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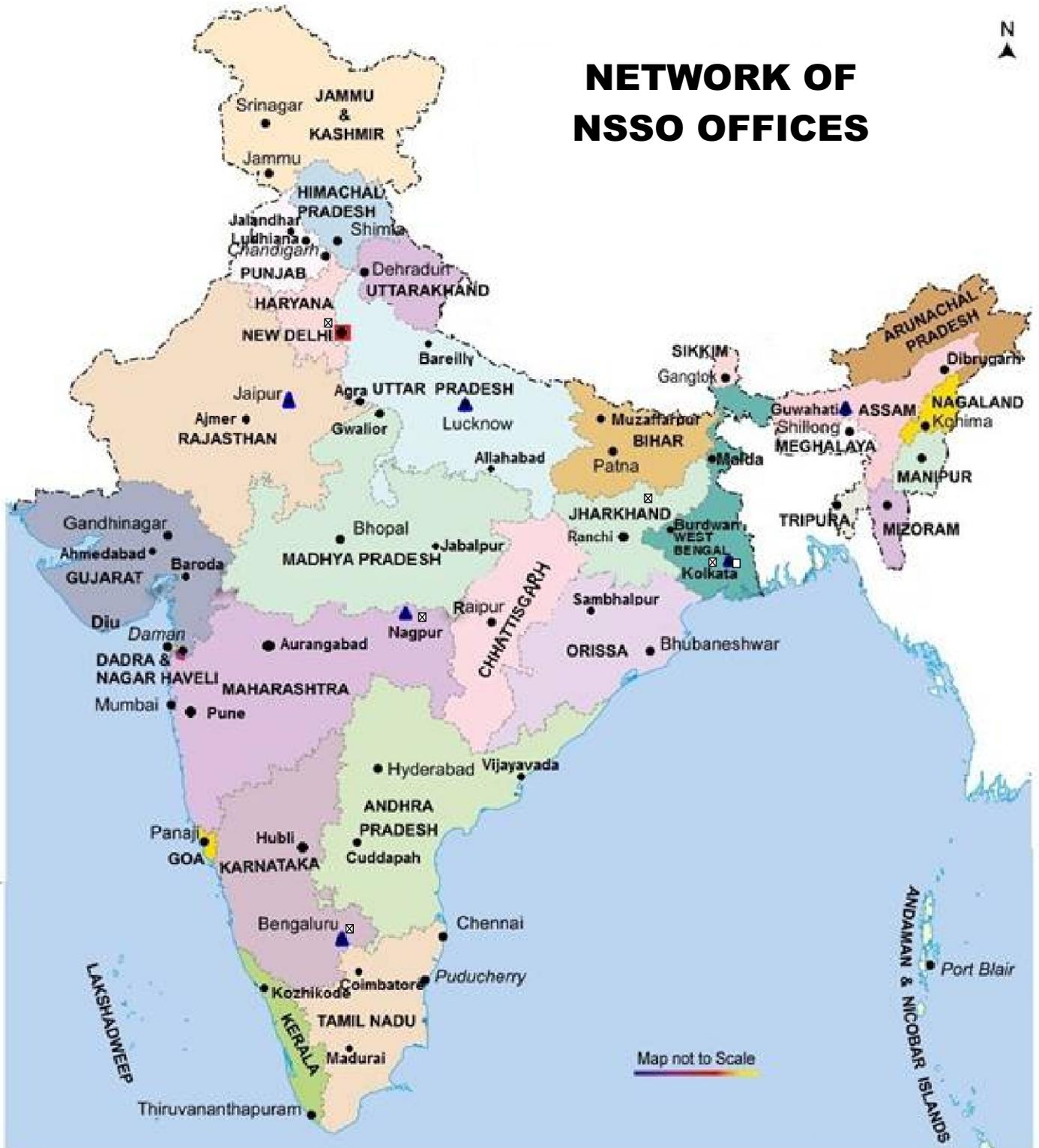
# सर्वेक्षण SARVEKSHANA

96<sup>th</sup> Issue  
Vol XXIX No. 3 & 4

*Journal of  
National Sample Survey Office*

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

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# SARVEKSHANA

**96th Issue  
Vol. XXIX No. 3 & 4  
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National Sample Survey Office**



सत्यमेव जयते

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Government of India  
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**Part-I**

**TECHNICAL PAPERS**

## **Half-year Survey on Morbidity and Health Care: Estimates and Implications**

Ankush Agrawal

### **Abstract**

This study examines how far the estimates from surveys based on varying periods are comparable and what would be nature of bias, if any, in estimates from short duration surveys particularly when the items of enquiry are subject to seasonality. The above issues are illustrated using information from two recent rounds of the survey on 'Morbidity and Health Care' conducted by the National Sample Survey Office (NSSO) of India. The study makes a case that the period for the surveys on such important aspects as morbidity and health care should be full-year.

JEL Codes: C81, C83, I10

Key words: morbidity, NSSO, survey data

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## Half-year Survey on Morbidity and Health Care: Estimates and Implications

### 1. Introduction

The National Sample Survey Office (NSSO) of India regularly conducts nationwide sample surveys on various socio-economic themes such as consumer expenditure, education, employment and unemployment, and morbidity and health care. The information from these surveys is useful in academic research, macroeconomic planning and in developing policy guidelines.

Generally the NSS survey period is one full agricultural year for all the topics covered although the period has varied in terms of duration, say, from six months to 12 months and as between agricultural and calendar years. The survey period and the time of year when the survey is initiated are important features of a survey. Studies quite often overlook such difference and compare estimates from the surveys with differing periods and time of initiation. For instance, the Task Force set up by the Government in 1976 to assess the minimum needs for estimation of poverty line decided to choose the NSSO 28<sup>th</sup> round survey, conducted during October 1973 to June 1974, as the reference year (Government of India 1979). Studies by Suryanarayana (2009a and 2009b) point out that for a monsoon dependent agricultural economy consumption estimates from the 28<sup>th</sup> round may not be a correct choice as the survey was not spread over the full agricultural year. Since the consumption of those at the bottom end of the distribution is more sensitive to seasonal variations, the nine-month survey may not be an appropriate one for the above purpose.

Recently, a joint study by Ministry of Health and Family Welfare and the WHO country office compared the estimates of morbidity, untreated morbidity and the nature of treatment sought from the NSSO surveys on 'Morbidity and Health Care' for 52<sup>nd</sup> and 60<sup>th</sup> rounds (Government of India 2007). The other recent studies that have made such comparisons include Dilip (2008), Mukherjee and Karmakar (2008), and Selvaraj and Karan (2009). The survey duration of 52<sup>nd</sup> round was one full agricultural year from July 1995 to June 1996 and that for the 60<sup>th</sup> round was half of the calendar year from January to June of 2004.

Because of differing survey periods however, the comparisons made in the above studies may not be appropriate. Even use of 'trend growth rate' based on 52<sup>nd</sup> and 60<sup>th</sup> rounds for arriving at the expenditure estimates for 2004-05 and the estimates of private health expenditure for 2004 in the National Health Accounts (Government of India 2009) may be subject to errors since the expenditure estimates for the two rounds may not be comparable.

Another factor which may cause non-comparability is 'reference period' used for collecting data on specific items in the survey. For instance, Ghosh and Bhattacharya (1995) based on their analysis of different NSSO rounds on consumption expenditure illustrate that the elasticities for clothing and several other items decline drastically when the reference period of 'last month' is replaced by 'last year'. In case of surveys on 'Morbidity and Health Care', the NSSO collected information on the self-reported morbidity and untreated morbidity with the reference periods of 30, 15, and 15 days during the 42<sup>nd</sup>, 52<sup>nd</sup>, and 60<sup>th</sup> rounds respectively. Therefore, owing to the possibility of bias from seasonal and short-run factors as the study by Ghosh and Bhattacharya points out, the estimates from the three surveys with different reference periods may not be compared. However, two studies, namely, Government of India (1998, p. 22) and Selvaraj and Karan (2009, p. 57), have compared the estimates for untreated morbidity.

The purpose of this paper is to examine and illustrate some issues involving comparison of estimates from surveys with different 'survey periods'. This is illustrated with reference to health outcomes and health care using unit level data from NSSO. The NSSO survey estimates on health outcomes are available for five rounds since 1973-74, though unit record data are available only for three rounds, viz., 42<sup>nd</sup> round (July 1986 — June 1987), 52<sup>nd</sup> round, and 60<sup>th</sup> round. The survey period is a complete agricultural year for the first two rounds and only half of the calendar year for the last one.

Any study examining inter-temporal comparability of estimates from NSSO surveys with different coverage

periods is useful given scarcity of household level databases in India. Furthermore since the NSSO sample is representative at the sub-state level of agro-climatic zones, they are immensely useful for academic research and policy. As far as the household level information on health outcomes and health care is concerned, the NSSO surveys are among the few sources of data available for the Indian population.<sup>1</sup> Since NSSO is conducting these surveys for quite some time, the surveys can be used to examine temporal as well as socioeconomic profiles of health outcomes like morbidity. While an inter-temporal profile helps understanding effectiveness of various government interventions aimed at improving health outcomes, socioeconomic profile is useful in assessing the health needs of various sections of the society and identifying the subgroups of Population that are most vulnerable.

## **2. Half-year survey on morbidity and health care: pros and cons**

Since considerable amount of resources are required, large-scale surveys entail huge cost in terms of money. There is a cost in terms of time too, in the form of delay in obtaining information and subsequent analysis to educe the information needed. Therefore, if a half-year survey can provide same information and inferences as precisely as a full-year survey; it would always be preferred.

On the other side, if seasonality is associated with the subjects of survey inquiry; estimates of population characteristics from the half-year surveys may be subject to errors.<sup>2</sup> The same may also lead to misleading inferences. It is well known that time profile of diseases exhibit seasonal patterns, and incidence of certain diseases is higher in particular seasons than that during the others. Consequently, a survey based on six-month period would ignore the

diseases that tend to exist during the remaining six months. For instance, Malaria is most common in India during July-November (Misra 2007, p. 235). Therefore, any survey omitting these months, such as the half-year survey of January-June 2004, would underestimate morbidity due to Malaria. Hence, getting a disease-specific morbidity profile of the country's population would simply be impracticable with the half-year surveys.

If the interest lies in estimating occurrence of overall morbidity, irrespective of the type of disease, the estimate obtained from even a half-year survey may be same as the one from a full-year survey. However, this would happen only if the distribution of morbidity is such that the morbidity profile during the six-month period included in the survey is similar to the one in remaining six months.<sup>3</sup> If the above condition does not hold, which is not very unlikely, using a half-year survey would provide incorrect estimate of the overall morbidity in the country.

As only ill households avail hospitalization facility and incur expenditure on health care, estimates on these aspects of health care too will be incorrect.<sup>4</sup> For instance, the out-of-pocket expenditure incurred by the households on inpatient as well as outpatient care varies considerably across the diseases (Agrawal 2009). Hence, depending upon the nature of disease that they have suffered during the remaining six months, the six-month survey would introduce a non-random bias in estimates of the expenditure across households. Thus, there is a possibility of deriving misleading conclusions about households' health seeking behavior.

Another weakness of the half-year surveys vis-à-vis full-year surveys is reduced size of the sample.<sup>5</sup> Since there is a trade-off between sampling error and sample size, as

<sup>1</sup> Besides NSSO, India Health Development Survey (IHDS), National Family Health Surveys (NFHSs) and World Health Survey (WHS) are other large scale surveys, conducted at the level of households in the country, that provide information on health status of the population and health care. The IHDS, conducted during November 2004-October 2005, was organized jointly by the researchers from the University of Maryland and the National Council of Applied Economics Research (NCAER), New Delhi. The NFHSs, administered by International Institute of Population Sciences (IIPS), are intended towards collection of information pertaining to maternal and child care. The WHS is monitored by the World Health Organization and was conducted in association with IIPS and Ministry of Health and Family Welfare, Government of India. It is a partial survey covering six major states in the country which comprise about 47 per cent of country's population (See, Gumber and Berman 1997, for information on other databases for India on morbidity and health care).

<sup>2</sup> Murthy (1967, p. 491) observes, "For items of information subject to seasonal fluctuation, it is desirable to have one complete year as the survey and reference periods..."

<sup>3</sup> Note that this condition includes the situation in which each season of the year contributes equally in overall morbidity.

<sup>4</sup> As the reference period associated with hospitalization is one year, incidence of hospitalization may be comparable across the half and full year surveys. The only difference is moving average would be taken over six months than the twelve. Discrepancy due to the difference in the two survey periods can be substantial if the recall lapse is dependent on season.

<sup>5</sup> The sample size respectively for rural and urban areas was 71284 and 49658 in 1995-96, and 47302 and 26566 households in 2004.

indicated by an inverse relationship although not necessarily linear between the two (Murthy 1967, pp. 11-12), the sampling error of the estimates obtained from such half-year surveys would be higher.<sup>6</sup> Another undesirable consequence of reduction in sample size is that it can make the unbiased estimation of parameters at disaggregated level, say, for example agro-climatic zones, difficult. In other words, even though the sample is representative to produce unbiased estimate of population parameters at the national level, it may not be so at the level of agro-climatic zones.<sup>7</sup> This issue is important since the NSSO surveys are perhaps the only household level nationwide sample surveys that permit generation of reliable estimates at the sub-state level of the agro-climatic zones.

### 3. Data and methodology

We test for presence of seasonality in self-reported morbidity from the 52<sup>nd</sup> and 60<sup>th</sup> rounds of surveys. Self-reported morbidity is defined as any deviation from the state of physical or mental well-being during the reference period excluding the cases of normal pregnancy and child birth.<sup>8</sup> It may not necessarily result in hospitalization, confinement to bed or restriction of activity. The survey collects information on morbidity using two reference periods: 15 days and one day preceding to the date of survey. Since morbidity estimates from such surveys measure only the proportion of ailing persons (PAP) during the reference period and not the frequency of illness, they are not the same as prevalence rate defined by the World Health Organization (Government of India 1998). Hence, we prefer to use the terms PAP while referring to the estimates based on 15 days reference period and PPM (i.e. point prevalence of morbidity) while referring to the estimates based on one day reference period. For the sake of robustness, we test for seasonality in both PAP and PPM.

Each round (survey period) is divided into sub-rounds of three months. The months of July-September, October-December, January-March, and April-June are the four sub-rounds for 1995-96; and January-March and April-June are the two sub-rounds for 2004. These sub-rounds can

be used to identify the seasons. Equal number of 'first stage units' (FSUs) are allotted to each sub-round so that the entire sample is approximately equally distributed across the sub-rounds (Government of India 1998 and 2006, pp.2-3). Once the number of FSUs to be allotted to each sub-round is arrived at, a random selection of FSUs from each strata/sub-stratum is made. Then, households/hamlet group in each stratum are selected randomly.

Table 1 shows the PAP in major Indian states for 1995-96 by sub-rounds. At the national level, both in rural and urban areas, PAP is highest in the months of July-September.<sup>9</sup> It is necessary to test whether the difference in morbidity is statistically significant across the sub-rounds. We use a logistic regression with seasonal dummies to test for the above purpose. The unit of observation for the analysis is individual and we also control for composition (age and sex) of the population.

### 4. Testing for seasonality

Let  $y_i$  denotes the health status of  $i$ th individual assuming value '1' if he/she is reported to be ill and '0' otherwise and  $j$  ( $j \in \{1,2,3,4\}$ ) denotes the sub-round in which the individual was surveyed. Here,  $y_i$  can be defined  $\in \{1,2,3,4\}$  respect to both PAP and PPM. Also let  $D_{ij}$  and  $S_i$  be dummy variables corresponding to the sub-round in which the individual 'i' was surveyed and his/her gender such that

$$D_{ij} = \begin{cases} 1 & \text{if } i \text{ is surveyed in } j\text{th sub-round} \\ 0 & \text{if } i \text{ is not surveyed in } j\text{th sub-round} \end{cases} \quad j \in \{1, 2, 3, 4\}$$

$$S_i = \begin{cases} 1 & \text{if } i\text{th individual is male} \\ 0 & \text{if } i\text{th individual is female} \end{cases}$$

We also define a set of dummy variables  $Age_{ik}$  ( $k \in \{1,2,3,4,\dots,13\}$ ) to indicate the age of the individuals. The individuals are classified into one of 13 age-groups: there are 12 age-groups each comprising five year interval for the ages 0-59 years and one for those above 60 years of age.<sup>10</sup> The dummies corresponding to age and sex control for population composition.

6 Sampling error is defined as the error originating from the use of sample observations to draw inferences about the population characteristics.

7 For instance, Murthy demonstrates that in a certain case of simple random sampling without replacement, if estimates with five percent precision are required for *each tehsil with in a district* total sample size needed is 434 villages as compared to a sample of only 214 villages for *the district as a whole*. While the sampling fraction in the latter case is 28 per cent, the same becomes 57 in the former (Murthy 1967, pp. 99-100).

8 Note that there is considerable skepticism about the reliability and usefulness of self-reported morbidity data in India (see for instance, Subramanian *et al.* 2009). However, this issue is not dealt with since it lies beyond the scope of this note.

9 Note however that the seasonal pattern of morbidity is not the same across the states.

10 The age-groups are defined on the basis of classification being adopted by the Sample Registration System (SRS).

It is possible to express the outcome variable of the interest, health status  $y_i$ , as a function of observed characteristics ( $X_i$ ) of individual  $i$  such that

If  $G$  is assumed to follow cumulative logistic distribution function (denoted by  $\tilde{E}$  in this study), the above equation gives us logit model. One can then define likelihood function which can be maximized to obtain parameter estimates.

We estimate the following logit regression:

$$\Pr(y_i = 1) = \Lambda(\alpha + \Gamma D_{ij} + \beta S_i + \Theta Age_{ik})$$

Here  $\tilde{A}$  and  $\tilde{E}$  are parameter vectors and  $\hat{a}$  a scalar corresponding to the dummy variables. Our base categories are first sub-round, female and the first age-group (0-4 years) respectively. Thus we estimate the above equation using three seasonal dummies, one gender dummy and 12 age-group dummies.

Table 2 shows odds ratios corresponding to the parameter of interest,  $\tilde{A}$ . In 1995-96, the odds of self-reported morbidity for an individual of given age-group and sex are significantly higher in the months of July to September. This is true in both the sectors irrespective of whether we use PAP or PPM as a measure of illness. Thus, the morbidity varies with the sub-rounds/ season even after controlling for the population composition. For 2004 too, we find that the morbidity is significantly higher in the months of April-June than that in January-March. In both the years, seasonality seems to be more pronounced in the urban sector.

## 5. Conclusion

This study examines comparability of estimates from a half-year survey to that from a survey with one full-year as the survey-period. This is illustrated using information from two recent rounds of the survey on 'Morbidity and Health Care', namely, 60<sup>th</sup> and 52<sup>nd</sup> rounds. We used a logit regression to test for seasonality in the morbidity estimates. Results confirm presence of seasonality in morbidity. The results holds true in both rural and urban areas and with the two measures of morbidity, PAP and PPM, differing on the basis of the reference period.

The above finding means that a six-month survey may not produce correct estimates of morbidity in the country.

The estimates of expenditure incurred on seeking health care by the households too may be incorrect. Further, the estimates from the two rounds, 60<sup>th</sup> and 52<sup>nd</sup>, may not be comparable because of seasonality. At best, one can only compare the estimates from the corresponding sub-rounds. This casts doubt on findings of the studies, discussed in the introduction section, that have compared the estimates from two rounds without addressing this issue. The above finding also means that since the morbidity in 1995-96 was the highest in the months of July-September, the estimates from half-year survey of 2004 might be an underestimate of the true morbidity in the country.

An important implication of this study is that health and medical interventions should be targeted with reference to seasons. Given the extent of dependence of research and policy in India on the NSSO surveys, it is vital that the household survey on such important aspects as morbidity and health care are carried out with one complete year as the survey period.

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**Table 1: Morbidity (PAP per 1000 persons) by Seasons: 1995-96**

State	Rural					Urban				
	Jul-Sept	Oct-Dec	Jan-Mar	Apr-June	All	Jul-Sept	Oct-Dec	Jan-Mar	Apr-June	All
Andhra Pradesh	61.9	45.9	65.9	67.4	60.5	64.9	55.6	54.7	56.7	58.1
Assam	78.2	76.6	75.4	87.0	79.1	84.5	83.4	72.8	94.3	83.9
Bihar	33.4	31.3	30.9	41.0	34.2	34.9	33.3	50.5	41.1	39.7
Gujarat	44.7	44.6	49.1	42.4	45.3	42.4	32.4	36.0	30.9	35.5
Haryana	64.7	41.1	50.1	81.0	60.7	86.5	61.1	38.1	59.5	62.3
Karnataka	51.3	35.3	38.6	42.7	42.3	42.6	40.1	33.9	33.3	37.5
Kerala	131.3	107.1	112.9	111.0	115.8	114.5	56.7	87.4	88.6	86.8
Madhya Pradesh	42.9	30.3	52.9	36.7	40.4	40.0	33.6	36.1	39.3	37.0
Maharashtra	51.1	50.8	49.5	47.3	49.8	55.2	43.8	44.8	40.7	46.4
Orissa	66.7	67.3	60.7	49.9	61.8	70.4	59.2	63.0	53.5	61.6
Punjab	76.7	70.3	83.8	69.6	74.9	75.1	73.5	98.2	87.5	84.2
Rajasthan	24.2	37.8	22.1	21.2	26.6	31.6	34.1	34.8	23.6	30.9
Tamil Nadu	64.6	50.9	46.5	45.0	51.7	85.4	56.2	47.0	42.9	57.6
Uttar Pradesh	67.3	54.3	55.3	66.1	60.6	68.3	65.4	62.7	89.1	71.2
West Bengal	73.1	58.6	63.4	66.4	65.4	84.9	58.1	55.2	58.1	63.9
India	58.3	49.5	53.3	55.4	54.1	61.8	49.4	49.6	51.5	53.2

Source: Estimates based on NSSO 52nd round unit level data.

**Table 2: Seasonality in Morbidity (1995-96 and 2004): Odds Ratio**

Months/ Season	1995-96				2004			
	Rural		Urban		Rural		Urban	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Jul-Sept	B	B	B	B				
Oct-Dec	0.84*	0.84*	0.79*	0.81*				
Jan-Mar	0.93*	0.91*	0.80*	0.83*	B	B	B	B
Apr-June	0.96	0.94	0.83*	0.89*	0.91*	0.89*	0.79*	0.84*

Notes: (i) Estimates in columns (1) correspond to PAP (15 days reference period) and those in (2) to PPM (one day reference period), (ii) Coefficients marked \* are significant at the five percent level, (iii) B indicates base category; and (iv) each regression includes controls for age-sex composition of the respective population, which are not reported here.

## **MILK CONSUMPTION PATTERN IN INDIA**

**Jignesh Shah and T.N. Datta**

### **Abstract**

Changes in the society are visible all around. The analysis of a single commodity like milk in the consumption basket is no exception. Though there are evidences to show how cereal consumption has been declining over time, milk consumption continues to be on the rise along with increase in number of milk consuming people – both these factors drive growth in milk demand in household segment. Nearly 14 million people turn up as new milk consumers every year, which is the prime driver of aggregate demand for milk. The paper argues that while household demand for milk continues to be buoyant, it is conjectured that milk demand in non-household segment in liquid or product form would be even brighter like in cereal based foods.

## 1. Background

The Consumer Expenditure Surveys (CES) of National Sample Survey Office (NSSO) are the most important and regular source of information of consumer surveys of different food and non-food items in India. Since 1950 until 28<sup>th</sup> Round (1973-74), the NSSO collected data on consumer expenditure every year. However, after 26<sup>th</sup> Round (1971-72) of the survey, the Governing council of NSSO decided to collect information on consumer expenditure and employment-unemployment together from a large sample survey once in five years — known as “quinquennial rounds”. These surveys are conducted over a fairly large sample size drawn from rural and urban areas and covering most of the States and Union Territories (UTs). There is yet another novelty in the compilations of the report. It contains information on absolute data in terms of consumption volume or quantity on per capita monthly basis and their corresponding value of expenditure. Therefore, the observations from these reports provide a canvas to examine the phenomenon from longitudinal as well as cross sectional perspectives.

The data collected in consumer expenditure surveys referred to more than 300 items comprising cereals, vegetables, fruits, pulses, milk & milk products, edible oil, meat, egg and fish, salt, sugar, spices, beverages, pan, tobacco and intoxicants in a very detailed manner. Data on clothing, fuel and light, footwear, medical expenses, education, entertainment, goods & personal care, sundry articles, durable goods, conveyance and other miscellaneous goods and services is also collected. This information is scattered over many rounds of survey reports and not analyzed in a way facilitating understanding of the changes in milk consumption in rural and urban areas.

There are ample reasons that provided motivation to go for such an in-depth analysis. First, with general inflation continued high at over 8 percent and food inflation being at around 17 percent – a phenomenon, which has never been observed in the food sector. Therefore, it is pertinent that the components of the food basket be analyzed critically to understand its implications on consumption behaviour with a specific focus on milk. Second, the milk demand in India by 2020 – estimated by various authors – is in the range of 160-290 million tonnes with a growth rate of 4-8 percent per annum. With a moderate growth in GDP of 7 percent, the milk demand is estimated at about 230 million tonnes

by 2020 (Shah, 2010), implying a growth of about 6 percent per annum in milk demand. The growth in milk demand is higher than the growth in milk production, which is about 4 percent per annum. Thus, the demand-pull is strong - leading to certain changes in consumption behavior of milk. This apart, it is important to note that the comparison of per capita consumption from CES data of NSSO provides a generalized trend which could be refined further, provided the consumption estimates are adjusted for different milk consuming population like age, sex, food habits, religion, etc. While it is recognized that the consumption data needs to be examined from the above attributes of milk consuming populations, the present structure of published reports of NSSO based on CES rounds preclude us from providing such analysis. Present analysis provides comprehensive understanding of the inter-temporal changes in milk consumption drawing inferences from different rounds of consumer surveys on a single canvas.

It may be pointed out that milk expenditure accounts for about 18-19 percent of total food expenditure in consumption basket, second most important commodity for consumption in household food and also assumes high social and cultural significance given the non-vegetarian food consumption in India. Moreover, there are hardly any commodity specific historical analyses for evaluation and understanding of the trend — most of which revolve round cereal, non-cereal, animal fat, protein specific generalized analyses. For instance, seminal works of Sen (2001) highlights how commodity specific changes are apparent from the successive rounds of consumer expenditure surveys and while there are plethora of academic and research materials dealing with poverty measurement and expenditure disparity in the society. All these singularly as well as collectively provide sufficient insights into the movements of consumables in the society and the development institutions and public policy makers draw sufficient wisdoms. The corporate and commercial entities however position and reposition their products into the markets subject to the observations made through various publications of the national consumer expenditure survey reports. Given this bandwidth of diversity in the utility and use of precious data put out through NSSO surveys, it might appear significant that a commodity like milk handpicked for in-depth analysis. Nonetheless, the paper makes a modest effort to provide greater clarity and

incisiveness into the milk sector and the lessons thereof could be utilized for other commodity profile on similar lines.

## 2. Data

For present analysis, data from different rounds of CES has been taken. Apart from quinquennial rounds, NSS also publishes annual rounds of CES with thin sample. However, the annual rounds of CES do not report absolute consumption data and therefore only quinquennial rounds viz., 43<sup>rd</sup> (1987-88), 50<sup>th</sup> (1993-94), 55<sup>th</sup> (1999-2000) and 61<sup>st</sup> (2004-05) rounds were used for analysis.

The scope in NSS inquiry is limited to household consumption. By default, out of home or institutional consumption is not reported. For milk, following definition is contained in the report of CES 2004-05; “Milk products include ghee, butter, curd, etc. Milk used for home preparation of sweetmeats, etc., is also accounted here. This category also includes those baby foods of which the principal constituent is milk. Further, milk (liquid) includes ice-cream of which the major component is milk. Ice with syrup but without milk sold under the name of ice-cream is not included in this category”.

## 3. Consumer expenditure basket

Consumption basket refers to of a basket of commodities that are consumed in the society on regular basis as necessities. This basket alters with change in food habits, level of income and life styles, urbanization, affordability and accessibility. With increase in level of income and improvement in life styles, the consumption basket tends to be more diversified—the traditional cereal consumption makes way for non-cereal based food and other items of consumption, mostly non-food items. Economists often relate this phenomenon with the operation of Engel’s law of Demand. This has relevance in the changes in the Indian food consumption basket as has been found through the analysis of last 30 years.

During the 1980s, nationally, some 63 percent of the total consumer expenditure in the rural areas used to be devoted towards food expenditure, and non-food used to share about 37 percent of the expenditure (Table 1). Over the years, this non-food component gained prominence, and currently placed at 45 percent – a significant shift in the consumer expenditure pattern, perfectly in line with Engel’s law of Demand. It can be contented that with changes in

affordability and higher disposable incomes, consumers tend to spend more on non-food especially on consumer durables, clothing, footwear, etc items. In the urban areas also, what was 45 percent as non-food expenditure in the 1980s, stands at 57 percent in the 2000s – a significant shift away from food expenditure.

As against the distribution of total expenditure, it is interesting to check the trends in distribution of total food expenditure. It may be seen that among the food items, the share of milk & milk products; egg, fish & meat; vegetables; fruits and beverages has increased over years. The share of milk expenditure to total food expenditure is the highest out of these commodities.

It may also be noted that food expenditure pattern, shown above, does not take into account the out of home consumption, which is in cooked and semi processed form. Thus along with the rise in the consumption of processed food and food/ meals taken outside home, which is not within the scope of NSS data, remained unreported. This is not small quantity, as eating out and take away meals have been rising rapidly – the business of restaurant and hotel shows more than 6 percent growth on per capita basis (Chand, 2010). Thus, the falling proportion of expenditure on food items may not solely be attributed to rise in non-food expenditure. The increasing incidence of out-of-home consumption has to be factored in. However, it is conjectured that the share of out-of-home consumption has been increasing over a period of time, but there is no direct evidence to support this contention.

While consumer expenditure on food drops over time, relative expenditure on milk continues to hold water, both in urban as well in rural areas, though marginal reduction in relative expenditure on milk in urban areas cannot be lost sight of. Significant point however is that in rural areas the scope of home away expenditure on milk is limited which perhaps could explain the marginal difference in relative expenditure trends between rural and urban areas. A similar trend is discernible for eggs, fish and meat expenditure. Delgado et al (1999), Delgado (2005), FAO (2009), have observed that livestock continues to gain prominence in the consumption basket of the people in the Asian economies compared to developed economies. The present observations of relative expenditure trends in milk only validates some of the preceding observations made by various researchers.

