

Socio-Economic (SE) Household Surveys

(Indian Experience)

Socio-Economic (SE) Surveys:

The Socio-Economic (SE) Surveys conducted by National Sample Survey Organisation (Office) or, NSSO are serialized in the form of “rounds” - each “round” being normally of one-year duration. The subject coverage of SE inquiries for different rounds is decided on the basis of a ten(10) year time frame. In this cycle, one(1) year is devoted to land and live stock holdings, debt and Investment; one(1) year to social consumption (education and health care, etc.), two(2) years to quinquennial surveys on household consumer expenditure, employment & un-employment situation and four(4) years to non- agricultural enterprises, namely, manufacturing, trade and services in un-organised sector. The remaining two(2) years are for open rounds on subjects of current/special interest on the basis of demands of Central Ministries, State Governments and research organizations etc.

The NSSO has four functional divisions:

- (i) Survey Design and Research Division
- (ii) Field Operations Division
- (iii) Data Processing Division and
- (iv) Coordination and Publication Division.

Field Operations Division (FOD) has its headquarters at New Delhi and has got its offices all over India with six Zonal Offices at Lucknow, Bangalore, Calcutta, Jaipur, Nagpur and Guwahati, 49 Regional Offices and 116 sub-regional offices. FOD is responsible for collection of data through large-scale sample surveys. It carries out the work through its Zonal/Regional/ Sub-regional offices scattered all over the country. Besides collecting data for socio-economic surveys, FOD also collects data pertaining to various other surveys for CSO/NSSO.

Among survey activities of FOD, Data collection for socio-economic surveys is the major one. Most of such data collection is based on household surveys. **This note briefly elaborates various aspects of Data Collection in NSS Household Surveys.**

Since its inception in 1950, NSS has been continuing multi-subject integrated socio-economic surveys in the form of successive rounds on countrywide basis. These surveys are conducted using two stage stratified sample design with villages in rural sector and Urban Frame Survey (UFS) blocks in the urban sector being first stage units and Households within the selected first stage unit as the second stage units. These surveys cover various aspects of socio-economic characteristics and provide basic data base to planners and policy makers.

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The sample size for these surveys is about 12,000 to 14,000 first stage units (Villages/UFS blocks) in the central sample. The States are also participate in NSS survey programme by canvassing at least on equal matching sample basis following the same schedules/instructions etc.

Sample Design of Household Surveys:

(Specific to household consumer expenditure and employment and unemployment)

Outline of sample design: A stratified multi-stage design is being adopted for Household surveys. The first stage units (FSU) are the Indian Census Villages in the rural sector and Urban Frame Survey (UFS) Blocks in the urban sector. The ultimate stage units (USU) are the households in both the sectors. In case of large FSUs, one intermediate stage of sampling is being carried out, viz., selection of two hamlet-groups (hgs)/ sub-blocks (sbs) from each rural/ urban FSU.

Sampling Frame for First Stage Units: *For the rural sector*, the list of 2001 census villages constitutes the sampling frame. *For the urban sector*, the list of UFS blocks (2007-12) is considered as the sampling frame.

Stratification: Within each District (administrative unit) of a State/ Union Territory, generally speaking, two basic strata are being formed: i) rural stratum comprising of all rural areas of the district and (ii) urban stratum comprising of all the urban areas of the district. However, within the urban areas of a district, if there are one or more towns with population 10 lakhs or more as per population census 2001 in a district, each of them will form a separate basic stratum and the remaining urban areas of the district will be considered as another basic stratum.

(Note: Use of 2001 Census villages have been replaced by 2011 Census villages after availability of 2011 Census results)

Sub-stratification:

Rural sector: If 'r' be the sample size allocated for a rural stratum, the number of sub-strata formed will be 'r/4'. The villages within a district as per frame will be first arranged in ascending order of population. Then sub-strata 1 to 'r/4' will be demarcated in such a way that each sub-stratum will comprise a group of villages of the arranged frame and have more or less equal population.

