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**On Measuring Informal Sector
Conceptual and Estimation Issues**

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ON MEASURING INFORMAL SECTOR - CONCEPTUAL AND ESTIMATIONAL ISSUES*

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It is well recognized that small, tiny and unorganised enterprises play an important role in shaping the growth of the developing economy undergoing a process of structural reforms. The informal sector as defined in the resolution of the fifteenth International Conference of Labour Statisticians, January 1993, refers to economic activities i.e., production and distribution of goods and services by the operating units of the households which essentially differ from the formal sector in terms of technology, economies of scale, use of labour intensive processes, and virtual absence of well maintained accounts. In the 1993 as also the 2008 System of National Accounts the Informal Sector has been identified as a sub-set of the household sector. Though, the informal sector has been characterized, as above, no clear-cut operational definition of informal sector is available in the literature, for the purpose of data collection. In several developing countries in Asia and the Pacific, in particular India however unorganised segment of the economy could be treated to closely represent the informal sector. The unorganised segment, particularly in the context of the Indian economy is labour intensive and provides employment to sizable section of the population. With the emphasis of the Governments to provide conducive atmosphere for the proper development of this segment of the economy in recent years, the need of proper statistics is imperative for planning and policy purposes. An attempt has been made in this paper to examine the scope of the unorganized/ informal sector in general, illustrating with data sources for the informal/unorganised sector in the Indian national accounts statistics. Size of the informal sector has been examined through the employment it generates and contribution to the value addition through the estimates of gross domestic product of unorganised segments of various economic activities in the Indian context.

I. INTRODUCTION

Informal sector embraces a widely dispersed multitude of operating units with high rates of birth and death and considerable mobility, essentially differing from the formal sector in technology, economies of scale, use of labour intensive processes for producing goods and services, virtual absence of well maintained accounts and dependence on government subsidy. It is informal in the sense that they are not regulated by government under any statute.

Many economic units escape the administrative, legal or statistical framework in force, particularly in developing countries in Asia and the Pacific like India. It is often tempting to label the units that so escape the “informal sector”. The major weakness of such a definition is, of course, that it is country-specific, depending on the prevailing administrative, legal or statistical framework; the sector will expand or contract with a change in the underlying yardstick over time. Somewhat along the same vein, the

* This paper draws heavily on Kulshreshtha (1998) and Kulshreshtha and Singh (1998, 1999).

informal sector is sometimes considered as that sector which falls outside the scope of planned development effort and thus remains uncared in terms of productivity, social security and, of course, statistics.

Since “Informal” implies the existence of something “formal”, it is evident that the concept is related to what one considers as formal. As both the formal and informal sectors refer to economic activities, that is, production and distribution of goods and services, the distinction between the two sectors must lie in the nature of economic units engaged in the activities and the manner and milieu in which they function. Much of the efforts to collect data on the informal sector in the Asian countries like India have tended to identify the “universe” based on certain enterprise characteristics.

The term ‘informal sector’ was first used in the official document for the first time in the report of a comprehensive employment mission in Kenya undertaken by International Labour Organisation (ILO) in 1972. Since then a considerable amount of work on data collection and research have been undertaken to understand as to what the informal sector is, why it exists and how it operates. Even though the term ‘informal sector’ has been widely used, its precise meaning has remained somewhat elusive and the subject of controversy as it has been defined in different contexts with different meanings (Husmanns, 1997 and Sethuraman, 1981). It is a somewhat controversial subject because there are different view points from which one can observe the informal sector. In view of this countries have the flexibility to adopt their definition which is appropriate to their needs and the system of data collection for the same. Since ‘informal’ implies the existence of something ‘formal’, it is evident that the concept is related to what one considers as formal. As both the formal and informal sectors refer to economic activities, that is, production and distribution of goods and services, the distinction between the two sectors must lie in the nature of economic units engaged in the activities and the manner and milieu in which they function. Much of the efforts to collect data on the informal sector, in many countries in Asia like India have tended to identify the ‘universe’ based on certain enterprise characteristics. With a view to helping the member countries in reporting comparable statistics of employment in the informal sector, the Fifteenth International Conference of Labour Statisticians (ICLS) held in January 1993 at Geneva adopted a Resolution on informal sector statistics which was subsequently endorsed by the United Nations Statistical Commission in February, 1993.

To promote international standard for compilation of national accounts as an analytical tool and the international reporting of the comparable national accounting data, United Nations (UN) has been recommending guidelines in the form of System of National Accounts (SNA). The first version of the SNA was recommended in 1953, which was revised by the UN in 1968. The third version of the SNA (popularly known as 1993 SNA) was prepared under the auspices of the Inter-Secretariat Working Group on National Accounts (ISWGNA) comprising Commission of the European Communities - Eurostat, International Monetary Fund (IMF), Organization for Economic Cooperation and Development, United Nations and the World Bank and adopted by the UN Statistical Commission in 1993. The 1993 SNA has now been updated avoiding any major change in concept or structure and adopted as 2008 SNA. The 2008 SNA is in two volumes, the

Volume-1 has already been brought out while Volume-2 is in offing. It is the latest international Standard on national accounts and is harmonized with other major statistical systems like Balance of Payments Statistics and Government Finance Statistics of the IMF. Thus the 2008 SNA like 193 SNA consists of a coherent, consistent and integrated set of macro-economic accounts based on a set of internationally agreed concepts, definitions, classifications and accounting rules. It provides comprehensive accounting framework within which data can be compiled and presented in a format that is designed for purposes of economic analysis, decision taking and policy making. It recommends preparation of integrated sequence of accounts comprising Current and Accumulation Accounts: Current accounts encompassing 'Production account' and 'Distribution and Use of Income accounts' (which in turn includes, primary distribution of income accounts: i.e., Generation of Income and Allocation of Primary income account, Secondary distribution of income account, Redistribution of income in kind account and Use of income account) and Accumulation accounts encompassing Capital, Financial and Other changes in volume of assets accounts (which in turn includes, Other changes in volume of assets account and Revaluation accounts), separately for each of the mutually exclusive institutional sectors: *government, corporations-financial, corporations - non-financial and financial, non-profit institutions serving households and households*, comprising the whole economy.

In India the term 'informal' has neither been used in the official statistics nor in the National Accounts Statistics (NAS). The terms used in the Indian NAS are 'organised' and 'unorganised', though quite often researchers have used the term 'unorganised' and 'informal' interchangeably. In fact the terms 'informal sector' and 'unorganised sector' are quite similar to each other though not identical. In many developing countries in Asia and the Pacific region the term unorganised and informal sector is used interchangeably.

This paper has been organised into eight sections. Section I is introduction while section II is devoted to coverage and definition of informal sector. The household sector and the informal sector as envisaged in the 1993 SNA as well as the 2008 SNA, has been described in section III. The coverage of the unorganised segment of the Indian economy in the official statistical system and its data sources have been enumerated in sections IV and V respectively. Section VI describes the practices of incorporating unorganised segment data into National Accounts Statistics. Finally the contribution of the informal sector to the Indian economy in terms of value added and employment have been examined in section VII.