**Table 1: % Distribution of total consumer and total food expenditure\*: All India**

Item	RURAL				Item	URBAN			
	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>		43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>
Cereals	26.1 (41.0)	24.2 (38.3)	22.2 (37.3)	18.0 (32.7)	Cereals	14.8 (26.5)	14 (25.7)	12.3 (25.7)	10.1 (23.7)
Gram	0.2 (0.4)	0.2 (0.3)	0.1 (0.2)	0.1 (0.2)	Gram	0.2 (0.3)	0.2 (0.3)	0.1 (0.2)	0.1 (0.2)
Cereal Substitutes	0.1 (0.2)	0.1 (0.2)	0.1 (0.1)	0.1 (0.1)	Cereal Substitutes	0.1 (0.1)	0.1 (0.1)	0.0 (0.1)	0.0 (0.1)
Pulses & pulse products	4.0 (6.2)	3.8 (6.0)	3.8 (6.4)	3.1 (5.6)	Pulses & pulse products	3.4 (6.0)	3/0 (5.6)	2.8 (5.9)	2.1 (5.0)
Milk & milk products	8.6 (13.5)	9.5 (15.0)	8.8 (14.7)	8.5 (15.4)	Milk & milk products	9.5 (17.1)	9.8 (17.9)	8.7 (18.1)	7.9 (18.6)
Edible oil	5.6 (8.8)	4.4 (7.0)	3.7 (6.3)	4.6 (8.4)	Edible oil	5.3 (9.5)	4.4 (8.0)	3.1 (6.5)	3.5 (8.1)
Egg, fish and meat	3.2 (5.1)	3.3 (5.3)	3.3 (5.6)	3.3 (6.0)	Egg, fish and meat	3.5 (6.3)	3.4 (6.2)	3.1 (6.5)	2.7 (6.4)
Vegetables	5.2 (8.2)	6.0 (9.6)	6.2 (10.4)	6.1 (11.1)	Vegetables	5.3 (9.4)	5.5 (10)	5.1 (10.7)	4.5 (10.5)
Fruits (fresh & dry)	1.6 (2.5)	1.7 (2.8)	1.7 (2.9)	1.9 (3.4)	Fruits (fresh & dry)	2.5 (4.5)	2.7 (4.9)	2.4 (5.0)	2.3 (5.4)
Sugar	2.9 (4.5)	3.0 (4.8)	2.4 (4)	2.4 (4.3)	Sugar	2.3 (4.2)	2.4 (4.4)	1.6 (3.4)	1.5 (3.5)
Salt	0.2 (0.3)	0.2 (0.3)	0.2 (0.4)	0.2 (0.4)	Salt	0.1 (0.2)	0.1 (0.3)	0.2 (0.3)	0.1 (0.3)
Spices	2.7 (4.2)	2.5 (3.9)	2.7 (4.6)	2.3 (4.2)	Spices	2.2 (3.9)	1.9 (3.5)	2.1 (4.3)	1.5 (3.6)
Beverages etc	3.9 (6.1)	4.2 (6.6)	4.2 (7.1)	4.5 (8.2)	Beverages etc	6.7 (12.0)	7.2 (13.2)	6.3 (13.2)	6.2 (14.6)
<b>Total Food</b>	<b>63.8</b> <b>(100)</b>	<b>63.2</b> <b>(100)</b>	<b>59.4</b> <b>(100)</b>	<b>55</b> <b>(100)</b>	<b>Total Food</b>	<b>55.9</b> <b>(100)</b>	<b>54.7</b> <b>(100)</b>	<b>48.1</b> <b>(100)</b>	<b>42.5</b> <b>(100)</b>
<b>Total Non-food</b>	<b>36.2</b>	<b>36.8</b>	<b>40.6</b>	<b>45.0</b>	<b>Total Non-food</b>	<b>44.1</b>	<b>45.3</b>	<b>51.9</b>	<b>57.5</b>
<b>Total Expenditure</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Total Expenditure</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* Figures in parenthesis indicates percentage to total food expenditure

In view of changing trend as witnessed in consumer expenditure basket, it would be interesting to take a stock of state-wise situation. The following section deals with the state-wise milk consumption trend in major states of the country. Here, it may be noted that the states for which consistent data is available across all four rounds of CES were considered for analyses.

#### 4. Per capita consumption of liquid milk in household segment (Base: total population)

At the aggregate level, per capita monthly milk (liquid) consumption has increased from a level of 3.48 liters in 1987-88 to 4.18 liters in 2004-05. During this period, the same has increased from 4.33 liters to 5.11 liters in urban areas and 3.23 liters to 3.87 liters in rural areas. The urban consumption of milk in absolute volume has been rising over the years for over a decade beginning 1987-88. The rural consumption, on the other hand, though increased during 1987-88 and 1993-94, showed a decline in

1999-00 over 1993-94 and 2004-05 over 1999-2000. The pooled data (rural + urban) of milk consumption has almost stagnated at the country level. In the states of Andhra Pradesh, Assam, Bihar, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu and West Bengal, the average per capita consumption of milk is less than the country average in both rural and urban areas across all the rounds.

At the aggregate level, during 1999-2000 to 2004-05, growth in per capita consumption of milk declined in Gujarat, Haryana, Jammu & Kashmir, Karnataka, Kerala, Maharashtra and Rajasthan in the household segment. However, this finding could logically triggers attention towards looking up of information in non-household segment for a satisfactory explanation. But lack of data in this regard prohibits any direct interpretation. The interpretation of NSS data could suggest that perhaps out of home consumption of milk is on the rise.

**Table 2: Monthly per capita consumption of liquid milk (ltrs) (base: total population)**

State	RURAL				URBAN				RURAL+URBAN			
	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>
Andhra Pradesh	2.32	2.62	2.87	3.05	3.36	3.92	4.40	4.38	2.56	2.96	3.31	3.39
Assam	1.33	1.21	1.11	1.31	2.02	1.66	2.14	2.00	1.39	1.26	1.21	1.37
Bihar	1.57	2.39	2.41	2.98	2.53	3.49	3.40	3.81	1.67	2.50	2.52	3.06
Gujarat	4.55	5.07	5.42	4.98	5.48	6.21	6.58	6.70	4.81	5.44	5.79	5.57
Haryana	11.49	13.82	13.88	13.13	8.16	9.10	9.03	9.59	10.73	12.60	12.55	12.18
Himachal Pradesh	7.10	7.52	7.87	8.72	7.91	8.95	10.08	8.17	7.15	7.64	8.07	8.67
J&K	4.89	7.26	9.53	8.02	6.34	9.11	8.02	8.31	5.14	7.61	9.22	8.09
Karnataka	2.76	2.88	3.45	3.30	3.86	4.42	5.07	4.87	3.07	3.32	4.63	3.78
Kerala	2.16	2.61	2.97	2.82	3.07	3.27	3.49	3.66	2.31	2.77	3.11	3.02
Madhya Pradesh	2.33	2.76	2.71	3.41	4.17	4.08	4.33	4.33	2.74	3.10	3.10	3.63
Maharashtra	2.24	2.50	2.66	2.73	4.27	4.72	4.79	4.39	2.90	3.33	3.48	3.40
Orissa	0.69	0.77	0.64	0.78	2.40	2.20	1.97	2.25	0.90	0.95	0.86	0.98
Punjab	12.91	14.33	11.67	11.55	8.92	9.70	9.73	10.57	11.86	12.99	11.06	11.23
Rajasthan	6.92	10.41	9.62	9.50	6.11	7.53	7.72	7.38	6.75	9.75	9.20	9.03
Tamil Nadu	1.56	2.12	2.39	2.48	3.30	3.80	4.77	4.82	2.17	2.71	3.22	3.38
Uttar Pradesh	4.32	5.44	4.52	4.64	4.81	5.63	5.27	5.10	4.41	5.48	4.67	4.73
West Bengal	1.30	1.54	1.31	1.45	2.69	2.73	2.63	2.59	1.65	1.82	1.59	1.73
<b>All India</b>	<b>3.23</b>	<b>3.94</b>	<b>3.79</b>	<b>3.87</b>	<b>4.33</b>	<b>4.89</b>	<b>5.10</b>	<b>5.11</b>	<b>3.48</b>	<b>4.18</b>	<b>4.12</b>	<b>4.18</b>

**Table 3: % Change in monthly per capita consumption of milk over previous round  
(base: total population)**

State	RURAL			URBAN			RURAL+URBAN		
	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>	50 <sup>th</sup> over 43 <sup>th</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>	50 <sup>th</sup> over 43 <sup>th</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>
Andhra Pradesh	12.9	9.5	6.3	16.7	12.2	-0.6	15.5	12.0	2.3
Assam	-9.0	-8.3	18.0	-17.8	28.9	-6.6	-9.4	-3.3	13.1
Bihar	52.2	0.8	23.6	37.9	-2.6	12.2	50.0	0.7	21.2
Gujarat	11.4	6.9	-8.2	13.3	6.0	1.9	13.1	6.4	-3.8
Haryana	20.3	0.4	-5.4	11.5	-0.8	6.1	17.4	-0.4	-2.9
Himachal Pradesh	5.9	4.7	10.8	13.1	12.6	-19.0	6.8	5.6	7.5
J&K	48.5	31.3	-15.9	43.7	-12.0	3.7	48.0	21.2	-12.3
Karnataka	4.3	19.8	-4.4	14.5	14.7	-4.0	8.1	39.5	-18.4
Kerala	20.8	13.8	-5.0	6.5	6.7	4.8	19.7	12.1	-2.9
Madhya Pradesh	18.5	-1.8	25.9	-2.2	6.1	-0.1	13.1	0.2	16.8
Maharashtra	11.6	6.4	2.5	10.5	1.5	-8.3	14.6	4.6	-2.4
Orissa	11.6	-16.9	21.7	-8.3	-10.5	14.0	6.2	-9.9	14.2
Punjab	11.0	-18.6	-1.1	8.7	0.3	8.7	9.5	-14.8	1.5
Rajasthan	50.4	-7.6	-1.3	23.2	2.5	-4.4	44.4	-5.6	-1.9
Tamil Nadu	35.9	12.7	3.8	15.2	25.5	1.1	24.7	18.7	5.0
Uttar Pradesh	25.9	-16.9	2.6	17.0	-6.4	-3.2	24.2	-14.7	1.3
West Bengal	18.5	-14.9	10.9	1.5	-3.7	-1.5	10.1	-12.4	8.7
<b>All India</b>	<b>22.0</b>	<b>-3.8</b>	<b>2.0</b>	<b>12.9</b>	<b>4.3</b>	<b>0.1</b>	<b>20.0</b>	<b>-1.3</b>	<b>1.5</b>

### 5. Incidence of milk consumption

It is pertinent to note that NSSO data throw sufficient light on to the incidence of milk consumption among the households. If incidence of consumption rises, it would be construed as enhancement of consumption base across wider population. The NSSO data suggest that incidence of milk consumption has been rising over the years uniformly across urban and rural areas. Though the proportion of milk consuming households is higher in urban areas, the absolute growth in milk consuming households was higher in rural areas. In 2004-05, about 71 percent households reported milk consumption in rural areas – an increase of almost 10 percentage points from 1987-88. In urban areas, the proportion was 85 percent, increased by 6 percentage points during

1987-88 to 2004-05. At the aggregated level, the incidence of milk consumption rose by 9-percentage point during 1987-88 to 2004-05.

The states of Gujarat, Haryana, Jammu & Kashmir, Karnataka, Punjab and Rajasthan have above 90 percent milk consumers. As far as growth in milk consuming households is concerned, these states have almost attained an optimum level and scope for incremental rise might be constrained. On the other hand, from 1987-88 onwards, absolute increase in milk consumers was substantial in Bihar, Madhya Pradesh, Orissa and West Bengal, both in rural and urban areas. One of the reasons of such a high growth would be that these states have started with a lower base and they still have scopes to expand their milk consumer base further.

**Table 4: Households reporting milk consumption (per 1000 households)**

State	RURAL				URBAN				RURAL+URBAN			
	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>
Andhra Pradesh	629	712	772	775	790	824	844	842	667	740	792	792
Assam	553	524	462	499	494	471	493	504	547	518	466	500
Bihar	399	522	524	701	537	623	681	813	413	533	542	712
Gujarat	953	938	929	917	960	960	941	942	955	946	933	926
Haryana	967	965	985	991	924	946	931	956	955	959	968	981
Himachal Pradesh	894	881	906	926	790	880	753	866	885	881	887	918
J&K	949	955	959	988	946	934	975	985	948	951	962	987
Karnataka	823	862	874	906	826	886	896	889	825	869	881	900
Kerala	632	674	717	720	706	750	748	765	645	693	725	731
Madhya Pradesh	613	606	607	756	853	840	845	934	668	667	667	799
Maharashtra	823	830	802	820	887	889	891	911	845	853	837	858
Orissa	259	249	214	256	438	442	402	502	284	275	246	292
Punjab	972	986	989	993	964	958	953	943	970	977	976	975
Rajasthan	841	948	961	982	959	959	971	973	866	951	963	980
Tamil Nadu	430	523	601	633	707	680	797	817	526	580	671	705
Uttar Pradesh	643	715	732	784	867	878	902	924	687	747	769	814
West Bengal	397	437	423	479	555	539	586	638	441	465	464	523
<b>All India</b>	<b>619</b>	<b>663</b>	<b>678</b>	<b>713</b>	<b>789</b>	<b>800</b>	<b>829</b>	<b>850</b>	<b>660</b>	<b>699</b>	<b>719</b>	<b>751</b>

**Table 5: % Change in incidence of milk consuming households over previous round**

State	RURAL			URBAN			RURAL+URBAN		
	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>
Andhra Pradesh	13	8	0	4	2	0	11	7	0
Assam	-5	-12	8	-5	5	2	-5	-10	7
Bihar	31	0	34	16	9	19	29	2	31
Gujarat	-2	-1	-1	0	-2	0	-1	-1	-1
Haryana	0	2	1	2	-2	3	0	1	1
Himachal Pradesh	-1	3	2	11	-14	15	0	1	4
J&K	1	0	3	-1	4	1	0	1	3
Karnataka	5	1	4	7	1	-1	5	1	2
Kerala	7	6	0	6	0	2	7	5	1
Madhya Pradesh	-1	0	25	-2	1	11	0	0	20
Maharashtra	1	-3	2	0	0	2	1	-2	2
Orissa	-4	-14	20	1	-9	25	-3	-11	18
Punjab	1	0	0	-1	-1	-1	1	0	0
Rajasthan	13	1	2	0	1	0	10	1	2
Tamil Nadu	22	15	5	-4	17	3	10	16	5
Uttar Pradesh	11	2	7	1	3	2	9	3	6
West Bengal	10	-3	13	-3	9	9	5	0	13
<b>All India</b>	<b>7</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>4</b>

## 6. Milk consuming population

Since the incidence of milk consuming households is on rise, it is important to understand its implications on the demand for the commodity given the fact that India has a huge mass of population to feed. The increasing number of total milk consumers in absolute term and its implications are vital in understanding the changing scenario of milk demand. At all India level, the total milk consumers has increased from 468 million to 734 million, witnessing an increase of 57 percent during 1987-88 to 2004-05. There were 266 million new consumers added into the fold. The additional consumers is logically a net effect of – additional population due to either population growth plus an inclusion of a segment that started consuming milk and possibly elimination of a group of people who have stopped consuming milk. Of these new milk consumers, about 70 percent have been added in rural areas.

If we check incremental consumers during two quinquennial rounds, about 12 million consumers increased annually during 1987-88 to 1993-94, 20 million annually increased during 1993-94 to 1999-2000 and between last two quinquennial rounds, the increase in milk consumers was 14 million per year.

If we look at the increase in milk consumer numbers at the country level both in rural and urban areas individually, it can be seen that the incremental number in rural areas is almost double than that of in urban areas. While in rural areas, the majority of the new milk consumers belonged to the states of Bihar, Karnataka, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal, most of the incremental numbers in urban areas were from Gujarat, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. The National Commission on Population Projection (2001-2026), GoI has projected higher growth in urban population in these states, corroborating the rapidly increasing urban milk consumers in these states.

**Table 6: Estimated milk consumers (in million)**

State	RURAL				URBAN				RURAL+URBAN			
	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>
Andhra Pradesh	28	33 (4.3)	40 (7.5)	42 (1.8)	11	13 (2.5)	18 (4.6)	16 (-2.2)	39	46 (6.8)	58 (12.1)	58 (-0.4)
Assam	8	9 (1.1)	9 (-0.1)	11 (2.1)	1	1 (0.3)	1 (0.2)	1 (0.0)	9	10 (1.3)	10 (0.0)	13 (2.1)
Bihar	19	25 (5.3)	32 (7.2)	47 (14.9)	3	3 (0.4)	5 (1.8)	6 (0.4)	22	28 (5.6)	37 (9.0)	52 (15.3)
Gujarat	22	24 (2.4)	27 (2.9)	28 (1.0)	9	12 (3.3)	13 (0.9)	15 (2.4)	31	36 (5.7)	40 (3.8)	44 (3.4)
Haryana	11	12 (1.7)	14 (1.3)	16 (2.1)	3	4 (1.2)	5 (0.7)	5 (0.6)	13	16 (3.0)	18 (2.0)	21 (2.7)
Himachal Pradesh	4	4 (0.3)	4 (0.5)	5 (0.7)	0	0 (0.1)	0 (0.0)	1 (0.1)	4	4 (0.4)	5 (0.4)	6 (0.8)
J&K	5	6 (0.2)	6 (0.2)	5 (-0.8)	1	1 (0.1)	1 (0.2)	2 (0.2)	6	7 (0.3)	7 (0.4)	7 (0.6)
Karnataka	22	25 (3.5)	4 (-21.1)	31 (26.6)	9	10 (1.8)	12 (1.5)	13 (1.5)	31	36 (5.2)	16 (-19.6)	44 (28.0)
Kerala	12	12 (-0.5)	14 (2.5)	17 (2.5)	3	4 (1.5)	5 (1.1)	6 (0.2)	15	16 (1.0)	20 (3.6)	22 (2.6)
Madhya Pradesh	20	21 (1.2)	26 (4.8)	35 (8.8)	8	10 (2.1)	12 (1.5)	13 (1.5)	28	31 (3.3)	38 (6.3)	48 (10.3)
Maharashtra	35	38 (2.3)	44 (6.6)	45 (1.1)	18	24 (5.5)	31 (6.9)	34 (3.2)	54	61 (7.8)	75 (13.5)	79 (4.3)
Orissa	6	7 (0.5)	6 (-0.7)	8 (1.9)	2	2 (0.3)	2 (0.5)	3 (0.2)	8	9 (0.8)	9 (-0.2)	11 (2.2)
Punjab	13	13 (-0.4)	15 (1.8)	16 (0.7)	5	5 (0.4)	7 (1.4)	7 (0.5)	18	18 (0.0)	21 (3.2)	23 (1.2)
Rajasthan	25	29 (4.1)	35 (6.3)	42 (7.2)	7	9 (1.3)	10 (1.3)	12 (2.1)	32	37 (5.4)	45 (7.7)	54 (9.3)
Tamil Nadu	14	19 (4.9)	23 (3.8)	22 (-0.9)	13	13 (0.8)	16 (2.8)	18 (1.5)	27	32 (5.7)	39 (6.6)	39 (0.6)
Uttar Pradesh	60	73 (13.4)	90 (16.9)	104 (14.1)	18	21 (3.2)	28 (6.3)	30 (2.4)	78	94 (16.6)	117 (23.2)	134 (16.4)
West Bengal	17	22 (5.2)	24 (2.5)	29 (4.3)	8	8 (0.3)	9 (1.0)	12 (3.2)	24	30 (5.5)	33 (3.5)	41 (7.4)
<b>All India</b>	<b>340</b>	<b>388</b> <b>(47.8)</b>	<b>469</b> <b>(81.2)</b>	<b>523</b> <b>(53.7)</b>	<b>128</b>	<b>154</b> <b>(26.1)</b>	<b>193</b> <b>(38.5)</b>	<b>211</b> <b>(18.6)</b>	<b>468</b>	<b>542</b> <b>(73.9)</b>	<b>662</b> <b>(119.7)</b>	<b>734</b> <b>(72.3)</b>

Figures in parenthesis indicates absolute increase/ decrease in population from previous round

## 7. Per capita consumption of milk for milk consuming population

Among the milk consuming population, the per capita monthly milk (liquid) consumption has increased from a level of 5.29 liters in 1987-88 to 5.59 liters in 2004-05. During this period, the same has increased from 5.29 liters to 5.59 liters in urban areas and 5.22 liters to 5.42 liters in rural areas. The urban consumption of milk in absolute volume has been rising over the years for over a decade

beginning 1987-88. The trend in per capita consumption of milk in milk consuming population follows the same pattern as has been witnessed in case of per capita consumption of milk for entire population. This is significant revelation in the consumption profile of milk consuming population in the country where in economic growth continuously spawn greater consumption growth.

During 1999-2000 to 2004-05, the growth in per capita consumption of milk declined in both rural as well as urban areas among the milk consuming population.

**Table 7: Monthly per capita consumption of liquid milk (ltrs) (base: milk-consuming population)**

State	RURAL				URBAN				RURAL+URBAN			
	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>	43 <sup>rd</sup>	50 <sup>th</sup>	55 <sup>th</sup>	61 <sup>st</sup>
Andhra Pradesh	3.69	3.68	3.72	3.94	4.25	4.76	5.21	5.20	3.84	3.99	4.18	4.28
Assam	2.41	2.31	2.40	2.63	4.09	3.52	4.34	3.96	2.53	2.42	2.61	2.75\
Bihar	3.93	4.58	4.60	4.25	4.71	5.60	4.99	4.69	4.04	4.70	4.65	4.30
Gujarat	4.77	5.41	5.83	5.43	5.71	6.47	6.99	7.11	5.04	5.76	6.21	6.02
Haryana	11.88	14.32	14.09	13.25	8.83	9.62	9.70	10.03	11.21	13.13	12.94	12.41
Himachal Pradesh	7.94	8.54	8.69	9.42	10.01	10.17	13.39	9.43	8.06	8.67	9.04	9.42
J&K	5.15	7.60	9.94	8.11	6.70	9.75	8.23	8.44	5.42	8.00	9.59	8.20
Karnataka	3.35	3.34	3.95	3.64	4.67	4.99	5.66	5.47	3.73	3.82	5.21	4.20
Kerala	3.42	3.87	4.14	3.92	4.35	4.36	4.67	4.78	3.59	4.00	4.28	4.13
Madhya Pradesh	3.80	4.55	4.46	4.51	4.89	4.86	5.12	4.63	4.11	4.65	4.67	4.55
Maharashtra	2.72	3.01	3.32	3.33	4.81	5.31	5.38	4.82	3.44	3.90	4.16	3.97
Orissa	2.66	3.09	2.99	3.04	5.48	4.98	4.90	4.47	3.20	3.48	3.50	3.38
Punjab	13.28	14.53	11.80	11.63	9.25	10.13	10.21	11.21	12.23	13.29	11.32	11.50
Rajasthan	8.23	10.98	10.01	9.67	6.37	7.85	7.95	7.58	7.80	10.26	9.55	9.21
Tamil Nadu	3.63	4.05	3.98	3.92	4.67	5.59	5.98	5.90	4.12	4.69	4.81	4.80
Uttar Pradesh	6.72	7.61	6.17	5.91	5.55	6.41	5.84	5.52	6.45	7.34	6.10	5.83
West Bengal	3.27	3.52	3.10	3.03	4.85	5.06	4.49	4.06	3.78	3.94	3.48	3.34
<b>All India</b>	<b>5.22</b>	<b>5.94</b>	<b>5.59</b>	<b>5.42</b>	<b>5.49</b>	<b>6.11</b>	<b>6.15</b>	<b>6.01</b>	<b>5.29</b>	<b>5.99</b>	<b>5.75</b>	<b>5.59</b>

**Table 8: % Change in monthly per capita consumption of milk over previous round**  
(base: milk-consuming population)

State	RURAL			URBAN			RURAL+URBAN		
	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>	50 <sup>th</sup> over 43 <sup>rd</sup>	55 <sup>th</sup> over 40 <sup>th</sup>	61 <sup>st</sup> over 55 <sup>th</sup>
Andhra Pradesh	-0.2	1.0	5.9	11.9	9.6	-0.3	3.9	4.7	2.4
Assam	-4.0	4.0	9.3	-13.8	23.2	-8.7	-4.3	7.9	5.3
Bihar	16.4	0.5	-7.6	18.9	-10.9	-6.0	16.4	-1.0	-7.7
Gujarat	13.2	7.9	-7.0	13.3	8.1	1.7	14.2	7.8	-3.0
Haryana	20.5	-1.6	-6.0	8.9	0.8	3.4	17.1	-1.4	-4.1
Himachal Pradesh	7.5	1.8	8.4	1.6	31.6	-29.6	7.6	4.2	4.2
J&K	47.5	30.7	-18.3	45.5	-15.7	2.6	47.6	19.8	-14.5
Karnataka	-0.4	18.1	-7.8	6.8	13.4	-3.3	2.5	36.2	-19.4
Kerala	13.3	7.0	-5.4	0.3	7.0	2.4	11.4	7.1	-3.6
Madhya Pradesh	19.8	-2.0	1.1	-0.6	5.5	-9.6	13.2	0.4	-2.6
Maharashtra	10.7	10.1	0.3	10.3	1.3	-10.3	13.6	6.6	-4.7
Orissa	16.1	-3.3	1.7	-9.2	-1.5	-8.7	8.9	0.7	-3.5
Punjab	9.4	-18.8	-1.5	9.4	0.8	9.8	8.6	-14.8	1.6
Rajasthan	33.5	-8.8	-3.4	23.2	1.3	-4.6	31.5	-6.8	-3.6
Tamil Nadu	11.7	-1.9	-1.5	19.7	7.1	-1.4	13.8	2.6	-0.1
Uttar Pradesh	13.2	-18.8	-4.2	15.6	-8.9	-5.5	13.8	-16.9	-4.4
West Bengal	7.6	-12.1	-2.1	4.5	-11.4	-9.5	4.4	-11.8	-3.9
<b>All India</b>	<b>13.9</b>	<b>-5.9</b>	<b>-3.0</b>	<b>11.4</b>	<b>0.6</b>	<b>-2.3</b>	<b>13.2</b>	<b>-4.0</b>	<b>-2.8</b>

### 8. Sources of growth of milk demand in household segment

If the total demand for milk is estimated in a simplistic mathematical form based on the available information, it is a sum product of per capita consumption of milk and total milk consuming population. As a logical extension of the foregoing analysis, it is important to diagnose the contributing factors that have stimulated milk demand and estimate the relative share of such contributing factors. The total change in milk demand can further be decomposed into three effects viz., contribution by milk consuming population effect, per capita consumption effect

and their interaction effect due to change in milk consuming population and per capita consumption. The formulation takes the following form:

$$\Delta D = P_o \Delta C + C_o \Delta P + \Delta C \Delta P$$

where,

D = Index number of milk demand in household segment

P = Index number of milk consuming population

C = Index number of per capita consumption

o = Base period value

$\Delta$  = Change during base and reference period

The results of decomposition analysis are presented through Table 7. If the increase in demand for milk in the urban areas during the period 1987-88 to 2004-05 is estimated at 100 per cent, then the decomposition of this growth takes the following contributions: effect of increase in milk consuming population is 69 per cent, the effect of increase in per capita consumption is 19 per cent and interaction effect is 12 percent. In rural areas, the results are almost in lines with that of urban areas.

Interestingly, if the same analysis is carried out for intra-quinquennial period, it is found that effect of contribution of

milk consuming population has been increasing, while the contribution of per capita consumption effect has been declining. It seems logical as the absolute increase in quantity of per capita consumption in rural and urban areas has been stagnated over years. These observations are universal across rural and urban areas. It suggests that the rise in milk demand in the household segment is primarily due to rise in milk consuming population, which can be attributed to demographic growth, increasing urbanization, income growth, change in food habits and other related factors.

**Table 9: Sources of growth in milk demand for household segment**

	RURAL				URBAN			
	43 <sup>rd</sup> to 50 <sup>th</sup>	50 <sup>th</sup> to 55 <sup>th</sup>	55 <sup>th</sup> to 61 <sup>st</sup>	43 <sup>rd</sup> to 61 <sup>st</sup>	43 <sup>rd</sup> to 50 <sup>th</sup>	50 <sup>th</sup> to 55 <sup>th</sup>	55 <sup>th</sup> to 61 <sup>st</sup>	43 <sup>rd</sup> to 61 <sup>st</sup>
Milk consuming population effect	36	128	84	64	57	82	98	69
Per capita consumption effect	56	-23	15	23	36	14	1	19
Interaction effect	8	-5	2	13	7	4	0	12
Total effect	100	100	100	100	100	100	100	100
<b>% Change in milk demand</b>	<b>29.9</b>	<b>13.8</b>	<b>8.1</b>	<b>59.8</b>	<b>34.1</b>	<b>25.8</b>	<b>7.1</b>	<b>80.5</b>

## 9. Conclusions

The general lessons obtained from the empirical material presented above suggest that consumption basket has been shifting towards non-food items and within the food regime, cereals are losing importance and making room for livestock products, fruits and animal protein foods. This is significant both in the rural and urban areas. Though per capita household consumption of milk has increased over a longer span of over 15 years, the increase in number of milk consuming population is indeed remarkable. These increases in turn induce higher demand aggregate demand for milk in the household segment.

If the factors associated in estimating milk demand are decomposed further, it is apparent that more and more people started consuming milk and it is the increasing incidence of milk consuming population that is fueling demand for milk. Sluggish growth in terms of per capita quantity of milk consumption within the premises of households opens another dimension. There may be greater

emphasis on the milk consumption in the non household segment – out of home consumption. Due to higher mobility of the population necessitated by employment opportunities and changing life styles and eating habits; non-household segment has been gaining continued significance for cereal based foods. Similar trend may hold true in case of milk and milk based products.

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## Experiences of the Survey on Unorganized Manufacturing Sector, NSS 62<sup>nd</sup> Round, 2005-06

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### 1. Introduction

1.1 Manufacturing sector is one of the important sectors of Indian economy. As per the NSS 61<sup>st</sup> round quinquennial survey on employment-unemployment (2004-05), the share of this sector in the total employment according to principal and subsidiary statuses taken together was about 8% for rural India and 25% for urban India. Further, the manufacturing sector had a share of about 16% in the GDP at factor cost during 2006-07.