Urban sector: If 'u' be the sample size for an urban stratum, 'u/4' number of sub-strata will be formed. In case u/4 is more than 1, implying formation of 2 or more sub-strata, this will be done by first arranging the towns in ascending order of total number of households in the town as per UFS phase 2007-12 and then arranging the (Investigator Units) IV units of each town and blocks within each IV Unit in ascending order of their numbers. From this arranged frame of UFS blocks of all the towns/million plus city of a stratum, 'u/4' number of sub-strata will be formed in such a way that each sub-stratum will have more or less equal number of households as per UFS 2007-12.

Allocation of total sample to States and UTs: The total number of sample FSUs is allocated to the States and UTs in proportion to population as per Indian Census 2001/2011 subject to a minimum sample allocation to each State/ UT. While doing so, the resource availability in terms of number of field investigators is being kept in view.

Allocation of State/UT level sample to rural and urban sectors: State/UT level sample size is allocated between two sectors in proportion to population as per *Census figure*

with double weightage to urban sector subject to the restriction that urban sample size for bigger states should not exceed the rural sample size. A minimum of 16 FSUs (minimum 8 each for rural and urban sector separately) will be allocated to each state/ UT.

Allocation to strata/ sub-strata: Within each sector of a State/ UT, the respective sample size is being allocated to the different strata/ sub-strata in proportion to the population as per Census figure. Allocations at stratum level will be adjusted to multiples of 4 with a minimum sample size of 4. Allocation for each sub-stratum will be 4. Equal number of samples will be allocated among the four sub-rounds.

Selection of FSUs:

For the rural sector, from each stratum/ sub-stratum, required number of sample villages is being selected by probability proportional to size with replacement (PPSWR), size being the population of the village as per Census 2001.

For the urban sector, UFS 2007-12 phase is being used for all towns and cities and from each stratum/sub-stratum FSUs are being selected by using Simple Random Sampling without Replacement (SRSWOR).

Both rural and urban samples are to be drawn in the form of two independent sub-samples and equal number of samples will be allocated among the four sub-rounds.

Selection of hamlet-groups/sub-blocks:

Proper identification of the FSU boundaries: The first task of the field investigators is to ascertain the exact boundaries of the sample FSU as per its identification particulars given in the sample list. For urban samples, the

boundaries of each FSU may be identified by referring to the map corresponding to the frame code specified in the sample list.

Criterion for hamlet-group/ sub-block formation: After identification of the boundaries of the FSU, it is to be determined whether listing will be done in the whole sample FSU or not. In case the population of the selected FSU is found to

be 1200 or more, it will be divided into a suitable number (say, D) of ‘hamlet-groups’ in the rural sector and ‘sub-blocks’ in the urban sector by more or less equalising the population as stated below.

approximate present population of the sample FSU	no. of hg’s/sb’s to be formed
less than 1200 (no hamlet-groups/sub-blocks)	1
1200 to 1799	3
1800 to 2399	4
2400 to 2999	5
3000 to 3599	6
.....and so on	

Formation and selection of hamlet-groups/ sub-blocks: In case hamlet-groups/ sub-blocks are to be formed in the sample FSU, the same should be done by more or less equalizing population. Note that while doing so, it is to be ensured that the hamlet-groups/ sub-blocks formed are clearly identifiable in terms of physical landmarks.

Two hamlet-groups (hg)/ sub-blocks (sb) are being selected, in general, from a large FSU wherever hamlet-groups/ sub-blocks have been formed in the following manner – one hg/ sb with maximum percentage share of population will always be selected and termed as hg/ sb 1; one more hg/ sb will be selected from the remaining hg's/ sb's by simple random sampling (SRS) and termed as hg/ sb 2. Listing and selection of the households will be done independently in the two selected hamlet-groups/ sub-blocks. The FSUs without hg/ sb formation will be treated as sample hg/ sb number 1. It is to be noted that if more than one hg/ sb have same maximum percentage share of population, the one among them which is listed first in block 4.2 of schedule 0.0 will be treated as hg/ sb 1.

Listing of households: Having determined the hamlet-groups/ sub-blocks, i.e. area(s) to be considered for listing, the next step is to list all the households (including those found to be temporarily locked after ascertaining the temporariness of locking of households through local enquiry). The hamlet-group/ sub-block with sample hg/ sb number 1 will be considered for listing first, to be followed by the listing of households within the sample hg/sb number 2.

