

Manual on Surveys of Informal Employment and Informal Sector

Draft Chapter 5:

**Establishment censuses and
informal sector establishment
surveys**

January 2010

1. Introduction

Establishments constitute the sampled and observation units and their owners are the reporting units in an establishment survey. Censuses and surveys of establishments were the most usual and classical means of measuring the informal sector until the 15th ICLS (1993). Door-to-door enumeration of establishments provided the basis for the selection of representative samples of small-scale establishments, surveyed through a detailed questionnaire in a second stage. The sample selection is based on the list of enumerated establishments and later on (when the list becomes out of date) on area sampling (a random selection of areas, drawn with a probability proportional to the number of establishments recorded in the area). Besides sample selection, this method also facilitates an easy updating of administrative registers of establishments.

But the above approach has been criticized for covering only the larger segment of the informal sector: micro and small enterprises performing their economic activities in identified non-domestic premises. Many informal sector businesses are difficult to identify or locate because they lack recognizable business premises; examples are activities conducted inside the home of the business owner (e.g. tailoring, food processing) or without fixed location (e.g. construction, transport, ambulant trade). Unless substantial special efforts are made, such activities are likely to be omitted from establishment censuses and surveys. It should be noted, however, such special arrangements to improve the coverage of home-based and mobile informal sector activities in establishment censuses and surveys (e.g. as in Indian economic censuses and unorganized sector enterprise surveys, the details of which are provided later in this chapter) involve higher cost and better training to enumerators.

Economic or establishment census is an infrequent enquiry conducted once in 5 or 10 years. It is limited in terms of data content of an establishment such as name, address, location, kind of economic activity, legal and ownership status, employment and, if possible, volume of sales and value of output. Such a census can provide the data for establishing the list and/or area sampling frames for use in conducting sample surveys of establishments. These censuses are generally very costly and require large inputs of manpower and time. This tends to limit them to a low frequency such as one or two in a decade. Establishment surveys are more frequently conducted using the census-based sampling frames, and more detailed data on an establishment such as identification particulars of the unit, type of economic organization, employment, and items of information required to estimate "value added" and gross fixed capital formation are collected.

Economic or establishment censuses and establishment surveys to collect data on units including informal sector units either partially or fully have been undertaken regularly in many major countries such as India, Indonesia, Egypt, as well as many Latin American countries and also in Italy. Such censuses were used for identification of micro and small enterprises, in contrast with the medium and large enterprises, on the basis of the legal status (unincorporated/incorporated) and the size (less than 5 or 10 employed). And in

many countries the regular enterprise survey is carried out on an annual and exhaustive basis for the medium and large enterprises, and on a sample and five yearly basis for the micro and small enterprises.

Taking cognizance of the historical development, the 15th ICLS (1993) noted that it might be possible to collect data on informal sector units through various kinds of establishment surveys depending on the measurement objectives, the intended uses of the data, the calendar and structure of the national statistical system, and the availability of sampling frames and resources. In conjunction with an establishment or economic census or using the latest economic census as an area sampling frame, special surveys of informal establishments may be conducted to collect specific data on employment, production, income generation and other characteristics of informal sector units and their owners. For this purpose, the economic census should, in principle, contain the required items for identifying the informal sector units. However, as the observation unit in economic censuses is typically the establishment, the reconstitution of informal sector enterprises on the basis of the available information may not be easy to achieve in practice. Unless particular measures are taken, the coverage of such surveys of informal sector establishments is limited by the scope of the economic census on which they are based. In particular, coverage typically excludes informal sector units, which do not operate in fixed premises designated for the purpose of carrying out production activities or which are not identifiable as such from the outside during the listing operation.

While it is generally preferable to cover all types of informal sector activities through a single survey, branch-specific surveys (such as manufacturing, trade, etc.) or a series of such surveys may be considered if the measurement objectives are limited to particular kinds of informal sector activities or if the scale of a single survey is considered too large to be manageable in practice. In a branch-specific survey, the listing operation should be such as to identify all and only those informal sector units that fall within the scope of the survey. Rules need to be established for informal sector units also engaged in other activities, particularly if some of these activities fall outside the scope of the survey. When the intention is to cover all types of informal sector activities through a series of branch-specific surveys rather than a single survey (as is the case in the unorganized sector enterprises surveys in India), the data collection programme should be designed to ensure a comprehensive coverage of informal sector units without omission or duplication among surveys. The timing of the surveys and the methodology to obtain over-all aggregates should be carefully planned.

As already noted, censuses and sample surveys of establishments are common in several countries. However, historically international recommendations (for industrial statistics in 1983, construction statistics in 1997 and statistics of distributive trades and services in 1975) on establishment-type data collection were generally geared towards the so-called organized or large-scale or formal sub-sector. This was evident, for instance, from the lack of information in these recommendations on sampling as well as on the line of questioning to be used to obtain similar information from the small establishments that do not maintain accounts. Although a need for separate recommendations or guidelines on the collection of statistics on household and small-scale industries was felt for a long time,

especially in developing countries, only “Draft recommendations for a statistical programme for household and small-scale industries (1986)” were prepared by United Nations. Further, the earlier international recommendations on establishment surveys assumed the availability of a register of establishments or enterprises (business register) and the suitability of such a list as the basis for a system of data collection. For developing countries with a large informal sector comprising small establishments/enterprises, an establishment (or business) register is not by itself an adequate basis for sample surveys of informal sector establishments/enterprises. Countries with a large informal sector often do not have a business register. Even where a business register exists, it does not usually cover informal sector enterprises. Thus, in most cases, informal sector establishment surveys can be conducted only following a general economic/establishment census covering the relevant branches of economic activity and containing the items of data required for the identification of informal sector units.

A methodology for an establishment survey programme that captures information from the entire employment size-range of establishments operating within an industry, called “Fully integrated rational survey technique (FIRST)” was presented in a publication: *Strategies for measuring industrial structure and growth (1994)* by United Nations. The FIRST methodology divides the statistical universe of establishments into two parts, namely a list frame of the large-scale sub-sector, which is clearly defined, and an area frame of the medium and small-scale sub-sector that covers all other establishments. The small-scale establishments include the informal sector units. The large-scale establishments are covered on the basis of a business register/directory (list frame). Data collection in the medium and small-scale sub-sector is done on the basis of area sampling. The FIRST methodology of establishment survey approach enables classification of the contribution of an industrial sector to gross domestic product into informal versus formal components; if the informal and formal production units are appropriately defined and used in the sampling and estimation procedures. India offers a good example for the application of FIRST methodology in manufacturing sector where (i) the registered establishments having large employment size are covered annually using a list frame in “Annual survey of industries” (ASI) and (ii) the unregistered establishments (not covered in ASI) are surveyed at five yearly interval in the “survey of unorganized manufacturing enterprises” using area sampling frame (prepared on the basis of economic census). In Indonesia, each year large and medium -scale manufacturing establishments are covered on complete enumeration basis using a directory of establishments and small-scale and micro manufacturing establishments are covered on a sample basis using area frame. Both the directory (list frame) and area frame are prepared on the basis of economic census.

The problems in the earlier international recommendations on establishment surveys with regard to absence of guidance on coverage of small or informal sector establishments have been addressed recently while revising those recommendations. In the new *International Recommendations for Industrial Statistics 2008 and International Recommendations for Distributive Trade Statistics 2008*, data collection strategies for small or informal sector establishments are included. The FIRST methodology mentioned

above has been described in detail, as one of the possible data collection methods in these new recommendations.

2. Sampling considerations for informal sector establishment surveys

In selecting a sampling design for any sample survey, the principle generally followed is either to minimize the overall cost of the survey for a given degree of precision of the estimates or to maximize precision for a given cost. Sampling is the key vehicle for mediating these ends within the context of the size and importance of the survey population involved. Sampling, unlike a census, will reduce the level of detail at which reliable estimates can be classified by size, kind of industrial activity, and geographic location; but this limitation can be overcome by selectively increasing the sampling fraction for cells where a lower sampling variance is required for a specific application of the data.

Since for a sample survey of establishments it is essential to know *a priori* the number and location of units to be accounted for, the basic requirement is a complete, reasonably accurate and recent sampling frame, and this is the greatest challenge for surveys of informal sector units. Theoretically, the sampling frame can be either a directory of informal sector units (called a list frame) or a list or map of area units with identifiable geographic boundaries (called an area frame). In practice, however, due to such factors as seasonality, mobility and the high turnover rates characteristic of informal sector units, the area frame is considered more reliable than the list frame. New formations and closures of individual informal sector units can seriously erode the accuracy of a list frame but usually do not affect the overall pattern of concentration of industries on which an area frame is based.

Assuming that the area frame will form the basis for most sample surveys of informal sector establishments, the primary task is to develop a frame that minimizes the effects of the constraints mentioned above. Since it may be expected that the geographic distribution of informal sector units will be sparse and uneven, some kind of stratification of area units becomes necessary. Because of the need for area stratification, every effort should be made to compile the best possible information on the concentration of these industries, at the level of area units proposed for sampling. This in turn depends upon the data sources available.

