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**Measuring the non-observed economy –
Practices adopted in the Indian National Accounts**

This paper, prepared by Mr Ramesh Kolli, Deputy Director General, Central Statistical Organisation, New Delhi, India, has been reproduced as submitted. It has been issued without formal editing.

**MEASURING THE NON-OBSERVED ECONOMY
- PRACTICES ADOPTED IN THE INDIAN NATIONAL ACCOUNTS**

1. Production

1.1 The Business Register

(a) Is there a single, general-purpose, business register? What information is collected? What is the perceived reliability of the results of the register?

(b) What is the coverage of the register? Which Enterprises within the 1993 SNA production boundary are excluded? What is the legal requirement for a business to register? What is the VAT threshold for registration and is this relevant for the business register?

(c) How are enterprises sampled? How often is the register updated and produced?

There is no single, general-purpose business register in India. However, there are several frames maintained by the respective Administrative agencies in India. The important ones, in brief are

A: Enterprise List

- (a) The Central Board of Direct Taxes maintains a list of tax paying firms.
- (b) Registrars of Companies maintain lists of joint stock companies.
- (c) The Employees Provident Fund Organisation (EPFO) maintains a list of companies coming under its purview.
- (d) Registrars of Societies maintain lists of societies registered under the respective State Acts.
- (e) Economic Census conducted by the Central Statistical Organisation (CSO) in collaboration with the State Directorates of Economics and Statistics (DES) (only areal frame is available)

B: Establishment List

- (a) The Central Board of Excise and Customs (CBEC) has a list of establishments producing excisable commodities.
- (b) Chief Inspectors of Factories and Boiler Inspection maintain lists of factories under the Factories Act 1948.
- (c) State Directorates/Chief Inspectors of Shops and Establishments maintain records of the establishments under their purview.
- (d) State Directorates of Industries maintain a list of small scale industries registered voluntarily with them.
- (e) The Department of Industrial Policy and Promotion (DIPP) maintains a list of medium and large scale industries having an investment of more than Rs. 10 million in plant and machinery .

Of all these frames, the important ones, which are used for sample surveys are the frame maintained by the Chief Inspectors of Factories in the respective States (for the conduct of Annual Survey of Industries in respect of registered manufacturing sector) and the Economic Census (for the conduct of follow-up surveys of enterprises covering unorganised mining, manufacturing and services sectors). The frame maintained by the DIPP enables in collecting monthly production data by important

commodities for the compilation of monthly index of industrial production (IIP). Details of the use of some of the important frames is given in the following table:

Frame of enterprises/ establishments and coverage	Name of the Organisation maintaining the Frame/sample selection
<p>1. medium and large manufacturing establishments covering</p> <ul style="list-style-type: none"> • Manufacturing and <i>bidi</i> and cigar manufacturing establishments employing 10 or more workers using power, or 20 or more workers without using power, and • units engaged in certain services, repair of motor vehicles and a few other consumer durables like watches, etc 	<p>Chief Inspectors of Factories and Boiler Inspection in the respective States maintain the Frame, in accordance with Factories Act, 1948</p> <p>Data on registered manufacturing and repairing units are collected through the Annual Survey of Industries (ASI), under the Collection of Statistics Act, 1953. Collection of data from the units in the ASI is record-based. The Central Statistical Organisation (CSO) is responsible for the designing of the survey methodology, processing of data and preparation of reports, while the field work is carried out by the National Sample Survey Organisation (NSSO).</p> <p>All units in the frame are grouped into two basic strata namely, the census sector and the sample sector. The units in the census stratum are surveyed on a complete enumeration basis, which comprises units employing 200 or more workers and all units in select 5 States/UTs.</p> <p>The sample sector is stratified into different strata with each stratum consisting of all manufacturing and repairing units belonging to a particular industry 4-digit code of National Industrial Classification, 1998. A sample of suitable size from each stratum is drawn circular systematically with equal probability and in the form of two independent sub-samples after arranging the units according to district and number of workers. In a particular year, the total number of units were 1,74,167, census sector units 9,570 and sample sector units 35,391.</p> <p>There are built-in mechanisms for updating the ASI frame every year</p>
<p>2. All enterprises (excluding crop production and plantation) (Areal frame)</p>	<p>Economic Census of the CSO conducted in collaboration with the State Directorates of Economics and Statistics (DES).</p> <p>The Economic Censuses give information on the number and distribution of enterprises and employment alongwith distribution by location, type of activities, nature of operations. Its purpose is to provide a sampling frame for detailed Follow-up Enterprise Surveys (FuS) for unorganised segment of economic activities. Economic Censuses were conducted so far in 1977, 1980, 1990 and 1998.</p> <p>Data on unorganised segment of mining, manufacturing and services sectors is collected through the Follow-up Surveys of the Economic Census by interviewing the respondents, as most units do not maintain any books of accounts. On an average, each sector is covered once in 5 years.</p>