1.2 Keeping in view the importance of this sector, the subject of unorganized manufacture sector has always remained an important theme of enquiry in the NSS. In fact, small scale manufacture was taken as one of the subjects in the very 1<sup>st</sup> round of NSS (1950-51) itself and thereafter, the topic was covered during NSS rounds 3-10, 14, 23 and 29 following the household approach. Subsequently, after the conduct of first Economic Census (EC) in 1977, the subject of unorganized manufacture sector has been covered in NSS rounds 33, 40, 45, 51, 56 and 62 following the site approach of enterprises for the purpose of listing and data collection.

### 2. Coverage and Survey Methodology of NSS 62<sup>nd</sup> Round

2.1 All manufacturing enterprises other than (a) those under the coverage of Annual Survey of Industries (ASI) and (b) government and public sector undertakings comprised the domain of units of 62<sup>nd</sup> round of NSS. In terms of National Industrial Classification (NIC) 2004, the survey covered the NIC 2-digit codes 15-37. In addition, enterprises engaged in cotton ginning, cleaning and baling (NIC 2004 code 01405) were also covered under the survey. It is to be noted that only those enterprises, which operated for at least 30 days (15 days in case of seasonal enterprises) during the last 365 days preceding the date of survey, were eligible for survey.

2.2 The survey in the central sample (i.e. fieldwork carried out mostly with the help of NSSO field staff) covered the whole of the Indian Union except (i) Leh, Kargil, Punch and Rajouri districts of Jammu & Kashmir, (ii) interior villages of Nagaland situated beyond five kilometres of bus route and (iii) villages of Andaman and Nicobar Islands which remain inaccessible throughout the year.

2.3 One salient feature of the sample design was the use of list frame of enterprises for urban areas, in addition to the usual area frame. This was done for the first time in order to capture sufficient number of relatively 'bigger' enterprises with a view to improving the overall estimate of gross value added per worker, total number of workers, total input, total output, etc. For this purpose, a list of 8,000 big non-ASI manufacturing enterprises<sup>1</sup> was prepared as per the data of the census of manufacturing enterprises conducted by Development Commissioner of Small Scale Industries (DCSSI) in 2003. All these units in the list frame were considered for survey without resorting to any sampling. However, only 2,260 units from the list frame could be surveyed and the remaining were ultimately treated as casualties due to various reasons – the major reason being that they were not eligible for survey since they were either government or public sector units or were under the coverage of ASI.

2.4 In the area frame, as usual, a stratified multi-stage design – with villages (panchayat wards in case of Kerala)/urban blocks as the first stage units (FSUs) and unorganized manufacturing enterprises as the ultimate stage units (USUs) – was adopted.

In case of large FSUs requiring hamlet-group (hg) / sub-block (sb) formation, one intermediate stage in the sampling involved the selection of two hg's/sb's from each FSU out of a minimum of three hg's/sb's formed in the FSU. As regards the first stage stratification, two basic strata were formed within each district of a State/UT: rural

<sup>1</sup> Big manufacturing units were identified based on the data of the census of manufacturing enterprises (2003) conducted by Development Commissioner of Small Scale Industries. While doing so, from the list of registered SSI units, those not registered under sections 2m(i) and 2m(ii) of Factories Act, 1948 and belonging to manufacturing sector were first identified. Thereafter, the units whose gross value of output in 2001 were more than 6 times the average output (Rs. 1,432,314) of all urban SSI units were separated out. Finally, from this truncated list, those (numbering 8,000) with 6 or more workers were identified.

stratum comprising all rural areas of the district and urban stratum consisting of all urban areas of the district. However, each city with a population of one million or more as per Census 2001 was invariably treated as a separate stratum by itself. For details of stratification, selection of sample FSUs and hg/sb selection, reference may be made to Appendix-B (Sample design and Estimation Procedure) of NSS Report Numbers 524-526 based on 62<sup>nd</sup> round.

2.5 All the eligible enterprises within the sample FSU (or its selected parts/segments as the case might be) were stratified into 2 broad second-stage strata by enterprise type i.e. Own Account Manufacturing Enterprise (OAME) and Non-Directory/Directory Manufacturing Establishments (NDME/DME)<sup>2</sup>. Each of these two broad second-stage strata was further divided into 3 broad manufacturing groups (BMG) i.e. BMG 1, BMG 2 and BMG 3. BMG 1 comprised eligible enterprises belonging to NIC codes 15-20 (NIC codes are described in the Annex). BMG 2 consisted of eligible enterprises belonging to NIC Codes 23, 27, 30-35 and 01405 while all other eligible enterprises belonging to the rest of the NIC codes under coverage formed BMG 3. Thus within a sample FSU, six ultimate second-stage strata were formed by jointly considering the broad second-stage strata and BMG. A total of 12 manufacturing enterprises – two from each ultimate second-stage stratum – were selected for detailed enquiry. Data from enterprises were collected from books of accounts if those were available. Otherwise, data were collected through oral enquiry.

### 3. Sample size

3.1 Out of 8,000 enterprises selected from the list frame, as stated already, data could be collected from only 2,260 enterprises. In the area frame, 80,637 enterprises (42,050 from rural India and 38,587 from urban India) spread over 4,798 villages and 5,125 urban blocks across the country were surveyed. Thus, considering the list frame and area frame both, a sample of 82,897 enterprises was covered in the 62<sup>nd</sup> round.

### 4. Key Findings of the Survey

4.1 The results of the survey on unorganized manufacturing sector undertaken in the 62<sup>nd</sup> round were brought out in the following three reports:

- NSS Report No. 524- Operational Characteristics of Unorganised Manufacturing Enterprises in India, 2005-06
- NSS Report No. 525- Unorganised Manufacturing Sector in India: Employment, Assets and Borrowings, 2005-06
- NSS Report No. 526- Unorganised Manufacturing Sector in India: Input, Output and Value Added

4.2 The following key statistics on characteristics of enterprises were generated from the survey and were presented in the reports at all-India (2-digit level of NIC'04) and State level.

- a. Estimated number of enterprises
- b. Type of ownership (i.e. Proprietary, Partnership, Ltd. Company etc.) of the enterprises and nature of operation (i.e. Perennial, Seasonal & Casual)
- c. Maintenance of accounts, status of registration, whether working on contract
- d. Estimated number of workers, type of worker (working owner, hired worker & other worker), nature of employment (full-time & part-time)
- e. Input, Output & Value added
- f. Fixed Assets, Gross Fixed Capital Formation
- g. Outstanding loan and sources of loan
- h. Interest paid

4.3 As per the survey, an estimated 17.07 million unorganised manufacturing enterprises in India were operative in India during 2005-06 of which nearly 71% were located in rural areas of the country. These enterprises employed about 36.44 million workers. Annual gross value added (GVA) by the unorganized manufacturing enterprises was worth Rs. 875.9 billions.

4.4 Percentage shares of rural and urban areas in the total annual GVA were nearly 43% and 57% respectively. The respective shares of OAMEs, NDMEs & DMEs in aggregate GVA were 32%, 24% & 44%. In this context, it

<sup>2</sup> OAMEs are enterprises which run without hiring any labour on a fairly regular basis. NDMEs and DMEs run by hiring at least one hired worker on a fairly regular basis – the distinction between the two categories being that the former (NDME) has a total of 5 or less number of workers (including the hired ones) while the latter engages at least 6 workers.

may be mentioned that in terms of number of enterprises, OAMEs, NDMEs & DMEs had percentage shares of about 86%, 10% and 4% respectively. This implies the relative importance of DMEs and NDMEs in terms of higher GVA per enterprise as compared to that by OAMEs. At all-India level, annual GVA per enterprise and GVA per worker were estimated at about Rs.51,307 and Rs.24,034 respectively.

4.5 Raw materials constituted about 85% of total operating expenses while manufactured products and by-products constituted nearly 80% of gross receipts of unorganized manufacturing enterprises. **Table 1** highlights some of the key findings of the survey separately for OAMEs, NDMEs and DMEs. It is to be noted that per enterprise values of assets, annual receipts, expenditure and GVA for DMEs are much higher than those of NDMEs. Similarly, per enterprise estimates of NDMEs are also much higher than those of OAMEs.

**Table 1: Key findings of the survey on unorganized manufacture sector, 2005-06**

India	Rural & Urban Combined			
	Survey characteristic	OAME	NDME	DME
(1)	(2)	(3)	(4)	(5)
1. Number of enterprises surveyed	55,045	18,060	9,792	82,897
2. Estimated number of enterprises (millions)	14.61	1.77	0.69	17.07
3. Number of workers (millions)	23.69	5.78	6.98	36.44
4. Key characteristics per enterprise:				
4.1 Number of workers	1.6	3.3	10.1	2.1
4.2 Value of assets: owned plus hired (Rs.)	32,734	248,601	744,246	83,780
4.3 Loans outstanding (Rs.)	1,023	34,440	201,102	12,548
4.4 Annual receipts (Rs.)	37,670	363,894	4,157,971	237,470
4.5 Annual expenses (Rs.)	18,467	244,592	3,599,458	186,163
4.6 Annual GVA (Rs.)	19,203	119,302	558,513	51,307
5. Annual GVA per worker:				
5.1 GVA per worker (Rs.)	11,846	36,543	55,052	24,034

4.6 **Table 2** presents estimated number of enterprises, number of workers and aggregate annual GVA for all-India by 2-digit of industry (NIC 2004). From the table, it may be seen that manufacture of food products and beverages (NIC 15), manufacture of tobacco products (NIC 16), manufacture of textiles (NIC 17), manufacture of wearing apparel, dressing and dyeing of fur (NIC 18), manufacture of wood and wood products etc (NIC 20), manufacture of fabricated metal products (NIC 28), and manufacture of furniture not elsewhere classified (NIC 36) are the major industries in terms of their shares in total number of enterprises/workers and annual GVA.

4.7 In **Table 3**, the state-wise estimates of the above three variables are presented for those major states only

with estimated number of unorganized manufacturing enterprises being at least one lakh<sup>11</sup>. It may be seen that states of Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal have major shares in the aggregate estimates of the three variables.

4.8 The results of 62<sup>nd</sup> round provide estimates of market value of assets holdings in different classifications of enterprises that are useful to derive further indicators. At all India level, market value of owned fixed assets per enterprise was Rs. 58,166 and that of hired fixed assets was Rs 25,614. About 69.8% of the total market value of fixed assets, both owned as well as hired, is in land and buildings and this share has progressively increased from

<sup>11</sup> Lakh = 10<sup>5</sup>

51<sup>st</sup> round and 56<sup>th</sup> round. Correspondingly, the share of plant and machinery in the fixed asset valued at 21.4% has progressively declined. As a measure of **capital efficiency**, the ratios of GVA to market value of fixed assets by NIC code and by state are presented in Tables 2 and 3. At all-India level, the ratio is 0.61 implying 61 paise contribution in GVA per one rupee value of fixed assets (owned plus

hired) at market price. As expected, there are certain variations in the ratios at the said levels of disaggregation. Rural-urban divergences for all-India are shown in **Table 4**. The difference in capital efficiency, however, is subjected to differentiated role of factors of production as well as to the differentiated interplay of factor market in the domain.

**Table 2: Estimates of number of enterprises, workers and annual GVA and their percentage distribution by NIC 2-digit**

NIC *Code	Estimated value				% Distribution			GVA to fixed assets ratio
	No. of Enter- prises (‘000)	No. of workers (‘000)	Annual GVA (Rs. Million)	Annual GVA per worker (Rs.) #	No. of Enter- prises	No. of workers	Annual GVA	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
01405	9	20	930.7	47,318	0.05	0.05	0.11	0.50
15	2601	6346	154058.8	24,277	15.25	17.41	17.59	0.59
16	2818	4199	28626.0	6,818	16.51	11.52	3.27	0.86
17	2568	6343	122342.4	19,289	15.04	17.40	13.97	0.60
18	3214	4930	93312.5	18,928	18.83	13.53	10.65	0.50
19	144	474	13579.7	28,674	0.84	1.30	1.55	0.67
20	2138	4059	54625.4	13,458	12.53	11.14	6.24	0.77
21	168	354	7098.5	20,040	0.98	0.97	0.81	0.43
22	118	411	20559.3	50,049	0.69	1.13	2.35	0.33
23	6	22	825.0	37,279	0.03	0.06	0.09	0.47
24	418	864	16322.3	18,892	2.45	2.37	1.86	0.58
25	72	277	14129.3	50,949	0.42	0.76	1.61	0.41
26	642	2336	66102.6	28,296	3.76	6.41	7.55	0.98
27	35	1129	11682.3	103,511	0.21	0.31	1.33	0.61
28	620	1658	90047.0	54,303	3.63	4.55	10.28	0.72
29	174	580	39713.6	68,434	1.02	1.59	4.53	0.60
30	1	10	771.5	76,178	0.01	0.03	0.09	0.98
31	111	269	13321.6	49,501	0.65	0.74	1.52	0.49
32	6	24	2190.3	92,939	0.03	0.06	0.25	0.56
33	10	33	2130.3	64,945	0.06	0.09	0.24	0.46
34	15	92	5473.4	59,462	0.09	0.25	0.62	0.80
35	25	111	5149.2	46,580	0.15	0.30	0.59	0.32
36	1152	2905	112291.0	38,650	6.75	7.97	12.82	0.65
37	4	14	574.2	40,104	0.02	0.04	0.07	0.42
<b>All</b>	<b>17071</b>	<b>36443</b>	<b>875856.7</b>	<b>24,034</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.61</b>

\* See Annex for the descriptions

# Likely to have errors due to rounding off

**Table 3: Estimates of number of enterprises, workers and annual GVA and their percentage distribution by major states**

State*	Estimated value				% Distribution			GVA to fixed assets ratio
	No. of enterprises ('000)	No. of workers ('000)	Annual GVA (Rs. millions)	Annual GVA Per worker (Rs.) #	No. of workers	No. of enterprises	No. of workers	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	1533	2939	46091.8	15,683	8.98	8.06	5.26	0.53
Assam	371	632	13616.9	21,529	2.17	1.74	1.55	1.27
Bihar	772	1453	20307.4	13,958	4.52	3.99	2.32	0.87
Chhattisgarh	207	458	8407.0	18,341	1.22	1.26	0.96	0.47
Gujarat	654	1852	63218.3	34,133	3.83	5.08	7.22	0.62
Haryana	230	544	27451.7	50,461	1.35	1.49	3.13	0.31
Himachal Pr.	107	165	5402.1	32,654	0.63	0.45	0.62	0.53
Jammu & Kashmir	173	319	12169.8	38,165	1.02	0.87	1.39	0.63
Jharkhand	586	949	13659.7	14,389	3.43	2.61	1.56	1.19
Karnataka	962	1974	55811.2	28,268	5.63	5.42	6.37	0.68
Kerala	659	1391	34199.8	24,586	3.86	3.82	3.90	0.48
Madhya Pradesh	855	1741	25316.5	14,544	5.01	4.78	2.89	0.68
Maharashtra	1126	2901	137329.3	47,332	6.60	7.96	15.68	0.58
Orissa	957	2024	19502.3	9,638	5.61	5.55	2.23	1.21
Punjab	293	601	22748.9	37,863	1.72	1.65	2.60	0.37
Rajasthan	636	1295	37937.1	29,287	3.73	3.55	4.33	0.61
Tamil Nadu	1482	3370	82382.0	24,449	8.68	9.25	9.41	0.51
Uttar Pradesh	2359	5288	122784.7	23,217	13.82	14.51	14.02	0.78
West Bengal	2753	5494	84339.4	15,351	16.13	15.08	9.63	0.90
<b>All-India</b>	<b>17071</b>	<b>36443</b>	<b>875856.7</b>	<b>24,034</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.61</b>

\* Major states only with estimated number of enterprises being at least 1 lakh

# Likely to have errors due to rounding off

**Table 4: Capital efficiencies for rural and urban India**

Sector	Estimated No. of enterprises	Total fixed assets (Rs. billions)	Total GVA (Rs. billion)	GVA to fixed assets ratio
(1)	(2)	(3)	(4)	(5)
Rural	12128266	469.75	380.28	0.81
Urban	4942554	960.44	495.58	0.52

4.9 Estimates of GVA per worker (GVAPW) based on the enterprise surveys of NSSO are used in the estimation of GDP by industrial activity. In this context, it may be useful to see how GVAPW behaves with the nature of enterprise in terms of the frame used, enterprise type, ownership type, duration of work, etc. **Table 5** highlights the findings. It is worth noting that GVAPW was much higher for the categories of enterprises like DMEs, those maintaining accounts, 'non-household' (i.e. other than proprietary & partnership) enterprises and those in the list frame.

**Table 5: Annual GVA per worker (Rs.) during 2005-06 as per nature of enterprise**

Enterprise type			Maintenance of a/c		Number of working hours per day		
OAME	NDME	DME	No	Yes	Less than 4	4-7	8 or more
11,846	36,543	55,052	17,888	138,794	5,688	11,171	33,169
Type of ownership		Type of frame (Urban)					
proprietary & partnership	Others	Area Frame	List Frame				
23,485	129,267	32,815	184,773				

## 5. Comparison with alternative data sources

5.1 Two other important data sources on manufacturing enterprises are the Annual Survey of Industries (ASI) and Economic Census (EC). While ASI is an annual exercise, the EC is conducted periodically – latest one being conducted during 2005. It would be of interest to compare the data from these alternate sources. But before doing so, we need to look at the coverage of these three sources. The term ‘unorganized manufacturing enterprises’ under the coverage of NSS 62<sup>nd</sup> round referred to all manufacturing enterprises not covered under the Annual Survey of Industries (ASI). All government and public sector enterprises were excluded from the coverage of NSS 62<sup>nd</sup> round but such enterprises forms part of the coverage of ASI. On the other hand, EC covers all types of enterprises irrespective of their ownership. In terms of National Industrial Classification (NIC) 2004 codes, NSS 62<sup>nd</sup> round covered the NIC 2-digit codes 15-37. In addition, enterprises engaged in cotton ginning, cleaning and baling (NIC 2004 code 01405) were also covered in NSS 62<sup>nd</sup> round to have parity with the coverage of ASI. Under the ambit of ‘manufacturing sector’, EC 2005 covered all manufacturing enterprises falling under NIC 2004 codes 15-37. Thus, in an ideal situation, total number of manufacturing enterprises considering both NSS 62<sup>nd</sup> round and ASI 2004-05 (fieldwork being conducted in 2005-06) after excluding those under NIC code 01405 should match with the number as per EC 2005. But from **Table 6**, it may be seen that total number of manufacturing enterprises as per NSS 62<sup>nd</sup> round and ASI 2004-05 taken together is much higher than those based on EC 2005. The similar kind of divergence is also there in respect of number of workers, although the exact magnitude of divergence is

somewhat lower because the under-reporting of units in EC is more with regard to the smaller units having relatively less number of workers.

**Table 6: Number of manufacturing enterprises and workers as per alternative sources**

Characteristic	NSS 62 <sup>nd</sup> Round (2005-06)*	ASI 2004-05*	NSS + ASI	EC 2005	% Divergence#
(1)	(2)	(3)	(4)	(5)	(6)
No. of enterprises	17061689	128122	17189811	8322205	-51.6

\* Excludes NIC 01405 # 100 x (col.5 – col.4)/col.4

5.2 **Table 7** below presents gross value added (GVA) as per NSS 62<sup>nd</sup> round (2005-06) and ASI 2004-05 and GDP at current prices (base year 1999-2000) according to National Accounts Statistics (NAS). It is seen that estimates as per NSS and ASI are much lower than those of NAS. It is also to be noted that the percentage divergence in the estimate between the NSS and NAS has increased from 40.5% during 2000-01 (the year when previous survey as per NSS 56<sup>th</sup> round was conducted) to 45% during 2005-06. We need to take steps to identify the reasons behind such divergences for taking necessary corrective measures. Main reasons of the said divergence could be grouped into two categories: one, probable under-reporting of receipts / GVA in the NSS and ASI and two, methodological issues in the compilation of NAS using various data sources.

**Table 7: GVA & GDP at current prices for manufacturing sector as per alternative sources**

NSS 62 <sup>nd</sup> Round (2005-06)	NAS 2005-06 (Unregistered Mfg. sector)	ASI 2004-05	NAS 2004-05 (Registered Mfg. sector)	NSS + ASI (Col. 1+3)	NAS (Col. 2+4)
(1)	(2)	(3)	(4)	(5)	(6)
Aggregate value (Rs. Billions)					
875.86	1593.34	2101.94	3126.22	2977.80	4719.56
% Divergence (NSS and ASI as compared to NAS)					
-45.0 (-40.5)	-	-32.8	-	-36.9	-

Note: Figure within brackets gives the percentage divergence for the year 2000-01.

## 6. Issues of concern and suggestions for future

**6.1 Size of the enterprise:** As per the NSS 62<sup>nd</sup> round, out of an estimated 17 million 'unorganized' manufacturing enterprises, nearly 2.34 lakh enterprises had at least 10 workers and about 34,000 of these units had engaged at least 20 workers. Ideally, such enterprises should be registered under the Factories Act, 1948 and be brought under the coverage of ASI. The standard NSS sample design is not appropriate to capture such bigger units in adequate number in the sample. Till steps are taken to include such units in the sampling frame of ASI, it is worth exploring the possibilities of introducing deeper stratification in the NSS sample design – both at the first stage and second stage of sampling – so as to ensure adequate representation of such units in the sample.

**6.2 Use of list frame:** It has been shown in Table 4 that GVA per worker of a list frame (LF) enterprise was much higher (Rs. 184,773) than that (Rs.32,815) of an enterprise belonging the area frame (AF). This reflects heterogeneity in the domain of enterprises. Further, in terms of numbers, the surveyed enterprises in list frame were only 0.05% of the estimated number of total enterprises in the urban sector. However, the aggregate GVA of list frame enterprises was about 0.9% of total GVA of unorganized manufacturing. Thus the list frame enterprises, though rare in the population, are distinctly significant in their contribution. Accordingly, it may be worth using both LF and AF in a survey of similar topic in future. However, to reap full benefits

of using the LF, the coverage of LF may be expanded by including more such units in the frame. To what extent the EC can be utilized for this venture must be explored. However, while developing such an LF, adequate care needs to be taken to ensure that the units included in the LF are really eligible for survey (i.e. not already covered under ASI frame or not government or public sector units, which are out of the coverage of unorganized manufacturing sector).

**6.3 Cooperation of respondents:** The final results based on any survey depend on the level of cooperation of respondents and the quality of response. The present survey revealed that nearly 4% of the respondents were busy or reluctant. Another 15% were cooperative but not capable. It needs to be seen how best these problems can be addressed.

**6.4 Length of the schedule:** There is no denying of the fact that size of the schedule should not be too large for improving the quality of response. Larger the length of the schedule, higher is the chance of primary data being affected by respondent's fatigue. In 16% of the cases / total number of sample enterprises, the canvassing time of the schedule of NSS 62<sup>nd</sup> round took 2 to 3 hours. In nearly 4% of the cases, the canvassing time exceed even 3 hours. It would be useful to cut down the length of the schedule so that primary data can be collected within a time period of 1 hour or so, at the most one hour and a half.

**Description of manufacturing activities under the survey coverage of NSS 62<sup>nd</sup> round**

NIC Code	Description
01405	Cotton ginning, cleaning and baling
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 Plating Materials
21	Manufacture of Paper and Paper Products
22	Publishing, Printing and Reproduction of Recorded Media
23	Manufacture of Coke, Refined Petroleum Products and Nuclear Fuel
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 Not Elsewhere Classified.
30	Manufacture of Office, Accounting and Computing Machinery
31	Manufacture of Electrical Machinery and Apparatus Not Elsewhere Classified.
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 Equipment
36	Manufacture of Furniture; Manufacturing Not Elsewhere Classified.
37	Recycling

## A NOTE ON SOME EXPERIENCES DURING NSS 63<sup>rd</sup> ROUND OF SOCIO-ECONOMIC SURVEY ON SERVICE SECTOR ENTERPRISES (EXCLUDING TRADE)

### CSO and NSSO

In this note, an attempt has been made to summarize the experiences of various divisions of NSSO and Economic Statistics Division of CSO based on the organizational papers from NSSO and CSO.

### 1. Salient Features of the Survey:

**1.1 Introduction** The 63<sup>rd</sup> Round survey (July 2006-June 2007) of National Sample Survey (NSS) was primarily devoted to the survey on enterprises in service sector (excluding trade) in the country. The other subject of enquiry covered in this round was usual annual survey of household consumer expenditure. Last survey of service sector enterprises was conducted in the 57<sup>th</sup> round of NSS during July 2001 to June 2002. The 63<sup>rd</sup> round was basically a repetition of the 57<sup>th</sup> round in terms of concepts and definitions. However, financial sector which was not included in 57<sup>th</sup> round was included in the coverage of 63<sup>rd</sup> Round.

**1.2 Objectives and Coverage:** Service sector is the most important sector of the economy in terms of income generation and second only to agriculture in employment generation. However, major data gaps existed in all the segments of this sector because of its impressive growth and reach. The survey on service sector enterprises was launched mainly with the objective to bridge the data gaps existing in this diverse sector and that could help the policy makers and planners. Beside, this survey has to enable the policy makers to understand and address the problems of production, income generation and manpower absorption in this growing sector.

**1.2.1** The objective of the household consumer expenditure survey was to provide an unbroken annual series of consumption pattern of rural and urban households. It was also to help in estimating number and percentage of persons below the Poverty Line in different States and UTs from the size distribution of monthly per capita expenditure.

**1.2.2** The NSS 63<sup>rd</sup> round survey covered all service sector (excluding trade) enterprises. However, service sector enterprises covered under the Annual Survey of Industries (ASI), Government and Public Sector

Undertakings were excluded. As such enterprises that came under NIC 2004 Divisions 55 (Hotel and Restaurants), 61 (Water Transport), 63 (Supporting and auxiliary transport Activities), 64 (Post & Telecommunication), 66, 67, 70-74, 80, 85, 90, 92-93, NIC 2004 Groups 602 & 659 and NIC 2004 Class 9191 & 9199 that are not run by Governments/PSUs/Local Bodies were covered in 63<sup>rd</sup> round. Information for the survey was collected during July, 2006 to June 2007.

**1.3 Sample Design:** In this round, a dual frame approach viz. a list frame and an area frame was adopted. This was the second survey in which a dual frame approach was used in a NSS round. The first time was in NSS 62<sup>nd</sup> round. Accordingly a list of about 1000 service sector enterprises containing names of financial enterprises supplied by RBI and names of other service sector enterprises supplied by M/o Company Affairs was used. All the eligible units in the list frame considering all its branches as one unit were considered for survey without resorting to any sampling. For the coverage of all other service sector enterprises in the universe, an area frame approach was followed for sampling the units. Besides these, in the area frame a separate segment 9 was formed comprising all the non-agricultural enterprises having 50 or more workers in the entire FSU and having operated for at least one day during last 365 days. All the eligible units of Segment 9 under coverage were surveyed without any sampling as was in the case of list frame. As a whole, 13997 FSUs (5608 villages and 8289 urban blocks) in area frame were allocated for central sample at all India level. In 63<sup>rd</sup> round, the following three types of schedules were canvassed:

- Schedule 0.0 - Listing of Households and Non- Agricultural Enterprises
- Schedule 2.345- Service Sector Enterprises (excluding trade) and
- Schedule 1.0 - Household consumer expenditure

The information was collected from 24 enterprises from eight second stage strata (SSS) for schedule 2.345. For schedule 1.0, information was collected in 6 households from three second stage strata in rural FSUs and 4 households from two second stage strata in urban FSUs.

## 2: Field related issues:

### 2.1 Conceptual/ Definitional and General Issues

2.1.1 The survey covered all types of enterprises, big and small, and the information on operating expenses, receipts, employment particulars, fixed assets, loan outstanding etc. was collected either through the book of accounts as provided by the units or orally through the interview. The field experience of the 63<sup>rd</sup> round shows that most of the units in service sector either do not maintain proper accounts or even if maintained, were very reluctant to present to the field staff. The records were obtained in a number of cases with great difficulty and after lot of persuasion. In the face of reluctance from owners, it is possible sometimes that the field official might not have insisted in using the records to avoid delays in survey work. As there was no legal obligation on the part of establishment, the field staff faced resistance in getting the information. Thus in a large number of cases the information was collected on interview basis and in such cases, the enterprises had the tendencies not to reveal the exact figures.

2.1.2 In a few cases, where the owners/operators of the enterprises lived outside or far from the FSU, their employees were unable to give any information and therefore the field officials had to spend longer time in searching for the right respondent. In a number of cases proprietors were reluctant to spare adequate time with the investigators for detailed enquiry.

2.1.3 Another major problem faced by the field officials was regarding use of two kinds of reference periods depending primarily on whether the enterprises under survey could provide information from their books of accounts or from oral enquiry. For enterprises providing oral information there were three kinds of reference periods, viz. a) reference month, b) reference year, and c) the last date of reference period. Again for the perennial and casual enterprises, reference month would refer to the last 30 days (preceding the date of survey) irrespective of the number of days of operation. For seasonal enterprises there were twin concepts of reference month, if the enterprise worked continuously for 30 days or more in the current season, the reference month referred to 'the last 30 days (preceding the date of survey)' and for enterprises which worked for less than 30 days in the current season, reference month referred to an average month in the last working season.

Also, if an enterprise was unable to provide information for the last 30 days but was able to provide for the latest completed calendar month, the calendar month was treated as reference month. Likewise, reference year was also changeable in nature and the field officials had to face difficulties with respect to the factors deciding the proper reference year / reference month/reference period under specific conditions. It was hard to keep in mind the wide range of concepts of reference period for different blocks and different items contained in schedule 2.345.

### 2.2 Specific Problems Associated with the Canvassing of the Schedules

2.2.1 Listing of Enterprises/Households and their Selection (Schedule 0.0).

2.2.1.1 In this round, a list of 998 enterprises as a list frame was provided for survey. Such enterprises were big *non*-ASI service sector units. However, during field survey, it was found that:

- (i) The lists provided by Reserve Bank of India and Ministry of Company Affairs were not up to date.
- (ii) Many of the units changed their places of operations as well as offices and some units were closed or had changed several hands.
- (iii) Majority of the units were already covered under Annual Survey of Industries. It was also found in a few cases that the units were involved in some other activity rather than service.
- (iv) There were lot of casualities as out of 998 list frame enterprises; only 438 enterprises could ultimately be surveyed.
- (v) In rural sample with very high population/area, formation of Segment 9 in Area Frame samples for listing big enterprises having 50 or more workers was found to be very time consuming (and created unnecessary fatigue among fieldworkers).
- (vi) There were some census 2001 towns and outgrowths (OGs) for which UFS updating works were not completed and such towns/OGs were selected as an FSU. In all such towns/OGs, listing of big enterprises for formation of Segment 9 was huge task for fieldworkers.