The best sources of information on the concentration of industries are derived from listing phases of establishment or economic censuses. Establishment lists for these censuses should identify every recognizable industrial establishment by size (of employment), as in the case of Indian Economic Census, 2005 (described in country experiences later). The area frame prepared from such lists may be in the form of national or regional maps of area units with identifiable geographic boundaries and some details of the number of establishments classified by nature of industrial activity and size (of employment). The data available from such area frames can be used for the allocation of the sample of area units to different geographic strata, for the stratification of area units

based on concentration of industrial activities, and for the selection of sample area units with probability proportional to size (number of establishments).

In view of the fact that informal sector units can be widely scattered, it is very important that the area units adopted for sampling should be large enough to ensure that a reasonable number of informal sector units are included in the sample. Also the chances of good representation of informal sector industries of different types will be increased if the area units are reasonably large.

The unit of enquiry will be an informal sector establishment employing one or more persons. After the area units have been selected, a complete listing of the units of enquiry within these area units is to be prepared, to provide a frame for selecting the ultimate sampling units. During this listing, information should be collected on: name and physical location of the unit, kind of activity (description and code) and number of persons engaged (or other size criterion). Based on this listing, units would be stratified according to kind of activity. If the number of establishments in each kind of activity is not unduly large, all of them may be surveyed for data collection. However, if this number is very large in a particular activity, as it is likely for trading in the case of heavily populated areas, further stratification based on size of establishment may be done and the listed units can be surveyed on a sample basis.

Application of above sampling principles and procedures, in practice, is further elaborated in country experiences given later (for example India).

3. Advantages of establishment censuses and surveys

The data collection system of economic or establishment census and follow-up surveys of informal sector establishments have the following advantages.

1. Economic or establishment census provides a country with information on the structure of its economy and establishes statistical foundation for continuing economic analysis.
2. Economic statistics generated from establishment surveys are primarily used for compilation of gross domestic product in national accounts statistics, whereas benchmark and key ratios used in national accounts are provided by the data obtained from economic or establishment census.
3. The census can provide basic data on the structure of industry at the most disaggregated level of industrial classification, while an establishment survey can yield reliable estimates only for suitably aggregated levels of industrial classification depending upon effective sample sizes at those levels.
4. The census data can be used to establish a complete register of businesses, when such registers are lacking or have become out of date.
5. The census data can be used to prepare a sampling frame of enumeration areas showing the concentration of units in various industries. Such an area-based frame is useful for selecting a sample of enumeration areas as primary sampling units in the follow-up establishment surveys (as in India).

6. Comparative analysis of data sources to throw light on employment in informal sector is possible, when the census of establishments is conducted simultaneously with or immediately thereafter a population census (like in Egypt or Tunisia).
7. Economic or establishment census provides the means to reconstitute enterprises through their establishments, if necessary details are collected in the census. In Tunisia, it was revealed during 1981 that an important proportion of small-scale establishments (employing less than 10 persons) were part of intermediate enterprises employing 10 to 50 persons, thereby demonstrating the dynamism of the informal sector and of its potential for accumulation.

4. Limitations of establishment censuses and surveys

The limitations of using establishment censuses and surveys as data collection strategies for obtaining data on informal sector are presented in the following.

1. Economic or establishment census is a large-scale and costly data collection effort and resource constraints may not allow the provision of adequate budget in the regular statistical programmes of less developed and developing countries for the conduct of the census even infrequently.
2. In general, the census covers only a segment of informal sector, albeit an important one, since many informal sector businesses located inside the homes of the owners of the businesses or conducted without fixed location are likely to be omitted. To capture all such segments of informal sector adequately, special arrangements in listing operation are required (as in India).
3. In establishment surveys, where primary sampling area units are selected on the basis of area frames constructed out of an earlier census data, fresh listing and identification of eligible establishments in the selected area units is required to take into account high rates of births and deaths of informal sector establishments between the periods of census and sample surveys.
4. As information is collected separately for each establishment in the census as well as sample survey, it may be difficult to show linkages among several informal sector activities undertaken by the same individuals or households, and to consolidate the data at the enterprise or household level.
5. There are possibilities of double counting of economic activities in branch-specific establishment surveys, unless investigators and supervisors engaged in field data collection work are well trained (as in India).
6. In branch-specific establishment survey approach spread over several years, it is not possible to have comprehensive data on all industry groups of informal sector in the same year, which may lead to difficulties in estimating the contribution of informal sector to gross domestic product in national account statistics (as in India).
7. In informal sector establishment surveys, there are difficulties in separating the operating expenses of establishments and the household expenses of the owners of the establishments leading to problems in data quality.

8. Response errors in reported details of expenses and receipts of informal sector establishments are likely to occur in the surveys, as usually no accounts are maintained in such units. Adequate attention has to be given to the training of investigators and supervisors in eliciting quality data through probing questions in these surveys.
9. There are possibilities of underestimation or negative figures for value added at establishment level in the surveys without satisfactory supporting explanation from investigators and supervisors.

In spite of the above limitations, economic or establishment censuses and informal sector establishment surveys do not qualify to become inferior instruments of data collection in comparison with other instruments for meeting the data needs of informal sector for the purposes of planning and formulation of development programmes as well as estimating the contribution to gross domestic product. These censuses and surveys are capable of providing data with improving quality over time with experience and by instituting measures for controlling sampling and non-sampling errors.

5. Censuses and surveys in various countries

Countries in which economic or establishment censuses and establishment surveys have been conducted (covering also informal sector units) are listed in Table 1.

Table 1. Countries in which the informal sector has been measured at national/urban levels in establishment censuses and surveys

Level	Type of census/survey	Country	Year(s)
National	Establishment census	Egypt	1986, 1996, 2006
National	Micro and small-scale enterprises survey	Kenya	1993, 1995
National	Establishment census	Mauritius	1992, 1997, 2002, 2007
National	Enterprise survey	Tunisia	1981, 1997, 2002
National	Economic census	India	1977, 1980, 1990, 1998, 2005
National	Unorganized sector enterprise surveys	India	1978-79, 1979-80, 1983-84, 1984-85, 1985-86, 1992-93, 1993-94, 1994-95, 1996-97, 2000-01, 2001-02, 2005-06, 2006-07

Level	Type of census/survey	Country	Year(s)
National	Establishment survey	Bangladesh	1992-93
National	Economic census	Indonesia	1996, 2006
National	Integrated survey of small-scale & micro establishments	Indonesia	Annual from 1998 to 2003
National	Unincorporated enterprise survey	Japan	Annual from 1996-2003
National	Economic census	Mexico	Every 5 years, latest 2009
National	Censuses on manufacturing, trade and services	Panama	1983
Urban	Establishment census and survey	Benin	1992, 1998
Urban	Census of economic establishments	Ethiopia	2004
Urban	Establishment census and survey	Niger	1987
Urban	Establishment census and survey	Mauritania	1992-93
Urban	Establishment survey	Myanmar	1996

6. Examples of Country Experience

AFRICA REGION

BENIN

The Government of the Republic of Benin, in close collaboration with UNDP and ILO launched in 1991 a programme at the national level to study the informal sector, its structure and dynamics. The Programme for Studies and Surveys in the Informal Sector (PSSIS) composed of four parts:

- the census aiming at the enumeration of all economic establishments in ten towns for the construction of a frame for sample surveys;
- sectoral surveys with detailed questionnaires, for the collection of information necessary to achieve objectives set;
- thematic studies for in-depth investigation on a particular issue or for policy making;
- studies of priority fields aiming at establishing, for some economic activities, a diagnosis of the constraints and potentials, actions to be prioritized, required

policies to promote the establishments and to develop inter and intra-sectoral cooperation.

The Census

In Benin, a Census of Economic Activities of the manufacturing sector, construction, trade and services was conducted in January 1992 in nine towns: Abomey, Bohicon, Cotonou, Djougou, Kandi, Lokossa, Parakou, Porto-Novo and Natitingou. The census covered all establishments engaged in market activities in the formal and informal sectors. The objectives were to:

- a) identify all establishments falling within the scope of this exercise irrespective of their size, operating mode and location in the urban areas of the selected regions;
- b) enumerate all economic units for the construction of a frame for sample surveys on activities in the informal sector;
- c) classify all establishments in two or more categories based on criteria determining the degree of informality;
- d) stratify the sample of informal establishments according to certain criteria such as locality, industry group, size of the establishment, degree of mobility as well as the sex, age and educational level of the entrepreneur;
- e) collect data for the measurement of employment in the formal and informal sectors by industry group, professional status, size of the establishment, town and mode of operation.

The census questionnaire comprised three parts: (A) for the fixed activities, (B) for the fixed/mobile activities and (C) for the itinerant and mobile activities.

In the questionnaire for fixed establishments, items of data were:

(i) type of activity,(ii) type of goods sold(for trade activity),(iii) year of start of present activity,(iv) location of unit(town, district , block, plot), (v)unit having electrical or motorized machines(yes/no), (vi)establishment belongs to(individual proprietor and his family, partnership, cooperative, company), (vii)number of persons working(manager, associates, apprentices, family workers, permanent paid employees, casual workers), (viii)keeping: order book(yes/no), purchases and sales book(yes/no), complete set of accounts(yes /no), no accounts at all, (ix) unit on trade register(yes/no), (x)unit registered at the Social Security Office in Benin(yes/no), (xi)any other income generating activity for the entrepreneur/owner of the unit(yes/no, if yes; as paid employee in public or private sector, as self-employed in manufacturing or trading or services or agriculture, animal rearing, having property or transfer income, other income source),(xii) address or contact address of establishment/construction site, (xiii) unit inside or outside market,(xiv) type of workplace(concrete building, barrack, veranda, yard, closed land, construction site, other),(xv) name of entrepreneur/respondent and (xvi) demographic details of entrepreneur/respondent such as sex ,age and educational attainment.

