of similar nature listed in Concluding Remarks which need to be examined.

B.S.Minhas (Retired from Indian Statistical Institute, Delhi): I had been looking forward to reading this study as it promised to be an extension of some research work which my colleagues and I had done in the late 1980s. I have quickly read the whole manuscript. However my comments relate mostly to some aspects of Table 1, in the first section of the report.

I Does the change in consumption expenditure between 1987-88 and 1993-94, as per NAS data, make sense? In itself? Or in relation to other aggregates, such as National Income of the NAS?

The NAS Consumption Expenditure in 1993-94 is estimated at Rs.574,772 crores, as against Rs.224,061 crores in 1987-88, implying an increase of 156.5% in six years. Using an independent (directly observed) index of wholesale prices (the implicit deflators are suspect when the data on which they are based are suspect), increase in wholesale prices over the same six year period works out to 72.6%. In other words, according to the NAS, aggregate private consumption expenditure of the Indian people rose by (156.5 - 72.6) 83.9% in real terms (taking the price inflation out) in just six years. This implies an average annual increase of about 14% in real terms. Remember, over this period, real income growth per year was around 5-6% (1987-88 to 1993-94). How can this happen? Is it possible? Where from did income come to finance annual increases in consumption expenditures of the order of 14% per year between 1987-88 & 1993-94?

These puzzles are not difficult to unravel. Why cross validate, when intersе validity of the NAS over-time is crying out loud for questioning. The National Statistical Commission may wish to give some thought to this problem.

II Let us look at the changes in aggregate consumer expenditure estimated through Consumer Expenditure Surveys by the NSS.

The NSS estimate of consumer expenditure in 1993-94 was shown to be Rs.335,770 crores as against Rs.173,765 crores in 1987-88 (see Table 1 of Report (NAD/SDRD) p.3). This shows an increase of 104.7% over the six year period and adjusting for the (same) price rise of 72.6%, the real increase in aggregate national consumer expenditure works out to about 32% over a six year period – an average annual increase of around 5.3%.

III Some Comments on 1983 Data

My colleagues and I had done detailed cross validation of the 1972-73 as well as 1977-78. However, it is not generally known that Mr. Kansal and I had also published a paper on the 1983 data (Journal of Income and Wealth, JIW, Vol.II, No.1, January 1989, pp.7-24). We had indicated that the difference between the NSS and NAS data for 1983, adjusted for differences in reference periods, prices etc., were rather small. However this Report (NAD/SDRD) shows (Table 1, p.3) the difference to be 24.88%; NAS NSS by 24.88%? This is wrong. First the NSS estimate of expenditure on non-food for 1983 (January-December) was Rs.48710 crores rather than Rs.3996 crores indicated in the Report.

The NSS estimate of aggregate consumer expenditure of 1983 (Jan-Dec) is Rs.117750 crores (See Table 1 p.16 of our 1989 paper loc. Cited) Compare this with the contemporary estimates for 1982-83 (Rs.114480) and 1983-84 (Rs.136400) of the NAS. We have in the above cited paper made some refined adjustments for comparability of the two data sets and found the difference between the NSS and NAS was around six per cent

NSS food-grains consumption was higher than NAS but the non-food expenditure of NAS was higher than NSS.

Let me offer a crude (but defensible) simple cross-validation exercise for NSS 1983 vs. NAS 1983-84.

Contemporary Data on Consumer Expenditure

(Rs. Crores)

	1982-83	**1983-84**	**1983**
NSS			117750
NAS	114480(a)	136400(b)	125440 ((a+b)/2)

Since the NSS data was for January-December 1983 and the agricultural year is from July-June i.e.82-83, it is June 1982-July 1983 and for 1983-84, it is from June 1983-July 1984. The consumption of food and other consumption goods in 1983 would be from 1983 and 1983-84 production, we can average the consumption of those two years for

comparison purposes. Seen the way the difference between NSS and NAS for 1983 comes to 6.3%. However if one were to take the non-contemporary, so called revised,

NSS (1983) vs. NAS Revised Data

	1983	1982-83	1983-84
NSS	118445(corrected for error)		
NAS	130282(a+b/2)	11480(a)	14608(b)

$$100 \times \left(\frac{130282-118445}{118445}\right) = 9.6\%$$

estimates of NAS (as they appear on Table 1 of the Report) then the difference is about 9.5%.

IV In our paper, "Firmness, Fluidity and Margins of Uncertainty in National Accounts Estimates of Private Expenditure in the 1980s", JIW, Vol. 12, No.1, January 1990, pp 92-102 we had demonstrated that the NAS procedures were subject to very large errors. The cross-validation studies for the consumer expenditure data for 1972-73, 1977-78 and 1983, showed that the differences between the NSS and NAS estimates were well within the range of uncertainty which surrounds the NAS estimates (around 20% in PFCE). However there seems to be no inter-se consistency between the NAS estimates of PFCE for 1987-88 and 1993-94. In fact, the increase in NAS consumer expenditure between 1987-88 and 1993-94 has been shown to be so inconsistent with changes in other national income aggregates that no purpose is likely to be served by attempting a cross-validation study of the revised NAS data with the NSS data for 1993-94.

In the 1990's, there has been many write-ups in the popular press about the fluidity and lack of objectivity in India's national Accounts Statistics. It seems that the main burden of unprincipled revisions and arbitrary adjustments has been borne by the PFCE estimates. I do have some disturbing observations to make on some sectoral consumption expenditure estimates discussed in the Report under examination. The revision process seems nothing short of a fast breeder reactor for accumulating errors. One looks in vain for any methodological studies or scientific procedures for the acceptance of new data, or sources in the NAS. The whole exercise seems to be too fluid to accommodate any concerns for consistency and other optimality properties in the estimates of aggregate consumption expenditure.

Vaskar Saha (Central Statistical Organisation): The Central Statistical Organization (CSO) compiles and publishes the estimates of Private Final Consumption Expenditure (PFCE) in its annual publication National Accounts Statistics (NAS). The National Sample Survey (NSS) Organization, on the other hand, conducts Household Consumption Expenditure Survey (HCES) for collecting data on Household Consumption Expenditure (HCE) [either with thin second-stage sample (annual round) or with larger sample (quinquennial round)] and releases various estimates on HCE. Ideally the two

estimates derived through PFCE and HCE should not vary significantly as both the estimates attempt to measure Household Consumption Expenditure though the approaches are different. But in reality the divergence between the two estimates are increasing significantly over the years. In fact quite a few studies have been conducted, as pointed out by the Study Group (SG) consisting of NAD and SDRD, to find out the reasons for divergences between the NSS and NAS estimates of consumption expenditure for some selected years. It was observed by the SG that the divergences between these two estimates were within about 10% in the years, namely, 1957-58, 1960-61, 1967-68, 1972-73 and 1977-78, but the same was as high as 25% by 1982-83 and remained at almost the same level in 1987-88. The SG also found that the difference between these two estimates was about 38% in 1993-94. If the estimates of total consumption are examined at food and non-food categories, the SG observed that the contribution of non-food items in the divergence of estimates has increased in a much faster rate than that of the food items. After identification of possible reasons for such high divergences between the NAS and NSS estimates, the SG suggested a number of measures to reduce such divergences in future. The SG has also observed that the divergence in the two sets of estimates is inevitable because of differences in approach, coverage, reference period, classification scheme, etc. Keeping all these points in view, an attempt has been made in the following paragraphs to suggest, even at the cost of repetition of what had been identified by the SG, the steps required to be taken for reduction of such divergences between the NAS and the NSS estimates in future:

1. The cross-validation studies on the estimates of private consumption expenditure from two sources, namely, NSS and NAS, have primarily been done by the academicians and research scholars. The recent attempt made by the official agencies responsible for the compilation of NAS and NSS data is definitely a welcome step and similar studies should be attempted in future also by the concerned official agencies at least for the reference years when NSS quinquennial surveys on consumption expenditure are conducted.

2. The NAS estimates of PFCE are derived from the production side using "commodity flow" approach and the adjustments required for conversion of producer's price to consumer price are appropriately made in this estimate. But these estimates include the final consumption of the Non-profit Institutions Serving Households (NPISHs), as the consumption data of NPISHs are not separately available from any source. In order to make the estimates comparable, there is an urgent need to develop a mechanism for getting separate estimates for the consumption expenditure and other important parameters of NPISHs. Since NPISHs is one of the five institutional sectors as far as System of National Account (SNA) is concerned, detailed information about NPISHs is essential not only for cross-validation purpose but also for the preparation of sequence of accounts for the five institutional sectors. Till such a mechanism for regular data collection in respect of NPISHs is developed, the contribution of NPISHs in the economy should be estimated through special studies.

3. The NSS estimates are derived from

the consumption side with the help of scientific sampling technique and covers only pure households. In the NSS surveys, therefore, police, defence personnel, houseless persons, institutional population like the inhabitants of orphanages, prison and hospitals, etc., are not included. In the NAS, however, consumption expenditures of these persons are included. Therefore appropriate adjustments should be made in the NSS estimates to make the NSS and the NAS estimates comparable.

4. The existing consumer expenditure schedule of NSS is quite lengthy and as such may suffer from respondent's fatigue especially towards the end of data collection from a household when data are collected for non-food items. Thus, in order to reduce respondent's fatigue, special emphasis should be given for shortening of NSS consumer expenditure schedule. Study based on the past data should be done for the selection of items/ item groups for the purpose of shortening of schedule and suitable instructions should be given to the field investigators for the collection of data. The survey results obtained through canvassing of abridged schedules in various rounds encourage working in this direction. In order to have an idea about the respondent's fatigue, sequence for collection of data (non-food items first then food items and vice versa) should also be changed and studies in this direction should be encouraged.

5. Reduction of recall lapse in the HCES is also an area where urgent attention is needed by the NSSO. For this purpose, selection of appropriate reference periods for data collection is very important. The Pilot Study on reference period recently conducted by the NSSO under the guidance of Prof. N. Bhattacharya throw significant light on this aspect. In fact this study on reference period revealed that even the 'previous day' as reference period is also very important for some items. Efforts should be made to conduct similar study in future also and the findings of these innovative studies should be used to determine the appropriate reference period for future NSS surveys. Appropriate correction factors should also be attempted through these studies to guard possible under and/or over estimation of certain items in the detailed HCES. At the time of cross-validation study on the estimates of consumption expenditure from NAS and NSS, findings of these innovative studies should be used, wherever necessary, to explain the observed divergences.

6. The NSSO should conduct focused survey with appropriate sample size in some selected areas. In case of consumption of fruits or tobacco by households, for example, it would be difficult to find out reliable estimates through sample surveys covering the entire country where the objective of the survey is primarily to collect data on consumer expenditure for all food and non-food items. Focused type studies providing emphasis on fruits or tobacco, as in the above example, with relatively small sample size will come as a rescue in such situations. Correction factors could be found out through such scientific type studies. In case of tobacco consumption, the NSS estimate based on large-scale survey is

likely to be on the lower side, as the data collected from a senior member of the household through enquiry method may suffer from under-reporting due to inhibitions against consumption of tobacco. Focused survey with appropriate sample design and with limited items should be conducted to collect reliable information in these situations.

7. Contributions from affluent households play an important role in the estimates of some parameters through NSS surveys. In the consumer expenditure survey special effort is normally made for collecting data from affluent households. Non-cooperation from the affluent households particularly in urban area could lead to under estimation in some important items like durable goods, fruit consumption, etc. The problem of non-cooperation needs to be tackled urgently through rigorous persuasion, if necessary by senior officers or by enacting appropriate Act.

8. NAS is compiled keeping in view the SNA framework. According to SNA certain notional values like imputed rent and Financial Intermediation Services Indirectly Measured (FISIM) are included in the NAS. But these imputed values are not covered in the NSS estimates. The contribution of the imputed values is quite significant in NAS. The imputed values should, therefore, be adjusted in NAS estimates while attempting cross-validation study to make the estimates comparable.

9. Wide difference between the estimates of private consumption expenditure available from NAS and NSS indicates the existing weakness in the statistical system in India. In order to critically examine the deficiencies of the present statistical system, the Government of India constituted the National Statistical Commission (NSC) under the Chairmanship of Dr. Rangarajan, the then Governor of Andhra Pradesh. The NSC made a number of recommendations to revamp the statistical system to generate timely and reliable statistics. In fact the total number of recommendations made by the NSC is more than six hundred in number. All the recommendations are important for revamping the exiting statistical system. However, due to availability of limited resources both human and capital, priority should be assigned to a few selected recommendations for implementations, which have direct bearing on the improvement of the statistical system particularly relating to economic statistics. These selected recommendations should also cover the areas needed for estimation of private consumption expenditure by the NSS and the NAS.

10. The IMF has taken initiatives for enhancing the availability of timely and comprehensive statistics with respect to all the important sectors of the economy for arriving at sound macroeconomic policies by the member countries. In order to achieve this objective, Special Data Dissemination Standard (SDDS) with respect of 17 data categories broadly grouped under (i) real sector, (ii) fiscal sector, (iii) financial sector, and (iv) external sector were evolved by the IMF in 1996. Subsequently the IMF evolved the General Data Dissemination System (GDDS) in 1997 for those countries,

whose statistical system is not strong enough to meet the standards of SDDS. Further work has been done by the IMF to complement SDDS and GDDS through the development of the Data Quality Assessment Framework (DQAF). The IMF also has taken initiative to increase the number of countries actively pursuing SDDS subscription. The objective for the preparation of the DQAF was to provide a common structure for assessing the data quality. Further, the DQAF has been integrated into the data module of Reports on Observance of Standards and Codes (ROSCs). India is participating in SDDS and a mission from the IMF visited India recently to prepare a report on the ROSC. The IMF mission made an in-depth assessment of the quality of data categories of national accounts, price indices, balance of payments, government financial statistics, and monetary statistics. These reports will highlight the status of the country's statistical system with respect to the standard laid down by the IMF. Ranking in the form of three categories, namely, Observed (O), Largely Observed (LO) and Largely Not Observed (LNO) are being assigned to various aspects of data collection, compilation, dissemination, etc., relating to four sectors, viz., (i) real sector, (ii) fiscal sector, (iii) financial sector, and (iv) external sector as compared to the best international practices. If the Country agrees, the ROSC will be displayed in the IMF website. The study includes implementation of 1993 SNA. As far as the private consumption expenditure is concerned, 1993 SNA envisages the classification to follow is the COICOP. For meeting the international requirement, the consumer expenditure survey conducted by the NSSO should make necessary provision in the CES schedules so that PFCE data of NAS could be released following COICOP.

11. The goods and services produced or consumed in an economy are expressed in monetary terms for aggregation. Pricing of goods and services plays a very important role for this purpose. The SG felt that a substantial part of the difference between the NAS and NSS estimates could be explained by the differences in implicit prices of various consumer goods. For this purpose, the SG made a detailed comparison between the NAS and NSS estimates for different items/ item-groups of food and non-food consumption for 1993-94 and very significant differences were observed in some items/ item-groups. After eliminating the effect of differential implicit prices in the two sets of estimates, the SG reduced the differences significantly. Removal of the effect of differential implicit prices is essential for a valid comparison between the estimates of consumption expenditure. While doing the cross-validation study in future, this aspect needs to be taken care of by adjusting the NAS or NSS estimates in terms of NSS or NAS prices or a combination of both.

12. The NAS estimates might suffer from over estimation in some area. The estimates of number of vehicles, for example, are taken from the Ministry of Surface Transport, which are based on number of registration of vehicles and not on the actual number of vehicles

in operation. So for finding out the contribution of transport services in NAS, the actual number of vehicles in operation and the estimates of per vehicle earnings are to be found out in a reliable manner. Periodic sample surveys are to be conducted in such cases to find out the contribution of such areas in the NAS.

13. For the compilation of NAS estimates, all the goods and services produced in the economy during the particular accounting year are to be covered. But data for all goods and services produced in the economy during that particular accounting period are not generally available at the time of compilation either because the data are not collected at all or the data are yet to be released by the source agency. In such cases the NAS uses various rates, ratios, norms, results of type studies, past trend, etc. Though there is no alternative to this practice in the compilation of NAS if the advance release calendar of NAS is to be maintained, the reliability of the NAS estimates, no doubt, depends a great deal on the accuracy of rates, ratios, etc., used for the compilation of the NAS. But some of the rates and ratios, which are presently being used by the NAS are based on the results of studies carried out long back. Thus the various rates, ratios, norms, etc., used in the compilation of NAS should be updated on a regular basis in order to take care the temporal and/ or technological changes.

14. The SG has identified substantial differences between the NAS and the NSS estimates even at item/ item group level like 'fruit', 'milk products', *vanaspati'*, 'chicken', 'eggs and egg products' etc. Studies should be carried out to identify the reasons for such high divergences. For the NAS, the National Horticulture Board (NHB), for example, is the main source for the production and price data for the fruits not covered in area and production statistics by the Directorate of Economics and Statistics, Ministry of Agriculture. The methodology followed by the NHB for the estimation of production and price data for these fruits requires a relook. In fact as recommended by the National Statistical Commission, the methodology adopted for crop estimation survey on fruits and vegetables should also be reviewed and an alternative methodology for the estimation of production of horticulture crops should be developed. In this endeavour, special emphasis should be given for estimating the production of high valued crops like mushroom, herbs, etc.

The **authors** replied, in writing, as follows:

Comparison between the 1993-94 series of the NAS estimates with the pre-revised 1980-81 series of the NAS:

As mentioned in a footnote (footnote 3) of the report, the study was confined to the comparison of only the revised (1993-94 series) NAS estimates and NSS estimates. Comparison of the estimates of the present series with the pre-revised estimates, as Tendulkar suggests, amounts to introduction of an additional dimension to the study, which calls for more detailed analysis. This kind of an analysis would no doubt enable one to comment on the latest revision, as was attempted by Minhas *et. al.* in their paper "Firmness, Flu-

idity and Margins of Uncertainty in National Accounts Estimates of Private Expenditure in the 1980s" for the revision of the NAS series done with 1980-81 as the base year. But, as the focus of the study was to examine the validity of the NAS and NSS estimates, particularly the sources and methods currently used for national accounting (which have evolved over the years through a series of revisions), this was not attempted in the study. The purpose of the study was to investigate the reasons of divergence between the two sets of estimates, rather than on the NAS revisions. It was considered more relevant to identify the areas where the divergence was most pronounced and isolate the possible reasons for the same. *Inter-se* consistency between the NAS estimates of PFCE drawn from two different series was therefore not an issue for the study.

The comparison between the estimates for 1987-88 and 1993-94 attempted by Minhas uses estimates from two different series of national accounts statistics (NAS) and are thus not comparable. Minhas has arrived at an annual increase in PFCE of the order of 14% per year between 1987-88 & 1993-94, using the estimates given in *Table 1* of the report, and an increment of 72.6 per cent in Wholesale Price Index (WPI) during the period. Apart from the inadequacies of WPI as a deflator of consumption expenditure (as services are not included in the basket used for WPI), the procedure used by Minhas employs a kind of linear growth rather than compound growth. Using the same numbers but under the assumption of compound growth, the annual growth rate works out to around 7 per cent (not 14 per cent) for PFCE estimates from two different series and 2 per cent for the estimates from the household consumption expenditure survey (HCES) of the NSSO. Minhas has obtained an estimate of 5.3 per cent annual growth rate for the estimate of consumption expenditure of NSSO. (See Table 1 of this note)

For a valid measure of growth rate of a macroeconomic aggregate, it is essential to use the estimates drawn from the same series of the NAS. The CSO has published the estimates of the earlier years that are comparable to the estimates of 1993-94 series of NAS. The annual growth rates, derived following the same procedure, from the comparable estimates of the 1993-94 series of NAS, turns out to be around 4 per cent for both deflated current-price and constant-price estimates. The difference between the growth rates obtained from the two sources is indeed significant, but is not as striking as projected in Minhas'

Table 1: Annual Growth Rate of Consumption Expenditure (%) – from NAS and NSS

Estimates	PFCE (Rs. Crore)		1987 to 1993-94 Growth (%)		annual real growth rate
	1987-88	1993-94	nominal	real	
PFCE Quoted by Prof. Minhas	224,061	574,772	156.5	48.6	6.8
CES of the NSSO	173,765	335,770	93.2	12.0	1.9
Current-price PFCE (1993-94 series)	260,195	574,772	120.9	28.0	4.2
PFCE at 1993-94 prices (1993-94 series)	451,215	574,772	—	27.4	4.1

comments. The purpose of undertaking the study was essentially to explore for the reasons of such divergence.

To guard against misinterpretation of *Table 1* of the report, the study group while revising the first draft has introduced a footnote (footnote 3), so that the study would not appear to be an attempt at temporal comparison of the PFCE estimates.

On 1983 Data

Minhas has questioned the estimates for 1983-84 cited in *Table 1* of the report. The method of computing the NSS estimates for the financial year 1983-84 is indicated in *Table 2* of this note. The population projections are taken from the *Population Projection for India and States 1981 – 1985* of the RGI. These estimates differ considerably from those referred to in the paper mentioned by Minhas. First, the NSS estimates of non-food expenditure (Rs. 48,000 Crores) quoted by him from his paper (1989) is in fact an adjusted estimate – the estimate based on HCES 1983 adjusted by imputed house rent. The NSS estimates presented in the *Table 1* of the report are based on survey-based estimates of actual household consumption expenditure and are not adjusted in any way. This is indicated clearly in the accompanying text of the report. Further, *Table 3* and the accompanying text of the report also reveal that the high order of divergence between the estimates from the two sources continues to persist even after making appropriate adjustments for imputed house rent.

Table 2: Aggregate estimates of food and non-food consumption in 1983-84 based on NSS 38th Round (1983)

Estimates	rural	urban	total
MPCE (Rs): food	73.63	97.31	—
MPCE (Rs): non-food	36.68	68.49	—
population (000) as on 1st Oct. 1983	550922	172187	—
Aggregate consumption (Rs. Crores)			
food	49,353	20,386	69,739
non-food	24,586	14,348	38,934
total	73,939	34,734	1,08,668

The NAS estimates quoted by Minhas pertain to the 1970-71 series of NAS, whereas the figures quoted in the report are taken from NAS 1990. His comments on the estimates for 1983-84 have however helped us in reviewing the first draft and make necessary corrections in this respect.

Regarding the "refined" adjustments done by Prof. Minhas and his colleague in their paper, the Study Group was of the view that such refinements are too fine to help identify the actual reasons for the observed divergence. As discussed in the report, the growth in production of food grains between 1992-93 and 1993-94 was too low to significantly affect the comparability on this count. Moreover, such adjustments for reference period involve too many strong assumptions to render validity to their results as possible explanation for the divergence.

Comparing survey results based on two different reference periods:

This was kept outside the scope of the study for much the same reason as mentioned above. It may, however, be noted that NSS estimates based on data collected with 365 days reference period are usually less than those based on data collected with 30 days reference period. Thus, the comparison between the NAS and NSS estimates for these item-groups, as suggested by Tendulkar, would have been poorer, had the estimates based on data collected with 365 days reference period been used. However, as suggested, we have now mentioned in the first paragraph of Section 4 that "The NSS estimates used for this purpose are based on the data collected with 30 days reference period".

Share of NPISHs

The statement made in the report that the estimate of 10 per cent share of the NPISHs in NAS estimate of PFCE is on the higher side is indeed subjective, but is founded on a general idea formed from the estimates of other macro-economic aggregates and the data of Economic Census 1998.

On cooked meals

The claim made in the first draft that the method followed in respect of recording "cooked meals" in the NSS leads to underestimation was not clear to Tendulkar. Dutta Roychoudhury too was of the opinion that it needs further examination. The relevant text has been revised to express our view more clearly. It is important to note in this context that, in the HCES, the meals served to a domestic help who is not a member of the employer household are included *only* in the consumption expenditure of the serving households and *not* at all in that of the recipients' households. But, the "cooked meals" consumed by the domestic help is a part of the remuneration she/he receives for the services provided to the employer household, which, in turn, is used up as final consumption by the latter. Thus, the value of the "cooked meals" served to a domestic help by an employer household forms a part of 'food' consumption of the former and that of consumption of 'services' of the latter. In the method followed in the HCES, the value of "cooked meal" representing consumption of services is not recorded.

Share of PFCE in output of Hotels and restaurants

There is at present no objective basis for the assumption that 33 per cent of the output is consumed by the households. The necessity of using a norm based on an objective study has been stressed in the recommendations. The value of tea, snacks, beverages and "other processed food" served in the hotels and restaurants are, in principle, included in the private consumption expenditure on hotels and restaurants, both in NAS and NSS. Only the part of these food items that is consumed at home is taken under the respective heads.

Disaggregated comparison of item groups like' clothing and footwear' and "glassware, tableware & utensils"

The classification schemes followed by the two agencies do not permit more disaggregated analysis, as suggested by Tendulkar. In fact, we could not identify any specific reason for the divergence between the two estimates, so far as the methodology is concerned. Thus, only the facts relating to data sources used have been mentioned, without mentioning possible reasons. As for quan-

tity-price comparison of "glassware, tableware & utensils", it could not be taken up since the only available estimates are those of value.

Norms used for PFCE on Transport services

There is at present no objective basis for assuming that 80 per cent of rail fare, 15 per cent of airfare, 50 per cent of taxi fare and 90 per cent of auto-rickshaw and bus fare as private final consumption. The necessity of using norms based on objective studies has been stressed in the recommendations. The MoST estimates of number of vehicles are known to be on the higher side as the system of de-registration is not operative in many of the States.

Estimates of PFCE on milk and milk products

The accuracy of the NAS estimates depends heavily on the accuracy of the rates, ratios and norms applied on the production estimates for arriving at the estimate of private consumption. As pointed out by Roy Choudhury, the NAS estimates of consumption of milk, milk products and manufactured articles suffer greatly due to absence of up-to-date estimates of the required rates, ratios and norms. This deficiency and the necessity of taking up studies to overcome them have been stressed in the recommendations given in Section 5 of the report.

On problem relating to valuation of commodities consumed and prices

Getting an appropriate price-base for estimation of NAS aggregates is indeed a formidable problem. Roy Choudhury acknowledges the problem and expresses her grave concern about use of different sets of price data for estimating the NAS aggregates. A solution to this problem has been suggested in Section 5 of the report, which entails examination of implicit prices derived from the NSS estimates of value and quantity for different commodities. Roy Choudhury endorses the necessity of examining the NSS estimates on the items like hotels and restaurants, durables, travelling expenses further. These issues have been covered in the recommendations made in Section 5 of the report. These recommendations, as suggested, have been further re-examined, also taking into consideration the Tendulkar's comments on them, and have now been revised appropriately.

We thank the discussants for the comments that have helped us in improving the contents of the report. We do not have any specific observation to make on the comments offered by Saha, which consist of a commentary on the findings of the WG and certain suggestions for improvement in the present practices of compilation of NAS and collection of household consumption expenditure data. We regret not addressing all the points raised.

PART - II

SUMMARY AND MAJOR FINDINGS OF SURVEYS

An Integrated Summary of NSS Fifty-Fifth Round (July 1999-June 2000) Survey Results on Informal Sector Employment in India

Asis Roy and Salil Mukhopadhyay

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Asis Roy and Salil Kumar Mukhopadhyay *

1 Introduction

1.1 In 1972, the term 'informal sector' was first used by the International Labour Organisation (ILO) to denote a wide range of small and un-registered economic activities. Since then, this term has been debated much for want of a universally acceptable definition. In the Fifteenth International Conference held in January 1993 (ICLS-1993) at Geneva, the Labour Statisticians discussed various issues relating to the concept and definition of the informal sector and a resolution (Resolution-II) concerning statistics of employment in the informal sector was taken at the end of the conference. Later, the System of National Accounts (1993) recommended by United Nations also endorsed this resolution with regard to the concept of informal sector. The concept and definition of the informal sector as per the resolution adopted at the Fifteenth International Conference of Labour Statisticians (ICLS-1993) is briefly discussed here.

1.2 Informal Sector

1.2.1 Informal sector may be broadly characterized as consisting of units engaged in the production of goods or services that typically operate at low level of organisation, with little or no division between labour and capital as factors of production and on a small scale. Labour relations, where they exist, are based mostly on casual employment, kinship, or personal or social relations rather than contractual arrangements with formal guarantees. The production units in informal sector have characteristic features of household enterprises. The owners of these production units have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligation incurred in the production process. Expenditure for production is often indistinguishable from household expenditure. The capital goods such as building or vehicles may be used indistinguishably for the business and household purpose. The fixed and other assets used do not belong to the production units as such but to their owners.

1.2.2 For statistical purpose, the informal sector is regarded as a group of production units, which form part of the household sector as household enterprises or equivalently, unincorporated enterprises owned by households. Within the household sector, the informal sector comprises (i) '*informal own account enterprises*' that are owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family members and employees on an occasional basis but do not employ employees on a continuing basis; and (ii) '*enterprises of informal employers'* that are owned and operated by employers, alone or in partnership with members of the same or other households, which employ one or more employees on a continuing basis. The infor-

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mal sector is defined irrespective of the kind of work place where the productive activities are carried out, the extent of fixed capital assets used, the duration of the operation of enterprise (perennial, seasonal or casual), and its operation as a main or secondary activity of the owner.

1.2.3 According to the United Nations System of National Accounts (Rev. 4), *household enterprises* (or equivalently unincorporated enterprises owned by households) are units engaged in the production of goods or services, which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners. The household enterprises include unincorporated enterprises owned and operated by individual household members or unincorporated partnership enterprises formed by two or more members of the same household as well as formed by members of different households.

1.3 Informal sector in the Indian context

1.3.1 To measure the contribution of informal sector to the national economy, the United Nations Statistical Commission constituted an international "Expert Group on Informal Sector Statistics" which is popularly referred to as the Delhi Group. The primary purpose of this group is to facilitate the exchange of knowledge and experience among countries, international organisations and other concerned agencies in regard to the measurement of the size of the informal sector and its contribution to an economy.

1.3.2 In India, the term 'informal sector' has not been used in the official statistics or in the National Accounts Statistics (NAS). The terms used in the Indian NAS are '**organised**' and '**unorganised**' sectors. The *organised sector* comprises enterprises for which the statistics are available regularly from the budget documents or reports, annual reports in the case of Public Sector and through Annual Survey of Industries in case of registered manufacturing. On the other hand, the *unorganised sector* refers to those enterprises whose activities or collection of data is not regulated under any legal provision and / or those which do not maintain any regular accounts. Non-availability of regular information has been the main criteria for treating the sector as unorganised. This definition helps to demarcate organised sector from the unorganised sector. For example, units not registered under the Factories Act 1948 constitute unorganised component of manufacturing on account of activity not regulated under any Act. In case of the sectors like trade, transport, hotels & restaurants, storage and warehousing, and services, all non-public sector units constitute the unorganised sector. However, the enterprises covered under Annual Survey of Industries (ASI) do not fall under the purview of unorganised sector survey.

1.3.3 The Delhi Group felt that 'Informal Own Account Enterprises' and 'Enterprises of the Informal Employers' as mentioned in the resolution adopted at the Fifteenth International Conference of Labour Statisticians (ICLS-1993) are conceptually close to that defined in the Indian Statistical System', i.e., 'Own Account Enterprises' and 'Establishments' with at least one hired worker. This definition which is enterprise based provides a good coverage of enterprises to work out the value added by industry groups required

for the National Accounts Statistics. The work force in the Informal Sector can also be measured through the household surveys by taking into account the principal and subsidiary activities of each member of the household.

1.4 NSS surveys to measure employment in the Informal Sector

1.4.1 In the recent years, both household and enterprise surveys were conducted by NSSO in its 55th (July 1999-June 2000), 56th (July 2000-June 2001) and 57th (July 2001-June 2002) rounds. In the 56th round, enterprise survey was on *unorganised manufacturing* sector and in the 57th round it was on *unorganised services* (excluding trade and finance). In the 56th and 57th rounds, information on employment through household survey was obtained from Schedule 1.0. In the 55th round, information on employment in the informal sector was available from both enterprise survey (Schedule 2.0) and household survey (Schedule 10).

1.4.2 The National Sample Survey Organisation (NSSO) conducted an integrated survey of households and enterprises in its 55th round during July 1999 to June 2000. The subjects covered were household consumer expenditure (Schedule 1.0), employment-unemployment (Schedule 10) and informal non-agricultural enterprises (Schedule 2.0). Besides collection of usual information on employment-unemployment indicators, certain information on workers in the non-agricultural sector was collected, to measure employment in the informal sector, from the households selected for the employment-unemployment survey. The non-agricultural enterprises engaged in the activities of manufacturing, construction, trading and repair services, hotels and restaurants, transport storage and communications, financial intermediation, real estate, renting and business activities, education, health and social work, other community, social and personal service activities (excluding domestic services) were covered in this survey. Information on characteristics of the enterprises, fixed assets, employment, expenses and receipts, value added, employment etc. was collected from the enterprises surveyed, which provided scope for generating alternative estimate of jobs created in the informal sector and may be approximated to the size of employment in the informal sector obtained through enterprise approach. In this survey, all unincorporated proprietary and partnership enterprises were defined as **informal sector** enterprises. This definition differs from the concept of unorganised sector used in National Accounts Statistics. In the unorganised sector, in addition to the unincorporated proprietary or partnership enterprises, enterprises run by cooperative societies, trusts, private and public limited companies (Non ASI) are also covered. The informal sector can therefore be considered as a subset of the unorganised sector. The concepts relevant for the two surveys and also, useful for this note are presented in Annex-III.