II. CONCEPT AND DEFINITION OF INFORMAL SECTOR

The informal sector as per 1993 SNA as well as 2008 SNA refers to productive institutional units characterized by (a) low level of organization, (b) little or no division between labour and capital, (c) labour relations based on casual employment and/or social relationships, as opposed to formal contracts. These units belong to the household sector (Annex-I) and cannot be associated with other units. In such units, the owner is totally responsible for all financial and non-financial obligations undertaken for the productive activity in question. The SNA endorses the resolution of the fifteenth

International Conference of Labour Statisticians, January 1993 in so far as informal sector concept is concerned. For statistical purposes, the informal sector is regarded, as a group of production units that, form part of the household sector as household enterprises or equivalently, unincorporated enterprises owned by households. Within the household sector, the informal sector comprises (i) 'informal own account enterprises' and (ii) the additional component consisting of 'enterprises of informal employers'. The informal sector is defined irrespective of the kind of work place where the productive activities are carried out, the extent of fixed capital assets used, the duration of operation of enterprise (perennial, seasonal or casual) and its operation as a main or subsidiary activity of the owner.

Another important point to be noted on the informal sector, though not explicitly mentioned in the SNA, but stated clearly in the Resolution made on the fifteenth International Conference of Labour Statisticians in para 7, is that the household enterprises are units engaged in production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them and for which *no complete sets of accounts* (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners. The informal units are the household enterprises which as per SNA are unincorporated enterprises and typical characteristic of these units is that no complete sets of accounts are available on them. *While all informal sector enterprises can be regarded as household enterprises, not all household enterprises can be considered as being part of informal sector.*

Informal sector Units

(i) Household Enterprises

As per 2008 SNA, household enterprises (or, equivalently, unincorporated enterprises owned by households) are distinguished from corporation and quasi-corporations on the basis of legal organisations of the units and the type of accounts kept for them. Household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities, independently of households or household members that own them, and for which no complete sets of accounts (including balances sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of the their owners and the identification of any flows of income and capital between the enterprises and the owners. Household enterprises include unincorporated enterprises owned and operated by individual household members or by two or more members of the same household as well as unincorporated partnerships formed by members of different households.

(ii) Informal own-account enterprises

Informal own-account enterprises are household enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis. For operational

purposes, informal own-account enterprises may comprise, depending on national circumstances, either all own account enterprises or only those which are not registered under specific national legislation. Own account workers, contributing family workers, employees and the employment of employees on a continuous basis are defined in accordance with the most recently adopted version of the International Classification of Status in Employment (ICSE).

(iii) Enterprises of informal employers

Enterprises of informal employers are household enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis. For operational purposes, enterprises of informal employers may be defined, depending on national circumstances, in terms of one or more of the following criteria, like, (i) size of the unit below a specified level of employment, (ii) non-registration of the enterprise or its employees, (iii) the upper size limit in the definition of enterprises of informal employers may vary between countries and branches of economic activity. It may be determined on the basis of minimum size requirements as embodied in relevant national legislation, where they exist, or in terms of empirically determined norms. The choice of the upper size limit should take account of the coverage of statistical inquiries of larger units in the corresponding branches of economic activity, where they exist, in order to avoid an overlap. In the case of enterprises, which carry out their activities in more than one establishment, the size criterion should, in principle, refer to each of the establishments separately rather than to the enterprise as a whole. Accordingly, enterprises should be considered to satisfy the size criterion if none of its establishments exceeds the specified upper size limit. For particular analytical purposes, more specific definitions of the informal sector may be developed at the national level by introducing further criteria on the basis of the data collected. Such definitions may vary according to the needs of different users of the statistics.

III. THE HOUSEHOLD SECTOR AND INFORMAL SECTOR IN SNA

In the SNA, household is defined as a small group of persons, who share the same living accommodation, but pool some or all of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. In general each member of a household should have some claim upon the collective resources of the household. At least decisions affecting consumption or other economic activities must be taken for the household as a whole. Households often coincide with families, but members of the same household do not necessarily have to belong to the same family so long as there is some sharing of resources and consumption. Households may be of any size and take a wide variety of different forms in different societies or culture depending on tradition, religion, education, climate, geography, history or other socio- economic factors.

The household sector consists of all resident households. Defined as institutional units, households include unincorporated enterprises owned by households, whether market producers or producing for own final use, as integral parts of those households. Only those household unincorporated market enterprises that constitute quasi- corporations are treated as separate institutional units. The household sector may be divided into four sub-sectors:

(a) employers, (b) own account workers, (c) employees, and (d) recipients of property and transfer incomes. The households act as producers as well as consumers of goods and services; they provide the labour to the economy. Production within the household sector takes place within enterprises that are directly owned or controlled by members of the household, either individually or in partnership with others. When members of household work as employees for corporations, quasi corporations or government, the production to which they contribute takes place outside the household sector. Producer units within the household sector are all unincorporated enterprises. Household sectors as producers can be put under two categories, (i) household unincorporated market enterprises and (ii) household enterprises producing for own final use. Household unincorporated market enterprises are created for the purpose of producing goods or services for sale or barter on the market.

The informal sector as per SNA refers to productive institutional units characterized by (a) low level of organization, (b) little or no division between labour and capital, (c) labour relations based on casual employment and/or social relationships, as opposed to formal contracts. These units belong to the household sector and they cannot be associated with other units. In such units, the owner is totally responsible for all financial and non-financial obligations undertaken for the productive activity in question. The 1993 as well as 2008 SNA endorses the resolution of the fifteenth ICLS on informal sector concept. This is popularly known as International Labour Organization (ILO) concept of Informal Sector. For statistical purposes, the operational definition of informal sector is regarded as a group of production units, which form part of the household sector as household enterprises or equivalently unincorporated enterprises owned by households. Within the household sector, the informal sector comprises, (i) informal own account enterprises and (ii) additional component consisting of enterprises of informal employers. The informal sector is defined irrespective of the kind of work place where the productive activities are carried out, the extent of capital assets used, the duration of the operation of the enterprise and in its operation as a main or secondary activity of the owner.

The two categories of informal sector units mentioned above need elaboration. The *informal own account enterprises* may be owned and operated by own account workers which may employ contributing family workers and employees on an occasional basis and which may comprise, depending on national circumstances, either all own account enterprises or only those which are not registered under specific forms of national legislation. The *enterprises of informal employers* may employ one or more employees on a continuous basis and which depending on national circumstances may be defined in terms of one or more of the following criteria: (i) Size of the unit below a specific level of employment; (ii) Non-registration of the enterprise or its employees.

In the backdrop of SNA production boundary (Annex-I), the informal sector may be identified by classifying the household production activities into the following five distinct categories (Becker, 1997):

1. Production of all goods or services that are supplied to units other than their producers.

- 1.1. Informal sector market production
- 1.2. Other market production (units which do not meet the criteria of the informal sector: registration criterion and/or employment size criterion)
2. Own-account production of all goods that are retained by their producers for own final consumption such as
 - 2.1. Subsistence farmers and others engaged in the production of agricultural goods for own final consumption
 - 2.2. Production of other goods for own consumption
 - 2.3. Construction of own dwellings
3. Domestic and personal services produced by employing paid domestic staff
4. Own-account production of housing services by owner occupiers
5. Hidden economy

As a subset of the household sector, the informal sector is just the above household category 1.1. However for practical reasons one may consider a narrow scope and compile in the informal sector only non-agricultural activities. On the other hand for a broader scope one may consider inclusion of the domestic and personal services, illegal services and may be part of the hidden economy in the informal sector.