For fixed/mobile units, items of data (i) to (iv),(xi) to (xiii),(xv) and(xvi) above were included. In addition, information on “respondent living in that town or other town or village” was collected.

For mobile/itinerant units, items of data (i) to (iv), (xiii) and (xvi) above were included.

Prior to the conduct of census, a pilot study was carried out in the town of Ouidah from 29 November to 5 December 1991. The census was carried out from 3 to 30 January 1992. The pilot study enabled improvements and testing of the census methodology and its procedures. The main methodological documents were the census questionnaires, and the training manual for the enumerators, which provided the concepts, methodology and techniques of data collection from establishments in urban areas. The manual comprised sections describing the objectives and activities of the project and the census statistical concepts of establishment, informal sector and mobility concept, the economic and geographic scope and the method of enumeration. They also described the structure of the three census questionnaires, how they were to be administered, and the way of recording information relating to each question. The role and obligations of enumerators, controllers and supervisors were also covered. The technical appendices provided two classifications: economic activities classified by industry group (4 digits) according to the ISIC, and trading goods on the street, classified according to codes for retail trade.

The analysis plan was organized in five sections as follows.

- The first summarized the overall results of the census by highlighting the main characteristics of the urban economy of Benin. The most pertinent variables were: industry group, degree of mobility and length of operation. These variables were tabulated with those describing characteristics of the entrepreneurs: sex, age, educational level and other paid work.
- The second section, relating to establishments operating at fixed location, highlighted their degree of informality according to the criteria defined in the census. Other characteristics of the establishments such as location in town, types of labour utilised and use of the electrical machinery were also analyzed.
- The third and fourth sections presented the characteristics of the fixed/mobile units and mobile/itinerant operators according to the same variables.
- The fifth and last section drew conclusions from the analysis presented and provided inputs for policy formulation. It also presented some practical recommendations to improve the methods of data collection for future studies.

The census operation met with various difficulties, namely: time constraints, insufficient sensitisation and lack of co-operation of the targeted population, insufficient logistics due to limited funds, technical and institutional constraints. In spite of these difficulties, the census of economic activities in urban areas proved to be effective both as regards technical and institutional aspects. On the technical side, the data collected provided an important source of information to construct a frame for sample surveys. In addition, an important part of the national statistical system was improved and updated by adapting the methodology and instruments for data collection to the local conditions.

On the institutional side, national competencies were reinforced in data collection, processing and analysis. Furthermore, planners and the policy makers would be able develop strategies based on facts to support establishments in Benin

The Survey

A sample survey was carried out from 19 to 31 October 1992 in six towns: Cotonou, Oporto-Novo, Abomey, Bohicon, Parakou and Djougou. The survey was preceded by a pilot study in Ouidah in August 1992 to test the various survey instruments and their adequacy to meet the objectives of the programme.

The main objective of the sample survey was to obtain information on economic units operating in the informal sector in order to measure their contribution to the national economy (GDP). Specially, the survey aimed (a) to determine the operational characteristics of the informal sector as well as the fundamental problems hindering the development of activities of the sector; and (b) to provide methodological, conceptual and practical elements to improve estimates of production.

Three types of questionnaires were designed: (i) manufacturing & services (ii) trade activities and (iii) transport activities. The distinction made at the time of the census between fixed, fixed/mobile and mobile/itinerant activities was thus not regarded for the survey; however, they were all represented in the sample. Each questionnaire was divided into several parts:

- general characteristics of the unit: identification, location, ownership and activities carried out,
- employment situation: professional background of the owner, composition, characteristics and remuneration of labour,
- goods manufactured and services provided, cost structure, seasonal patterns in activities,
- management and market strategies: search for customers, fixing of prices, competition and measures taken, business administration,
- changes brought about in the establishment since the start of operation,
- credit problems: difficulties in accessing credit and use of the loans secured,
- main problems of the entrepreneur and support needed,
- attempts of the owner to become member of a professional association or a 'self-help' group for support,
- information on the size of the owner's household and on the number of income earners therein.

Detailed explanations on the questionnaire are presented in the "Methodological manual for the survey of economic activities in the informal sector".

Sample selection

a) The sampling frame

The census provided a list of all enumerated economic units. The survey frame comprised all economic units which did not have a set of accounts, or were not listed on the business register or were not registered at the Benin Social Security Office (OBSS). These criteria were applied to establishments with fixed location and 21,661 such fixed establishments were thus considered for all the towns. All the fixed/mobile economic units and mobile/itinerant units are considered to be in the informal sector. Thus, the overall frame consisted of 127,796 economic units across the towns.

b) The sample size and scheme

The number of establishments in each town and their distribution by industry group were considered in drawing the sample. For Cotonou and Oporto-Novu, the sampling rates were as follows: 5% for fixed establishments, 1% for fixed/mobile units, 1% for mobile/itinerant activities. In the other towns, the rates were: 10% for fixed establishments, 2% for fixed/mobile units, 2% for mobile activities.

The overall sample size was 2,587 units based on available financial and technical resources. The sample was then divided into three groups: manufacturing and services (including restaurants), trade activities and transport services.

The sample was drawn by town and type of establishment (fixed, fixed/mobile and mobile/itinerant). The stratified (by industry group) systematic sampling method was used:

- For the fixed establishments, 20% of the sample was assigned to trade activities and the remaining 80% was proportionately distributed among the other industry groups according to their relative importance.
- For the fixed/mobile units, 10% of the sample was allocated to trade and 90% distributed among the other industry groups.

For mobile/itinerant activities, 20% of the sample was assigned to trade, 20% to restaurants and the remaining 60% to transport services. To facilitate replacement of establishments which had closed down or gone away, some extra establishments were sampled in each town.

Response

It had not been possible to survey all sampled establishments in the four towns due to high mobility and closures, of which a few could not be replaced. On the other hand, Cotonou and Abomey had a larger number of questionnaires than expected as the establishments were over-sampled because of the quality of data and all the questionnaires were considered.

The **reasons for mobility** were various: demolition of the establishment, the workplace taken back by the owner, flood and others, but the main reason is looking for a more appropriate place to carry out the activity. The **absences** are explained by illnesses, traveling relating to the business, family responsibilities and social obligations. The **closure** of the unit can be due to the fact that the entrepreneur has ceased the activity or has passed away.

On the whole, 113 establishments had closed down or gone away in Cotonou, that is, an annual rate of 12.8 percent. High rates of mobility/closures were observed mainly in manufacture of wearing apparels, retail trade and construction. The over-sampled units were used to replace them. In Cotonou, a second sample had to be drawn because of the large number of replacements required.

Refusals were mainly in connection with information on receipts, expenditure, investments, remunerations of workers and other figures, which might be subject to control by tax officers or labour inspectors. In Cotonou, a low refusal rate of 3% (35 cases) was recorded. In addition to the reasons mentioned above, '**not found**' cases were mainly because information provided on the census questionnaire as regards nature of the activity, name of the owner, identification number of the plot, block or district where the establishment was located, were incorrect or not precise enough.

Egypt

In Egypt, the Central Agency for Public Mobilization and Statistics (CAPMAS) have carried out both Population, Housing and Establishments Census (as a General Census) and Economic Census. The latest in this series were done in 2006. In fact, Economic Census depended on Population, Housing and Establishments (General) Census. The General Census contains three censuses at the same time:

- 1 - Population census and their housing condition.
- 2 - Housing census and its units.
- 3 - Establishments census, and obtaining the frame of establishments for conducting the Economic Census

In the General Census, data collected about the establishments consisted of the following:

A. For all establishments:

- The address and the location of establishment.
- Description of the place occupied by establishment.
- Activity status (working, closed temporarily, closed ...etc.)
- Sector (Gov., Public & Public business, Private....)

B. For working and closed temporarily establishments.:

- Establishment trade name.
- Owner's or manger's name.
- Owner's nationality.
- Main economic activity (in detail).
- Number of branches.

• Total numbers of workers in the establishment divided into:

- o Paid and unpaid employers (male and female)
- o Paid and unpaid employees (male and female).

This stage was very important for conducting Economic Census, and it provided the link between General Census and Economic Census..

Economic Census provided complete, comprehensive and detailed picture for the working establishments belonging to the different economic sectors: governmental, public business, formal private, informal private and investment sectors. There were two methods of collecting data:

- 1- Full enumeration, for covering the informal private sector establishments.
- 2- Regular statistics, for covering: -

- formal private sector establishments,
- public and public business sector establishments,
- investment sector establishments.