Formation of second stage strata and allocation of households:

(i) *Specific to NSS 68th Round: July 2011-June 2012- Survey on Household Consumer Expenditure and Employment & Unemployment*

SSS	composition of SSS	number of households to be surveyed	
		FSU without hg/sb formation	FSU with hg/sb formation (for each hg/sb)
Rural			
SSS 1:	relatively affluent households	2	1
SSS 2:	of the remaining, households having principal earning from non-agricultural activity	4	2
SSS 3:	other households	2	1
Urban			
SSS 1:	households having MPCE of top 10% of urban population	2	1
SSS 2:	households having MPCE of middle 60% of urban population	4	2
SSS 3:	households having MPCE of bottom 30% of urban population	2	1

(ii) *Specific to NSS 69th Round: July - December 2012- Surveys on Drinking water, Sanitation, Hygiene, Housing conditions and Survey on Slums)*

SSS	composition of SSS	number of households to be surveyed	
		FSU without hg/sb formation	FSU with hg/sb formation (for each hg/sb)
Rural			
SSS 1:	households having pucca dwelling structure	4	2
SSS 2:	households having semi-pucca dwelling structure	4	2
SSS 3:	other households (including those with no structure)	4	2
Urban			
SSS 1:	households having MPCE of top 10% of urban population	2	1
SSS 2:	households having MPCE of middle 60% of urban population	4	2
SSS 3:	households having MPCE of bottom 30% of urban population	6	3

The above table provides the plan of allocation of the sample household in the respective SSS. However, there can be situations in the selected FSUs both in rural and urban sectors where adequate number of households is not available for required allocation. In such situation, the selection of household for the SSS is compensated from the other SSS. This is done by adopting specified procedure. To meet the shortfall of households in one SSS, compensation can be made from other SSSs. The details of the compensation rules are available in the survey manual.

Selection of households for NSS 68th Round: From each SSS the sample households for each of the schedules will be selected by SRSWOR. If a household is selected for more than one schedule, only one schedule will be canvassed in that household in the priority order of Schedule 1.0 (Type 1), Schedule 1.0 (Type 2) and Schedule 10 and in that case the household will be replaced for the other schedule. If a household is selected for Schedule 1.0 (Type 1) it will not be selected for Schedule 1.0 (Type 2) or Schedule 10. Similarly, if a household is not selected for Schedule 1.0 (Type 1) but selected for Schedule 1.0 (Type 2) it will not be selected for Schedule 10.

(Sample schedule / questionnaire of 68th round is attached below at Annexure-I)

Selection of households for NSS 69th Round: From each SSS the sample households for each of the schedules will be selected by SRSWOR. In this NSS Round, there is only one type of household schedule, hence question of replacement dose not arise.

(House/Household listing Block used in NSS 69th Round (July– December 2012) is given at Annexure-II)

List of Households

Listing schedule of most of the NSS surveys is numbered as **Schedule 0.0**, is meant for listing all the houses and households residing in the sample first stage unit (FSU) or sample hamlet-groups/ sub-blocks in case of large FSUs. Some household information like household size, relative affluence, if principal earning is from non-agricultural activity, household MPCE etc. are also being collected in this schedule. These auxiliary information are used for grouping the households into different second-stage-strata (SSS). The sampling frames for selection of households are prepared and details of the selection of sample households are also recorded in this schedule. Whenever hamlet-groups/ sub-blocks (hg's/sb's) are required to be formed, particulars relating to the formation and selection of hg's/ sb's are also to be recorded in this schedule.

