

## APPENDIX-III

**Sample Design of NSS 56<sup>th</sup> Round****General**

56<sup>th</sup> round of NSS (July 2000 to June 2001) has been earmarked for conducting mainly the survey on Unorganized Manufacturing Enterprises. In addition to the main subject, data on household consumer expenditure and some employment- unemployment characteristics will also be collected in a thin sample of households as per the usual practice.

**Sample Design**

1. A stratified two-stage sample design with villages (Panchayat wards in case of Kerala) / UFS blocks as the first stage units (FSUs) and manufacturing enterprises in the unorganised sector (OAME/ NDME / DMEs) as the ultimate stage units (USUs) has been adopted. For consumer expenditure and employment-unemployment survey, households are the USUs as usual.

2. *Sampling Frame:* EC '98 with enterprise/ establishment level data is taken as the frame for the survey for the whole of India except Orissa (EC '98 work not completed) & 66 towns of Karnataka (EC-98 work not done using UFS blocks). For Orissa, Population Census 1991 is taken as frame. Sampling frame for 66 towns of Karnataka and all towns of Orissa is the UFS blocks. Similar frame is to be taken for the States for which EC '98 cannot be used.

3. *Stratification:*

*Rural:* Each district will be treated as a stratum for all States/UTs. In all States/UTs except Orissa, each district will be divided into three sub-strata as under:

- sub-stratum 1: FSUs with no unorganized manufacturing enterprises
- sub-stratum 2: FSUs with at least one DME in the unorganized sector
- sub-stratum 3: remaining FSUs

Sub-stratum 1 with less than 20 FSUs is to be merged with sub-stratum 3 and vice versa. Sub-stratum 2 with less than 8 FSU will be merged with sub-stratum 3.

As EC-98 work is not complete for Orissa the principle of stratification in this state is based on Population Census 1991. In this case, each district will be a stratum but there will be two sub-strata within each district:

- sub-stratum 1: All FSUs with population between 0 to 50 as per Census 1991.
- sub-stratum 2: The remaining FSUs.

Formation of a sub-stratum may be considered only if there are at least 20 FSUs in that sub-stratum; otherwise there will not be any sub-stratification. However, all FSUs in this case will be identified with sub-stratum 2 for processing work.

*Urban:* Strata will be formed within each NSS region of a State/UT. The towns within an NSS region is stratified according to the population of the towns as per 1991 population Census as given below ( P stands for population of '91 census ):

- i) Stratum 1: all towns with  $P \leq 50000$
- ii) Stratum 2: all towns with  $50000 < P \leq 100000$
- iii) Stratum 3: all towns with  $100000 < P \leq 500000$
- iv) Stratum 4: all towns with  $500000 < P \leq 1000000$
- v) Stratum 5/ 6/ 7: Each town with  $P > 1000000$

Within each stratum ( except for Orissa and part of Karnataka ) three sub-strata will be formed as under:

- sub-stratum 1: FSUs with no unorganized manufacturing enterprises
- sub-stratum 2: FSUs with at least one DME in the unorganized sector
- sub-stratum 3: remaining FSUs .

Sub-stratum1 with less than 20 FSUs is to be merged with sub-stratum 3 and vice versa. Sub-stratum 2 with less than 8 FSUs will be merged with sub-stratum 3.

For Karnataka, there are 66 towns where UFS blocks were not used for EC-98 work. The stratification procedure is therefore modified for the urban sector of Karnataka in the following manner:

All the towns of the State will first be grouped into NSS region  $\times$  town classes as per the criteria given above. Then within each region  $\times$  town class, two strata will be formed. The towns included in the list of 66 special category towns will form a **special stratum** within a region  $\times$  town class. The rest of the towns within the region  $\times$  town class will form a **general stratum**.

Sub-stratification for **general strata** of Karnataka will be same as in the case of other States/UTs. For **special strata** of Karnataka and all the strata of Orissa, three sub-strata will be formed as follows:

- sub-stratum 1: all FSUs ( i.e. UFS blocks as per the latest UFS ) identified as Industrial Area ( IA).
- sub-stratum 2: all FSUs identified as Bazar Area ( BA).
- sub-stratum 3: the remaining FSUs

If an FSU has been identified as mixed area type e.g. IA and BA, BA and RA, etc. priority order for inclusion in sub-strata will be IA and then BA e.g. an FSU identified as both IA and BA will belong to sub-stratum 1. If there are less than 20 FSUs in a sub-stratum, it will be merged with other sub-stratum. Sub-stratum1 will be merged with sub-stratum 2 and sub-stratum 2 will be merged with sub-stratum 3 in such cases.