Frame of enterprises/ establishments and coverage	Name of the Organisation maintaining the Frame/sample selection
	<p>The FuS, which adopt a stratified two or three-stage sampling design, with villages and urban blocks as the first-stage units (FSUs) and unregistered units as the ultimate stage sampling units, generally use the list of villages and blocks with information on number of enterprises and workers as per the Economic Census as the sampling frame for selection of FSUs. After listing the enterprises in the selected villages and urban blocks, requisite number of enterprises are selected by circular systematic sampling.</p> <p>Data for the selected enterprises are collected by visiting the respective sites. However, for enterprises without fixed premises, requisite information about the entrepreneurial activities are collected by interviewing the owner of the enterprise (or any other suitable respondent) at the household of the owner.</p> <p>The FuS on unregistered manufacture have been carried during 1978-79, 1984-85, 1989-90, 1994-95, 1998-99, 1999-2000 and 2000-01. A list of the FuS on other unorganised segments of economic activities is presented in Annex-1.</p>
<p>3. Manufacturing establishments producing excisable products (units with turnover less than Rs. 50 million are exempted from paying central excise duty)</p>	<p>Central Board of Excise and Customs, Ministry of Finance, in accordance with the provisions of Central Excise Act, 1944.</p> <p>Data is collected on monthly basis on various parameters, including production, clearances and excise duty paid. Almost all manufacturers are required to file monthly return containing production data within 5 days from the close of a month.</p>
<p>4. Large and medium manufacturing industries as per investment criteria (above Rs.10 million) in plant and machinery)</p>	<p>Department of Industrial Policy and Promotion, under the provisions of Industries (Development and Regulations) Act, 1951.</p> <p>Monthly data is collected on production by commodities from the manufacturing establishments covered under this definition.</p>
<p>5. Village and Small Industries (VSI), identified on the basis of investment limits in plant and machinery (upto and below Rs. 10 million in plant and machinery)</p>	<p>Supervisory bodies or boards at the Central level, namely, Development Commissioner for Handicrafts, Development Commissioner for Handlooms, Khadi and Village Industries Commission, Coir Board, Central Silk Board, Textile Commissioner and the Development Commissioner for Small Scale Industries (DCSSI) in association with the State Directorate of Industries.</p> <p>All-India Censuses of Small Scale Industrial Units were conducted in 1973-74, 1990-91 with reference year as 1987-88, and 2001-02 with the reference year as 2000-01. The last Census aimed to cover for the first time both registered and unregistered units in the SSI sector. The registered sector consists of units registered with State Directorates of Industries. However, traditional industries falling under the purview of Khadi and Village industries, Handlooms, Handicrafts, Sericulture, Coir sectors as well as Powerlooms</p>

Frame of enterprises/ establishments and coverage	Name of the Organisation maintaining the Frame/sample selection
	<p>sector are not covered in the Third Census of SSI. The units that are registered as on 31 March 2001 are covered on a complete enumeration basis. The unregistered sector consists of units, which are eligible for registration as per the definition of the SSI but are not registered, as the registration in SSI is voluntary. The unregistered SSI units, which are eligible for registration as on 31 March 2001, are covered in the Third Census through a sample survey. In this survey, a sample of about 2500 villages are selected first and details of about 2.5 lakh sample units are collected from the selected villages.</p> <p>For understanding the trend in production in the Small Scale Sector at the industry group level, the office of DC (SSI) has scheme of monthly data collection on production by commodities on sampling basis.</p>
6. Enterprises registered with the Registrar of Companies	<p>Department of Company Affairs, under the Companies Act, 1956</p> <p>The registered public limited companies are required to file annual profit and loss accounts and balance sheets with the Registrar of Companies.</p>
7. Enterprises employing 20 or more workers	Employees Provident Fund Organisation

1.2 Industry

(a) How are estimates of value-added, production in, and intermediate consumption by, each industry compiled (preferably at least at the 2-digit ISIC level)? For each industry what data sources are used? (E.g. business register, quantities, insurance company reports on profits and losses, household budget surveys, etc).

Broadly, the methodology for compiling the estimates of GDP consists in dividing the whole economy into various sectors comprising primary, secondary and tertiary activities. The estimates of GDP in respect of agriculture, forestry and logging, fishing, mining and quarrying, registered manufacturing (establishments registered under Factories Act 1948) and construction are based on production approach. In other sectors viz.: un-registered manufacturing (factory establishments not registered under Factories Act), electricity, gas and water supply, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, ownership of dwellings, business services, public administration and defence and other services, the GDP is estimated following a combination of production and income approaches.

The estimates of value added for primary economic activities are compiled by valuing the total production of each commodity in the country. These data are available from the administrative agencies. For other sectors, The estimates of various services in the public sector are compiled by analysing the budget documents and annual reports of departmental and non-departmental commercial undertakings, those of organised (registered) manufacturing sector are made using the data from Annual Survey of

Industries, the estimates relating to the unorganised sectors in various economic activities are made using the figures of per worker value added available from the results of follow-up surveys of the Economic Census and the labour force in the activity. Generally for unorganised sectors estimate of GDP is compiled for the base year and estimates of subsequent years are obtained by moving the base year estimate with the help of appropriate physical indicators. The data sources used for estimating the GDP are given in detail in Annex-2.

(b) What other source data is available but not currently used, even if only as a diagnostic?

In the case of crop production statistics, the scheme of improvement of crop statistics (ICS) provides estimates of area and yield on sample basis to check the reliability of data provided by the administrative agencies. In the case of registered manufacturing sector, besides the ASI, data is also available on index of industrial production, central excise tax collections, turnover/operating expenses of manufacturing segment of corporate sector. All these data are used to cross-check the results of ASI. In the case of services sectors, there are not many sources of data.

(c) What adjustments are made to output, value-added or intermediate consumption on account of non-observed activities? Are any adjustments made to correct for income in kind, e.g.: free rail tickets; provision of recreation activities; meals and drinks; housing services; uniforms worn outside of work; private use of business cars; etc. What adjustments, if any, are based on data confrontation with demand based estimates?