Formal private sector establishments meant establishments with legal status as : stocks est., limited liability est ., partnership est ., in addition to branches of foreign est. . These were covered with the regular statistics and included:

- all construction and building establishments,
- wholesale establishments,
- establishments employing 10 or more in mining and manufacturing industries,
- establishments employing 5 or more in retail trade

Informal private sector establishments were covered in the Economic Census by enumerators. Nine questionnaires were designed for covering 9 activities; these were :

- 1- A questionnaire for mining, quarrying activity for establishments in private sector employing 9 workers or less.
- 2- A questionnaire for manufacturing industries for establishments in private sector employing 9 workers or less.
- 3- A questionnaire for repairing carriages with motors.
- 4- A questionnaire for retail trade for establishments employing 4 workers or less.
- 5- A questionnaire for restaurants, cafes and beverage stores.
- 6- A questionnaire for transport and communication.
- 7- A questionnaire for services.
- 8- A questionnaire for school institutes and colleges in private sector
- 9- A questionnaire for agricultural activities inside establishments

Economic Census provided detailed picture on the structure and characteristics of the different economic activities and their geographical distribution belonging to different economic sectors as the following:

- 1- Total number of establishments.
- 2- Total number of workers in the est. was divided into:
 - Paid and unpaid employers (male and female)
 - Paid and unpaid employees (male and female)
3. The wages and salaries for paid workers
4. Nature of work (regular, temporary, seasonal,etc)
5. Distribution of workers according to their main profession and gender.
6. Distribution of workers according to their education status and gender.
7. Distribution of workers according to their age groups (less than 15 years, from 15-60 years and 60 years and over).
8. Total number of est. and the value of inputs and outputs for each economic activity.

Comparisons between population and establishment censuses provide significant insights into the relative size of homework, outwork and enterprises in domestic premises, as shown by the Egyptian experience, for Egypt is one of the few countries to have carried out simultaneously and on a regular basis both types of censuses.

Correspondingly, comparisons between the two sources facilitate the estimation of informal sector employment, and they are particularly useful as they reveal the importance of work in domestic premises and refine assumptions concerning the proportion of outworkers in the total. The population census asks whether homes or dwelling places are used for economic activities, and in the establishment census, the question is raised as to whether the activity is performed in domestic premises. It is then possible, by differentiation, to measure the size of the labour force in large, medium and small establishments (in the establishment census), and for these three categories, mainly but not only for the last one, the proportion of jobs performed in domestic premises. Further, since the total number of jobs in establishments is always lower than the total number of jobs declared in households, and since the underlying difference is larger than independent work carried out within homes, one can evaluate the concealed segment of the labour force. Of course, this method can only be used and is only reliable when the comparisons are conducted at the micro-level.

ETHIOPIA

The Central Statistical Agency (CSA) in Ethiopia conducted surveys and censuses of various economic activities, of which Census of Economic Establishments, which was carried out in February-March 2004 was the first of its kind at CSA.

Objectives of the Census of Economic Establishments

- To create a Business Register System,
- To obtain baseline data for on-going surveys and censuses of economic activities,
- To create economic activities database,
- To obtain a frame for future statistical surveys,
- To obtain data on the number and distribution of economic establishments by industrial category, region, persons engaged, ... etc and
- To obtain baseline data which will be an input to the System of National Accounts on economic activities.

Scope and Coverage

The scope of the Census was confined to all establishments that were set up with the aim of profit making and covered both public and private establishments that were located in urban areas of the country. The Census included those which sold or produced in open markets, in fixed location and mobile businesses in all sectors, such as: Agriculture, Fishing, Mining and Quarrying, Construction, Electricity, Gas and Water supply, Wholesale and Retail trade, Hotels, Restaurants and Bars, Transport, Storage and Communication, Financial intermediaries, Real-estate, Renting and Business activities, Education, Health and Social works, and other Community, Social and Personal Service activities, with no limitation of number of persons engaged and amount of income. However, it excludes civil service institutions, defense and other non-profit making government and non-governmental organizations.

Report

A report was prepared presenting the main results of the Census, showing in particular the composition of the economy into formal and informal sectors, the distribution of the business unit population into economic categories as well as its regional distribution. Among others, to mention only few, the contents of the list of tables of the report were:

- Number and percentage distribution of business establishments by ownership, region, major urban centers and industrial categories,
- Number of persons engaged by region and industrial categories,
- Conditions of books of accounts and license by region and industrial categories.
- Formal and Informal Business establishments by region and industrial categories,
- Number of business establishments by initial capital, revenue by region and industrial categories . . . etc.

Problems encountered

Although the fieldwork of the census was carried out without much problem, there were a number of shortcomings.

- the census of the economic establishments was found to be a huge undertaking,
- the qualities of the data on size indicators, which were very important for further economic survey sampling, were unreliable, specially paid up capital and revenue,
- lack of in-depth knowledge for establishing a database for such huge data as required for sampling activities.

Therefore, the CSA's major emphasis on economic statistics has been to establish a reliable frame or business register system by conducting well -designed Census of Economic establishments/enterprises in four years time, and to use at the same time administrative data for establishing and maintaining Business Register system.

MAURITIUS

The Central Statistics Office (CSO) conducted its fifth Census of Economic Activities (CEA) in the main islands of the Republic of Mauritius (Island of Mauritius and Island of Rodrigues) from January 2007 to April 2009, with 2007 as reference year. The main objective of this exercise, carried out every five years, was to collect data on the operating characteristics and structure of all types of economic activities, except agriculture. The 2007 CEA was conducted in two phases - Phase I covered a sample of small production units (i.e. those engaging less than ten persons) and Phase II covered all large units, that is, those with ten or more persons. Data collection for Phase I was carried out from January 2007 to December 2007 while that for Phase II started in July 2008 and was completed in April 2009.

Objectives

The objectives of the 2007 Census of Economic Activities were:

- (a) To collect up-to-date information on the operating characteristics and structure of all types of economic activities except agriculture carried out in the Republic of Mauritius.
- (b) To assess the contribution of the various industry groups in the overall economy.

- (c) To obtain benchmark data for computing national accounts estimates.
- (d) To obtain detailed data for the construction of Input-Output tables and Social Accounting Matrices (SAM) for impact analysis.
- (e) To obtain benchmark data and weights for the construction of volume and price indices

The methodology for Phase I covering small establishments is summarised below.

Coverage

Phase I of the CEA 2007 aimed at covering production units engaging less than ten persons located in the Republic of Mauritius. However, the following were excluded for reasons stated below:

- (a) Agricultural activities: These activities were not covered because of the difference in methodology and measurement techniques used in the collection and compilation of data pertaining to the agricultural sector as compared to other sectors of the economy.
- (b) Domestic services: These services could not be appropriately covered by an establishment survey.
- (c) Concealed and illicit activities: These activities were difficult to measure

Unit of enquiry

The unit of enquiry was a ‘small establishment’ or an ‘itinerant unit’ defined as follows: A **small establishment** was defined as a production unit with less than 10 persons engaged in one kind, or predominantly one kind of activity at a fixed physical location. An **itinerant unit** referred to a mobile production unit, which did not operate at a fixed location. Examples are hawkers and sellers along the road within a makeshift location, taxi operators and units involved in construction activities.

Reference period

The reference period was the calendar year 2007. However, to reduce respondents’ burden, selected units were requested to provide data for a particular month during the year. The monthly data were then consolidated using appropriate weights to arrive at annual estimates for year 2007. In the Island of Mauritius, data were collected every month, while in the Island of Rodrigues data collection was carried out during four months of the year, namely March, June, September and December.

Sampling frame

The first phase of the Census of Economic Activities was to cover all small production units (i.e those engaging less than 10 persons) operating in the Republic of Mauritius, except agricultural activities, activities of household employees and illegal activities. Hence, a comprehensive list of such units (the sampling frame) was required from which the sample would be drawn.

The sampling frame was constructed from data available in the business register compiled by the Central Business Register unit of the CSO, supplemented by information

from some other administrative sources. The Business Register of the CSO was based on licenses issued by local authorities and lists of businesses registered with ministries and private organizations. The constructed frame comprised around 66,000 production units, of which 64,800 were in Mauritius and 1,200 in Rodrigues.

Sampling design

Stratification.: For the CEA, the sampling frame was sub-divided into ‘activity groups’ where all units within an activity group were engaged in more or less similar economic activities. The activity-groups were based on the National Standard Industrial Classification of all Economic Activities (NSIC), an adapted version of the International Standard Industrial Classification (ISIC Rev.3). The NSIC classification consisted of a 5-level hierarchical structure. The first step in the construction of strata was the classification of each unit in the frame into its appropriate sub-class. After this exercise it was found that 305 sub-classes were represented by at least one production unit. Out of these 305, some sub-classes did not contain enough units to be taken as strata on their own and therefore two or more of them had to be merged into broader groups, on the basis of their ‘proximity’. Finally the stratification process resulted in 119 strata (activity-groups).

Sample allocation: It was decided to survey a sample of around 3,400 units, 3,100 in Mauritius and 300 in Rodrigues. Analysis of data collected at the 2002 Census of Economic Activities showed that estimates of value added within some activity groups varied considerably. Based on this finding and assuming cost of surveying a production unit was the same across all activity-groups, the overall sample was allocated to the strata according to the ‘Neyman Allocation’ or optimum allocation at fixed cost, which considers both the size of the strata and the heterogeneity of units within them while allocating the sample. Hence, more units were selected from activity-groups having larger variation and relatively less units from activity groups with smaller variation.