IV. THE UNORGANISED SEGMENT OF THE ECONOMY IN THE INDIAN OFFICIAL STATISTICAL SYSTEM

In the Indian NAS the unorganized segment of the economy refers to all operating units whose activities are not regulated under any statutory Act or legal provision and/or those which do not maintain any regular accounts. Non-availability of regular accounts has been the main criteria for classifying these units as unorganized. This definition helps to demarcate organized from unorganized. The organized segment of the economy in NAS broadly includes all operating units on major minerals, for manufacturing activities, the units registered under Factories Act 1948, for non-manufacturing activities, the private corporate sector and public sector units comprising administrative departments, departmental commercial undertakings and non-departmental commercial undertakings. Exact coverage of organized segment in the Indian NAS is at Annex-II. This segment is called organized as statistics for it are available regularly from budget documents, annual reports in case of public sector and through results of Annual Survey of Industries (ASI) in case of registered manufacturing. All remaining operating units under various economic activities are in the unorganized segment. Though the major component of the unorganized segment is the household own-account enterprises but there is sizeable number of establishments as well in the unorganized segment as all the manufacturing establishments which are not covered by the ASI and all the non-public sector and unincorporated enterprises/establishments in various economic activities are very much there in the unorganized sector. The unorganized segment is labour intensive and in the Indian context and it can be typically viewed as a proxy to the household sector combined with Non-profit Institutions Serving Households (NPISHs). In the Indian economy, about 57 per cent of the national income is generated in the unorganized (informal) segment.

The informal sector concept as enunciated by the ILO and the unorganized segment mentioned above are conceptually quite different, in that, whereas the ILO concept focuses on a particular group of production units for economic/social/political reasons, the

unorganized segment depends on the country practices to generate information for the different economic activities in an organized manner. In the Indian context as indicated above the unorganized segment of the economy is one, which is not organized and would include own account production of goods and services of owner occupied dwellings, domestic services and some quasi-corporations, etc. Therefore, strictly speaking, to get information on informal sector one is expected to net out the contribution of above mentioned activities from the unorganized segment. Normally the unorganized segment would be larger than the informal sector but it could be the other way round as well if the country practices for generating information in an organized way on a regular basis become comprehensive.

V. DATA SOURCES FOR UN-ORGANIZED SEGMENT OF INDIAN ECONOMY

The household sector including private unincorporated enterprises is viewed as unorganized segment of the economy. For agriculture the principle sources of information used for the purpose of building up of the national income estimates are (i) the land use statistics, (ii) area and outturn of principal crops and (iii) cost of cultivation studies. Statistics on land utilization flow as by-product of a normal departmental activity of the State Revenue Departments who collect them for various administrative needs for land revenue collection. Periodic estimates of area and outturn of principal crops, generally known as forecast crops, are prepared by the state agencies and are consolidated by the Directorate of Economic & Statistics, Ministry of Agriculture. Final estimates of production are based on complete coverage of area and yield through crop cutting experiments conducted by the respective State Governments. The results of cost of cultivation studies conducted on various crops in different States provide information on the inputs of agriculture such as seed, consumption of diesel oil, electricity consumed, feed to animals, repair and maintenance of farm machinery, etc. Input data relating to electricity, fertilizer and insecticides are not utilised from cost of cultivation studies, as better and more reliable data are available in supply side from Central Electricity Authority, Fertilizer Association of India and Pesticide Association of India. There are several other agencies, which provide data for agriculture. These are Tea Board, Coffee Board, Rubber Board, Arecanut Board, Cashewnut Development Board, Directorate of Sugar and Vanaspati, etc. Output of livestock production are prepared on the basis of the results of Integrated Sample Surveys and studies made on the advice of Technical Committee of Direction for Improvement of Animal Husbandry and Dairying Statistics. Indian Livestock Census conducted quinquennially is the main source of data on livestock numbers. Other sources for data are State Animal Husbandry Departments, Directorate of Marketing and Inspection, National Sample Survey Organisation (NSSO), Central Silk Board, Khadi and Village Industries Commission, etc.

The non-agricultural part of the un-organised segment are covered in the Indian economy through various surveys conducted under the regular programmes of NSSO and follow-up Surveys of the Economic Census organised/coordinated by the Central Statistical Organisation (CSO). India has conducted five Economic Censuses, first in 1977, second in 1980 third in 1990 fourth in 1998 and the fifth in 2005. The Economic Census provides basic information on the location, activity, employment, etc. of all the enterprises. The items of information collected under the Economic Census include

location, nature of activity, number of persons usually working, type of ownership, social group and gender of owner, having fixed or no premises, power/fuel used, and whether registered or licensed under any Act. In India the Economic Censuses conducted have provided the required frame for the conduct of the follow-up surveys on various activities: manufacturing, trade, transport, hotels and restaurants and other services for covering the un-organised segments of the non-agricultural economy.

The follow up surveys have been conducted utilising the frame provided by the Economic Censuses. India has a quinquennial programme of follow-up surveys of Economic Census. A particular economic activity in the unorganised segment of the economy gets a chance to be covered once in five years. Amongst the non-agricultural economic activities, the two major activities are manufacturing and trading (unregistered). The follow-up surveys include Directory Establishments (DE, employing more than 5 workers and not registered/non-public sector), Non-Directory Establishments (NDE, those employing 1 to 5 workers) and Own-account Enterprises (OAE) in the integrated surveys for capturing the unorganized segment of the economy.

The follow-up surveys have provided detailed information on the value of output; intermediate consumption, value added and additions to capital stock required for the national accounts purposes. The experience has shown that the sample surveys provide reliable information on ratios and not on the individual characteristics. Thus, the ratios such as value added per worker of the activity are taken from the survey results and multiplied by corresponding estimated work force to arrive at the estimate of value added for each activity.

VI. PRACTICES OF INCORPORATING UNORGANISED SEGMENT DATA INTO INDIAN NATIONAL ACCOUNTS STATISTICS

In the Indian NAS the total economy is covered by taking sum of organized and un-organized segments of each economic activity. Practices in use to compile domestic product from un-organized segments of various economic activities are described below:

Agriculture and Allied Activities

The agriculture and allied activities sector covers production of all agricultural crops, raising of livestock and poultry, livestock products and operation of irrigation system. Except operation of government irrigation system and plantation crops of tea, coffee, etc., most of the agriculture activity is in the household sector. The value added of this sector is estimated through production approach i.e. value of output less intermediate consumption comprising seed, manure, fertilizers, pesticides, repair and maintenance of assets, irrigation charges, electricity, diesel oil etc. Value of output is estimated as the products of outturn of the crops and corresponding average prices. The outturn of crops is estimated as the product of area under the crops and corresponding yield rates. The inputs in the agriculture are estimated on the basis of the results of cost of cultivation studies, which are undertaken for each of the crops in different states. The value of output of livestock products comprising, milk, eggs, poultry, meat and other livestock products are estimated on the basis of various studies/surveys conducted.

Operation of government irrigation system is considered as allied activity but this is an activity of the organized sector.

Plantation crops like tea, coffee are mostly managed by the corporate sector and data becomes available from the Tea Board and Coffee Board. To a large extent, agricultural activity is undertaken by own-account workers with the help of unpaid family workers and paid workers on a temporary basis. Agricultural production activities are also carried out by both market and non-market producers. Market producer has the prime intention of selling their produce in the market. The non-market producers produce primarily for their own final consumption. The agricultural and allied activities in India are by and large un-organized and with the characteristics of the informal sector. The ILO resolution excludes the household enterprises engaged in agricultural activities from the scope of the informal sector and suggests keeping it separately for practical reasons of data collection. It may also be worthwhile to make a mention of the backyard in the case of rural and kitchen garden in the case of urban area where fruits and vegetables are produced primarily for self-consumption, are within the production boundary as per 1993 as well as 2008 SNA. These activities are of course covered in the Indian NAS.