In the case of agriculture, forestry and fishing sectors, the estimates are based on overall production (for firewood, the production is estimated from the overall consumption) and deemed to include non-observed activities like illegal or unrecorded production. For the surveys on registered manufacturing, unregistered manufacturing and services sectors, the questionnaire includes the income in kind as well as payments made to employees in kind. The value added from the unorganised banking sector is assumed to be one-third of the value added of organised banking sector.

However, for income in kind, like provision of free rail tickets, etc., no imputations or adjustments are made.

The demand based estimates (particularly the PFCE and GFCF by assets) are not estimated independently, but mostly compiled through commodity-flow methods, and as such no adjustments are made in the production based estimates on account of their confrontation with demand based estimates. However, discrepancies in each of the demand based aggregates (PFCE, GFCF, Imports and Exports) are prepared and presented in the annual publication. These discrepancies are monitored constantly. At the time of preparing the 5-yearly input-output transactions table, the discrepancies are adjusted in the demand based estimates, as in the Indian national accounts, the production based GDP is considered to be firmer.

(d) How are estimates of own-account production by households (not for own-consumption), and output of other informal enterprises captured and recorded?

The households which are engaged in production and not entirely for own consumption are treated as own account enterprises (provided they do not engage any hired workers). The output of these enterprises, as also those of other unorganised establishments are captured through the follow-up surveys of enterprises conducted by the NSSO, based on the frame provided by the Economic Census. Different economic activities are chosen each year, but, on an average, all activities in the unorganised segment are covered once in about 5 years.

(e) What attempt, if any, is made to record the production of illegal activities such as prostitution and illegal drug production? How is this done?

No attempt is made to record the production of illegal activities such as prostitution and illegal drug production. However, the persons engaged in these activities may report as workers in the household employment and unemployment surveys or the population censuses, which are the basis for estimating the value added in unorganised manufacturing and services sectors.

For agriculture sector, estimates are based on land-use statistics and, therefore, illegal crops may be covered indirectly, under 'area under other crops'. In the forestry sector, 10 per cent of production of major forest products is assumed to be from illegal felling of trees. Firewood production is captured from the consumption estimates and, hence account for illegal gathering of firewood.

However, smuggling and other explicit illegal activities are not directly covered in the GDP estimates.

2. Expenditure

2.1 Household final consumption expenditure (HHFC) and the Household Sector

(a) What types of surveys are used in deriving estimates of household final consumption estimates? (household budget surveys, retail trade statistics, production statistics, administrative data e.g. number of marriages, socio-demographic data, international trade etc). What is the perceived reliability of the results of these surveys?

Private final consumption (PFCE) includes final consumption expenditure of (i) households and (ii) non-profit institutions serving households (NPISH). The final consumption expenditure of households relates to outlays on new durable as well as non-durable goods (except land) and on services. This consumption expenditure also includes the imputed gross rent of owner-occupied dwellings, consumption of own account production evaluated at producers' prices and payments in kind of wages and salaries valued at cost, e.g., provision for food, shelter and clothing to the employees. The final consumption expenditure of non-profit institutions serving households includes the value of goods and services produced for own use on current account i.e., the value of gross output reduced by the sum of the value of their commodity and non-commodity sales. This would include transfers in kind of

non-durable goods and services from government administration, industries and rest of the world. The final consumption expenditure of households and non-profit institutions serving households are estimated together and are not available separately. However, expenditures on second hand goods are not included.

Estimates of PFCE are obtained by following the commodity flow approach. This approach implies working of commodity balances relating to various items of consumption, taking into account (i) production, (ii) intermediate consumption in agriculture, manufacturing and other industries, (iii) net exports, (iv) stock variations, (v) consumption on government account and household and non-household final consumption. For obtaining PFCE, the expenditure incurred by industries as intermediate consumption and all final consumption (including imports and exports) other than those by households and non-profit institutions are deducted from the total availability. The quantity of final consumption obtained from commodity balances is generally evaluated at market prices.

The basic data on output and prices are mostly the same as those utilised for the preparation of GDP estimates.

Results of Household consumer expenditure surveys of the NSSO are not generally used in the estimation of PFCE, as they refer to only the consumption expenditure of households, and also due to the absence of surveys on NPISHs.

(b) What other social and demographic data is available e.g. number of persons, age distribution, marital status, number of children, number of wage earners, number of pensioners per household. What would constitute “the average household” in terms of these parameters?

Details like relation to head of the household, sex, age, marital status, general education are collected in demographic particulars of household members.

A group of persons normally living together and taking food from a common kitchen constitutes a household. The members of a household may or may not be related by blood or marriage to one another. The number of normally resident members of a household is its size. It includes temporary stay-aways, but excludes temporary visitors and guests.

(c) How is the Household Budget Survey sampled? Are there any problems with coverage of expenditure in rural areas as compared to urban areas?

A stratified two-stage design is adopted in the household consumer expenditure survey. The first stage units are villages in the rural areas and blocks in the urban areas. The ultimate stage units are households in both the sectors. Within each district of a state, two basic strata are formed, one comprising rural areas and another comprising urban areas. Villages/towns in each stratum are arranged in ascending order of population. Requisite number of villages are selected by PPSWR and urban blocks by SRSWOR. After listing the households in the selected villages/urban blocks, requisite number of households are selected by SRSWOR. Before selection of households, they are stratified mainly on affluent and other households.

There is no problem with coverage of expenditure in rural areas as compared to urban areas.

(d) How are estimates of consumption on, and production of, illegal activities derived? How are purchases of stolen goods treated? If stolen goods originate from abroad are these included in estimates of imports?

Informant of the household does not give the details of items of consumption obtained through illegal ways. Informant reports that these items are purchased from the markets.