Selection of units

Island of Mauritius

The selection of units within a stratum (a specific activity group) was effected using the systematic circular method. The final sample for Mauritius comprised 3,113 units. These were then evenly spread over the 12 months period from January to December 2007, while ensuring representativeness.

Island of Rodrigues

The same methodology was applied for the Island of Rodrigues and the final sample size was 312 units. However, due to the relatively smaller sample size for Rodrigues, the total sample was allocated to the four quarters of the year instead of twelve months.

Survey documents

The first phase of the CEA 2007 necessitated the use of five field documents to collect the required information from the selected establishments.

Identification Schedule

In view of capturing the dynamism of the units in the sampling frame and also to provide additional information for the computation of analytical weights (blowing factors) for estimation purposes, an identification schedule (ID) requesting information on any changes in ownership, activity and operation status was completed for each sampled unit by the interviewers.

Diary

A diary was used as the base document for data collection. This was given to each respondent to record the daily transactions of the production units during the reference month. This document was necessary, as most small production units did not keep adequate records to complete the survey questionnaire.

Questionnaires

The methodology used for compiling economic aggregates, such as output, input, value added, etc., varied from activity to activity. It was therefore not possible to use a unique questionnaire for all sectors. Ultimately three different questionnaires had to be designed to meet the requirements of the CEA. The activities covered by each questionnaire were as follows:

- CEAS 1: All activities covered by the survey except Construction and Transport
- CEAS 2: Construction sector
- CEAS 3: Transport sector

Topics included in CEAS 1, 2 and 3 were: (a) Characteristics of production units, (b) Employment, hours of work, and labour cost, (c) Consumption of materials, fuel and services, (d) Other payments (taxes, rates, insurance, interest, etc.), (e) Information & Communication Technology (ICT) related services, (f) Output, (g) Other receipts (interest, insurance claims, dividends, etc.) and (h) Addition to fixed assets.

Field operation

Identification phase

Some 3 weeks before the survey month, the Interviewers were provided with a list of production units, which they had to identify on the field. For each unit, they had to fill in an Identification Schedule, whether they were able to locate it or not. Through this stage of the data collection exercise, information was gathered on whether the establishment could be located or not, had changed owner, activities & address and whether it was operational. This screening exercise was essential, mainly for adjusting the analytical weights (expansion factors) to be used for 'blowing up' of the survey data. Any change in activity was reported to the Supervisor and necessary action was taken for replacement while maintaining the sample ratios. A unit, not operational or not located, was replaced by the next one in the same activity group (stratum).

Data collection

Data was collected from a sample of small production units from January to December 2007. Recording of economic transactions of the units in the diary started on the first day of the reference month. The owners/managers of the selected production units were

requested to keep daily records of all expenditures and receipts relating to their production activities for a particular survey month in diaries provided to them. Interviewers visited the units at least twice a week to ensure that the records were being properly kept.

At the end of each week, Interviewers had to compute summary data for the week from the daily records of diaries of the respondents and check for any consistencies, missing data or misreporting, and ensure that appropriate corrective actions are taken. At the end of the survey month, the weekly data were consolidated and transferred to the respective questionnaires.

Weighting of the survey data

Estimates of variables for the ‘population of small units’ were made at stratum level by ‘blowing up’ the sample figures by a factor equal to the estimated total number of units in the stratum divided by the number of units selected from the stratum. The number of units in each stratum was first updated to 2007 level. A first estimate of the number of small production units operating in 2007 for a given stratum was calculated by applying the growth rate of licenses between 2002 and 2007 to the total number of production units in the stratum as estimated at the 2002 CEA. This was repeated for all strata. Those first estimates were then adjusted where necessary on the basis of information collected during the identification phase of the survey when it was found that some license holders were not operating for various reasons. Further refinements were made using data from administrative sources where more reliable information was available on the number of currently operating units.

TUNISIA

To study regularly the structural changes occurring in the economic sectors, the INS (Institut National des Statistiques) carried out the 2002 National Survey of Economic Activities (NSEA) of small establishments in parallel with a survey covering almost all establishments of the formal sector so that all sectors, establishments of all sizes and all industry groups were surveyed in 2002 same as in 1997.

Objectives of the survey

The main objective of the NSEA of small establishments was to produce income and expenditure accounts for small establishments of the informal sector. Thus the questionnaire attempted to gather in a simplified and consistent way the main accounting elements necessary for this exercise.

A second objective of the survey was to collect detailed information on the workforce, its characteristics, training level, working conditions and the level of income from work for both the employees and employers.

A third objective was to determine the characteristics of the small establishments and small entrepreneurs of the informal sector (age, sex, training level...) and to compute value added, investment, etc. To understand the behavioral patterns of the small establishments and formulate better supporting policies for them it was essential to know the strengths as well as the weaknesses of this important sector of the Tunisian economy.

Coverage of survey

The 2002 NSEA among small establishments covered all economic activities except agriculture, breeding, sylviculture and fishing, administration and the extra-territorial organisations, production and supply of electricity and water, and professional organisations and research & development activities. Even if these activities are primarily urban, the survey covered rural areas as well.

The survey was restricted to establishments with less than 6 employees, while establishments with 6 or more employees were surveyed with questionnaires designed for establishments of the formal sector (those having a complete set of accounts).

Sample frame and sampling scheme

The sampling frame for the NSEA is the National Register of Establishments for all establishments (small and large). At 31 December 2002, the register of the INS included 415,000 establishments which could be classified by detailed industry group, ownership, employment size, legal status and VAT registered or not. It contained date of start of operation of the establishments, type of imposition (forfait/réel) and employment history.

Based on the scope of the survey, some 392,000 units constituted the frame from which units were sampled with varying rates according to their activity, legal status, sizes and geographical location, thus ensuring a good representativeness of the main industry groups, if necessary at the regional level, in line with the new international definition of the informal sector.

Based on available resources, the maximum size of the sample was set at 12,500 establishments. However, the survey methodology yielded a sample of 12,530 establishments with less than 6 employees, representing a sampling fraction of almost 3%. The sampling fraction varied with stratum: a stratum being determined by industry group (of the Tunisian 4-digit Classification of Activities, NAT, i.e. 459 branches of activity in the survey coverage) and size of the establishments (own account, 0 employees, 1-2 employees, 3-5 employees). Thus, when the number of establishments in the population was high for industry group and size, the sampling fraction was low, whereas when the number was few, the sampling fraction was high, and it may even happen that the whole stratum is selected. The sample also contained establishments with undefined activities XXX, which were then determined during the survey. The category 'Own account' in the register included establishments whose size were unknown; the category '0 employee' consisted of establishments listed on the register of employers at the CNSS, but which were no longer employing people.

Questionnaire

The questionnaire comprised 7 modules or sections:

- **Section A "Identification"** covered name and address of the establishment, legal status and place where the activity was carried out.

- **Section B “Characteristics of the establishment”** specified the main and secondary activities, as well as the type of accounts held.
- **Section C “Employment and wages”** recorded the demographic characteristics (sex and age), education and training, employment status and skill, remuneration in cash and in kind (net income) for each person working in the establishment (including the employer). Information on social security contributions and hours of work were collected at the establishment level. Casual and seasonal employment was also covered as well as outworkers and sub-contracted work.
- **Section D “Production and purchases”** comprised sub-sections for: industrial and artisanal activities, trade activities and services activities. Data were collected on the type of goods and services produced, with the corresponding quantities and values for a specified period; similar data were collected for purchases. For trade, data were collected on the value of goods sold, stock replacement and profit margins. Finally, qualitative information on the monthly rate of production was collected to deseasonalise the monthly estimates.
- **Section E “Miscellaneous expenses”** included payments for various fixed and variable charges and taxes.
- **Section F “Equipment and investment”** provided all investments made over the last 12 months and the sources of financing.
- **Section G** included questions on the economic situation of the establishment to determine whether it was export-oriented or produced for administration.

The questionnaire also comprised a summary sheet for the supervisor to compute a simplified production accounts and work out the operating surplus of the establishment in order to decide if it was necessary to call back for further information.

Nonresponse and change in sample size

Sampling rates changed because of new information on the establishments during the survey, and non-response. Initially, the surveyed establishments were classified according to their characteristics (activity and size) as per the frame.

In addition, because of the way sampling frame was constituted, establishments with complete set of accounts were found in the sample drawn for the informal sector. A questionnaire of the formal sector was administered to 418 such establishments.

The final sample comprised 8,251 establishments, i.e., a sampling fraction of 2% due to a high non-response rate of 34.2%, against 41.3% in 1997. Several reasons explained this non-response rate:

- closures: 49,5% of the non-response,
- unknown at the address: 12,6% (the establishment was not found at the indicated address)
- address unknown: 6,4% (it was not possible to find the address)
- refusal: 25,5%
- other reasons: 6,0% (e.g. dormant, temporarily closed)

The proportion of closures was inversely proportional to size of establishments, indicating the instability of the very small informal household businesses. Conversely,

the refusal rate increased with the size of the establishments, which was in line with what was observed on the field. The overall response rate was particularly high among establishments with 3 -5 employees (42.7%).