1.4.3 This note presents the summary of findings, based on schedule 10, on non-agricultural workers by various attributes such as their activity status, broad industry of work, enterprise type, location of workplace, etc., with special emphasis on workers in the informal sector, i.e., those working in proprietary or partnership type of enterprises. A comparison of the same with that obtained from the enterprise survey has formed a part of this summary also. However, the detailed results on the employment in the informal non-agricultural enterprises are available in NSS Report numbers 459 and 460.

1.5 Geographical coverage

1.5.1 The survey covered the whole of the Indian Union except (i) Ladakh and Kargil districts of Jammu & Kashmir, (ii) villages situated beyond 5 Kms. of bus route in the state of Nagaland and (iii) inaccessible villages of Andaman and Nicobar. As in the previous rounds, all the uninhabited villages of the country, according to 1991 census, are left out of the coverage of NSS 55th round.

1.6 Sample Design

1.6.1 A stratified sampling design was adopted for selection of the sample first-stage units (FSUs). The FSUs were villages (panchayat wards for Kerala) for rural areas and Urban Frame Survey (UFS) blocks for urban areas. The Ultimate stage units (USUs) were the households for canvassing consumer expenditure (Schedule 1.0) & employment-unemployment schedules (Schedule 10/10.1) and enterprises for canvassing informal sector enterprise schedule (Schedule 2.0). USUs were selected by the method of circular systematic sampling from the corresponding frame in the FSU. Large FSUs were sub-divided into hamlet groups (rural) / sub-blocks (urban). Details of the formation of hamlet–group/sub-blocks and procedure of selection of households are also given in Annex-II.

1.7 Sample size – first stage units

1.7.1 A total number of 10,384 FSUs (6,208 villages and 4,176 urban blocks) were selected for survey in the central sample at the all-India level in the 55th round for all the schedules, of which 10,173 villages/ blocks (6,048 villages and 4,125 urban blocks) were actually surveyed. Table 1.1 of Annex-II gives the number of FSUs surveyed for the different states/u.t.s. Sample size for the whole round for each State/UT x Sector (i.e. rural/urban) was allocated equally among the 4 sub-rounds. Sample FSUs for each sub-round were selected afresh in the form of 2 independent sub-samples. Thus, there were 8 such sub-samples. In addition, 3894 FSUs – 1298 in each of the sub-rounds 2, 3 and 4, corresponding to sub-samples 1, 3 and 5 - were re-visited for canvassing Schedule 10.1 meant for collection of selected data on employment and unemployment at the re-visit. Note that, information for measuring employment in the informal sector collected for workers in the non-agricultural sector through Schedule 10.1 in the re-visit was also used for estimating the employment in informal sector presented in Report number 460.

1.8 Sample size – second stage units

1.8.1 For schedule 10, a sample of 1,65,244 households were surveyed – 97,986 in rural areas and 67,258 in urban areas. As regards the number of persons surveyed, it was 5,09,779 in the rural sector and 3,09,234 in the urban sector. For the enterprise survey, 1,97,637 units (114506 from the rural and 83131 from the urban) belonging to the informal sector were surveyed. Table 1.2 of Annex-II gives the number of persons and enterprises surveyed for the different states/ u.t.s

1.9 Period of survey and work programme

1.9.1 The fieldwork of 55th round of NSSO started from 1st July, 1999 and continued till 30th June, 2000. As usual, the survey period of this round was divided into four sub-rounds, each with a duration of three months, the 1st sub-round period ranging from July to September,1999, the 2nd sub-round period from October to December 1999 and so on.

Equal number of sample FSU's was allotted for survey in each of these four sub-rounds.

1.10 Lay-out of the paper

1.10.1 As stated earlier, this paper deals with various estimates with regard to non-agricultural workers, with special emphasis on workers in the informal sector, along with their correlates as obtained from the data collected through 55th survey on Employment and Unemployment (schedule 10), and Informal Non-agricultural Enterprises (Schedule 2.0). Including the present introductory sub-section, Sub-section 2 gives the summary findings of the survey. All the summary results for the states and u.ts. are put in Annex-I. The details of sample design and estimation procedure including the villages and urban blocks allotted as well as surveyed, allocation for each State and Union Territory, number of persons/enterprises surveyed for employment-unemployment and informal sector non-agricultural enterprise enquiry are given in Annex-II. Annex–III gives, in detail, the concepts and definitions of only those terms used in the survey in connection with the various items covered in this paper. Extract of NIC 1998 giving activities covered under different tabulation categories (A-Q) is given at Annex-IV. Detailed activities, coverage and their definition used in this survey for collection of data through schedule 2.0 are given in Annex-V.

2. Summary of findings

2.1 This sub-section summarises the important findings of the Employment-Unemployment survey based on the responses to the questions put to the usual status non-agricultural workers on the various particulars of their enterprise of work and discusses the salient features pertaining to these aspects. A comparison on number of workers in the informal sector obtained from household survey (Schedule 10) and Enterprise survey (Schedule 2.0) has also been made in this sub-section.

2.2 The usual activity status refers here to activity status of workers taking together the principal status (ps) and subsidiary economic status-I (ss) for persons categorised 'not working' in their principal status. In this paper, this has been referred to as 'workers (ps+ss)'. Discussions are mainly centered around the all-India estimates. It may be mentioned that while all-India summary results are presented along with write-up in the Statements, the corresponding results at the state/ union territory level are given together in the Tables in Annex-I.

2.3 As per the survey estimates, about 921 million people stayed in 189 million households in India during 1999-2000. About 73 percent of the households belonged to rural India and accounted for nearly 75 percent of total population. The average household size for the rural was 5.0 which was a little higher than the urban average of 4.5. On an average, the sex ratio (number of females per 1000 males) of an Indian household was 947. For every 1000 males, the number of females was more in the rural (959) as compared to the urban areas (915). It may be noted in this context that compared to the census population or the projections thereof, population estimates from the NSSO surveys are, in general, on the lower side. This difference arises mainly due to the differences in methods and coverage adopted by the NSSO in comparison to the census operation.

2.4 At the outset, an overview of the total work-force and the share of non-agricultural sector in the workforce as obtained

Statement 1: Number of workers (ps+ss) per 1000 persons all-India

sector	workers		
	male	female	persons
(1)	(2)	(3)	(4)
rural	531	299	417
urban	518	139	337
combined	**527**	**259**	**397**

Proportion of males in the workforce: 68%

Statement 2: Number of non-agricultural workers per 1000 workers (ps+ss) all-India

sector	non-agricultral workers		
	male	female	persons
(1)	(2)	(3)	(4)
rural	286	146	237
urban	934	823	912
combined	**450**	**235**	**382**

Proportion of males in the non-agricultural workforce: 80%

from employment-unemployment survey is presented at the all-India level in Statement 1 and Statement 2, respectively. Usual status 'all' workers (henceforth called *workers*), i.e., workers in principal (ps) and subsidiary (ss) economic status taken together, were considered to constitute the work-force. It is seen from the Statement 1 that 40% of the population were working during 1999-2000. The gender differentials in the number of worker (per 100 persons) were quite significant – the number was 53 for males and 26 for females. The number was higher for rural (42) than that of urban (34). Among the workers, the proportion of non-agriculture workers was much higher in urban areas (91%) than that in rural areas (24%). The proportion were higher for males (45%) than that for females (24%).

2.5 Workers in the informal sector

2.5.1 The distribution of non-agricultural workers by their type of enterprise in which they were employed is presented at the all-India level in Statement 3. The two groups – proprietary and partnership (P&P) – have been clubbed together. They constitute the un-incorporated proprietary and partnership enterprises – a category defined as *informal sector* in this survey.

2.5.2 Statement 3 reveals that a high proportion of non-agricultural workers, in both the rural or urban areas, had been working in the *informal sector* (i.e. in proprietary and partnership enterprises). About 71% of the non-agricultural workers in rural areas and 68% in urban areas were employed in the *informal sector* during 1999-2000. This proportion was found to be higher for females (72%) than that for males (68%) and this was true for both rural and urban areas. Figure 1 shows number of workers engaged in the *informal sector* per 1000 of non-agricultural workers separately for males and females in both the rural and urban areas.

Statement 3: Per 1000 distribution of non-agricultural workers (ps+ss) by enterprise type all-India

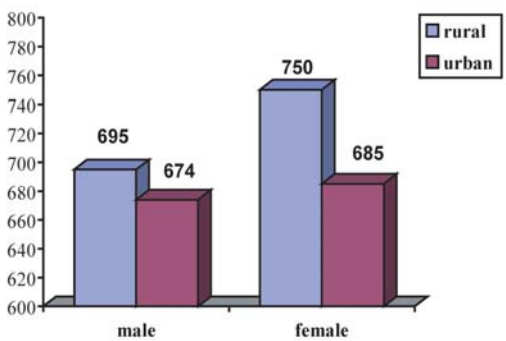
category of workers	non-agricultural workers (ps+ss) by enterprise type										
	proprietary		partnership		P&P	public sector	semi-public	others	not known	n.r.	total
	male	female	within same hh	from difft. hhs.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
rural											
male	657	10	14	13	695	98	12	56	41	98	1000
female	404	321	18	7	750	70	9	56	33	82	1000
persons	602	78	15	12	707	92	11	56	39	95	1000
urban											
male	623	7	25	19	674	142	15	88	37	44	1000
female	374	281	20	11	685	130	14	74	40	57	1000
persons	578	56	24	18	676	140	15	85	38	46	1000
combined											
male	639	9	20	16	684	121	14	73	39	69	1000
female	390	302	19	9	720	98	11	64	36	71	1000
persons	590	66	20	15	691	116	13	71	39	70	1000

Note: 'n.r.' stands for non response

2.6 Informal sector workers by type of enterprise

2.6.1 Statement 4 presents the distribution of workers in the *informal sector* by type of enterprise in which they were employed, separately for males and females in both rural and urban areas. Among the workers in the informal sector, majority are engaged in the *proprietary enterprises* – 95 % for males and 96 % for females. About 93% of the male workers in the informal non-agricultural sector were engaged in the *proprietary male* enterprises. As against this, only 42% of female workers were engaged in the *proprietary* female enterprises. Figure 2 shows, both for rural and urban areas, the share of informal sector workers in the proprietary enterprises and that in partnership enterprises.

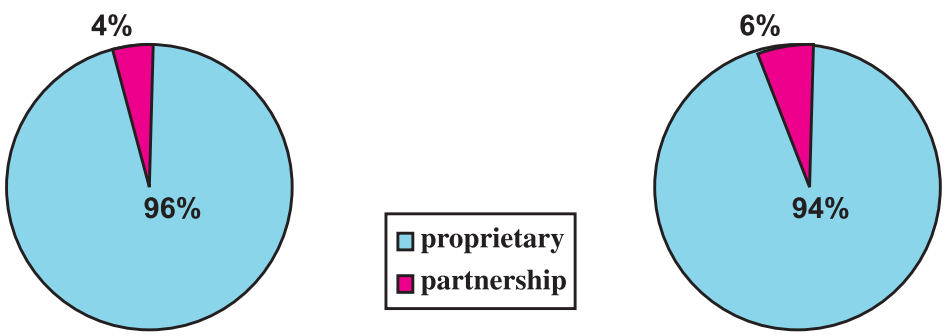
Figure 1: Number of workers engaged in the informal sector per 1000 of non-agricultural workers



Statement 4: Per 1000 distribution of workers in the informal sector (i.e., those engaged in proprietary and partnership enterprises) by type of enterprise all-India

category of workers	type of enterprise				proprietary and partnership
	proprietary		partnership		
	male	female	within same household	from different households	
(1)	(2)	(3)	(4)	(5)	(6)
			rural		
male	945	14	20	19	1000
female	539	428	24	9	1000
persons	851	110	21	17	1000
			urban		
male	924	10	37	28	1000
female	546	410	29	16	1000
persons	855	83	36	27	1000
			combined		
male	934	13	29	23	1000
female	542	419	26	13	1000
persons	854	96	29	22	1000

Figure 2: Share of informal sector workers in the proprietary enterprises and that in partnership enterprises



Statement 5: Distribution of workers by sex in each of the proprietary male and proprietary female enterprises all-India

enterprise type	workers		
	male	female	all
(1)	(2)	(3)	(4)
Proprietary male	87	13	100
Proprietary female	11	89	100

2.6.2 It may be noted that about 68% of the work-force in the country was shared by the males. The situation was extremely biased towards males in the case of work-force in the non-agricultural sector, informal sector as well as in the case of proprietary enterprises. About 20% of the employment was left to the females in each of non-agricultural enterprises, informal sector enterprises and proprietary enterprises. Further analysis of the work-force in the *proprietary* enterprises are made in Statement 5. A clear gender bias is observed when the share of work-force is examined in respect of sex of the owner of the *proprietary* enterprises. About 87% of the workers in the *proprietary* male enterprises were males, whereas in the *proprietary* female enterprises the share of female workers was 89%.

2.7 The state level distributions of non-agricultural workers by their type of enterprise in which they were employed as obtained from the survey are presented in Table 1.

2.8 Informal sector workers in different usual activity status

2.8.1 It may be of interest to obtain the proportion of non-agricultural workers engaged in the *informal sector* for different usual activity statuses of workers. Statement 6 presents these proportions corresponding to different work statuses excluding those engaged as casual workers in public works.

Statement 6: Number of non-agricultural workers (ps+ss) engaged in proprietary or partnership (P&P) enterprises per 1000 non-agricultural workers (ps+ss) for each activity status all-India

usual activity status	non-agricultural workers (ps+ss) engaged in P&P enterprises					
	rural			urban		
	male	female	persons	male	female	persons
(1)	(2)	(3)	(4)	(5)	(6)	(7)
11	908	926	911	955	925	950
12	934	902	932	914	518	878
21	897	917	908	943	946	944
11-21	907	921	911	951	928	947
31	336	284	328	402	408	403
51	698	637	687	740	721	737
11-51 (excl. 41)	697	754	710	675	687	677

2.8.2 It is observed from Statement 6 that proportion of workers in the informal sector among the non-agricultural sector is highest among the self-employed and it was as high as 91% in rural areas and 95% in urban areas during 1999-2000. Among the non-agricultural workers who were casual labourers engaged in other than public works too, a substantial chunk was employed in the *informal sector* – 69% in rural areas and 74% in urban areas. As compared to these categories, a relatively less proportion of the regular salaried workers were employed in the *informal sector.* The proportion ranged from 33% in rural areas to 40% in urban areas. It may be noted that number of non-agricultural workers (ps+ss) engaged in proprietary or partnership (P&P) enterprises per 1000 non-agricultural workers (ps+ss), presented in Statement 6 is higher than the cor-

responding figures presented in Statement 3. This is because proportion of workers in proprietary or partnership (P&P) enterprises in Statement 6 has been obtained by excluding those engaged as casual labourers in public works (activity status code 41) from the total workers engaged in non-agricultural enterprises.

Statement 7: Per 1000 distribution of non-agricultural workers (ps+ss) by activity status separately for those (i) engaged in proprietary or partnership enterprises and (ii) all enterprises all-India

usual activity status	non-agricultural workers (ps+ss)					
	male		female		persons	
	P&P	all	P&P	all	P&P	all
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			rural			
11	497	382	362	294	466	363
12	9	7	2	2	7	6
21	92	71	400	329	163	127
11-21	598	460	764	626	636	496
31	129	267	65	172	114	246
51	273	273	171	203	250	258
11-51 (excl. 41)	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
			urban			
11	447	316	346	257	429	306
12	19	14	5	6	16	12
21	101	73	245	178	127	91
11-21	567	402	596	441	572	409
31	264	443	238	400	259	436
51	169	154	167	159	169	155
11-51 (excl. 41)	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**

2.8.3 Statement 7 shows the distributions at all-India level – separately for non-agricultural workers in general, and for workers in the *informal sector* in particular – over different activity statuses of such workers.

2.8.4 *In rural areas*: It is observed that the *self-employed* workers were more preponderant among those working in the *informal sector* (64%) than among all non-agricultural workers (50%). Within the *informal sector,* of the female workers, as many as 76% were self-employed while, among male workers, about 60% were self-employed. Among all non-agricultural workers, proportions of *self-employed* were a little lower than those working in the *informal sector,* these being 63% for females and 46% for males. The proportion of *regular wage earners* was lower among workers in the *informal sector* (11%) than that among all non-agricultural workers (25%).

2.8.5 *In urban areas*: The proportion of self-employed workers in urban areas – whether among those working in the *informal sector* or among all non-agricultural workers – was lower than the corresponding proportions in rural areas. These were 57% among workers in the *informal sector* and 41% among all non-agricultural workers. In urban areas, unlike in rural areas, the proportion of regular wage earners – whether among workers in the *informal sector* or among all non-agricultural workers taken together – was much higher than that for casual labourers. While among all non-agricultural workers, proportion of regular wage earners and casual workers were estimated as 44% and 16% respectively, among workers in the *informal sector*, these estimates were 26% and 17% respectively.

2.8.6 The state level distribution of workers in the *informal sector* by their activity status as obtained from the survey are presented in Table 2.

Statement 8: Number of non-agricultural workers (ps+ss) engaged in proprietary or partnership enterprises per 1000 non-agricultural workers for each tabulation category. all-India

non-agricultural workers (ps+ss) in P&P enterprises						
tabulation categories	rural			urban		
	male	female	persons	male	female	persons
(1)	(2)	(3)	(4)	(5)	(6)	(7)
C	656	732	672	266	400	278
D	787	876	819	698	859	732
E	93	25	92	60	41	59
F	697	519	677	753	636	739
G	890	896	891	892	844	886
H	867	878	870	899	896	899
I	717	514	715	657	419	647
J	238	291	243	218	181	212
K	753	675	750	797	735	791
L	57	37	55	52	69	54
M	187	248	204	324	389	355
N	531	183	420	452	348	412
O	741	781	753	745	798	764
P	522	686	625	616	826	751
Q	0	0	0	588	794	636
all (C- Q)	695	750	707	674	685	676

Description of Tabulation category C to Q: C: Mining and Quarrying; D: Manufacturing; E: Electricity, Gas and water supply; F: Construction; G: Wholesale and retail trades, repair of motor vehicles, motor cycles and personal and household goods;H: Hotels and restaurants; I: Transport, storage and communications; J: Financial intermediation; K: Real estate, renting and business activities; L: Public administration and defence, compulsory social security; M: Education; N: Health and social work; O: Other community, social and personal service activities; P: Private households with employed persons; Q: Extra – territorial organisations and bodies

2.9 Informal sector workers by broad industry of work

2.9.1 It would be interesting to know that corresponding to each broad industry of work (referred to as *tabulation category)*, how many of the non-agricultural workers were accounted by the *informal sector* alone. Statement 8 presents the proportions of *informal sector* workers among all non-agricultural workers separately for each *tabulation category*. The descriptions corresponding to each tabulation category is given in Annex-V.

2.9.2 Statement 8 shows that more than four-fifths of all non-agricultural workers engaged in *wholesale or retail trade* etc (i.e. *tabulation category* G) or in *hotels and restaurants* (i.e. *tabulation category* H) belonged to the informal sector alone. This was true in rural or urban areas and even when male or female non-agricultural workers were considered separately. Among the *manufacturing* workers (*tabulation category* D) also, the proportion of non-agricultural workers employed in the *informal sector* was quite significant – more so in rural than in urban areas. This proportion was higher for females than for males. The survey has estimated that as high as 88% and 86% of females workers in the manufacturing sector were in the informal sector in rural and urban areas, respectively. The corresponding estimates for males were 79% and 70% in rural and urban areas, respectively. On the other hand, among *real estate, renting and business* workers (*tabulation category* K), the situation was just the reverse. Nearly 80% of urban and 75% of rural male workers in this *category* were in the *informal sector* while the corresponding proportions for female workers were 73% and 68% in urban and rural areas, respectively. Number of workers in the informal sector per 100 workers of different tabulation categories are shown in Figure 3 for both rural and urban areas.

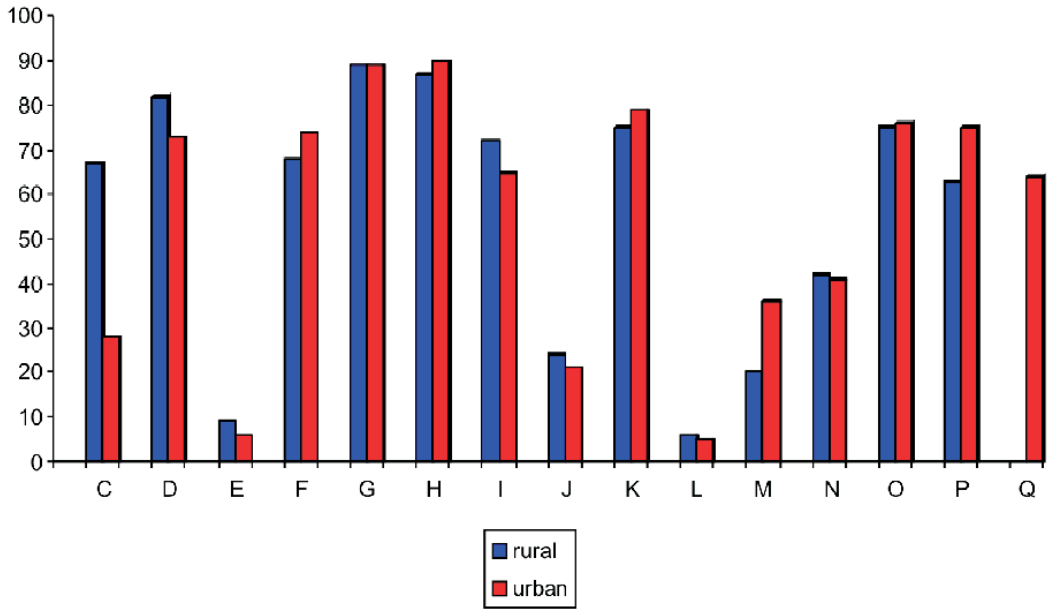
2.9.3 Having formed an idea of the relative preponderance of *informal sector* workers among workers for each broad non-agricultural industry of work, it would be of interest to have a look into how *informal sector* workers in particular, and non-agricultural workers in general, are distributed over the various broad industries of work (i.e., tabulation category). Statement 9 presents these distributions at the all-India level, separately for rural and urban areas.

2.9.4 *In rural areas:* The survey results suggest that *manufacturing* (*tabulation category* D) and *wholesale and retail trade*, etc. (*tabulation category* G) sectors together were the most important providers of employment. In the *manufacturing* (*tabulation category* D) sector alone, about 31% of the non-agricultural - and 36% of the *informal sector*– workers were employed. Most of the non-agricultural female workers (52%)- and those in the *informal sector* too (61%) were engaged in *manufacturing* activities. For male workers, these proportions were less - 26% for those engaged in all non-agricultural work and 29% for those in *informal sector*. *Wholesale and retail trade* etc. (*tabulation category* G) sector also plays an important role in providing employment. About 19% of all non-agricultural workers and 24% of workers in *informal sector* were employed in such industries, the proportions being significantly higher for males than for females. Proportions of male workers engaged in *wholesale and retail trade* etc, was more than the corresponding proportions of female workers for all non-agricultural workers as well as for those in the *informal sector*.

Statement 9: Per 1000 distribution of non-agricultural workers (ps+ss) by tabulation category of NIC-98 separately for those (i) engaged in proprietary or partnership (P&P) enterprises and (ii) all enterprises **all-India**

tabulation categories	non-agricultural workers (ps+ss)					
	male		female		Persons	
	P&P	all	P&P	all	P&P	all
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			rural			
C	19	20	19	20	19	20
D	289	255	605	519	362	312
E	1	9	0	1	1	7
F	157	156	50	72	132	138
G	272	212	132	110	239	190
H	31	25	31	26	31	25
I	114	110	3	4	88	87
J	3	8	1	3	2	7
K	10	9	1	1	8	7
L	5	59	1	25	4	51
M	14	52	24	74	16	57
N	10	12	5	21	9	14
O	75	71	116	111	85	79
P	1	2	11	12	4	4
Q	0	0	0	0	0	0
all(C – Q)	1000	1000	1000	1000	1000	1000
			urban			
C	4	9	3	4	3	8
D	248	239	366	292	269	249
E	1	9	0	2	1	7
F	104	93	54	59	95	87
G	372	281	220	179	345	263
H	44	33	36	27	43	32
I	108	111	13	21	91	95
J	7	21	4	17	6	20
K	32	27	15	14	29	24
L	6	84	5	48	6	78
M	15	32	78	137	27	50
N	11	16	23	45	13	21
O	41	37	107	92	53	47
P	7	8	76	63	20	18
Q	0	0	0	0	0	0
all(C – Q)	1000	1000	1000	1000	1000	1000

Figure 3 : Number of workers in the informal sector per 100 workers of different tabulation categories.



2.9.5 *In urban areas:* Here, too, the same two broad industries of work were the main providers of employment in the non-agricultural sector - 25% by *manufacturing* (*tabulation category* D) and 26% by *wholesale and retail trade etc*.(*tabulation category* G). The broad features noted in rural areas regarding gender differentials for those engaged in *manufacturing* and *wholesale and retail trade, etc.* hold true here also for all non-agricultural workers as well as for those in the *informal sector*.

2.9.6 The state level distributions of workers in the *informal sector* by the broad industries of work (i.e. tabulation category) as obtained from the survey are presented in Table 3.

2.10 Workers in the informal manufacturing enterprises

2.10.1 As seen from the previous section, the category 'manufacturing' was the most important provider of employment in rural areas and was one of the most important one in urban areas. So, it would be of interest to take a further look at such activities.

2.10.2 An important aspect of any manufacturing enterprise is use of electricity for purposes of manufacturing. Statement 10 presents the proportions of workers employed in manufacturing enterprises which used electricity for production purposes to all non-agricultural workers employed in such enterprises- separately for the manufacturing enterprises belonging to the *informal sector* as well as for all manufacturing enterprises.

2.10.3 *In rural areas*: The survey estimates that a little less than a quarter (24%) of all workers in *manufacturing* enterprises were employed in those manufacturing units that used electricity for manufacturing purpose. The proportion was much higher for male workers (32%) than that for female workers

(9%). The proportion was little lower - about 20% - for those working in *informal sector* units. However, when workers employed in *manufacturing* enterprises owned on a *partnership* basis are considered separately, this proportion was much higher (51%).

Statement 10:Number of workers (ps+ss) engaged in manufacturing enterprises those used electricity for production purposes per 1000 non-agricultural workers in the manufacturing enterprises for broad enterprise types all-India

type of manufacturing entrprises	workers (ps+ss) in mfg. enterprises using electricity					
	rural			urban		
	male	female	persons	male	female	persons
(1)	(2)	(3)	(4)	(5)	(6)	(7)
proprietary	253	78	184	474	178	397
partnership	586	274	506	755	577	738
P&P	274	85	201	504	191	427
all	320	86	236	570	222	498

2.10.4 *In urban areas:* Here, the proportion of workers in *manufacturing* enterprises using electricity to all those working in *manufacturing* enterprises as a whole was almost double (50%) of that in rural areas. The feature observed in rural areas viz. this proportion being a little lower for workers in *informal sector* as a whole but being much higher for workers in partnership owned manufacturing units holds true in urban areas too. In the latter case, the proportion was estimated to be as high as 74%. The feature of the proportion being much higher for male workers than that for female workers also holds true in urban areas, they being estimated as 57% and 22% respectively.

2.11 Workers by location of work place

2.11.1 Information on the various types of location of work place/enterprise in which a person was working has been collected for each of the working members of the sample household. Statement 11 presents the distribution of usual status non-agricultural workers – and separately for those who were working in enterprises in the *informal sector* only – by their location of work place. The description of different locations of workplace are given at the bottom of Statement 11.

2.11.2 *In rural areas:* Quite a significant proportion of non-agricultural workers, particularly the males, residing in rural areas had to move to the urban for their day-to-day work. About 8 % of the rural non-agricultural male workers had to move to the urban for work. The said proportion for female workers was less by 5 % point. However, these proportions were further lower when employment in the *informal sector* alone is considered. For female workers employed in the *informal sector*, the proportion was about 3 %. The corresponding proportion for males being 7 %. Female workers were more frequently found to be working in the rural areas in *own dwelling* and, to a lesser extent, in *employer's enterprise etc. but outside employer's dwelling*. However, for male workers, apart from these two categories, there were quite a number who worked in *own enterprise etc. but outside own dwell-*

Statement 11: Per 1000 distribution of non-agricultural workers (ps+ss) by location of workplace separately for those (i) engaged in proprietary or partnership (P&P) enterprises and (ii) all enterprises all-India

location of workplace	non-agricultural workers (ps+ss)					
	male		female		persons	
	P&P	all	P&P	all	P&P	all
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			rural			
1	99	78	35	31	84	68
2	207	148	586	459	294	215
3	194	141	95	76	171	127
4	28	27	47	44	32	31
5	178	235	110	169	163	221
6	28	23	14	12	25	21
7	115	100	34	44	96	88
8	65	64	31	36	57	58
sub-total (2 to 8)	815	738	918	841	839	760
9	5	4	4	3	5	4
10	16	13	2	3	13	10
11	3	3	2	3	3	3
12	26	36	10	15	23	31
13	3	3	0	0	2	2
14	13	13	5	7	11	11
15	5	6	1	2	4	5
sub-total (9 to15)	71	77	25	32	61	67
n.r.	15	107	22	97	17	105
all	1000	1000	1000	1000	1000	1000
			urban			
1	51	39	25	19	47	36
2	17	11	43	31	21	15
3	43	31	19	14	39	28
4	6	5	17	14	8	7
5	26	37	17	28	24	35
6	5	4	4	3	5	4
7	10	8	8	6	10	8
8	8	8	5	5	7	7
sub-total (2 to 8)	114	103	113	102	114	103
9	107	73	357	252	152	105
10	244	170	95	70	217	152
11	26	27	123	104	44	41
12	283	395	179	290	264	376
13	36	30	26	25	34	29
14	73	61	43	44	67	58
15	55	53	26	32	50	50
sub-total (9 to15)	824	810	849	817	829	811
n.r.	10	48	12	62	10	50
all	1000	1000	1000	1000	1000	1000

Descriptions of the codes:*1 – no fixed place;* **workplace in rural areas:** *2 – own dwelling, 3 – own enterprise/unit /office/shop but outside own dwelling, 4 – employer's dwelling, 5 – employer's enterprise/ unit /office/shop but outside employer's dwelling, 6 – street with fixed location, 7 – construction site, 8 – others;* **work place in urban areas:** *9 – own dwelling, 10 – own enterprise/unit /office/shop but outside own dwelling, 11 – employer's dwelling, 12 – employer's enterprise/ unit /office/shop but outside employer 's dwelling, 13 – street with fixed location, 14 – construction site, 15 – others.*

ing. The proportion of workers with *no fixed work place* was higher among males than among females. For all non-agricultural workers, these proportions were estimated as 8% and 3% for males and females, respectively while for those working in the *informal sector* alone, the estimates were 10% and 4% for males and females, respectively.

2.11.3 *In urban areas:* Among all non-agricultural workers residing in urban areas, about 10% had to move to the rural areas for their day-to-day work. This proportion was slightly higher (11%) for those employed in the informal sector. The gender variations in these proportions were very little. About 25% of the female non-agricultural workers residing in urban areas had worked in their *own dwelling in urban areas* compared to 7% for the males. The difference widened further in the case of *informal sector* – the proportions being 36% for females and 11% for males. Other categories of work place where females worked with relatively higher frequency are *employer's enterprise etc. but outside employer's dwelling in urban areas* (29% among all enterprises and 18% among *informal sector* alone) and *employer's dwelling in urban areas* (10% among all enterprises and 12% among *informal sector* alone). On the other hand, male workers were most commonly found working in *employer's enterprises etc. but outside employer's dwelling in urban areas* (40% among all enterprises and 28% among *informal sector* alone). They were also working in relatively large numbers in *own enterprises, etc. but outside own dwelling in urban areas* – 17% among all enterprises and 24% among enterprises within the *informal sector* alone. There were quite a few cases of non-reporting with respect to the location of work place of workers in both rural and urban areas.

2.12 Workers in the informal sector and size of the enterprises

2.12.1 The size in terms of number of workers of the enterprises or establishments where they were engaged was collected for each non-agricultural worker in the survey. Such information have been presented in Statement 12 in the form of distribution of non-agricultural workers (ps+ss) by number of workers in their enterprise separately for those (i) engaged in proprietary or partnership (P&P) enterprises and (ii) all enterprises. A large proportion of non-agricultural workers are found to work in the small enterprises. The proportion of workers engaged in enterprises of size less than 6 workers was 61% in rural areas and 54% in urban areas. These proportions increased considerably to 80% and 76%, respectively for the informal sector, and reached the highest level for female workers (83% in rural and 79% in urban). Thus, the number of tiny (in terms of number of workers) enterprises are many in the economy and absorb a large section of work-force of the informal sector as well as that of the non-agricultural sector.

2.12.2 Statement 13 seeks to find the relationship among the sex of the workers engaged in the non-agricultural proprietary enterprises, sex of the proprietor and the size of the enterprises. Employment in the enterprises engaging six or more workers, called 'big enterprises', has been considered for this analysis. When male workers are engaged in the *proprietary female* enterprises, a relatively higher proportion of workers are employed in the 'big enterprises'. In the rural areas, the proportion of male workers engaged in the proprietary female 'big enterprises' was 29% and corresponding proportion for female workers was 21% when they

Statement 12:Per 1000 distribution of non-agricultural workers (ps+ss) by number of workers in their enterprise separately for those (i) engaged in proprietary or partnership (P&P) enterprises and (ii) all enterprises.

all-India

no. of workers in non-agri. enterprises	non-agricultural workers (ps+ss)					
	male		female		persons	
	P&P	all	P&P	all	P&P	all
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			rural			
less than 6	787	595	826	676	796	613
6 - 9	73	71	62	64	71	69
10 - 19	41	51	36	41	40	49
20 & above	44	91	41	64	43	86
not known	41	83	24	65	37	79
all (incl. n.r.)	1000	1000	1000	1000	1000	1000
			urban			
less than 6	749	533	785	576	756	541
6 - 9	88	76	65	70	84	75
10 - 19	54	61	42	61	52	61
20 & above	51	174	55	137	52	167
not known	45	105	36	88	43	102
all (incl. n.r.)	1000	1000	1000	1000	1000	1000

were engaged in proprietary male enterprises. As against this, the proportion was 14% when males were engaged in proprietary male enterprises and it was 3% when females were engaged in proprietary female enterprises. In the urban areas, for the proprietary female enterprises, only 3% of the female workers were engaged in enterprises with workers 6 or more, whereas, this proportion was about 23% when females were engaged in proprietary male enterprises.