Stolen/smuggled goods originated from abroad are not included in the estimates of imports.

(e) How are estimates of household own-account production for own-consumption derived; in particular owner-occupied dwelling services and agricultural products?

Household own-account production for own consumption is accounted for in respect of agriculture, livestock, forestry and fishing activities, as also the owner-occupied dwelling services.

The agriculture production by various crops is estimated on the basis of total area under each crop and the yield estimates. The value of output of these crops is estimated by multiplying the production with average price in the primary marketing centres during the peak marketing period of each crop. Similarly, in the case of livestock sector, the total production of milk, egg, wool, meat, etc. is estimated on the basis of number of animals and the yield rates and the value of output is derived by applying to the production the appropriate first point of transaction price. In the case of forestry sector, the production of fuelwood, industrial wood and minor forest products is estimated on the basis of total production or consumption (for fuelwood). For fishing sector, the value of output includes production for subsistence purposes.

The agricultural production of the backyard/foreyard of dwellings is also taken into account in the GDP estimates of agriculture sector.

As regards capturing production of other goods within the households, no information is available at present and is not included in the GDP estimates.

For the ownership of dwellings, the number of dwellings in urban and rural areas are available from the decennial population censuses, which are used for preparing the benchmark estimates. For subsequent years, estimates of rural and urban dwellings are prepared by applying the geometric growth rate between the two censuses in respect of dwellings. The data on rent per household is taken from the five-yearly consumer expenditure surveys of the NSSO to estimate the gross rental, separately for rural and urban areas. For other years, the data on gross rentals is inflated using the CPI (UNME) of house rent sub-group. The data on repair and maintenance of dwellings is available from the decennial All India Debt and Investment Survey (AIDIS).

2.2 Government Final Consumption Expenditure

How are these estimates produced? What are the data sources? Are they produced and estimated consistently with the production estimates?

The annual estimates of government final consumption are compiled by analysing the budget documents of central and state governments. The expenditures of the general government are classified into 'compensation of employees' and 'purchase of goods and services'. The GFCE estimates are, therefore, consistent with production estimates.

Final consumption expenditure of administrative departments is equivalent to the current expenditure on compensation of employees, purchase of non-durable goods and services net of sales and the CFC. No provision is made in the budget documents for consumption of fixed capital of the central/state governments and local authorities. These are worked out from the estimated value of capital stock and the expected age of various types of assets at the aggregate level. By convention, expenditure on durable goods which are used for defence are also treated as part of consumption expenditure of the government. The sources of data for administrative departments are the annual budget documents of the central, state and local governments and finance accounts published by the Comptroller and Auditor General of India. The GFCE accounts for 12.5 per cent of GDP at current market prices

2.3 Final Consumption Expenditure of NPISH

How are these estimates produced? What are the data sources? Is there a difference between large and small NPISH? What use is made of data sources such as foreign aid (transfers) to NPISH?

The final consumption expenditure of NPISHs is not estimated separately. These, together with the final consumption expenditures of households are estimated as private final consumption expenditure (PFCE), which is generally derived through commodity-flow approach, from the production based data after accounting for imports and exports, GFCE, GFCF, change in stocks, and intermediate consumption.

2.4 Gross Fixed Capital Formation

(a) How are these estimates produced? What are the data sources used? Does a dedicated capital expenditure survey exist?

Fixed Capital Formation

In the Indian national accounts, the estimates of capital formation are prepared separately (i) from the financing side as the sum of saving and net capital inflow from abroad, (ii) by assets and (iii) by industry of use (sum of gross fixed capital formation (GFCF) and change in stocks). Of the three independently derived estimates of capital formation, the estimate compiled from the financing side are treated as firmer.

Gross capital formation (GCF) refers to the aggregate of gross additions to fixed assets (i.e., fixed capital formation) and change in stocks during the accounting period. Fixed assets comprise construction and machinery and equipment (including transport equipment and breeding stock, draught animals, dairy cattle and the like). Construction for military purposes (other than construction or alteration of family dwellings for military personnel), defence equipment, durable goods in the hands of

the households and increase in the stocks of defence materials are excluded from the scope of capital formation. However, capital outlays of defence enterprises on ordnance and clothing factories are included.

GFCF by assets

The estimates of capital formation for the entire economy, by assets, are based on commodity flow approach except the part of kutchra (from locally available materials) construction works. Estimates are based on current data in respect of outlays on new construction works, purchase of machinery and equipment and net addition to inventories. Data on expenditure on kutchra construction works are available from various budget documents in respect of public sector and the reports of various plantation Boards. In the case of household sector the estimates of the output of kutchra construction are based on the decennial All India Debt and Investment Survey (AIDIS). For the asset, machinery and equipment, the sources of data are the Annual Survey of Industries and the 5-yearly surveys conducted by the NSSO on unorganised manufacturing.

GFCF by institutional sectors

The estimates of capital formation are also compiled by three institutions, namely, public sector, private corporate sector and household sector. The estimates of GFCF for public sector are based on the analysis of budget documents and annual reports of Departmental and non-Departmental commercial undertakings (DCU/NDCUs). In the case of private corporate sector, the estimates are prepared on the basis of the sample studies on companies, published by the Reserve Bank of India (RBI). The estimates of household GFCF are derived by the residual method, from the total GFCF estimated through the commodity flow approach, by type of assets.

GFCF by industry of use

The sources of data for the GFCF by industry of use for the public, private corporate sector and cooperative societies are the same as those mentioned earlier. For the household sector, the sources of data are the AIDIS and the enterprise surveys conducted from time to time.