2.2.1.2 It was observed that in some cases a particular FSU was repeated 5 times in a sub-round and 11 times in the entire round. Even, repetition also occurred between State and Central samples. The real problem faced during canvassing of schedules in repeated FSUs was that even the cooperative informants turned hostile on subsequent visits.

2.2.1.3 The provision in the listing schedule for recording all NAEs in column 15 (serial number) of block-5a (list of households and non-agricultural enterprises) helped in preparation of the list of the service sector units with minimum omission. However, the transfer of entries from column - 19 and 17 from block-5a to block-5b sometimes resulted in copying errors. There were chances of omission of such enterprises, which were not in existence on the date of survey but operated during the last 365 days preceding the date of survey. There was also the possibility of omission of invisible enterprises like tuition taking, brokerage, etc at listing stage. There were enterprises, which carried out more than one activity simultaneously. Each of such activity was to be treated as separate enterprise if information for these activities was separately available. If accounts were not separable then the enterprise is classified as having mixed activity. In some cases the enterprises that carry out more than one activity simultaneously may not have been recorded correctly. Thus there were chances of omission of such enterprises. Difficulties were experienced to collect information for column 21 & 22 in block-5b on total number of workers including both household workers and hired workers (including apprentices, paid or unpaid) usually working on a working day during reference year for perennial and casual enterprises and during the last working season of the reference year for seasonal enterprises. The general tendency of the informants was to hide information on number of workers hired. The under reporting of the hired workers was mainly due to the application of Labour Act (**which?**). There were instances the informant changed versions regarding hired worker from listing stage to detailed enquiry stage (**number may be changing due to seasonality ?**)

2.2.1.4 As per procedural instructions, industries that fetched maximum earning/employment in case of mixed activities were to be recorded at the listing stage. This resulted in many enterprises doing mixed activities (trade with service or manufacturing with service) becoming

ineligible for survey coverage at listing stage as the shares of service activities of the enterprises were less than other activities.

2.2.1.5 It was found, in many cases that the informant denied the existence of a particular enterprise run from the house despite display of signboard for a particular enterprise.

2.2.1.6 Self Help Groups were generally not physically visible in sample FSU, so SHGs might have been missed at listing stage in some cases.

2.2.1.7 Preparation of frame for selection (8-second stage strata (SSS) in each segment 1&2) and selection of enterprises had been carried out in a very lengthy way using a fairly complex procedure, which had sometimes led to mistakes.

2.2.2 Survey on Service Sector Enterprises (Schedule 2.345)

2.2.2.1 Whenever a branch unit was selected in Area Frame whose head office was situated in another city, it was, in general, difficult to get the information from the branch unit. In many cases, the branch units showed resistance to provide the information. In some cases, the head office of enterprise was also not maintaining branch-wise details to furnish information. As per instruction, data on receipts, expenses, wages, rent, interest, etc. were to be apportioned using the number of workers in the selected branch and number of workers considering all the branches. This process was time consuming and generally information was obtained by persuasions and approximation.

2.2.2.2 For enterprises where data was to be collected for the last 30 days, sometimes a situation was encountered when the enterprise did not work during the last 30 days being lean period for the unit. In such cases, data in most of the blocks was left blank. Likewise in case of enterprises which operated only for two months during the reference year and where data was to be collected for last operating month, the enterprises found it very difficult to recall the information after a long period. The situation was more difficult in case of seasonal and casual type of enterprises.

2.2.2.3 Chartered Accountants and Advocates had a doubt whether the schedule was meant for them as all the possible services found place in sub-heading of the schedule except legal activities and accounting.

2.2.2.4 Some of the block and item specific problems and experiences of the field are as follows:

- i) Block 2.1: problem was felt while recording 'number of hours the enterprise normally worked in a day in item 206-207, 'location of enterprise' in item 220 for renters as they may not spend even five to ten minutes for the main activity as the tenant deposit the rent at bank.
- ii) Block 2.1: In case the ownership type of sample enterprise was proprietary or partnership, some information of this block e.g. items 209-216 were related to the working owner. Wherever the owner was not available, no other person could provide the desired information properly as almost all the information was of personal nature.
- iii) Bl.2.1: In a few cases informants/owners did not know under which Act their establishments were registered (item 229-235). Beside, in item 233, information about service tax registration was also difficult to obtain as informant showed reluctance assuming their enterprise was going to be levied service tax.
- iv) Bl. 2.2: There were difficulties in collecting information on age of transport vehicles in column 4 to 7 and their load capacity in column 7 as this information was not available with the informant in most of the cases.
- v) Bl.2.3: It was very difficult to collect information for items 252 to 257 in case of large cooperative society wherein a large number of members had taken loans from the SHG.
- vi) Bl.3: Enterprises engaged with transport activities were unable to provide information on expenses incurred on tyres, tubes and batteries (item 306) particularly in those enterprises where books of accounts were not maintained.
- vii) Bl.3: It was very difficult to collect information on item 316 and 317 in case of commercial properties which were rented out and the owner did not stay in the place of survey.
- viii) Bl. 4& 4.1: Bifurcation of receipts for those units having both Hotel and Restaurant facilities, was

difficult as separate accounts for both the activities were not maintained.

- ix) Bl.5: This block remained almost blank in case of those enterprises that had not maintained their books of accounts as various entries in this block were to be recorded from the balance sheet of the enterprise. There were difficulties in collecting information for this block particularly for items 511 to 533 as most of the enterprises did not have their books of accounts maintained and certain terminologies used in this block i.e. transfer to reserves (item513), gain on exchange(item538), excess provision written back(item 542) were less explained in the Instructions to Field Staff Volume-I.
- x) Bl.7.1: There were many cases of list frame enterprises having a large number of branches and getting details of each of them was extremely difficult and time consuming.
- xi) Bl.9 & 10: For those enterprises that provided information orally and whose working proprietors were not available, it was almost impossible to obtain information on market value of fixed/current assets as well as financial liabilities of the enterprise as informants were hesitant/ reluctant to give information. Further, where informant was proprietor himself, he intended to under report the asset figures and over report the liability figures. Hence, information in these blocks (could be obtained through approximation only?) were not exact.

#### 2.2.3 Consumer Expenditure Survey (Schedule 1.0)

This schedule besides being lengthy and time consuming posed specific problems as under:

- i) In case of consumption of vegetables and fruits (items 190-247 in block 5), generally, the informant failed to recall consumption of different items of fruits and vegetables quantity wise but was able to give an overall expenditure on fruits and vegetables. In fact even the period of 30 days was too long for these items.
- ii) Item 352: Imputation of value of gobar gas was almost impossible to the informant as well as Investigator.

- iii) It was difficult for the informants to recall exact number and amount of expenditure on clothing, bedding and footwear. They could only tell the overall expenditure. For example, reporting of number of under garments used in last 365 days for a large family was difficult and embarrassing. Likewise in some cases there was problem of recall lapses for minor repairs on durable goods. Even the bifurcated information on medical (institutional) goods and services were rarely available. Also information on sanitary napkins was difficult to be collected. This might have been clubbed with the other toilet items.

### 3: Data Processing issues

3.1 Introduction: The data of each subject of enquiry has its own distinctive features. Whereas the data of household expenditure is based on recall of consumption details by the respondent of the sample household, the data of enterprise survey is captured mostly from the office records of the sample enterprise. Collected data, of course, is always subject to various types of non-sampling error, due to lack of understanding of concepts and definitions on the part of the data collector, lack of adequate clarity in the instructions to the field staff, unavailability of data at the required level of details, respondent resistance, and so on. But in case of the enterprise survey, collected data suffers from an altogether different type of deficiency from that of household surveys. This is mainly due to problem in transformation of the financial figures available in the enterprise office records to the format of NSS schedule. In the small enterprises problems may be ascribed to non-disclosure of commercial information by the owner. While processing a huge mass of data as handled by Data Processing Division (DPD) of NSSO, various kinds of abnormalities in the collected data have been observed. Documentation of these along with the technical treatment they were subjected to will decide help planning and designing various stages of survey operations, data processing and analysis.

It is needless to emphasize that greater care at the stage of developing a suitable survey methodology and also at the stage of primary data collection will ultimately result in faster data processing, and in turn, quicker dissemination of survey results. An attempt has been made in this note to list the experiences gained while processing NSS

63<sup>rd</sup> Round data and also to suggest measures that might prevent recurrence of the major problems encountered, especially in surveys on unorganized sector enterprises, as the NSS goes into its 67<sup>th</sup> round.

### 3.2 Schedule 2.345: Service Sector Enterprises (excluding Trade)

3.2.1 Coverage: The 63<sup>rd</sup> round (July 2006 - June 2007) of NSS covered service sector enterprises (excluding Trade). All service sector enterprises, which are not covered under the Annual Survey of Industries (ASI), were under the coverage of the survey. Government and public sector undertakings, and a few other special types of enterprises were excluded. Service sector enterprises coming under the NIC category 55, 602, 61, 63, 64, 659, 66, 67, 70, 71, 72, 73, 74, 80, 85, 90, 9191, 9199, 92 and 93 were covered. That means data were collected from the following group of enterprises:

Sl. No.	Category of enterprises
1	hotels and restaurants (NIC-04 group 551 and 552)
2	transport (NIC-04 group 602, 611, 612, class 6301 and 6303 to 6309)
3	storage (NIC-04 class 6302)
4	communications (NIC-04 group 641 and 642)
5	real estate, renting and business activities (NIC-04 division 70 - 74 excluding 70103)
6	education (NIC-04 group 801, 802, 803 and 809)
7	health and social work (NIC-04 group 851, 852 and 853)

In 63<sup>rd</sup> round, DPD processed 51.92 lakh records of sch.2.345, in respect of 191,179 sample enterprises. It has always been the experience in the past that enterprise survey data are more difficult to control i.e. to bring it to a satisfactory level of accuracy through validation. In 63<sup>rd</sup> round, data validation work was completed by March, 2008, but the subsequent stages of tabulation, edit and post-tabulation checks had taken comparatively more time. However, data and reports relating to Sch.1.0 of 63<sup>rd</sup> round were finalised much earlier.

### 3.3 Experience in Sampling

3.3.1 Non-UFS towns and OG: In 63<sup>rd</sup> round, it was noticed for the first time that many newly declared small towns and outgrowths (OGs) which were declared as urban in census 2001, are being omitted in the NSSO frame, as UFS work was not yet done there. It was expected that newly emerging industries will mostly be found in these outgrowth urban areas, and hence for an enterprise survey it is very important to cover these areas. By careful manual scrutiny, a separate list of such towns/OGs was prepared and that was used as a frame for such towns and OGs in urban sector. All these non-UFS towns and OGs of Census 2001 were put in a separate urban sub-stratum and the whole town/ OG was considered as FSU for sample selection.

### 3.4 Data of List Frame Enterprises

3.4.1 List frame Enterprises: A list of about 1000 large enterprises spread across the country, where data were collected without any sub-round restriction. Out of 998 list-frame enterprises surveyed, as many as 574(=58%) were surveyed during last 3 months of the survey and despatched thereafter. As a result, receipts of the schedules of these big enterprises were concentrated towards the end of the data processing cycle. Perhaps, the field staff had to wait for the accounting year to complete, to get the required information from the enterprise.

3.4.2 Information relating to branches: The list frame enterprises did not have information on the State to which they/ their branches belonged. The enterprise and branches were excluded from the area frame to avoid duplicate estimation. Some special problems were faced while data processing of this category of enterprises:

- (a) Out of 998 list frame enterprises, information relating to branches were available only for 148 cases.
- (b) Significant no. of cases with no. of employees as low as 1-2 and large no branches. In fact, out of 998 enterprises, 564(=57%) did not report any worker at all. 66(=7%) reported = 5 workers. On the other hand, there were 55 enterprises reporting more than 1000 workers (4 of them with more than 28000 workers!).
- (c) Non-reporting of workers was mainly due to the fact that the respondents in the Corporate Head

Office were not able to provide the number of employees in branches.

- (d) Similarly, information on wages was altogether missing in respect of about 558(=56%) cases.
- (e) As major branches of some big enterprises were distributed in several states, state and sector code was not recorded/ data-entered in case of 148 (=15%) enterprises, out of which 25 reported to have branches. This caused problem in tabulating the data and references were made to the sample list at the time of tabulation.
- (f) Obviously, rural/urban classification of such enterprises made in the sample list may not be compatible with its actual operational data.

### 3.5. Detail Schedule data (Sch. 2.345)

The main data processing issues are as follows:

3.5.1 Block-void cases: Data were to be filled in specified sub-blocks in the schedules for different enterprise categories. For examples, for hotels and restaurants expenditure figures were to be given at sub-block (item.301-304), and the receipt details at sub-block (item.401-404). Accordingly, validation rules were also framed. But in a large number of schedules figures were not furnished in the respective blocks. Rather, they were clubbed into blocks titled 'other expenses' (Blk-3.1) or 'other receipts' (Blk.-4.1). In most of these cases, little corrections could be made. But each of these cases required detailed checking. Block-void cases that remained in the data even after validation and field references are presented below.

Sl. No.	Category of enterprises	No. of sample enterprises	No. of Block-void (Expenses Block)	% No. of cases	No. of Block-void (Receipt Block)	% No. of cases
1	hotels and restaurants (NIC-04 group 551 and 552)	30746	564	1.8	341	1.1
2	transport (NIC-04 group 602, 611, 612, class 6301 and 6303 to 6309)	42526	2049	4.8	639	1.5
3	storage (NIC-04 class 6302)	82	16	19.5	5	6.1

Sl. No.	Category of enterprises	No. of sample enterprises	No. of Block-void (Expenses Block)	% No. of cases	No. of Block-void (Receipt Block)	% No. of cases
4	communications (NIC-04 group 641 and 642)	22898	239	1	171	0.7
5	real estate, renting and business activities (NIC-04 division 70 - 74 excluding 70103)	20731	3096	14.9	1310	6.3
6	education (NIC-04 group 801, 802, 803 and 809)	12285	802	6.5	202	1.6
7	health and social work (NIC-04 group 851, 852 and 853)	11937	652	5.5	228	1.9

As an example, there were many cases of ‘Cybercafes’ which wrongly reported expenditure/ receipts in items 314 and 411 leaving blank their allotted sub-blocks i.e. items 316-317 and items 412-413.

3.5.2 Mixed activities: Another aspect of reporting at wrong sub-block was in respect of enterprises having mixed activities. Because of incorrect reporting, it was difficult to ascertain which activity was major and which one is minor.

In about 3% of the cases reporting mixed activity (8515 in number), NIC code of the second activity was not specified or invalid.

For small units with multiple activities and not keeping separate accounts it was difficult to assign correct NIC codes by looking at the supportive evidences available in the schedule.

### 3.6 Experiences at the Tabulation stage

3.6.1 Unacceptable GVA per worker: At the tabulation stage, the doubtful cases of large negative GVAs and unacceptable levels of GVA per workers in some of the State x Tabulation Category were again referred to the DP Centres for in-depth scrutiny. In many cases it was found, that data were collected for 1 year but it was reported as for one month ( as for oral enquiry, it is to be one month reference). Hence, medium-sized positive/negative GVA got unnecessarily multiplied by 12 resulting into large positive/negative GVA. One Computer-edit rule of making ‘blank’ number of workers into ‘1’ added further

complications to the problem. Some of these cases had upset the estimates even at State x Tabulation Category level. A fairly large number of such suspected cases were re-checked in detailed, before GVA tables could be finalised. This consumed additional time that was not expected.

3.6.2 Enterprises having Branches: In this round in addition to the area frame units, it was proposed to canvass 1000 list frame units. As per the lay out of the schedule design, for the list frame units, in Block 1, items 6 to 16 (i.e. ID particulars where state and sector code is recorded) were not required to be filled in. So there was a problem of obtaining state and sector code for the list frame units. Hence there was necessity to ascertain state and sector code for each of the list frame unit before tabulation. In this connection, an imputation procedure as follows was adopted:

In all the list frame units canvassed, whenever usable branch-wise details (bl 7.1) were available, the values are to be apportioned depending on the number of workers at the state and sector level. Wherever such information was not available, the state and sector code of the place where it was surveyed is to be taken. It was found that out of 1000 units, only in 148 units branch-wise details were available. For the remaining 852 units state and sector code had to be obtained by looking into the sample list. Any aggregate for any sector x state has to be derived in a proportionate manner — the proportion will be the ratio of number of workers of a branch to the total number of workers recorded in block 7.1.

While examining the validated data it was observed that the following problems could arise.

- (i) Enterprises having branches abroad (state code 40) were found in 6 cases. The proportional contribution of these branches will have to be excluded during state x sector aggregation.
- (ii) Enterprises were found having branches but state and sector code as blank. 25 such cases were found.
- (iii) Enterprises were found having large number of branches (as large as 177) with number of workers as low as 1 or 2. So distributing the workers into different state and sector code with male/female/working owner/hired/ full time / part time etc. was not possible.

Also total number of vehicles recorded in block 2.2 could not be segregated for each of the branches.

In view of the above difficulties, it was decided that branch-wise segregation of list frame data was not feasible and each unit was taken as single unit for estimation purpose. State and sector code of each unit was taken where it was canvassed as per sample list of the list frame. However some special tables were generated from these branch-wise details as per the procedure and tabulation plan provided separately. Had the provision for collecting information on state and sector for the list frame units could be made at the stage of designing the schedule, such complications and adjustments could be avoided at the tabulation stage, requiring lot of additional time for table and data finalization.

**3.6.3 Imputation of workers and emoluments:** At the time of tabulation, it was detected that in a large no. of cases, no. of workers were '0' or blank whereas emoluments were >0 and vice versa. It was verified from filled-in schedules also. Earlier, it was suggested by SDRD in the auto correction programme that whenever total numbers of workers in an enterprise were found to be '0' or blank, it should be replaced by '1'. Depending on type of ownership and enterprise type, item 702 / item 711 was made '1' and hence total no. of workers resulting in '1'. But subsequently, when tables were generated, it was found that GVA per worker and Annual emolument per worker were so abnormal that tables were not presentable. Thereafter, several alternative procedures for imputation of "workers from emoluments" and "emoluments from workers" were tried out, and each time fresh software had to be developed. As a result, full procedure of generating tables — starting from editing, imputation, generation of multiplier, posting of multiplier, generation of work files, generation of tables etc. — could be finished only after completion of a few long-drawn iterative cycles.

**3.6.4.** In about 60 % cases list frame units were found to be casualty as proper care was not taken to exclude ASI units from the coverage of the list frame units. But there were some List Frame Units which were undoubtedly under the coverage of the survey and data could not be collected for them due to some reasons. Some suitable multiplying factors were used in some cases to obtain the population figure for the List Frame Units. Otherwise, here were no multiplier (i.e., multiplier = 1.00) for all the List Frame Units.

### 3.7 New Challenges Faced in the 63<sup>rd</sup> Round

#### 3.7.1 New areas of data collection

The "public works" columns introduced in the demographic block, though not absolutely new to NSS as they had appeared earlier in Schedule 10 of the 62<sup>nd</sup> round, should be mentioned here as they seem to be still affected by the conceptual problems characteristic of new data items. Failure to make entries in the "no. of days worked" column as well as the "wages" columns when such entries were necessary, was frequent. The wages data were further messed up by a conceptual error: in many cases it was obvious that the investigator had entered the daily wage rate instead of the total amount received as wages in 365 days (note that the wage rate *was* required in Block 9 of Sch.0.0). Although a broad column heading "total wages received (Rs.)" had been provided in the block across the wages columns, it appears on hindsight that "total wages received (Rs.) in 365 days" would have been a better alternative.

*Example 1:* In this round instructions were given to record value less than Rs. 0.50 as zero. But the check "quantity=0 if and only if value=0" remained unaltered. For some cases where value thus became recorded as 0 though quantity consumed was > 0 (e.g. against matchbox), much time was wasted in validating the data. The anomalies remained and, as one might expect, a number of queries were received on this matter from users of unit level data.

### 3.8 Recurring Problems of the Consumer Expenditure Schedule

#### 3.8.1. Problems removable through redesign of schedules

The most obvious example of this kind of problem is the durable goods block (see **Annexure-I**). It is taken up at the end, when the informant has already become restless and the investigator has to be quick with his questions and writing down. At this point there comes a block that has the most complicated structure among all the blocks of the consumer expenditure. It has columns for purchase and repair, first-hand and second-hand, number and value, and finally, a code for 'whether hire-purchased'. Moreover the positioning of these columns does not follow a simple pattern. For example, the treatment of 'first-hand and second-hand' is not symmetric. The block thus lacks the symmetry and simplicity of most of the preceding blocks. Matters are further complicated by a completely avoidable attempt to shade or blacken out the cells for which

information is not deemed to be necessary. The logic behind the choice of cells to be shaded is not always clear. The fall-out is that entry in a row is sometimes planned to start from col. 3, sometimes from col. 4, sometimes from col. 5 and sometimes from col. 6. It is not at all surprising, under the circumstances, that the entries for numbers purchased or codes for 'whether hire-purchased' get entered in the value columns, creating cars worth Re.1 or Rs. 2 to the bewilderment of unit level data users.

### 3.8.2 Problems removable through more comprehensive instructions

The range of items of human consumption is so enormously wide that one cannot have an item in the schedule for every kind of food that is consumed in India. Thus, many items in the schedule have each got to cover a range of foods or non-food articles. This being so, it is the job of the instructions manual to specify, at least for all the commonly consumed food and non-food articles, the exact item in the schedule against which consumption of that article is to be recorded. Otherwise, a great deal of consumption will be missed, giving the estimates a downward bias. Under the circumstances, it is inexplicable that a food as widely consumed in India as '*papad*', which, in fact, has a strong claim to be accorded the status of a separate item, has yet to find a place either in the schedule or in the instructions. On the other hand '*ganja*', in spite of being rarely reported and attracting data of doubtful quality, continues to enjoy separate- item status when it is high time it is clubbed with "other intoxicants". FOD officials have, during this round as in earlier rounds, expressed their ignorance as to where '*papad*' is to be reported.

It needs also to be emphasized that the item break-up of the group "beverages, refreshments and processed food" needs to be examined afresh in the light of the growing importance of this group with economic development and the aggressive marketing strategies of multinational corporations. For one thing, it preferable to have a separate sub-group for ready-to-eat snacks consumed away from home such as *samosas*, *chowmein*, *paw bhaji*, etc., as opposed to packets of semi-processed food such as "chow", *papad*, Maggi noodles, etc. There are two reasons for this. One is that separating the two types of processed food helps and increases recall. The other is that prices of the 'ready-to-eat' variety are typically higher, and the calorie content per rupee commensurately lower.

### 3.9 Problems avoidable through better field work

A great variety of data problems fall into this category. One example is the NIC and NCO codes of the household characteristics block (Block 3). These are often inconsistent with the household industry and occupation descriptions. They are also often inconsistent with household type, reported in the same block. These are persistent problems, suggesting that some training needs to be specially conducted, or some training time specially set aside, for these items alone.

Other examples of recurrent data deficiencies that can be overcome through better field efforts include data on quantity. Cases of missing quantity, or quantity inconsistent with value, can be easily detected and corrected through field scrutiny and unnecessary editing at later stages avoided.

### 3.10 Problems due to non-cooperativeness of informants

It is well-known that of all schedules, the consumer expenditure schedule remains the one which arouses the greatest amount of suspicion and hostility among informants, especially of the affluent variety. This is mainly because it appears to unnecessarily intrude upon the privacy of the household. It is quite possible that cases of missing quantity or value, for instance, arise from the informant's refusal to answer not one but two questions, one on quantity and another on value, on even the most unimportant food articles such as chillies and capsicum. An attempt should be made in every round to reduce schedule bulk by weeding out the items with least contribution to the average MPCE in the preceding round.

Ultimately, the solution to such problems depends on the collective will of the NSS and its stakeholders to collect realistic data.

### 3.11 Schedule 0.0: List of Households and Non-agricultural Enterprises

The following are the main observations on this schedule.

- (a) High casualty in SSS: In this round of enterprise survey, 8 SSS's were to be formed in each area-frame FSU, and 24 enterprises were to be surveyed from each FSU. But in reality, only 190,181 enterprises were surveyed in 12,898 such FSUs,

giving a per-FSU count of enterprises of 15. Thus many of the SSS's had only a few enterprises, which might have affected the multiplier and reliability. Average number of enterprises surveyed in each SSS is given below:

SSS no.	Avg. no. of enterprises surveyed	
	Without HG* formation	With HG formation
1	2.00	1.53
2	1.59	1.45
3	1.19	1.27
4	2.75	2.43
5	3.89	3.27
6	4.25	2.59
7	2.44	2.19
8	11.70	8.41

\*Hamlet Group (HG)

It may be seen that SSS-8 had been grossly over-sampled, at the cost of inadequate netting of other classified types of enterprises. In SSS-8, i.e. group of unclassified OAEs, as many as 1,23,667 enterprises were listed, which is 65% of the total number of area-frame enterprises.

- (b) Misclassification of enterprises into SSS at listing stage: Extent of differences in classification into SSS at listing stage and after canvassing the detailed schedule was found to be negligible. The table below gives the figures:

SSS number	As per NIC code in the Detailed Schedule	At listing stage
1	1892	1943
2	665	657
3	254	221
4	8922	9848
5	30295	29638

SSS number	As per NIC code in the Detailed Schedule	At listing stage
6	11662	14114
7	10624	10293
8	148041	123667

- (c) Segment 9 enterprises: There were 202 FSUs under Segment 9, having 378 eligible enterprises in them. Hence average number of sampled enterprises was only about 2 per FSU.
- (d) NIC codes recorded under col. 17 (NIC) did not match with the description of col.16 (description of activities).
- (e) Discrepancies were found in case of compensation rule in the event of shortfall of enterprises. The prescribed priority order was not followed there.
- (f) In Col.1, Block 2, the figures were reported against house no. with alphabet, hyphen, slash, etc. As the data entry package did not allow entry of alpha characters, the data transcription has been made by ignoring hyphens, slashes and other non numerical characters. Had the field personnel been sensitized in time to the implications of recording such characters, much time spent on an unnecessary data cleaning job would have been saved.

### 3.12 Misclassification of enterprises among the different second stage strata

The misclassification of enterprises among the different second stage strata, has been examined by the Bangaluru centre (See **Annexure-IV**).

3.12.1 To study the extent of the misclassification of the enterprise among the Second Stage Strata, the data with respect to NIC code, and enterprise code, were compared with Second Stage Strata classification. Accordingly, we have arrived the frequency of misclassification as indicated below.

SR	STATE/ SECTOR	No. of SSUs in Processed	No. of SSUs in Error	R-1	R-2	R-3	R-4	R-5	R-6	R-7	R-8	R-9	R-10
I	KTK(R)	855	5	1	0	0	2	1	0	0	1	2	1
	KTK(U)	1595	22	2	0	0	11	2	1	5	1	4	5
	TN(R)	2208	15	3	0	0	4	1	1	2	4	4	6
	TN(U)	2935	42	2	4	0	8	8	2	9	9	15	19
II	KTK(R)	994	5	0	0	0	0	0	0	4	1	0	1
	KTK(U)	1569	16	0	0	0	9	0	0	2	5	0	7
	TN(R)	2221	7	0	0	0	2	0	0	0	5	0	5
	TN(U)	2705	23	0	1	1	4	2	0	8	7	2	10
III	KTK(R)	771	4	0	0	0	3	0	0	0	1	0	1
	KTK(U)	1263	12	0	0	0	5	3	2	0	2	3	4
	TN(R)	1969	5	0	0	0	5	0	0	0	0	0	0
	TN(U)	2176	14	1	0	0	4	0	1	3	5	1	9
IV	KTK(R)	973	6	0	0	0	3	2	0	0	1	2	1
	KTK(U)	1322	23	3	0	0	12	3	0	0	5	6	5
	TN(R)	1979	2	0	0	0	0	0	0	0	2	0	2
	TN(U)	1987	18	1	0	0	4	7	2	0	4	9	6
Total		27522	219	13	5	1	76	29	9	33	53	48	82

(Rules are enclosed as **Annexure-V**)

3.12.2 In few cases we have identified that the enterprise code reported in the listing schedule differs from the detailed schedule 2.345. For example, in listing schedule enterprise was reported as “OAE”, while in the detailed schedule the same was reported as “Establishment”.

3.12.3 The coding structure is not uniform in the listing as well as detailed schedule 2.345. The coding was ‘1’ for establishments and ‘2’ for own account enterprises in listing schedule, where as in schedule 2.345, the coding was ‘2’ for establishments and ‘1’ for own account enterprises. This different coding structure may be one of the reasons for the misclassification. This may lead to confusion for the field investigator in giving proper coding.

3.12.4 For example, all establishments having NIC code 6301,6303,6304,6309 etc. should have been classified

under SSS4. But as per instructions NIC 6302 should go to SSS2 and 6305, 6306 should go to SSS5. Such a robust classification may lead to confusion in classifying the establishments/OAEs by the investigators.

3.12.5 On examining the distribution of errors across the second stage strata 219 no. of SSUs in error were observed out of 1632 FSU’s canvassed. The patterns of error were not randomly distributed, but more concentrated in SSS4, SSS5, SSS7 and SSS8. This would probably have overall impact on the estimation.

3.12.6 An attempt was made to classify the 219 misclassified SSS out of 27522 SSS canvassed. These schedules are classified into appropriate SSS with the help of NIC and establishment codes. The details are given below.

SSS	1	2	3	4	5	6	7	8	Total
<b>Total Schedules Canvassed</b>	<b>420</b>	<b>99</b>	<b>39</b>	<b>1411</b>	<b>4345</b>	<b>3671</b>	<b>1437</b>	<b>16100</b>	<b>27522</b>
<b>Wrong Classification</b>	<b>13</b>	<b>5</b>	<b>1</b>	<b>76</b>	<b>29</b>	<b>9</b>	<b>33</b>	<b>53</b>	<b>219</b>
<b>Correct Classification</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>137</b>	<b>15</b>	<b>5</b>	<b>41</b>	<b>219</b>
<b>Net</b>	<b>415</b>	<b>95</b>	<b>38</b>	<b>1347</b>	<b>4453</b>	<b>3677</b>	<b>1409</b>	<b>16088</b>	<b>27522</b>
<b>Percentage Change</b>	<b>-1.2</b>	<b>-4.0</b>	<b>-2.6</b>	<b>-4.5</b>	<b>2.5</b>	<b>0.2</b>	<b>-1.9</b>	<b>-0.1</b>	

3.12.7 It may be observed from the above table, the estimates relating to SSS2, SSS3, SSS4, and SSS7 are overestimated, where as that of SSS5 is underestimated. It may be inferred from the above, such a robust classification will have impact on the estimation.