Statement 13:Number of workers employed in non-agricultural enterprises with 6 or more workers per 1000 workers for each sex and enterprise type all-India

enterprise type	workers			
	rural		urban	
	male	female	male	female
(1)	(2)	(3)	(4)	(5)
proprietary male	144	210	172	227
proprietary female	288	29	192	35

2.13 Workers in enterprises maintaining written accounts

2.13.1 There are many who consider that most or all informal sector enterprises do not maintain books of account of their expenditure or receipts that they make. To test such a hypothesis, the status of account of the enterprise for each working member of a sample household was recorded in this survey. Statement 14 below presents the proportion of workers employed in enterprises maintaining such written accounts among non-agricultural workers. It also presents the proportions separately for different types of enterprises.

Statement 14: Number of non-agricultural workers (ps+ss) engaged in enterprises maintaining written accounts per 1000 non-agricultural workers

all india

type of entrprises	non-agri. workers (ps+ss) in enterprises maintaining accounts					
	rural			urban		
	male	female	persons	male	female	persons
(1)	(2)	(3)	(4)	(5)	(6)	(7)
proprietary	105	79	99	229	141	213
partnership	401	264	373	638	578	630
P&P	**117**	**85**	**109**	**256**	**160**	**239**
public sector	782	742	775	840	835	839
semi-public	814	462	757	816	832	819
others	573	531	564	722	656	712
not known	219	70	192	266	190	251
all	**209**	**152**	**197**	**379**	**287**	**363**

2.13.2 The survey estimated about 20% of all non-agricultural workers in rural areas - and 36% in urban areas - were employed in enterprises that maintained written accounts. The proportion was higher for male workers (21% in rural and 38% in urban areas) than that for female workers (15% in rural and 29% in urban areas).

2.13.3 The Statement also shows that when workers employed in the *informal sector* only was considered, these proportions were much lower - 11% in rural areas and 24% in urban areas. These proportions declined further to 10% in rural and 21% in urban areas for those working solely in the *proprietary* type of enterprise.

2.14 Comparison of number of workers in the informal sector obtained through enterprise survey and household survey approach

2.14.1 As mentioned earlier, survey of non-agricultural enterprises belonging to the informal sector was also carried out in the 55th round. Information on number of workers engaged in those enterprises, along with other things, were also collected through Schedule 2.0. An independent estimate of the number of non-agricultural workers that has been obtained from such information collected, provides a scope for comparing with the number of workers according to the principal (ps) and subsidiary activity statuses (ss)

obtained from the data collected through employment and unemployment schedule (Schedule 10).

2.14.2 There are certain points that are to be kept in mind while comparing the two sets of estimates. In the employment and unemployment survey, the number of workers is obtained from the household by head-count considering the participation of the household members in the economic activity either in the principal status or in the subsidiary status. In the enterprise survey, information on number of workers are obtained from the enterprise by considering the number of persons working in the enterprise on a fairly regular basis. A worker need not mean that the same person is working continuously; it only refers to a position. Thus, if more than one person work against a position in an enterprise, the number of workers in the enterprise survey will be one, whereas in the employment-unemployment survey, the number of workers will be more than one. On the other hand, if a person works in more than one enterprises on a fairly regular basis, in the employment-unemployment survey the number of worker will be one but in the enterprise survey, he/she is to be counted as worker in all those enterprises. Again, a person may be engaged in economic activity for a month or so during a period of 365 days and he/she is considered as worker in the employment and unemployment, but he/she may not be counted as a worker in enterprise survey – not being engaged in the enterprise on a fairly regular basis during the reference period. In view of these reasons, the two sets of estimates are not strictly comparable. However, they are expected to converge closely.

2.14.3 Number of enterprises surveyed: Enterprise survey of 55th round covered all informal enterprises in the non-agricultural sector of the economy, excluding those engaged in mining and quarrying, electricity, gas and water supply. All unincorporated enterprises which operate on either proprietary or partnership basis were considered to constitute the informal sector. Enterprises engaged in the activities relating to tabulation categories 'D' to 'O' (except E and L) were covered in the enterprise survey. A total of 197637 non-agricultural enterprises were surveyed all over India. Of them, 114506 (i.e., 58%) were from rural areas and 83131 from urban areas. Out of the total number of sample enterprises, 1.63 lakhs* (82%) were OAEs and the rest were Establishments. Of the rural 1.14 lakhs sample enterprises, 89% were OAEs and the rest were Establishments. In the urban areas, 73% of the sample enterprises were OAEs and the rest were Establishments.

2.14.4 **Estimated number of enterprises:** At the all India level, the number of non-

Statement 15:Estimated number of workers in informal sector obtained form schedule 10 and schedule 2.0 all-India

sector	estimated number of workers (000)		
	Schedule 2.0	Schedule 10	
		ps	ps+ss
(1)	(2)	(3)	(4)
rural	39808	44121	46688
urban	39975	45521	47168
combined	**79783**	**89643**	**93856**

Note: * 100 thousand = 1 lakh

agricultural enterprises were estimated at 444.1 lakhs. Of which, 250.7 lakh (i.e., 56%) enterprises were located in rural areas and 193.4 lakhs in urban areas. Among these enterprises, 388 lakhs were OAEs (87 %) and 56.1 lakhs were establishments (13 %)

2.14.5 **Estimated number of workers:** Statement 15 gives the estimated number of workers separately for rural and urban areas as obtained from Schedule 10 and Schedule 2.0. At the all India level, the number of workers in the informal sector obtained from Schedule 2.0 was 797.8 lakhs. Of these, 398.1 lakh (i.e., 50%) worked in enterprises located in rural areas and 399.7 lakh in enterprises located in the urban areas. As against this, number of informal sector workers obtained from Schedule 10 was 938.56 lakhs. Estimated number of workers in the informal sector as obtained from Schedule 10 (ps) and Schedule 2.0 are shown in Figure 4 for both rural and urban areas.

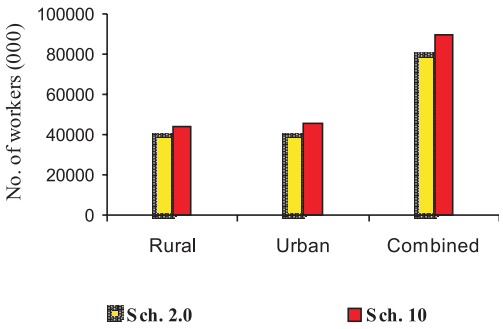
2.14.6 The estimated number of workers in informal sector as obtained from enterprise survey (Schedule 2.0) and household survey (Schedule 10), corresponding to the tabulation categories covered in informal non-agricultural enterprise survey (Schedule 2.0), are given in Statement 16.

Statement 16:Estimated number of workers engaged in the informal sector as obtained from enterprise survey and household survey all-India

tabulation category	estimated number of workers (000)								
	rural			urban			combined		
	Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10	
		ps	ps+ss		ps	ps+ss		ps	ps+ss
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
D	17692	15667	17379	11969	12362	13086	29661	28029	30465
F	1522	6275	6352	1148	4601	4635	2669	10876	10987
G	11995	11142	11489	16408	16323	16755	28403	27466	28244
H	1661	1440	1485	2630	2032	2081	4291	3472	3566
I	2527	4194	4241	2700	4396	4436	5226	8591	8677
J	66	111	112	266	301	309	333	412	421
K	313	370	377	1215	1345	1391	1528	1715	1767
M	587	685	786	1152	1102	1291	1739	1787	2077
N	536	396	408	667	604	620	1203	1000	1029
O	2909	3841	4059	1820	2455	2564	4729	6295	6623
all activities	**39808**	**44121**	**46688**	**39975**	**45521**	**47168**	**79783**	**89643**	**93856**

2.14.7 The estimated number of workers presented here for Schedule 10 is based on the *principal usual activity status* (ps) and *subsidiary economic activity status* (activity 1) (ss) of the persons during the reference period of 365 days preceding the date of survey. The relevant concepts have been explained in Annex-III. The tabulation category-wise estimate of the number of workers in the informal sector (Schedule 10) was computed by using the number of workers in the non-agricultural sector and the proportion of workers in the proprietary and partnership enterprises corresponding to the

Figure 4: Estimated number of workers (000)

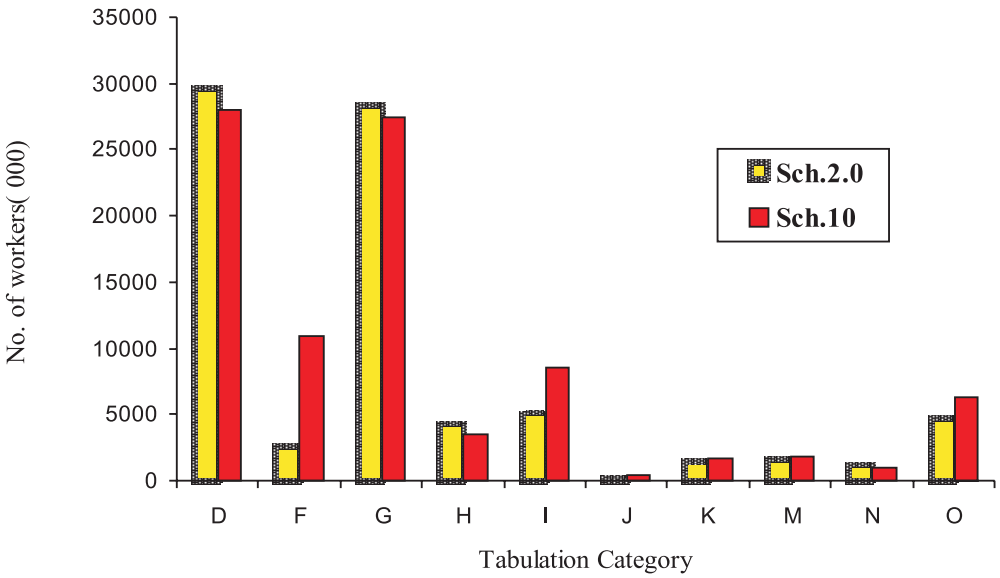


tabulation category. The estimated number of workers from Schedule 2.0 is based on the number of workers usually working on a working day in the sample enterprises during the reference month, i.e., last 30 days preceding the date of survey. In the enterprise survey, a worker is one who participates in the activities of the enterprise on a fairly regular basis during the reference month either on full time or on part time basis. So the casual labourers are not captured in the enterprise survey approach. These workers can best be captured through the household survey approach (Schedule 10). The individuals serving as housemaids, cooks, gardeners, governess, baby sitters, chowkidars, night watchmen etc. were outside the coverage of enterprise survey, although they were included in the household survey (Schedule 10).

2.14.8 It is seen from Statement 15 that the estimated number of workers from Schedule 10 is higher than those estimated from Schedule 2.0, both in rural and urban areas. The total number of workers (ps) from Schedule 10 is found to be about 12% higher than that from Schedule 2.0. The extent of divergence is almost same both in rural and urban areas.

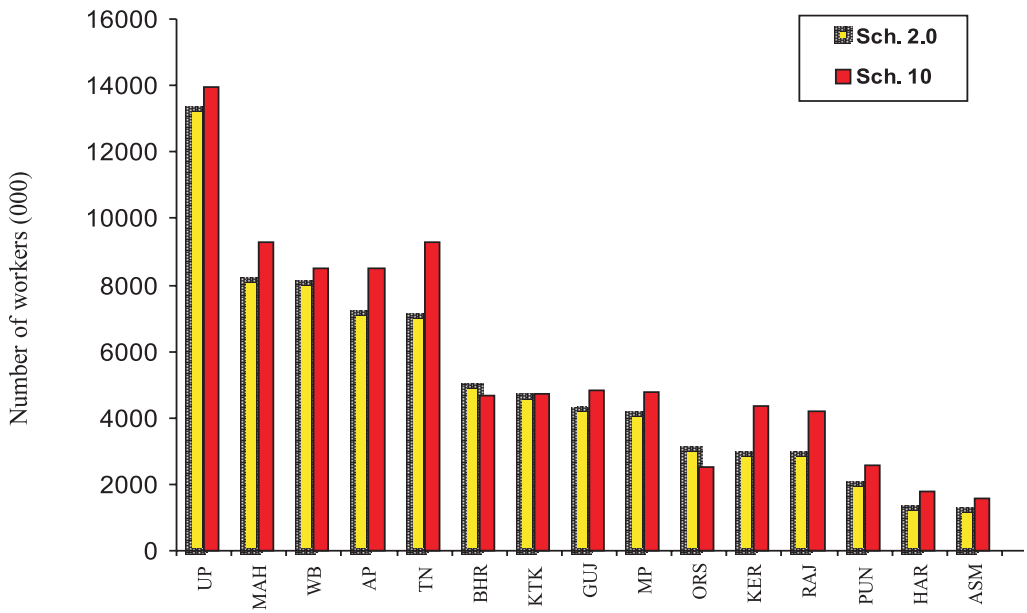
2.14.9 Figure 5 presents the tabulation category-wise comparison of estimated number of workers as obtained from Schedule 10 (ps) and Schedule 2.0. It may be seen that the estimated number of workers for tabulation category D (manufacturing) , G

Figure 5 : Number of workers (000) in the informal sector by tabulation category



(trade), H (hotels and restaurants) and N (health and social work) is higher for Schedule 2.0 as compared to the respective estimates obtained from Schedule 10. The estimated number of workers is close in case of tabulation category M (education). In the case of remaining tabulation categories, the estimates from Schedule 10 are higher than the estimates from Schedule 2.0. Further, the divergence in the two sets of estimates is quite large in case of tabulation categories F (construction) and I (transport, storage and communication). The enterprises belonging to construction and transport are perhaps difficult to be captured through enterprise survey approach. For example, a mason who works at different places (self employed) is treated as an enterprise in the enterprise survey. But the labourers accompanying him will not be captured as workers in the enterprise survey approach if they are not hired by the mason. Similarly, the porters / loaders etc. can not be captured in the enterprise survey approach if they are not hired on a fairly regular basis by the transport enterprises.

Figure 6 : Estimated number of workers (000) in the informal sector for major states



2.14.10 Table 4 gives estimated number of workers in the informal sector in the state and u.t. level as obtained from enterprise survey (Schedule 2.0) and household survey (Schedule 10). Figure 6 shows the estimated number of workers from the two approaches for the major states of India. In all the major states, the estimated number of workers from Schedule 10 is higher than the Schedule 2.0 except in the states of Bihar and Orissa, where the estimate for Schedule 2.0 is higher than Schedule 10.

2.14.11 Tables 5 and 6 respectively give State/UT wise estimated number of informal sector workers in manufacturing (tabulation category D) and 'trade & repair services' (tabulation category G) as obtained from Schedule 2.0 and Schedule 10. It may be seen that the number of workers in the informal sector for the industry 'manufacturing and trade' as estimated from Schedule 2.0 is higher than those estimated from Schedule 10 for a number of States/UTs.

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ANNEX - I

TABLES

of

Integrated Summary of

NSS Fifty-Fifth Round (July1999-June 2000) Survey Results

On

Informal Sector Employment in India.

List of Tables in Annex-I

Table (1):Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) by enterprise type for each state and u.t.

rural males

state/u.t.	enterprise type										
	proprietary		partnership		propr-ietary or part-nership	public sector	semi-public	others	not known	n.r.	all
	male	female	within same hhs.	from difft. hhs.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pr.	739	11	8	11	769	88	5	54	18	66	1000
Ar. Pradesh	116	0	0	18	133	181	1	8	42	635	1000
Assam	598	6	3	9	615	110	6	76	57	136	1000
Bihar	579	9	18	4	611	52	6	34	31	266	1000
Goa	621	1	6	0	629	113	34	155	48	21	1000
Gujarat	591	2	10	60	664	115	28	52	79	62	1000
Haryana	553	5	16	13	587	175	16	52	62	108	1000
Himachal Pradesh	531	3	0	2	537	160	14	51	53	185	1000
Jammu & Kashmir	595	18	4	2	618	174	1	35	40	132	1000
Karnataka	660	10	18	12	700	114	12	55	13	106	1000
Kerala	755	9	14	26	804	65	3	42	32	54	1000
Madhya Pd.	596	13	6	5	620	139	15	57	70	99	1000
Maharashtra	529	6	11	15	562	141	44	126	61	66	1000
Manipur	417	4	23	20	465	361	11	53	20	90	1000
Meghalaya	476	52	15	11	554	163	48	65	58	112	1000
Mizoram	300	8	0	39	347	381	152	30	2	88	1000
Nagaland	297	0	9	4	310	378	4	26	0	282	1000
Orissa	653	11	16	2	682	132	14	37	45	90	1000
Punjab	662	4	18	10	695	98	6	44	69	88	1000
Rajasthan	739	5	7	8	758	81	6	58	53	44	1000
Sikkim	393	16	2	1	411	488	35	15	6	45	1000
Tamil Nadu	647	14	21	20	702	105	7	94	38	54	1000
Tripura	504	6	10	10	531	37	4	13	16	399	1000
Uttar Pradesh	701	15	15	15	746	73	10	50	35	86	1000
West Bengal	761	14	12	1	788	50	12	23	23	104	1000
A&N Islands	481	0	0	4	484	469	0	44	0	3	1000
Chandigarh	630	1	30	17	678	102	16	90	93	21	1000
D & N Haveli	620	0	21	12	653	50	5	181	111	0	1000
Daman & Diu	421	0	59	58	538	103	9	282	62	6	1000
Delhi	504	13	114	0	632	303	5	24	35	1	1000
Lakshadweep	118	41	0	3	161	585	0	232	21	1	1000
Pondicherry	580	0	15	44	639	174	5	134	25	23	1000
All India	657	10	14	13	695	98	12	56	41	98	1000

Table (1):Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) by enterprise type for each state and u.t.

rural females

state/u.t.	enterprise type										
	proprietary		partnership		propr-ietary or part-nership	public sector	semi-public	others	not known	n.r.	all
	male	female	within same hhs.	from difft. hhs.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pr.	494	219	21	2	737	53	1	126	13	70	1000
Ar. Pradesh	0	24	0	0	24	85	0	40	183	668	1000
Assam	239	341	5	6	591	93	7	80	67	162	1000
Bihar	506	189	19	3	718	37	0	48	8	189	1000
Goa	463	219	0	0	682	160	79	42	38	0	1000
Gujarat	410	136	2	30	577	165	41	27	110	80	1000
Haryana	340	342	31	0	713	54	0	52	107	74	1000
Himachal Pradesh	267	119	10	0	396	354	16	29	39	166	1000
Jammu & Kashmir	548	97	18	76	739	120	0	26	23	92	1000
Karnataka	315	379	25	30	748	91	15	17	15	114	1000
Kerala	477	244	7	15	743	87	9	100	21	40	1000
Madhya Pd.	359	227	23	0	610	115	6	102	71	96	1000
Maharashtra	429	181	10	7	627	126	41	60	78	68	1000
Manipur	46	641	111	0	799	97	5	29	10	60	1000
Meghalaya	107	278	11	0	396	197	0	278	10	119	1000
Mizoram	169	328	76	2	575	362	13	13	15	22	1000
Nagaland	124	155	0	0	278	496	18	7	0	201	1000
Orissa	446	353	18	0	818	38	1	15	59	69	1000
Punjab	265	335	7	9	616	119	0	61	55	149	1000
Rajasthan	524	214	10	5	753	93	0	54	51	49	1000
Sikkim	228	64	1	4	297	617	0	23	3	60	1000
Tamil Nadu	426	314	30	13	782	62	4	64	27	61	1000
Tripura	384	177	23	3	588	83	4	25	29	271	1000
Uttar Pradesh	426	374	16	5	821	46	13	22	23	75	1000
West Bengal	257	610	15	0	883	25	6	5	12	69	1000
A & N Islands	218	50	0	0	268	690	0	42	0	0	1000
Chandigarh	247	358	0	0	606	123	0	229	43	0	1000
D & N Haveli	451	123	0	0	573	96	53	92	173	13	1000
Daman & Diu	327	135	91	83	636	84	44	20	216	0	1000
Delhi	417	2	0	0	419	279	61	241	0	0	1000
Lakshadweep	0	0	0	0	0	737	0	263	0	0	1000
Pondicherry	365	178	0	64	607	100	0	181	36	76	1000
All India	404	321	18	7	750	70	9	56	33	82	1000

Table (1):Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) by enterprise type for each state and u.t.

rural persons

state/u.t.	enterprise type										
	proprietary		partnership		propr-ietary or part-nership	public sector	semi-public	others	not known	n.r.	all
	male	female	within same hhs.	from difft. hhs.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pr.	659	79	12	8	759	76	3	77	16	69	1000
Ar. Pradesh	102	3	0	15	120	170	1	12	58	639	1000
Assam	551	50	4	8	612	107	6	77	58	140	1000
Bihar	566	42	18	4	631	49	5	36	27	252	1000
Goa	589	46	5	0	640	123	43	131	46	17	1000
Gujarat	562	24	9	55	650	123	30	48	84	65	1000
Haryana	538	28	17	12	596	166	15	52	65	106	1000
Himachal Pradesh	508	13	1	2	524	178	14	49	52	183	1000
Jammu & Kashmir	591	26	5	9	630	168	1	34	39	128	1000
Karnataka	568	108	20	17	713	108	13	45	13	108	1000
Kerala	686	68	12	23	789	71	5	57	29	49	1000
Madhya Pd.	534	69	10	4	618	133	13	68	70	98	1000
Maharashtra	514	33	11	14	572	139	44	116	64	65	1000
Manipur	273	252	58	12	595	258	8	44	16	79	1000
Meghalaya	324	145	14	6	489	177	28	153	38	115	1000
Mizoram	251	128	28	25	433	374	100	24	7	62	1000
Nagaland	268	26	7	4	305	398	6	23	0	268	1000
Orissa	587	121	17	2	726	102	10	30	49	83	1000
Punjab	617	42	17	10	686	100	6	46	67	95	1000
Rajasthan	706	36	8	7	757	83	5	57	52	46	1000
Sikkim	356	27	2	2	386	517	27	17	5	48	1000
Tamil Nadu	578	108	24	18	727	92	6	85	35	55	1000
Tripura	492	24	12	9	537	42	4	15	18	384	1000
Uttar Pradesh	660	69	15	13	757	69	10	46	34	84	1000
West Bengal	617	185	13	0	815	43	10	18	20	94	1000
A & N Islands	446	7	0	3	455	499	0	44	0	2	1000
Chandigarh	595	35	27	15	672	104	15	102	88	19	1000
D & N Haveli	597	16	18	10	642	56	12	169	120	1	1000
Daman & Diu	410	15	63	61	549	101	13	252	80	5	1000
Delhi	502	13	111	0	626	303	6	30	34	1	1000
Lakshadweep	102	35	0	2	140	606	0	236	18	0	1000
Pondicherry	535	38	12	48	632	158	4	144	28	34	1000
All India	602	78	15	12	707	92	11	56	39	95	1000

Table (1): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) by enterprise type for each state and u.t.

urban males

state/u.t.	enterprise type										
	proprietary		partnership		propr-ietary or part-nership	public sector	semi-public	others	not known	n.r.	all
	male	female	within same hhs.	from difft. hhs.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pr.	639	10	8	23	679	176	5	75	35	30	1000
Ar. Pradesh	197	0	0	12	209	122	0	45	5	619	1000
Assam	560	5	7	11	583	195	9	39	13	161	1000
Bihar	565	5	10	7	587	119	10	71	31	182	1000
Goa	419	3	40	23	486	170	5	109	227	3	1000
Gujarat	601	2	53	33	689	120	26	109	44	12	1000
Haryana	573	7	28	24	631	103	14	174	52	26	1000
Himachal Pradesh	414	12	21	1	449	312	34	31	50	124	1000
Jammu & Kashmir	503	8	26	5	543	213	6	49	70	119	1000
Karnataka	611	8	12	19	650	136	20	111	43	40	1000
Kerala	607	11	18	29	664	130	4	65	28	109	1000
Madhya Pd.	589	7	19	7	621	173	19	82	46	59	1000
Maharashtra	582	5	33	28	648	145	24	120	46	17	1000
Manipur	441	14	43	42	540	279	13	55	22	91	1000
Meghalaya	347	24	16	10	396	478	13	47	37	29	1000
Mizoram	415	31	9	6	462	372	10	27	33	96	1000
Nagaland	173	8	5	0	186	485	2	69	7	251	1000
Orissa	561	6	6	11	584	234	32	66	34	50	1000
Punjab	683	3	42	10	738	126	5	30	62	39	1000
Rajasthan	684	2	11	7	704	195	19	37	29	16	1000
Sikkim	603	12	3	2	620	342	7	8	0	23	1000
Tamil Nadu	674	11	21	26	731	98	5	96	31	39	1000
Tripura	418	2	2	21	444	119	4	2	23	408	1000
Uttar Pradesh	698	11	32	16	757	105	12	57	26	43	1000
West Bengal	607	7	29	15	659	141	18	104	40	38	1000
A & N Islands	354	1	18	36	408	403	8	172	8	1	1000
Chandigarh	524	9	40	18	591	273	29	45	55	7	1000
D & N Haveli	701	5	57	28	791	33	0	167	2	7	1000
Daman & Diu	699	9	34	28	770	69	14	144	0	3	1000
Delhi	632	4	36	10	682	167	7	115	15	14	1000
Lakshadweep	166	0	0	7	173	564	0	56	8	199	1000
Pondicherry	696	3	3	19	721	127	3	77	10	62	1000
All India	623	7	25	19	674	142	15	88	37	44	1000

Table (1):Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) by enterprise type for each state and u.t.

urban females

state/u.t.	enterprise type										
	proprietary		partnership		propr-	public	semi-	others	not	n.r.	all
	male	female	within same hhs.	from difft. hhs.	ietary or part-nership	sector	public		known		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pr.	448	244	8	13	713	100	4	83	56	44	1000
Ar. Pradesh	29	167	0	0	196	295	0	0	32	477	1000
Assam	187	262	3	8	459	248	30	99	19	145	1000
Bihar	276	391	3	0	670	71	2	57	32	168	1000
Goa	219	267	28	4	519	190	71	69	152	0	1000
Gujarat	368	275	14	17	674	140	38	68	58	22	1000
Haryana	320	275	10	13	619	179	24	81	38	59	1000
Himachal Pradesh	243	166	23	1	432	339	31	58	27	113	1000
Jammu & Kashmir	190	144	7	9	351	426	8	53	107	55	1000
Karnataka	371	289	4	17	681	139	12	95	34	39	1000
Kerala	282	287	8	10	587	113	10	90	32	168	1000
Madhya Pd.	360	291	28	3	681	127	11	74	27	80	1000
Maharashtra	357	275	33	15	679	138	23	89	44	27	1000
Manipur	81	514	103	4	702	155	8	26	4	105	1000
Meghalaya	47	370	2	0	419	465	12	53	11	40	1000
Mizoram	232	333	19	9	594	233	1	10	20	142	1000
Nagaland	63	198	50	0	311	465	0	28	10	186	1000
Orissa	384	221	4	29	639	178	34	46	69	34	1000
Punjab	311	164	7	6	487	167	18	65	74	189	1000
Rajasthan	376	321	8	5	709	192	5	40	43	11	1000
Sikkim	377	66	3	0	446	505	0	23	0	26	1000
Tamil Nadu	449	240	16	13	718	107	10	76	36	53	1000
Tripura	139	180	8	16	343	217	0	15	21	404	1000
Uttar Pradesh	398	338	61	5	802	103	5	25	21	44	1000
West Bengal	369	366	13	2	750	82	17	56	37	58	1000
A & N Islands	249	288	5	30	572	375	3	46	0	4	1000
Chandigarh	221	223	22	8	473	416	32	16	33	30	1000
D & N Haveli	644	16	0	0	660	60	79	202	0	0	1000
Daman & Diu	461	232	4	5	702	88	0	198	10	2	1000
Delhi	276	292	13	4	584	216	11	147	32	10	1000
Lakshadweep	9	26	0	0	35	316	0	0	12	637	1000
Pondicherry	458	168	8	16	650	92	0	132	4	122	1000
All India	374	281	20	11	685	130	14	74	40	57	1000

Table (1): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) by enterprise type for each state and u.t.

urban persons

state/u.t.	enterprise type										
	proprietary		partnership		propr-ietary or part-nership	public sector	semi-public	others	not known	n.r.	all
	male	female	within same hhs.	from difft. hhs.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pr.	595	64	8	21	687	159	5	77	40	32	1000
Ar. Pradesh	172	24	0	10	207	147	0	38	9	599	1000
Assam	502	45	6	10	563	203	12	49	14	159	1000
Bihar	532	49	9	6	596	113	9	69	31	182	1000
Goa	387	45	38	20	491	173	16	102	215	3	1000
Gujarat	562	48	46	30	686	123	28	102	47	14	1000
Haryana	543	38	26	22	630	112	15	163	51	29	1000
Himachal Pradesh	391	33	21	1	446	315	33	34	47	125	1000
Jammu & Kashmir	474	21	24	6	525	233	6	50	73	113	1000
Karnataka	560	69	10	19	657	137	19	107	41	39	1000
Kerala	520	85	15	24	644	125	6	72	29	124	1000
Madhya Pd.	551	54	20	6	631	165	18	81	43	62	1000
Maharashtra	544	50	33	26	653	144	24	114	46	19	1000
Manipur	324	176	62	30	593	239	11	46	16	95	1000
Meghalaya	248	138	11	7	404	474	12	49	29	32	1000
Mizoram	360	123	12	7	502	330	7	22	29	110	1000
Nagaland	142	63	18	0	222	479	2	57	8	232	1000
Orissa	526	49	5	14	595	223	33	62	41	46	1000
Punjab	630	26	37	9	703	132	7	35	64	59	1000
Rajasthan	640	47	11	7	705	195	17	38	31	14	1000
Sikkim	548	25	3	2	578	381	5	12	0	24	1000
Tamil Nadu	618	68	20	22	728	100	6	91	32	43	1000
Tripura	385	24	3	20	432	131	3	4	23	407	1000
Uttar Pradesh	658	54	36	15	763	105	11	53	25	43	1000
West Bengal	569	65	27	13	674	131	18	96	40	41	1000
A & N Islands	329	69	15	34	446	397	7	142	6	2	1000
Chandigarh	468	48	36	16	569	300	30	39	51	11	1000
D & N Haveli	695	6	51	25	778	36	8	171	2	5	1000
Daman & Diu	641	64	27	22	753	74	11	157	3	2	1000
Delhi	582	44	32	9	668	174	7	119	17	15	1000
Lakshadweep	119	8	0	5	132	489	0	39	9	331	1000
Pondicherry	635	45	4	18	703	118	2	91	9	77	1000
All India	578	56	24	18	676	140	15	85	38	46	1000

Table (2): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by activity status for each state and u.t.

rural males

state/u.t.	usual status (ps+ss)						
	11	12	21	11-21	31	51	all (excluding status 41)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pr.	526	9	89	624	128	248	1000
Ar. Pradesh	540	0	38	578	372	50	1000
Assam	553	10	45	608	68	324	1000
Bihar	646	2	120	767	72	161	1000
Goa	300	10	37	347	182	471	1000
Gujarat	364	12	90	466	173	361	1000
Haryana	493	3	62	557	158	285	1000
Himachal Pradesh	397	2	49	447	103	449	1000
Jammu & Kashmir	488	3	65	556	82	362	1000
Karnataka	437	3	141	581	151	269	1000
Kerala	303	32	29	363	102	535	1000
Madhya Pradesh	536	0	146	682	80	238	1000
Maharashtra	488	18	85	591	123	286	1000
Manipur	614	11	49	674	239	87	1000
Meghalaya	418	0	65	483	127	390	1000
Mizoram	503	0	14	518	163	319	1000
Nagaland	552	4	55	611	376	13	1000
Orissa	613	6	127	747	50	203	1000
Punjab	440	1	68	509	201	290	1000
Rajasthan	448	4	60	511	125	364	1000
Sikkim	466	0	122	587	208	205	1000
Tamil Nadu	361	22	63	446	248	306	1000
Tripura	503	0	28	530	57	413	1000
Uttar Pradesh	536	2	124	662	126	212	1000
West Bengal	622	5	89	717	91	192	1000
A & N Islands	399	36	60	496	127	377	1000
Chandigarh	369	4	47	420	344	236	1000
D & N Haveli	172	0	3	176	252	572	1000
Daman & Diu	225	31	54	310	637	53	1000
Delhi	371	28	99	498	366	136	1000
Lakshadweep	542	9	9	559	63	378	1000
Pondicherry	232	37	76	345	240	415	1000
All India	497	9	92	598	129	273	1000

Table (2): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by activity status for each state and u.t.