There is no dedicated capital expenditure survey in India at present.

(b) How are fixed assets defined? What distinguishes these from intermediate consumption?

Fixed assets comprise construction and machinery and equipment (including transport equipment and breeding stock, draught animals, dairy cattle and the like). Construction for military purposes (other than construction or alteration of family dwellings for military personnel), defence equipment, durable goods in the hands of the households and increase in the stocks of defence materials are excluded from the scope of capital formation. However, capital outlays of defence enterprises on ordnance and clothing factories are included.

Construction activity covers all new constructions, alterations and repairs of buildings, highways, streets, bridges, culverts, railroad beds, railroads, subways, airports, parking areas, dams, drainages, wells and other irrigation sources, water and power projects, communication systems such as telephone and telegraph lines,

land reclamations, bunding and other land improvements, planting and cultivating new orchards, tea, coffee and rubber plantations, afforestation projects and all other types of heavy construction. Activities of the special trade contractors such as carpenters, plumbers, plasterers and electricians relating to construction projects, and assembly and installation at site of prefabricated integral parts into bridges, storage and warehousing facilities, etc. are also included. Current repairs and maintenance are treated as intermediate consumption

Machinery and equipment comprises all types of machinery like agricultural machinery, power generating machinery, manufacturing, transport equipment, furniture and furnishings. Also included are increments in livestock in respect of breeding stock, draught animals, dairy cattles and other animals raised for wool clippings. Additions to livestock other than these are accounted for under change in stock. Output of software is capitalised from the asset side and expenditures on software made by the establishments is treated as fixed asset. However, own-account software and databases are not included in capital formation. Entire expenditure on mineral exploration is treated as capital formation. Defense related assets that could be used for civilian purposes with the exception of dwellings is not taken as capital formation. for military staff. Valuables are recognized when purchased by enterprises. Historical monuments. In India they are not taken into account, but this is not material because they are rarely transferred in ownership.

Various items of machinery and equipment domestically produced, imported, exported and re-exported are classified into (i) capital goods; (ii) parts of capital goods; (iii) partly capital goods and (iv) parts of partly capital goods. The total availability of the items classified under (i) is taken for capital formation. In the case of parts of capital goods, on the basis of ASI data and details from users, 50 per cent of the value is taken as capital formation and the rest treated as intermediate consumption.

(c) Are cultivated assets such as livestock and trees included? Are intangible assets such as software (and own-account production) included?

Breeding stock, draught animals, dairy cattle and the like are included in the fixed assets, but cultivated assets such as trees are not included.

Production of software as accounted for in the GDP estimates through production approach is treated as a fixed asset and is accounted for in the GFCF estimates. Expenditures made by industrial undertakings on software purchases are included in the capital formation. However, own account production or development of software and databases is not included in the GFCF estimates.

2.5 Changes in Inventories

How are these estimates produced? What are the data sources used? How are holding gains and losses calculated and treated?

The estimates of changes in stocks are made separately for public, private corporate sector and the household sector. While the estimates for public and private

corporate sector are based on current data, those of household sector are compiled industry-wise, mainly using the 5-yearly bench mark enterprise surveys.

The concept of work in progress is not applied to growing crops, stocks of fish, or livestock reared for the purposes of food. The CSO revalues data on inventories received from enterprises in order to compute changes in inventories as the difference between opening and closing stocks of inventories at average prices of the period.

2.6 Acquisitions Less Disposals of Valuables

How are these estimates produced? What are the data sources used?

These are not currently accounted for in the national accounts owing to lack of data.

2.7 Imports and Exports of Goods and Services

(a) How are these estimates produced? What are the data sources used?

Data on imports and exports of goods and services are available from the Directorate General of Commercial Intelligence and Statistics in the form of foreign trade statistics and from the Reserve Bank of India (RBI) through their balance of payments statistics.

(b) How is smuggling estimated? How are illegal activities recorded?

These are not explicitly accounted for in the foreign trade data.

3. Employment/labour statistics

The labour input method (described in the OECD handbook and used by ISTAT, the Italian Statistical Office) is the principal global verification method for the exhaustiveness of GDP compilation by the production (output) approach. In this context we would like to explore the extent of data that is currently available to facilitate the derivation of labour-input based methods.

In India, the labour input method is used to estimate the GDP of unorganised manufacturing and services sectors by the production method. In this method, the total workforce engaged in each of the unorganised manufacturing and services sectors is multiplied with a benchmark value added per worker estimate to obtain the GDP estimate of each of these economic activities for the benchmark year. Estimates of GDP for these activities for subsequent years is based on physical indicators, like in the case of unorganised manufacturing, the index of industrial production.

The major agencies involved in the collection of Labour and Employment Statistics are the Ministry of Labour and its affiliates such as Labour Bureau and the Director General of Employment and Training (DGE&T); the National Sample Survey Organisation (NSSO); and the Registrar General and Census Commissioner of India. The Central Statistical Organisation (CSO) also collects data on employment through the Economic Census.

Organised Sector

The main agency involved in the collection and compilation of Labour Statistics mainly in the organised sector is the Labour Bureau in the Ministry of Labour. The

Labour Bureau collects statistics through statutory and voluntary returns under different Labour Acts. The State Governments compile such statistics at the State level; the Bureau in turn consolidates them for the country as a whole covering all States and sectors of the economy and brings out periodical reports.

