

Preparation of Survey Instruments

(Indian experience)

In the context of preparation of survey instruments, preparation of Sample frame and selection of samples from the frame are very crucial. NSSO (National Sample Survey Organisation) mainly conducts household/enterprise level sample surveys. Hence for obtaining an estimate at the national level for India the entire country is broadly divided into two categories, rural and urban. Rural area comprises of villages and Urban area comprises of towns and cities. Rural frame is prepared from the details of the villages listed in the Census, which is conducted in India after every 10 years. Latest available census data is census 2001. For the urban area, a separate survey is conducted by NSSO called Urban Frame Survey (UFS), which is conducted for every town and city. In UFS some basic information is collected in the form of blocks which consists nearly 100 households. Normally a town is divided into a number of IV units (investigator units), which are further divided into a no. of blocks. This distribution of towns and cities into smaller blocks is very important for managing the workload of the survey in the urban areas. In the rural area, the entire village is taken as a single unit. Different steps of sample selection:

A. Methodology:

In NSSO, normally a two-stage stratified sampling procedure is followed for each survey, where the first stage unit (FSU) is village in rural area and UFS block in the urban area. The second stage unit is a household or an enterprise as per the survey requirements.

B. Strata formation:

- a. Entire India is divided into different States/UTs (provinces). States are further divided into districts.
- b. Districts are divided into two sectors, rural and urban areas. Rural area comprises of all the villages of a district and urban area comprises of all the towns and cities.
- c. Within a district, all the villages put together form a rural stratum and all the towns form an urban stratum. However, the cities having 1 million or more population form separate urban stratum.
- d. The allocation of samples in a particular round is provided stratum wise, which is further broken into sub-stratum wise allocation and sample selection.

C. Sub-stratum formation and sample selection:

- a. Normally NSS surveys conducted in different rounds span over one full year. The entire time period of 12 months is further divided into 4 survey periods consisting of three months each called sub-rounds. Hence if the sample size allotted in a stratum is 'r' then no. of sub-strata formed is 'r/4'.
- b. In the rural area, the sample design followed is Probability proportional to size with replacement (PPSWR). Hence to meet the requirements of PPSWR, all the villages within a district are arranged in ascending order of population. Then 'r/4' sub-strata are formed in such a way that each of the sub-strata consists of more or less equal population.
- c. In the urban area, the sample design followed is Simple random sampling without replacement (SRSWOR). All the towns are initially arranged in ascending order of total no. of households. In each town IV units and blocks arranged in ascending order of their numbers. From this arranged frame of UFS blocks of a stratum 'u/4' number of sub-strata are formed where 'u' is the no. of samples allotted to that stratum. Sub-strata are formed in such a way that each sub-stratum comprises of more or less equal number of households.
- d. For both rural and urban sector samples are drawn in the form of 2 independent sub-samples. After selection of the allotted no. of samples the same are evenly distributed among 4 sub-rounds. The samples selected for a sub-round are supposed to be canvassed within the time period of the sub-round.