rural females

state/u.t.	usual status (ps+ss)						
	11	12	21	11-21	31	51	all (excluding status 41)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pr.	257	1	535	793	70	137	1000
Ar. Pradesh	787	0	0	787	213	0	1000
Assam	478	14	187	679	55	266	1000
Bihar	383	0	509	892	13	95	1000
Goa	265	0	152	417	93	490	1000
Gujarat	244	0	366	610	13	377	1000
Haryana	467	0	254	721	35	244	1000
Himachal Pradesh	328	0	305	633	203	164	1000
Jammu & Kashmir	217	29	576	822	129	49	1000
Karnataka	414	0	401	815	41	144	1000
Kerala	247	8	134	389	178	433	1000
Madhya Pradesh	309	0	381	690	18	292	1000
Maharashtra	282	9	467	758	46	196	1000
Manipur	704	10	260	975	14	11	1000
Meghalaya	714	5	161	881	5	114	1000
Mizoram	474	0	387	861	89	50	1000
Nagaland	369	0	386	755	245	0	1000
Orissa	346	0	559	904	15	81	1000
Punjab	383	22	91	496	194	310	1000
Rajasthan	228	0	297	525	43	431	1000
Sikkim	250	0	325	575	281	144	1000
Tamil Nadu	347	4	359	709	169	121	1000
Tripura	279	15	57	351	228	421	1000
Uttar Pradesh	340	0	527	867	26	107	1000
West Bengal	559	0	324	883	19	97	1000
A & N Islands	187	0	269	456	0	544	1000
Chandigarh	102	0	218	320	412	268	1000
D & N Haveli	208	0	31	239	245	516	1000
Daman & Diu	176	17	264	456	196	348	1000
Delhi	158	0	443	601	399	0	1000
Lakshadweep	0	0	0	0	0	0	1000
Pondicherry	366	0	128	494	342	164	1000
All India	362	2	400	764	65	171	1000

Table (2): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by activity status for each state and u.t.

rural persons

state/u.t.	usual status (ps+ss)						
	11	12	21	11-21	31	51	all (excluding status 41)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pr.	441	6	230	678	110	213	1000
Ar. Pradesh	546	0	37	583	368	49	1000
Assam	544	10	63	617	67	316	1000
Bihar	591	1	200	793	60	147	1000
Goa	292	8	63	362	163	475	1000
Gujarat	347	11	129	487	150	363	1000
Haryana	490	3	78	571	148	281	1000
Himachal Pradesh	392	2	66	460	110	430	1000
Jammu & Kashmir	456	6	125	587	87	325	1000
Karnataka	431	2	213	646	120	234	1000
Kerala	289	27	54	370	120	511	1000
Madhya Pradesh	477	0	207	685	64	252	1000
Maharashtra	453	16	149	619	110	271	1000
Manipur	661	11	158	830	123	48	1000
Meghalaya	517	2	97	616	86	298	1000
Mizoram	489	0	201	689	126	184	1000
Nagaland	524	4	106	634	356	11	1000
Orissa	516	4	284	804	37	158	1000
Punjab	434	3	71	508	200	292	1000
Rajasthan	414	3	96	513	113	374	1000
Sikkim	428	0	157	585	221	194	1000
Tamil Nadu	356	16	163	535	221	244	1000
Tripura	477	2	31	510	76	414	1000
Uttar Pradesh	504	2	189	695	110	195	1000
West Bengal	603	4	162	768	69	163	1000
A & N Islands	382	34	77	493	117	390	1000
Chandigarh	347	3	62	411	350	239	1000
D & N Haveli	177	0	7	183	251	566	1000
Daman & Diu	218	29	82	330	578	92	1000
Delhi	367	28	105	500	366	134	1000
Lakshadweep	542	9	9	559	63	378	1000
Pondicherry	259	30	86	375	261	364	1000
All India	466	7	163	636	114	250	1000

Table (2): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by activity status for each state and u.t.

urban males

state/u.t.	usual status (ps+ss)						
	11	12	21	11-21	31	51	all (excluding status 41)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pr.	413	21	70	504	271	226	1000
Ar. Pradesh	602	0	64	666	246	88	1000
Assam	581	28	112	721	151	128	1000
Bihar	623	5	124	752	135	113	1000
Goa	243	175	41	459	264	276	1000
Gujarat	413	18	126	557	196	247	1000
Haryana	543	9	80	631	222	147	1000
Himachal Pradesh	565	0	100	665	158	177	1000
Jammu & Kashmir	655	0	161	816	95	90	1000
Karnataka	436	5	111	552	245	203	1000
Kerala	368	42	32	442	164	394	1000
Madhya Pradesh	506	1	129	636	200	165	1000
Maharashtra	363	34	90	487	376	137	1000
Manipur	624	11	67	702	201	97	1000
Meghalaya	444	22	87	552	107	340	1000
Mizoram	470	14	54	539	180	282	1000
Nagaland	676	0	25	701	136	163	1000
Orissa	546	1	115	662	180	158	1000
Punjab	450	27	123	600	297	102	1000
Rajasthan	471	7	121	599	237	164	1000
Sikkim	472	0	157	630	264	106	1000
Tamil Nadu	333	32	71	435	363	202	1000
Tripura	558	6	19	582	198	220	1000
Uttar Pradesh	506	3	139	648	214	138	1000
West Bengal	537	9	81	627	211	162	1000
A & N Islands	309	86	106	502	180	319	1000
Chandigarh	521	5	59	584	354	61	1000
D & N Haveli	224	0	158	382	471	147	1000
Daman & Diu	539	27	128	695	272	32	1000
Delhi	438	51	94	583	379	38	1000
Lakshadweep	603	30	0	632	70	297	1000
Pondicherry	282	33	64	379	316	305	1000
All India	447	19	101	567	264	169	1000

Table (2): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by activity status for each state and u.t.

urban females

state/u.t.	usual status (ps+ss)						
	11	12	21	11-21	31	51	all (excluding status 41)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pr.	266	1	293	559	193	248	1000
Ar. Pradesh	267	0	200	468	532	0	1000
Assam	362	9	22	393	302	305	1000
Bihar	427	0	271	698	179	123	1000
Goa	548	0	141	688	126	186	1000
Gujarat	354	3	198	554	93	353	1000
Haryana	496	0	123	619	195	186	1000
Himachal Pradesh	376	0	268	645	270	86	1000
Jammu & Kashmir	310	85	148	544	92	363	1000
Karnataka	390	0	237	627	225	148	1000
Kerala	401	20	124	545	242	213	1000
Madhya Pradesh	393	0	296	688	104	208	1000
Maharashtra	383	6	157	545	311	144	1000
Manipur	711	2	194	907	67	26	1000
Meghalaya	557	0	93	650	158	192	1000
Mizoram	409	0	241	650	90	260	1000
Nagaland	553	0	273	826	137	37	1000
Orissa	299	0	431	730	42	228	1000
Punjab	299	5	144	448	466	87	1000
Rajasthan	438	1	237	675	126	198	1000
Sikkim	89	0	115	204	518	278	1000
Tamil Nadu	287	6	247	539	332	129	1000
Tripura	180	0	106	287	453	260	1000
Uttar Pradesh	331	5	422	757	181	62	1000
West Bengal	375	5	178	558	289	153	1000
A & N Islands	172	97	184	453	131	416	1000
Chandigarh	365	0	14	378	545	77	1000
D & N Haveli	24	0	434	458	33	508	1000
Daman & Diu	623	0	235	858	60	82	1000
Delhi	283	32	196	511	465	24	1000
Lakshadweep	250	469	0	719	281	0	1000
Pondicherry	211	0	200	411	316	273	1000
All India	346	5	245	596	238	167	1000

Table (2): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by activity status for each state and u.t.

urban persons

state/u.t.	usual status (ps+ss)						
	11	12	21	11-21	31	51	all (excluding status 41)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pr.	378	16	123	517	252	231	1000
Ar. Pradesh	554	0	83	638	287	76	1000
Assam	553	25	101	679	170	151	1000
Bihar	598	4	143	745	140	114	1000
Goa	295	146	58	498	241	261	1000
Gujarat	404	15	138	557	179	265	1000
Haryana	537	8	85	630	219	151	1000
Himachal Pradesh	540	0	122	662	173	165	1000
Jammu & Kashmir	633	5	160	798	95	107	1000
Karnataka	426	4	139	569	240	191	1000
Kerala	376	36	54	467	183	350	1000
Madhya Pradesh	486	1	159	645	183	172	1000
Maharashtra	367	29	101	497	365	138	1000
Manipur	658	8	116	782	149	69	1000
Meghalaya	482	14	89	586	124	290	1000
Mizoram	448	9	124	580	146	274	1000
Nagaland	624	0	130	754	136	110	1000
Orissa	493	0	183	677	150	173	1000
Punjab	435	25	125	585	314	101	1000
Rajasthan	466	6	138	610	221	169	1000
Sikkim	401	0	149	550	312	138	1000
Tamil Nadu	322	25	114	461	356	184	1000
Tripura	521	5	27	554	222	224	1000
Uttar Pradesh	482	3	178	663	209	128	1000
West Bengal	508	8	99	615	225	160	1000
A & N Islands	268	90	129	487	165	348	1000
Chandigarh	497	4	52	553	384	64	1000
D & N Haveli	208	0	181	389	434	177	1000
Daman & Diu	559	21	153	733	224	44	1000
Delhi	420	48	107	575	389	36	1000
Lakshadweep	575	65	0	639	87	274	1000
Pondicherry	266	25	96	387	316	297	1000
All India	**429**	**16**	**127**	**572**	**259**	**169**	**1000**

Table (3): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by tabulation category of NIC 1998 for each state and u.t.

rural male

state/u.t.	tabulation category (as per NIC 1998)														
	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pr.	42	230	1	139	229	41	110	7	6	2	15	14	160	2	0
Ar. Pradesh	0	92	21	452	273	0	36	0	9	65	21	0	31	0	0
Assam	4	108	0	70	384	15	115	0	6	10	9	2	273	5	0
Bihar	13	299	1	103	292	29	90	2	10	6	20	10	122	3	0
Goa	87	63	0	245	228	89	276	0	0	4	3	0	4	0	0
Gujarat	10	405	3	110	243	11	136	0	16	7	4	6	49	0	0
Haryana	12	270	0	257	252	21	126	0	10	2	8	13	27	2	0
Himachal Pradesh	1	167	7	425	167	43	125	1	12	6	3	13	24	8	0
Jammu & Kashmir	0	197	0	418	229	5	75	1	7	18	8	11	32	0	0
Karnataka	53	287	0	112	257	71	111	3	22	2	6	11	67	0	0
Kerala	42	168	1	233	260	59	158	9	19	2	13	3	31	0	0
Madhya Pradesh	19	296	0	107	333	27	85	0	5	12	15	7	95	1	0
Maharashtra	10	304	1	123	293	40	130	2	7	2	4	12	73	0	0
Manipur	0	169	3	123	210	18	155	0	7	139	23	38	115	0	0
Meghalaya	133	69	0	228	315	29	175	0	0	17	0	2	25	7	0
Mizoram	87	104	0	209	311	14	33	0	0	103	63	0	77	0	0
Nagaland	28	70	0	99	354	15	153	0	0	115	81	27	0	56	0
Orissa	6	309	0	167	306	43	73	0	7	1	11	11	64	3	0
Punjab	0	224	2	242	259	18	165	2	12	7	4	21	43	1	0
Rajasthan	70	176	2	369	194	19	94	0	12	5	11	5	40	2	0
Sikkim	19	114	0	201	351	30	179	0	32	2	0	4	22	46	0
Tamil Nadu	18	405	3	150	196	44	106	7	5	1	8	1	53	2	0
Tripura	0	99	0	171	281	50	72	0	1	35	16	2	273	0	0
Uttar Pradesh	4	317	0	152	277	15	108	1	11	8	22	16	69	1	0
West Bengal	2	362	2	74	330	26	127	2	7	1	23	7	36	0	0
A & N Islands	0	183	0	400	252	0	152	0	6	0	0	0	7	0	0
Chandigarh	0	303	0	329	163	12	74	2	50	11	0	0	53	1	0
D & N Haveli	42	363	0	55	79	18	386	0	0	0	3	0	55	0	0
Daman & Diu	0	571	0	13	108	135	138	0	9	0	0	10	9	5	0
Delhi	0	406	0	68	417	15	74	0	2	0	0	4	4	10	0
Lakshadweep	0	0	0	378	507	0	80	0	0	0	0	0	34	0	0
Pondicherry	0	377	14	89	271	89	54	23	0	0	13	0	51	17	0
All India	19	289	1	157	272	31	114	3	10	5	14	10	75	1	0

Table (3): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by tabulation category of NIC 1998 for each state and u.t.

rural female

state/u.t.	tabulation category (as per NIC 1998)														
	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pr.	55	354	0	35	167	73	1	0	0	0	28	1	271	14	0
Ar. Pradesh	0	0	0	0	787	0	0	0	0	0	0	0	213	0	0
Assam	0	569	0	0	94	2	19	0	0	0	14	14	246	42	0
Bihar	5	688	0	31	126	7	1	4	0	0	11	4	121	2	0
Goa	165	63	0	95	430	143	0	0	0	0	40	1	64	0	0
Gujarat	22	427	0	153	266	10	16	0	0	0	3	0	103	0	0
Haryana	0	205	0	0	448	0	0	0	0	0	24	0	323	0	0
Himachal Pradesh	0	490	0	19	247	6	47	0	0	0	131	0	60	0	0
Jammu & Kashmir	0	787	0	18	76	0	34	0	0	0	84	0	0	1	0
Karnataka	53	578	0	25	142	72	1	0	0	5	7	3	113	0	0
Kerala	19	556	0	82	59	50	6	14	6	3	63	23	88	30	0
Madhya Pradesh	6	596	0	145	164	8	2	0	0	1	6	2	69	0	0
Maharashtra	18	526	0	85	267	36	0	0	0	0	21	5	37	7	0
Manipur	48	710	0	0	213	15	0	0	0	0	6	7	0	0	0
Meghalaya	19	43	0	28	685	145	8	0	0	0	5	0	67	0	0
Mizoram	0	198	0	50	548	43	0	0	0	27	61	0	73	0	0
Nagaland	0	70	0	0	728	0	0	0	0	0	148	54	0	0	0
Orissa	0	763	0	42	89	21	0	0	0	0	16	0	65	3	0
Punjab	0	306	0	12	155	39	0	0	0	0	125	25	276	62	0
Rajasthan	124	420	0	251	98	5	0	0	0	0	32	6	62	3	0
Sikkim	35	174	0	0	404	97	0	0	3	0	98	0	35	153	0
Tamil Nadu	8	678	0	39	128	44	6	0	7	1	24	2	45	19	0
Tripura	0	196	0	94	76	0	0	0	0	134	68	0	361	72	0
Uttar Pradesh	0	573	0	24	159	17	1	0	0	2	29	13	178	4	0
West Bengal	0	846	0	7	51	6	1	0	0	0	16	1	60	12	0
A & N Islands	260	45	0	201	289	0	0	113	9	0	0	0	83	0	0
Chandigarh	0	207	0	0	284	0	0	0	0	0	19	222	268	0	0
D & N Haveli	106	644	0	55	37	0	158	0	0	0	0	0	0	0	0
Daman & Diu	0	560	0	0	272	38	0	0	0	0	0	0	130	0	0
Delhi	0	0	0	0	851	0	0	0	0	0	0	0	0	149	0
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pondicherry	0	351	0	30	290	117	0	0	37	0	98	0	56	21	0
All India	19	605	0	50	132	31	3	1	1	1	24	5	116	11	0

Table (3): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by tabulation category of NIC 1998 for each state and u.t.

rural persons

state/u.t.	tabulation category (as per NIC 1998)														
	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pr.	46	270	1	106	210	52	75	5	4	1	19	10	195	6	0
Ar. Pradesh	0	90	20	441	285	0	35	0	9	64	20	0	35	0	0
Assam	3	166	0	61	347	14	103	0	5	8	9	3	269	10	0
Bihar	11	379	1	88	258	25	72	2	8	5	18	9	122	3	0
Goa	104	63	0	212	273	101	216	0	0	3	12	0	17	0	0
Gujarat	11	408	3	116	246	11	119	0	13	6	4	5	57	0	0
Haryana	11	265	0	236	268	19	116	0	9	2	10	12	51	2	0
Himachal Pradesh	1	189	7	398	172	40	119	1	11	6	12	12	26	7	0
Jammu & Kashmir	0	264	0	372	212	5	70	1	6	16	16	9	28	0	0
Karnataka	53	368	0	88	225	71	80	2	16	3	6	9	80	0	0
Kerala	37	260	1	197	213	57	122	10	16	2	25	8	45	7	0
Madhya Pradesh	15	374	0	116	289	22	64	0	4	9	13	6	88	0	0
Maharashtra	11	341	1	117	289	39	108	1	6	1	7	10	67	1	0
Manipur	25	452	1	59	212	16	74	0	3	66	14	22	55	0	0
Meghalaya	95	61	0	161	439	68	119	0	0	11	2	2	39	5	0
Mizoram	44	150	0	129	429	29	17	0	0	65	62	0	75	0	0
Nagaland	24	70	0	84	412	13	129	0	0	97	91	31	0	48	0
Orissa	4	473	0	122	228	35	47	0	4	1	13	7	64	3	0
Punjab	0	232	2	218	249	20	148	2	10	7	17	21	66	8	0
Rajasthan	78	213	1	351	179	17	80	0	10	4	14	5	43	2	0
Sikkim	22	125	0	166	360	41	148	0	27	2	17	3	24	65	0
Tamil Nadu	15	496	2	113	173	44	73	5	6	1	13	2	50	8	0
Tripura	0	110	0	163	258	44	64	0	1	46	22	2	283	8	0
Uttar Pradesh	4	358	0	131	258	15	90	1	9	7	23	16	87	1	0
West Bengal	1	512	1	53	243	20	88	2	5	1	21	5	43	4	0
A & N Islands	20	172	0	384	255	0	140	9	6	0	0	0	13	0	0
Chandigarh	0	295	0	301	173	11	68	2	46	10	2	19	71	1	0
D & N Haveli	49	396	0	55	74	16	359	0	0	0	2	0	48	0	0
Daman & Diu	0	570	0	12	130	122	120	0	8	0	0	9	25	5	0
Delhi	0	399	0	67	425	14	73	0	2	0	0	4	4	13	0
Lakshadweep	0	0	0	378	507	0	80	0	0	0	0	0	34	0	0
Pondicherry	0	372	11	77	275	95	43	18	7	0	30	0	52	18	0
All India	19	362	1	132	239	31	88	2	8	4	16	9	85	4	0

Table (3): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by tabulation category of NIC 1998 for each state and u.t.

urban male

state/u.t.	tabulation category (as per NIC 1998)														
	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pr.	4	196	0	144	341	52	125	14	29	10	24	13	43	5	0
Ar. Pradesh	0	0	78	158	625	40	0	0	0	54	0	0	32	13	0
Assam	1	108	0	57	455	64	71	8	51	44	7	32	98	4	0
Bihar	16	230	2	48	431	37	82	2	42	14	39	11	45	2	0
Goa	9	81	0	256	314	70	214	0	40	10	0	5	1	0	0
Gujarat	0	284	1	110	393	35	107	6	26	1	3	10	23	1	0
Haryana	0	213	0	97	467	49	89	9	13	4	5	16	35	3	0
Himachal Pradesh	0	172	8	158	381	82	81	6	25	20	15	14	37	0	0
Jammu & Kashmir	0	144	0	185	505	36	54	6	29	8	9	1	23	0	0
Karnataka	4	220	1	136	396	44	108	8	35	5	1	10	32	0	0
Kerala	4	216	2	194	312	61	126	8	29	4	12	3	31	0	0
Madhya Pradesh	5	186	1	84	434	42	116	5	27	13	17	9	58	3	0
Maharashtra	0	262	0	106	342	49	123	8	43	1	6	14	31	13	0
Manipur	33	125	1	140	322	59	93	0	12	105	36	4	71	0	0
Meghalaya	0	95	7	278	433	10	118	0	4	4	7	7	30	6	0
Mizoram	25	117	0	238	354	25	97	0	28	93	11	6	7	0	0
Nagaland	0	225	0	194	374	40	28	0	31	0	0	9	98	0	0
Orissa	7	172	0	115	372	88	83	5	36	2	22	24	72	2	0
Punjab	0	271	2	87	382	45	113	1	22	5	4	14	49	5	0
Rajasthan	37	267	1	147	337	18	95	1	33	4	15	5	36	3	0
Sikkim	30	106	5	54	502	146	42	0	0	8	6	0	70	31	0
Tamil Nadu	1	294	1	97	330	51	104	12	28	2	7	10	47	14	0
Tripura	0	44	4	35	403	22	92	3	21	119	31	13	212	2	0
Uttar Pradesh	0	279	0	81	395	37	90	2	24	7	26	6	48	3	0
West Bengal	1	239	1	87	342	47	143	6	36	2	34	13	38	11	0
A & N Islands	0	207	0	102	442	33	184	0	27	0	2	0	0	3	0
Chandigarh	0	192	0	101	439	65	60	4	68	3	15	11	21	21	0
D & N Haveli	0	616	0	74	144	33	95	0	34	0	0	0	3	0	0
Daman & Diu	4	69	0	69	527	79	115	0	10	3	6	2	115	3	0
Delhi	0	284	1	72	401	26	85	6	38	19	8	5	28	21	4
Lakshadweep	0	162	0	392	162	62	205	0	16	0	0	0	0	0	0
Pondicherry	0	321	0	170	296	47	86	10	26	1	2	0	29	12	0
All India	4	248	1	104	372	44	108	7	32	6	15	11	41	7	0

Table (3): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by tabulation category of NIC 1998 for each state and u.t.

urban female

state/u.t.	tabulation category (as per NIC 1998)														
	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pr.	2	277	0	127	256	74	9	5	19	4	58	11	115	44	0
Ar. Pradesh	0	0	0	0	588	0	0	0	0	249	83	0	0	81	0
Assam	0	138	0	0	103	10	8	5	9	0	141	8	329	249	0
Bihar	0	323	4	31	268	20	0	4	24	1	43	22	112	148	0
Goa	0	211	0	186	305	84	0	0	0	0	69	0	144	0	0
Gujarat	0	244	0	97	279	9	29	7	13	2	31	19	221	50	0
Haryana	0	238	0	14	419	1	12	0	19	0	169	22	97	9	0
Himachal Pradesh	0	62	0	49	330	80	16	4	16	83	180	78	97	7	0
Jammu & Kashmir	21	370	0	263	146	0	0	0	0	0	157	23	18	0	0
Karnataka	5	469	0	59	231	33	4	8	16	3	36	31	65	39	0
Kerala	3	461	0	31	214	25	20	14	18	11	64	26	65	47	0
Madhya Pradesh	0	430	0	80	236	42	12	1	2	7	38	18	103	29	0
Maharashtra	0	213	0	31	299	29	10	3	39	1	72	42	138	123	0
Manipur	0	397	0	6	377	66	37	0	12	54	13	2	38	0	0
Meghalaya	0	99	0	2	501	97	11	0	18	0	8	0	133	132	0
Mizoram	32	82	0	100	571	101	20	0	17	35	19	1	10	11	0
Nagaland	0	253	0	0	453	11	0	0	93	0	88	7	24	71	0
Orissa	0	471	0	128	143	31	0	0	0	0	25	19	182	0	0
Punjab	0	261	0	10	293	13	42	1	21	12	195	20	83	50	0
Rajasthan	32	489	0	128	143	8	24	3	11	0	80	7	67	8	0
Sikkim	88	3	0	117	154	46	0	0	0	6	47	4	70	465	0
Tamil Nadu	3	468	0	38	199	48	18	2	5	2	52	20	49	95	1
Tripura	0	76	4	0	122	48	48	48	0	278	149	12	147	66	0
Uttar Pradesh	0	475	0	14	131	18	13	6	3	5	204	8	89	34	0
West Bengal	1	366	0	11	124	37	7	4	2	0	74	17	143	212	0
A & N Islands	0	161	0	0	290	23	0	0	0	0	53	58	415	0	0
Chandigarh	0	198	0	0	182	17	77	7	47	0	211	37	146	79	0
D & N Haveli	0	67	0	0	406	0	0	0	0	0	33	0	494	0	0
Daman & Diu	0	138	0	13	324	9	0	0	13	0	33	0	437	33	0
Delhi	0	327	0	17	133	34	11	0	24	52	110	92	100	100	0
Lakshadweep	0	0	0	250	469	0	0	0	0	281	0	0	0	0	0
Pondicherry	0	409	0	121	275	37	0	0	3	0	22	7	101	25	0
All India	3	366	0	54	220	36	13	4	15	5	78	23	107	76	0

Table (3): Per 1000 distribution of non-agricultural workers according to usual activity category (ps+ss) engaged in proprietary or partnership enterprises by tabulation category of NIC 1998 for each state and u.t.

urban persons

state/u.t.	tabulation category (as per NIC 1998)														
	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pr.	4	215	0	140	321	57	97	12	26	8	32	12	60	14	0
Ar. Pradesh	0	0	67	136	619	34	0	0	0	81	11	0	28	22	0
Assam	1	112	0	50	410	57	63	8	46	38	24	29	127	36	0
Bihar	14	242	3	46	410	35	71	2	40	12	39	12	54	20	0
Goa	7	103	0	244	312	73	177	0	34	9	12	4	26	0	0
Gujarat	0	277	1	108	374	31	94	7	23	1	7	11	56	9	0
Haryana	0	216	0	88	461	44	80	8	14	4	24	17	42	3	0
Himachal Pradesh	0	158	7	144	375	82	73	5	24	28	36	22	45	1	0
Jammu & Kashmir	1	158	0	190	482	34	51	6	27	8	18	3	22	0	0
Karnataka	4	276	0	118	359	41	85	8	31	5	9	15	39	9	0
Kerala	4	276	2	154	288	52	100	10	26	6	24	8	39	11	0
Madhya Pradesh	4	230	1	83	398	42	98	4	23	12	20	10	66	8	0
Maharashtra	0	254	0	93	335	45	103	7	42	1	18	19	50	32	0
Manipur	20	230	1	88	343	61	72	0	12	85	27	3	58	0	0
Meghalaya	0	96	5	184	456	40	81	0	9	3	7	5	65	49	0
Mizoram	28	104	0	188	432	53	69	0	24	72	14	4	8	4	0
Nagaland	0	237	0	116	406	28	17	0	56	0	36	8	68	29	0
Orissa	5	237	0	118	323	75	65	4	28	2	23	23	96	1	0
Punjab	0	270	2	79	373	42	106	1	22	6	23	15	52	9	0
Rajasthan	37	299	1	144	309	17	85	2	30	3	25	6	41	4	0
Sikkim	41	86	4	66	437	128	34	0	0	8	14	1	70	112	0
Tamil Nadu	2	337	1	82	298	50	83	10	23	2	18	12	48	34	0
Tripura	0	47	4	31	376	24	88	7	19	134	42	13	206	8	0
Uttar Pradesh	0	307	0	72	358	35	79	3	21	7	51	6	54	8	0
West Bengal	1	262	1	73	302	46	118	6	30	2	41	14	57	47	0
A & N Islands	0	193	0	71	397	30	129	0	19	0	17	18	125	2	0
Chandigarh	0	193	0	86	399	58	63	4	65	2	45	15	40	30	0
D & N Haveli	0	571	0	68	166	30	87	0	31	0	3	0	44	0	0
Daman & Diu	3	85	0	56	480	63	89	0	11	2	12	1	188	10	0
Delhi	0	290	1	65	369	27	76	5	36	23	20	16	37	30	4
Lakshadweep	0	149	0	381	187	57	189	0	15	22	0	0	0	0	0
Pondicherry	0	342	0	158	291	44	66	8	20	1	7	2	46	15	0
All India	3	269	1	95	345	43	91	6	29	6	27	13	53	20	0

Table (4) : Estimated number of workers as obtained through enterprise survey (Sch. 2.0) and household survey (Sch. 10) approach

state/ut	estimated number of workers (000)								
	rural			urban			combined		
	Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10	
		ps	ps+ss		ps	ps+ss		ps	ps+ss
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	3740	4108	4261	3425	4389	4529	7164	8498	8790
Arunachal Pradesh	11	5	5	8	3	3	19	7	7
Assam	884	1192	1306	358	388	410	1242	1580	1716
Bihar	3472	3053	3223	1498	1594	1631	4970	4647	4855
Goa	45	93	95	119	90	93	163	184	188
Gujarat	1264	1884	1933	3057	2923	3012	4321	4808	4945
Haryana	496	838	875	820	926	959	1316	1764	1835
Himachal Pradesh	276	341	344	80	60	62	355	402	406
Jammu & Kashmir	331	346	375	206	179	185	538	526	559
Karnataka	2092	2005	2061	2574	2713	2784	4666	4718	4845
Kerala	1790	2899	3037	1167	1448	1506	2957	4347	4543
Madhya Pradesh	2071	1982	2109	2092	2784	2864	4162	4765	4974
Maharashtra	2385	2447	2585	5775	6849	7079	8160	9297	9665
Manipur	78	50	62	61	46	53	139	96	115
Meghalaya	73	39	39	37	31	31	110	70	70
Mizoram	10	9	9	22	23	24	31	32	33
Nagaland	15	11	11	18	10	12	33	21	23
Orissa	2500	1641	1924	610	851	922	3110	2492	2846
Punjab	673	1071	1099	1394	1497	1538	2068	2568	2636
Rajasthan	1543	2380	2438	1401	1827	1902	2944	4207	4340
Sikkim	18	21	21	9	7	7	27	28	28
Tamil Nadu	2983	4246	4325	4107	5047	5179	7090	9293	9504
Tripura	110	192	193	71	41	42	181	234	235
Uttar Pradesh	7674	7499	7867	5640	6474	6830	13314	13973	14697
West Bengal	5046	5234	5958	3043	3261	3381	8088	8495	9339
A & N. Islands	9	12	12	6	12	13	15	24	25
Chandigarh	30	20	20	110	116	125	140	136	144
D & Nagar Haveli	5	19	19	3	5	5	8	24	24
Daman & Diu	6	11	11	10	12	12	16	23	23
Delhi	153	436	436	2161	1803	1873	2314	2239	2309
Lakshadweep	1	0	0	1	1	1	2	1	1
Pondicherry	29	33	34	92	106	109	121	139	143
all India	39808	44121	46688	39975	45522	47168	79783	89643	93856

Table 5: Estimated number of workers in manufacturing (tabulation category D) as obtained through enterprise survey (Sch. 2.0) and household survey (Sch. 10) approach

state/ut	estimated number of workers (000)								
	rural			urban			combined		
	Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10	
		ps	ps+ss		ps	ps+ss		ps	ps+ss
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	1472	1140	1215	818	949	1002	2290	2088	2217
Arunachal Pradesh	1	0	0	1	0	0	1	0	0
Assam	235	154	222	51	42	50	286	196	271
Bihar	1383	1143	1247	279	396	415	1662	1539	1662
Goa	17	7	7	14	8	10	31	15	16
Gujarat	534	790	805	1018	823	844	1553	1613	1649
Haryana	123	221	235	215	191	208	338	412	444
Himachal Pradesh	106	65	66	15	10	10	121	75	76
Jammu & Kashmir	133	76	101	61	27	29	195	103	130
Karnataka	1053	781	803	802	741	783	1855	1523	1586
Kerala	656	758	829	372	409	425	1028	1167	1254
Madhya Pradesh	1035	728	808	571	646	675	1606	1374	1483
Maharashtra	921	801	895	1761	1796	1860	2682	2596	2754
Manipur	35	19	31	20	9	14	55	28	44
Meghalaya	14	3	3	4	3	3	18	6	6
Mizoram	3	1	2	5	3	3	8	4	5
Nagaland	4	1	1	3	2	3	7	3	4
Orissa	1514	714	916	161	178	220	1675	892	1136
Punjab	188	246	259	328	412	422	516	658	681
Rajasthan	605	544	569	453	557	595	1058	1101	1164
Sikkim	4	3	3	1	1	1	5	4	4
Tamil Nadu	1649	2147	2204	1497	1740	1814	3147	3887	4018
Tripura	47	22	22	9	2	2	56	24	25
Uttar Pradesh	2970	2654	2849	1648	1955	2124	4619	4609	4973
West Bengal	2925	2434	3075	1028	878	933	3953	3312	4008
A & N. Islands	1	2	2	2	2	2	3	4	5
Chandigarh	18	6	6	30	24	25	49	30	31
D & Nagar Haveli	1	8	8	0	3	3	2	11	11
Daman & Diu	2	6	6	2	1	1	4	7	7
Delhi	32	176	176	752	523	576	784	699	752
Lakshadweep	0	0	0	0	0	0	0	0	0
Pondicherry	9	13	13	46	37	38	54	49	51
all India	17692	15666	17379	11969	12362	13086	29661	28029	30465

Table 6: Estimated number of workers in trading services (Tabulation category G) as obtained through enterprise survey (Sch. 2.0) and household survey (Sch. 10) approach

state/ut	estimated number of workers (000)								
	rural			urban			combined		
	Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10		Sch. 2.0	Sch. 10	
		ps	ps+ss		ps	ps+ss		ps	ps+ss
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	1004	919	944	1383	1437	1495	2387	2355	2439
Arunachal Pradesh	8	2	2	5	2	2	14	3	3
Assam	434	451	464	194	175	182	628	626	645
Bihar	1103	814	847	706	694	703	1809	1507	1550
Goa	12	29	29	57	29	30	69	58	59
Gujarat	467	458	485	1289	1102	1139	1756	1560	1624
Haryana	207	218	238	362	435	446	569	653	684
Himachal Pradesh	88	59	60	39	23	24	127	83	84
Jammu & Kashmir	109	77	81	73	88	90	182	165	171
Karnataka	620	474	491	1065	1001	1019	1685	1475	1510
Kerala	534	665	678	410	425	444	943	1089	1122
Madhya Pradesh	683	601	625	909	1144	1170	1592	1746	1796
Maharashtra	873	735	757	2398	2372	2454	3271	3107	3211
Manipur	19	14	14	20	19	20	39	33	35
Meghalaya	32	19	19	18	15	15	50	34	34
Mizoram	5	4	4	12	11	12	17	16	16
Nagaland	9	6	6	10	4	5	18	10	10
Orissa	554	420	441	235	288	300	789	709	741
Punjab	262	270	277	682	560	584	944	830	861
Rajasthan	470	464	479	574	599	614	1044	1063	1093
Sikkim	8	8	8	4	4	4	13	12	12
Tamilnadu	671	767	770	1354	1570	1604	2025	2337	2373
Tripura	36	53	53	32	18	18	68	71	71
Uttar Pradesh	2467	1966	2052	2373	2421	2482	4840	4388	4534
West Bengal	1224	1439	1460	1194	1058	1077	2418	2497	2538
A & N. Islands	5	3	3	3	5	5	8	8	8
Chandigarh	6	3	3	42	49	51	48	52	55
D & Nagar Haveli	2	1	1	1	1	1	3	2	2
Daman & Diu	1	1	1	4	6	6	5	7	8
Delhi	73	188	188	936	728	734	1008	916	922
Lakshadweep	0	0	0	1	0	0	1	0	0
Pondicherry	9	10	10	24	32	32	33	42	42
all India	11995	11142	11489	16408	16323	16755	28403	27466	28244

ANNEX - II

SAMPLE DESIGN AND ESTIMATION PROCEDURE

NSS Fifty Fifth Round
(July 1999 – June 2000)

Sample Design and Estimation Procedure

1. Sample Design

1.1 General:

A stratified sampling design has been adopted for selection of the sample first-stage units (FSUs). The FSUs are villages (panchayat wards for Kerala) for rural areas and Urban Frame Survey (UFS) blocks for urban areas. The Ultimate stage units (USUs) are households for canvassing consumer expenditure (schedule 1.0) & employment-unemployment schedules (schedule 10/10.1) and enterprises for canvassing informal sector enterprise schedule (schedule 2.0). USUs are selected by the method of circular systematic sampling from the corresponding frame in the FSU. Large FSUs are subdivided into hamlet groups (rural) / sub-blocks (urban) that are grouped into two segments, and USUs are selected independently from each of these segments.