The Directorate General of Employment and Training (DGE&T) in the Ministry of Labour, in its administration of various provisions of the Employment Exchanges (such as Compulsory Notification of Vacancies) Act, 1959 has been collecting statistics on employment and the likely vacancies to occur for the organised sector of economy under the Employment Market Information Programme (EMIP) which covers: (a) all establishments in the public sector (except defence establishments and armed forces, however, the programme covers civilian employees in defence establishments), (b) non-agricultural establishments in the private sector, employing 25 or more persons on a compulsory basis, and establishments having 10-24 workers on a voluntary basis. The organisation provides estimates of the utilisation of labour force in different sectors, industries, occupations, etc. The information is collected through two forms called Employment Return – I (ER-I) and Employment Return – II (ER-II). The form ER- I is a quarterly return containing items on total employment by sex on the last day of the quarter, number of vacancies that occurred and were filled during the quarter with details of occupations for which manpower shortages have been experienced by the establishments. Form ER-II is a biennial return and is used for collection of information on the educational and occupational pattern of employees. The EMIP is the only source of data on the organised sector employment and other details on a regular basis.

Total labour force

Population census

The Decennial Census conducted by the Office of the Registrar General of India provides data on various characteristics of the labour force once in every 10 years for the entire country. The data so collected on workers are tabulated for main worker and marginal worker under various demographic, social and economic characteristics, which include classification by industrial activity and occupation. The tabulation also gives the spatial distribution of workers by rural/urban residence at National, State and district levels.

Surveys conducted by National Sample Survey Organisation

The NSSO collects information on certain key parameters of employment and unemployment in its surveys annually and through a comprehensive survey on employment and unemployment quinquennially. The first comprehensive survey on employment and unemployment was carried out during 1972-73 (27th Round). Since then the survey on employment and unemployment has become part of the quinquennial programme of NSSO and so far six such comprehensive surveys have been conducted, the latest being the 55th Round (1999-2000). The NSSO classifies workers by three approaches namely, usual status, current weekly status, and current daily status and further by demographic, social, economic and spatial characteristics (as also principal and subsidiary workers). It helps in capturing the prevalence of intermittent work and characteristics of workers in more detail than the Census. Estimates of number employed according to activity status and their social, demographic and economic characteristics are available at the National and State

level. Similarly, data for the unemployed is also available by the three approaches and characteristics.

Economic Censuses of Central Statistical Organisation

The CSO conducts Economics Census, which is another source of data on employment. So far four Economics Censuses have been conducted in the years 1977, 1980, 1990 and 1998. The Economics Census covers both agricultural (other than crop production and plantation) and non-agricultural activities and is intended to gather basic information on the number of enterprises and their employment by location, type of activity and nature of operation. It provides information on the number of persons working and the number of hired employees in these enterprises.

Estimates of value added per worker

The estimates of GVA per worker for urban and rural areas are obtained from the follow-up surveys of Economic Census.

In the Indian national accounts, the estimates of GDP for the services sectors are generally derived separately for the three segments, namely, (i) public (ii) private organised and (iii) private un-organised services. While the estimates for the public part are derived from budget documents and annual reports of commercial undertakings, estimates for the private organised (DGE&T definition) part comprising private corporate sector and co-operative societies, are by using the results of the RBI study on company finances and information available from NABARD, respectively.

For estimating the contribution of the unorganised segment, the labour input method is used i.e. as a product of working force and value added per worker. The estimate of the working force of this segment, for the urban areas, is obtained by subtracting from the total the working force of the public sector and the private organised segment, available from DGE&T (assuming that DGE&T working force includes the working force of co-operatives as well). The workforce for rural areas is taken as such. The estimates of GVA per worker for urban and rural areas is obtained from the follow-up surveys of Economic Census.

4. Fiscal Data

(a) What tax data is currently used in compiling the national accounts?

There are two types of tax data that are presently available in India, which can be used in the compilation of national accounts. The taxes paid on manufactured products at the time of their removal from the factories are the central excise taxes, which are levied by the Central Government (with certain exceptions). Data on these taxes is available by broad group of products (following the HS classification), every month. On the other hand, the taxes levied at the time of sales, known as sales taxes, are generally by the State Governments. The data on sales tax is not available by product and is available only through budget documents. Besides these, data on taxes collected on some services is available from central excise authorities.

Tax data is not presently used in the compilation of national accounts. However, the monthly data on taxes paid on commodities is used to cross-check the estimates of value added of organised manufacturing sector, which are compiled using the results

of annual survey of industries (ASI). For the Quick estimates of gross domestic product (GDP), the monthly data of Index of Industrial Production (IIP) is used. The data on overall direct and indirect taxes, required in the compilation of national accounts, is compiled from the budget documents of the Central and State Governments.

However, the potential of using Central Excise and Customs data on products in the compilation of national accounts, especially the quarterly estimates of fixed capital formation and consumption expenditure, is being explored.

(b) How are estimates of government final consumption and fixed capital formation collected?

Government Final Consumption

The annual estimates of government final consumption are compiled by analysing the budget documents of central and state governments. The expenditures of the general government are classified into 'compensation of employees' and 'purchase of goods and services'.

Final consumption expenditure of administrative departments is equivalent to the current expenditure on compensation of employees, purchase of non-durable goods and services net of sales and the CFC. No provision is made in the budget documents for consumption of fixed capital of the central/state governments and local authorities. These are worked out from the estimated value of capital stock and the expected age of various types of assets at the aggregate level. By convention, expenditure on durable goods which are used for defence are also treated as part of consumption expenditure of the government. The sources of data for administrative departments are the annual budget documents of the central, state and local governments and finance accounts published by the Comptroller and Auditor General of India. The GFCE accounts for 12.5 per cent of GDP at current market prices.