Structure of the schedule 0.0: The schedule 0.0 of NSS 68th Round contains the following blocks:

- Block 0: Descriptive identification of sample FSU
- Block 1: Identification of sample FSU
- Block 2: Particulars of field operations
- Block 3: Sketch map of hamlet-group (hg)/ sub-block (sb) formation
- Block 4.1: List of hamlets (only for rural samples with hg formation)
- Block 4.2: List and selection of hamlet-groups (hg's)/ sub-blocks (sb's)
- Block 5: List of households and record of selection for households (hg/ sb 1/ 2)
- Block 5.1: Working sheet for identifying relatively affluent households (hg 1 / 2) (rural only)
- Block 6: Particulars of sampling of households
- Block 7: Village facilities for Rural samples only
- Block 8: Remarks by Field Investigators
- Block 9: Comments by supervisory officers

Specimen copy of House/Household listing schedule meant for NSS 68th Round (*Survey on Household Consumer Expenditure and Employment & Unemployment*) and the relevant block of NSS 69th Round (*Surveys on Drinking water, Sanitation, Hygiene, Housing conditions and Survey on Slums*) are given at the end of this note.

Quality Management of data collection:

Measures like Supervision, Inspection, Scrutiny and Feed-back minimized the non-sampling error.

In the context of the emphasis that is being laid in effecting improvement in the quality of survey data, the role of supervision in terms of inspection, scrutiny and feedback does not need any special emphasis. Supervision in totality provides adequate opportunities to the supervisory

officers to have a feel of the survey data and exposure to various operational problems faced by the field personnel. From the point of view the supervisory officials/officers are inspected to get actively involved and undertake more and more field inspections, scrutiny of filled-in schedules and issue timely feedbacks.

Before going into the details about 'Supervision' in the context of field work of any particular survey, the basic principle, concepts and the relationship between the primary worker and supervisory officer needs emphasis.

The basic questions are: what makes some people work while others do as little as possible? how can a supervisor influence the performance of people who work under him?

Knowledge of motivation at work will make a supervisor to understand and answer the above questions. There are no definite rules through which subordinates and colleagues can be motivated. However, the following general guidelines which have proved successful in modifying internal motivation by outside influence can be listed as under:

- (i) **Belief in oneself and in other people**
- (ii) **Setting a good example**
- (iii) **Placements of employees in proper jobs**
- (iv) **Stress on participation**
- (v) **Keeping employees informed**
- (vi) **Recognising achievements of subordinates**
- (vii) **Employing fear judiciously**

In order to maintain effective control of survey operations and give guidance to the workers in any organisation, the role of effective supervision cannot be over emphasised. Supervision is different from inspection. Supervision in the real sense would mean the process of passing on superior experiences of senior officers to the Junior level staff. Inspection would mean the process of careful and critical examination of existing situation obviously with a view to bring the effective improvements. It must be remembered that the main object of inspections is to locate the deficiencies noticed in the process of data collection, and to take adequate and necessary steps to correct them. Inspections are intended to assess the quality of data collected and the knowledge and understanding of the instructions by the primary worker engaged in the data collection and application of knowledge in the actual collection of data.

Feed-back

In case of individuals, feedback is essential as an act of introspection, in organization it is an act towards perfection. Feed-back has to be a two way communication and all should have an open mind for effecting improvements. The supervisory and managerial personnel have to undertake the dual functions. They have to collect feeding material and

supply it to various primary functionaries. In the organisation like NSSO which is engaged in large scale sample surveys where all steps are being taken to minimise the non-sampling errors to the maximum extent, for better quality in data collected, the feedback system acquires great importance.

Scrutiny of filled in schedules: Proper scrutiny of filled in schedules is one of the important measure to reduce non-sampling error. Scrutiny operations carried out at different levels and scrutiny notes prepared there from, if analysed and documented can produce a very good feedback material. The system of issuing consolidated scrutiny bulletins showing the common mistakes and mistakes of special nature on different blocks of different schedules would be highly beneficial and thus improves the quality of data. Monthly meetings in SRO's/RO's serve a very good platform for sharing experiences and these may be effectively utilised for feedbacks.