#### 4. Certain conceptual issues and operational experience

**4.1 Introduction:** Schedule of enquiry designed for enterprise survey of NSS 63<sup>rd</sup> round was one of the most complex schedules designed for any enterprise survey in the history of NSS. In the course of field-work and data processing and tabulation, considerable difficulties were experienced. After the trial tables were generated, considerable efforts were put in to remove the anomalies in the tables owing to omissions or commissions in the schedule designing stage and data collection stage. The following sections give a critical assessment of enterprise survey of NSS 63<sup>rd</sup> round based on the experience of tabulating the results.

#### 4.2 Issues related to sample size:

4.2.1 The issue of sample size needs proper consideration for giving disaggregated estimates like 'all-India x Tabulation category', 'State x Tabulation category' etc. As for example, 'storage and warehousing' units not covered under ASI were surveyed in NSS 63<sup>rd</sup> round. But estimates generated for 'estimated number of enterprises', estimated number of workers, GVA per worker etc. is subject to high relative standard (RSE) error. The following table may be seen.

**Table 1: Relative Standard Errors (RSE) by sector**

Storage and Warehousing (I1)	Relative Standard Error (RSE)	
	Rural	Urban
Est. no. of enterprises	44.7	20.2
Est. no. of workers	48.0	38.6
GVA per enterprise	20.0	44.79
GVA per worker	28.3	23.5

4.2.2 GVA estimates of State x Tabulation Category (I1) have come blank in many states in the tabulated results though such estimates were generated in 57<sup>th</sup> round survey. This is possibly because the number of FSUs surveyed in 63<sup>rd</sup> round (13271 FSUs) was much lower than the same for 57<sup>th</sup> round (15869 FSUs). Consequently, in the selected villages and UFS blocks in several states during listing stage, no sample enterprise was found under 'storage and warehousing (I1)'. To illustrate, State-wise sample-size under tabulation category I1 in 57<sup>th</sup> round and 63<sup>rd</sup> round is presented in **Annexure-II**. Only 82 sample enterprises were surveyed in 63<sup>rd</sup> round as against 726 enterprises in 57<sup>th</sup> round.

#### 5. Divergences in the Estimates of Number of Establishments and Workers Engaged in the Services Sector in India as per NSS 63<sup>rd</sup> Round and Economic Census 2005

**5.1 Introduction:** Apart from the NSS follow-up surveys, information on number of establishments and workers is also available from the Economic Censuses (EC) conducted from time to time. The last EC was conducted during 2005. Although survey period of NSS 63<sup>rd</sup> round

(2006-07) differs from that of EC 2005, it may be useful to study the closeness of the related estimates based on the two sources. Scope of this paper is confined to this study with a view to identifying the sub-domains/activities within the services sector where the divergence is more prominent so that remedial corrective measures can be taken in future.

NSS 63<sup>rd</sup> round did not cover establishments belonging to government and public sector. Accordingly, figures based on EC 2005 presented in this report do not include such establishments to make the comparison with the NSS meaningful. Further, in all the statistical tables, only those activities of services sector have been considered for which separate estimates are available in the released NSS reports.

## 5.2 Findings on the divergences in the alternative estimates

### A. All establishments taken together

**Table 2** shows the divergence in the number of establishments and number of workers in terms of ratio of NSS estimate to that of EC. It may be seen that, in general, across all activities except hotels and storage & warehousing, NSS estimate is much higher than that of EC. The divergence is quite alarming in case of communications, non-banking financial intermediation, and insurance & pension funding. The time difference in the conduct of fieldwork of the two sources cannot probably explain the said divergence.

**Table 2: Divergence with regard to number of establishments and workers**

Activity	Number of establishments		Ratio of NSS to EC	Number of workers		Ratio of NSS to EC
	NSS 63 <sup>rd</sup> Round	EC 2005		NSS 63 <sup>rd</sup> Round	EC 2005	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hotels	69318	215500	0.32	440658	769721	0.57
Restaurants	1990393	1249438	1.59	4693097	2878265	1.63
Storage and Warehousing	2719	95221	0.03	17910	263707	0.07
Communications	1893347	623994	3.03	2665392	1101650	2.42
Non Banking financial Intermediation*	1285330	98429	13.06	5332671	325632	16.38
Insurance and pension funding	228718	66372	3.45	437814	164796	2.66
Real Estate, renting and Business activities	1400966	996398	1.41	3098087	2572698	1.20
Education	1041208	544418	1.91	3873975	2827658	1.37
Health and Social work	1094815	596334	1.84	2181238	1655093	1.32
Other Community, social and personal services	3128230	2372069	1.32	5088172	4342998	1.17
<b>All</b>	<b>12135044</b>	<b>6858173</b>	<b>1.77</b>	<b>27829014</b>	<b>16902218</b>	<b>1.65</b>

\* Excluding insurance and pension funding.

### B. Divergence by type of establishment

If we look at the extent of divergence in the figures of both number of establishments and number of workers by type of establishments in terms of whether they hired workers or not, the former being categorized as Own Account Establishments (OAEs), interestingly it reveals that

(see **Tables 3 and 4**) estimates of number of OAEs as per NSS are much higher than those of EC across the activity categories except hotels and storage & warehousing. Reverse is the case with 'Other type of establishments' which operated with the help of hired workers. For such units, EC figures are generally found to be on the higher side.

**Table 3: Divergence in the total number of establishments by type of establishment**

Activity	OAE		Ratio of NSS to EC	Others		Ratio of NSS to EC
	NSS 63 <sup>rd</sup> Round	EC 2005		NSS 63 <sup>rd</sup> Round	EC 2005	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hotels	8110	89156	0.09	61208	126344	0.48
Restaurants	1540298	742904	2.07	450095	506534	0.89
Storage and warehousing	678	42124	0.02	2041	53097	0.04
Communications	1753260	428939	4.09	140087	195055	0.72
Non Banking financial Intermediation*	1209330	44866	26.95	75999	53563	1.42
Insurance and pension funding	198964	45252	4.40	29754	21120	1.41
Real Estate, renting and Business activities	1039673	538987	1.93	361293	457411	0.79
Education	712596	199057	3.58	328612	345361	0.95
Health and Social work	813315	311335	2.61	281500	284999	0.99
Other Community, social and personal services	2855429	1519973	1.88	272802	852096	0.32
<b>All</b>	<b>10131653</b>	<b>3962593</b>	<b>2.56</b>	<b>2003391</b>	<b>2895580</b>	<b>0.69</b>

**Table 4: Divergence in the total number of workers by type of establishment**

Activity	OAE		Ratio of NSS to EC	Others		Ratio of NSS to EC
	NSS 63 <sup>rd</sup> Round	EC 2005		NSS 63 <sup>rd</sup> Round	EC 2005	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hotels	14724	138361	0.11	425934	631360	0.67
Restaurants	2654365	1021580	2.60	2038731	1856685	1.10
Storage and warehousing	787	49369	0.02	17123	214338	0.08
Communications	2227525	481166	4.63	437867	620484	0.71
Non Banking financial Intermediation*	4879945	84558	57.71	452726	241074	1.88
Insurance and pension funding	211839	49306	4.30	225975	115490	1.96
Real Estate, renting and Business activities	1292441	645557	2.00	1805646	1927141	0.94
Education	774060	278145	2.78	3099915	2549513	1.22
Health and Social work	896497	384930	2.33	1284741	1270163	1.01
Other Community, social and personal services	4063251	1998940	2.03	1024921	2344058	0.44
<b>All</b>	<b>17015434</b>	<b>5131912</b>	<b>3.32</b>	<b>10813579</b>	<b>11770306</b>	<b>0.92</b>

\* Excluding insurance and pension funding.

### C. Divergence by rural and urban

The divergence in the alternative estimates by rural and urban is shown in **Table 5**. Problem is relatively more in

case of rural. The divergence is alarmingly high in case of establishments in the non-banking financial intermediation located in the rural areas.

**Table 5: Divergence (ratio of NSS estimate to EC) by rural and urban**

Activity	Number of establishments		Number of workers	
	Rural	Urban	Rural	Urban
(1)	(2)	(3)	(4)	(5)
Hotels	0.13	0.49	0.20	0.76
Restaurants	1.56	1.64	1.58	1.67
Storage and warehousing	0.03	0.03	0.05	0.07
Communications	3.82	2.52	3.62	1.87
Non Banking financial Intermediation*	26.04	2.72	35.25	3.28
Insurance and pension funding	4.73	2.77	3.63	2.41
Real Estate, renting and Business activities	1.43	1.39	1.18	1.21
Education	1.89	1.93	1.28	1.44
Health and Social work	2.43	1.34	1.58	1.19
Other Community, social and personal services	1.46	1.10	1.37	0.94
<b>All</b>	<b>2.03</b>	<b>1.50</b>	<b>2.10</b>	<b>1.33</b>

\* Excluding insurance and pension funding

### 6. Suggestions

6.1 In each of the sample FSUs, eligible enterprises were divided into 8 Second Stage Stratum (SSS). For selection of sample enterprises, a separate block 5b was provided with 24 columns in which first two columns were copied from the previous block 5a. In some cases, there was possibility of errors while transferring entries from block 5a to block 5b. The space provided in different columns for second stage stratification was too less hence there was possibility of error in formation of SSS. Most of the fieldworkers were of the view that SSS may be minimized to ensure correct sample selection if possible.

6.2 On the whole the experiment of list frame and its mixing with the area frame complicated the field work. As far as possible, it should be avoided in future surveys.

6.3 The list frame enterprises did not respond favorably. Similar problem was faced in case of big enterprises (having 50 or more workers). Many of the units were either reluctant or/and provided data in a haphazard manner. Many enterprises, despite maintaining books of accounts neither

provided books of accounts nor revealed exact figures where information was collected orally.

6.4 While defining concept of household it has been stated that foreign nationals and their domestic servants will not be listed. However, if a foreign national becomes an Indian citizen for all practical purposes, he/she is to be listed as per definition provided in para 1.9.2(iv) at page A-17. The term 'becomes Indian citizen for all purposes' is not clear and should be elaborated. Similarly, now a days, period of under trial prisoners in jail extends up to years together and as per definition provided in para 1.9.2(ii) at page A-17, these persons are to be listed in their parent households. Keeping in view of long term stay at jail of under trial prisoners, it would be better to exclude under trial prisoners who are in jail for more than six months.

6.5 The schedule 2.345 was most difficult to be canvassed. It took a lot of time in motivating the informants for response and required a lot of probing for getting reliable data. Either the units (both list/area frame and other service sector units) in businesslike manner did not have time to

spare or were busy in narrating their problems of facilities and finances and apathy of Govt. machinery. Besides, various terminologies used in the schedule were purely technical in nature for which elaborate instructions must be provided to the field staff. A better understanding of balance sheet is required while canvassing in those enterprises that are providing information from their books of account for which training to field staff by the experts of balance sheet could be helpful.

6.6 There should be some space in the schedule to carry out calculations in the schedule 2.345 so that it could be rechecked at any time for accuracy of data.

6.7 There should be some legal binding on enterprises to provide information pertaining to their operational characteristics which could be helpful in getting proper response from reluctant informant particularly big enterprises.

6.8 In schedule 1.0, it was difficult for the informants to recall exact number and amount of expenditure on clothing, bedding and footwear etc. and for minor repairs on durable goods which had the reference period of last 365 days. They could only tell the overall expenditure. It is suggested that 7 days reference period may be kept for food items like edible oil, eggs, fish and meat, vegetable, fruits, spices, beverages etc.”

6.9 The informants were hesitant in giving information on jewelry items and sanitary napkins. The item on sanitary napkins may be clubbed with the other toilet items.

6.10 The feedback indicates a considerable improvement in the awareness among people about NSSO. There is a need for enhancement of funds for the advertisement of NSSO activities particularly through electronic media.

6.11 Over last five decades or so, field conditions have vastly changed, however, the service conditions of the field officials have not changed much. They need motivation in terms of recognition or incentive awards. Besides, proper training on behavioral science and psychology, they should be equipped with NSS survey results, pamphlets etc. to enable them to deal with urban informants.

6.12 Enterprises having books of accounts were allowed to provide information orally if they chose to. This created an additional category of enterprises as far as provision of information was concerned, which was given

a separate code. Again, the code entered was vital for interpretation of the data collected. Just like 62<sup>nd</sup> Round, this aspect added an additional dimension of complications into the data, which required more resources in data processing.

6.13 In many cases copy of the balance sheet was attached. DPD scrutinizing staff had no prior knowledge of reading a balance sheet for checking the reported figures in the schedule. Some exposure/brief training on accountancy before the commencement of the data processing activities would have been very useful. In fact, such training may be held for the Field Staff and DPD staff together, whenever enterprise surveys are taken up.

6.14 Had the issue of treatment of the enterprises having branches been planned and settled earlier, spending additional time at tabulation stage could have been avoided.

6.15 The absence of the sub-round restriction causes bulk of the schedules from these categories to be received at the very end of the survey period. This leaves little time to detect and, through correspondence with the field, to prevent the occurrence of any more data affected by conceptual errors. In 63<sup>rd</sup> round, these were List Frame Units, which are relatively big units, having more data processing complications. It is quite important to introduce a work schedule for these types of schedules.

6.16 Blocks-3.1 & 4.1: In number of cases blocks 3 and 4 were found blank and the entire expenses and receipt were found reported against blocks 3.1 and 4.1 only.

6.17 Blocks-3-5 & 6: In many cases it has been noticed that for financial enterprises, data are found reported in blocks 3-5 instead of block-6 and the vice versa in few cases.

6.18 Blocks-2.2 to 12: Instances were noticed with enterprises operated for few months and found not operating for the last 30 days at the time of survey. However considering the period of last 365 days prior to survey, such enterprises were surveyed with the reference period as last 30 days during which it was not operated. In such cases blocks other than 0, 1 and 2.1 are found blank.

6.19 In many cases it was found that where the total expenses transferred to Balance Sheet as ‘Preliminary Expenses’ or ‘Deferred Revenue Expenditure’, such information was not properly transferred to the block

specified the matter was taken up with SDRD and instructions were given to processing staff for correcting the entry

6.20 Two items Deferred Revenue expenditure (page C-99) and Preliminary expenditure (page C-100) (item 1016) were shown in the Vol. I to be recorded in the liability side but as per schedule VI of the Companies Act it is to be recorded in the asset side. This too created confusion both at the field and in the processing unit.

6.21 One of the problems for negative GVA was for those companies which had not started functioning but registered as enterprises therefore it was canvassed. Such companies even enclosed balance sheet showing negative transactions.

6.22 Checking of all the draft tables together for both the reports of 63<sup>rd</sup> Rd. enterprise survey, would have helped detection and timely rectification of some of the critical data problems and inter-table inconsistencies, which caused delay in report finalization.

6.23 The field for item no. 14 of Sch. 0.0 (i.e. frame population) is auto-generated. But the field staff puts some figure either from their own understanding or from the sample list. And the PDES check point for this item states that 'check the entries from the sample list & correct it'. At least the PDES check point for item 14 should be dropped when it is auto generated from sample list file. And it would be better if the item is dropped from the schedule itself.

6.24 For column 1, block 2 of Sch. 0.0 (i.e. house no.), the field people often puts some number with alphabet, slash, hyphen etc. As the field is a numeric only, keeping the provision for writing running srl. No. in 1<sup>st</sup> column of Block 2 of the schedule may be thought of and the same may also be entered.

6.25 For PDES & CSP of each schedule, the 'action to be taken if check fails' should be clearly mentioned to enable the scrutinizers to take uniform 7 correct measure in respect of the abnormalities/mistakes found in the schedules.

6.26 The particulars of the substituted samples should be supplied to D. P. Centres as the necessity of the same is felt at DCS during Id-checking.

6.27 Blocks 5, 6, 7: Generally the error codes appear due to reporting of wrong total figures or missing of constituent items. To detect mistakes easily, the derived totals as per data entered may also be printed in the error list.

6.28 An attempt should be made to reduce schedule bulk by weeding out the items with least contribution to the average MPCE. In schedule 1.0 we have set of 400 odd items of information so is for the enterprise schedule (Sch. 2.345). **Annexure-III** gives a list of least reported items of schedule 1.0.

6.29 The difficulties encountered during NSS 63<sup>rd</sup> round highlight the fact that a survey of very big enterprises and small, medium and micro-enterprises should never be done together. This leads to difficulties in adopting efficient sampling design. The survey also revealed that in the absence of statutory legislation, attempts to cover big enterprises through oral enquiry are not desirable. The experience of 63<sup>rd</sup> round led to the decision of covering unincorporated manufacturing, trade and service sector enterprises in NSS 67<sup>th</sup> round enterprise survey.

6.30 There are wide divergences in the figures thrown up by two sources. OAEs seem to have been grossly under-reported in the EC. There are wide divergences in the figures of number of establishments/workers as per the two sources in case of hotels, storage & warehousing, communications, non-banking financial intermediation, insurance and pension funding, education, and health and social work. The reasons for divergences could be many like (a) lack of clarity of the concepts and definition of the term 'establishment' particularly in case of enumerators of EC, (b) under-listing of establishments in EC, and (c) sampling errors associated with the NSS estimates. Ascertaining of the exact reasons would require in-depth study at disaggregated level like village/block level at least for some villages/blocks selected for the NSS 63<sup>rd</sup> round. With the constraint of time and resources, this study could not be undertaken. However, from the limited analysis and findings presented in this paper, it is evident that divergences in the alternative estimates are quite alarming in case of certain activities. Both the sources are required to take remedial measures so that observed divergences are minimized in future.



## Annexure-II

Sample enterprises surveyed under 'Storage and Warehousing '(I) in 57<sup>th</sup> round and 63<sup>rd</sup> round

State/UT	No. of enterprises surveyed In 57 <sup>th</sup> round in category 'Storage and Warehousing '(I)	No. of enterprises surveyed In 63 <sup>rd</sup> round in category 'Storage and Warehousing '(I)
	Total FSUs surveyed=15869 (57 <sup>th</sup> round)	Total FSUs surveyed=13271 (63 <sup>rd</sup> round)
Andhra Pradesh	77	2
Arunachal Pradesh	1	0
Assam	43	9
Bihar	55	5
Chhattisgarh	14	1
Delhi	18	14
Goa	0	0
Gujarat	9	2
Haryana	15	0
Himachal Pradesh	6	0
Jammu & Kashmir	20	3
Jharkhand	25	0
Karnataka	30	0
Kerala	10	2
Madhya Pradesh	18	8
Maharashtra	68	9
Manipur	14	4
Meghalaya	38	3
Mizoram	4	0
Nagaland	9	0
Orissa	1	0
Punjab	15	1
Rajasthan	4	0
Sikkim	0	0
Tamil Nadu	17	3
Tripura	32	2
Uttarakhand	1	0
Uttar Pradesh	34	7
West Bengal	141	7
A & N Islands	0	0
Chandigarh	0	0
D & N Haveli	3	0
Daman & Diu	0	0
Lakshadweep	0	0
Puducherry	4	0
<b>All-India</b>	<b>726</b>	<b>82</b>

Source: NSS Report No. 483 and NSS Report No. 528

## Least reported items of Sch. 1.0

Item Description	Round Number			
	62nd		63rd	
	item no.	sample no. of hhs	item no.	sample no. of hhs
barley & its products	120	70	120	145
walnut	254	199		
cheroot (no.)	325	141	325	288
ganja	330	41	330	68
gobar gas	352	142	352	193
medical insurance premium	414	89	414	137
medicine (unani)			423	160
club fees	433	123	433	194
goods for recreation & hobbies	434	156	434	371
attendant	481	71	481	126
legal expenses	487	148	487	194
air fare	500	15	500	44
hotel lodging charges	521	60	521	92
foam, rubber cushion	554	52	554	153
painting, drawings, engravings etc.	556	64	556	126
camera & photographic equipment	563	22	563	90
musical instruments	566	27	566	70
other goods for recreation	567	144	567	384
jewels, pearls	572	76	572	207
washing machine	594	148		
water purifier	598	185		
other transport equipment	614	114	614	289
other medical equipment	621	19	621	50
other machines for household work	631	18	631	98
personal computer	632	141		
telephone instrument(landline)	634	127		
any other personal goods	635	156	635	322

## Annexure-IV

## Schedule 2.345: SERVICE SECTOR ENTERPRISES (EXCLUDING TRADE)

The following rules are checked for misclassification of enterprises by Enterprise type / NIC 2004.

Sl. No.	reference to schedule			Rule
	block	item	col.	
(1)	(2)	(3)	(4)	Ø
1.	1 2	15 202, 228	- -	For SSS-1, (i) If Blk-1/It-15 = 1 then Blk-2 /It-228 = 2 and Blk-2/It-202 (NIC) should be any one of '659, 66, 67' (ii) If Blk-1/It-15 = 1 then Blk-2 /It-228 = 2
2.	1 2	15 202, 228	- -	For SSS-2, (i) If Blk-1/It-15 = 2 then Blk-2 /It-228 = 2 and Blk-2/It-202 (NIC) should be any one of '72, 73, 6302' (ii) If Blk-1/It-15 = 2 then Blk-2 /It-228 = 2
3.	1 2	15 202, 228	- -	For SSS-3, (i) If Blk-1/It-15 = 3 then Blk-2 /It-228 = 2 and Blk-2/It-202 (NIC) should be any one of '61, 90, 9191, 9199' (ii) If Blk-1/It-15 = 3 then Blk-2 /It-228 = 2
4.	1 2	15 202, 228	- -	For SSS-4, (i) If Blk-1/It-15 = 4 then Blk-2 /It-228 = 2 and Blk-2/It-202 (NIC) should be any one of '551, 6301, 6303, 6304, 6309, 641, 701, 742, 743, 851, 921' (ii) If Blk-1/It-15 = 4 then Blk-2 /It-228 = 2
5.	1 2	15 202, 228	- -	For SSS-5, (i) If Blk-1/It-15 = 5 then Blk-2 /It-228 = 2 and Blk-2/It-202 (NIC) should be any one of 'codes under <b>coverage</b> other than above' (ii) If Blk-1/It-15 = 5 then Blk-2 /It-228 = 2
6.	1 2	15 202, 228	- -	For SSS-6, (i) If Blk-1/It-15 = 6 then Blk-2 /It-228 = 1 and Blk-2/It-202 (NIC) should be any one of '659, 66, 67' (ii) If Blk-1/It-15 = 6 then Blk-2 /It-228 = 1
7.	1 2	15 202, 228	- -	For SSS-7, (i) If Blk-1/It-15 = 7 then Blk-2 /It-228 = 1 and Blk-2/It-202 (NIC) should be any one of '70, 72, 73, 74' (ii) If Blk-1/It-15 = 7 then Blk-2 /It-228 = 1
8.	1 2	15 202, 228	- -	For SSS-8, (i) If Blk-1/It-15 = 8 then Blk-2 /It-228 = 1 and Blk-2/It-202 (NIC) should be any one of 'codes under coverage other than above' (ii) If Blk-1/It-15 = 8 then Blk-2 /It-228 = 1
9.	1 2	15 228	- -	If Blk-1/It-15 = (1/2/3/4/5) then Blk-2 /It-228 = 2
10.	1 2	15 228	- -	If Blk-1/It-15 = (6/7/8) then Blk-2 /It-228 = 1

**Note:**

Block-1 / Item 15 SSS (1-5) - Establishment SSS (6-8) - OAE

Block-2 / Item 228 Enterprise type - Code '1': OAE Code '2' : Establishment

**State /UTwise status of participation in  
Public works**

State code	State/UT	Sample no. of households	State code	State/UT	Sample no. of households
01	Jammu & Kashmir	74	16	Tripura	245
02	Himachal Pradesh	216	17	Meghalaya	55
03	Punjab	39	18	Assam	271
04	Chandigarh	1	19	West Bengal	914
05	Uttaranchal	80	20	Jharkhand	90
06	Haryana	83	21	Orissa	437
08	Rajasthan	508	22	Chhattisgarh	186
09	Uttar Pradesh	530	23	Madhya Pradesh	277
10	Bihar	238	24	Gujarat	157
11	Sikkim	37	27	Maharashtra	277
12	Arunachal Pradesh	55	28	Andhra Pradesh	612
13	Nagaland	60	29	Karnataka	137
14	Manipur	43	31	Lakshadweep	8
15	Mizoram	72	32	Kerala	95
			33	Tamil Nadu	285
			34	Pondicherry	4
			35	A & N islands	13

**Part-II**

**SUMMARY AND MAJOR FINDINGS OF SURVEYS**

# An Integrated Summary of NSS Survey on Service Sector in India — 63<sup>rd</sup> Round (July 2006-June 2007)

Gayatri Bhattacharyya

## 1. Introduction

1.1 Service sector is the most important segment of economy in terms of its contribution to the overall GDP. It is a diverse domain of economic activities and operational characteristics of units. The entire range of units in the service sector consist of very big corporate entities accounting for bulk of output as well as large number of very small and tiny enterprises with substantial share in employment. It is second only to agriculture in employment generation. However, major data gaps exist in all the segments of this sector because of its vast and heterogeneous spread in the geographical domain and its growth dynamics. The survey of service sector enterprises in NSS 63<sup>rd</sup> round during July 2006 - June 2007 is an attempt to fill these data gaps. The enterprise survey thus is an exclusive source of comprehensive and national and sub national data profile on estimated number of enterprises, their ownership and operational characteristics, estimates on number of workers, type of worker, nature of employment, input, output & value added, fixed assets, capital formation, assets and liabilities. The previous survey of NSSO on service sector enterprises was conducted during July 2001-June 2002 in NSS 57<sup>th</sup> round.

1.2 The term ‘service sector enterprises’ under the coverage of 63<sup>rd</sup> round basically referred to all service sector enterprises, other than (a) government and public sector undertakings and (b) those covered under Annual Survey of Industries. The survey thus covers all service sector enterprises (excluding trade) engaged in the activities of hotels and restaurants (Section H of NIC 2004); transport, storage and communication (I); financial intermediation (J); real estate, renting and business activities (K); education (M); health and social work (N) and other community, social and personal service activities (O). One distinct feature of this survey is inclusion of financial intermediation (J) not covered in previous surveys on unorganised service sector enterprises of NSSO. However, the survey does

not cover the industries/ activities of transport *via* railways, air or pipeline (groups 601, 603 and division 62 of NIC 2004), operating of real estate of self owned residential buildings (sub-class 70103 of NIC2004), monetary intermediation (group 651 of NIC 2004), activities of trade unions (sub-class 91200), religious organizations (sub-class 91910) and political organizations (sub-class 91920). Note that a part of sub-class 91910 relating to activities of individuals who provided services directly to worshippers like priests etc. is covered.

## 2. Methodology

**2.1 Geographical Coverage:** The survey covered the whole of the Indian Union except (i) Leh (Ladakh), Kargil, Punch and Rajauri districts of Jammu & Kashmir, (ii) interior villages situated beyond 5 km of a bus route in Nagaland, (iii) villages of Andaman and Nicobar Islands, which remain inaccessible throughout the year.

**2.2 Outline of Sample Design:** Keeping in view a heterogeneous domain of service sector comprising very large as well as very small enterprises, the sample design of 63<sup>rd</sup> round was specially evolved with dual frame namely, list frame and area frame, for selection of sample enterprises. While a list of financial sector enterprises and a list of other service sector enterprises comprising relatively large units constituted the *list frame*, other enterprises (other than list frame enterprises) located in all the villages and urban blocks within the geographical coverage constituted the *area frame*. In the area frame, a stratified multi-stage sampling design was adopted. First-Stage Units (FSUs) were villages (Panchayat wards in Kerala) in rural areas and Urban Frame Survey (UFS) blocks in urban areas. Relatively larger FSUs were sub-divided into smaller parts called hamlet-groups in the rural areas and sub-blocks in the urban areas. In case of large FSUs requiring hamlet-group (hg) / sub-block (sb) formation, one intermediate stage in the sampling involved the selection of three hg’s / sb’s from each FSU

out of a minimum of four hg's/sb's formed in the FSU. One hg/sb with maximum number of service sector enterprises was selected with probability '1' and called segment 1 and two more hg's/sb's, selected at random from the list of remaining hg's/sb's of the FSU, constituted segment 2. Within the segments as noted above, eight Second Stage Strata (SSS) classified by type of industries x enterprise types were formed. The ultimate stage units (USUs) *i.e.* the service sector enterprises were selected from the eligible enterprises of the respective SSS of each segment by SRSWOR. However, within the whole FSU relatively bigger service sector enterprises having 50 or more workers that were eligible for survey (*i.e.* having operated for at least 30/15 days during the reference year respectively for non-seasonal/seasonal enterprises) were separately listed (segment 9) and the schedule was canvassed in all these listed enterprises of segment 9. Ultimately, a sample of 438 enterprises from *list frame* (total 998 enterprises) and 190,282 enterprises spread over 13,271 sample villages/urban blocks from *area frame* were actually surveyed.

**2.3** Design-based estimates of aggregates for any selected survey characteristic were obtained separately for list frame and area frame. Finally these two sets of estimates were added to get the pooled aggregate estimate for the combined frame. In this summary report, discussion will be mainly focused on the pooled estimate based on two types of frames used in the survey.

**2.4 Items of information collected:** Schedule 2.345 was designed for collection of data from the service sector enterprises. The schedule was organized into 19 blocks. The items of information collected through different blocks of the schedule are: Particulars of operation and background information of the enterprise, Principal operating expenses, Other operating expenses, Principal receipts, Other receipts, Other receipts/expenditures (non-entrepreneurial) for non-financial enterprises, Gross value added, Employment particulars, Compensation to workers, Fixed assets owned and rent payable on hired assets, and Financial liabilities.

### 3. Contents of the Integrated Summary:

**3.1** Based on NSS 63<sup>rd</sup> round enterprise survey, two reports have been published: (1) Service Sector in India (2006-07)—Operational Characteristics of Enterprises (NSS Report No. 528) and (2) Service Sector in India (2006-07)—Economic Characteristics of Enterprises (NSS Report No. 529). The present integrated summary of the results gives the major findings based on the two reports.