Fixed Capital Formation

In the Indian national accounts, the estimates of capital formation are prepared separately (i) from the financing side as the sum of saving and net capital inflow from abroad, (ii) by assets and (iii) by industry of use (sum of gross fixed capital formation (GFCF) and change in stocks). Of the three independently derived estimates of capital formation, the estimate compiled from the financing side are treated as firmer.

Gross capital formation (GCF) refers to the aggregate of gross additions to fixed assets (i.e., fixed capital formation) and change in stocks during the accounting period. Fixed assets comprise construction and machinery and equipment (including transport equipment and breeding stock, draught animals, dairy cattle and the like). Construction for military purposes (other than construction or alteration of family dwellings for military personnel), defence equipment, durable goods in the hands of the households and increase in the stocks of defence materials are excluded from the scope of capital formation. However, capital outlays of defence enterprises on ordnance and clothing factories are included.

GFCF by assets

The estimates of capital formation for the entire economy, by assets, are based on commodity flow approach except the part of kutchra (from locally available materials) construction works. Estimates are based on current data in respect of outlays on new construction works, purchase of machinery and equipment and net addition to inventories. Data on expenditure on kutchra construction works are available from various budget documents in respect of public sector and the reports of various plantation Boards. In the case of household sector the estimates of the output of kutchra construction are based on the decennial All India Debt and Investment Survey (AIDIS). For the asset, machinery and equipment, the sources of data are the Annual Survey of Industries and the 5-yearly surveys conducted by the NSSO on unorganised manufacturing.

GFCF by institution

The estimates of capital formation are also compiled by three institutions, namely, public sector, private corporate sector and household sector. The estimates of GFCF for public sector are based on the analysis of budget documents and annual reports of Departmental and non-Departmental commercial undertakings (DCU/NDCUs). In the case of private corporate sector, the estimates are prepared on the basis of the sample studies on companies, published by the Reserve Bank of India (RBI). The estimates at constant (1993-94) prices are worked out with the help of suitable price indices as applicable by various assets, institutions as well as industry groups separately. The estimates of household GFCF are derived by the residual method, from the total GFCF estimated through the commodity flow approach, by type of assets.

GFCF by industry of use

The sources of data for the GFCF by industry of use for the public, private corporate sector and cooperative societies are the same as those mentioned earlier. For the household sector, the sources of data are the AIDIS and the enterprise surveys conducted from time to time.

(c) Is there detailed information on the taxation of the “small businesses” and the corporate sector comparable to the information needed for the household sector in terms of rates, turnover or profit bands, exemptions, investment allowances, differentiations between sectors or regions.

Detailed information on the corporate sector is available in terms of direct taxes paid by them. However, these enterprises are outside the scope of ‘household sector’. This sector, in essence, covers the “small businesses” and is generally exempt from taxation, provided their turnover is within certain specified limits. As such, there is no information available from the fiscal data which can be utilised to estimate the ‘household sector’. The contribution of this sector is estimated only through periodic enterprise surveys.

Follow-up Enterprise Surveys of Economic Census Conducted so far on Services Sector

Sl. No.	Survey coverage	Survey year
1	2	3
1.	Trade; Hotels and Restaurants; Transport; Storage and Warehousing; Other Services	1979-80
2.	Hotels and Restaurants; Transport; Storage and Warehousing; Other Services	1983-84
3.	Trade	1985-86
4.	Hotels and Restaurants; Transport	1988-89
5.	Trade	1990-91
6.	Other Services	1991-92
7.	Storage and Warehousing	1992-93*
8.	Hotels and Restaurants; Transport	1993-94
9.	Trade (<i>Directory Establishments</i>)	1996-97
10.	Trade (<i>Non-Directory Establishments and Own Account Enterprises</i>)	1997
11.	Trade; Hotels and Restaurants; Transport; Storage and Warehousing; Other Services	1998-99
12.	Informal non-agricultural enterprises	1999-2000
13.	Unorganised services	2001-02

Notes: 1. Directory Establishments mean units employing at least one hired worker on a fairly regular basis and having at least 6 workers (including household workers).

2. Non-Directory Establishments mean units employing at least one hired worker on a fairly regular basis and having less than 6 workers (including household workers).

3. Own Account Enterprises mean units working without employing any hired worker on a fairly regular basis.

DATA SOURCES FOR THE COMPILATION OF GDP

Agriculture

1. The principal source agency for data on agriculture sector is the Directorate of Economics and Statistics, Ministry of Agriculture (DESAg). Out of about 78 crops/crop-groups for which estimates of value of output are prepared, data on area and yield in respect of 45 principal crops are available from the DESAg. For other crops, although area figures are available from the DESAg, production estimates are based on the information supplied by the state government sources and adhoc reports. Data on state/crop weighted average prices, which are used for evaluating the output of crops, are made available by the State Directorates of Economics and Statistics (DESSs).

2. The principal sources of data for inputs are the results of the Cost of Cultivation Studies (CCS), State DESSs, State agriculture departments, Central Electricity Authority, Fertiliser Association of India and Pesticides Association of India.

Livestock

3 The source agency for the data on milk, egg and wool is the Department of Animal Husbandry & Dairying (DAHD), which collects this information through the Integrated Sample Survey (ISS) conducted by the State AHDs. Estimates of meat and number of slaughtered/fallen animals are available from the State AHDs/DESSs and that of livestock population from the DESAg/State AHDs from the results of livestock censuses. Estimates of silk and honey are available from the respective Boards/state AHD.