Weighting of the survey data and adjustment

Each responding establishment was allocated a blowing factor which was equal, by definition, to the reciprocal of the sampling fraction. But the final sampling rates were significantly different from the rates fixed at the sample design stage due non-response. At the end of the survey, the sampled establishments thus comprised two groups:

- responding establishments; i.e. establishments with completed questionnaires
- non-respondents; all other cases.

The non-responses consisted mainly of closures and cases where the establishment could not be found at the indicated address. Hence only 8,251 responses were obtained out of 12,530 units initially contacted. Among the respondents, 1,229 were found to have a complete set of accounts (a questionnaire for establishments with a complete set of accounts was administered). These establishments, estimated at 18,700 after blowing were excluded from the category of small establishments according to the international definition whereby only individual units without a complete set of accounts belonged to the informal sector. Thus, the number of small establishments without a complete set of accounts was estimated at 273,954.

Weights were based on the population falling within the scope of the survey. Later on, and in line with National Accounts, the results of the NSEA could be used for estimates of the informal units not covered by the survey: in fact, comparison with exhaustive sources (Employment Survey 2002) and registration statistics showed a difference that could be attributed to the informal sector not located in establishments (outworkers, itinerant workers....), but also to some 'non-reported' employment in the formal sector.

The survey covered establishments which, by definition, did not have a complete set of accounts, or which only had simple accounts. The objective of the survey being to reconcile the production accounts and 'income & expenditure' accounts (production, intermediate consumption, charges, value added, wage bill, gross operating surplus....), it was important, in the questionnaires, to collect detailed information for adjustments where necessary. The inconsistencies appeared in the sequence of the accounts: when the gross operating surplus (or mixed income of the self-employed) was negative or lower than the paid wages, without any indication or mention in the questionnaire that the establishment was having financial problems; then there was need to study more closely the detailed information in the questionnaire and make necessary adjustments.

When the operating surplus (or annual income of the employer) was lower than 2,400 dinars (that is a value lower than the SMIG which was, in 2002, 2,400 dinars per year), and this figure could not be explained by closure or the establishment being dormant for some months of the year, then the ratio of value added to gross output of other establishments within the same industry group was applied to the production value of the establishment to come up with a more reasonable value added for the establishment.

ASIA REGION

INDIA

Economic census

The Fifth Economic Census conducted in India during 2005 provided a good example in identifying both formal and informal sector enterprises. All sectors of the economy (except crop production and plantations) were covered in the census. All units engaged in the production or distribution of goods or services other than for the sole purpose of own consumption were counted. The census covered businesses with employees or without employees and also government owned enterprises. There were mainly two reporting forms (i) house list schedule and (ii) enterprise schedule. For enterprises having 10 or more workers details of address and phone/fax number were collected through address slip. Key data variables collected in house list were (i) census house category (residential only, residential-cum-enterprise unit, enterprise unit only, others including vacant), (ii) entrepreneurial unit number, (iii) household number, (iv) name of the enterprise/head of the household, (v) whether any member of the household was engaged in entrepreneurial activity within the premises or outside without fixed structure (yes or no), (vi) number of enterprises within the household/unit, (vii) number of enterprises outside the household/unit and not having any structure (a) without fixed location and (b) with fixed location and (viii) type of the structure occupied by the household/unit (pucca house, kutchha house, semi-pucca house, others).

The census could record about 7.91 million enterprises, constituting 18.8% of total number of enterprises, which did not have any premises for carrying out economic activities; and all these enterprises were listed in the households of the owners of the enterprises. These enterprises could be captured only due to the listing procedure adopted in the census.

Key data variables collected in the enterprise schedule were (i) enterprise premises status (without premises or with premises), (ii) description of economic activity of enterprise, (iii) major activity or subsidiary activity, (iv) national industrial classification code (to be filled at supervisory level only), (v) classification of enterprise (agricultural or non-agricultural), (vi) operation code (perennial or non-perennial), (vii) ownership of enterprise (government or public sector, private-non-profit institution, unincorporated proprietary, unincorporated partnership, corporate non-financial, corporate financial, cooperative), (viii) social group of owner for private enterprise, (ix) type of power used (not using power, electricity, coal/soft coke, petrol/diesel/kerosene, LPG/Natural gas, firewood, animal power, non-conventional energy, others), (x) registration (not registered, registered under/ recognized by different specified agencies), (xi) number of persons usually employed (adult male, adult female, children male, children female, total), (xii) number of unpaid or non-hired persons usually employed - (adult male, adult female, children male, children female, total), and (xiii) source of finance (self financing, assistance from government sources, borrowing from financial institutions, borrowing from non-institutions/money lenders, others like NGOs, voluntary organizations).

The reference period for recording entries in enterprise schedule was the last calendar year for perennial enterprise and last working season for the non-perennial enterprise. For enterprises that started operations only recently the characteristics were recorded as on the date of census.

The census data were used for (i) economic analysis of key variables, and (ii) preparation of area sampling frames for unorganized/informal sector enterprises. While the fifth economic census was conducted in 2005, the earlier fourth census was carried out in 1998. The basic structure of the fourth and fifth censuses was the same. However, the fifth census collected various characteristics useful for classifying an enterprise as informal sector enterprise. Based on the fourth census, area sampling frames were prepared for unorganized sector enterprises. In India, the definition of unorganized sector is broader than that of informal sector. Informal sector forms a major and substantial part of the unorganized sector

Sample surveys on unorganized/informal sector enterprises

The National Sample Survey Organization (NSSO) in India has been conducting unorganized sector enterprises surveys since 1978-79 as earlier indicated in Table 1. The NSSO has been classifying all the manufacturing units not covered under the Factories Act, 1948 as unorganized manufacturing enterprises in its survey on unorganized manufacturing sector. In the case of services, the NSSO survey on unorganized services sector treats the enterprises neither run by the Government nor included in the public sector as unorganized sector services enterprises. The NSSO conducted the first ever survey on informal sector non-agricultural enterprises along with the household survey on employment and unemployment (a kind of mixed household and enterprise survey) during the 55th round (1999-2000). In this informal sector survey, all unincorporated proprietary and partnership enterprises in non-agricultural activities were defined as informal sector enterprises. This definition of informal sector differs from the concepts of unorganized sector used in unorganized sector enterprises surveys conducted by NSSO. The informal sector defined by NSSO can be considered as a subset of unorganized sector in the NSSO surveys on unorganized sector enterprises.

Survey of unorganized manufacturing enterprises (2000-01)

As a follow-up to fourth economic census (1998), a sample survey of unorganized manufacturing enterprises was conducted in 2000-01 by NSSO. Organized manufacturing enterprises, employing 10 or more persons using power and those employing 20 or more persons without using power, registered under Factories Act 1948 and covered separately under Annual Survey of Industries (ASI) on the basis of available list frame, were excluded from the coverage of survey on unorganized manufacturing enterprises.

Sample Design

A stratified two-stage sample design with villages in rural areas and urban frame blocks in urban areas as the primary sampling units (PSU) and manufacturing enterprises in the unorganized sector as the ultimate sampling units (USU) was adopted. Fourth economic census 1998 (EC 1998) enterprise data in PSU was taken as the sampling frame for the first-stage. Three types of enterprises were defined. An own - account enterprise (OAE)

is an undertaking run by household labour, usually without employing any hired person on a fairly regular basis. Enterprises, which have employed at least one hired person on a fairly regular basis, are called establishments. An establishment employing one to five persons (household and hired taken together) is termed a non-directory establishment (NDE). A directory establishment (DE) is an establishment, which has employed six or more persons.

In rural areas, each geographic district was treated as a stratum, which was further divided into three sub-strata: (i) sub-stratum 1 consisting of PSUs with no unorganized manufacturing enterprise according to EC 1998, (ii) sub-stratum 2 comprising PSUs with at least one directory establishment (DE) in the unorganized manufacturing sector and (iii) sub-stratum 3 having remaining PSUs. In urban areas, in each geographic region of NSS within a state, towns were first stratified according to population size of 1991 population census. And within each such stratum, three substrata were formed with the same criteria as in rural sub-strata.

The allocation of number of sample PSUs between rural and urban areas was made in proportion to the number of persons employed in unorganized non-agricultural enterprises as per EC 1998 with 1.5 weightage to urban areas. Allocation to strata/sub-strata in both rural and urban areas was made in proportion to the number of persons employed in nonagricultural enterprises in the unorganized sector as per EC 1998.

For sub-stratum 1 in rural/urban areas, PSUs were selected with equal probability and without replacement. For all other sub-strata in both rural/urban areas, PSUs were selected with probability proportional to size (PPS), size being the number of persons employed in manufacturing enterprises in the unorganized sector as per EC 1998. This procedure for selecting the PSUs was adopted to ensure better representation in the sample of the areas in which unorganized manufacturing activity was concentrated. Samples were drawn in the form of two independent sub-samples separately for rural and urban areas. For uniform spread of data collection over the survey period of 12 months, the sample PSUs were arranged in the form of 4 sub-rounds, each of which was covered in 3 months duration in order to account for seasonal effects.