### 4. Main Findings:

#### 4A: All-India Results

**4.1 Key Indicators:** There are many indicators of enterprise sector by which the impact on the economy can be studied. Some of these key indicators are size (like number of enterprises and number of workers), employment per enterprise, gross value added, etc. **Statement 1** gives an overview of the Service Sector Enterprises in India during 2006-07 in terms of key indicators. It reveals that about 16.5 million service sector enterprises were working in India during 2006-07. It also reveals that about 33.5 million persons were working in service sector enterprises during 2006-07. The aggregate Gross Value Added (GVA) for the country is estimated at 2,44,792 Crores of Rupees. The estimated market value of owned fixed assets per enterprise for the country is estimated at Rs. 1,78,102. The heterogeneity of the domain of service sector is evident from the simple revelation that per enterprise value of owned fixed assets for *Establishments* (Rs. 960.2 thousand) is about 22 times the same (Rs. 43.7 thousand) for *Own Account Enterprises* (OAEs)<sup>1</sup>. It is seen that, on an average, the financial liability (*the total liability incurred by the enterprise as on the last date of reference year which includes capital deployed by the partners of an enterprise, share capital, reserve and surplus amount noted in the balance sheet, long-term loans and also all short-term commitments for payments like unpaid wages etc.*) of an enterprise amounts to Rs. 4,41,133. The financial liability per enterprise for OAEs is Rs. 21,430 against Rs. 28,84,961 for Establishments for the country.

<sup>1</sup> As per the definition adopted in the survey, an own account enterprise is a unit that operated without hiring any worker during major part of the preceding one year while the establishment referred to a unit that hired at least one worker during the said reference period.

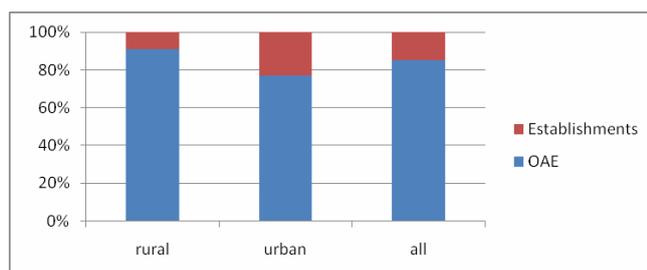
**Statement 1: Service Sector Enterprises in India, 2006-07 at a glance**

Key indicators	Total	OAE	Establishment
Estimated number of enterprises (in '000)	16,512	14,092	2,420
Estimated number of workers (in '000)	33,516	21,258	12,258
Average number of workers per enterprise	2.03	1.51	5.07
Aggregate GVA (in Rs. Crore)	2,44,792	45,660	1,99,131
Estimated value (in Rs.) of fixed assets owned per enterprise	1,78,102	43,774	9,60,260
Estimated value (in Rs.) of Financial liability per enterprise	4,41,133	21,430	28,84,961

**4.2 Number of Enterprises and their features:** Number of enterprises is a major characteristic to describe the growth of economy and the scale of economic entrepreneurship. As shown in **Statement 2**, during 2006-07, about 16.5 million enterprises are engaged in the service sector activities excluding trade. Interestingly, 60% of the service sector enterprises are in rural India as against 40% in urban sector. OAEs constitute 85% of all enterprises. **Chart 1** provides the pictorial view of the distribution of enterprises by type of enterprise – OAE and Establishment and sector – rural India and urban India.

**Statement 2: Estimated number of enterprises by enterprise type and sector in India, 2006-07**

sector	Number of enterprises (in '000)		
	OAE	Establishments	all
Rural	9,004	896	9,900
urban	5,088	1,524	6,612
All	14,092	2,420	16,512

**Chart 1: Percentage distribution of enterprises by enterprise type and sector**

**4.3 Statement 3** provides a few important features of the service sector enterprises. Proprietary enterprises (*i.e.* enterprises owned by a single household) has the highest share (90%) in total number of enterprises in the country. The preponderance of informality of service sector

entrepreneurship in the economic space was reflected from the fact that about 59% of all enterprises are found to be not registered under any Act or with any registration authority and this proportion is more in case of OAEs (63%) than establishments (34%). About 26% of the enterprises operate their business without any fixed location. The corresponding percentage is less in the case of establishments (10%) as compared to OAEs (29%). A vast majority (99%) of all enterprises is perennial *i.e.* operating more or less throughout the year. About 91% of the enterprises has worked for 9 months or more during the last 365 days.

**Statement 3: Some features of enterprises by enterprise type in India, 2006-07**

Features	Total	OAE	Establishment
Percentage of proprietary enterprises	90.2	91.0	86.0
Percentage of enterprises not registered with any agency	59.1	63.4	34.5
Percentage of enterprises without fixed premises	26.4	29.1	9.9
Percentage of enterprises operating peremises	98.6	98.6	98.3
Percentage of enterprises operating for 9 or more months	90.9	90.9	90.5
Percentage of enterprises working on contract	2.5	2.3	3.8

**4.4 Problems faced in operation of enterprises and status of receiving assistance:** **Statement 4** reveals that about 22% of enterprises reported to be suffering from scarcity of capital. This percentage is little higher in case of rural India (23%) than urban India (20%).

**Statement 4: Percentage of enterprises reporting shortage of capital**

Percentage of enterprises reporting shortage of capital

Rural			Urban			All		
OAE	Establishment	All	OAE	Establishment	All	OAE	Establishment	All
22.7	23.4	22.8	20.9	16.3	19.9	22.1	18.9	21.6

**4.5** The non-receipt of any government assistance is also reported by majority of the enterprises. As seen in **Statement 5**, about 86% of the enterprises do not receive any assistance in the form of loan or subsidy or training etc from the government. Interestingly, the incidence of non

receipt of any assistance is reported higher, though marginally by urban enterprises. About 12% get it as loans only. The incidence of receiving assistance in any form is higher for establishments (22%) than OAEs (13%).

**Statement 5: Percentage of enterprises receiving assistance and not receiving any assistance categorized by enterprise type and sector**

percentage of enterprises	Rural			Urban			All		
	OAE	Establishment	All	OAE	Establishment	All	OAE	Establishment	All
receiving assistance as loan	13.5	23.6	14.4	7.6	15.4	9.4	11.4	18.5	12.4
receiving other assistance	1.8	5.4	2.1	1.4	2.9	1.7	1.6	3.8	1.9
not receiving any assistance	84.7	71.0	83.5	91.0	81.7	88.9	87.0	77.7	85.7

**4.6 Employment in Service Sector:** In India, service sector has an important role in generating employment. Number of workers in service sector in India during 2006-07 was estimated to be about 3.35 Crores, with rural and urban share being 54% and 46% respectively.

**Statement 6: No. of workers by enterprise type and sector during 2006-07**

Enterprise type	Estimated number of workers (in '000)		
	Rural	Urban	All
OAE	14,548	6,709	21,258
Establishments	3,582	8,673	12,255
<b>All</b>	<b>18,130</b>	<b>15,383</b>	<b>33,513</b>

**4.7 Proportion of Female Workers:** In order to study the gender differential in employment in service sector enterprises, the particulars of employment are collected also

by gender of the workers. **Statement 6a** gives the proportions of female workers in different enterprise types separately for rural, urban and both sectors combined. It is seen that the female workers constituted roughly 29% of all workers in service sector enterprises and the percentage of female workers is higher in rural areas (35%) than the same in urban areas (22%).

**Statement 6a: Percentage of female workers by enterprise type and sector during 2006-07**

Enterprise type	Percentage of female worker		
	Rural	Urban	All
OAE	39.0	20.2	33.0
Establishments	19.4	24.0	22.6
<b>All</b>	<b>35.1</b>	<b>22.4</b>	<b>29.2</b>

**4.8 Workers (full-time and part-time):** The information on number of workers engaged in the enterprise

on a full-time or part-time basis was collected in the survey for generating estimates of full-time and part-time workers. A worker is considered to be working for full-time if he or she has worked for more than half of the period of normal working hours of the enterprise on a fairly regular basis. **Statement 6b** reveals that about 76% of workers in rural enterprises and 90% of those in urban enterprises are engaged on full-time basis. Information on hired worker (person employed directly or through any agency on payment of regular wage / salary in cash or kind including Apprentices, paid or unpaid, paid household workers, servants and resident workers of the enterprise) was also collected and Statement 6c reveals some facts about salary of hired workers for establishments in India.

**Statement 6b: Percentage of workers by duration of work and sector during 2006-07**

Duration of work	Percentage of worker		
	Rural	Urban	All
Full-time	76	90	83
Part time	24	10	17
<b>All</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Statement 6c: Annual salary (in Rs. ) per hired worker based on area frame during 2006-07**

Enterprise type	Annual salary per hired worker (in Rs.)		
	Rural	Urban	All
Establishments	24,816	57,977	48,482

**Statement 6c** reveals that annual salary for hired worker in urban areas (Rs. 57,977) is more than double in case of rural India (Rs. 24,816).

**4.9 Fixed Assets Owned:** **Statement 7** presents the estimated value of total fixed assets owned per enterprise for different enterprise types. At all-India level, the estimated market value of owned fixed assets per enterprise is estimated as Rs. 1,78,102. The market value of owned fixed assets per enterprise in urban areas is about 5.5 times the corresponding value in rural areas. Per enterprise value of owned fixed assets for Establishments is about 22 times the same for OAEs.

**Statement 7: Estimated value (Rs.) of owned fixed assets per enterprise by enterprise type**

Enterprise type	Estimated value of owned fixed assets per enterprise (in Rs.)		
	Rural	Urban	All
OAE	32,801	63,194	43,774
Establishments	3,67,366	13,09,118	9,60,260
<b>All</b>	<b>63,096</b>	<b>3,50,325</b>	<b>1,78,102</b>

**4.10 Financial Liability:** Financial liabilities included capital deployed by the partners of an enterprise, share capital, reserve and surplus amount noted in the balance sheet, long-term loans and also all short-term commitments for payments like unpaid wages, etc. The average amount of financial liability per enterprise is presented in **Statement 8**. It is seen that at all-India level, the financial liability of an enterprise as on the last date of the reference year amounted to Rs. 4,41,133. The financial liability per enterprise for OAEs is Rs. 21,430 against Rs. 28,84,961 for Establishments. Thus, financial liability per Establishment is considerably higher than the same for OAEs.

**Statement 8: Estimated value (Rs.) of financial liability per enterprise by enterprise type**

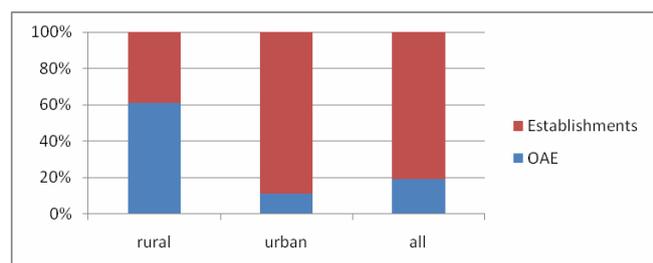
Enterprise type	financial liability per enterprise (Rs.)		
	Rural	Urban	All
OAE	8,210	44,827	21,430
Establishments	3,84,220	43,56,395	28,84,961
<b>All</b>	<b>42,258</b>	<b>10,38,455</b>	<b>4,41,133</b>

**4.11 Gross Value Added:** Gross Value Added (GVA) is the value added to the economy by the process of production of an enterprise. **Statement 9** gives an overview of GVA in the Indian economy. Aggregate annual gross value added by service sector enterprises is estimated as Rs.2,44,792 crore out of which rural India and urban India had shares of 15% and 85% respectively. Major contribution to GVA has come in rural areas from OAEs (61%) and in urban areas from Establishments (89%). Considering both rural and urban India, establishments have the major contribution (81%) in total GVA by the service sector (see **Chart 2** also).

**Statement 9: Aggregate gross value added (Rs. in crores) by enterprise type and sector during 2006-07**

Enterprise type	aggregate gross value added (Rs. in crores)		
	Rural	Urban	All
OAE	22,759	22,901	45,660
Establishments	14,660	1,84,472	1,99,131
<b>All</b>	<b>37,419</b>	<b>2,07,373</b>	<b>2,44,792</b>

**Chart 2: Percentage distribution of gross value added by enterprise type for each sector and total**



#### 4.11.1 GVA per worker based on area frame:

**Statement 10** below gives the estimated annual gross value added per worker (GVAPW) by type of enterprise separately for rural, urban and combined sector. As expected, GVAPW are substantially high for Establishments for all sectors. At all-India level, annual GVAPW in service sector is estimated at Rs. 73038. For rural India, annual GVAPW for OAEs and Establishments are estimated as Rs 15644 and Rs. 40931 respectively. The corresponding estimates for urban areas are Rs. 34132 and Rs. 212615 respectively.

**Statement 10: GVA per worker (in Rs.)**

Enterprise type	Estimated GVA per worker (in Rs.)		
	Rural	Urban	All
OAE	15,644	34,132	21,479
Establishments	40,931	2,12,615	1,62,452
<b>All</b>	<b>20,640</b>	<b>1,34,782</b>	<b>73,038</b>

**4.12 Features of Service Sector Enterprises at Activity Levels:** As seen in the **Statement 11** below, *transport, storage & communication (I)* has the highest percentage of enterprises (38%) followed by *other community, social and personal service activities (O)* (19%). As against the total number of workers estimated as 3.35 crores, the number of workers in various activities in the service sector differ. It is seen that the estimated number of workers engaged in enterprises belonging to '*transport, storage and communication (I)*' (0.84 crores) is the highest followed by '*financial intermediation (J)*' (0.58 crores), '*hotels and restaurants (H)*' (0.513 crores), '*other community, social and personal services (O)*' (0.509 crores), and '*education (M)*' (0.39 crores). It is further seen that '*Hotels (H1)*' has the highest annual GVA per enterprise (Rs. 1548 thousand) at all-India level. This is followed by '*Insurance and pension funding and auxiliary activities (J2)*' (Rs. 1327 thousand) and '*Storage and warehousing (I1)*' (Rs. 572 thousand). '*Other community, social and personal service activities (O)*' had the lowest GVA per enterprise (Rs. 45 thousand).

**Statement 11: Some features of service sector enterprises at activity levels**

Activities	Percentage distribution of enterprises			Estimated number of enterprises (in '000)	Estimated number of workers (in '000)	Estimated annual gross value added per enterprise (in Rs. '000)	Estimated annual gross value added per worker (in Rs. '000)
	Total	OAE	Establishment				
Hotels (H1)	0.42	0.06	2.53	69	441	1,548	244
Hotels and restaurants (H)	12.47	10.99	21.13	2,060	5,134	137	55
Storage and warehousing (I1)	0.02	0.00	0.08	3	18	572	87
Transport, storage and communication (I)	37.99	40.55	23.09	6,273	8,370	70	52
Insurance and pension funding and auxiliary activities (J2)	1.39	1.41	1.23	229	438	1327	693
Financial intermediation (J)	9.17	9.99	4.37	1,514	5,770	327	86
Real estate, renting and business activities (K)	8.48	7.38	14.93	1,401	3,098	483	218
Education (M)	6.31	5.06	13.58	1,041	3,874	226	61
Health and social work (N)	6.63	5.77	11.63	1,095	2,181	165	83
Other community, social and personal service activities (O)	18.94	20.26	11.27	3,128	5,088	45	27
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>16,512</b>	<b>33,516</b>	<b>148</b>	<b>73</b>

**4.13 Comparative results with the past rounds:** **Statement 12** gives comparison of the results of enterprise surveys on service sector during 2006-07 (NSS 63<sup>rd</sup> round) and during 2001-02 (NSS 57<sup>th</sup> round) and indicates that there is nominal change in the number of enterprises and number of workers over years. It is interesting also to note that top four States in terms of number of enterprises (names) are identical both in 2001-02 and 2006-07 and their

percentage shares do not reveal noteworthy differences.

**4.14** GVA per enterprise is Rs. 1,30,153 in 63<sup>rd</sup> round [excluding enterprises covered under financial intermediation (J)] against Rs. 51,673 in 57<sup>th</sup> round. GVA per worker is Rs. 70,358 in 63<sup>rd</sup> round [excluding enterprises covered under financial intermediation (J)] against Rs. 28,160 in 57<sup>th</sup> round.

**Statement 12: Comparative statements for some key indicators over previous round:**

Key Indicators	57 <sup>th</sup> round (2001-02)	63 <sup>rd</sup> round (2006-07)*
Estimated number of enterprises (in '000)	14472	14998
Estimated number of workers (in '000)	26556	27742
Average number of workers per enterprise	1.8	1.8
Share of top five states in total number of enterprises	UP	UP 14.71
	WB	WB 12.81
	AP	AP 9.35
	Maharashtra	Maharashtra 8.95
	Bihar	TN 6.57
	Total	Total 52.40
GVA per enterprise (in Rs.)	51,673	1,30,153
GVA per worker (in Rs.)	28,160	70,358

\* Percentages and estimates calculated by excluding enterprises covered under financial intermediation (J).

**4B. State-wise results**

**4.15** Results for certain major economic characteristics are discussed in respect of 21 major states which are identified on the basis of estimated number of enterprises (exceeding 1 lakh).

**4.16 Enterprises across Major States in 2006-07:**

Across the states, the characteristics of the enterprises were differing in terms of its size, total number workers and annual GVA.

**Statement 13: Key indicators of service sector enterprises for 21 Major states in India during 2006-07 (based on area frame)**

State/UT	Estimated number of enterprises in '000 (OAE)	Estimated number of enterprises in '000 (Estt.)	Estimated number of enterprises in '000 (total)	% share of total enterprises	Estimated number of workers in '000	% share	Aggregate Annual Gross Value Added (Rs. lakhs)	% share of GVA
Andhra Pradesh	1,566	156	1,722	10.43	3635	11.06	10,03,501	6.56
Assam	493	103	596	3.61	1128	3.43	2,75,469	1.80
Bihar	797	75	872	5.28	1309	3.98	2,88,338	1.89
Chhattisgarh	151	26	177	1.07	450	1.37	92,942	0.61
Delhi	90	57	147	0.89	323	0.98	1,78,565	1.17
Gujarat	534	110	644	3.90	1223	3.72	12,16,637	7.95
Haryana	271	57	328	1.99	572	1.74	2,47,472	1.62
Himachal Pradesh	89	26	115	0.69	217	0.66	84,077	0.55
Jammu & Kashmir	109	30	139	0.84	244	0.74	1,35,330	0.88
Jharkhand	387	48	435	2.63	647	1.97	2,03,051	1.33
Karnataka	707	98	805	4.88	1592	4.84	17,84,135	11.66
Kerala	758	202	960	5.81	2174	6.61	11,60,437	7.59
Madhya Pradesh	381	87	468	2.84	1017	3.09	3,03,309	1.98
Maharashtra	1178	311	1,489	9.02	3160	9.61	28,24,612	18.47
Orissa	547	75	622	3.77	1924	5.85	2,24,677	1.47
Punjab	382	69	451	2.73	800	2.43	4,20,316	2.75
Rajasthan	479	121	600	3.64	1188	3.61	5,62,698	3.68
Tamil Nadu	953	240	1,193	7.23	2922	8.89	11,80,685	7.72
Uttarakhand	125	24	149	0.90	246	0.75	1,00,298	0.66
Uttar Pradesh	1969	277	2,246	13.60	4064	12.36	10,64,251	6.96
West Bengal	1927	164	2,091	12.67	3321	10.10	7,98,305	5.22
India	14,092	2,420	16,512	100.00	32880	100.00	1,52,95,334	100.00

**Statement 13** above presents some key characteristics of enterprises in major states of India. It shows that Uttar Pradesh has the highest share in total number of enterprises (14%) followed by West Bengal (13%), Andhra Pradesh (10%), Maharashtra (9%) and Tamil Nadu (7%). These five states together account for more than half of the enterprises. The top five states in terms of their share of workers are Uttar Pradesh (12%), Andhra Pradesh (11%), West Bengal (10%), Maharashtra (9.6%) and Tamil Nadu (9%). These five states together account for 51.6% of total workers of the service sector in the country. As regards the GVA, Maharashtra has the highest share of GVA (18%) followed by Karnataka (12%), Gujarat (8%), Tamil Nadu (7.7%) and Kerala (7.6%). These five states together account for 53.3% of total GVA of the service sector in the country.

**4.17 Other important features: Statement 14** (based on area frame) presents some important features of the enterprises, viz. the estimated value of total fixed assets owned per enterprise, financial liability per enterprise and annual GVA per enterprise by type of enterprise for major states in India. It reveals that among the major States, Gujarat (Rs. 362 thousand) and Bihar (Rs. 35 thousand) has respectively the highest and the lowest fixed assets owned per enterprise. Also among the major states, the highest and lowest financial liability per enterprise is observed in Maharashtra (Rs. 615 thousand) and Bihar (Rs. 1 thousand) respectively. As regards the GVA per enterprise, Karnataka had the highest position (Rs. 222 thousand) and Bihar (Rs. 33 thousand) has the lowest position. As expected, estimated annual GVA per enterprise for each state is higher for Establishments than the OAEs.

**Statement 14: Value of owned fixed assets, financial liability and GVA per enterprise (in Rs. '000) based on area frame for major states in India**

State	OAE			Establishments			All		
	fixed assets	Financial liability	GVA	fixed assets	Financial liability	GVA	Fixed assets	Financial liability	GVA
Andhra Pradesh	27	11	24	6,61	654	406	85	70	58
Assam	34	1	29	3,03	103	127	81	18	46
Bihar	24	0	25	1,51	8	116	35	1	33
Chhattisgarh	44	6	28	3,96	70	195	96	16	52
Delhi	1,18	1	49	7,09	105	233	3,49	41	121
Gujarat	75	7	46	17,54	1564	884	3,62	273	189
Haryana	93	4	44	8,59	47	222	2,27	11	75
Himachal Pradesh	1,02	21	33	7,98	415	214	2,58	109	73
Jammu & Kashmir	1,10	13	62	8,28	77	224	2,66	27	97
Jharkhand	25	1	27	3,35	77	202	60	9	47
Karnataka	30	14	25	9,28	4078	1641	1,39	507	222
Kerala	64	19	38	6,13	701	431	1,80	162	121
Madhya Pradesh	40	3	27	4,77	192	228	1,22	38	65
Maharashtra	61	17	38	9,11	2880	763	2,38	615	190
Orissa	22	8	19	4,22	162	159	70	26	36
Punjab	84	5	42	12,23	589	374	2,59	94	93
Rajasthan	86	6	38	9,12	720	315	2,53	150	94
Tamil Nadu	46	18	36	7,59	813	349	1,89	178	99
Uttarakhand	77	6	35	7,42	335	234	1,85	59	67
Uttar Pradesh	40	1	31	4,91	25	167	96	4	47
West Bengal	19	3	22	4,39	727	223	52	60	38
<b>All-India</b>	<b>44</b>	<b>8</b>	<b>31</b>	<b>7,38</b>	<b>955</b>	<b>453</b>	<b>1,45</b>	<b>146</b>	<b>93</b>

**Part-III**

**HIGHLIGHTS OF RECENT REPORTS RELEASED BY NSSO**

## Highlights of recent reports released by NSSO

### Highlights of NSS 65<sup>th</sup> round report number 534 (Some Characteristics of Urban Slums, 2008-09)

- For this survey, conducted during July 2008 to June 2009, urban areas notified as slums by respective municipalities, corporations, local bodies or development authorities were treated as “notified slums”. A “non-notified slum” was a compact urban area with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions. All such slums, notified or non-notified, were considered as ‘slum’ for the purpose of the survey, if at least 20 households lived in such a slum within the selected urban block. In the 4738 urban blocks surveyed out of the allotted random sample of 4764 urban blocks during the 65<sup>th</sup> round, there existed 365 notified and 365 non-notified slums.
- About 49 thousand slums were estimated to be existence in urban India in 2008-09, 24% of them were located along nallahs and drains and 12% along railway lines.
- About 57% of slums were built on public land, owned mostly by local bodies, state government, etc.
- In 64% of notified slums, a majority of the dwellings were pucca, the corresponding percentage for the non-notified ones being 50%.
- For 95% slums, the major source of drinking water was either tap or tubewell.
- Only 1% notified and 7% non-notified slums did not have electricity connection.
- About 78% of notified slums and 57% of the non-notified slums had a pucca road inside the slum.
- About 73% notified and 58% non-notified slums had a motorable approach road.
- About 48% of the slums were usually affected by water logging during monsoon – 32% with inside of slum waterlogged as well as approach road to the slum, 7% where the slum was waterlogged but not the approach road, and 9% where only the approach road was waterlogged in the monsoon.
- The sanitary conditions in the slums in terms of latrine facility during 2008-09 showed considerable improvement since 2002. Latrines with septic tanks (or similar facility) were available in 68% notified and 47% non-notified slums (up from 66% and 35% respectively in 2002). At the other extreme, 10% notified and 20% non-notified slums (down from 17% and 51% in 2002) did not have any latrine facility at all.
- About 10% notified and 23% non-notified slums did not have any drainage facility. The corresponding proportions in 2002 had been 15% for notified and 44% for non-notified slums. Underground drainage systems or drainage systems constructed of pucca materials existed in about 39% notified slums (25% in 2002) and 24% non-notified slums (13% in 2002).
- Underground sewerage existed in about 33% notified slums (30% in 2002) and 19% non-notified slums (15% in 2002).
- Government agencies were collecting garbage from 75% notified and 55% non-notified slums. Among these slums, garbage was collected at least once in 7 days in 93% notified and 92% non-notified slums. About 10% notified and 23% non-notified slums did not have any regular mechanism for garbage disposal.

Note that the changes reported during the last five years in the slums are as reported by the knowledgeable person (from whom the information is collected) depending on his/her perceptions.

- Over the last five years, facilities had improved in about 50% of notified slums in terms of roads (both within-slum road and approach road) and water supply. The incidence of deterioration of any of the existing facilities in notified slums during the last five years was quite low (about 6% or below).
- In case of most slum facilities – sewerage and medical facilities being exceptions – the facility was reported to have improved during the last five years in more than 20% of non-notified slums. Deterioration of any of the existing facilities in non-notified slums, like notified slums, was rare (about 9% or below).
- Facilities such as street light, latrine, drainage, sewerage and medical facilities were each reported by more than 10% of notified slums to be non-existent both at the time of survey and five years earlier. In case of non-notified slums, facilities like street light, latrine, drainage, sewerage and garbage disposal were each reported by more than 20% of the slums to be non-existent, both during the survey and five years earlier.
- Where improvement had been brought about during the last 5 years, it was due to the Government's efforts in about 80-90% of slums, both notified as well as non-notified and for all the facilities. Improvement in educational facilities at primary level was attributed to NGOs in 13% of the notified slums where such improvement was reported. NGOs were also found to have played a role in the improvement of latrine and sewerage system in non-notified slums.

## Highlights of NSS 65<sup>th</sup> round report number 535 (Housing Condition in India, 2008-09)

This report is based on the 65<sup>th</sup> round survey on Housing Condition (Schedule 1.2) conducted during July 2008 to June 2009. In this survey, a total of 12,865 first stage units (FSUs) were surveyed: 8,130 villages in rural areas and 4,735 urban frame survey (UFS) blocks in urban areas. The survey covered a sample of 1,53,518 households (97,144 in rural areas and 56,374 in urban areas). Some of the key findings are stated below.

### 1. Some Aspects of Facilities for Living

#### 1.1 Drinking water facility during last 365 days

- In rural areas the major source of drinking water (most often used) was ‘tube well/hand pump’ in respect of 55 per cent of households followed by ‘tap’ for 30 per cent of households.
- In urban areas, ‘tap’ was the major source of drinking water for 74 per cent of the households and ‘tube well/hand pump’ served another 18 per cent households.
- The three sources of drinking water, ‘tap’, ‘tube well/hand pump’ and ‘well’ together served nearly 97 per cent of rural households and 95 per cent of urban households.
- Nearly 86 per cent of the rural households got sufficient drinking water throughout the year from the first major source against nearly 91 per cent of urban households. Thus, the insufficiency of drinking water in any of the month was in respect of 14 per cent and 9 per cent of rural and urban households, respectively.
- Shortage of drinking water set in the month of March and gradually reached a peak during May; thereafter, the situation of availability of drinking water gradually improved and by August the situation improved substantially.
- During the month of May, drinking water for 13 per cent of the rural households and 8 per cent of the urban households was insufficient.
- Drinking water facility within the premises was available to nearly 41 per cent of rural households and 75 per cent of urban households.

#### 1.2 Bathroom facility

- Bathroom facility was not available for nearly 64 per cent of rural households, while in urban areas, the proportion of households with no bathroom was considerably lower, nearly 22 per cent.
- In the rural areas, detached bathrooms were more common (23 per cent of the households) than were attached bathrooms (13 per cent of the households).
- In urban areas, a higher proportion of households (48 per cent) had attached bathroom than detached bathroom (nearly 31 per cent).

#### 1.3 Sanitation facility

- Nearly 49 per cent households had no latrine facility. Nearly 65 per cent of rural households had no latrine facility whereas 11 per cent of urban households did not have any latrine.
- In rural areas, nearly 14 per cent of the households used pit latrine compared to nearly 8 per cent households in urban areas.
- In rural areas, septic tank/flush latrine was used by 18 per cent households compared to 77 per cent households in urban areas.

#### 1.4 Electricity facility

- At the all-India level, nearly 75 per cent of the households had electricity for domestic use. While only 66 per cent households in rural areas had this facility, 96 per cent in urban areas had this.

#### 1.5 Households with three basic facilities: drinking water within premises, latrine and electricity

- Nearly 18 per cent of rural households had all three facilities (drinking water within premises, latrine and electricity) whereas in urban areas, all three facilities were enjoyed by 68 per cent households.

#### 1.6 Tenure types

- A majority of the households in both rural and urban areas were residing in owned dwelling: nearly 95 per cent in rural areas and 62 per cent in urban areas.

- 3 per cent of rural households lived in hired dwelling while a greater proportion, viz., 30 per cent of urban households lived in hired dwelling.
- Nearly 5 per cent of the urban households had residence in employer's quarter against slightly less than one per cent of rural households.

## 2. Characteristics of the house and dwelling unit

### 2.1 Type of structure

- Nearly 55 per cent of the rural households and 92 per cent of the urban households lived in pucca structures.
- Nearly 28 per cent of the rural households and 6 per cent of the urban households lived in semi-pucca structures.
- Nearly 2 per cent of the urban households and 17 per cent of the rural households lived in katcha structures.

### 2.2 Availability of separate room to married couples and per capita floor area

- Nearly 75 per cent of households both in rural as well as in urban areas, had availability of separate room for the married couples.
- Per capita floor area availability was 8.39 sq. mt. in rural areas and 9.45 sq. mt. in urban areas.
- Nearly 13 per cent of the urban households and 8 per cent of the rural households had per capita floor area of 20 sq. mt. and above.

### 2.3 Rent of hired accommodation

- Average monthly rent of hired dwellings (excluding employer's quarter) per household in urban areas (Rs. 1149) was nearly double of that in rural areas (Rs. 560).

## 3. Micro environmental elements surrounding the house

- Nearly 19 per cent of the households in rural areas and 6 per cent in urban areas had open katcha drainage. Nearly 57 per cent of the households in rural areas and 15 per cent in urban areas had no drainage arrangement.