Forestry

The activities of forestry cover major products comprising industrial wood and fuel-wood and minor products comprising a large number of heterogeneous items such as bamboo, fodder, lac, sandalwood, honey, resin, gum, tendu leaves etc. The major products are covered by the government sector as mostly the forests are under the control of the government. The fuel-wood and minor forest products are however mostly collected by the households as free collections. These activities, therefore, are in the un-organized sector as the households as own-account enterprises perform these. Also, there is lot of unauthorized lifting of both major and minor products of forest, which becomes an illegal activity. These activities are, therefore, not properly accounted for in the national accounts. In the NAS, the fuel-wood production is covered through the consumption approach. The information from the consumer expenditure surveys conducted by the NSSO is utilised as a proxy for the production of fuel-wood.

Fishing

The activities covered in the fishing sector are commercial fishing in ocean, coastal, offshore and inland waters; subsistence fishing; and gathering of sea weeds, sea shells, pearls, etc. The value added is estimated by production approach. Value of output is estimated separately for the marine fish and inland fish and inputs in the form of repairs and maintenance of boats, nets and other operational costs are based on some specific studies made. The value added of un-organized sector of this activity is obtained as a residual i.e. taking the value added estimate from the production approach and netting it for the components of the public and corporate sector estimated separately from the budget documents, annual reports and the sample studies on private companies.

Mining and Quarrying

The estimates of this activity are compiled separately for the major and minor minerals. Information on the major minerals is covered by the annual surveys of mining

covering all major minerals by the Indian Bureau of Mines. Petroleum and natural gas is covered by the Oil and Natural Gas Corporation. The un-organized segment of this activity is the minor minerals and quarrying. Data on minor minerals at present are collected by the State Geological Departments. The information on minor minerals and quarrying is not adequately covered. India has only now included this activity in the follow-up Surveys of the Economic Census.

Manufacturing

For the purpose of estimation of domestic product, the entire manufacturing activities are classified into two broad sectors organized and un-organized. In the Indian NAS the organized sector is taken as the registered sector covering the factories employing 10 or more workers and using power or those employing 20 or more workers but not using power. All such factories are registered under the Indian Factories' Act, 1948 and data from these factories are collected through the Annual Survey of Industries. The un-organized sector, which is termed as 'unregistered', is covered using the results of the follow-up surveys of Economic Census. Results of the integrated enterprise survey provide information on the value added per worker which is multiplied by the working force (in new series, labour input which is WF adjusted for multiple jobs undertaken by the labour) to get the value added of the unregistered sector in the base year. The estimates of other years are obtained by moving the base year figure with appropriate physical indicators and price indices.

In the new 1999-00 series of the NAS attempts have been made to capture unorganized manufacturing segment in a more comprehensive manner, in that the value added from these units in the Small Scale Industries has been estimated separately making use of the results of the All India Census of the Small Scale Industrial Units 2001-02. The entire contribution of unregistered manufacturing can not deem to be originated in the informal sector component of the household sector (including unincorporated enterprises). To obtain the contribution of informal sector appropriate netting of the corporate sector included in the un-registered manufacturing sector component has to be made, even though it may not be significant.

Construction

In most developing countries the value added through the activity of construction is measured following a very indirect approach. Value of output of construction is estimated through commodity flow approach i.e. taking into account the net availability of the basic materials which go in for the construction activity. Based on the estimated value of these basic materials the output of construction is estimated by including the value added component which is taken as a proportion of the value of basic materials. The proportions are arrived at on the basis of research/type studies relating to various kinds of construction activities. Construction activity also comprise components which are labour intensive, viz., improvement of land, plantation, construction of traditional houses by the household themselves making use of the free natural material (bamboo, leaves, etc.). The value of construction by type of institution is taken as the expenditures made by the type of institutions in the acquisition of the construction assets. For Government and corporate sector it is the expenditure made by them on the construction

activity. The household sector construction component (i.e. the un-organized sector) is arrived at as a residual i.e. from the total value of construction obtained as indicated above, netting for the components of public sector and corporate sector.

It is very difficult to collect reliable information on the construction activity through sample surveys as construction takes place at sites and one does not have even a sampling frame of construction sites to facilitate selecting of a sample. Also there are other conceptual problems such as even when Government or a company spends money on the construction activity, construction work is done by a contractor who either subcontracts or employs casual labour. Thus the estimates relating to the construction activity of public sector or corporate sector does not necessarily indicate that the activity of construction has originated in the organized sector.

Electricity, Gas and Water Supply

The activity of electricity, gas and water supply is mostly in the realm of the Government. Only a small component of informal sector exists in case of water supply- the activities of carrying water by water fetchers whose sources of water are wells and manual water pumps and whose services are sold to clients for a fee. These activities, as per 1993 as well as 2008 SNA, are included in the production boundary. Another activity that falls in un-organized segment is gobar (cow dung) gas. This activity is mostly carried out by the households for own consumption but the possibility of selling part of it cannot be ruled out. In the NAS new series with base year 1999-2000 the contribution of gobar gas is estimated on the basis of the production data furnished by the Khadi & Village Industries Commission and information on the number of Bio-gas plants supplied by the Ministry of Non-conventional Energy Sources.

Trade, Hotels & Restaurants

The activity of the services of trade and hotels & restaurants are covered separately for the organized and un-organized segments. The estimates for the un-organized sector are arrived at as a product of the working force and per worker value added. The working force of the un-organized segments is obtained as a residual from the estimated total workforce by removing the workforce of the organized segment. The per-worker value added is taken from the results of sample surveys conducted for the purpose. First the bench mark estimates are prepared separately for rural and urban areas as a product of number of workers and per worker Gross Value Added (GVA). In the earlier series (base 1993-94) and in the new series (base 1999-2000), the private (non-public) trading and Hotels & Restaurants activity, for the purpose of capturing GVA, is considered separately for the (i) private organized part and (ii) private unorganized part instead of the private sector trade, hotel & restaurants as a whole as was the case in the earlier series of NAS. Estimates for the private organized part comprising private corporate and cooperative sector engaged in the activity have been prepared for the base year using results of the Reserve Bank of India (RBI) studies on company finance and information available from National Agricultural Bank and Rural Development (NABARD) respectively. The estimates for the unorganized segment have been obtained as the product of the work force (labour input) and value added per worker. The estimates of work force for this segment have been obtained from the total work force for

the activity by subtracting the work force of the public sector and the private organized segment as available from Director General Employment and Training (DGE&T). The estimates of GVA per worker for urban and rural areas have been obtained from the results of the follow-up surveys of the Economic Census conducted as informal sector survey during 55th round (1999-00) of NSS. The bench-mark estimates of GVA are carried forward to other years through an index of Gross Trading Income prepared specifically for the purpose by taking into account the marketable surplus of agriculture commodities, domestic output of industrial goods and imports and the corresponding trade margins.

Own-account Trading Enterprises are very large in number making significant presence but there is a problem in estimating their contribution to national income on the basis of the results of follow up surveys wherein data is collected through personal enquiry by asking questions on the commodities purchased and sold. There seems to be tendency on part of the respondents not to provide information truthfully for a variety of reasons - may be fear of attracting taxation, lack of comprehension, not attaching importance to the survey etc. In India the follow up surveys conducted so far on the trading activity have not yielded reliable (to the extent that at times unusable) results - indicating even negative value added. An alternative method of capturing this activity and methodological studies to solve the problems is still a challenge.