4. *Sample Size:* State/UT level sample size is decided on the basis of its investigator strength. Considering that 818 investigators are in position with FOD and that the State Statistical agencies of Arunachal Pradesh, Manipur, Mizoram and Tripura are able to survey about 840 FSUs of central sample, the total sample size for Central Sample is fixed at 15032. Total State sample size is fixed at 17096 taking care of prevalent matching pattern for almost all states. Table T<sub>0</sub> gives the Statewise details of the allocations of sample size by State/UT.

5. *Allocation between rural and urban sectors:* The allocation of FSUs between rural and urban sectors is made in proportion to the number of workers engaged in unorganized non-agricultural enterprises as per EC '98 (Census '91 for Orissa) with 1.5 weightage to Urban sector.

6. *Allocation among strata/sub-strata:* Allocations to strata/sub-strata in both rural and urban sectors (except for urban sector of Orissa and special urban strata in Karnataka) will be made in proportion to the number of non-agricultural workers in the unorganized sector as per EC '98.

For Orissa rural, allocation has been made to strata/sub-strata in proportion to non-agricultural workers as per population Census '91. For urban strata of Orissa, allocation will be made in proportion to the number of FSUs in the strata. Allocations to sub-strata within the stratum will then be done in proportion to number of FSUs in the sub-strata with weights 2, 2 and 1 for sub-stratum 1, 2 & 3 respectively.

For the special urban strata of Karnataka, stratum allocations will be made in proportion to number of non-agricultural workers as per EC '98. But sub-stratum allocations will be made in the same manner as for urban sub-strata of Orissa.

Allocation to any stratum/sub-stratum will be adjusted to a multiple of 2 FSUs. ( If the proportional allocation turns out to be less than three, it will be adjusted to 2. If the allocation is greater than or equal to 3 but less than 5, it will be adjusted to 4 and so on.)

While allocating FSUs to stratum/sub-stratum it is ensured that each (stratum x sub-stratum × sub-sample) is represented.

7. *Selection of FSUs:* For sub-stratum 1 in rural/urban sector of each State/UT, all urban sub-strata of Orissa and all *special* strata/sub-strata relating to 66 towns of Karnataka, FSUs will be selected with equal probability and without replacement. For all other sub-strata in both rural and urban sectors, FSUs will be selected circular systematically with PPS, size being the number of manufacturing workers in the unorganized sector as per EC '98. (For Orissa rural, size in this case will be manufacturing workers as per census '91. If an FSU has no manufacturing worker, size 1 will be assigned to that FSU before drawing samples). However, some manufacturing enterprises may have large number of workers as per EC '98 frame even though they are in the unorganized sector. Some adjustment to the size of workers for such enterprises will be made before calculating the size of FSUs. For this purpose, any unorganized manufacturing enterprise having more than 200 workers will be deemed to have a size equal to 200. Enterprise sizes will thereafter be added up to get the FSU size and sub-stratum / stratum size.

Samples will be drawn in the form of two independent sub-samples separately for rural and urban sectors. For uniform spread of field work over the survey period all the samples of a state for central and state separately will be arranged first by stratum and then each stratum by sub-stratum and each sub-stratum by sub-sample and then sub-round number will be assigned against sample FSUs in the sequence 1, 2, 3, 4.

Central sample and state sample will be selected independently. However, it may be ensured that the two sets of samples do not become identical.

**8. For any State/UT for which EC '98 frame is not available or usable, sample design will be same as that adopted for Orissa.**

**Table T<sub>0</sub> : Allocation of sample size by State/UT**

Srl. no	State	Central sample	State sample
1	Andhra Pradesh	992	992
2	Arunachal Pradesh	176	176
3	Assam	488	488
4	Bihar	1192	1192
5	Gujarat	664	664
6	Goa	56	48
7	Haryana	288	288
8	Himachal Pradesh	312	312
9	J & K	544	1088
10	Karnataka	576	576
11	Kerala	544	544
12	Madhya Pradesh	992	992
13	Maharashtra	1312	2296*
14	Manipur	192	384
15	Meghalaya	144	144
16	Mizoram	184	184
17	Nagaland	192	384*
18	Orissa	512	512
19	Punjab	560	560
20	Rajasthan	696	696
21	Sikkim	144	144
22	Tamil Nadu	1056	1056
23	Tripura	288	288
24	Uttar Pradesh	1640	1640
25	West Bengal	952	952
26	A & N	88	-
27	Chandigarh	24	24
28	Dadra & N.Haveli	24	-
29	Daman & Diu	16	16
30	Delhi	144	432
31	Lakshadweep	16	-
32	Pondicherry	24	24
	<b>All-India</b>	<b>15032</b>	<b>17096</b>

\* subject to change depending on adjustments in the rural /urban allocations in the central sample.