- Garbage disposal arrangement was available to only 24 per cent of rural households against 79 per cent of the urban households.
- Nearly 18 per cent of the rural households had no direct opening to road against nearly 6 per cent of the urban households.

## 4. Construction for residential purpose during last 365 days

- Nearly 12 per cent households in rural areas and 4 per cent households in urban areas undertook constructions during the last 365 days.
- Among rural households, nearly 11 per cent completed constructions and 1 per cent undertook constructions which were in-progress.
- In urban areas, nearly 4 per cent households completed constructions and less than 1 per cent undertook constructions which were in-progress.
- On an average, each reporting household, both in rural and urban areas, undertook only one construction activity.
- Average cost per completed construction was nearly Rs. 27,000 in rural areas and, nearly Rs. 58,000 in urban areas.
- Average cost of constructions that were in-progress was nearly Rs. 82,000 in rural areas against nearly Rs. 1,53,000 in urban areas.
- Nearly 72 per cent of the completed constructions in rural areas and 71 per cent in urban areas were of the type alteration /improvement/ major repair.
- In both rural and urban areas, nearly 14 per cent of the constructions related to new building.
- In rural areas, for nearly 9 per cent of the completed constructions some amount was financed from institutional agencies, while in urban areas it was for nearly 11 per cent of the constructions.
- Financing from non-institutional agencies was almost of the same order in both rural and urban areas: in rural areas nearly 27 per cent of the constructions had some amount financed from non-institutional agencies while it was nearly 26 per cent in urban areas.

- In both the rural and urban areas, financing of the cost of construction from own sources had dominant share in total cost of completed constructions: in rural areas nearly 66 per cent of the total cost of completed constructions was financed from own sources which was nearly 61 per cent in urban areas.
- In rural areas, nearly 18 per cent of the total cost of completed constructions was financed from institutional agencies and nearly 17 per cent from non-institutional agencies.
- In urban areas, nearly 25 per cent of the total cost of completed constructions was financed from institutional agencies against 15 per cent from non-institutional agencies.

#### **5. Some aspects of housing condition among social groups**

- In rural areas, 'tube well/hand pump' remained the major source of drinking water across all the social groups: nearly 59 per cent of the SC households depended on 'tube well/hand pump' as the major source of drinking water against 56 per cent of ST households, 52 per cent of OBC households and 56 per cent of the residual social group 'others'.
- In rural areas, 'tap' as a major source of drinking water was the lowest reported among ST households (19 per cent) and it was the highest among OBC households (33 per cent) closely followed by households in the residual social group 'others' (31 per cent).
- In urban areas, proportion of households who depended on 'tap' was lowest among ST households (69 per cent) and the same was highest among 'others' (78 per cent).
- In urban areas, 'tube well/hand pump' served the highest proportion of SC households (23 per cent) and lowest proportion of 'others' households (14 per cent).
- In rural areas, highest proportion of SC households had no latrine facility (76 per cent), closely followed by ST households (75 per cent) and lowest proportion of 'others' households had no latrine facility (43 per cent).
- In urban areas, highest proportion of SC households had no latrine facility (23 per cent), closely followed by ST households (21 per cent) and for 'others' households the proportion was lowest (4 per cent).
- In rural areas, nearly 57 per cent of ST households had electricity for domestic use against nearly 74 per cent of households in 'others' category.
- In urban areas, nearly 92 per cent of ST households had electricity against nearly 98 per cent of households in 'others' category.

**Some important indicators of housing condition at a glance (NSS 65<sup>th</sup> round)**

<b>Indicator</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural+Urban</b>
(1)	(2)	(3)	(4)
Percentage of households with 'tap' as major source of drinking water	30	74	43
Percentage of households with 'tube well/ hand pump' as major source of drinking water	55	18	44
Percentage of households who got sufficient drinking water from first major source	86	91	88
Percentage of households who had access to drinking water within premises	41	75	51
Percentage of households with no latrine facility	65	11	49
Percentage of households with electricity for domestic use	66	96	75
Percentage of households who were residing in own dwelling	95	62	85
Percentage of households who were residing in hired dwelling	3	30	11
Percentage of households who lived in pucca structures	55	92	66
Percentage of households who lived in semi-pucca structures	28	6	21
Percentage of households who lived in katcha structures	17	2	13
Per capita floor area (sq. mt.)	8.39	9.45	8.67
Percentage of households with availability of separate room to each married couple	75	76	75
Average monthly rent (Rs.) payable for hired dwelling (excluding employer's quarter)	560	1149	1045
Percentage of households who undertook construction during last 365 days	12	4	10
Average number of constructions undertaken per reporting household during last 365 days	1.02	1.01	1.02
Average cost (Rs.) per residential construction	32000	69000	37000

### Highlights of NSS 65<sup>th</sup> round report number 536 (Domestic Tourism in India, 2008-09)

The results on 'Domestic Tourism in India' are based on data collected during July 2008 — June 2009 from 1,53,308 surveyed households in 8,109 sample villages and 4,719 urban blocks spread over all States and Union Territories of India. All estimates relate to a period of 365 days. The important indicators for studying domestic tourism in a demographic domain are derived through the concept of 'trip', which is devised as a unit of movement of members of a household as 'domestic visitors'.

#### NUMBER OF TRIPS MADE IN A YEAR

- In a one-year period, 418 overnight trips were made per 100 Indian households (on an average, about 4 per household). The number of trips per 100 households was 440 for the rural population, perceptibly higher than for the urban population, for which it was 365.
- The incidence of same-day trips, at 753 per 100 households in a year, was substantially higher than that of overnight trips. Rural households undertook same-day trips at the rate of 844 per 100 households, which was noticeably higher than 537 trips per 100 households, the rate for urban households.
- The number of overnight trips made per 100 persons in the population was 210 in rural India and 207, that is, roughly the same level, in urban India.
- The number of overnight trips per 100 persons was higher for males – 225 for the rural population and 220 for the urban – than for females – 194, rural, and 192, urban.
- The number of same-day trips per 100 of population was 330 in rural India and 263 in urban India. In rural India it was 389 for males and 266 for females, and in urban India it was 297 among males and 226 among females.
- With increase in age, the number of overnight as well as same-day trips per person rose gradually and then declined, being highest for the age-group 30—34 in rural India and highest for the age-group 40—44 in urban India. Among children under 15,

however, the number of trips, both same day as well as overnight, per child was highest in the lowest age group 0-4 for rural as well as urban India.

- There was not much variation among persons of different occupations or industries in number of overnight or same-day trips per 100 persons.

#### CHARACTERISTICS OF TRIPS

- **Overnight/ Same-day:** For the rural population, slightly over one-third of all trips were overnight trips and nearly two-thirds were same-day trips. For the urban population, the proportion of overnight trips was a little higher – over 40%.
- **Trip size:** For the rural population, every 100 overnight trips had 223 participating members, and every 100 same-day trips had 183. For the urban population, every 100 overnight trips had 232 participants, and every 100 same-day trips had 200 participants.
- **Leading purpose (overnight trips):** Trips whose purpose was 'social' (social visits) accounted for 75% of overnight trips of the rural population and 71% of overnight trips of the urban population. Trips with 'religious and pilgrimage' purposes accounted for about 9% of overnight trips for the rural population and 12% for the urban population. Trips for 'health and medical' purposes formed 7% of overnight trips of the rural population and about 3½% for the urban population of India. Trips for 'holidaying, leisure and recreation' accounted for 5% of overnight trips of urban people but only 2% for rural people.
- **Leading purpose (same-day trips):** About 55% of same-day trips of the urban population and 38% for the rural population were made for 'social' visits. 'Shopping' was found to be the next leading purpose for undertaking same-day trips in rural India, accounting for 23% of such trips, but was less common in urban India, where its share was only about 7%. 'Health and medical' purposes, too, were much more common in rural India, accounting for 17% of same-day trips, and less common in urban India, where their share was about 8%.
- **Duration:** The average number of nights spent on overnight trips was about 3 for the rural population

and about 4 for the urban. However, the average duration of overnight trips undertaken by the urban population varied from 3.5 nights in the months of February and August to 5.6 in the month of July. In rural areas month-to-month variation was relatively low, the average duration varying from 2.7 nights in February to 3.4 nights in June.

- **Destination location:** Travel within one's own district accounted for about 66% of overnight visitor-trips of the rural population but only about 30% for the urban population. For the urban population, 49% of overnight visitor-trips were to a place outside one's district but within one's state; for the rural population, 28% of overnight visitor-trips were of this kind. 21% of urban and 6% of rural overnight visitor-trips involved travel beyond one's state.
- **Number of places visited:** For every 100 trips made to a destination outside one's state, about 150 places were visited. For every 100 trips made to a destination outside one's district but within one's state, about 119 places were visited. For every 100 trips made to a destination within one's district, about 104 places were visited.

#### VISITOR CHARACTERISTICS AND VISITOR-SPECIFIC CHARACTERISTICS OF TRIPS

- **Gender profile:** Among every 1000 overnight visitors, 537 were males and 463 were females for the urban sector while 525 were males and 475 females for the rural sector. Among same-day visitors the male-female break-up did not differ much across sectors and was about 55:45.
- **Visitor purpose:** The break-up of overnight or same-day visitor-trips by the purpose that led the visitor to make the trip did not differ appreciably from the break-up of overnight/ same-day trips by leading purpose.
- **Mode of travel:** Buses were the dominant mode of travel for overnight and same-day trips alike, accounting for two-thirds (67%) of overnight visitor-trips of the rural population, 57% of overnight visitor-trips by the urban population, and 57-61% of same-day visitor-trips of the rural and

urban populations. About 21% of same-day visitor-trips, for both rural and urban sectors, were by own transport.

- Trains were used as the major mode of travel for 27% of overnight visitor-trips by urban Indians; for rural Indians their share in overnight visitor-trips was 7%. Trains were also used in 9% of same-day visitor-trips by urban Indians but their share was only 2% for rural Indians.
- **Type of stay:** In case of 85% of rural and 80% of urban overnight visitor-trips, the visitors stayed with friends and relatives for the major part of their stay.

#### OCCURRENCE OF DOMESTIC TOURISM ACTIVITY IN A ONE-YEAR PERIOD

- About 77% of the population of both rural and urban sectors took part in at least one overnight trip during a one-year period. For same-day trips the proportion of population making at least one trip was about 76% in rural India and 70% in urban India.
- Households in which at least one member had made an overnight trip during the past one year formed 92% of all households (about 93% in the rural sector and 90% in the urban sector).
- As many as 96% of rural households, but only 86% of urban households, had at least one member who had taken part in a same-day trip during the past one year, the overall percentage for India being 93%.
- The percentage of households with at least one member making an overnight trip during the past one year did not vary appreciably with household occupation, household social group or household religion. Nor was there any clear pattern of variation with household economic level.

#### EXPENDITURE ON TRIPS

- At all-India level, average expenditure per overnight trip was Rs.821 for the rural population and Rs.1,636 for the urban population.

- Overnight trips with ‘social’ leading purpose had a per-trip expenditure of Rs.466 (43% lower than the average trip considering all purposes) for the rural population and Rs.989 for the urban population (40% lower than average). Overnight trips for ‘health and medical’ purposes were four times as expensive as the average trip for both rural and urban populations. The urban population’s overnight trips for ‘holidaying, leisure and recreation’ were on the average more than three times as expensive, and its ‘business’ trips twice as expensive as the average trip considering all purposes. In both sectors, religious trips had a per-trip expenditure close to, but slightly higher than, the all-purposes average.
- Average expenditure per overnight visitor-trip was Rs.369 in rural India and Rs.715 in urban India.
- Average expenditure per overnight visitor-trip made for ‘social’ reasons was only Rs.202 in rural India and Rs.418 in urban India. In urban India ‘religious and pilgrimage’ trips had an average expenditure per visitor-trip of Rs.699, lower than the all-purposes average.
- In both rural and urban India, ‘social’ purpose trips accounted for about 43% of all overnight trip expenditure. Trips for ‘health and medical’ purposes had a share of 30% in overnight trip expenditure for the rural population and 15% for the urban. ‘Religious and pilgrimage’ trips had a share of about 11% in the rural sector and about 14% in the urban.
- The share of transport in overnight trip expenditure was 20% in rural India but as much as 33% in urban India. The share of shopping was 30% in rural India and 25% in urban India. The share of recreation, religious, cultural, sporting and health-related expenditure was as high as 32% in rural India but only 15% in urban India.
- The share of food and drink in overnight trip expenditure was about 9-10% for both rural and urban India. The share of accommodation was 3% in rural India and about 6% (excluding payments made as part of a ‘package’) in urban India.
- For same-day trips, shopping was the largest component of expenditure, accounting for 60% of expenditure in case of the rural population and 44% in case of the urban.
- For ‘social’ overnight trips, shopping expenditure formed 51% of the total in rural India and about 38% in urban India. For the urban population, transport commanded the largest share of expenditure (around 43%) for both ‘social’ and ‘religious and pilgrimage’ trips. The share of recreation, religious, cultural, sporting and health-related expenditure for the rural population was over 78% in ‘health and medical’ trips but under 10% in ‘religious’ trips and lower still in trips for ‘social’ visits.
- Of the total expenditure by households on domestic tourism, expenditure on overnight trips accounted for 61% – 36% being incurred by rural and 25% by urban households. Same-day trips had a share of 39% in total expenditure, 30% incurred by rural and 9% by urban households. Thus, of the total domestic tourism expenditure, the share of the rural households was about two-thirds (66%).

खण्ड-IV हिन्दी

# सर्वेक्षण

राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय  
की पत्रिका

भाग-XXIX सं.3 और 4  
अंक संख्या 96



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

सर्वेक्षण

भाग-XXIX सं.3 और 4

## विषय सूची

"भारत में सेवा क्षेत्र " के संबंध में राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय के 63वें दौर (जुलाई, 2006--  
जून, 2007) का समन्वित सार ।

हिन्दी 1-12

## सम्पादकीय सलाहकार बोर्ड

1. डॉ. यू. संकर
2. प्रो. टी.जे. राव
3. प्रो. ए.के. अधिकारी
4. डॉ. मनोज पांडा
5. श्री जी.सी. मन्ना
6. श्री पी.एस. बोस
7. श्री के. एन. उन्नी
8. श्री सत्य नारायण सिंह

## सम्पादकीय सचिवालय

समन्वय एवं प्रकाशन प्रभाग,  
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भारत में सेवा क्षेत्र के संबंध में रा.प्र.सर्वे. के 63वें दौर (जुलाई, 2006-जून, 2007)  
का समन्वित सार

रामकृपाल एवं  
विनोद सागर

## 1. प्रस्तावना

**1.1** सेवा क्षेत्र, जीडीपी में अपने योगदान के परिप्रेक्ष्य में अर्थव्यवस्था का सबसे महत्वपूर्ण पहलू है। यह इकाईयों की परिचालन विशिष्टताओं तथा आर्थिक गतिविधियों का बहुविध क्षेत्र है। सेवा क्षेत्र में शामिल इकाईयों की संपूर्ण श्रृंखला में विशाल निगमित उद्यम तथा छोटे-छोटे उद्यम दोनों ही शामिल हैं। विशाल उद्यमों का जहां उत्पादन में योगदान बहुत ज्यादा है वहीं छोटी इकाईयों का रोजगार में योगदान ज्यादा है। यह रोजगार सृजन में कृषि के बाद द्वितीय स्थान पर है। तथापि, भौगोलिक क्षेत्र में इसकी विविध वृहत व्याप्ति तथा वृद्धि गतिकी के कारण इस क्षेत्र के सभी भागों में भारी डाटा अंतराल है। जुलाई 2006-जून 2007 के दौरान रा.प्र.सर्वे. के 63वें दौर में सेवा क्षेत्र उद्यमों का सर्वेक्षण इन डाटा अंतरालों को भरने का प्रयास है। अतः उद्यम सर्वेक्षण, उद्यमों की अनुमानित संख्या, उनके स्वामित्व और परिचालन विशिष्टताओं, कामगारों की संख्या संबंधी अनुमानों, कामगारों के प्रकार, रोजगार की प्रकृति, इनपुट, उत्पादन एवं मूल्यवर्धन, स्थायी परिसंपत्तियों, पूंजी निर्माण, परिसंपत्ति एवं देनदारियों संबंधी राष्ट्रीय तथा उप राष्ट्रीय डाटा की व्यापक रूपरेखा का एकमात्र स्रोत है। सेवा क्षेत्र उद्यमों संबंधी रा.प्र.सर्वे. का पिछला सर्वेक्षण जुलाई 2001-जून 2002 के दौरान रा.प्र.सर्वे. के 57वें दौर में आयोजित किया गया था।

**1.2** 63वें दौर के अंतर्गत प्रयुक्त "सेवा क्षेत्र उद्यम" शब्द (ए) सरकारी तथा सार्वजनिक क्षेत्र उपक्रम तथा (बी) वार्षिक उद्योग सर्वेक्षण के अंतर्गत सम्मिलित क्षेत्र के अलावा मुख्यतः सभी सेवा क्षेत्र उद्यमों के संदर्भ में है। अतः सर्वेक्षण में होटल तथा रेस्टोरेंट (एनआईसी 2004 का सेक्शन एच); परिवहन, संग्रहण तथा संचार (आई) वित्तीय मध्यस्थता (जे) जमीन जायदाद, किराए पर देना और व्यावसायिक गतिविधियां (के) शिक्षा (एम) स्वास्थ्य एवं सामाजिक कार्य (एन) और अन्य सामुदायिक, सामाजिक तथा निजी सेवा कार्य-कलापों में संबद्ध सभी सेवा क्षेत्र उद्यम (ओ) (व्यापार को छोड़कर) सम्मिलित हैं। इस सर्वेक्षण की एक मुख्य विशेषता वित्तीय मध्यस्थता (जे) को शामिल करना है जो कि रा.प्र.सर्वे. का. के असंगठित सेवा क्षेत्र उद्यमों से संबंधित पिछले सर्वेक्षण में शामिल नहीं थी। तथापि, इस सर्वेक्षण में उद्योग/रेलवे, विमान या पाइपलाइन (एनआईसी 2004 का समूह 601, 603 और प्रभाग 62) के जरिए परिवहन की गतिविधियां, निजी आवासीय भवनों (एनआईसी 2004 का उप वर्ग 70103) की जमीन जायदाद का संचालन, मौद्रिक मध्यस्थता (एनआईसी 2004 का समूह 651), ट्रेड यूनियन (उप-वर्ग 91200) के कार्य-कलाप, धार्मिक संगठन (उप-वर्ग 91910) एवं राजनीतिक संगठन (उप-वर्ग 91920) शामिल नहीं हैं। उल्लेखनीय है कि उप वर्ग 91910 का एक भाग ऐसे व्यक्तियों से संबंधित है जो पुजारी इत्यादि जैसे उपासकों को अपनी सेवाएं उपलब्ध कराते हैं।

## 2. पद्धति

**2.1 भौगोलिक क्षेत्र:** इस सर्वेक्षण में (i) जम्मू एवं कश्मीर के लेह (लद्दाख), कारगिल, पूंछ एवं राजौरी जिले (ii) नागालैंड में बस रूट से पांच किलोमीटर की दूरी से परे स्थित आंतरिक गांव (iii) अंडमान और निकोबार द्वीप समूह के गांव, जो पूरे वर्ष अगम्य रहते हैं, को छोड़कर पूरा भारत संघ शामिल है।

**2.2 प्रतिदर्श डिजाइन की रूपरेखा:** विशाल एवं बहुत छोटे उद्यमों वाले सेवा क्षेत्र के विषम डोमेन को ध्यान में रखते हुए प्रतिदर्श उद्यमों के चयन हेतु 63वें दौर का प्रतिदर्श अभिकल्प विशेषतौर से दोहरे फ्रेम नामतः लिस्ट फ्रेम और एरिया फ्रेम से तैयार किया गया था। यद्यपि वित्तीय क्षेत्र उद्यमों व सेवाक्षेत्र के अन्य बड़े उद्यमों को लिस्ट फ्रेम में शामिल किया गया था, तथापि गांवों तथा शहरी प्रखंडों के भौगोलिक क्षेत्र में अवस्थित अन्य सभी उद्यमों (लिस्ट फ्रेम में शामिल उद्यमों को छोड़कर) को एरिया फ्रेम में शामिल किया गया था। एरिया फ्रेम में, स्तरीकृत बहु-स्तरीय प्रतिदर्श डिजाइन को अपनाया गया था। ग्रामीण क्षेत्रों में पहले स्तर की इकाईयां (एफएसयू) गांव (केरल में पंचायत वार्ड) थे और शहरी क्षेत्रों में, शहरी फ्रेम सर्वे (यूएफएस) प्रखंड पहले स्तर की इकाईयां थी। अपेक्षाकृत पहले स्तर की बड़ी इकाईयों को छोटे-छोटे भागों में बांटा गया, जिन्हें ग्रामीण क्षेत्रों में बस्ती-समूह नाम दिया गया और शहरी क्षेत्रों में उप-प्रखंड नाम दिया गया। पहले स्तर की बड़ी इकाईयों के मामले में, जहां बस्ती-समूह (एचजी)/उप-प्रखंड (एसबी) बनाना जरूरी था, वहां प्रतिदर्श चयन में एक मध्यवर्ती स्तर शामिल किया गया, जिसमें प्रत्येक एफएसयू से तीन बस्ती-समूह/उप-प्रखंड का चयन किया जाना था। ये बस्ती-समूह/उप-प्रखंड एफएसयू में बनाए गए कम से कम चार एचजी/एसबी में से चुने जाने थे। सेवा क्षेत्र के उद्यमों की अधिकतम संख्या वाला एक एचजी/एसबी संभाव्यता "1" एक के साथ चुना गया और इसे सेगमेंट -1 कहा गया और एफएसयू के शेष एचजी/एसबी की सूची में से यादृच्छिक आधार पर दो एचजी/एसबी और चुने गए तथा इनसे सेगमेंट-2 बनाया गया। जैसा कि ऊपर उल्लेख किया गया है, सेगमेंट के अंतर्गत, उद्योगों के प्रकार एवं उद्यमों के प्रकार के आधार पर वर्गीकृत दूसरे चरण के आठ द्वितीय स्तर संस्तर (एसएसएस) तैयार किए गए। अंतिम स्तर की इकाईयों (यूएसयू) अर्थात् सेवा क्षेत्र के उद्यमों को एसआरएसडब्ल्यूओआर के जरिए प्रत्येक सेगमेंट के संबंधित एसएसएस के पात्र उद्यमों में से चुना गया था। लेकिन, संपूर्ण एफएसयू में से सेवा क्षेत्र के अपेक्षाकृत बड़े उद्यम (गैर- मौसमी/मौसमी उद्यमों के मामले में, संदर्भ वर्ष के दौरान 30/15 दिन काम करने वाले उद्यम), जिनमें 50 या इससे अधिक कर्मचारी काम करते हैं और जो सर्वेक्षण के योग्य थे, को अलग से सूचीबद्ध (सेगमेंट-9) किया गया और सेगमेंट-9 के इन सभी सूचीबद्ध उद्यमों में अनुसूचियां भरी गईं। अंततः लिस्ट फ्रेम (कुल 998 उद्यम) से नमूने के तौर पर 438 उद्यमों का और एरिया फ्रेम से 13,271 प्रतिदर्श गांवों/शहरी प्रखंडों में अवस्थित 190,282 उद्यमों का वास्तविक सर्वेक्षण किया गया।

**2.3** किसी भी चुनिंदा सर्वेक्षण विशेषता के संबंध में समाहारों के डिजाइन आधारित अनुमान, लिस्ट फ्रेम और एरिया फ्रेम के लिए अलग-अलग हासिल किए गए। अंत में, संयुक्त फ्रेम के लिए एकत्रित सकल अनुमान प्राप्त करने के उद्देश्य से अनुमानों के इन दोनों सेटों का योग निकाला गया। इस सार-संक्षिप्त रिपोर्ट में, सर्वेक्षण में उपयोग किए गए दो प्रकार के फ्रेमों पर आधारित एकत्र अनुमान के बारे में विशेष रूप से चर्चा की जाएगी।

2.4 **मदें, जिनके बारे में सूचना जुटाई गई:** सेवा क्षेत्र के उद्यमों से आंकड़े जुटाने के लिए अनुसूची 2.345 तैयार की गई थी। अनुसूची को 19 प्रखंडों में संगठित किया गया। अनुसूची के विभिन्न खंडों के माध्यम से जिन मदों के बारे में सूचना जुटाई गई, वे हैं : संचालन का विवरण तथा उद्यम की पृष्ठभूमि के बारे में सूचना, संचालन का मूल व्यय, संचालन संबंधी अन्य व्यय, मूल प्राप्तियां, अन्य प्राप्तियां, गैर-वित्तीय उद्यमों के संबंध में अन्य प्राप्तियां/व्यय, सकल मूल्यवर्धन, रोजगार संबंधी विवरण, कामगारों को पारिश्रमिक, स्वामित्व वाली अचल संपत्तियां और किराए पर ली गई संपत्तियों का किराया तथा वित्तीय देयताएं।

### 3. समन्वित सार की विषय-वस्तु

3.1 **उद्यम सर्वेक्षण पर आधारित एनएसएस के 63वें दौर से संबंधित दो रिपोर्टें प्रकाशित हो चुकी हैं:** (1) भारत में सेवा क्षेत्र (2006-07) - उद्यमों की प्रचालनात्मक विशेषताएं (एनएसएस रिपोर्ट सं.528) तथा (2) भारत में सेवा क्षेत्र (2006-07)- उद्यमों की आर्थिक विशेषताएं (एनएसएस रिपोर्ट सं.529)। परिणामों का मौजूदा एकीकृत सार उपरोक्त दो रिपोर्टों के प्रमुख निष्कर्ष पर आधारित है।

### 4. मुख्य निष्कर्ष :

#### 4 क: अखिल-भारतीय परिणाम

4.1 **प्रमुख संकेतक:** उद्यम क्षेत्र के कई संकेतक हैं जिसके जरिए अर्थव्यवस्था पर प्रभाव का अध्ययन किया जा सकता है। इसमें से कुछ प्रमुख संकेतक हैं- आकार (जैसे उद्यमों की संख्या और कामगारों की संख्या), प्रति उद्यम रोजगार, सकल मूल्यवर्धन आदि। **विवरणी 1** प्रमुख संकेतकों के संदर्भ में 2006-07 के दौरान भारत में सेवा क्षेत्र उद्यमों की एक झलक प्रस्तुत करती है। इससे प्रकट होता है कि 2006-07 के दौरान भारत में लगभग 16.5 मिलियन सेवा क्षेत्र उद्यम कार्य कर रहे थे। इससे यह भी प्रकट होता है कि 2006-07 के दौरान सेवा क्षेत्र उद्यमों में लगभग 33.5 मिलियन लोग कार्य कर रहे थे। देश का कुल सकल मूल्यवर्धन 2,44,792 करोड़ रु. अनुमानित किया गया है। देश की प्रति उद्यम स्वामित्व वाली स्थाई परिसंपत्तियों की बाजार कीमत 1,78,102 रु. अनुमानित की गई है। सेवा क्षेत्र के डोमेन की विषमता इस साधारण तथ्य से ही स्पष्ट है कि प्रतिष्ठानों की स्वामित्व वाली स्थायी परिसंपत्तियों का प्रति उद्यम मूल्य (रु.960.2 हजार) स्व-लेखा उद्यमों<sup>1</sup> (ओएई) के इसी मूल्य (रु. 43.7 हजार) का लगभग 22 गुणा है। यह देखा गया है कि एक उद्यम का औसतन, वित्तीय दायित्व (संदर्भ वर्ष की अंतिम तिथि की स्थिति के अनुसार उद्यम द्वारा वहन किया गया कुल दायित्व जिसमें एक उद्यम के साझेदारों द्वारा लगाई गई पूंजी, शेयर पूंजी, बैलेंस शीट में नोट की गई रिजर्व तथा अधिशेष राशि, दीर्घ अवधि के ऋण तथा अप्रदत्त मजदूरी आदि जैसे भुगतानों के लिए सभी अल्प-अवधि की प्रतिबद्धताएं भी शामिल हैं) 4,41,133 रु. है। देश में ओएई का प्रति उद्यम वित्तीय दायित्व, प्रतिष्ठानों के 28,84,961 रु. की तुलना में, 21,430 रु. है।

<sup>1</sup> सर्वेक्षण में अपनाई गई परिभाषा के अनुसार, स्व-लेखा उद्यम वह इकाई है जो पिछले एक वर्ष के अधिकांश भाग के दौरान कोई भाड़े के कामगार को लिए बिना चलाई गई हो जबकि प्रतिष्ठान से तात्पर्य ऐसी इकाई से है जिसमें उक्त संदर्भ अवधि के दौरान कम से कम एक भाड़े का कामगार लगाया गया हो।

**विवरणी 1 : भारत में सेवा क्षेत्र उद्यम, 2006-07 की एक झलक**

प्रमुख संकेतक	कुल	ओएई	प्रतिष्ठान
उद्यमों की अनुमानित संख्या ('000)	16,512	14,092	2,420
कामगारों की अनुमानित संख्या ('000)	33,516	21,258	12,258
प्रति उद्यम कामगारों की औसत संख्या	2.03	1.51	5.07
कुल सकल मूल्यवर्धन (रु. करोड़ में)	2,44,792	45,660	1,99,131
प्रति उद्यम स्वामित्व वाली स्थाई परिसंपत्तियों का अनुमानित मूल्य (रु. में)	1,78,102	43,774	9,60,260
प्रति उद्यम वित्तीय दायित्व का अनुमानित मूल्य (रु. में)	4,41,133	21,430	28,84,961

**4.2 उद्यमों की संख्या तथा उनकी विशेषताएं :** अर्थव्यवस्था के विकास तथा आर्थिक उद्यमशीलता के मान की व्याख्या हेतु उद्यमों की संख्या एक मुख्य विशेषता है। जैसा **विवरणी 2** में दर्शाया गया है, 2006-07 के दौरान व्यापार को छोड़कर लगभग 16.5 मिलियन उद्यम सेवा क्षेत्र गतिविधियों में लगे हैं। ध्यान देने योग्य है कि 60 प्रतिशत सेवा क्षेत्र उद्यम ग्रामीण भारत में हैं जबकि 40 प्रतिशत शहरी क्षेत्र में हैं। ओएई सभी उद्यमों का 85 प्रतिशत है।