A team of two or three investigators along with one supervisor was deployed for data collection work in each selected PSU. With a view to controlling the workload at the stage of listing of households/enterprises, hamlet-groups (in rural) and sub-blocks (in urban) were formed in a large PSU by considering the approximate present population and/or present number of non-agricultural enterprises found to exist in the sample PSU. Hamlet groups/sub-blocks were formed by more or less equalizing population. Three hamlet groups/sub-blocks were selected—one with the maximum number of manufacturing enterprises was always selected and termed segment 1; other two were selected circularly systematically with equal probability and combined to form segment 2 and listing was done separately for segment 1 and 2. When there is no hamlet group/sub-block selection, the listing was done in respect of the whole village/block against segment 1.

While listing a house, the investigator first found out how many households resided there. From each household the details of all non-agricultural enterprises (NAE) run for at least one day by its members during last 365 days preceding the date of survey (the enterprise may not be in operation on the date of listing) were collected. These details included: description of activity, the 2-digit national industrial classification 1998 code, ownership code (proprietary male/female, partnership with members of the same household/members not all from the same household, cooperative society and others). The NAE run by the household and located in the same house, where the household lived, and those run without any fixed premises were listed one after another against that household. But NAE run by the same household and located at other fixed premises were listed at their places of location to avoid double counting. After exhausting the resident households and all the different types of NAE as described here, the investigator listed all other NAE if any, which were located in that house and operated either by households staying in some other houses (either within or outside selected PSU or hamlet group/sub-block) or by an institutional body. After this, the investigator proceeded to the next house. An enterprise pursuing multiple/mixed activities was listed separately under each activity, if separate details on employment etc. were available. Otherwise, it was listed as one enterprise corresponding to the major activity. A listed NAE, based on the national industrial classification, was identified as belonging to manufacturing or not. For the manufacturing enterprises, additional details were collected in the listing schedule. These included: (i) registration to identify whether it belonged to organized sector and hence to be excluded from this survey on unorganized manufacturing, (ii) broad manufacturing group code (1 to 6), (iii) total number of persons usually employed on a working day during the reference year for perennial and casual enterprises and during the last working season of the reference year for seasonal enterprises, (iv) the number of hired persons usually employed on fairly regular basis and (v) eligibility code (1 if the enterprise operated for at least 30 days for perennial and casual enterprises or 15 days in case of seasonal enterprise, during the reference year and code 2 otherwise). Based on these details, unorganized manufacturing enterprises, which were eligible for detailed survey (with eligibility code 1), could be identified and classified into own-account manufacturing enterprises (OAME), non-directory manufacturing establishments (NDME) and directory manufacturing establishments (DME) according to broad manufacturing group (BMG).

Adequate attention was devoted to the training of investigators and supervisors so that listing exercise was done (a) without double counting an enterprise at more than one location and (b) with proper identification of the industry code of the listed enterprise.

Three second-stage strata (SSS) were formed for DME, NDME and OAME for each sample PSU/segment by grouping all the listed eligible enterprises. In a PSU at most 16 enterprises were selected and surveyed. When the second-stage frame was found to contain 16 or less of such enterprises, all the available ones were surveyed. However, when the frame was found to contain more than 16 unorganized manufacturing eligible enterprises, a total of 16 enterprises were selected circularly systematically with equal probability after arranging the frame enterprises according to BMG, such that 8 DMEs, 4 NDMEs and 4 OAMEs were selected from the respective SSS. Since fresh listing of all

eligible enterprises for the survey was done in each selected PSU and a sample of enterprises for collection of detailed data was selected from such lists, currently relevant and valid multipliers or blowing-up factors for use in the estimation procedure at second-stage were available from within the survey itself.

Data collected from unorganized manufacturing enterprises

The enterprise schedule was canvassed in each of the selected sample enterprise for collecting basic information, such as employment, fixed assets, borrowings, inputs, outputs and value added of the enterprise. Last month was used as the reference period to collect most of the data. Various receipts and expenses as well as employment, emoluments, rent, interest, net surplus and value added for the enterprises were collected for the last month only. For some of the items like value of fixed assets, amount of loan outstanding, etc., the reference period was 'as on the date of survey'. For some other items like net additions to fixed assets, number of months operated, number of other economic activities taken up, etc., the reference period was the 'last 365 days preceding the date of survey'

As regards the structure of the schedule, it consisted of 17 blocks. Blocks 0 and 1 were meant to record the identification particulars of the enterprise; blocks 12 to 14 were for reporting particulars of field operation, remarks by the investigator and comments by the supervisory officer(s). In blocks 2 to 10, data were collected from the enterprises; block 11 was for the recording of the investigator's perception about the reported net surplus data.

Specific attention to items of information collected in block 2 of the schedule may be drawn, as these reflect various characteristics of the enterprise, which enable the classification of the unorganized manufacturing enterprise into informal sector. These items include: (i) nature of operation (perennial, seasonal, casual), (ii) type of ownership (proprietary male, proprietary female, partnership with members of the same household, partnership between members not all from the same household, cooperative society, private limited company, others), (iii) whether accounts maintained (yes or no), (iv) location of the enterprise (within household premises, outside household premise: -with fixed premises and with permanent structure, with fixed premises and with temporary structure/kiosk/stall, with fixed premises but without any structure, mobile market, without fixed premises such as street vendors, etc.), (v) registered under any act/authority (yes or no), (vi) if registered, agencies under which the enterprise is registered (maximum of three specified agencies), (vii) whether the enterprise undertakes any work on contract basis (yes or no), (viii) if work on contract basis is undertaken, type of contract (working solely for enterprise/contractor, mainly on contract but also for other customers, mainly for customers but also on contract, solely for customers); equipment supplied (by the master unit/contractor, self-procured, both); raw materials supplied (by the master unit/contractor, self-procured, both); design specified by contractor (yes or no), (ix) whether mixed activity (yes or no), (x) number of other economic activities undertaken during last 365 days, and (xi) number of months operated during the last 365 days. Information on items (vii) and (viii) was useful to identify home-workers.

Blocks 3, 3.1, 4 and 4.1 were the main blocks of the schedule where operating expenses and various receipts of the enterprises were recorded. Blocks 3 and 4 recorded the principal expenses and receipts, whereas blocks 3.1 and 4.1 recorded the other expenses and receipts. The schedule was designed in such a way that the different types of receipts and expenses for mixed activity of enterprises could also be accommodated within the framework of blocks 3 and 4. To meet these objectives, each of these two blocks was divided into two sub-blocks. The first sub-block was meant for specifically recording the manufacturing activity whereas the second sub-block was for recording the other activities, if any, including the purchase/sale of commodities without any transformation. Block 3.1 and 4.1 were for all activities of an enterprise. For an enterprise that ran a mixed activity, both the sub-blocks of 3 and 4 could have entries.

Operating expenses include (i) value of raw materials consumed in manufacturing activity; (ii) value of commodities purchased or items consumed in trading and other activities of the enterprise and (iii) other overall expenses of the enterprise such as electricity charges; value of fuel and lubricant consumed; value of raw materials consumed for own construction of building, furniture and fixtures including labour costs, rent payable on machinery and equipment; service charges for work done by other units; traveling ,freight and transport expenses; communication expenses; value of consumable stores and packing materials; paper, printing and stationery expenses; local taxes payable and any other expenses relating to the operation of the enterprise.

Receipts include (i) gross sale/market value of products and by-products manufactured; (ii) value of change in stocks of semi-finished goods; (iii) value of commodities sold and change in stocks of trading goods; (iv) receipts from other activities; (v) overall receipts of the enterprise such as receipts from services provided to others including commission charges; market value of own construction of building, furniture and fixtures; value of consumption of goods/services produced or traded for own use of the owner and employees of the enterprise; rent receivable on plant & machinery and other fixed assets; funding and donations received; and other receipts

Block 5 was kept for calculation of gross value added, as the difference of total receipts and the sum of total expenses and distributive expenses, if any. The employment particulars of the enterprise were recorded in block 6 by collecting data on numbers of male and female full-time and part-time employed persons such as working owner, hired employees, and other helpers. Blocks 7, 8 and 9 were meant to collect information on emoluments, fixed assets and loan position of the enterprise respectively. Factor incomes of the enterprise were recorded in block 10.

Survey of unorganized enterprises in service sector (2001-2002)

A survey on unorganized enterprises in service sector (covering hotels and restaurants, transport, storage and communication, real estate, renting and business activities, education, health and social work and other community, social and personal services) was conducted using Economic Census 1998 sampling frame, during 2001-2002 in India by the NSSO. The survey was similar to the survey on unorganized enterprises in manufacturing sector (2000-2001), described in above paragraphs. The main aim of the

survey in the service sector was to estimate size in terms of the total number of unorganized enterprises, employment, fixed assets, operating expenses, receipts, value added, loans, etc. Information on other attributes like type of ownership, type of operation, number of months of operation, whether carrying out mixed/multiple activity, whether accounts maintained, etc., was also collected.