1.2 Sampling Frame:

List of villages (panchayat wards for Kerala) as per 1991 Census and latest lists of UFS blocks are respectively used for selection of rural and urban sample FSUs. For selection of sample villages from the State of Jammu & Kashmir, list of villages as per 1981 Census has been used as the sampling frame. As already mentioned that all the uninhabited villages of the country as per 1991 Census, interior villages of Nagaland situated beyond 5 kms. of a bus route and inaccessible villages of Andaman & Nicobar Islands are left out of the survey coverage of the NSS 55th round.

1.3 Sample size (FSUs):

A total number of 10,384 FSUs were selected for survey in the *central sample* at all-India level (rural & urban combined) in the 55th round. Sample size for the whole round for each State/UT and Sector (i.e., rural/ urban) is allocated equally among the four sub-rounds. Sample FSUs for each sub-round are selected afresh in the form of two independent sub-samples. Of the 10384 FSUs selected for the survey, 10173 were actually surveyed. This comprises 6048 villages and 4125 urban blocks. State/UT-wise distribution of FSUs allotted and surveyed is given Table 1.1. Similar information giving the number of persons surveyed for employment –unemployment surveys and enterprises surveyed for enterprise survey are presented in Table 1.2.

1.4 Stratification

1.4.1 Rural:

Two special strata were formed at the **State/ UT level,** viz.

Stratum 1: all FSUs with population between 1 to 100, and

Stratum 2: FSUs with population more than 15,000.

[Note: The above two strata were spread across a given state and are not confined to any particular administrative division within the state.]

These strata of either type were formed if at least 50 such FSUs were there in the respec-

tive frames. Otherwise, they were merged with the general strata.

While forming general strata (consisting of FSUs other than those covered under strata 1 & 2), efforts were made to treat each district as a separate stratum. If limitation of sample size did not allow forming so many strata, smaller districts within a particular NSS region were merged to form a stratum. Each district with rural population of 2 millions or more as per 1991 Census (1.8 millions or more as per 1981 Census in case of Jammu & Kashmir) was split into a number of strata.

1.4.2 Urban:

Strata formed within **NSS Regions** were as follows:

Stratum number	Composition of strata by considering population of various towns as per the 1991 Census
1, 3, 5 *	'hospital area' (HA) / 'industrial area' (IA) / 'bazaar area' (BA) blocks taken together of each single city with a population of 10 lakhs or more (there could be a maximum of 3 such cities within an NSS Region)
2, 4, 6 *	Other blocks of each single city with a population of 10 lakhs or more
7	HA or IA or BA blocks of all towns with population greater than or equal to 50,000 but less than 10 lakhs
8	Other blocks of all towns with population greater than or equal to 50,000 but less than 10 lakhs
9	HA or IA or BA blocks of all towns with population less than 50,000
10	Other blocks of all towns with population less than 50,000

* Stratum numbers 3, 4, 5 & 6 remained void if there was only one city in an NSS region with a population of 10 lakhs or more.

If limitation of sample size did not allow forming so many strata, all blocks of stratum 7 were merged with those of stratum 8 and all blocks of stratum 9 were merged with those of stratum 10.

1.5 Allocation of FSUs:

State/ UT level rural sample size was allocated among the rural strata in proportion to population. State/ UT level urban sample size was first allocated among the three classes of towns (i.e. more than 10 lakh, 50000 to less than 10 lakhs and less than 50,000) in proportion to population. Then sample allocation for each of the three classes of towns, within an NSS region, was further allocated between two strata types consisting of - (i) HA/ IA/ BA blocks and (ii) the rest in proportion to total number of FSUs in the respective frames with double weightage given to the first category of blocks. Stratum level allocations for both rural and urban areas of a sub-round were made in even numbers in order to facilitate selection of FSUs in the form of 2 independent sub-samples. Sub-sample numbers were 1 & 2 for sub-round 1; 3 & 4 for sub-round 2; 5 & 6 for sub-round 3 and 7 & 8 for sub-round 4.

1.6 Selection of FSUs :

For each sub-round, sample FSUs from each stratum were selected in the form of 2 independent sub-samples by following circular systematic sampling with (a) probability proportional to population for all rural strata other than stratum 1, and (b) equal probability for rural stratum 1 as well as all urban strata.

1.7 Formation of hamlet-group (hg's) in large villages and sub-block (sb's) in large urban blocks: Depending upon the values of approximate present population (P) and approximate total number of non-agricultural enterprises (E), decision was taken to divide the FSU into a fixed number of hamlet-groups (hg's - the term applicable for rural samples) / sub-blocks (sb's - the term applicable for urban samples) as per the rules given below:

Population (P)	**No. of hg's/ sb's formed in the FSU as per population criterion**	**Number of enterprises (E)**	**no. of hg's/ sb's formed in the FSU as per enterprise criterion**
(1)	(2)	(3)	(4)
Less than 1200	1 @	Less than 100	1 @
1200 – 1999	5	100 – 249	5
2000 – 2399	6	250 – 299	6
2400 – 2799	7	300 – 349	7
2800 – 3199	8	350 – 399	8
(and so on)		(and so on)	

@ no. of hg's/ sb's = '1' means the whole FSU is considered for listing.

[For rural areas of Himachal Pradesh, Sikkim and Poonch, Rajouri, Udhampur and Doda districts of Jammu & Kashmir, number of hg's formed in the village as per population criterion was : 1 for P < 600, 5 for P = 600 to 999, 6 for P = 1000 to 1199, 7 for P = 1200 to 1399, 8 for P = 1400 to 1599, and so on. (Procedure remains unchanged as per enterprise criterion.)]

The number (D) of hamlet-groups (hg)/ sub-blocks (sb) formed in the FSU was such that the higher of the two values as per population and enterprise criteria was chosen. If value of P was less than 1200 (600 for certain hilly areas specified above) as well as value of E was less than 100 for an FSU, hg/ sb formation was not resorted to and the whole FSU was considered for listing. In case hg's/ sb's were formed in the sample FSU, the same was done by more or less equalizing population.

1.8 Formation of Segments within FSU:

The hg/ sb having maximum concentration of non-agricultural enterprises was selected with certainty for listing of households/ enterprises. This hg/ sb was referred to as segment 1. From the remaining (D-1) hg's/ sb's of the FSU, two more hg's/ sb's were selected circular systematically and these two selected hg's/ sb's together were referred to as segment 2 for a combined listing of house-

holds/ enterprises. Thus listing of households/ enterprises was done only in segments 1 and 2 of the FSU. The FSU not requiring hg/ sb formation was treated as segment 1 for the purpose of data collection and estimation.

1.9 Sampling frame of households/ enterprises:

Having determined the area(s) considered for listing, all the households (including those found temporarily locked) and non-agricultural enterprises were listed in the next step. Although all non-agricultural enterprises were listed, only the 'informal non-agricultural enterprises' (other than those covered under ASI and mining & quarrying and electricity, gas & water supply) which operated at least 30 days (15 days for seasonal enterprises) during the last year qualified for survey. Such enterprises were referred to as 'eligible enterprises'. Listing of households as well as eligible enterprises for the purpose of sample selection was independent for segments 1 & 2.

1.10 Stratification of households:

All the households listed in a segment (both rural & urban) were stratified into two second stage strata, viz. 'affluent households' (formed second stage stratum 1) and the rest (formed second stage stratum 2). In rural sector, a household was classified as 'affluent' if the household owned certain items like motor car/ jeep, colour TV, telephone, etc. or owns land / livestock in excess of certain limits. In urban sector, the households having MPCE (monthly per capita consumer expenditure) greater than certain limit for a given town/city were treated as 'affluent' households for the present survey and were included in the frame of second stage stratum 1, and rest of the urban households were included in the frame of second stage stratum 2.

1.11 Stratification of enterprises:

All the eligible informal non-agricultural enterprises other than mining & quarrying and electricity, gas & water supply which operated at least 30 days (15 days for seasonal enterprises) during the last year in a segment (both rural & urban) were stratified into 12 strata by jointly considering their broad industry group and enterprise class. Eligible enterprises could belong to any of the 6 broad industry groups, viz. manufacturing - 1, construction - 2, trade & repair services - 3, hotels & restaurants - 4, transport, storage & communication - 5 and other service sector - 6. The enterprises were classified into two enterprise classes. Enterprise class of an enterprise was '1' for Own Account Enterprises. Enterprise class for Establishments was '2'. Thus there were 12 possible strata of various combinations of broad industry groups and enterprise classes.

1.12 Number of households/ enterprises selected for survey:

The number of households/ enterprises selected for survey from each FSU in general is given on the next page :-

The FSUs of sub-sample 1, sub-sample 3, and sub-sample 5 were revisited during sub-round 2, sub-round 3 and sub-round 4 respectively. In the FSUs of these re-visit sub-samples, all the households where Schedule 10 was previously canvassed (i.e. during the previous sub-round) were revisited for canvassing Schedule 10.1. However, in case such a household could not be surveyed during revisit, it was substituted and Schedule 10 was canvassed in the substituted household. Further, Schedule 10 was also canvassed for those households which were ca

segment	Household allotment * (sch. 1.0/10 each)			enterprise allotment (sch. 2.0)												
	SSS			broad industry group												
	1	2	total	1		2		3		4		5		6		total
				enterprise class		enterprise class		enterprise class		enterprise class		enterprise class		enterprise class		
				1	2	1	2	1	2	1	2	1	2	1	2	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
FSU with hg/ sb formation:																
1	1	3	**4**	1	1	1	1	1	1	1	1	1	1	1	1	**12**
2	1	7	**8**	1	1	1	1	1	1	1	1	1	1	1	1	**12**
FSU with no hg/ sb formation:																
1	2	10	**12**	2	2	2	2	2	2	2	2	2	2	2	2	**24**

* *'SSS' means second stage stratum and 'ent. class' means enterprise class.*

sualty during visit 1 but could be surveyed during the revisit. From among the newly formed households found during the revisit of a FSU (which constituted 2nd stage strata 9), a sample of 2 additional households (one each from the 2 segments) was canvassed (Schedule 10).

Estimation procedure

1.13 General procedure of selection of households/ enterprises:

Sample households/ enterprises were selected from the respective frames by circular systematic sampling with equal probability. For the purpose of systematic sampling, households in the frame of 2nd stage stratum 2 were arranged by means of livelihood x land possessed classes for rural samples and by means of livelihood x MPCE classes for urban samples. Enterprises under each stratum (i.e. segment x broad industry group x enterprise class) were arranged in the ascending order of NIC 2-digit codes (3-digit codes for hotels & restaurants) before sampling.

1.14 Approach:

This estimation procedure fulfils the twin objectives of providing (a) estimates on quarterly/ sub-round basis, and (b) the estimate of error from the sub-sample replicates. Tabulated estimate for a quarter/ sub-round is obtained by combining the estimates of the corresponding sub-sample replicates. Similarly, a tabulated estimate of the Round is obtained by combining the four sub-round-wise/ quarterly estimates.

The following notations are being used in this section:

a : subscript for the a-th stratum

r : subscript for the r-th sub-sample replicate (r=1,2,…,8)

q : subscript for the q-th sub-round / quarter (q=1,2,3 & 4)

f : subscript for the f-th sampled village/ block as First Stage Unit (FSU)

v : subscript for the v-th visit of sampled village/ block (v=1 & 2)

s : subscript for the s-th segment of sampled village/ block (s= 1 & 2)

c : subscript for the c-th 2nd stage stratum of households in the sampled village / block (c= 1,2); for new hhs during revisit, c= 9.

g : subscript for the g-th broad group of industry (g=1,2,3,..,6)

t : subscript for the t-th enterprise class (t= 1 & 2)

j : subscript for the j-th sampled household

k : subscript for the k-th sampled enterprise

p : subscript for pooled estimate

z: size used for selection of an FSU from the sampling frame

Z : total of sizes in the sampling frame for the stratum

[Note: For urban sector, z=1 and Z=N which is the total number of UFS blocks (FSU's) in the frame.]

n : number of sampled FSU surveyed within a stratum and a sub-sample replicate (including zero cases but excluding casualty and not reported cases) and used for tabulation

L : number of sub-sample replicates surveyed and used for tabulation

D : number of hamlet-groups/ sub-blocks formed in rural/ urban sampled FSU

H : total number of households listed in the appropriate frame

h : number of sampled households surveyed and used for tabulation from the frame

E : total number of enterprises listed in the appropriate frame

e : number of sampled enterprises surveyed and used for tabulation from the frame

y, x : value of characteristic y, x obtained in the sample

$\hat{Y}$, : estimated value of the total of characteristic y, x respectively.

1.15 Estimates of aggregates:

In the formulae given in this section, is the estimate of aggregate of any characteristic y for a given stratum (**a**), and for a particular sub-round (**q**) and sub-sample replicate (**r**). These formulae [except (5) and (6)] are provided for the general case of FSU's having 2 segments 1 & 2. For the FSU's requiring no hg/ sb formation, the formula is identical to that given for segment 1 while the contribution from segment 2 is taken as zero.

1.16 Schedule 2.0

For estimating a characteristic of enterprises for a stratum of a sub-sample replicate from the selection frame based on a broad group of industry (g) x enterprise class (t):

Rural

$$\hat{Y}_{gt} = \frac{Z}{n}\sum_{f=1}^{n}\frac{1}{z_f}\sum_{s=1}^{2}B_{fsgt}\sum_{k=1}^{e_{fsgt}}y_{fsgtk} \quad \ldots(1)$$

Here $B_{fsgt}=\frac{E_{fsgt}}{e_{fsgt}}$, for segment 1 (s=1) and $B_{fsgt}=\frac{D_f-1}{2}\times\frac{E_{fsgt}}{e_{fsgt}}$, for segment 2 (s=2).

Urban

$$\hat{Y}_{gt}=\frac{Z}{n}\sum_{f=1}^{n}\sum_{s=1}^{2}B_{fsgt}\sum_{k=1}^{e_{fsgt}}y_{fsgtk} \qquad \ldots(2)$$

Here $B_{fsgt}=\frac{E_{fsgt}}{e_{fsgt}}$, for segment 1 (s=1) and $B_{fsgt}=\frac{D_f-1}{2}\times\frac{E_{fsgt}}{e_{fsgt}}$, for segment 2 (s=2).

Note: For tabulating any characteristic from this detailed schedule, $\hat{Y}=\sum_{g}\sum_{t}\hat{Y}_{gt}$ is to be used.

1.17 Schedule 10

For estimating the total of a characteristic of household from a given 2nd stage stratum (c) in the selection frame:

Rural

$$\hat{Y}_c=\frac{Z}{n}\sum_{f=1}^{n}\frac{1}{z_f}\sum_{s=1}^{2}B_{fsc}\sum_{j=1}^{h_{fsc}}y_{fscj} \qquad \ldots(3)$$

Here $B_{fsc}=\frac{H_{fsc}}{h_{fsc}}$, for segment 1 (s=1) and $B_{fsc}=\frac{D_f-1}{2}\times\frac{H_{fsc}}{h_{fsc}}$, for segment 2 (s=2).

Urban

$$\hat{Y}_c=\frac{Z}{n}\sum_{f=1}^{n}\sum_{s=1}^{2}B_{fsc}\sum_{j=1}^{h_{fsc}}y_{fscj} \qquad \ldots(4)$$

Here $B_{fsc}=\frac{H_{fsc}}{h_{fsc}}$, for segment 1 (s=1) and $B_{fsc}=\frac{D_f-1}{2}\times\frac{H_{fsc}}{h_{fsc}}$, for segment 2 (s=2).

Note: For tabulating any characteristic from this detailed schedule $\hat{Y}=\sum_{c}\hat{Y}_c$, is to be used.

1.18 Combined estimate from sub-samples

In the previous section, the estimate $\hat{Y}$ of the total of characteristic y as obtained for a stratum (a), for a particular sub-round (q) and a sub-sample replicate (r), actually represent $\hat{Y}_{aqr}$. The combined /pooled estimate for a particular stratum and a particular sub-round is computed as the average of sub-sample replicate estimates and is given below:

$$\hat{Y}_{aq}=\frac{1}{L}\sum_{r=1}^{L}\hat{Y}_{aqr} \qquad \ldots\ldots\ldots(5)$$

1.19 Estimate of aggregates for a sub-round at State/ UT/ region level

If $\hat{Y}_{qr}$ be the State/ UT/ Region level estimate of the aggregate from the r-th sub-sample replicate and q-th sub-round, and $\hat{Y}_{qp}$, the combined/ pooled estimate of the aggregate based on the whole sample, for a given sub-round/ quarter q, then:

$$\hat{Y}_{qr} = \sum_{a} \hat{Y}_{aqr} \qquad \ldots(6)$$

based on sub-sample replicate group r,

and

$$\hat{Y}_{qp} = \frac{1}{L} \sum_{r=1}^{L} \hat{Y}_{qr} \qquad \ldots(7)$$

based on all sub-sample replicates.

1.20 Estimates of aggregates for the round (i.e. all the 4 sub-rounds/ quarters together) at State/ UT/ Region level

The estimates of aggregates for the whole round are computed as the simple average of the sub-round estimates derived in previous section, and are given below:

$$\hat{Y}_{r} = \frac{1}{4} \sum_{q=1}^{4} \hat{Y}_{qr} \qquad \ldots(8)$$

based on sub-sample replicate1 and 2*,

and

$$\hat{Y}_{p} = \frac{1}{4} \sum_{q=1}^{4} \hat{Y}_{qp} \qquad \ldots(9)$$

based on whole sample.

***Note:** In the Round, sub-samples 1, 3, 5 & 7 (in sub-rounds 1 to 4) are combined together to form sub-sample replicate1 (annual) while sub-samples 2, 4, 6 & 8 (in sub-rounds 1 to 4) combine together to form sub-sample replicate 2 (annual). This is being followed in the remaining sections also.

Stratum level estimate for the Round is obtained similarly.

1.21 Estimates of ratio

If $\hat{X}$ & $\hat{Y}$ be the State/ UT/ Region level aggregate estimate corresponding to variables x and y, then the estimate of ratio is given below:

$$\hat{R}_{r} = \frac{\hat{Y}_{r}}{\hat{X}_{r}} \qquad \ldots(10)$$

based on sub-sample group r,

and

$$\hat{R}_{p} = \frac{\hat{Y}_{p}}{\hat{X}_{p}} \qquad \ldots(11)$$

based on the whole sample.

(The formulae for are obtained similarly by replacing $\hat{Y}$ by $\hat{X}$ and y by x in the above formulae stated in previous sections.)

Note: Estimates for the sub-round (quarter) $\hat{R}_{qr}$ and $\hat{R}_{qp}$ may also be obtained by replacing $\hat{Y}_{r}$ and $\hat{Y}_{p}$, by $\hat{Y}_{qr}$ and $\hat{Y}_{qp}$ respectively and $\hat{X}_{r}$ and $\hat{X}_{p}$ by $\hat{X}_{qr}$ and $\hat{X}_{qp}$, respectively.

Table 1.1: Number of villages/ blocks allotted and surveyed, and number of persons surveyed in different states and union territories

state/u.t.	villages / blocks			
	allotted		surveyed	
	rural	urban	rural	urban
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	432	320	432	320
Ar. Pradesh	80	24	74	21
Assam	296	72	291	71
Bihar	624	192	611	190
Goa	16	24	16	24
Gujarat	208	232	208	232
Haryana	96	64	96	64
Himachal Pradesh	144	80	140	80
Jammu & Kashmir	208	128	131	84
Karnataka	232	208	232	208
Kerala	240	168	240	168
Madhya Pradesh	432	264	432	264
Maharashtra	352	440	352	440
Manipur	64	56	64	56
Meghalaya	80	32	80	32
Mizoram	40	72	39	72
Nagaland	40	24	40	24
Orissa	296	88	295	88
Punjab	184	160	184	160
Rajasthan	272	168	272	168
Sikkim	88	24	88	24
Tamil Nadu	352	360	352	360
Tripura	136	48	86	48
Uttar Pradesh	792	392	791	391
West Bengal	384	288	384	288
A & N Islands	24	16	24	16
Chandigarh	16	64	16	64
D & N Haveli	16	8	16	8
Daman & Diu	16	16	15	16
Delhi	16	96	16	96
Lakshadweep	8	16	7	16
Pondicherry	24	32	24	32
All India	**6208**	**4176**	**6048**	**4125**

Table 1.2: Number of persons and enterprises surveyed in different states and union territories

state/ u.t.	no. of persons surveyed (Sch. 10)			no. of enterprises surveyed (Sch. 2.0)		
	rural	urban	combined	rural	urban	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pr.	30668	22712	53380	9466	6921	16387
Ar. Pradesh	5393	993	6386	293	250	543
Assam	25875	4890	30765	5248	1420	6668
Bihar	54810	15635	70445	12477	3734	16211
Goa	1193	1634	2827	341	408	749
Gujarat	17681	17936	35617	3914	4747	8661
Haryana	8858	5091	13949	1806	1370	3176
Himachal Pradesh	10807	4703	15510	1875	1363	3238
Jammu & Kashmir	10796	6744	17540	2395	1812	4207
Karnataka	19627	15232	34859	4584	4365	8949
Kerala	16815	12642	29457	4993	3651	8644
Madhya Pradesh	39359	22425	61784	6198	4699	10897
Maharashtra	28027	33233	61260	6660	8677	15337
Manipur	5441	4757	10198	874	1128	2002
Meghalaya	6472	2282	8754	718	335	1053
Mizoram	2826	5571	8397	354	1043	1397
Nagaland	3285	1559	4844	649	362	1011
Orissa	23277	6209	29486	5803	1823	7626
Punjab	16346	11509	27855	3415	3382	6797
Rajasthan	25828	13668	39496	4541	3144	7685
Sikkim	7111	1475	8586	1048	494	1542
Tamil Nadu	23523	22961	46484	7581	7872	15453
Tripura	6435	3305	9740	1959	910	2869
Uttar Pradesh	78391	34132	112523	16803	8454	25257
West Bengal	31813	19404	51217	8238	5931	14169
A & N. Islands	2327	1061	3388	324	235	559
Chandigarh	927	4387	5314	352	1091	1443
D & N Haveli	1247	527	1774	289	168	457
Daman & Diu	1095	1318	2413	319	370	689
Delhi	1340	6768	8108	364	1746	2110
Lakshadweep	455	2314	2769	136	564	700
Pondicherry	1731	2157	3888	489	662	1151
all India	**509779**	**309234**	**819013**	**114506**	**83131**	**197637**

ANNEX - III

CONCEPTS, DEFINITIONS AND PROCEDURES

Concepts, Definitions and Procedures

A: Survey on Employment and Unemployment

1.1 Household:

A group of persons who normally live together and take food from a common kitchen constitute a household. The adverb "normally" means that temporary visitors are excluded but temporary stay-aways are included. Thus, a child residing in a hostel for studies is excluded from the household of his/her parents, but a resident employee or a resident domestic servant or paying guest (but not just a tenant in the house) is included in the employer/host's household. "Living together" is given more importance than "sharing food from a common kitchen" in drawing the boundaries of a household in case the two criteria are in conflict. However, in the special case of a person taking food with his family but sleeping elsewhere (say, in a shop or a different house) due to space shortage, the household formed by such a person's family members is taken to include the person also. Each inmate of a hotel, mess, boarding-lodging house, hostel, etc., is considered to be a single-member household except that a family living in a hotel (say) is considered one household only. The same principle is applicable for the residential staff of such establishments.

1.2 Economic activity:

Any activity resulting in production of goods and services that add value to national product is considered as an economic activity. Such activities include produc-tion of all goods and services for market, i.e., production for pay or profit, and, the production of primary commodities for own consumption and own account production of fixed assets, among the non-market activities. As in earlier rounds, certain activities like prostitution, begging, smuggling, etc., which though fetch earnings, are, by convention, not considered as economic activities.

1.3 Activity status:

It is the activity situation in which a person is found during a reference period with regard to the person's participation in economic and non-economic activities. According to this, a person could be in one or a combination of the following three broad activity statuses during a reference period:

(i) working or being engaged in economic activity (work) as defined above,

(ii) being not engaged in economic activity (work) but either making tangible efforts to seek 'work' or being available for 'work' if the 'work' is available and

(iii) being not engaged in any economic activity (work) and also neither seeking nor available for 'work'.

Broad activity statuses mentioned in (i) & (ii) above are associated with 'being in labour force' and the last with 'not being in the labour force'. Within the labour force, broad activity status (i) and (ii) are associated with 'employment' and 'unemployment', respectively.

1.4 Categories of activity status:

Identification of each individual into a unique situation could pose a problem when more than one of the three broad activity statuses listed above are concurrently obtained for a

person. In such an eventuality, the identification uniquely under any one of the three broad activity statuses has been done by adopting *either the major time or priority criterion*. The former is used for classification of persons according to the 'usual activity status' approach and the latter for classification of persons according to the 'current activity status' approach. Each of the three broad activity statuses are further sub-divided into several detailed activity categories. If a person categorised as engaged in economic/non-economic activity by adopting one of the two criteria mentioned above is found to be pursuing more than one economic/non-economic activity during the reference period, the appropriate detailed activity status code relates to the activity in which relatively more time has been spent. The detailed activity categories under each of the three broad activity statuses used in the survey along with the codes assigned to them are stated below:

code	description
situation of working or being engaged in economic activities (employed)	
11	worked in household enterprise (self-employed) as own account worker
12	worked in household enterprise (self-employed) as employer
21	worked as helper in household enterprises (unpaid family worker)
31	worked as regular salaried / wage employee
41	worked as casual wage labour in public works
51	worked as casual wage labour in other types of work
61	had work in household enterprise but did not work due to sickness
62	had work in household enterprise but did not work due to other reasons
71	had regular salaried/wage employment but did not work due to sickness
72	had regular salaried/wage employment but did not work due to other reasons
situation of being not engaged in work but seeking or available for work (unemployed):	
81	sought work
82	did not seek but was available for work
situation of being not available for work (not in labour force)	
91	attended educational institutions
92	attended domestic duties only
93	attended domestic duties and was also engaged in free collection of goods (vegetables, roots, firewood, cattle-feed etc.) sewing, tailoring, weaving etc. for household use
94	rentiers, pensioners, remittance recipient, etc.
95	not able to work due to disability
96	beggars, prostitutes
97	others
98	did not work due to sickness (for casual workers only)

1.5 Workers (or employed):

Persons who are engaged in any economic activity or who, despite their attachment to economic activity, abstain from work for reason of illness, injury or other physical disability, bad weather, festivals, social or religious functions or other contingencies ne-

cessitating temporary absence from work, constitute workers. Unpaid helpers who assist in the operation of an economic activity in the household farm or non-farm activities are also considered as workers. All the workers are assigned one of the detailed activity statuses under the broad activity category 'working' or 'being engaged in economic activity' (or employed).

1.6 Seeking or available for work (or unemployed):

Persons, who could not work owing to lack of work, but either sought work through employment exchanges, intermediaries, friends or relatives or by making applications to prospective employers or expressed their willingness or availability for work under the prevailing conditions of work and remuneration, are considered as those 'seeking or available for work' (or unemployed).

1.7 Self-employed:

Persons who operate their own farm or non-farm enterprises or are engaged independently in a profession or trade on own-account or with one or a few partners are deemed to be self-employed in household enterprises. The essential feature of the self-employed is that they have *autonomy* (i.e., how, where and when to produce) and *economic independence* (i.e., market, scale of operation and money) for carrying out their operation. The fee or remuneration received by them comprises two parts - share of their labour and profit of the enterprise. In other words, their remuneration is determined wholly or mainly by sales or profits of the goods or services which are produced.

1.8 Categories of self-employed persons:

Self-employed persons are categorised as follows:

(i) **Own-Account workers**: Those self-employed persons who operate their enterprises on their own account or with one or a few partners and who, during the reference period, by and large, run their enterprise without hiring any labour are categorised as Own Account Workers. They could, however, have unpaid helpers to assist them in the activity of the enterprise.

(ii) **Employers** are those self-employed persons who work on their own account or with one or a few partners and, who, by and large, run their enterprise by hiring labour, and

(iii) **Helpers in household enterprise** are those self-employed persons (mostly family members) who are engaged in their household enterprises, working full or part time and do not receive any regular salary or wages in return for the work performed. They do not run the household enterprise on their own but assist the related person living in the same household in running the household enterprise.

1.9 Regular salaried/wage employee:

These are persons who work in others' farm or non-farm enterprises (both household and non-household) and, in return, receive sal-

ary or wages on a regular basis (i.e. not on the basis of daily or periodic renewal of work contract). This category includes not only persons getting time wage but also persons receiving piece wage or salary and paid apprentices, both full time and part-time.

1.10 Casual wage labour:

A person who is casually engaged in others' farm or non-farm enterprises (both household and non-household) and, in return, receive wages according to the terms of the daily or periodic work contract, is a casual wage labour.

1.11 Usual activity status:

The usual activity status relates to the activity status of a person during the reference period of 365 days preceding the date of survey. The activity status on which a person spends relatively longer time (i.e., major time criterion) during the 365 days preceding the date of survey is considered as the ***principal usual activity status*** of the person. To decide the principal usual activity of a person, he/she is first categorised as belonging to the labour force or not during the reference period **on the basis of major time criterion**. Persons thus adjudged as not belonging to the labour force are assigned the broad activity status 'neither working nor available for work'. For persons belonging to the labour force, the broad activity status of either 'working' or 'not working but seeking and/or available for work' is ascertained based on the same criterion viz. relatively longer time spent in either of the two broad statuses within the labour force during the 365 days preceding the date of survey. Within the broad activity status so determined, the detailed activity status of a person pursuing more than one such activity is determined once again on the basis of the relatively longer time spent on such activities. In terms of activity codes, codes 11-51 are applicable for persons classified as workers, while code 81 is assigned to people either seeking or available for work (unemployed persons) and codes 91-97 for those who are out of labour force.

1.12 Subsidiary economic activity status:

A person whose principal usual status is determined on the basis of the major time criterion may be pursuing some economic activity **for a relatively shorter time** during the reference period of 365 days preceding the date of survey. The status in which such economic activity is pursued is the subsidiary economic activity status of that person. Thus, activity status codes 11-51 only are applicable for persons reporting some subsidiary economic activity. It may be noted that engagement in work in subsidiary capacity could arise out of the following two situations, viz.

(i) a person could be engaged for a relatively longer period during the last 365 days in one economic/non-economic activity and for a relatively shorter period in another economic activity, and

(ii) a person could be pursuing one economic activity/ non-economic activity almost throughout the year in the principal usual activity status and simultaneously pursue another economic activity for a relatively shorter period in a subsidiary capacity.

1.13 Number of subsidiary economic activities pursued during last 365 days:

For persons reporting some subsidiary activity, the number of subsidiary activities pur-

sued by him/her during last 365 days were ascertained and recorded. However, details of a maximum of two such subsidiary economic activities were recorded. The activities having different work status were considered as different activities. Activities within the same work status but with different industry and/or occupation are also considered as different activities. If the person is engaged in two or more subsidiary economic activities, the details of two subsidiary economic activities pursued for the maximum time period among all the subsidiary economic activities are considered, and the major subsidiary economic activity is deemed as 'subsidiary status number I' and the next major one as 'subsidiary status number II'.