**विवरणी 2 : भारत में उद्यम के प्रकार तथा क्षेत्र के अनुसार उद्यमों की अनुमानित संख्या, 2006-07**

क्षेत्र	उद्यमों की संख्या ('000 में)		
	ओएई	प्रतिष्ठान	सभी
ग्रामीण	9,004	896	9,900
शहरी	5,088	1,524	6,612
समस्त	14,092	2,420	16,512

**4.3 विवरणी 3** सेवा क्षेत्र उद्यमों की कुछ महत्वपूर्ण विशेषताएं बताती है। स्वामित्व वाले उद्यम (अर्थात् एकल परिवार के स्वामित्व वाले उद्यम) देश में उद्यमों की कुल संख्या में सर्वाधिक हिस्सा (90%) रखते हैं। आर्थिक जगत में सेवा क्षेत्र उद्यमशीलता की अनौपचारिकता की प्रधानता इस तथ्य से प्रदर्शित हुई कि कुल उद्यमों का लगभग 59 प्रतिशत हिस्सा किसी अधिनियम अथवा किसी पंजीकरण प्राधिकरण के तहत पंजीकृत नहीं पाया गया है और यह अनुपात प्रतिष्ठानों (34%) की तुलना में ओएई (63%) के मामले में अधिक है। लगभग 26 प्रतिशत उद्यम किसी नियत अवस्थिति के बिना अपना रोजगार चलाते हैं। समनुरूप प्रतिशतता ओएई (29%) की तुलना में प्रतिष्ठानों (10%) के मामले में कम है। सभी उद्यमों में अधिकांशतः (99%) बारहमासी हैं अर्थात् पूरे वर्ष कमोबेश कार्य करते रहते हैं। 91 प्रतिशत उद्यमों ने पिछले 365 दिनों के दौरान 9 माह अथवा अधिक कार्य किया है।

**विवरणी 3 : भारत में उद्यम के प्रकार के अनुसार उद्यमों की कुछ विशेषताएं, 2006-07**

विशेषताएं	कुल	ओएई	प्रतिष्ठान
स्वामित्व वाले उद्यमों की प्रतिशतता	90.2	91.0	86.0
किसी एजेंसी से पंजीकृत न हुए उद्यमों की प्रतिशतता	59.1	63.4	34.5
बिना नियत परिसरों वाले उद्यमों की प्रतिशतता	26.4	29.1	9.9
बारहमास चलने वाले उद्यमों की प्रतिशतता	98.6	98.6	98.3
9 महीने अथवा अधिक महीने चलने वाले उद्यमों की प्रतिशतता	90.9	90.9	90.5
ठेके पर कार्य वाले उद्यमों की प्रतिशतता	2.5	2.3	3.8

**4.4 उद्यमों के परिचालन की समस्याएं तथा सहायता प्राप्त करने की स्थिति :** विवरणी 4 से स्पष्ट है कि लगभग 22% उद्यम पूंजी की कमी का सामना करते बताए गए हैं। यह प्रतिशतता शहरी भारत (20%) की तुलना में ग्रामीण भारत (23%) के मामले में थोड़ी अधिक है।

**विवरणी 4 : पूंजी की कमी बताने वाले उद्यमों की प्रतिशतता**

पूंजी की कमी बताने वाले उद्यमों की प्रतिशतता								
ग्रामीण			शहरी			समस्त		
ओएई	प्रतिष्ठान	समस्त	ओएई	प्रतिष्ठान	समस्त	ओएई	प्रतिष्ठान	समस्त
22.7	23.4	22.8	20.9	16.3	19.9	22.1	18.9	21.6

4.5 अधिकांश उद्यमों द्वारा सूचित किया गया कि उनको कोई सरकारी सहायता नहीं मिली। जैसा विवरणी 5 में देखा गया है, लगभग 86% उद्यम सरकार से ऋण अथवा आर्थिक सहायता अथवा प्रशिक्षण आदि के रूप में कोई सहायता प्राप्त नहीं करते हैं। ध्यान देने योग्य है कि किसी सहायता के प्राप्त न होने की घटनाएं शहरी उद्यमों द्वारा कुछ अधिक सूचित की गई हैं। लगभग 12% इसे ऋणों के रूप में ही प्राप्त करते हैं। किसी रूप में सहायता प्राप्त करने की घटनाएं ओएई (13%) की तुलना में प्रतिष्ठानों (22%) के लिए अधिक हैं।

**विवरणी 5 : उद्यम के प्रकार तथा क्षेत्र के अनुसार श्रेणीकरण किए गए सहायता प्राप्त कर रहे उद्यम तथा कोई सहायता प्राप्त न कर रहे उद्यमों की प्रतिशतता**

	ग्रामीण			शहरी			समस्त		
	ओएई	प्रतिष्ठान	समस्त	ओएई	प्रतिष्ठान	समस्त	ओएई	प्रतिष्ठान	समस्त
ऋण के रूप में सहायता प्राप्त कर रहे	13.5	23.6	14.4	7.6	15.4	9.4	11.4	18.5	12.4
अन्य सहायता प्राप्त कर रहे	1.8	5.4	2.1	1.4	2.9	1.7	1.6	3.8	1.9
कोई सहायता प्राप्त नहीं कर रहे	84.7	71.0	83.5	91.0	81.7	88.9	87.0	77.7	85.7

**4.6 सेवा क्षेत्र में रोजगार :** भारत में, सेवा क्षेत्र की रोजगार सृजन में महत्वपूर्ण भूमिका है। वर्ष 2006-07 के दौरान सेवा क्षेत्र में कामगारों की संख्या लगभग 3.35 करोड़ होने का अनुमान लगाया गया था, जिसमें ग्रामीण तथा शहरी हिस्सा क्रमशः 54% तथा 46% था।

**विवरणी 6 : वर्ष 2006-07 के दौरान उद्यम के प्रकार तथा क्षेत्र के अनुसार कामगारों की संख्या**

उद्यम का प्रकार	कामगारों की अनुमानित संख्या ('000 में)		
	ग्रामीण	शहरी	समस्त
ओईई	14,548	6,709	21,258
प्रतिष्ठान	3,582	8,673	12,255
समस्त	18,130	15,383	33,513

**4.7 महिला कामगारों का अनुपात :** सेवा क्षेत्र उद्यमों में रोजगार में लिंग अंतर का अध्ययन करने के लिए, रोजगार के विवरण कामगारों के लिंगानुसार भी एकत्र किए जाते हैं। **विवरणी 6क** ग्रामीण, शहरी तथा दोनों (संयुक्त) क्षेत्रों के लिए पृथकरूप से विभिन्न उद्यमों के प्रकार में महिला कामगारों के अनुपातों को बताती है। यह देखा गया है कि सेवा क्षेत्र उद्यमों में सभी कामगारों का लगभग 29% महिला कामगार हैं तथा महिला कामगारों की प्रतिशतता शहरी क्षेत्रों (22%) की तुलना में ग्रामीण क्षेत्रों (35%) में अधिक है।

**विवरणी 6क : वर्ष 2006-07 के दौरान उद्यम के प्रकार तथा क्षेत्र के अनुसार महिला कामगारों की प्रतिशतता**

उद्यम के प्रकार	महिला कामगारों की प्रतिशतता		
	ग्रामीण	शहरी	समस्त
ओईई	39.0	20.2	33.0
प्रतिष्ठान	19.4	24.0	22.6
समस्त	35.1	22.4	29.2

**4.8 कामगार (पूर्ण कालिक तथा अंश कालिक) :** पूर्ण कालिक तथा अंश कालिक कामगारों के अनुमान तैयार करने के लिए सर्वेक्षण में पूर्ण कालिक अथवा अंश कालिक आधार पर उद्यमों में कार्यरत कामगारों की संख्या संबंधी सूचना एकत्र की गई। एक कामगार को पूर्ण कालिक तभी माना जाएगा यदि उसने पूर्ण रूप से नियमित आधार पर उद्यम के सामान्य काम के घंटों की आधी अवधि से अधिक कार्य किया है। **विवरणी 6ख** से स्पष्ट है कि ग्रामीण उद्यमों में लगभग 76% तथा शहरी उद्यमों में 90% कामगार पूर्ण कालिक आधार पर कार्यरत हैं। भाड़े के कामगारों (सीधे अथवा किसी एजेंसी द्वारा नियमित पारिश्रमिक वेतन के भुगतान अथवा प्रकार के आधार पर नियोजित व्यक्ति जिसमें प्रशिक्षु, वैतनिक अथवा अवैतनिक, वेतनभोगी पारिवारिक कामगार, नौकर तथा उद्यम के आवासीय कामगार शामिल हैं) से संबंधित सूचना भी एकत्र की गई तथा **विवरणी 6ग** भारत में प्रतिष्ठानों हेतु भाड़े के कामगारों के वेतन के बारे में कुछ तथ्य स्पष्ट करती है।

**विवरणी 6 ख: 2006-07 के दौरान कार्यावधि एवं क्षेत्र के अनुसार कामगारों का प्रतिशत**

कार्यावधि	कामगारों का प्रतिशत		
	ग्रामीण	शहरी	सभी
पूर्णकालिक	76	90	83
अंशकालिक	24	10	17
सभी	100	100	100

**विवरणी 6 ग: 2006-07 के दौरान एरिया फ्रेम के आधार पर भाड़े पर कार्यरत प्रति कामगार वार्षिक वेतन (रु.में)**

उद्यम का प्रकार	भाड़े पर कार्यरत प्रति कामगार वार्षिक वेतन (रु. में)
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	ग्रामीण	शहरी	सभी
प्रतिष्ठान	24,816	57,977	48,482

**विवरणी 6** ग से प्रकट होता है कि शहरी क्षेत्रों में भाड़े पर कार्यरत कामगारों का वार्षिक वेतन (57,977 रु.) ग्रामीण भारत (24,816 रु.) की तुलना में दुगुने से अधिक है ।

**4.9 स्वामित्व वाली स्थायी परिसम्पत्तियाँ- विवरणी 7** विभिन्न प्रकार के उद्यमों के लिए प्रति उद्यम स्वामित्व वाली कुल स्थायी परिसम्पत्तियों का अनुमानित मूल्य प्रस्तुत करती है । अखिल भारतीय स्तर पर, प्रति उद्यम स्वामित्व वाली स्थायी परिसम्पत्तियों का अनुमानित बाज़ार मूल्य 1,78,102 रु. है । शहरी क्षेत्रों में प्रति उद्यम स्वामित्व वाली स्थायी परिसम्पत्तियों का बाज़ार मूल्य ग्रामीण क्षेत्रों में इसी प्रकार के मूल्य का लगभग 5.5 गुणा है । प्रतिष्ठानों के लिए स्वामित्व वाली स्थायी परिसम्पत्तियों का प्रति उद्यम मूल्य स्वलेखा उद्यमों (ओएई) के उसी प्रकार के मूल्य का लगभग 22 गुणा है ।

**विवरणी 7: भिन्न प्रकार के उद्यमों के अनुसार स्वामित्व वाली स्थायी परिसम्पत्तियों का अनुमानित मूल्य (रु.)**

उद्यम का प्रकार	प्रति उद्यम स्वामित्व वाली स्थायी परिसम्पत्तियों का अनुमानित मूल्य (रु.में)		
	ग्रामीण	शहरी	सभी
ओएई	32,801	63,194	43,774
प्रतिष्ठान	3,67,366	13,09,118	9,60,260
सभी	63,096	3,50,325	1,78,102

**4.10 वित्तीय दायित्व:** वित्तीय दायित्वों में किसी उद्यम के भागीदारों द्वारा लगाई गई पूंजी, शेयर पूंजी, बेलेंस शीट में नोट की गई रिज़र्व और अधिशेष राशि, दीर्घवधि ऋण तथा अप्रदत्त मज़दूरी आदि भुगतानों के लिए सभी लघु अवधि की प्रतिबद्धताएं भी शामिल थी । प्रति उद्यम वित्तीय दायित्व की औसत राशि **विवरणी-8** में दी गई है । यह देखा गया कि अखिल भारतीय स्तर पर, किसी उद्यम का वित्तीय दायित्व संदर्भ वर्ष की अंतिम तिथि के अनुसार 4,41,133 रुपए था । प्रतिष्ठानों के लिए 28,84,961 रु. की तुलना में स्वलेखा उद्यमों (ओएई) का प्रति उद्यम वित्तीय दायित्व 21,430 रु. है । अतः प्रति प्रतिष्ठान वित्तीय दायित्व ओएई के वित्तीय दायित्व से काफी अधिक है ।

**विवरणी 8: भिन्न प्रकार के उद्यमों के अनुसार वित्तीय दायित्व का अनुमानित मूल्य (रु.)**

उद्यम का प्रकार	प्रति उद्यम वित्तीय दायित्व (रु.में)		
	ग्रामीण	शहरी	सभी
ओएई	8,210	44,827	21,430
प्रतिष्ठान	3,84,220	43,56,395	28,84,961
सभी	42,258	10,38,455	4,41,133

**4.11 सकल मूल्य संवर्द्धन:** सकल मूल्य संवर्द्धन (जीवीए) वह मूल्य है जो किसी उद्यम के उत्पादन की प्रक्रिया द्वारा अर्थव्यवस्था में जोड़ा जाता है । **विवरणी 9** भारतीय अर्थव्यवस्था में जीवीए की एक झलक प्रस्तुत करती है । सेवा क्षेत्र में उद्यमों द्वारा जोड़ा गया कुल वार्षिक सकल मूल्य संवर्द्धन 2,44,792 करोड़ रु. अनुमानित है जिसमें ग्रामीण भारत और शहरी भारत का हिस्सा क्रमशः 15% और 85% था । जीवीए में प्रमुख अंशदान ग्रामीण क्षेत्रों में ओएई से (61%) तथा शहरी क्षेत्रों में

प्रतिष्ठानों से (89%) प्राप्त हुआ है। ग्रामीण और शहरी क्षेत्र दोनों में ही (संयुक्त रूप से) सेवा क्षेत्र में कुल जीविए में प्रतिष्ठानों द्वारा मुख्य अंशदान (81%) किया गया।

**विवरणी 9: 2006-07 के दौरान उद्यम के प्रकार और क्षेत्र के अनुसार कुल सकल मूल्य संवर्द्धन (करोड़ रु.में)**

उद्यम का प्रकार	कुल सकल मूल्य संवर्द्धन (करोड़ रु.में)		
	ग्रामीण	शहरी	सभी
ओएई	22,759	22,901	45,660
प्रतिष्ठान	14,660	1,84,472	1,99,131
सभी	37,419	2,07,373	2,44,792

**4.11.1 एरिया फ्रेम के आधार पर प्रति कामगार जीविए:-** नीचे दी गयी विवरणी 10 भिन्न-भिन्न उद्यमों द्वारा ग्रामीण, शहरी और संयुक्त क्षेत्रों के लिए अलग-अलग अनुमानित प्रति कामगार वार्षिक सकल मूल्य संवर्द्धन (जीविएपीडब्ल्यू) दर्शाती है। आशा के अनुरूप, सभी क्षेत्रों में प्रतिष्ठानों के लिए जीविएपीडब्ल्यू काफी अधिक था। अखिल भारतीय स्तर पर, सेवा क्षेत्र में वार्षिक जीविएपीडब्ल्यू 73038 रु. अनुमानित है। ग्रामीण भारत के लिए, ओएई तथा प्रतिष्ठानों के लिए वार्षिक जीविएपीडब्ल्यू क्रमशः 15644 रु. और 40931 रु. अनुमानित हैं। शहरी क्षेत्रों के लिए इसी प्रकार के अनुमान क्रमशः 34132 रु. और 212615 रु. हैं।

**विवरणी 10: प्रति कामगार जीविए (रु. में)**

उद्यम का प्रकार	प्रति कामगार अनुमानित जीविए (रु.में)		
	ग्रामीण	शहरी	सभी
ओएई	15,644	34,132	21,479
प्रतिष्ठान	40,931	2,12,615	1,62,452
सभी	20,640	1,34,782	73,038

**4.12 कार्यकलाप स्तर पर सेवा क्षेत्र के उद्यमों की विशेषताएं :** जैसा कि नीचे विवरणी 11 में दर्शाया गया है, कुल उद्यमों में परिवहन, भंडारण तथा संचार (आई) उद्यमों की प्रतिशतता सबसे अधिक (38%) है, इसके बाद अन्य समुदाय, सामाजिक तथा व्यक्तिगत सेवा कार्यकलापों (ओ) का स्थान (19%) है। 3.35 करोड़ अनुमानित कामगारों की कुल संख्या में से सेवा क्षेत्र के विभिन्न कार्यकलापों से जुड़े कामगारों की संख्या भिन्न है। देखा गया है कि "परिवहन, भंडारण तथा संचार (आई)" से संबंधित उद्यमों से जुड़े कामगारों की अनुमानित संख्या सबसे अधिक (0.84 करोड़) है, इसके बाद "वित्तीय मध्यस्थता (जे)" (0.58 करोड़), "होटल एवं रेस्तरां (एच)" (0.513 करोड़), "अन्य समुदाय, सामाजिक तथा व्यक्तिगत सेवायें (ओ)" (0.51 करोड़), तथा "शिक्षा (एम)" (0.39 करोड़) का स्थान है। आगे यह भी देखा गया है कि अखिल भारतीय स्तर पर प्रति उद्यम सर्वाधिक वार्षिक जीविए "होटल (एच1)" (1548 हजार रु.) का है। इसके बाद "बीमा एवं पेंशन फंडिंग तथा सहायक कार्यकलापों (जे2)" (1327 हजार रु.) तथा "भंडारण एवं भंडारगृह (आई1)" (572 हजार रु.) का स्थान है। प्रति उद्यम सबसे कम जीविए "अन्य समुदाय, सामाजिक तथा व्यक्तिगत सेवा कार्यकलापों (ओ)" (45 हजार रु.) का था।

**विवरणी 11: कार्यकलाप स्तर पर सेवा क्षेत्र के उद्यमों की कुछ विशेषताएं**

कार्यकलाप	उद्यमों का प्रतिशतवार वर्गीकरण			उद्यमों की अनुमानित संख्या (हजार रु. में)	कामगारों की अनुमानित संख्या (हजार रु. में)	प्रति उद्यम अनुमानित वार्षिक सकल मूल्य वर्द्धन (हजार रु. में)	प्रति कामगार अनुमानित वार्षिक सकल मूल्य वर्द्धन (हजार रु. में)
	कुल	ओआई	प्रतिष्ठान				
होटल (एच 1)	0.42	0.06	2.53	69	44 1	1,548	244
होटल एवं रेस्तरां (एच)	12.47	10.99	21.13	2,060	5,134	137	55
भंडारन एवं भंडारगृह (आई 1)	0.02	0.00	0.08	3	18	572	87
परिवहन, भंडारण एवं संचार (आई)	37.99	40.55	23.09	6,273	8,370	70	52
बीमा एवं पेंशन फंडिंग तथा सहायक कार्यकलाप (जे2)	1.39	1.41	1.23	229	438	1327	693
वित्तीय मध्यस्थता (जे)	9.17	9.99	4.37	1,514	5,770	327	86
रियल एस्टेट, किरायेदारी तथा व्यापारिक कार्यकलाप (के)	8.48	7.38	14.93	1,401	3,098	483	218
शिक्षा (एम)	6.31	5.06	13.58	1,041	3,874	226	61
स्वास्थ्य एवं सामाजिक कार्य (एन)	6.63	5.77	11.63	1,095	2,181	165	83
अन्य समुदाय, सामाजिक तथा व्यक्तिगत सेवा के कार्यकलाप (ओ)	18.94	20.26	11.27	3,128	5,088	45	27
कुल	100	100	100	16,512	33,516	148	73

**4.13 पिछले दौरों के साथ तुलनात्मक परिणाम: विवरणी 12** में 2006-07 (एनएसएस का 63वां दौर) तथा 2001-02 (एनएसएस का 57वां दौर) के दौरान सेवा क्षेत्र से संबंधित उद्यमों के सर्वेक्षण के परिणामों की तुलना दी गई है जिससे यह पता चलता है कि पिछले वर्षों के दौरान उद्यमों की संख्या तथा कामगारों की संख्या में मामूली बदलाव हुआ है। यह देखना भी दिलचस्प है कि 2001-02 तथा 2006-07 दोनों ही दौरों में उद्यमों की संख्या के मामले में शीर्ष चार राज्य एक ही रहे हैं तथा उनकी प्रतिशतता की हिस्सेदारी में कोई उल्लेखनीय अंतर नहीं रहा है।

**4.14** 57वें दौर में 51,673 रु. प्रति उद्यम जीविए के मुकाबले 63वें दौर में प्रति उद्यम जीविए 1,30,153 रु. रहा है (वित्तीय मध्यस्थता (जे) के तहत शामिल उद्यमों को छोड़कर)। 57वें दौर में 28,160 रु. के प्रति कामगार जीविए के मुकाबले 63वें दौर में प्रति कामगार जीविए 70,358 रु. (वित्तीय मध्यस्थता (जे) के तहत शामिल उद्यमों को छोड़कर) रहा है।

## विवरणी 12: पिछले दौरों के दौरान कुछ मुख्य संकेतकों के तुलनात्मक विवरण:

मुख्य संकेतक	57 वां दौर (2001-02)		63 वां दौर (2006-07)*	
उद्यमों की अनुमानित संख्या (हजार में)	14472		14998	
कामगारों की अनुमानित संख्या (हजार में)	26556		27742	
प्रति उद्यम कामगारों की औसत संख्या	1.8		1.8	
उद्यमों की कुल संख्या में शीर्ष पांच राज्यों की हिस्सेदारी का प्रतिशत	उत्तर प्रदेश	17.19	उत्तर प्रदेश	14.71
	पश्चिम बंगाल	10.79	पश्चिम बंगाल	12.81
	आंध्र प्रदेश	9.29	आंध्र प्रदेश	9.35
	महाराष्ट्र	8.21	महाराष्ट्र	8.95
	बिहार	8.17	तमिलनाडू	6.57
	कुल	53.65	कुल	52.40
प्रति उद्यम जीवीए (रु. में)	51,673		1,30,153	
प्रति कामगार जीवीए (रु. में)	28,160		70,358	

\*वित्तीय मध्यस्थता (जे) के तहत शामिल उद्यमों को छोड़कर प्रतिशतता तथा अनुमानों की गणना की गई है।

**4ख: राज्य-वार परिणाम**

**4.15** 21 बड़े राज्यों की कुछ मुख्य आर्थिक विशेषताओं के परिणामों की चर्चा की गई है जिनकी पहचान उद्यमों की अनुमानित संख्या (1 लाख से अधिक) के आधार पर की गई है।

**4.16 2006-07 में बड़े राज्यों में अवस्थित उद्यम:** इन राज्यों में उद्यमों के आकार, कुल कामगारों की संख्या तथा वार्षिक जीवीए के मामले में उद्यमों की विशेषताएं भिन्न-भिन्न थीं।

**विवरणी 13: 2006-07 के दौरान भारत के 21 बड़े राज्यों के सेवा क्षेत्र उद्यमों की मुख्य विशेषताएं (एरिया फ्रेम के आधार पर)**

राज्य/संघ राज्य क्षेत्र	उद्यमों की अनुमानित संख्या "000" में (ओएई)	उद्यमों की अनुमानित संख्या "000" में (प्रतिष्ठान)	उद्यमों की अनुमानित संख्या "000" में (कुल)	कुल उद्यमों का % हिस्सा	कामगारों की अनुमानित संख्या "000" में	कुल कामगार का % हिस्सा	कुल वार्षिक सकल मूल्य वर्द्धन (रु. लाख में)	कुल सकल मूल्य वर्द्धन का % हिस्सा
आंध्र प्रदेश	1,566	156	1,722	10.43	3635	11.06	10,03,501	6.56
असम	493	103	596	3.61	1128	3.43	2,75,469	1.80
बिहार	797	75	872	5.28	1309	3.98	2,88,338	1.89
छत्तीसगढ़	151	26	177	1.07	450	1.37	92,942	0.61
दिल्ली	90	57	147	0.89	323	0.98	1,78,565	1.17
गुजरात	534	110	644	3.90	1223	3.72	12,16,637	7.95
हरियाणा	271	57	328	1.99	572	1.74	2,47,472	1.62
हिमाचल प्रदेश	89	26	115	0.69	217	0.66	84,077	0.55
जम्मू और कश्मीर	109	30	139	0.84	244	0.74	1,35,330	0.88
झारखंड	387	48	435	2.63	647	1.97	2,03,051	1.33
कर्नाटक	707	98	805	4.88	1592	4.84	17,84,135	11.66
केरल	758	202	960	5.81	2174	6.61	11,60,437	7.59
मध्य प्रदेश	381	87	468	2.84	1017	3.09	3,03,309	1.98
महाराष्ट्र	1178	311	1,489	9.02	3160	9.61	28,24,612	18.47
उड़ीसा	547	75	622	3.77	1924	5.85	2,24,677	1.47
पंजाब	382	69	451	2.73	800	2.43	4,20,316	2.75
राजस्थान	479	121	600	3.64	1188	3.61	5,62,698	3.68
तमिलनाडु	953	240	1,193	7.23	2922	8.89	11,80,685	7.72
उत्तराखंड	125	24	149	0.90	246	0.75	1,00,298	0.66
उत्तर प्रदेश	1969	277	2,246	13.60	4064	12.36	10,64,251	6.96
प. बंगाल	1927	164	2,091	12.67	3321	10.10	7,98,305	5.22
भारत	14,092	2,420	16,512	100.00	32880	100.00	1,52,95,334	100.00

उपरोक्त विवरणी 13 भारत के प्रमुख राज्यों में उद्यमों की प्रमुख विशेषताएं प्रस्तुत करती है। यह दर्शाती है कि उत्तर प्रदेश के पास कुल उद्यमों का अधिकतम हिस्सा (14%) है उसके पश्चात पश्चिम बंगाल (13%), आंध्र प्रदेश (10%), महाराष्ट्र (9%) और तमिलनाडु (7%) हैं। इन पाँच राज्यों में उद्यमों का कुल मिलाकर आधे से अधिक हिस्सा विद्यमान है। कामगारों के हिस्से के रूप में पाँच राज्यों के क्रम में उत्तर प्रदेश (12%), आंध्र प्रदेश (11%), पश्चिम बंगाल (10%), महाराष्ट्र (9.6%) और तमिलनाडु (9%) हैं। इन पाँच राज्यों के पास कुल मिलाकर देश में सेवा क्षेत्र के कुल कामगारों का 51.6% हिस्सा है। सकल मूल्य वर्द्धन के संबंध में, महाराष्ट्र के पास सकल मूल्य वर्द्धन का अधिकांश हिस्सा (18%) है इसके पश्चात कर्नाटक (12%), गुजरात (8%), तमिलनाडु (7.7%) और केरल (7.6%) है। इन पाँच राज्यों के पास कुल मिलाकर देश में सेवा क्षेत्र के कुल सकल मूल्य वर्द्धन (जीवीए) का 53.3% हिस्सा है।

**4.17 अन्य प्रमुख विशेषताएं :** विवरणी 14 (एरिया फ्रेम पर आधारित) उद्यमों की कुछ प्रमुख विशेषताएं प्रस्तुत करती है जैसे: प्रति उद्यम स्वामित्व वाली कुल स्थाई परिसम्पत्तियों का अनुमानित मूल्य, प्रति उद्यम वित्तीय दायित्व और भारत में प्रमुख राज्यों के लिए उद्यम के प्रकार द्वारा प्रति उद्यम सकल मूल्य वर्द्धन (जीवीए)। यह दर्शाता है कि प्रमुख राज्यों में से क्रमशः गुजरात (362 हजार रूपए) तथा बिहार (35 हजार रूपए) के पास प्रति उद्यम स्वामित्व वाली अधिकतम तथा न्यूनतम स्थाई परिसम्पत्तियां हैं। प्रमुख राज्यों में भी, प्रति उद्यम अधिकतम तथा न्यूनतम वित्तीय दायित्व क्रमशः महाराष्ट्र (615 हजार रूपए) तथा बिहार (1 हजार रूपए) में पाया गया है। प्रति उद्यम सकल मूल्य वर्द्धन (जीवीए) के संबंध में, कर्नाटक का सर्वोच्च स्थान (222 हजार रूपए) तथा बिहार

सर्वेक्षण

हि.12

का निम्नतम स्थान (33 हजार रूपए) है। जैसे कि उम्मीद थी, प्रत्येक राज्य के लिए प्रति उद्यम अनुमानित सकल मूल्य वर्द्धन (जीवीए) स्व-लेखा उद्यमों की तुलना में प्रतिष्ठानों के लिए उच्च है।

**विवरणी 14:** स्वामित्व वाली कुल स्थाई परिसम्पत्तियों का मूल्य, वित्तीय दायित्व और प्रति उद्यम सकल मूल्य वर्द्धन (रु. हजार में) (जीवीए) भारत में प्रमुख राज्यों के लिए एरिया फ्रेम पर आधारित।

राज्य	स्व-लेखा उद्यम			प्रतिष्ठान			सभी		
	स्थाई परिसम्पत्तियाँ	वित्तीय दायित्व	सकल मूल्य वर्द्धन (जीवीए)	स्थाई परिसम्पत्तियाँ	वित्तीय दायित्व	सकल मूल्य वर्द्धन (जीवीए)	स्थाई परिसम्पत्तियाँ	वित्तीय दायित्व	सकल मूल्य वर्द्धन (जीवीए)
आंध्र प्रदेश	27	11	24	661	654	406	85	70	58
असम	34	1	29	303	103	127	81	18	46
बिहार	24	0	25	151	8	116	35	1	33
छत्तीसगढ़	44	6	28	396	70	195	96	16	52
दिल्ली	118	1	49	709	105	233	349	41	121
गुजरात	75	7	46	1754	1564	884	362	273	189
हरियाणा	93	4	44	859	47	222	227	11	75
हिमाचल प्रदेश	102	21	33	798	415	214	258	109	73
जम्मू और कश्मीर	110	13	62	828	77	224	266	27	97
झारखंड	25	1	27	335	77	202	60	9	47
कर्नाटक	30	14	25	928	4078	1641	139	507	222
केरल	64	19	38	613	701	431	180	162	121
मध्य प्रदेश	40	3	27	477	192	228	122	38	65
महाराष्ट्र	61	17	38	911	2880	763	238	615	190
उड़ीसा	22	8	19	422	162	159	70	26	36
पंजाब	84	5	42	1223	589	374	259	94	93
राजस्थान	86	6	38	912	720	315	253	150	94
तमिलनाडू	46	18	36	759	813	349	189	178	99
उत्तराखंड	77	6	35	742	335	234	185	59	67
उत्तर प्रदेश	40	1	31	491	25	167	96	4	47
प. बंगाल	19	3	22	439	727	223	52	60	38
समस्त भारत	44	8	31	738	955	453	145	146	93

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