Forestry

4. The sources for data on production of forest products (industrial wood, fuelwood and minor forest products) are the various Forest Departments of State Governments (SFD). However, the estimates of production of fuelwood reported by the SFDs are considered totally unreliable as most of the fuelwood is lifted in unauthorised way. For the purpose of estimation of GDP, output of fuelwood is estimated from the consumption side making use of the results of NSS on consumption expenditure of households.

Fishing

5. The main source of data for inland fishing, marine fishing and production of prawns is the Ministry of Agriculture. The source agencies for data on other ancillary activities like sundrying of fish and salting of fish are the state fisheries departments. Data on prices are made available by the DESSs.

Mining

6. The source agencies for the major minerals are the Indian Bureau of Mines (IBM), Coal India Ltd. (CIL) and its subsidiaries, and Oil & Natural Gas Corporation (ONGC). The information on minor minerals is obtained from the State Geological Departments. The information on the material inputs is available from the Office of Coal Controller, IBM, ONGC and Oil India Limited. An enterprise survey conducted in 1992 is the new source on minor minerals.

Registered Manufacturing

7. The registered sector of manufacturing covers all factories employing 10 or more workers and using power and those employing 20 or more persons but not using power, and bidi and cigar establishments registered under Bidi and Cigar Workers' Act, 1966 employing 10 or more workers using power and 20 or more workers but not using power. Data on products and by-products of the factories covered under Factories' Act, 1948 and material inputs are collected annually through the Annual Survey of Industries (ASI) by the CSO. Factories employing 200 persons or more are covered on census basis and other factories are covered on a sample basis.

Unregistered Manufacturing

8. Data from unregistered manufacturing (factories other than those covered under the ASI) is not collected on annual basis. Data from such units is collected once in five years on sample basis through the follow-up surveys of the Economic Census. Directory Establishments employing 6 persons and more and Non-Directory establishments employing 1 to 5 persons and Own Account Establishments are covered separately in the follow-up surveys. The Index of Industrial Production (IIP) is generally used for extrapolating the benchmark estimates.

Electricity, gas and water supply

9. The information on output/sales and material inputs of electricity, gas supply by pipeline and water supply, are available in respect of departmental undertakings, Central/State power Corporations, State Electricity Boards. For data on gobar gas, the source agencies are the Ministry of Non-conventional Energy and the KVIC. The estimates of water supply are based on the data of responding municipalities and estimates of workforce engaged in this activity.

Construction

10. The information on current production, export and import, intermediate consumption etc. of basic construction materials are available from the official sources. The information on the other construction materials is based on norms provided by National Buildings Organisation (NBO), Central Public Works Department (CPWD) and Central Building Research Institute (CBRI) etc. on various types of constructions namely; residential buildings, non-residential buildings, roads, bridges, etc. The information on the expenditures made on the kutchha construction in respect of public sector is culled out from the budget documents of the Administrative Departments and annual reports and Departmental and Non-Departmental Undertakings. For the private corporate sector, the information is taken from the Tea, Coffee and Rubber Boards. The sources of information for the household sector is the All India Debt and Investment Survey (AIDIS) and some old NSS reports.

Trade, hotels and restaurants

11. For the components of public sector, information on factor incomes is available in the budget documents/annual reports of the departmental and non-departmental commercial undertakings. For the organised – private part, estimates of value added and work-force are taken from the Reserve Bank of India (RBI)'s Company Finance Studies and the publications of Directorate General of Employment & Training (DGE&T). For unorganised

segments of trade and hotels and restaurants, bench mark estimate (prepared on the basis of working force and per worker value added) is moved with the help of physical indicator namely; the Gross Trading Income. The per worker value added information is available from the Enterprise Surveys conducted quinquennially by the CSO.

Transport, Storage and Communication

12. The activities of transport – railways and other transport, storage and communication are covered separately for the public sector, private organised sector and unorganised sector. For public sector components, the requirements relating to factor incomes, capital formation etc. are met with from the budget documents and annual reports of the departmental and non-departmental commercial undertakings. For private sector particularly the private shipping companies and air transport, annual reports of the companies are available which provide required information for compiling GVA and other aggregates. For the unorganised segments of other activities namely; mechanised road transport, non-mechanised road transport, other sailing vessels other than ships, the services incidental to transport and storage, GDP estimates are built up using estimates of workforce and per worker value added. Estimates for the subsequent years are made on the basis of appropriate physical indicators, like commercial vehicles registered, cargo handled at major ports, etc.

Banking & Insurance

13. As most of the banking and insurance activities are in the public sector, requisite data are available from the annual reports. Also, the RBI provides information on the banks including the Reserve Bank. The information on cooperative credit societies is available from the Statements Relating to Cooperative Movement in India published by National Bank for Agricultural and Rural Development (NABARD). The value added of the unorganised segment is assumed to be one-third of the value added of organised banking sector.

Services

14. In so far as public administration and defence activity is concerned, the information on compensation of employees is available from the budget documents. However, requisite data in respect of local bodies are not available. The estimates in respect of local bodies are prepared on the basis of transfers made by the State Government to the local bodies. For rest of the services activities, the estimates of unorganised component are built-up using various sources of data, like Population Census (for dwellings), NSS (for rent per dwelling), Bar Council (for no. of registered advocates), Ministry of Human Resource Development (for recognised educational institutions), Enterprise Surveys (for value added per worker) and Directorate General of Employment and Training (DGE&T) (for no. of workers in the organised sector, which is required to derive the workforce in unorganised sector) and other adhoc sources.