Transport, Storage & Communication

For transport and storage services the practices followed are the same as that of the trade, hotels and restaurants. Much of the communication activity is with the public sector as post and telegraph, telephones, etc. are managed by them. It is a recent phenomena that some of the communication activities such as cellular phone, faxes and transmission of information through satellite , e-mail etc. have come in the picture in a big way. In the new series with base 1999-00, the private communication services comprising (i) Courier activities (NIC-98, code 64120), (ii) Activities of cable operators (NIC-98, 64204), and Other communication (NIC-98, code 642 - 64204) have been appropriately covered. The private sector work force is obtained after subtracting the public sector work force of communication service taken from DGET publication, 'Employment Review' from the total work force of communication services. The estimates of value added per worker (VAPW) for these activities have been taken from the results of 57th round of NSSO on Enterprise survey on services sector, 2000-01. Latest data have been used from the year 1997-98 onwards keeping in view the activities covered and separate estimates for cellular mobile, courier services and public call offices booths (PCOs) have been incorporated.

Banking & Insurance

Most of the activities of banking and insurance are in organized (public) sector yet there are informal financial transactions through household operations such as pawnshops, informal chit-funds, etc. These services are only approximately accounted for in the national accounts. There is a need to capture these activities through enterprise surveys and accordingly the NSSO has taken up these services along with other services

in the 63rd round survey (2006-07). The results of the survey were not available at the new series.

Real Estate and Ownership of Dwellings

Ownership of dwelling is a service which is produced and consumed by the households and therefore is not informal sector. However, in Indian NAS the contribution of this activity is accounted in the unorganized segment. Real estate activity in the un-organized sector is covered by the Enterprise surveys, the follow-up survey of the Economic Census.

Other Services

The other services include educational services, research and scientific services, medical and health services, sanitary services, religious and other community services, legal services, recreation and entertainment services, personal services such as domestic laundry, dry-cleaning, barbers, beauty shops etc. and services not elsewhere classified. The practices followed for covering the services in the un-organized sector is the same as those mentioned above i.e. the working force (now in new series, labour input which is WF adjusted for multiple jobs undertaken by the labour) of a particular activity multiplied by the value added per worker. The value added per worker is estimated from the Enterprise Survey results.

VII. CONTRIBUTION OF THE INFORMAL SECTOR TO THE INDIAN ECONOMY

The informal sector has assumed increasing importance in the Indian economy. The contribution of the informal sector to the economy can be examined through several macro-economic aggregates like, the employment, domestic product etc. The National Accounts Statistics in India as on date are compiled following the guidelines set out in the SNA. Details of data sources used and methodology adopted are disseminated through the Central Statistical Organisation (CSO) publication, National Accounts Statistics: Source and Methods for each of the series (1970-71, 1980-81, 1993-94, 1999-2000), latest being for the 1999-2000 series published in March 2007.

Estimating Employment in the Indian Informal Sector

Informal Sector is basically labour intensive and provides employment to a large section of society. Various approaches could be adopted to estimate the size of the employment in the informal sector. One could be to identify the informal sector enterprises through the mechanism of Economic Census and ascertain the employment therein. Alternatively, one could estimate the total employment through either Population Census results or large-scale household surveys on employment and unemployment and then subtract from it the employment in the formal or organised sector. Yet another approach could be to determine the employment in the informal sector directly through sample surveys of the households - that is, first identify the workers in the household through sample and then determine if they are themselves the own-account enterprise or they work in an enterprise that is informal and thereafter by reaching the informal enterprise, estimate the size of the informal sector. This approach had been tried on an experimental basis in India in its NSS 55th Round in 1999-2000. There are, however,

serious problems on account of quality aspect of the data. The UN ESCAP is running a project in five countries (Mongolia, Philippines, Sri Lanka, Saint Lucia, Palestine) to capture informal sector through household survey approach. The project has adopted the concept of Household Unincorporated Enterprises with at least some Market production (HUEMs) and data collection methodology is based on 'The1-2 Survey Approach'. The project objective has been to improve availability of sound and internationally comparable informal sector and informal employment data. The quality of data on informal sector, which is available through different censuses and surveys, is a problem area. To illustrate, in the Indian context, information on employment is available from Population Censuses, Economic Censuses, and Enterprise Surveys that are conducted as follow-up surveys of the Economic Census and large-scale household survey on Informal sector/ employment and unemployment. The estimates of work force from these sources are however, at large variance and the users are at loss in identifying the reality of the situation from these alternative sets of estimates.

The size of employment in the informal sector can be measured directly or indirectly. There are difficulties in both the approaches firstly, because a clear-cut operational definition of informal sector is not at hand and secondly various existing data sources give different estimates of work force for various economic activities. In the compilation of Indian national accounts statistics, the size of employment in the informal sector has been obtained by the second approach i.e. first obtaining the total work force estimates and then subtracting from it the estimated work force in the organized (formal) sector comprising public sector (general government, departmental and non-departmental commercial enterprises), private corporate sector and cooperative societies.

The limitation of the Economic Census is that it does not cover the agriculture activities in the crop production and domestic services. The limitation of the follow-up surveys of the Economic Censuses has been that they have been conducted for individual economic activities in different years and also all activities have not been covered. Also, it has been an experience that the sample survey based results are good for estimating ratios rather than the population totals. It is important to note that Population Census based estimates of work force do not capture the activities, particularly those of women, adequately. In fact the worker population ratios from various NSS Employment Surveys are higher than those of based on the Population Censuses (Visaria, 1998).

Table: 1 show the estimates of total workforce for the year 1991 based on (i) NSS principal and subsidiary workers estimated using the worker population ratios of 43rd and 50th round and the estimated population total based on the Population Census, 1991 and (ii) estimated main and marginal workers based on Population Census (PC), 1991. The above comparison shows that the total work force estimated from the NSS Survey is higher by 10.86 per cent whereas the estimated female work force is higher by 28.24 per cent. In brief, the Table 1 clearly reveals that there was under-counting of work force in the 1991 Population Census in all the categories (rural/urban/ male/female), and particularly in case of females both in rural and urban areas.

Table 1: Estimates of Total Work Force of the Indian Economy for the year 1990-91

	NSS Principal & Subsidiary Workers			Population Census Main & Marginal Workers		
	Male	Female	Total	Male	Female	Total
Rural	173,149,626 (2.29%)	99,927,249 (24.23%)	273,076,875 (9.36%)	169,275,125	80,437,891	249,713,016
Urban	60,457,262 (8.91%)	15,116,528 (63.06%)	75,573,789 (16.66%)	55,510,863	9,270,712	64,781,575
Total	233,606,887 (3.92%)	115,043,777 (28.24%)	348,650,664 (10.86%)	224,785,988	89,708,603	314,494,591

Note: The percentage figures shown in parentheses denote how much higher the NSS figures are over that of the Population Census

Having observed the fact that there is under-enumeration of the work force through the PC1991, in the 1993-94 series of National Accounts Statistics, it was for the first time that estimates of work force had been prepared in a synthetic way using (i) worker population ratios and work force participation rates observed in NSS Survey on Employment and Unemployment (50th round) and (ii) population projections and pattern of work force in different economic activities as obtained from the results of full count tabulation of Population Census, 1991 from the Office of the Registrar General of India.

For the new series of National Accounts Statistics with base year 1999-2000, the estimates of work force have again been prepared in a synthetic way (similar to the one used in earlier series with base year 1993-94 mentioned above) using (i) worker population ratios and work force participation rates observed in 55th round NSS Survey on Employment and Unemployment, 1999-2000 and (ii) population projections and pattern of work force in different economic activities as obtained from the results of full count tabulation of PC from the Office of the Registrar General of India. The estimates of the work force have been arrived at using the methodology indicated below:

Methodology for Estimating Work Force

First the methodology of obtaining estimates of Workforce (number of workers) and *labour inputs* in the 1993-94 series is summarized. To begin with, the worker-population ratios from the 50th round NSS along with population projection figures were used to estimate the work force for 1993-94 for rural/urban and male/female break-up at the all India and state levels. Having obtained these marginal totals, the workers were then apportioned to the different economic activities at one digit of National Industrial Classification (NIC) level using the NSS work participation rates, both for the all India and state levels. Once the numbers of workers for rural/urban and male/female break-up at the one digit level of NIC were fixed, the workers were further apportioned to the two and three digit levels of NIC in the proportions observed in the full count tabulations of the working force as provided by the Office of the Registrar General of India.