Annexure-I

RURAL	*
URBAN	

GOVERNMENT OF INDIA

NATIONAL SAMPLE SURVEY OFFICE

SOCIO-ECONOMIC SURVEY

SIXTY-EIGHTH ROUND: JULY 2011 – JUNE 2012

SCHEDULE 0.0: LIST OF HOUSEHOLDS

CENTRAL	*
STATE	

[0] descriptive identification of sample FSU	
1. state/u.t.:	4. village name:
2. district:	5. ward/investigator unit:
3. tehsil/town*:	6. block:

[1] identification of sample FSU							
item no.	Item	code		item no.	item	code	
1.	serial number of sample village/block			11.	sub-sample		
				12.	FOD sub-region		
2.	round number	6	8	13.	frame code		
3.	schedule number	0	0	14.	frame population / households @		
4.	sample (central-1, state-2)			15.	approx. present population		
5.	sector (rural-1, urban-2)			16.	total number of hg's/sb's formed (D)		
6.	NSS region						
7.	District			17.	survey code		
8.	stratum			18.	reason code for substitution of original sample (for codes 4 – 7 in item 17)		
9.	sub-stratum						
10.	sub-round						

[2] particulars of field operations													
srl. no.	Item	investigator/ asst. superintending officer						supervisory officer					
(1)	(2)	(3)						(4)					
1.	(i) name (block letters)												
	(ii) code												
2.	date(s) of:	DD		MM		YY		DD		MM		YY	
	(i) commencement of survey/ inspection												
	(ii) completion of survey / inspection												
	(ii) receipt												
	(iii) scrutiny												
	(iv) despatch												
3.	number of additional sheet(s) attached												
4.	total time taken to canvass the schedule (in hours) [no decimal point]												
5.	whether schedule contains remarks (yes-1, no-2)	(i) in block 8/ 9											
		(ii) elsewhere in the schedule											
6.	Signature												

[8] remarks by Field investigator

[9] comments by supervisory officer

[3] sketch map of hamlet-group (hg)/sub-block (sb) formation



[4.1] list of hamlets (only for rural samples with hg formation)			[4.2] list and selection of hamlet-groups (hg's)/ sub-blocks (sb's)				
			D =				
serial number	name of hamlet	% of population	serial no. of hg/ sb	serial no. of hamlets in the hg (rural only)	% of population in the hg/ sb	sampling serial number of the hg/ sb *	sample hg/ sb number #
(1)	(2)	(3)	(1)	(2)	(3)	(4)	(5)
total		100	total		100		

* '0' for hg/ sb having maximum percentage share of population
 # '1' for hg/sb with '0' in col (4)

[7] distance of the village to the nearest facility, availability of some amenities and participation in MGNREG work (for inhabited villages only)					
srl. no.	Item	distance (in code)	srl. no.	item	distance (in code)
(1)	(2)	(3)	(1)	(2)	(3)
distance to the nearest facility (code): for items 1 – 23 and 24(b)					
1.	gram panchayat headquarters		16.	post office	
2.	bus stop		17.	fair price shop	
3.	boat jetty		18.	cooperative credit society	
4.	metalled road		19.	commercial bank	
5.	school having primary level classes		20.	PCO	
6.	school having secondary level classes		21.	veterinary hospital/ dispensary	
7.	higher secondary school/ junior college		22.	fertilizer/ pesticide shop	
8.	health sub-centre/ dispensary		23.	agricultural produce market / rural primary market	
			availability of amenities (code): for items 24 – 26		
9.	primary health centre		24.	drinking water (code)	(a) major source
10.	community health centre				(b) distance
11.	government hospital		25.	type of drainage arrangement (code)	
12.	AYUSH Unit		26.	electricity connection (code)	
13.	private clinic/ doctor		participation in MGNREG work		
14.	medicine shop		27.	whether the villagers participated in MGNREG programme during last 365 days (yes – 1, no – 2)	
15.	anganwadi centre (ICDS)				
28. informant code					

CODES FOR BLOCK 7

items 1 to 23 and 24 (b): **distance (in code):** within village – 1; outside village: less than 5 kms – 2, 5 kms or more – 3

item 24 (a): **major source of drinking water:** bottled water – 01, tap – 02, tube well / hand pump – 03, well: protected – 04, unprotected – 05; tank / pond (reserved for drinking) – 06, other tank / pond – 07, river/ canal/ lake – 08, spring – 10, harvested rainwater – 11, others – 19

item 25: **type of drainage arrangement:** underground – 1, covered pucca – 2, open pucca – 3, open katcha – 4, no drainage – 5

item 26: **electricity connection:** yes: (percentage of households connected) $P < 25\%$ – 1, $25\% \leq P < 50\%$ – 2, $P \geq 50\%$ – 3; no – 4

item 28: **informant code:** sarpanch (male) – 1, sarpanch (female) – 2, other panchayat member – 3, patwari/ gram sevak – 4, teacher – 5, health personnel – 6, others – 9