B: Survey on Informal Non-agricultural Enterprises

1.14 Enterprise:

An enterprise is an undertaking which is engaged in the production and / or distribution of some goods and / or services meant mainly for the purpose of sale, whether fully or partly. An enterprise may be owned and operated by a single household or by several households jointly, or by an institutional body.

1.15 Non-agricultural enterprise:

All enterprises covered under Tabulation Categories 'A' and 'B' of the National Industrial Classification, NIC-1998 (see Annexure IV), are 'agricultural enterprises' while the others covered under Tabulation Categories 'C' to 'Q' are 'non-agricultural enterprises'. However, in the 55th round survey, the enterprises falling under tabulation categories D to O (except E and L) have only been covered. Therefore, the non-agricultural enterprises belonging to mining & quarrying (Tabulation category C), electricity, gas and water (Tabulation category E), public administration and defence, compulsory social security (Tabulation category L), private households with employed persons (Tabulation category P), and extra-territorial organisation and bodies (Tabulation category Q), have not been covered in this survey.

1.16 Informal Non-agricultural enterprises:

All non-agricultural enterprises (excluding those covered under the Annual Survey of Industries) with type of ownership as either 'proprietary' or 'partnership' were treated as informal non-agricultural enterprises.

1.17 Proprietary enterprises:

Proprietary enterprises are those where an individual is the sole owner of the enterprise.

1.18 Partnership Enterprises:

Partnership is defined as the 'relation between persons who have agreed to share the profits of a business carried on by all or any one of them acting for all'. Partners may be from the same household or they may be from different households.

1.19 Own account enterprise (OAE):

An own account enterprise is an undertaking run by household labour, usually without any hired worker employed on a 'fairly regular basis'. 'Fairly regular basis' means the major part of the period of operation(s) of the enterprise during the last 365 days.

1.20 Establishment:

Thos e enterprises, which have got at least one hired worker on a 'fairly regular basis' are called establishments.

1.21 Seasonal enterprise:

Seasonal enterprises are those which are usually run in a particular season or fixed months of a year.

1.22 Worker:

A worker is defined as one who participates either full time or part time in the activity of the enterprise. The worker may serve the enterprise in any capacity - primary or supervisory. He/she may or may not receive wages/ salaries in return for his/ her work incidental to or connected with the entrepreneurial activity.

1.23 Working owner.

In the case of proprietary enterprises, the owner himself / herself works / supervises the work in the enterprise and is considered as working owner. In fact, in most of the own-account enterprises the owner himself / herself manages all activities of the enterprise without the help of anybody else (on a 'fairly regular basis'). In the case of partnership enterprises, if only one partner or some of the partners or all the partners work in the enterprise on a fairly regular basis then they are treated as working owners.

1.24 Hired worker:

A hired worker is a person employed directly or through any agency on payment of regular wage/ salary in cash or kind. Apprentices, paid or unpaid, are treated as hired workers. Paid household workers, servants and resident workers of the enterprise are also considered as hired workers.

1.25 Other worker/ helper:

This includes all persons belonging to the household of the proprietor or households of the partners who are working in or for the enterprise without regular salary or wages. Persons working as exchange labourer in the enterprise without salary or wages will also be covered in this category. All unpaid household workers/ helpers who are associated with the activities of the enterprise during the reference month are considered against this category.

1.26 Reference Period:

Last month was used as the reference period to collect most of the data on enterprises. Various receipts and expenses as well as employment, emoluments, rent, interest and net surplus for the enterprises was collected for the last month only. *Last month refers to the last 30 days (preceding the date of survey) for perennial and casual enterprises irrespective of the number of days of operation. For seasonal enterprises also, last month refers to the last 30 days (preceding the date of survey), if they have worked continuously for the last 30 days or more (including scheduled holidays) in the current season. Only for seasonal enterprises, which have worked for less than 30 days in the current season, last month refers to an average month in the last working season. If some enterprise is unable to give information for the last 30 days and is able to give information for the last calendar month, figures for the same are taken.* For some of the items like value of fixed assets, amount of loan outstanding, etc., the reference period is 'as on the date of survey'. For some other items like net additions to fixed assets, number of months operated, number of other economic activities taken up, etc., the reference period is the 'last 365 days preceding the date of survey'.

ANNEX - IV

NATIONAL INDUSTRIAL CLASSIFICATION

(NIC) – 1998

NATIONAL INDUSTRIAL CLASSIFICATION (NIC) – 1998

TABULATION CATEGORIES: CLASSIFICATION AT ONE DIGIT LEVEL

Tabulation Category	Description
A.	AGRICULTURE, HUNTING AND FORESTRY
B.	FISHING
C.	MINING AND QUARRYING
D.	MANUFACTURING
E.	ELECTRICITY, GAS AND WATER SUPPLY
F.	CONSTRUCTION
G.	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS
H.	HOTELS AND RESTAURANTS
I.	TRANSPORT, STORAGE AND COMMUNICATIONS
J.	FINANCIAL INTERMEDIATION
K.	REAL ESTATE, RENTING AND BUSINESS ACTIVITIES
L.	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
M.	EDUCATION
N.	HEALTH AND SOCIAL WORK
O.	OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICE ACTIVITIES
P.	PRIVATE HOUSEHOLDS WITH EMPLOYED PERSONS
Q.	EXTRA-TERRITORIAL ORGANISATIONS AND BODIES

NATIONAL INDUSTRIAL CLASSIFICATION (NIC) – 1998

DIVISIONS: CLASSIFICATION AT TWO DIGIT LEVEL

Tabulation Category	Division	Description
A		AGRICULTURE, HUNTING AND FORESTRY
	01	AGRICULTURE, HUNTING AND RELATED SERVICE ACTIVITIES
	02	FORESTRY, LOGGING AND RELATED SERVICE ACTIVITIES
B		FISHING
	05	FISHING, OPERATION OF FISH HATCHERIES AND FISH FARMS; SERVICE ACTIVITIES INCIDENTAL TO FISHING
C		MINING AND QUARRYING
	10	MINING OF COAL AND LIGNITE; EXTRACTION OF PEAT
	11	EXTRACTION OF CRUDE PETROLEUM AND NATURAL GAS; SERVICE ACTIVITIES INCIDENTAL TO OIL AND GAS EXTRACTION, EXCLUDING SURVEYING
	12	MINING OF URANIUM AND THORIUM ORES
	13	MINING OF METAL ORES
	14	OTHER MINING AND QUARRYING
D		MANUFACTURING
	15	MANUFACTURE OF FOOD PRODUCTS AND BEVERAGES
	16	MANUFACTURE OF TOBACCO PRODUCTS
	17	MANUFACTURE OF TEXTILES
	18	MANUFACTURE OF WEARING APPAREL; DRESSING AND DYEING OF FUR
	19	TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY, HARNESS AND FOOTWEAR
	20	MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK, EXCEPT FURNITURE; MANUFACTURE OF ARTICLES OF STRAW AND PLAITING MATERIALS
	21	MANUFACTURE OF PAPER AND PAPER PRODUCTS
	22	PUBLISHING, PRINTING AND REPORODUCTION OF RECORDED MEDIA
	23	MANUFACTURE OF COKE, REFINED POETROLEUM PRODUCTS AND NUCLEAR FUEL

Tabulation Category	Division	Description
	24	MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS
	25	MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS
	26	MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS
	27	MANUFACTURE OF BASIC METALS
	28	MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT
	29	MANUFACTURE OF MACHINERY AND EQUIPMENT N.E.C.*
	30	MANUFACTURE OF OFFICE, ACCOUNTING AND COMPUTING MACHINERY
	31	MANUFACTURE OF ELECTRICAL MACHINERY AND APPARATUS N.E.C.
	32	MANUFACTURE OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS
	33	MANUFACTURE OF MEDICAL, PRECISION AND OPTICAL INSTRUMENTS, WATCHES AND CLOCKS
	34	MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS
	35	MANUFACTURE OF OTHER TRANSPORT EQUIPMENMT
	36	MANUFACTURE OF FURNITURE; MANUFACTURING N.E.C.
	37	RECYCLING
E		ELECTRICITY, GAS AND WATER SUPPLY
	40	ELECTRICITY, GAS, STEAM AND HOT WATER SUPPLY
	41	COLLECTION, PURIFICATION AND DISTRIBUTION OF WATER
F		CONSTRUCTION
	45	CONSTRUCTION
G		WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS
	50	SALE, MAINTENANCE AND REPAIR OF MOTOR VEHICLES AND MOTORCYCLES; RETAIL SALE OF AUTOMOTIVE FUEL
	51	WHOLESALE TRADE AND COMMISSION TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES

* N.E.C. = Not Elsewhere Classified

Tabulation Category	Division	Description
	52	RETAIL TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES; REPAIR OF PERSONAL AND HOUSEHOLD GOODS
H		HOTELS AND RESTAURANTS
	55	HOTELS AND RESTAURANTS
I		TRANSPORT, STORAGE AND COMMUNICATIONS
	60	LAND TRANSPORT; TRANSPORT VIA PIPELINES
	61	WATER TRANSPORT
	62	AIR TRANSPORT
	63	SUPPORTING AND AUXILIARY TRANSPORT ACTIVITIES; ACTIVITIES OF TRAVEL AGENCIES
	64	POST AND TELECOMMUNICATIONS
J		FINANCIAL INTERMEDIATION
	65	FINANCIAL INTERMEDIATION, EXCEPT INSURANCE AND PENSION FUNDING
	66	INSURANCE AND PENSION FUNDING, EXCEPT COMPULSORY SOCIAL SECURITY
	67	ACTIVITIES AUXILIARY TO FINANCIAL INTERMEDIATION
K		REAL ESTATE, RENTING AND BUSINESS ACTIVITIES
	70	REAL ESTATE ACTIVITIES
	71	RENTING OF MACHINERY AND EQUIPMENT WITHOUT OPERATOR AND OF PERSONAL AND HOUSEHOLD GOODS
	72	COMPUTER AND RELATED ACTIVITIES
	73	RESEARCH AND DEVELOPMENT
	74	OTHER BUSINESS ACTIVITIES
L		PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
	75	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
M		EDUCATION
	80	EDUCATION
N		HEALTH AND SOCIAL WORK
	85	HEALTH AND SOCIAL WORK

Tabulation Category	Division	Description
O		OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICE ACTIVITIES
	90	SEWAGE AND REFUSE DISPOSAL, SANITATION AND SIMILAR ACTIVITIES
	91	ACTIVITIES OF MEMBERSHIP ORGANIZATIONS N.E.C.
	92	RECREATIONAL, CULTURAL AND SPORTING ACTIVITIES
	93	OTHER SERVICE ACTIVITIES
P		PRIVATE HOUSEHOLD WITH EMPLOYED PERSONS
	95	PRIVATE HOUSEHOLDS WITH EMPLOYED PERSONS
Q		EXTRA-TERRITORIAL ORGANISATIONS AND BODIES
	99	EXTRA-TERRITORIAL ORGANISATIONS AND BODIES

ANNEX - V

ACTIVITY COVERAGE FOR INFORMAL NON- AGRICULTURAL SURVEY

in

NSS 55th Round

Activity coverage for informal non-agricultural survey in NSS 55th Round

Detailed coverage of various activities in the NSS 55th round, along with their two digit codes is summarised below. The survey covered all informal non-agricultural enterprises other than the activities classified under Tabulation categories C, E, L, P and Q. Thus, activities such as agriculture, fishing, mining and quarrying, electricity, gas and water supply, public administration & defence, compulsory social security, private households with employed persons and extra territorial organisations & bodies were excluded in coverage.

Activity / NIC 2 digit code	Coverage
Manufacturing NIC (15-37)	Manufacturing is the process of transformation of raw materials into final products.All units mainly engaged in manufacturing which are registered not under Sections 2m(i) and 2m(ii) of the Factories Act 1948, are covered under this activity. Enterprises engaged in manufacturing of Bidi and Cigars, other than those covered in ASI, are also covered.
Construction NIC (45)	All units like contractors, sub-contractors, overseers, plumbers, masons, electricians, mistries for mosaic or tiles fitting, etc. connected with the construction activity are covered. However, own-account construction is outside the coverage. The self-employed persons engaged in construction activity will generally be listed in their households. But promoters/ contractors, who have offices of their own, are listed against their main offices, if they have any such office.
Trading and repair NIC(50-52)	Generally, the activity of trading (wholesale as well as retail) involves only servicespurchase of goods and their disposal by way of sale, without any intermediate physical transformation of goods. In wholesale trade, goods are generally purchased from the producer and sold to the retailer. The activities of intermediaries (commission agents) who do not actually purchase or sell goods but only arrange their purchase and sale and earn remuneration by way of brokerage and commission are also included. In retail trade, goods are generally purchased from the wholesaler and sold to the ultimate consumers. Sale of agricultural produce or manufactured goods directly by the producer is excluded. Also excluded from trade are the agency activities of intermediaries in stock exchange, real estate and other financial matters. Free collection and sale of agricultural produce is excluded. Separate and distinct trading units of manufacturing concerns (like Sale shops of DCM, Bombay Dying, Bata Shoe, etc.) are excluded. However, if private dealers or agents run these units, they are covered.
Hotels and restaurants NIC (55)	A hotel is an enterprise, which provides lodging services with or without arrangements for meals, other prepared food and refreshments. Dharamshala type lodging places are also covered under hotels.

Activity / NIC 2 digit code	Coverage
	A restaurant generally provides eating and drinking services where prepared meals, food and refreshments and other snacks are sold for immediate consumption without any provision for lodging.Such establishments are variously known as restaurants, cafes, cafeteria, snack bars, lunch counters, refreshment stands, milk bar canteens, etc. Bars and other drinking places are also treated as restaurants. Canteens located in offices, factories, etc. are treated as restaurants if private on tractors operate them. But departmental canteens run by government are excluded.
Transport, storage and communications NIC(60-64)	Transport means rendering transport service to others as a business proposition. Transport activity relates to the act of carrying passenger and/or goods from one place to another. Supporting services incidental to transport such as packing, freighting, travel agency etc. are also covered under transport. Both mechanised and non-mechanised transport is covered. The following activities are also covered: (i) hackney carriages, carriage by bullock-carts/ ekka/tonga, etc. (ii) transport by animals like horses, elephants, mules, camels, etc., (iii) transport by man including rickshaw-pullers, cart-operators, etc., (iv) non-mechanized inland/ ocean/ coastal and water transport, (v) pipeline transport, (vi) supporting services to land transport like operation of highway bridges, toll roads, parking lots, etc. and (vii) supporting services to water transport like operation and maintenance of piers, docks, light house, loading and discharging vessels, etc. The operation of storage and warehouses on hire to the farm producer, dealer, trader, processor and manufacturing enterprises, as an independent business is covered in this survey. Warehousing services may be given to the private individuals/ households also. Storage and warehousing services in respect of grains, other food articles, oil seeds and other agricultural commodities like cotton, jute and tobacco, are included. Also included are the refrigerated storage facilities on hire to other enterprises for potato, fruits, dairy products, fish and other food products and also refrigerated food locker on rental services chiefly delivered to individual household. Storage of all manufactured products including textiles, machine tools, apparatus and equipment are to be included. Spaces for lumber, waste and scrap materials are included. But farm produce stored by the owner of the farm in his own godown or a dealer or a manufacturer storing his commodities in his own godown or warehouse are excluded from the scope of this survey. Also excluded are the establishments of Central Warehousing corporation, State Warehousing Corporations and the warehousing by the Central and State Governments. Lockers in

Activity / NIC 2 digit code	Coverage
	commercial banks and in other type of enterprises for safe storage of precious belongings are also excluded. All enterprises providing communication services, not owned by government, Public Sector undertakings, local bodies and corporate sector, are covered. This will include courier services, ISD/STD/ PCO booths; Voice Mail Services through computer networking, Video/fax services, phone plus services, voiced and non-voiced leased circuits, telex/FAX/data services through computer network, radio paging, cellular mobile telephone services, and audio services etc.
Financial intermediation NIC(65-67)	All financial intermediation activities like, financial leasing, activities of hirepurchase financing, life insurance agents, non-life insurance agents, administration of financial markets, stock brokers, actuaries, financial advisors, etc. are covered.
Real estate, renting and business activities NIC (70-74)	Real estate activities are covered under NIC code 70. They include activities like: (i) purchase, sale, letting and operating of real estate i.e. residential/nonresidential buildings, (ii) developing and sub-dividing real estate into lots, (iii) lessors of real property and (iv) real estate agents, brokers and managers engaged in renting, buying and selling, managing and appraising real estate on a contract or fee basis. Letting out of an accommodation is not included except in case of real estate agents running such a business. Renting of machinery and equipment will be covered under NIC 71. Note that a household hiring out machinery & equipment or household durables are also treated as an enterprise. All business activities classifiable under NIC codes 72 to 74 are covered in this survey. Stamp vendors are not covered here but covered under retail trade.
Education NIC(80)	Only such educational institutions are included which are under proprietary or partnership control. Research and scientific services rendered by institutions and laboratories are also covered provided they satisfy the above criterion. These may be engaged in research in biological, physical and social sciences. Meteorological institutes and medical research organizations belonging to the informal sector are also included. Management training institutes, computer training centres, Nursing schools, schools of music, drama, dance, modelling, fashion designing, yoga and physical education and general coaching centres (e.g. for various competitive examinations) etc. are to be covered. Private tutors are covered only when the person (tutor) is giving tuition in his own house/coaching centre.
Health and social work NIC (85)	All enterprises engaged in health and medical services other than those owned by government, public sector undertakings, local bodies or corporate sector are covered, irrespective of the system of medicine.

Activity / NIC 2 digit code	Coverage
	All dispensaries, clinics and consultation chambers run by doctors are also covered. The survey also covers activities of veterinary services including bird hospitals. An employed doctor and para-medical person (such as midwife, dai, etc.) doing private practice are covered and his/her private practice alone is considered as an enterprise. Included in this activity are all kinds of health clubs. Big hospitals like Escort, Apollo, Peerless, etc. are not covered as they belong to the corporate sector.
Other community, social and personal service activities (excluding domestic services) NIC (90-93)	This cover the activities like sewage and refuse disposal, activities of membership organizations, recreational, cultural and sporting activities covered under NIC 90 to 93; and other service activities like washing and cleaning of textile products, hair dressing, funeral and related activities, massage saloons, sauna baths, activities of shoe shiners, porters, car parkers etc; activities such as tailoring, embroidery, etc. classified under NIC 93. Palmists and astrologers are also covered here. It may be noted that individuals serving as housemaids, cooks, gardeners, governess, baby sitters, chowkidars, night watchmen, etc. are in general outside the coverage of the present survey. However, if such activities are provided by some agencies against prescribed fees, those agencies will be treated as enterprises under NIC 93. For example, an agency, which supplies baby sitters, or night watchmen, with some profit margin, is covered.

ANNEX - VI

FACSIMILE OF INFORMAL NON-AGRICULTURAL ENTERPRISES

Schedule (Sch. 2.0) and Household Employment and Unemployment Schedule (Sch. 10)

NSS Fifty-Fifth Round
(July 1999 – June 2000)

RURAL
URBAN

*

GOVERNMENT OF INDIA
NATIONAL SAMPLE SURVEY ORGANISATION
SOCIO - ECONOMIC SURVEY
FIFTY-FIFTH ROUND (JULY 1999 - JUNE 2000)
SCHEDULE 2. 0 : INFORMAL
NON-AGRICULTURAL ENTERPRISES

CENTRAL
STATE

*

[0] descriptive identification of sample enterprise	
state/u.t	ward/inv. unit/ UFS block
district	name of owner
tehsil/town*	name of informant
village name	name and address of the enterprise
serial no. of hamlet	

*tick mark (▤) may be put in appropriate place

[1] identification of sample enterprise / establishment					
item no.	**item**	**code**	**item no.**	**item no.**	**code**
1	round number	5 5	11	serial no. of sample village / block	
2	schedule number	0 2 0	12	enterprise visit number	1
3	sample (central-1, state-2)		13	segment number (1 / 2)	
4	sector (rural - 1, urban - 2)		14	broad industry group (code)	
5	state - region		15	enterprise class (OAE-1, others -2)	
6	district code		16	serial no. of the enterprise	
7	stratum no.		17	response code	
8	sub - round		18	informant code	
9	sub - sample		19	survey code	
10	FOD sub-region		20	reason for substitution of original sample (code)	

CODES FOR BLOCK 1

item 14 :	**broad industry group code**: manufacturing – 1; construction – 2;trade and repair services – 3; hotels and restaurants – 4; transport, storage and communication – 5; other service sector – 6
item 17 :	**response code** : informant co-operative and capable - 1, informant co-operative but not capable - 2, informant busy - 3, informant reluctant - 4, others - 9
item 18 :	**informant code** : owner – 1, manager – 2, others – 9
item 19 :	**survey code**: original enterprise surveyed - 1, substitute surveyed - 2, casualty - 3
item 20 :	**reason for substitution of original sample**: informant busy – 1, informant not available – 2, informant non-cooperative – 3, others –9

CODES FOR BLOCK 2

item 3 : type of ownership			
proprietary (male) ……..…...	1	partnership with members of the same household ….....…….	3
proprietary(female) ……	2	partnership between members not all from the same household …….	4
item 5 : location of the enterprise			
within household premises …….	1	with fixed premises but without any structure ……...	4
outside household premises:		mobile market ……..	5
with fixed premises and with permanent structure …….	2	without fixed premises(street vendors) …	6
with fixed premises and with temporary structure/kiosk/stall ……	3	construction site ……...	7
items 10, 11 & 12 : act/authority of registration			
license issued by municipal corporation/panchayat/local body ……..	01	development commissioner of handicrafts/handloom ……..	08
partnership act ……	02	development commissioner of small scale industries …….	09
provident fund act ……	03	road transport act …….	10
shops and establishments act …….	04	motor vehicles act …….....	11
sales tax act ……	05	hotels and restaurants act …….	12
state directorate of industries …….	06	money lenders act ……	13
khadi & village industries commission/board ……...	07	others (*please mention the act in the space provided*) ……..….	19
items 13 & 14 : source/destination agency			
government ……...	1	private individual / household …….	5
co-operative/ marketing society ……..	2	no source agency ……	6
private enterprise ……	3	others ……..	9
contractor / middleman ……	4		
item 15 : problems faced by the enterprise			
no specific problem ……	01	competition from larger units …….	07
shortage of capital ……...	02	non-availability of labour ……	08
lack of lighting facilities ……	03	labour problems ……..	09
problem of power-cut …….	04	raw materials/fuel not available or exorbitant price …….	10
lack of marketing / other infrastructural facilities ……..	05	non- recovery of service charges / fees/ credit ……	11
local problems ……	06	others (*specify in the space provided*)	19
item 18 : type of contract			
working solely for enterprise/contractor..	1	mainly for customers but also on contract	3
mainly on contract but also for other customers ……	2	solely for customers ……...……..	4
items 19 & 20 : equipment / raw materials supplied by			
self-procured ……...	1	both …….	3
supplied by the master unit/contractor …	2		

[2] particulars of operation and background information			
1	5-digited code as per NIC 1998		
	description of activity:		
2	nature of operation (perennial – 1, seasonal – 2, casual – 3)		
3	type of ownership (code)		
4	whether accounts maintained ? (yes-1, no-2)		
5	location of the enterprise (code)		
6	number of months operated during the last 365 days		
7	whether mixed activity? (yes – 1, no – 2)		
8	number of other economic activities taken up during the last 365 days		
9	registered under any act/authority? (yes-1, no-2)		
10	if 'yes' in item 9, registered under	code 1	
11		code 2	
12		code 3	
13	source agency for purchase of basic inputs (code)		
14	destination agency for sale of final product/service (code)		
15	problems faced in its operation (code)		
16	status of the enterprise over the last 3 years (expanding – 1, stagnant – 2, contracting – 3, not applicable – 9)		
17	working on contract basis? (yes-1, no-2)		
18	if 'yes' in item 17	type of contract(code)	
19		equipment supplied by (code)	
20		raw materials supplied by (code)	
21		design specified by contractor ? (yes–1, no – 2)	

[3] principal operating expenses (value in rupees – whole number)		
manufacturing activity		
	raw materials consumed	**last month**
301.		
302.		
303.		
304.	other raw materials	
305.	purchase value of the goods sold in the same condition as purchased	
309.	**total (items 301 to 305)**	

trading activity		
	commodities purchased	**last month**
311.		
312.		
313.		
314.	other commodities purchased	
319.	**total (items 311 to 314)**	

construction activity (for contractors/sub-contractors)		
	items consumed	**last month**
321.		
322.		
323.	other items consumed	
324.	service charges payable to other enterprises	
329.	**total (items 321 to 324)**	

hotel and restaurant activity		
	main items	**last month**
331.	articles consumed for food & drink preparation	
332.	purchase value of goods traded	
333.	purchase of crockery, glassware, bedding and other consumables	
339.	**total (items 331 to 333)**	

Transport, storage and communications activities		
	main items	**last month**
341.	petrol, diesel, lubricants, etc.	
342.	tyres , tubes, batteries and retreading expenses	
343.	repair and maintenance of transport equipment	
344.	consumable stores used in the warehouse	
345.	insurance charges	
346.	call charges and rent payable to the government (STD booth)	
349.	**total (items 341 to 346)**	

educational activity		
	main items	**last month**
351.	recurring expenses on laboratory, newspaper, etc.	
352.	maintenance of furniture and fixtures	
359.	**total (items 351 to 352)**	

medical and health activity		
	main items	**last month**
361.	diet of patients	
362.	medicine, drugs and chemicals	
363.	purchase of disposable therapeutic equipment	
364.	machinery maintenance charges	
369.	**total (items 361 to 364)**	

If some of the items have already been covered under specific activities in block 3, they should not be reported again in block 3.1.

Block 3.1 records the overall expenses for all service enterprises.

[3.1] other operating expenses : all activities (value in rupees - whole number)		
	items	**last month**
371.	electricity charges	
372.	fuel and lubricant	
373.	raw materials consumed for own construction of building, furniture and fixtures (including labour charges)	

minor repair and maintenance of		
374.	building	
375.	furniture and fixtures	
376.	machinery	
377.	transport equipment	
378.	other fixed assets	

381.	rent payable on machinery and equipment (other than land and building)	
382.	contract, sub-contract and commission expenses	
383.	travelling, freight and cartage (transport) expenses	
384.	communication expenses (telephone, telegram, fax , postal, courier , e-mail, etc.)	
385.	purchase of consumable stores, packing materials, etc.	
386.	paper, printing and stationery expenses	
387.	service charges for work done by other establishments (e.g., legal, audit, advertising and other accounting services; warehousing expenses etc.)	
388.	licence fees, cess charged by local bodies, other local rates (excise duties and other indirect taxes are not to be included)	
391.	other expenses	
399.	**total (items 371 to 391)**	

[4] principal receipts (value in rupees – whole number)		
manufacturing activity		
	products and by-products manufactured	**last month**
401.		
402.		
403.		
404.	other products/ by-products	
405.	sale value of the goods sold in the same condition as purchased	
409.	**sub-total (items 401 to 405)**	
411.	opening stock of semi-finished goods	
412.	closing stock of semi-finished goods	
413.	changes in stock of semi-finished goods (item 412 - item 411) put **(-)** sign in case of negative value	
419.	**total (item 409+item 413)**	

trading activity		
	commodities sold	**last month**
421.		
422.		
423.		
424.	other commodities sold	
429.	**sub-total (items 421 to 424)**	
431.	opening stock of trading goods	
432.	closing stock of trading goods	
433.	changes in stock of trading goods (item 432 - item 431) put **(-)** sign in case of negative value	
439.	**total (item 429 +item 433)**	
440.	***overall trade margin (in percentage - whole number)***	

construction activity		
	main items	**last month**
441.	amount receivable from master contractor / owner	
442.	service charges including commission (plumbers, masons, etc.)	
449.	**total (items 441 and 442)**	

hotel and restaurant activity		
	main items	**last month**
451.	lodging charges and rent receivable for hiring out rooms and halls for functions, conferences	
452.	receipts from sale of prepared food, refreshment and drinks	
453.	receipts from trading of purchased food, refreshment and drinks	
454.	receipts from catering services	
459.	**total (items 451 to 454)**	

transport, storage and communications activities		
	main items	**last month**
461.	earnings from passenger traffic	
462.	earnings from goods traffic	
463.	storage charges	
464.	charges receivable from customers (STD/courier/fax, etc.)	
469.	**total (items 461 to 464)**	

educational activity		
	main items	**last month**
471.	tuition fees	
472.	other fees (including transport fees, laboratory fees, examination fees, etc.)	
473.	donations/ grants from individuals and institutions	
479.	**total (items 471 to 473)**	

medical and health activity		
	main items	**last month**
481.	consultation fees and charges for medicines	
482.	charges for operation theatre, cabin, pathological and radiological examination, diet, nursing, etc.	
483.	donations/ grants from individuals and institutions	
489.	**total (items 481 to 483)**	

If some of the items have already been covered under specific activities in block 4, they should not be reported again in block 4.1 .

Block 4.1 records the overall receipts for all service enterprises.

[4.1] other receipts : all activities (value in rupees – whole number)		
	main items	**last month**
491.	receipts from services provided to others including commission charges	
492.	market value of own construction of building, furniture and fixtures	
493.	value of consumption of goods /services produced or traded for own use of the owner or employees (at owner's cost)	
494.	rent receivable on plant & machinery and other fixed assets	
495.	funding / donations received (including recurring govt. grants)	
496.	other receipts	
499.	**total (items 491 to 496)**	

[5] calculation of gross value added (value in rupees - whole number)		
	items	**last month**
501	total operating expenses: [items (309+319+329+339+349+359+369+399)]	
502	total receipts: [items(419+439+449+459+469+479+489+499)]	
509	**gross value added (item 502 - item 501) put (-) sign in case of negative value**	

[6] employment particulars of the enterprise during the reference month						
serial no.	**type of worker**	**average number of workers**				
		full time		**part time**		**total**
		female	**male**	**female**	**male**	**(cols. 3 to 6)**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
1	working owner					
2	hired worker					
3	other worker / helper					
4	**total (1 to 3)**					

[7] compensation to workers during the reference month		
serial no.	**type of emoluments**	**value (Rs)**
(1)	**(2)**	**(3)**
1	salary / wages, allowances and other individual benefits (cash & kind)*	
2	imputed value of group benefits for the month @	
3		
	total emoluments (items 1 and 2)	

*includes bonus, retirement benefits etc. apportioned for the month

@ includes employer's contribution towards canteen, sports, insurance, etc.

[8] fixed assets owned and hired					
serial no.	type of assets	market value of assets (Rs) as on the date of survey		*net additions during last 365 days (Rs)	monthly rent on hired assets (Rs)
		owned	hired		
(1)	(2)	(3)	(4)	(5)	(6)
1	land and building				
2	plant and machinery				
3	transport equipment				
4	tools and other fixed assets				
5	**total (1 to 4)**				

***net additions to owned assets to be reported**

[9] loan outstanding as on the date of survey			
serial no.	source of loan	amount (Rs)	interest payable during the ref. month (Rs)
(1)	(2)	(3)	(4)
1	central and state level term lending institutions		
2	government (central, state, local bodies)		
3	public sector banks and other commercial banks		
4	co-operative banks and societies		
5	other institutional agencies		
6	money lenders		
7	business partner(s)		
8	suppliers / contractors		
9	friends and relatives		
10	others		
11	**total (1 to 10)**		

[10] factor incomes of the enterprise		
serial no.	item	monthly value (Rs)
1	emoluments (item 3, col.3 of block 7)	
2	rent payable (item 1, col.6 of block 8)	
3	interest payable (item 11, col. 4 of block 9)	
4	net surplus (including home consumption)	
5	**total (1 to 4)**	

[11] particulars of field operation

sl. no.	particulars	investigator	assistant superintendent	superintendent
(1)	(2)	(3)	(4)	(5)
1	(i) employee's name (block letters)			
	(ii) employee's code			
2	total time taken to canvass sch. 2.0 (minutes)		x	x
3	date(s) of			
	(i) survey / inspection			
	(ii) receipt	x		
	(iii) scrutiny	x		
	(iv) duplication		x	x
	(v) despatch			
4	signature			

[12] remarks by investigator

[13] comments by supervisory officer(s)

RURAL *
URBAN

GOVERNMENT OF INDIA
NATIONAL SAMPLE SURVEY ORGANISATION
SOCIO-ECONOMIC SURVEY
FIFTY-FIFTH ROUND : JULY 1999 - JUNE 2000
HOUSEHOLD SCHEDULE 10 : EMPLOYMENT AND UNEMPLOYMENT

CENTRAL *
STATE

[0] descriptive identification of sample household	
state/u.t. :	srl. no. of hamlet :
district :	ward/inv. unit/block :
tehsil/town :	name of head :
village name :	name of informant :

[1] identification of sample household

item no.	item	code	item no.	item	code
1.	round number	5 5	11.	srl. no. of sample village / block	
2.	schedule number	1 0 0	12.	household visit number (1 / 2)	
3.	sample (*central-1, state-2*)		13.	segment (1 / 2)	
4.	sector (*rural-1, urban-2*)		14.	second-stage stratum	
5.	state - region		15.	sample household no.	
6.	district code		16.	srl. no. of informant (as in col. 1, block 4)	
7.	stratum number				
8.	sub - round		17.	response code	
9.	sub - sample		18.	survey code	
10.	FOD sub - region		19.	reason for first substitution of original hh. (code)	

CODES FOR BLOCK 1

item 17:	**response code** : informant : co-operative and capable-1, co-operative but not capable-2; busy-3, reluctant-4, others-9.
item 18:	**survey code** : household surveyed : original-1, substitute-2; casualty-3.
item 19:	***reason for first substitution of original household*** *: informant busy-1, members away from home-2, informant non-cooperative-3, others-9.*

* tick mark (✓) may be put in the appropriate place.