It may be mentioned that in Population Census apart from main and marginal (equivalent to principal and subsidiary in the NSSO survey on employment and unemployment) workers, estimate of the third category of workers, namely, 'main worker

with other work' (MWOW) is also available. The estimate for this category of workers is not directly available in the NSSO surveys. Unfortunately, the estimates of MWOW are not available as at that detailed level as main and marginal workers, in that, these are available only at total level with rural/urban and male/female breakup. As these workers are engaged in multiple economic activities, it is imperative to reckon them in national accounts in order to capture the value added on account of activities performed by them. For the purposes of the National Accounts, therefore, the total work force comprises principal workers, subsidiary workers and MWOW workers. In order to obtain the total workforce, MWOW workers had been adjusted assuming that the ratio of MWOW workers (as available from the PC 1991) to main and marginal workers in 1991 would be the same in 1993-94 as well. For the head count purposes, however, only principal and subsidiary workers need to be considered. The adjustment made in the workforce estimates for MWOW to take care of the multiple jobs undertaken by the labour, in fact, converts the workforce estimates into the *labour input*.

The method of estimating aggregate workforce followed for the 1993-94 series of the NAS mentioned above has been continued for the new series, i.e., estimates of work participation rates (WPRs) from EUS 55th Round (1999-2000) of NSSO applied on the population projections (as on 1st October 1999) based on PC to obtain the total workforce for the mid-accounting year 1999-2000. The estimates of course are worked out separately for the four population segments (cross of rural-urban and male-female) and then added to arrive at the aggregate work force estimate. As regards the adjusting for Multiple jobs (*labour inputs*) in the new series, EUS 55th Round data has been used to derive the principal and subsidiary capacity employment as the sum of estimated number of workers in principal capacity and that of workers in subsidiary capacity separately for each activity category relevant for compilation of NAS. In the process, each reported 'job', both in principal and subsidiary capacity, of all the workers gets counted, subject to a maximum of two per worker. By definition this is equivalent to the MWOW adjusted workforce estimate, and thus is a measure of *labour input* of the economy.

Table 2: Estimated number of Workers and Population from the PC 2001 and EUS (1999-2000)

Item/ area	PC 2001					EUS 55 th Round (1999-2000)				
	Total population	Total workers	Main workers	Marginal workers	Non- workers	Total population	Total workers	Principal workers	Subsidiary workers	Non- workers
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Population and number of workers and non-workers (in millions)</i>										
Rural	740	311	230	81	430	687	287	261	26	400
Urban	285	92	84	8	193	234	79	76	3	155
Total	1025	403	314	89	623	921	365	337	29	556
<i>Percentage shares of workers and non-workers in total population</i>										
Rural	100.00	41.97	31.03	10.94	58.03	100.00	41.72	37.97	3.75	58.28
Urban	100.00	32.23	29.30	2.93	67.77	100.00	33.67	32.38	1.30	66.33
Total	100.00	39.26	30.55	8.71	60.74	100.00	39.67	36.55	3.12	60.33
<i>Percentage shares in total working population</i>										
Rural		100.00	73.93	26.07			100.00	91.02	8.98	
Urban		100.00	90.90	9.10			100.00	96.15	3.85	
Total		100.00	77.80	22.20			100.00	92.13	7.87	

For the new series of NAS with base year 1999-2000, the workforce estimates thrown up by the EUS 55th Round (1999-2000) and PC 2001 were examined to observe (see Table 2) that though the overall participation rates are quite close, 39.26 for PC2001 and 39.67 for EUS 55th Round, there are considerable differences in the rates to main (*principal*) and marginal (*subsidiary*) workers between the two sources.

The DGE&T brings out the estimates of employment in the organised segment of the Indian economy based on the information collected through the network of employment exchanges in the country under the Employment Market Information (EMI) Programme. The employers of the organised segment furnish the requisite information through the employment returns prescribed under the employment exchanges (Compulsory Notification of Vacancies) Act 1959 and Rules framed there under, to the DGE&T. The EMI Programme relates to the organised sector, which covers all establishments in the public sector, irrespective of their size and non-agricultural establishments in the private sector, employing 10 or more persons. Accordingly, information in respect of all public sector establishments and non agricultural establishments in the private sector employing 25 or more persons is collected statutorily under the provisions of the Employment Exchanges (Compulsory Notification of Vacancies) Act 1959 and information from smaller non-agricultural establishments in the private sector employing 10-24 persons is collected on voluntary basis. It can thus be seen that the estimates of employment in the organised segment of the economy as available from the DGE&T publication entitled, '*Employment Review*' has its limitations, in that the estimates of employment in the private organised segments is reported on voluntary basis from the establishments employing 10-24 persons. In the absence of any other alternative source of the estimates of work force in the organised segment (except for manufacturing for which the work force in the organised segment is available from the ASI) in the economy, however, this information on employment in organised segment has been used to derive the estimates of work force in the unorganised segment by subtracting it from the total work force estimates as obtained above. For illustration purpose of the method the estimates of work force for the compilation categories of Indian national accounts in the unorganised/informal sector for the year 1999-2000 are presented below in Table 3.

Table 3: Estimates of working force in the Indian economy 1999-2000 (as on 1st October)

S.N.	NIC98	Description	Work force				
			TOTAL org & unorg	Organised Sector			Un- organised Sector
				Public	Private	total orgd	
1	01405	cotton ginning	89730			54161	35569
2	151	Production, processing, preservation meat, fish, fruit vegetables, oils, fats	802725			116794	685931
3	152	Mfg of dairy products	272514			54333	218181
4	153	Mfg grain mill products, animal feeds	2760601			246385	2514216
5	154	Mfg other food products	2486186			569731	1916455
6	155	Mfg Beverages	455419			54110	401309

7	16	Mfg tobacco products	4635640			449257	4186383
8	171+172 +173	Mfg Textile, Knitted and crocheted fabrics and articles	8021979			1152586	6869393
9	181- 18105	Mfg Wearing apparel, except fur apparel and tailoring	2584668			249878	2334790
10	18105	Tailoring	3350169				3350169
11	182+19	Mfg articles of fur and leather; luggage, handbags, and footwear	1190030			100568	1089462
12	20	Mfg Wood, cork products except furniture	5334786			40259	5294527
13	361	Mfg of Furniture	854054			17838	836216
14	21+22 *	Mfg Paper, Products; publishing, printing, reproduction of recorded	1289544			212917	1076627
15	23+25	Mfg coke, refined petroleum, rubber and plastic products	1218254			256843	961411
16	24	Mfg chemical and chemical products	1904312			552446	1351866
17	26	Mfg other non-metallic mineral products	4008775			359945	3648830
18	271+273 1+272+2 732	Mfg Basic Iron & Steel + Casting of iron and steel	1148808			479567	669241
19	371+372	Recycling of metal waste and scrap+ non-metal waste and scrap	20799			280	20519
20	28 +29 +30	Mfg fabricated metal products, except machinery and equipments	3739000			516858	3222142
21	31+32	Electrical machinery, apparatus+ radio, television and communication equipment and apparatus	1147288			239231	908057
22	33+369	Mfg Medical, precision, optical instruments, watches, clocks+ n.e.c	2705017			131694	2573323
23	34+35	Mfg Motor vehicles, trailers + other transport equipment	618226			340241	277985
24	502+504 04	Mfg and repair of motor vehicles and motor cycles	1688229		68634	68493	1619735
25	50-502- 50404	Sale of motor vehicles	435578		24584	24835	410743
26	51+7499 1	Whole sale trade except of motor vehicles + Auctioning activities	3960598		207977	390865	3569734
27	526	Repair of personal and household goods	3373966		35723	37251	3336715
28	52-526	Retail trade (except motor vehicle)	30039860		95365	94605	29945255
29	551	Hotels; camping sites etc.	375390			93658	281732
30	552	Restaurants, bars and canteens	4442200			72950	4369250
31	601	Transport via railways	1116998			1116998	0
32	6021	Scheduled passenger land transport	1900508	689272		689272	1211237
33	60221	Non-scheduled passenger land transport by motor vehicles	3745373				3745373
34	60231	Freight transport by motor vehicles	4240123	22163		22163	4217960