[6] particulars of sampling of households

Schedule	hg/sb number *	population	second stage stratum (SSS)	number of households listed (H)	number of households				casualty [col.6-col.9]	number of households replaced	
					selected (h)	surveyed		total [col.7+col.8]			
						originally selected	substituted				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1.0 (type 1)	1		1								
			2								
			3								
			all								
	2			1							
				2							
				3							
				all							
1.0 (type 2)	1		1								
			2								
			3								
			all								
	2			1							
				2							
				3							
				all							
10	1		1								
			2								
			3								
			all								
	2			1							
				2							
				3							
				all							

* If no hg/sb is formed, entries may be made against hg/sb number 1

[5.1] working sheet for identifying relatively affluent households (hg 1/2)* (rural only)

serial number	household serial number @	name of head of household	does the household own ? (yes –1, no – 2)				cultivable land owned (0.0 ha) (if ≥ 7 ha)	irrigated land owned (0.0 ha) (if ≥ 3.5 ha)	number of heads of cattle, buffaloes and camels (if ≥10)
			motor car, jeep, tractor, combine-harvester, truck, bus etc.	refrigerator/washing machine	spacious pucca house in good condition	any member doctor/ advocate/ high salaried job/ large business, etc.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
local knowledgeable person (code): (codes: sarpanch (male) – 1, sarpanch (female) – 2, other panchayat member – 3, patwari/gram sevak – 4, teacher – 5, health personnel – 6, others – 9)									

* strike out which is not applicable

@ encircle serial numbers of top 10 relatively affluent households

[5] list of households and record of selection for households (hg/sb 1 / 2)*																					
house number	household serial number	name of head of household	household size	rural only			urban only			sample household number											
				relatively affluent household (yes - 1, no - 2)	principal earning from non-agri activity (yes - 1, no - 2)	average monthly total consumer expenditure for the entire household (Rs.)	MPCE (Rs) (col. 7 ÷ col. 4)	MPCE (code)	sampling serial number@			Schedule 1.0 (Type 1)			Schedule 1.0 (Type 2)			Schedule 10			
									SSS			SSS			SSS			SSS			
									1	2	3	1	2	3	1	2	3	1	2	3	
H=	H=	H=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=	h=		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	

cum. total

@

col. (9): **MPCE code:** MPCE > B → 1, A ≤ MPCE ≤ B → 2, MPCE < A → 3

* strike out which is not applicable

rural			urban		
col. 5	col. 6	SSS	col. 9	SSS	SSS
1	1 / 2	→ 1	1	→ 1	→ 1
2	1	→ 2	2	→ 2	→ 2
2	2	→ 3	3	→ 3	→ 3

House/Household listing Block used in NSS 69th Round (July – December 2012) is given below.

[5] list of households and record of selection for households (hg/sb 1 / 2)*													
house number	household serial number	name of head of household	household size	structure type code (rural)	urban			schedule 1.2					
					average monthly total consumer expenditure for the entire household (₹)	MPCE (₹) (col. 6 ÷ col. 4)	MPCE code	SSS					
								sampling serial number			sample household number		
								code 1 in col. 5 (R) or in col. 8 (U)	code 2 in col. 5 (R) or in col. 8 (U)	code 3 in col. 5 (R) or in col. 8 (U)	1	2	3
								1	2	3	h=	h=	h=
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

page total

cum. total

CODES FOR BLOCK 5

col.(5): **structure type code** (only for rural samples): pucca – 1, semi pucca – 2, others (including those with no structure) – 3

col.(8): **MPCE code** (only for urban samples): $MPCE > B \rightarrow 1$, $A \leq MPCE \leq B \rightarrow 2$, $MPCE < A \rightarrow 3$