[2] particulars of field operation

srl. no.	particulars	investigator	assistant superintendent	superintendent
(1)	(2)	(3)	(4)	(5)
1.	i) name			
	ii) code			
2.	**date(s) of :**	DD MM YY	DD MM YY	DD MM YY
	(i) survey/ inspection			
	(ii) receipt			
	(iii) scrutiny			
	(iv) despatch			
3.	no. of addl. sheets attached			
4.	total time taken to canvass schedule 10 (minutes)			
5.	signature			

[10] remarks by investigator	[11] comments by supervisory officer(s)

[3] household characteristics			
1. household size			
2 social group (code)			
3. religion (code)			
4. household type (code)			
5. total expenditure last month (Rs) (to be copied from item 19, bl. 9)			
6. land owned as on date of survey	*(in 0.00 hectares)*		
7. land possessed as on date of survey [land possessed = land (owned + leased-in + neither owned nor leased-in) - land leased out]	*(in 0.00 hectares)*		
8. land cultivated during July 1998 - June 1999	*(in 0.00 hectares)*		
no. of members who got work for at least 60 days in 'public works' during the last 365 days	9. male		
	10. female		

CODES FOR BLOCK 3

item 2:	**social group**: scheduled tribe-1, scheduled caste-2, other backward class-3, others-9.
item 3:	**religion**: Hinduism-1, Islam-2, Christianity-3, Sikhism-4, Jainism-5, Buddhism-6, Zoroastrianism-7, others-9.
item 4:	**household type:**
	for rural areas: self-employed in non-agricul-ture-1, agricultural labour-2, other labour-3, self-employed in agriculture-4, others-9.
	for urban areas: self-employed-1, regular wage/salary earning-2, casual labour-3, others-9.

Note: 1 Acre = 0.4047 Hectare

[3.1] indebtedness of rural labour household as on date of survey (i.e. for households with code 2 or 3 in item 4, block 3)				
serial no. of loan	nature of loan (code)	source (code)	purpose (code)	amount outstanding including interest on date of survey (Rs)
(1)	(2)	(3)	(4)	(5)
total				

CODES FOR BLOCK 3.1

col. (2) :	**nature of loan** : hereditary loan -1, loan contracted in cash -2, loan contracted in kind -3, loan contracted partly in cash and partly in kind -4.
col. (3) :	**source**: government -1, co-operative society -2, bank -3, employer/landlord -4, agricul-tural/professional money lender -5, shop keeper/trader -6, rela-tives/friends -7, others -9.
col. (4) :	***purpose**: household consumption: medical expenses -1, educa-tional expenses -2, legal expenses -3, other consumption expenses -4; marriage and other ceremonial expenses -5, purchase of land/construction of building -6, productive purpose -7, repayment of debt -8, others -9.*

CODES FOR BLOCK 4

col. (3):	**relation to head** : self-1, spouse of head-2, married child-3, spouse of married child-4, unmarried child-5, grand child-6, father/mother/father-in-law/mother-in-law-7, brother/ sister/brother-in-law/sister-in-law/other relatives-8, servants/employees/other non-relatives-9.
col. (6):	**marital status :** never married-1, currently married-2, widowed-3, divorced/separated-4.
col. (7):	**educational standard-general** : not literate-01, literate through attending: NFEC/AEC-02, TLC-03, others-04; literate but below primary-05, primary-06, middle-07, secondary-08, higher secondary-09, graduate and above in : agriculture-10, engineering/technology -11, medicine-12, other subjects-13.
col (8):	**educational standard-technical** : no technical education-1, technical degree in agriculture / engineering / technology / medicine etc.- 2, diploma or certificate in: agriculture-3, engineering/technology-4, medicine-5, crafts-6, other subjects-9.
col (9):	**current attendance in educational institution and course of study**: currently not attending any educational institution: never attended: to supplement hh. income-11, other reasons-12; ever attended but discontinued studies: to supplement hh. income-13, other reasons-14; dropped out: to supplement hh. income-15, other reasons-16; currently attending: NFEC/AEC-21, TLC-22; pre-primary-23, primary-24, middle-25, secondary and higher secondary-26, graduate & above in: agriculture-27, engineering/ technology-28, medicine-29, other subjects -30; diploma or certificate course: agriculture-31, engineering/technology-32, medicine-33, crafts-34, other subjects-35.
col. (15):	**location of last usual residence**: same district: rural-1, urban-2; same state but another district: rural-3, urban-4; another state: rural-5, urban-6; another country-7.
col. (17):	**state/ u.t. :** A.P.-02, Ar.P.-03, Assam-04, Bihar-05, Goa-06, Gujarat-07, Haryana-08, H.P.-09, J &K-10, Karnataka-11, Kerala-12, M.P.-13, Maharashtra-14, Manipur-15, Meghalaya-16, Mizoram-17, Nagaland-18, Orissa-19, Punjab-20, Rajasthan-21, Sikkim-22, T.N.-23, Tripura-24, U.P.-25, W.B.-26, A & N Is.-27, Chandi-garh-28, Dadra & Nagar Haveli-29, Daman & Diu-30, Delhi-31, Lakshadweep-32, Pondicherry-33. **country:** Bangladesh- 51, Nepal- 52, Pakistan- 53, Sri Lanka- 54, Bhutan- 55, Gulf Countries (Saudi Arabia, Iran, Iraq, Kuwait, UAE and other countries of the region)-56, Other Asian Countries- 57, USA- 58, Canada- 59, Other Countries of North and South America- 60, UK- 61, Other Countries of Europe- 62, Countries of Africa- 63, Rest of the World- 64.
col. (18):	**usual status at the time of migration**: worked in h.h. enterprise (self-employed) : own account worker -11, employer-12, worked as helper in h.h. enterprise (unpaid family worker)-21, worked as regular salaried/wage employee-31, worked as casual wage labour: in public works-41, in other types of work-51; did not work but was seeking and/or available for work-81, attended educational institution-91, attended domestic duties only-92, 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, rentiers, pensioners, remittance recipients, etc. -94, not able to work due to disability-95, beggars, prostitutes-96, others-97.
col. (20):	**reason for leaving the last usual place of residence**: in search of employment -01, in search of better employment -02, to take up employment/better employment -03, transfer of service/contract -04, proximity to place of work-05, studies -06, acquisition of own house/flat -07, housing problems -08, social/ political problems -09, health -10, marriage -11, migration of parent/earning member of the family -12, others -19.

[4] demographic and migration particulars of household members

srl. no.	name of member	relation to head (code)	sex (male-1, female-2)	age (years)	marital status (code)	educational standard (code)		current attendance in educational institution and course of study (code)	currently registered with employment exchange (yes-1, no-2)	whether staying in the same vill./ town for last 6 months or more (yes-1, no-2)	**if code 1 in col. 11** whether stayed away from vill./town for last 6 months or more (yes-1, no-2)	whether place of enumeration differs from last usual place of residence (yes-1, no-2)	**If code 1 in col. 13**						
						general	technical						period since leaving the last usual place of residence (yrs.)	particulars of last usual residence			usual activity at the time of migration		reason for leaving the last usual place of residence (code)
														location (code)	State/u.t./country		status (code)	**for codes 11-51 in col 18,** industry division (2 digit NIC 1998)	
															name	code			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)

CODES FOR BLOCK 5.1

col. (3):	**status** : worked in h.h. enterprise (self-employed) : own account worker -11, employer-12, worked as helper in h.h. enterprise (unpaid family worker)-21, worked as regular salaried/wage employee-31, worked as casual wage labour: in public works-41, in other types of work-51; did not work but was seeking and/or available for work-81, attended educational institution-91, attended domestic duties only-92, 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, rentiers, pensioners , remittance recipients, etc.-94, not able to work due to disability-95, beggars, prostitutes-96, others-97.
col. (5) :	**industry** : 5-digit code as in NIC-1998.
col. (6) :	**occupation** : 3-digit code as in NCO-1968.
col (8):	**no. of subsidiary activities during last 365 days:** one activity-1, two activities-2, three or more activities-3.
col. (9):	***location of workplace***: ***no fixed workplace -10,***
	workplace in rural areas and located in: own dwelling-11, own enterprise/unit/office/shop but outside own dwelling -12, employer's dwelling -13, employer's enterprise/unit/office/shop but outside employer's dwelling -14, street with fixed location-15, construction site-16, others -19
	workplace in urban areas and located in: own dwelling -21, own enterprise/unit/office/shop but outside own dwelling -22, employer's dwelling -23, employer's enterprise/unit/office/shop but outside employer's dwelling -24, street with fixed location-25, construction site-26, others -29
col. (10):	***enterprise type***: *proprietary: male -1, female -2; partnership: with members from same hh. -3, with members from different hh. -4; public sector -5, semi-public -6, others -7 (includes co-operative society, public limited company, private limited company and other units covered under ASI), not known -9*
col. (12):	***number of workers***: *less than 6 -1, 6 to 9 -2, 10 & above but less than 20 -3, 20 & above -4, not known -9*
col. (14):	**whether worked under given specifications**: yes: wholly -1, mainly -2, partly -3; no-4, not known -9
col. (15):	**who provided credit / raw material / equipments**: own arrangement -1, provided by the enterprise: credit only -2, raw material only -3, equipments only -4, credit and raw material only-5, credit and equipments only -6, raw material and equipments only -7, credit, raw material and equipments -8, not known -9
col. (16):	***no. of oulets of disposal***: *one outlet -1, two outlets -2, three or more outlets -3; not known -9*
col.(19):	**skill**: typist, stenographer-01, word processing-02, computer programming-03, data entry operator-04, fisherman-05, washerman-06, miner, quarryman-07, spinner including charkha operator-08, weaver-09, tailor, cutter-10, decorator-11, shoe-maker, cobbler-12, carpenter-13, mason, bricklayer-14, moulder-15, mechanic-16, machineman-17,

	craftsman-18, fitter-19, die-maker-20, welder-21, plumber-22, blacksmith-23, goldsmith/ silversmith-24, electrician-25, repairer of electronic goods-26, motor vehicle driver, tractor driver-27, boatman-28, potter-29, nurse, midwife-30, basket maker, wicker product maker-31, toy maker-32, sports goods maker-33, brick maker, tile maker-34, bidi maker-35, agarbatti maker-36, bookbinder-37, artist/painter -38, barber-39, mud house builder & thatcher-40, others-41; no skill-99.
col. (20):	**period of seeking/availability for work during last 365 days :** yes: less than 1 month-1, 1 to 3 months -2, 3 to 6 months-3; no-4.

CODES FOR BLOCK 5.2

col. (3):	**status:** codes as in col. 3, block 5.1**. (only codes 11-51 are applicable here).**
col. (5) :	**industry** : 5-digit code as in NIC-1998.
col. (6) :	**occupation** : 3-digit code as in NCO-1968.
col. (7) :	***location of workplace***: *codes as in col. 9, block 5.1.*
col. (8):	***enterprise type***: *codes as in col. 10, block 5.1.*
col. (10):	***number of workers***: *codes as in col. 12, block 5.1.*
col. (12):	**whether worked under given specifications:** codes as in col. 14, block 5.1.
col. (13):	**who provided credit/ raw material/equipments**: codes as in col. 15, block 5.1.
col. (14):	**no. of oulets of disposal:** codes as in col. 16, block 5.1.

[5.1] usual principal activity particulars of household members

srl. no. as in col. 1, bl. 4	age (years as in col. 5 bl. 4)	principal usual activity				engaged in any work in subsidiary capacity *(yes1, no-2)*	**if code 1 in col.7,** no of subs. activities during last 365 days (code)	particulars of enterprise for persons with industry divisions 10-99 in col. 5										**for age 15 yrs. & above and with code 81-97 in col. 3,** skill possessed (code)	**for code other than 81 in col. 3,** period of seeking/ availability for work during last 365 days (code)
		status (code)	**for codes 11-51 in col. 3**					location of workplace (code)	enterprise type (code)	whether keeps written accounts? *(yes-1, no-2, not known-9)*	number of workers (code)	whether uses electricity **for mfg.** *(yes-1, no-2, not known-9)*	**if code 11, 12 or 21 in col. 3**						
			Industry-Occupation										whether worked under given specifications? (code)	**if code 1 or 2 in col. 14**					
			description	code										who provided credit /raw material/ equipments (code)	no. of outlets of disposal (code)	basis of payment *(piece rate-1, contract basis-2)*	type of specifications *(written-1, oral-2, not known-9)*		
				industry (5 digit)	occupation (3 digit)														
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)

[5.2] usual subsidiary economic activity particulars of household members (i.e., those with code 1 in col. 7, bl. 5.1)

srl. no. as in col. 1, bl. 4	age (years as in col. 5 bl. 4)	usual subsidiary activity				particulars of enterprise for persons with industry divisions 10-99 in col. 5										subsidiary status no. (1/2)
		status (code)	for codes 11-51 in col. 3			location of work-place (code)	enter-prise type code	whether keeps written accounts ? *(yes-1, no-2, not known-9)*	number of workers (code)	whether uses electricity **for mfg.** *(yes-1, no-2, not known-9)*	if code 11, 12 or 21 in col. 12					
			Industry-Occupation								whether worked under given specifications ? (code)	if code 1 or 2 in col. 12				
			description	code								who provided credit/raw material / equipments (code)	no. of outlets of disposal (code)	basis of payment *(piece rate-1, contract basis-2)*	type of spcifications *(written-1, oral-2, not known-9)*	
				industry (5-digit)	occupation (3-digit)											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
subsidiary status number-I																
																1
																1
																1
																1
																1
																1
																1
																1
subsidiary status number-II																
																2
																2
																2
																2
																2

[5.3] time disposition during the week ended on ....

srl. no. as in col. 1, bl. 4	age (yrs.) as in col. 5, bl. 4	current day activity particulars: srl. no. of activity	status (code)	industry division (code)	**for rural areas only,** operation (code)	intensity of activity (full-1.0, half-0.5): seventh day	sixth day	fifth day	forth day	third day	second day	first day	total no. of days in each activity (0.0)	wage and salary earnings (received or receivable) for the work done during the week (Rs): cash	kind	total	mode of payment (code)	no. of days with nominal work	current weekly activity particulars: status (code)	**for codes 11-72 in col. 20** (code): (5 digit) industry	(3 digit) occupation	whether unemployed on all the 7 days of the week (*yes-1, no-2)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									

[5.3] time disposition during the week ended on ....

srl. no. as in col. 1, bl. 4	age (yrs.) as in col. 5, bl. 4	current day activity particulars: srl. no. of activity	current day activity particulars: status (code)	current day activity particulars: industry division (code)	current day activity particulars: **for rural areas only,** operation (code)	intensity of activity (full-1.0, half-0.5): seventh day	intensity of activity: sixth day	intensity of activity: fifth day	intensity of activity: forth day	intensity of activity: third day	intensity of activity: second day	intensity of activity: first day	total no. of days in each activity (0.0)	wage and salary earnings (received or receivable) for the work done during the week (Rs): cash	wage and salary earnings: kind	wage and salary earnings: total	mode of payment (code)	no. of days with nominal work	current weekly activity particulars: status (code)	current weekly activity particulars: **for codes 11-72 in col. 20** (code): (5 digit) industry	current weekly activity particulars: **for codes 11-72 in col. 20** (code): (3 digit) occupation	whether unemployed on all the 7 days of the week (*yes-1, no-2*)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									

[5.3] time disposition during the week ended on ....

srl. no. as in col. 1, bl. 4	age (yrs.) as in col. 5, bl. 4	current day activity particulars																no. of days with nominal work	current weekly activity particulars			whether un-employed on all the 7 days of the week (*yes-1, no-2)*
		srl. no. of acti-vity	status (code)	indu-stry divi-sion (code)	**for rural areas only,** opera-tion (code)	intensity of activity (full-1.0, half-0.5)							total no. of days in each acti-vity (0.0)	wage and salary earnings (received or receivable) for the work done during the week (Rs)			mode of pay-ment (code)		status (code)	**for codes 11-72 in col. 20** (code)		
						seven-th day	sixth day	fifth day	forth day	third day	second day	first day		cash	kind	total				(5 digit) industry	(3 digit) occu-pation	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									
total						1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0									

[6] follow-up questions for persons unemployed on all the 7 days of the week (i.e., code 1 in col. 23 of bl. 5.3)

srl. no. as in col. 1 of bl. 5.3	age (yrs.) as in col. 2 of bl. 5.3	whether ever worked *(yes-1, no-2)*	**for code 1 in col. 3,** particulars of last employment					
			duration (code)	status (code)	industry (5-digit code as in NIC 1998	occup-ation (3-digit code as in NCO-1968)	reason for break in employ-ment (code)	**for code 2 in col. 8** reason (code)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

CODES FOR BLOCK 6

col. (4):	**duration**: only 1 week -1, 1 to 2 weeks -2, 2 weeks to 1 month -3, 1 to 2 months -4, 2 to 3 months -5, 3 to 6 months -6, 6 to 12 months -7, 12 months & above -8
col. (5):	**status** : code structure same as in col. (3), block 5.1 **(only codes 11-51 are applicable).**
col. (8):	**reason for break in employment** : loss of earlier job-1, quit earlier job-2, lay-off without pay-3, unit has closed down-4, lack of work in the enterprise (for self-employed persons)-5, lack of work in the area (for casual labour)-6, others-9.
col.(9):	**reason for quitting job**: work was not remunerative enough-1, unpleasant environment-2, employer harsh-3, health hazard-4, to avail benefits of voluntary retirement-5, others-9.

CODES FOR BLOCK 5.3

cols. (4) and (20):	**status** : codes 11, 12, 21, 31, 41, 51 and 91-97 of col. (3), block-5.1 and also the following codes: had work in h.h. enterprise but did not work due to : sickness-61, other reasons-62; had regular salaried/wage employment but did not work due to : sickness-71, other reasons - 72; sought work-81, did not seek but was available for work-82, did not work due to temporary sickness (for casual workers only)-98.
col. (5):	**industry division** : 2 digit division codes as per NIC 1998.
col. (6):	**operation (for rural areas only)**: manual work in cultivation: ploughing-01, sowing-02, transplanting-03, weeding-04, harvesting-05, other cultivation activities-06; manual work in other agricultural activities: forestry-07, plantation-08, animal husbandry -09, fisheries-10, other agricultural activities-11; manual work in non-agricultural activities-12, non-manual work in : cultivation-13, activities other than cultivation-14.
col. (18):	**mode of payment**: **piece rate in cash** : daily-01, weekly-02, fortnightly-03, monthly-04, other-05; **piece rate in kind** : daily-06, weekly-07, fortnightly-08, monthly-09, other-10; **piece rate in both cash and kind**: daily-11, weekly-12, fortnightly-13, monthly-14, other-15; **other (non-piece) rate in cash**: daily-16, weekly-17, fortnightly-18, monthly-19, other-20; **other (non-piece) rate in kind**: daily-21, weekly-22, fortnightly-23, monthly-24, other-25; **other (non-piece) rate in both cash and kind**: daily-26, weekly-27, fortnightly-28, monthly-29, other-30.
col. (21):	**industry** : 5-digit code as in NIC-1998.
col. (22):	**occupation** : 3-digit code as in NCO-1968.

[7.1] follow-up questions on availability for work to persons working in the usual principal or subsidiary status (activity - I) (i.e. those with codes 11-51 either in col. 3 of bl. 5.1 or bl. 5.2)												
srl. no. as in col. 1, bl. 5.1	age (yrs.) as in col.2, of bl. 5.1	usual activity status code		whether engaged mostly in full time or part time work during last 365 days *(full time-1, part time-2)*	whether worked more or less regularly during last 365 days *(yes-1, no-2)*	approx-imate no. of months without work (months)	**if entry≥ 1 in col. 7,** sought / available for work during those months *(yes: on most days-1, on some-days-2; no-3))*	**if code 1 or 2 in col. 8,** made any efforts to get work (code)	sought / available for additional work during the days he/ she had work (code)	**if code 1 or 2 in col. 10,** reason (code)	sought / available for alternative work during the days he/ she had work (code)	**if code 1 or 2 in col. 12,** reason (code)
		principal (as in col. 3, bl. 5.1)	subsidiary activity - I (as in col. 3, bl. 5.2)									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

[7.2] follow-up questions on change of nature of work and/or establishment to persons working in the usual principal status or subsidiary status (activity - I) (i.e. those with codes 11-51 in col. 3 of bl. 5.1 or bl. 5.2)

srl. no. as in col. 1, bl. 5.1	age (yrs.) as in col.2, of bl. 5.1	usual status		is there any union / asso-ciation in your activ-ity? (code)	**if 'yes' in col. 5,** whether a member of union / asso-ciation *(yes-1, no-2)*	**for codes 11-51 in col. 3 or 4**		**for codes 11-51 in col. 3** whether during last 2 years changed							**if 'yes' in col. 11 or 13** reason for last change (code)
		prin-cipal (as in col. 3, bl. 5.1)	subsi-diary acti-vity - I (as in col. 3, bl. 5.2)			nature of empl-oyment *(perma-nent-1, tempo-rary-2*	whether covered under Provi-dent Fund *(code)*	work activity status *(yes-1, no-2)*	**if 'yes' in col. 9,** last activity status (code)	industry *(yes-1, no-2)*	**if 'yes' in col. 11,** last industry (code)	occu-pation *(yes-1, no-2)*	**if 'yes' in col. 13,** last occupation (code)	establ-ishment *(yes-1, no-2)*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)

CODES FOR BLOCK 7.1

col. (9):	**made any efforts to get work** : registered in employment exchange-1, other efforts-2, no effort-3
col. (10)/(12):	**sought/ available for additional/ alternative work during the days he/she had work** : yes: on most days-1, on some days-2, no-3
col. (11):	**reason for seeking/available for additional work** : to supplement income-1, not enough work-2, both-3, others-9.
col. (13):	**reason for seeking/available for alternative work** : present work not remunerative enough-1, no job satisfaction-2, lack of job security-3, work place too far-4, wants wage/salary job-5, others-9.

CODES FOR BLOCK 7.2

col. (5) :	**union/association :** yes-1, no-2, not known-9
col. (8) :	**whether covered under Provident Fund** : yes: GPF-1, CPF-2, PPF-3, combination of GPF, CPF and PPF - 4; no-5
col. (10) :	**status:** code structure same as in col. 3, bl. 5.1 **(only codes 11 -51 are applicable)**.
col. (12) :	**industry:** 2-digit codes as in NIC-1998.
col. (14) :	**occupation:** 2-digit codes as in NCO-1968.
col. (16) :	**reason for last change** : loss of earlier job due to : retrenchment/lay-off-1, closure of unit-2, for better income/remuneration-3, no job satis-faction-4, lack of work in the enterprise (for self-employed) -5, lack of job security-6, work place too far-7, promotion/ transfer-8, others-9.

CODES FOR BLOCK 8

items 10-14:	*yes : commodities produced in own farm/free collection-1, commodities acquired otherwise-2; no-3.*
item 23:	***type of work acceptable:*** *dairy -1, poultry -2, other animal husbandry -3, spinning and weaving -4, manu-facturing wood and cane products -5, tailoring -6, leather goods manufacturing -7, others -9.*
item 25:	***whether assistance required***: *no assistance -1; yes: initial finance on easy terms -2, working finance facilities -3, easy availability of raw materials -4, assured market -5, training -6, accommodation -7, others -9.*

[8]	follow-up questions for females (code 2 in col. 4, bl.4) with usual activity status code 92 or 93 (in col. 3 of bl. 5.1)				
1.	serial number as in col. 1, bl. 4				
2.	age (years) as in col. 5, bl. 4				
3.	Were you required to spend most of your time on domestic duties almost throughout the last 365 days? (*yes-1, no-2*)				
4.	***if code 1 in item 3***, reason thereof (*no other member to carry out the domestic duties-1, cannot afford hired help-2, for social and/or religious constraints-3, others-9*)				
5.	***if code 2 in item 3***, reason for still pursuing domestic duties (*non-availability of work-1, by preference-2, others-9*)				
	for items 6 to 19 alongwith your domestic duties did you more or less regularly carry out during the last 365 days:				
6.	maintenance of kitchen gardens, orchards etc.? (*yes-1, no-2*)				
7.	work in household poultry, dairy, etc.? (*yes-1, no-2*)				
8.	free collection of fish, small game, wild fruits, vegetables, etc. for household consumption? (*yes-1, no-2*)				
9.	free collection of fire-wood, cowdung, cattle feed etc. for household consumption? (*yes-1, no-2*)				
10.	husking of paddy for household consumption? (code)				
11.	grinding of foodgrains for household consumption? (code)				
12.	preparation of gur for household consumption? (code)				
13.	preservation of meat and fish for household consumption? (code)				
14.	making baskets and mats for household use? (code)				
15.	preparation of cow-dung cake for use as fuel in the household? (*yes-1, no-2*)				
16.	sewing, tailoring, weaving etc. for household use? (*yes-1, no-2*)				
17.	tutoring of own children or others' children free of charge? (*yes-1, no-2*)				
18.	bringing water from outside the household premises? (*yes-1, no-2*)				
for rural only 19.	bringing water from outside the village? (*yes-1, no-2*)				
for rural only 20.	***if yes in item 19***: distance in kilometers				
21.	inspite of your pre-occupation in domestic duties, are you willing to accept work if work is made available at your household? (*yes-1, no-2*)				
if code 1 in item 21 22.	the nature of work acceptable (*regular full time-1, regular part-time-2, occasional full time-3, occasional part-time-4*)				
if code 1 in item 21 23.	type of work acceptable (code)				
if code 1 in item 21 24.	do you have any skill/experience to undertake that work? (*yes-1, no-2*)				
if code 1 in item 21 25.	what assistance do you require to undertake that work? (code)				

[9] worksheet for recording household consumer expenditure		
item group	**value of consumption (Rs) during**	
	last 30 days	**last 365 days**
(1)	**(2)**	**(3)**
1. cereals & cereal products		
2. pulses & pulse products		
3. milk & milk products		
4. edible oil		
5. vegetables		
6. fruits & nuts		
7. egg, fish & meat		
8. other food items (sugar, salt, spices, beverages, processed food, etc.)		
9. pan, tobacco & intoxicants		
10. fuel & light		
11. **total** (*items 1 to 10*)		
12. **misc. goods & services (monthly expenditure)**		
12.1 cinema / theatre / video show		
12.2 tuition fees		
12.3 newspapers, magazines, fiction		
12.4 medical expenses (non-institutional)		
12.5 toilet articles including washing soap & other cleaning agents		
12.6 regular (commuting type) and other journeys		
12.7 house rent		
12.8 other miscellaneous goods & services		
12.9 **sub-total** *(items 12.1 to 12.8)*		
13. **misc. goods & services (annual expenditure)**		
13.1 school books & other educational articles		
13.2 hospital, nursing home (institutional)		
13.9 **sub-total** *(items 13.1+13.2)*		
14. clothing		
15. footwear		
16. **durable goods**		
16.1 furniture		
16.2 utensils		
16.3 ornaments		
16.4 kitchen equipments		
16.5 vehicles		
16.6 clocks & watches		
16.7 cassettes & records		
16.8 TV, radio, etc.		
16.9 other household appliances		
16.10 repair and maintenance		
16.99 **durable goods total** *(items 16.1 to 16.10)*		
17. **total** (*item 13.9+ item14 + item 15+ item 16.99*)		
18. average monthly expenditure for items 13.9, 14, 15 and 16.99 (*i.e. item 17 ¸ 12*)		
19. monthly total consumer expenditure (*item 11 + item 12.9 + item 18*)		

खण्ड III–हिन्दी

सर्वेक्षण

राष्ट्रीय प्रतिदर्श सर्वेक्षण संगठन
की
पत्रिका

भाग XXV संख्या 4
व
भाग XXVI संख्या 1
अंक संख्या 88

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

संपादकीय सचिवालय

समन्वय एवं प्रकाशन प्रभाग, राष्ट्रीय प्रतिदर्श सर्वेक्षण संगठन, सरदार पटेल भवन, संसद मार्ग, नई दिल्ली–110001

श्री राम कृपाल, निदेशक
श्री पवन कुमार धमीजा, संयुक्त निदेशक
श्री भूपेन्द्र कुमार, सांख्यिकी अधिकारी
श्री एस. ए. बेग, कनिष्क अन्वेषक

मूल्य : अन्तर्देशीय 200.00 रूपये

सर्वेक्षण
XXV, संख्या 4 व भाग XXVI संख्या 1

विषय–सूची

भारत में अनौपचारिक क्षेत्र रोजगार संबंधी सर्वेक्षण परिणामों के रा.प्र.सर्वे. 55वां दौर (जुलाई, 1999 - जून, 2000) का एकीकृत सार

असिस रॉय तथा सलिल कुमार मुखोपाध्याय *

1 प्रस्तावना

1.1 अनौपचारिक क्षेत्र मुख्यतः उन इकाइयों से मिलकर बनता है जो संगठन के निम्न स्तर पर कार्यरत होते हैं जिनमें उत्पादन के साधन के रूप में पूंजी और श्रम में थोड़ा सा अथवा नगण्य अंतर होता है और जो छोटे पैमाने पर वस्तुओं और सेवाओं के उत्पादन में लगे हैं । श्रमिक संबंध, जहां भी वे विद्यमान हैं, औपचारिक प्रतिभूतियों सहित संविदात्मक व्यवस्था की अपेक्षा अधिकांश अनियत रोजगार, रिश्तेदारी अथवा वैयक्तिक अथवा सामाजिक संबंधों पर आधारित होते हैं । अनौपचारिक क्षेत्र की उत्पादन इकाइयों में घरेलू उद्यमों के विशि-ट लक्षण होते हैं । इन उत्पादन इकाइयों के स्वामी अपने जोखिम पर जरूरी वित्त एकत्र करते हैं और व्यक्तिगत रूप से बिना किसी सीमा के उत्पादन प्रक्रिया में वहन किए गए ऋण अथवा बाध्यता हेतु उत्तरदायी होते हैं । उत्पादन हेतु व्यय अमूमन घरेलू व्यय से भिन्न नहीं होता है । भवन अथवा वाहन जैसे पूंजीगत सामान व्यापार अथवा घरेलू उद्देश्य हेतु अविभेद्य रूप से प्रयोग किए जा सकते हैं । अचल तथा प्रयोग की गई अन्य परिसंपत्तियां सामान्यता उत्पादन इकाईयों से संबद्ध नहीं होती किंतु उनके स्वामी से होती हैं ।

1.2 सांख्यिकीय प्रयोजन हेतु, अनौपचारिक क्षेत्र को उत्पादन इकाइयों के एक समूह के रूप में माना जाता है जो घरेलू उद्यमों अथवा समकक्ष,परिवारों के स्वामित्व वालेअनिगमित उद्यमों के रूप में घरेलू क्षेत्र के भाग की संरचना करता है । घरेलू क्षेत्र के अंतर्गत, अनौपचारिक क्षेत्र में शामिल हैं : (i) "अनौपचारिक स्वलेखा उद्यम" जो कि स्व-लेखा कर्मियों द्वारा या तो अकेले अथवा उसी या अन्य परिवार के सदस्यों के साथ सहभागीदारी में उन्हीं के स्वामित्व में रहता है और प्रचालित किया जाता है और जो आवसरिक आधार पर सहभागीदार पारिवारिक सदस्यों तथा कर्मचारियों को नियोजित करता है किंतु कर्मचारियों को निरंतरता के आधार पर नियोजित नहीं करता है, और (ii) "अनौपचारिक नियोजकों के उद्यम" जो कि नियोजकों द्वारा अकेले अथवा उसी या अन्य परिवार के सदस्यों के साथ स्वामित्व में भागीदारी वाले हैं और प्रचालित किए जाते हैं, जो एक अथवा अधिक कर्मचारियों को निरंतरता के आधार पर नियोजित करते हैं ।

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* दोनों सर्वेक्षण अभिकल्प एवं अनुसंधान प्रभाग, रा-ट्रीय प्रतिदर्श सर्वेक्षण संगठन, कोलकाता में कार्यरत हैं ।

2. अनौपचारिक क्षेत्र में रोजगार आकलन हेतु रा.प्र.सर्वे.सं. द्वारा सर्वेक्षण

2.1 रा-ट्रीय प्रतिदर्श सर्वेक्षण संगठन ने जुलाई, 1999 से जून, 2000 के दौरान अपने 55वें दौर में परिवारों एवं उद्यमों का एक एकीकृत सर्वेक्षण आयोजित किया । इसमें जो वि-ाय शामिल किए गए वे थे - घरेलू उपभोक्ता व्यय (अनुसूची 1.0), रोजगार-बेरोजगारी (अनुसूची-10) तथा अनौपचारिक गैर-कृ-ाीय उद्यम (अनुसूची 2.0) । रोजगार-बेरोजगारी की सामान्य जानकारी के अलावा रोजगार-बेरोजगारी सर्वेक्षण हेतु चयनित परिवारों से, अनौपचारिक क्षेत्र में रोजगार आकलन हेतु रोजगार-बेरोजगारी संकेतकों संबंधी सामान्य सूचना तथा गैर-कृ-ाि क्षेत्र में कामगारों संबंधी कुछ सूचना एकत्र की गई थी । सर्वेक्षित उद्यमों से उद्यमों की विशे-ाताओं, अचल परिसंपत्तियों, रोजगार, व्यय एवं प्राप्तियां, मूल्यवृद्धि, रोजगार इत्यादि संबंधी सूचना एकत्र की गई जिससे अनौपचारिक क्षेत्र में सृजित नौकरियों के वैकल्पिक अनुमान तैयार करने का अवसर प्राप्त हुआ और जिससे उद्यम दृ-टिकोण के माध्यम से प्राप्त अनौपचारिक क्षेत्र में रोजगार के आकार का अनुमान लगाया जा सकता है ।