35	60222	Other non-scheduled passenger land transport	1878396				1878396
36	60232	Other Freight tpt by motor vehicles	2329535				2329535
37	61	Water Transport	259521			57363	202158
38	62	Air transport	83656			45466	38190
39	6302	Storage and warehousing	170202			92454	77748
40	63-6302	Supporting & auxiliary transport activities	596454			91776	504678
41	6411	National post activities	446080			542031	-95951
42	6412	Courier activities	98775	18489	1418	19907	78868
43	64204	Cable operator	65067				65067
44	642-64204	other communication	723870	222288	24735	247023	476847
45	70	Real Estate Activities	191934		6710	6710	185225
46	71	Renting of machinery & equipment without operator, household goods	370595				370595
47	72	Computer and Related activities	322983	40278	58451	98730	224253
48	7411	Legal activities	500190		15307	15307	484884
49	7412	Accounting, book-keeping	291698		24093	24093	267605
50	73+7413+7414+742+743+749-74991	R &D+ market research, public opinion polling+ business consultancy, architectural, engineering + advertising+ business activities n.e.c (-) auctioning activities	1077508		327556	327556	749952
51	80903+80904	Coaching centres,(+) Activities of the individuals providing tuition	991446				991446
52	80-80903-80904	Education-(Coaching centres,(+) Activities of the individuals providing tuition	7594915	2956297	1389657	4345954	3248961
53	851+852	Human health activities+ Veterinary activities	2738635	1076931	154811	1231742	1506894
54	90	Sewage And Refuse Disposal, Sanitation And Similar Activities	495452	202618		202618	292834
55	91+853	Activities of Membership Organisations n.e.c.+ Social work	1289602		782948	782948	506654
56	92	Recreational, cultural and sporting activities	981534	65570	59418	124988	856546
57	9301	Washing cleaning textile/ fur products	2480359				2480359
58	9302	Hair dressing, other beauty treatment	1916130				1916130
59	9303+9309	Funeral and related activities	3909391				3909391
60	95	Private Households With Employed Persons	1864941				1864941
61	99	Extra Territorial Organizations And Bodies	18114		18114	18114	0

Source: Estimates of workforce from the NSS 55th round, 1999-2000, Paper at IARNIW conference by Ramesh Kolli, Savita Sharma and Anindita Sinharay, Central Statistical Organisation.

Contribution of Unorganised Sector to the Net Domestic Product in Indian Economy

The estimates of net domestic product (NDP) in organized and unorganized segments by economic activities in the Indian economy for the years 1999-2000, 2003-04 and 2005-06 as per NAS 2008 are given in Table 4 and the estimates of the share of different sectors in the total NDP from unorganised segment and share of unorganised segment to total (organised plus unorganised) NDP for 1999-2000, 2003-04 and 2005-06 have been presented in Table 5.

Table 4: Net Domestic Product (NDP) in Organised / Unorganised Segment by economic activity in the Indian economy for 1999-2000, 2003-04 and 2005-06

Economic activity (1)	Net Domestic Product (Rs. crore)					
	1999-2000		2003-2004		2005-06	
	Organised (2)	Un-organised (3)	Organised (4)	Un-organised (5)	Organised (6)	Un-organised (7)
1. Agriculture, forestry & fishing	37967	386985	40102	461216	53088	523521
1.1 agriculture	35053	355538	37101	419730	49590	474776
1.2 forestry & logging	2895	14391	2989	18570	3477	21387
1.3 fishing	19	17056	12	22916	21	27358
2. Mining & Quarrying	30232	2769	47607	5227	71236	8233
3. Manufacturing	129469	77717	199411	101610	269354	127049
4. Electricity, gas & water supply	26559	658	26873	960	26347	1491
5. Construction	40717	58650	60975	90833	108821	148503
6. Trade, hotels & restaurants	37839	210498	74734	311480	101382	424615
6.1 trade	32230	195516	65205	289741	85621	394804
6.2 hotels & restaurants	5609	14982	9259	21739	15761	29811
7. transport, storage & communication	51143	56770	70811	98996	80712	144129
7.1 railways	16409	0	20617	0	25207	0
7.2 transport by other means	16007	52113	24476	87192	30247	116006
7.3 storage	656	680	798	887	1092	1003
7.4 communication	18071	3977	24920	10917	24166	27120
8. Financing, insurance & real estate	110040	103403	185468	147273	226501	171709
8.1 banking & insurance	92601	10039	141943	15575	155109	19869
8.2 real estate etc.	17439	93364	43525	131698	71392	151840
9. Community, social & personal services	189814	56874	244913	89700	295309	114867
9.1 public administration & defence	107036	0	135688	0	169305	0
9.2 Other Services	82778	56874	109225	89700	126004	114867
All sectors	650780	954324	950894	1307295	1232750	1664117

Source: NAS 2008, CSO, India

Table 5: Share in NDP from Unorganized Segment and share of Unorganized segment in NDP, by economic activity in the Indian economy for 1999-2000, 2003-04 and 2005-06

Economic activity	Share in NDP from unorganized segment			Share of unorganized segment in NDP		
	1999- 00	2003-04	2005-06	1999-20	2003-04	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Agriculture, forestry & fishing	40.6	35.3	31.5	91.1	92.0	90.8
1.1 agriculture	37.3	32.1	28.5	91.0	91.9	90.5
1.2 forestry & logging	1.5	1.4	1.3	83.3	86.1	86.0
1.3 fishing	1.8	1.8	1.6	99.9	99.9	99.9
2. Mining & Quarrying	0.3	0.4	0.5	8.4	9.9	10.4
3. Manufacturing	8.1	7.8	7.6	37.5	33.8	32.1
4. Electricity, gas & water supply	0.1	0.1	0.1	2.7	3.4	5.4
5. Construction	6.1	6.9	8.9	59.0	59.8	57.7
6. Trade, hotels & restaurants	22.1	23.8	25.5	84.8	80.6	80.7
6.1 trade	20.5	22.2	23.7	85.8	81.6	82.2
6.2 hotels & restaurants	1.6	1.7	1.8	72.8	69.5	65.4
7. transport, storage & communication	5.9	7.6	8.7	52.6	58.3	64.1
7.1 railways	-	-	-	-	-	-
7.2 transport by other means	5.5	6.7	7.0	76.5	78.1	79.3
7.3 storage	0.1	0.1	0.1	50.9	52.6	47.9
7.4 communication	0.4	0.8	1.6	18.0	30.5	52.9
8. Financing, insurance & real estate	10.8	11.3	10.3	48.4	44.3	43.1
8.1 banking & insurance	1.1	1.2	1.2	9.8	9.9	11.4
8.2 real estate etc.	9.8	10.1	9.1	84.3	75.2	68.0
9. Community, social & personal services	6.0	6.9	6.9	23.1	26.8	28.0
9.1 public administration & defence	-	-	-	-	-	-
9.2 Other Services	6.0	6.9	6.9	40.7	45.1	47.7
All sectors	100	100	100	59.5	57.9	57.4

It is evident from these tables that though the contribution of the unorganized segment to the total NDP of India has slightly declined during the period 1999-2000 to 2005-06, it still accounts for quite a large share (over 57 per cent). It also reveals that there is considerable variation in the share of the unorganized segment in various economic activities.

For example, the share of unorganized segment in agriculture is over 90 per cent, as against less than 5 per cent in the activity of 'electricity, gas and water supply'. The activities of trade, transport, construction and manufacturing also show a high share of unorganized segment in the NDP. As regards the structure of the informal economy, agriculture which accounted for half of the unorganized segment income in 1993-94 and 40 per cent in 1999-2000 has now reduced to 31 per cent in 2005-06. Besides agriculture, 'trade, hotels and restaurants' and 'manufacturing' are the other two major economic activities that contribute significantly to the unorganized income of the economy.

The decline in the share of the unorganised segment in the NDP could possibly be attributed to the reduction in the market response to these activities, resulting in fall in the productivity of labour, their real wages etc. The growth in the number of self-employed persons and casual workers, as observed from the data of National Sample Surveys can be cited in support of this argument. Many research workers and activists working on the subject would, however, strongly discount this proposition and would be inclined to hold inadequacy of coverage and indifferent attitude of the official agencies,

even in the data collection on informal sector, as responsible for this trend. It is indeed true that the present system of data collection does not give due importance to the informal sector, which is treated as residual category. However, given its importance in the economy, it is essential to strengthen surveys on the subject to provide more reliable information so as to enable a proper analysis of the dynamics of the informal sector, especially when the public agencies are sought to be replaced by market in several areas.

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HOUSEHOLD SECTOR AND PRODUCTION BOUNDARY IN THE SYSTEM OF NATIONAL ACCOUNTS

Household Sector

In the 1993 SNA as well as the 2008 SNA, household is defined as a group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. In general each member of a household should have some claim upon the collective resources of the household. At least some decisions affecting consumption or other economic activities must be taken for the household as a whole. Households often coincide with families, but members of the same household do not necessarily have to belong to the same family so long as there is some sharing of resources and consumption. Households may be of any size and take a wide variety of different forms in different societies or culture depending on tradition, religion, education, climate, geography, history or other socio-economic factors.

Domestic staff who live on the same premises as their employer do not form part of their employers' household even though they may be provided with a accommodation and meals as remuneration in kind. Paid domestic employees have no claim on the collective resources of their employer's households and the accommodation and food they consume are not included with their employer's consumption. They should therefore be treated as belonging to separate households from their employers.

The household sector consists of all resident households. Defined as institutional units, households include unincorporated enterprises owned by households, whether market producers or producing for own final use, as integral parts of those households. Only those household unincorporated market enterprises that constitute quasi-corporations are treated as separate institutional units. The household sector may be divided into four sub-sectors: (a) employers, (b) own account workers, (c) employees, and (d) recipients of property and transfer incomes.

The households act as producers as well as consumers of goods and services; they provide the labour to the economy. Production within the household sector takes place within enterprises that are directly owned or controlled by members of the household, either individually or in partnership with others. When members of household work as employees for corporations, quasi corporations or government, the production to which they contribute takes place outside the household sector. Producer units within the household sector are all unincorporated enterprises. Household sectors as producers can be put under two categories, (i) household unincorporated market enterprises and (ii) household enterprises producing for own final use. Household unincorporated market enterprises are created for the purpose of producing goods or services for sale or barter on the market.

Production Boundary

As per 1993 SNA as well as 2008 SNA, activities that fall within the production boundary of the System are (a) the production of all individual or collective goods or services that are supplied to units other than their producers or intended to be so supplied, including production of goods or services used up for in the process of producing such goods or services; (b) the own account production of all goods that are retained by their producers for their own final

consumption or gross capital formation; (c) the own account production of housing services by owner occupiers and domestic and personal services produced by employing paid domestic staff.

The own account production of domestic and personal services produced for own final consumption within households has been put outside the production boundary traditionally for various good reasons elaborated in the System. The System, however, gives guidelines with respect to the treatment of certain kinds of household activities, which may be particularly important in some developing countries.

Own account production of goods:

The System includes the production of all goods within the production boundary. Thus the following types of production by households are included whether intended for own final consumption or not, (a) the production of agricultural products and their subsequent storage, gathering of berries or other un-cultivated crops, forestry, wood cutting, collection of firewood, hunting and fishing, (b) the production of other primary products such as mining salt, cutting peat, supply of water, etc. (c) the processing of agricultural products; the production of grain by thrashing; the production of flour by milling; the curing of skins and the production of leather; the production/ preservation of meat and fish products; the preservation of fruits by drying, bottling, etc.; the production of dairy products such as butter or cheese; the production of beer, wine or sprits; the production of baskets or mats, etc.; (d) other kinds of processing such as weaving cloth, dress making and tailoring; the production of footwear; the production of pottery, utensils or durables; making furniture or furnishings; etc.

“Do it yourself” repairs and maintenance of consumer durables and dwellings carried out by members of the household constitute the own account production of services and are therefore excluded from the production boundary. However, substantial repairs have to be taken into account.

The use of goods within the household for direct satisfaction of human needs is not treated as production. Services of owner occupied dwellings have always been included within the production boundary in the national accounts.

The illegal production is now included within the production boundary of the System. Illegal production could be (a) the production of goods or services whose sale, distribution or possession is forbidden by law or (b) production activities which are usually legal but which become illegal when carried out by unauthorized producers such as unlicensed medical practitioners.

Activities of concealed production and underground economy stands for quite legal production but unknown to the public authorities for different reasons viz., (a) evasion of value added tax, income tax etc. (b) evasion of social securities contributions, (c) the non-observance of standards defined by law such as minimum wages, working hours, equipment for safety on the job, etc. (d) the non-complying with administrative procedures or statistical questionnaires. These activities also fall within the production boundary of the System.

ANNEX -II

Coverage of the organized sector in the Indian National Account Statistics

In the Indian National Accounts Statistics the coverage of organized sector by economic activities is as under:

Economic activity	coverage of organized segment in the activities
Agriculture	government irrigation system non-departmental enterprises and crop production in plantation crops of tea, coffee and rubber covered in private corporate sector
Forestry	recorded production of industrial and fuel wood
Fishing	non-departmental enterprises
Mining & Quarrying	Major minerals
Manufacturing	registered factories covered under Factory Act, 1948
Electricity, gas and water supply	total activity of electricity, public sector part of gas and water supply
Construction	construction works in the public sector and private corporate sector
Trade, hotels & restaurants	public and private corporate sector and co-operatives
Railways	total
Transport by other means	public sector, private shipping companies and road transport under the private corporate sector.
Storage	warehousing corporation in public sector, cold storage covered under Factory's Act, 1948.
Communication	total
Banking and insurance	total activity except the commission agents attached to Life Insurance Corporation of India and un-organized non-banking financial undertakings including professional moneylenders and pawn brokers.
Real estate, ownership of dwellings and business services	real estate companies in the private corporate sector and public sector.
Public administration and defence	total
Other services	public sector medical, education and sanitary services, TV and radio broadcasting and recognized educational institutions in the private sector.