2.2 भौगोलिक क्षेत्र विस्तार :-

सर्वेक्षण में समस्त भारत संघ को शामिल किया गया लेकिन जो क्षेत्र शामिल नहीं किए गए, वे थे (i) जम्मू और कश्मीर के लद्दाख तथा कारगिल जिले, (ii) नागालैंड राज्य के गांव जो बस रूट के 5 कि.मी. से अधिक की दूरी पर स्थित हैं और (iii) अण्डमान और निकोबार के गांव जहां पहुंचना संभव नहीं था । पहले दौर की भांति, 1991 की जनगणना के अनुसार देश के ऐसे सभी गांव, जहां लोग नहीं रहते, को रा.प्र.सर्वे. 55वें दौर में शामिल नहीं किया गया ।

2.3 प्रतिदर्श अभिकल्प :-

प्रथम चरण इकाइयों (एफ एस यू) के प्रतिदर्श के चयन हेतु एक स्तरीकृत प्रतिचयन अभिकल्प अपनाया गया । ग्रामीण क्षेत्र हेतु प्रथम चरण इकाइयां गांव (केरल हेतु पंचायत वार्ड) थे और शहरी क्षेत्र हेतु शहरी संरचना सर्वेक्षण (यू एफ एस) खण्ड थे । अंतिम चरण इकाइयां (यू एस यू), उपभोक्ता व्यय (अनुसूची 1.0) तथा रोजगार-बेरोजगारी अनुसूचियां (अनुसूची 10/10.1) तैयार करने हेतु परिवार तथा अनौपचारिक क्षेत्र उद्यम अनुसूची (अनुसूची 2.0) तैयार करने हेतु उद्यम थे । अंतिम चरण इकाइयों को तदनुरूपी शहरी संरचना सर्वेक्षण से वर्तुल क्रमबद्ध प्रतिचयन की पद्धति के द्वारा चयनित किया गया था । बड़ी प्रथम चरण इकाइयों हेमलेट समूह (ग्रामीण)/ उप-खंड(शहरी) में उप- विभाजित थीं ।

2.4 प्रतिदर्श आकार :-

सभी अनुसूचियों हेतु 55वें दौर में अखिल भारत स्तर पर केन्द्रीय प्रतिदर्श में सर्वेक्षण हेतु कुल 10,384 एफ एस यू (6208 गांव और 4176 शहरी खंड) का चयन किया गया था जिनमें से 10173 गांवों/खंडों (6048 गांव तथा 4125 शहरी खंडो) का वास्तविक रूप से सर्वेक्षण

किया गया । हमेशा की तरह इस दौर की सर्वेक्षण अवधि को चार उप-दौरों में बांटा गया, प्रत्येक की अवधि तीन माह थी और इन प्रत्येक चारों उप-दौरों में 2 स्वतंत्र उप-प्रतिदर्शों के रूप में प्रथम चरण इकाइयों की समान संख्या नए सिरे से चयनित की गई । इस प्रकार ऐसे 8 उप-प्रतिदर्श थे । इसके अतिरिक्त, 3894 एफ एस यू - जिसमें से कि उप-प्रतिदर्श 1,3 तथा 5 के तदनुरूपी 2,3, तथा 4 उपदौरों के प्रत्येक में 1298 का अनुसूची 10.1 तैयार करने हेतु पुनः निरीक्षण किया गया इसका तात्पर्य पुनः निरीक्षण पर रोजगार एवं बेरोजगारी संबंधी चयनित आंकड़े एकत्रित करना था । अनुसूची 10 हेतु 1,65,244 परिवारों के प्रतिदर्श का सर्वेक्षण किया गया - 97, 986 ग्रामीण क्षेत्र में तथा 67,258 शहरी क्षेत्रों में । जहां तक सर्वेक्षित लोगों की संख्या का संबंध है तो ग्रामीण क्षेत्र में यह 5,09,779 तथा शहरी क्षेत्र में 3,09,234 थी । उद्यम सर्वेक्षण हेतु अनौपचारिक क्षेत्र से संबंधित 1,97,637 इकाइयों (114506 ग्रामीण क्षेत्र से तथा 83131 शहरी क्षेत्र से) का सर्वेक्षण किया गया ।

3. उपलब्धियों का सार

3.1 यह उपखंड अनुसूची 10 पर आधारित अनौपचारिक क्षेत्र के ऐसे कामगारों अर्थात् जो अपने स्वामित्व वाले अथवा साझेदारी वाले उद्यमों में कार्य करते हैं, पर जोर देते हुए गैर-कृ-ि कामगारों की उनकी विभिन्न विशे-ाताओं जैसे उनके कार्यकलाप की स्थिति, कार्य का विस्तृत उद्योग, उद्यम प्रकार, कार्यस्थल की स्थिति, इत्यादि संबंधी आवश्यक उपलब्धियों का सार प्रस्तुत करता है । उद्यम सर्वेक्षण से प्राप्त की गई इसी प्रकार की एक तुलना को भी इस सार का एक भाग बनाया गया है । अनौपचारिक गैर-कृ-ि उद्यमों में रोजगार संबंधी विस्तृत परिणाम रा.प्र.सर्वे. रिपोर्ट सं. 459 तथा 460 में उपलब्ध है । परिणामों का सारांश बाद के पैराग्राफ में दिया गया है । विस्तृत तालिकाएं परिशि-ट-1 में दी गई हैं ।

3.2 सर्वेक्षण अनुमानों के अनुसार, 1999-2000 के दौरान भारत में लगभग 92.10 करोड़ लोग 18.90 करोड़ परिवारों में रहते हैं । लगभग 73 प्रतिशत परिवार ग्रामीण भारत से संबंधित हैं जो कुल जनसंख्या का लगभग 75 प्रतिशत हैं। ग्रामीण क्षेत्र हेतु औसत परिवार आकार 5.0 था जो शहरी क्षेत्र के 4.5 औसत से थोड़ा अधिक है । औसतन, एक भारतीय परिवार का लिंग अनुपात (प्रति 1000 पुरू-ाों पर महिलाओं की संख्या) 947 था । प्रत्येक 1000 पुरू-ाों हेतु शहरी क्षेत्रों (915) की तुलना में ग्रामीण क्षेत्र में (959) महिलाओं की संख्या अधिक थी ।

3.3 प्रारंभ में, कुल कार्य-बल और गैर-कृ-ि क्षेत्र के कार्यबल का भाग जैसा कि रोजगार और बेरोजगारी सर्वेक्षण से प्राप्त किया जाता है का सिंहावलोकन समस्त भारत स्तर पर क्रमशः विवरणी-। और विवरणी-।। में प्रस्तुत किया जाता है । आम स्तर पर सभी कामगारों (अब से कामगार कहा जाए), अर्थात आर्थिक स्तर साथ लेने पर मुख्य (पीएस) और सहायक(एसएस) कामगारों के कार्यबल गठित करने पर विचार किया था । विवरणी-। से यह देखा गया है कि 1999-2000 के दौरान 40% जनसंख्या कार्य

कर रही थी । कामगारों की संख्या में लिंग संबंधी अंतर (प्रति 100 व्यक्ति) काफी उल्लेखनीय था । यह संख्या पुरूषों के लिए 53 और महिलाओं के लिए 26 थी । गांवों में यह संख्या उच्चतर शहरों में (34) की तुलना में (42) थी । कामगारों में गैर-कृषि कामगारों का समानुपात ग्रामीण क्षेत्रों में (24%) की तुलना में शहरी क्षेत्रों में काफी उच्चतर (91%) था । यह समानुपात महिलाओं के लिए (24%) की तुलना में पुरूषों के लिए उच्चतर (45%) था ।

विवरणी-1 : प्रति 1000 व्यक्तियों पर कामगारों (पीएस+एसएस) की संख्या

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क्षेत्र	कामगार		
	पुरूष	महिला	व्यक्ति
(1)	(2)	(3)	(4)
ग्रामीण	531	299	417
शहरी	518	139	337
संयुक्त	527	259	397
कार्यबल में पुरूषों का अनुपात : 68%			

विवरणी-2: प्रति हजार (पीएस+एसएस) कामगारों पर गैर-कृषि कामगारों की संख्या

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क्षेत्र	गैर-कृषि कामगार		
	पुरूष	महिला	व्यक्ति
(1)	(2)	(3)	(4)
ग्रामीण	286	146	237
शहरी	934	823	912
संयुक्त	450	235	382
गैर-कृषि कार्यबल में पुरूषों का अनुपात : 80%			

3.4 अनौपचारिक क्षेत्र में कामगार

3.4.1 उद्यम जिसमें वे कार्यरत थे के प्रकार के अनुसार गैर-कृषि कामगारों का समस्त भारत स्तर पर वितरण विवरणी-III में प्रस्तुत किया गया है । दो समूहों - स्वामित्व और साझेदारी (पी एंड पी) को एक साथ रखा गया है । वे अनिगमित स्वामित्व और साझेदारी उद्यम की रचना करते हैं - इस सर्वेक्षण की अनौपचारिक क्षेत्र के रूप में परिभाषित एक श्रेणी ।

विवरणी-3: उद्यम के प्रकार के अनुसार गैर-कृ-ि कामगारों (पीएस+एसएस) का प्रति 1000 पर वितरण

समस्त भारत

उद्यम के प्रकार के अनुसार गैर-कृ-ि(पीएस+एसएस)कामगार											
कामगारों की श्रेणी	स्वामित्व		साझेदारी		पी एंड पी	सार्व-जनिक क्षेत्र	अर्ध सार्व-जनिक	अन्य	अज्ञात	गैर उत्तर	कुल
	पुरू-ा	महिला	उसी परिवार में	विभिन्न परिवारों से							
1	2	3	4	5	6	7	8	9	10	11	12
ग्रामीण											
पुरू-ा	657	10	14	13	695	98	12	56	41	98	1000
महिला	404	321	18	7	750	70	9	56	33	82	1000
व्यक्ति	602	78	15	12	707	92	11	56	39	95	1000
शहरी											
पुरू-ा	623	7	25	19	674	142	15	88	37	44	1000
महिला	374	281	20	11	685	130	14	74	40	57	1000
व्यक्ति	578	56	24	18	676	140	15	85	38	46	1000
संयुक्त											
पुरू-ा	639	9	20	16	684	121	14	73	39	69	1000
महिला	390	302	19	9	720	98	11	64	36	71	1000
व्यक्ति	590	66	20	15	691	116	13	71	39	70	1000

3.4.2 विवरणी-3 से पता चलता है कि ग्रामीण और शहरी दोनों क्षेत्रों में गैर-कृ-ि कामगारों का एक उच्च समानुपात अनौपचारिक क्षेत्र (अर्थात् स्वामित्व और साझेदारी वाले उद्यमों) में कार्य कर रहे थे । 1999-2000 के दौरान ग्रामीण क्षेत्रों में गैर-कृ-ि कामगारों का लगभग 71 प्रतिशत और शहरी क्षेत्रों में लगभग 68 प्रतिशत अनौपचारिक क्षेत्र में कार्यरत थे । पुरू-ा (68 प्रतिशत) की तुलना में महिलाओं (72 प्रतिशत) का यह अनुपात उच्चतर था यह ग्रामीण और शहरी दोनों क्षेत्रों के लिए ठीक था ।

3.5 उद्यम के प्रकार के अनुसार अनौपचारिक क्षेत्र के कामगार

3.5.1 विवरणी-4 ग्रामीण और शहरी दोनों क्षेत्रों में पुरू-ा और महिलाओं के लिए पृथक-पृथक उद्यम जिसमें वे कार्यरत थे के प्रकार के अनुसार अनौपचारिक क्षेत्र में कामगारों का वितरण प्रस्तुत करती है । अनौपचारिक क्षेत्र में कामगारों में से अधिकांश 95 प्रतिशत पुरू-ा और 96 प्रतिशत महिलाएं स्वामित्व वाले उद्यमों में लगे हैं । अनौपचारिक गैर-कृ-ि क्षेत्र में पुरू-ा कामगारों

का लगभग 93 प्रतिशत पुरू-ा स्वामित्व वाले उद्यमों में लगे थे । इसके विपरीत केवल 42 प्रतिशत महिला कामगार ही महिलाओं के स्वामित्व वाले उद्यमों में कार्यरत थीं ।

विवरणी-4: उद्यमों के प्रकार के अनुसार अनौपचारिक क्षेत्र (अर्थात् जो स्वामित्व और साझेदारी उद्यमों में कार्यरत) में कामगारों का प्रति 1000 पर वितरण

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कामगारों कीश्रेणी	उद्यमों का प्रकार				
	स्वामित्व		साझेदारी		स्वामित्व और साझेदारी
	पुरू-ा	महिला	पुरू-ा	महिला	
(1)	(2)	(3)	(4)	(5)	(6)
			ग्रामीण		
पुरू-ा	945	14	20	19	1000
महिला	539	428	24	9	1000
व्यक्ति	851	110	21	17	1000
			शहरी		
पुरू-ा	924	10	37	28	1000
महिला	546	410	29	16	1000
व्यक्ति	855	83	36	27	1000
			संयुक्त		
पुरू-ा	934	13	29	23	1000
महिला	542	419	26	13	1000
व्यक्ति	854	96	29	22	1000

3.5.2 यह उल्लेखनिय है कि देश में कार्यबल का लगभग 68 प्रतिशत भाग पुरू-ाों का था । गैर-कृ-ि क्षेत्र, तथा अनौपचारिक क्षेत्र के साथ साथ स्वामित्व वाले उद्यमों में, कार्यबल के मामले में स्थिति पुरू-ाों के प्रति अत्याधिक पक्षपातपूर्ण थी । गैर कृ-ीय उद्यमों, अनौपचारिक उद्यमों तथा स्वामित्व वाले उद्यमों प्रत्येक में महिलाओं के लिए लगभग 20% रोजगार के अवसर रखे गए । इसके पश्चात् स्वामित्व उद्यमों में कार्यबल के विश्ले-ाण विवरणी-5 में किए गए हैं । स्वामित्व वाले उद्यमों के स्वामियों की लिंग संबंधी जांच करते समय कार्यबल की हिस्सेदारी में लिंग पूर्वाग्रह स्प-ट रूप से लक्षित होता है । स्वामित्व वाले पुरू-ा उद्यमों में पुरू-ा कामगारों का प्रतिशत 87% था जबकि स्वामित्व वाले महिला उद्यमों में महिला कामगारों का प्रतिशत 89% था ।

विवरणी-5 :पुरू-ा स्वामित्व और महिला स्वामित्व वाले उद्यमों में से प्रत्येक में लिंग के अनुसार कामगारों का वितरण ।

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उद्यम प्रकार	कामगार		
	पुरू-ा	महिला	सभी
(1)	(2)	(3)	(4)
पुरू-ा स्वामित्व	87	13	100
महिला स्वामित्व	11	89	100

3.6 विभिन्न सामान्य गतिविधि स्थिति में अनौपचारिक क्षेत्र कामगार :

3.6.1 विवरणी-6 सार्वजनिक कार्यों में अनियत मजदूर के रूप में लगे कामगारों को छोड़कर कामगारों की विभिन्न गतिविधि स्थितियों के लिए अनौपचारिक क्षेत्र में लगे गैर-कृ-ाीय कामगारों के समानुपात दर्शाती है । विवरणी-6 से यह देखा गया है कि अनौपचारिक क्षेत्र में गैर-कृ-ाीय कामगारों का समानुपात स्व-रोजगार में सर्वाधिक है । यह समानुपात व-र्ा 1999-2000 के दौरान ग्रामीण क्षेत्रों में 91% तथा शहरी क्षेत्रों में 95% रहा । गैर-कृ-ाीय कामगार, जो अनियमित मजदूरों के रूप में सार्वजनिक कार्यों के अलावा भी कार्यरत थे, उनमें से ग्रामीण क्षेत्र में 69% तथा शहरी क्षेत्र में 74% अर्थात् एक बड़ा भाग अनौपचारिक क्षेत्र में कार्यरत था । इन श्रेणियों की तुलना में, अनौपचारिक क्षेत्र में नियमित वेतनभोगी कामगार अपेक्षाकृत कम समानुपात में नियोजित थे । यह समानुपात ग्रामीण क्षेत्रों में 33% तथा शहरी क्षेत्रों में 40% तक रहा ।

विवरणी-6: प्रत्येक गतिविधि स्तर के लिए प्रति 1000 गैर-कृ-ाीय कामगारों (पीएस+एसएस) में स्वामित्व या साझेदारी(पी एंड पी) में लगे गैर-कृ-ाीय कामगारों की संख्या

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सामान्य गतिविधि	पी एंड पी उद्यमों में कार्यरत गैर-कृ-ाीय कामगार (पीएस+एसएस)					
	ग्रामीण			शहरी		
	पुरू-ा	महिलाएं	व्यक्ति	पुरू-ा	महिलाएं	व्यक्ति
(1)	(2)	(3)	(4)	(5)	(6)	(7)
11	908	926	911	955	925	950
12	934	902	932	914	518	878
21	897	917	908	943	946	944
11-21	907	921	911	951	928	947
31	336	284	328	402	408	403
51	698	637	687	740	721	737
11-51(41 को छोड़कर)	697	754	710	675	687	677

3.7 वृहद कार्य उद्योगों के अनुसार अनौपचारिक क्षेत्र कामगार

3.7.1 यह जानना रूचिकर होगा कि प्रत्येक वृहद् कार्य उद्योग (सारणीयन श्रेणी के संदर्भ में) के संगत कितने गैर-कृ-षीय कामगार अकेले अनौपचारिक क्षेत्र में आकलित किए गए हैं । विवरणी-7 प्रत्येक सारणीयन श्रेणी के लिए अलग-अलग सभी गैर-कृ-षीय कामगारों में अनौपचारिक क्षेत्र कामगारों का समानुपात दर्शाती है ।

3.7.2 विवरणी-7 यह दर्शाती है कि थोक या खुदरा व्यापार आदि (अर्थात सारणीयन श्रेणी

विवरणी-7 स्वामित्व एवं साझेदारी उद्यमों में लगे, प्रत्येक सारणीयन श्रेणी हेतु प्रति 1000 गैर-कृ-षीय कामगारों में (पीएस+एसएस) की संख्या समस्त भारत

सारणीयन श्रेणियां	पी एंड पी उद्यमों में लगे गैर-कृ-षीय कामगार (पीएस+एसएस)					
	ग्रामीण			शहरी		
	पुरू-ा	महिलाएं	व्यक्ति	पुरू-ा	महिलाएं	व्यक्ति
(1)	(2)	(3)	(4)	(5)	(6)	(7)
सी	656	732	672	266	400	278
डी	787	876	819	698	859	732
ई	93	25	92	60	41	59
एफ	697	519	677	753	636	739
जी	890	896	891	892	844	886
एच	867	878	870	899	896	899
आई	717	514	715	657	419	647
जे	238	291	243	218	181	212
के	753	675	750	797	735	791
एल	57	37	55	52	69	54
एम	187	248	204	324	389	355
एन	531	183	420	452	348	412
ओ	741	781	753	745	798	764
पी	522	686	625	616	826	751
क्यू	0	0	0	588	974	636
सभी (सी-क्यू)	695	750	707	674	685	676

सी से क्यू सारणीयन का विवरणः सीः खनन एवं उत्खनन; डीः विनिर्माण; ईः विद्युत, गैस एवं जल आपूर्ति; एफः निर्माण; जीः थोक एवं खुदरा व्यापार, मोटर वाहन, मोटर साईकिल और वैयक्तिक एवं घरेलू सामान की मरम्मत; एचः होटल तथा रेस्तरां; आईः परिवहन, भंडार एवं संचार; जेः वित्तीय मध्यस्थता; केः भू संपदा, किराएदारी तथा व्यापारिक क्रियाकलाप; एलः सार्वजनिक प्रशासन एवं सुरक्षा, आवश्यक सामाजिक रक्षा; एमः शिक्षा; एनः स्वास्थ्य एवं सामाजिक कार्य; ओः अन्य समुदाय सामाजिक एवं वैयक्तिक सेवा कार्य; पीः नियोजित व्यक्तियों सहित निजी परिवार; क्यूः अतिरिक्त-संघीय संगठन एवं निकाय ।

जी) या होटलों और रेस्टोरेंटों(अर्थात सारणीयन श्रेणी एच) में लगे सभी गैर-कृ-ीय कामगारों का 4/5 से भी अधिक भाग अकेले अनौपचारिक क्षेत्र से संबंधित है । यह ग्रामीण और शहरी क्षेत्रों में भी सत्य था और तब भी जब पुरू-ा और महिला गैर-कृ-ीय कामगारों को अलग-अलग माना जाता था । विनिर्माण कामगारों (सारणीयन श्रेणी डी) में भी, अनौपचारिक क्षेत्र में नियोजित गैर कृ-ीय कामगारों का समानुपात बहुत महत्वपूर्ण था - जबकि शहरी क्षेत्रों की अपेक्षा ग्रामीण क्षेत्रों में इससे भी अधिक था । यह समानुपात पुरू-ाों के मुकाबले महिलाओं में उच्चतर था ।

सर्वेक्षण के अनुसार यह अनुमान लगाया गया है कि अनौपचारिक क्षेत्र में विनिर्माण क्षेत्र में ग्रामीण एवं शहरी क्षेत्रों में क्रमशः 88% तथा 86% महिला कामगार थीं। पुरू-ाों का ग्रामीण एवं शहरी क्षेत्रों में तदनुरूपी आकलन क्रमशः 79% तथा 70% था । दूसरी ओर, भू संपदा, किराएदारी एवं व्यापार कामगारों (सारणीयन श्रेणी के) में स्थिति पूर्णतः विपरीत थी । इस श्रेणी में लगभग 80% शहरी तथा 75% ग्रामीण पुरू-ा कामगार अनौपचारिक क्षेत्र में था जबकि महिला कामगारों के लिए शहरी एवं ग्रामीण क्षेत्रों में तदनुरूपी अनुपात क्रमशः 73% तथा 68% था ।

3.8 अनौपचारिक क्षेत्र में कामगार तथा उद्यमों का आकार

3.8.1 सर्वेक्षण में प्रत्येक गैर-कृ-ीय कामगार के लिए उद्यमों अथवा प्रति-ठानों जहां वे कार्यरत हैं, के कामगारों की संख्या के रूप में आकार को एकत्र किया गया था । ऐसी सूचना (i) स्वामित्व अथवा साझेदारी (पी एंड पी) उद्यमों में लगे तथा (ii) सभी उद्यमों के लिए, उनके उद्यमों में अलग से लगे हुए कामगारों की संख्या के अनुसार गैर-कृ-ीय कामगारों (पीएस+एसएस) के वितरण के रूप में विवरण 8 में में दी गई है । गैर-कृ-ीय कामगारों का एक बड़ा समानुपात लघु उद्यमों में काम कर रहा है । 6 कामगारों से कम आकार के उद्यमों में लगे कामगारों का अनुपात ग्रामीण तथा शहरी क्षेत्रों में क्रमशः 61% तथा 54% था । इस अनुपात में अनौपचारिक क्षेत्र के लिए विशे-ा वृद्धि हुई जो बढ़कर 80% तथा 76% तक पहुंच गया । महिला कामगारों के लिए यह अनुपात ग्रामीण एवं शहरी क्षेत्र के लिए क्रमशः 83% तथा 79% तक के उच्चतम स्तर तक पहुंच गया । इसलिए, छोटे (कामगारों की संख्या के संबंध में) उद्यमों की संख्या अर्थव्यवस्था में बहुत है और अनौपचारिक क्षेत्र और गैर-कृ-ीय क्षेत्र के कार्यबल का एक बहुत बड़ा भाग इसमें समायोजित है ।

विवरण-8 : (i) स्वयं स्वामित्व और भागीदारी (पी एंड पी) उद्यमों (ii) सभी उद्यमों में अलग-अलग संलग्न अपने उद्यमों में कामगारों की संख्या के अनुसार गैर-कृ-ि कामगारों का प्रति 1000 विभाजन

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गैर-कृ-ि उद्यमों में कामगारों की संख्या	गैर-कृ-ि कामगार (पीएस+एसएस)					
	पुरू-ा		महिला		व्यक्ति	
	पी एंड पी	सभी	पी एंड पी	सभी	पी एंड पी	सभी
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			ग्रामीण			
6 से कम	787	595	826	676	796	613
6 - 9	73	71	62	64	71	69
10 - 19	41	51	36	41	40	49
20 और उससे ऊपर	44	91	41	64	43	86
अज्ञात	41	83	24	65	37	79
सभी (एन आर सहित)	1000	1000	1000	1000	1000	1000
			शहरी			
6 से कम	749	533	785	576	756	541
6 - 9	88	76	65	70	84	75
10 - 19	54	61	42	61	52	61
20 और उससे ऊपर	51	174	55	137	52	167
अज्ञात	45	105	36	88	43	102
सभी (एन आर सहित)	1000	1000	1000	1000	1000	1000

3.8.2 विवरणी-9 गैर कृ-ीय स्वामित्व वाले उद्यमों में संलग्न कामगारों के लिंग, स्वामियों का लिंग, और उद्यमों के आकार में संबंध ढूंढने का प्रयास करती है । उद्यमों, जिसमें छः या उससे अधिक कामगार लगे हैं; को "बड़ा उद्यम" कहा जाता है को इस विश्ले-ाण के लिए विचारित किया गया है । जब पुरू-ा कामगार महिला स्वामित्व वाले उद्यमों में लगे हैं, सापेक्ष रूप से कामगारों का उच्चतर प्रतिशत "बड़े उद्यमों" में नियोजित हैं । ग्रामीण क्षेत्रों में महिला स्वामित्व वाले "बड़े उद्यमों" में संलग्न पुरू-ा कामगारों का अनुपात 29% था और तदनुरूप महिला कामगारों का अनुपात जब वे पुरू-ा स्वामित्व वाले उद्यमों में संलग्न थीं 21% था । इसके विपरीत, पुरू-ा स्वामित्व वाले उद्यमों में संलग्न पुरू-ों का अनुपात 14% था और महिला स्वामित्व वाले उद्यमों में संलग्न महिलाओं का अनुपात 3%

था । शहरी क्षेत्रों में, महिला स्वामित्व वाले उद्यमों के लिए केवल 3%, 6 या इससे अधिक कामगारों सहित महिला कामगारों वाले उद्यमों में संलग्न था, जबकि यह अनुपात लगभग 23% था जब महिलाएं पुरू-ा स्वामित्व वाले उद्यमों में संलग्न थीं ।

विवरण-9: प्रत्येक लिंग और उद्यम प्रकार के लिए प्रति 1000 कामगारों पर 6 या उससे अधिक कामगारों वाले गैर-कृ-ाीय उद्यमों में नियोजित कामगारों की संख्या

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उद्यम प्रकार	कामगार			
	ग्रामीण		शहरी	
	पुरू-ा	महिला	पुरू-ा	महिला
(1)	(2)	(3)	(4)	(5)
पुरू-ा स्वामित्व	144	210	172	227
महिला स्वामित्व	288	29	192	35

3.9 उद्यम सर्वेक्षण और परिवार सर्वेक्षण उपागम के माध्यम से प्राप्त अनौप-चारिक क्षेत्र में कामगारों की संख्या की तुलना

3.9.1 55वें दौर के उद्यम सर्वेक्षण ने खनन और खदान, विद्युत, गैस और जल आपूर्ति में संलग्न उद्यमों को छोड़कर अर्थव्यवस्था के गैर-कृ-ाि क्षेत्र में सभी अनौपचारिक उद्यमों को कवर किया है । सभी अनिगमित उद्यमों जो या तो स्वामित्व या भागीदारी आधार पर चलते हैं को अनौपचारिक क्षेत्र के गठन हेतु माना गया था । समस्त भारत में कुल 197637 गैर-कृ-ाि उद्यमों का सर्वेक्षण किया गया था । समस्त भारत स्तर पर गैर-कृ-ाि उद्यमों की सख्या 444.1 लाख अनुमानित थी । जिनमें से 250.7 लाख (अर्थात् 56%) उद्यम ग्रामीण क्षेत्रों में और 193.4 लाख शहरी क्षेत्रों में स्थित थे । इन उद्यमों में, 388 लाख ओ ए ई (87%) और 56.1 लाख प्रति-ठान (13%) थे ।

विवरण-10:अनुसूची 10 और अनुसूची 2.0 से प्राप्त अनौपचारिक क्षेत्र में कामगारों की अनुमानित संख्या

समस्त भारत

क्षेत्र	कामगारों की अनुमानित संख्या (000)		
	अनुसूची 2.0	अनुसूची 10	
		पीएस	पीएस+एसएस
(1)	(2)	(3)	(4)
ग्रामीण	39808	44121	46688
शहरी	39975	45521	47168
संयुक्त	79783	89643	93856

3.9.2 कामगारों की अनुमानित संख्या : विवरण 10 अनुसूची 10 और अनुसूची 2.0 से प्राप्तानुसार ग्रामीण और शहरी क्षेत्रों के लिए अलग अलग कामगारों की अनुमानित संख्या दर्शाती है । समस्त भारत स्तर पर, अनुसूची 2.0 से प्राप्त अनौपचारिक क्षेत्र में कामगारों की संख्या 797.8 लाख थी । इनमें, 398.1 लाख (अर्थात् 50%) कामगार उद्यम ग्रामीण क्षेत्र में स्थित थे और 399.7 लाख कामगार शहरी क्षेत्रों में स्थित उद्यमों में थे । इसके विपरीत, अनुसूची 10 से प्राप्त अनौपचारिक क्षेत्र कामगारों की संख्या 938.56 लाख थी ।

विवरण-11:उद्यम सर्वेक्षण और परिवार सर्वेक्षण से प्राप्तानुसार अनौपचारिक क्षेत्र में लगे कामगारों की अनुमानित संख्या

समस्त भारत

गणना श्रेणी	कामगारों की अनुमानित संख्या (000)								
	ग्रामीण			शहरी			संयुक्त		
	अनु.2.0	अनुसूची 10		अनु.2.0	अनुसूची 10		अनु.2.0	अनुसूची 10	
		पीएस	पीएस+ एसएस		पीएस	पीएस+ एसएस		पीएस	पीएस+ एसएस
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
डी	17692	15667	17379	11969	12362	13086	29661	28029	30465
एफ	1522	6275	6352	1148	4601	4635	2669	10876	10987
जी	11995	11142	11489	16408	16323	16755	28403	27466	28244
एच	1661	1440	1485	2630	2032	2081	4291	3472	3566
आई	2527	4194	4241	2700	4396	4436	5226	8591	8677
जे	66	111	112	266	301	309	333	412	421
के	313	370	377	1215	1345	1391	1528	1715	1767
एम	587	685	786	1152	1102	1291	1739	1787	2077
एन	536	396	408	667	604	620	1203	1000	1029
ओ	2909	3841	4059	1820	2455	2564	4729	6295	6623
समस्त गतिविधियां	**39808**	**44121**	**46688**	**39975**	**45521**	**47168**	**79783**	**89643**	**93856**

3.9.3 अनौपचारिक गैर-कृषि उद्यम सर्वेक्षण में कवर की गयी गणना श्रेणी के तदनुरूप उद्यम सर्वेक्षण (अनुसूची 2.0) और परिवार सर्वेक्षण (अनुसूची 10) से प्राप्त अनौपचारिक क्षेत्र में कामगारों की अनुमानित संख्या विवरणी 11 में दी गयी है । विवरणी-11 से यह दर्शित होता है कि अनुसूची 10 से कामगारों की अनुमानित संख्या ग्रामीण और शहरी क्षेत्र दोनों में अनुसूची 2.0 से अनुमानित संख्या से अधिक है । अनुसूची 10 से कामगारों (पीएस) की कुल संख्या अनुसूची

2.0 के कामगारों की संख्या से लगभग 12% अधिक होना पायी गयी है । भिन्नता का विस्तार ग्रामीण और शहरी दोनों क्षेत्रों में लगभग समान है । यह देखा जा सकता है कि गणना श्रेणी डी (विनिर्माण), जी(व्यापार), एच(होटल और रेस्तरां), और एन (स्वास्थ्य और सामाजिक कार्य) हेतु अनुसूची 2.0 में कामगारों की अनुमानित संख्या अनुसूची 10 से प्राप्त संबंधित अनुमानों की तुलना में अधिक है । कामगारों की अनुमानित संख्या गणना श्रेणी एम(शिक्षा)के मामले में समीप है । शे-ा गणना श्रेणियों के मामले में, अनुसूची 10 के अनुमान अनुसूची 2.0 के अनुमानों से उच्चतर है । इसके अलावा, गणना श्रेणी एफ(निर्माण) और आई(परिवहन, भण्डारण और संचार) के मामले में अनुमानों के दो सेटों में भिन्नता वृहत्त है । निर्माण और परिवहन से संबंधित उद्यम को संभवत उद्यम सर्वेक्षण उपागम के माध्यम से पकड़ना मुश्किल है । उदाहरणार्थ, एक राजमिस्त्री जो विभिन्न स्थानों(स्व-नियोजित) पर कार्य करता है को उद्यम सर्वेक्षण में एक उद्यम के रूप में माना गया है । लेकिन उसके साथ लगे श्रमिकों को उद्यम सर्वेक्षण उपागम में कामगारों के रूप में नहीं रखा जाएगा यदि उन्हें राज-मिस्त्री द्वारा किराये पर न रखा गया हो । उसी प्रकार, पल्लेदार/भारिक को उद्यम सर्वेक्षण उपागम में नहीं रखा जा सकता यदि उन्हें परिवहन उद्यमों द्वारा नियमित आधार पर किराये पर न लिया गया हो ।

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