Issues of data quality in unorganized sector enterprise surveys

For estimating the contribution of unorganized sector enterprises to gross domestic product, in the recommended method, the estimated labour input in each industry groups is multiplied by the corresponding gross value added per unit of labour input. The use of this methodology depends on the availability of reliable data sets on employment and gross value added per unit of labour input for all industry groups in the unorganized sector of the economy at regular intervals of time. In the context of India, the estimates of labour input obtained from unorganized sector enterprise surveys were felt to be underestimates due to possible underreporting of employment numbers in the enterprises by owners of/employers in the enterprises. This conclusion was reached by comparing these estimates with the corresponding employment estimates derived from labour force surveys conducted by NSSO in 55th (1999-2000) and 61st (2004-05) rounds. Further, the estimation of gross value added per unit of labour input is a difficult task due to non-coverage of all industrial groups in the economy simultaneously in the same year in the unorganized sector enterprise surveys being conducted in India. For example, trade group of enterprises was not covered in the 2000-01 and 2001-02 surveys of unorganized sector enterprises detailed above, due to the earlier unsatisfactory experience of obtaining unusable estimates of gross value added per unit of labour input from such surveys. There is thus considerable scope for improving the data quality and timing of the unorganized sector enterprise surveys in India.

INDONESIA

Economic Census

The Indonesian Economic Census is a national project, which is regularly carried out by BPS Statistic Indonesia in ten years period. It is considered as a starting point for the informal sector statistics under establishment approach. The economic units having both legal status (formal/large –scale and medium establishments) and not having legal status (informal/micro and small units) were covered in the economic census. The important data on informal sector available from the economic census were:

- (a) number of establishments not having legal status by employment size, industrial origin, province and other characteristics;
- (b) output and input structure by industrial group and province; and
- (c) their opinions on the prospects and constraints regarding their activities.

The 2006 Economic Census

The Indonesian 2006 Economic Census (EC06) was the third Economic Census. It was a 5-years project starting from 2005 to 2009. The first year (2005) was the preparation period. The second year (2006) was devoted to the first phase of the EC06 – listing activity. The third year (2007) was set apart for the second phase of EC06 – Census Sample for detailed enumeration. The fourth year of the census activities (2008) was

earmarked for the processing, tabulation and publication of detailed results of census-sample. Finally, in the last period (2009), the detailed analysis of the census-sample was accomplished.

Objectives

The general purpose of the EC06 was to provide and disseminate database of economic activities, which consisted of number, category, and scale of establishments in non-agriculture economic sectors. Moreover, there were specific purposes:

- a. To provide number of establishments elaborated by industrial sector/category, activity, business scale, and region.
- b. To provide basic information on various business issues elaborated by industrial sector/category, business scale, and region.
- c. To disseminate basic statistics related to the non-agricultural economic activities up to small area statistics.
- d. To compile complete and integrated maps and directories of establishments in each district/regency/municipality.
- e. To develop a complete sampling frame that would be used in surveys, especially surveys in economic area.

The approach of enumeration in the EC06 was based on the establishment/business approach. The units of enumeration included micro, small, medium, and large-scale establishments/businesses. The classification of establishments/businesses into micro, small, medium and large categories was based on number of workers in manufacturing establishment and mainly on value of total assets/yearly turnover/yearly output of establishment/business in other non-agricultural economic sectors. The listing activity of EC06 was accomplished in the first quarter of 2007. The results had given description of the population of economic activities in each administrative level (sub-district /district/regency/ municipality and province). The listing activity of all establishments/businesses excluding those in the agriculture sector included the businesses with permanent and non-permanent location (mobile). The detailed enumeration of the business activities in the second phase of the census activity was carried out in 2007 until the first quarter of 2008. The detailed enumeration phase was conducted using two methods. First, the sample enumeration (approximately 5% sample) was adopted for micro and small-scale establishments. Second, the complete enumeration (census) was carried out for medium and large-scale establishments. From the results of the second phase, it was expected to get more detailed information regarding the income and expenditure structure, capital structure as well as several other business characteristics at sub district level, district level and province level. The processing and tabulation of the results had been done starting from the second quarter of 2008.

Method of Establishment Listing

There were two types of stratification implemented in the EC06; *village* and *census block stratification*. The village stratification was created based on the number of census buildings, which were not dwelling or mix used (used for dwelling and business) buildings (NDMUB) taken from the 2000 Population Census. Two strata were made, i.e.: ‘*Non-concentration*’ villages, if the number of NDMUB in the village < 150, otherwise

the villages were classified as the '*Concentration*' villages. Every stratum was differentiated into urban and rural areas.

The census block stratification was also classified based on the number of NDMUBs in the block. To implement the stratification, BPS determined the cut off point for every area (provinces). The block was called the '*concentration census block*' if the number of NDMUB within the block > cut off point while the rest of the block in the village was called the '*nonconcentration census block*'

Two types of enumeration methods were adopted based on the type of census blocks (CBs):

a) **“Door to door” method:** This method was applied for all CBs in the concentration-villages or concentration-CB in the non-concentration villages. In this method, the enumerators visited all buildings to record the establishments/businesses that were located in and around a building. Traditional businesses outside a building (like street vendors) were listed in their fixed locations. The mobile units such as vendors, taxi drivers, etc., going from place to place to conduct their economic activities, were listed in their homes.

b) **“Snowball” method:** This method was implemented for non-concentration CBs in the non-concentration villages. The snowball method was the first time ever implemented in the survey or census activities in Indonesia. The main purpose of using this method was for the effectiveness and efficiency of the field operation, especially in term of operation budget. The *snowball* method was the listing procedure by visiting only establishment units including household establishment in a location. Information on establishment units was obtained for the first time from resource person (such as chief of neighborhood administrative unit or other person). This method was efficient if it was applied on non-concentration location, because it did not require many listing officials. Therefore, the success of this method depended on the perseverance of the listing official and the accuracy of choosing the resource person as well as the accuracy of the information given by resource person. The weakness of this method was the difficulty in catching hidden economic activities (like hidden home industries)

Data collected in listing

Data and information collected in the establishment listing of EC06 were:

- a. Name of the establishment/enterprise
- b. Address of the establishment/enterprise
- c. Legal status of the establishment/enterprise
- d. Industrial sector/category of main activity of establishment/enterprise
- e. Operating time of the establishment/enterprise
- f. Number of workers by gender
- g. Networks of the establishment/enterprise
- h. Assets and wealth of the establishment
- i. Production/turnover/income
- j. Months worked
- k. Average days worked in a month
- l. Average hours worked in a day.

Second phase of the Economic Census 2006

Objectives

- o To obtain detailed characteristics of the establishments/businesses in various scales of businesses (micro, small, medium, and large) as the source information for planning and analysis of micro and macro economic activities in Indonesia.
- o To get benchmark and basic data for the various subsequent economic surveys in Indonesia up to the next economic census

Census-Sample

The enumeration units of establishments/businesses were grouped into two sets: Medium and Large Scale Establishments (MLSE) and Micro and Small Scale Establishments (MSSE). Based on the listing result, the number of MLSE was approximately 200,000 units, so that complete enumeration (census) was conducted for this group in the second phase of EC06. The total number of MSSE recorded in the listing operation was approximately 22.5

million units, To study in detail the MSSE, the total number of sample MSSE extracted from the listed MSSE was about 1.2 million units(approximately 5%).

Sample survey for the Micro and Small Scale Establishments in EC06

Sampling frame and sample selection

The *sampling frame* used as the base for selecting the sample of MSSE was the list of businesses/ establishments by name and by address with the industrial sector/category(KBLI), number of workers as well production/turnover/output available from the listing phase. Before sample selection, the MSSEs were grouped by region and KBLI.

Population targets and sub populations were necessary for the field operation of the MSSE survey since the sample size for each category was different.

The Population targets and sub populations were defined based on the following rules.

Establishments/businesses from list of mobile units and from list of permanent location units within districts/municipalities were separated into two different sub populations.

(a) Establishments/businesses from list of mobile units classified according to:

- o Business location in alley/corridor, side street vendor (K5), mobile vendor, and motorcycle transportation.

- o Business scale (micro and small).

- o 2, 3, 4, and 5 digits categories based on KBLI 2005 in each District/Municipality

(b) Establishments/businesses from list of permanent location units classified according to:

- o Business scale (micro and small),

- o 2, 3, 4, and 5 digits categories based on KBLI 2005 in each District/Municipality

Sample with the total target of 1.2 million MSSE was allocated into 440 district/regency/municipalities based on the depth of coverage of the KBLI category. Determination of the sample size was done in BPS headquarters for each sub-population target in every district/regency/municipality. Sample selection was done in province office for each district/regency/municipality and sub-population target based on determined sample size.

Questionnaires

There were three types of questionnaire for MSSE. The grouping of the questionnaire was based on the similarity of characteristic for each the category: MSSE-Production, MSSE- Distributive, and MSSE Services.

The categories/sectors included in each group were as follows:

a. MSSE-Production

1. Mining and Quarrying, 2. Manufacturing Industry, 3. Private Electricity, 4. Private Water Supply and 5. Construction

b. MSSE-Distributive

1. Wholesale and Retail Trade, 2. Preparing accommodation and food and beverage, and 3. Transportation, warehousing, and communication

c. MSSE-Services

1. Financial intermediaries, 2. Real Estate, leasing and business services, 3. Education services, 4. Health services and social activities, 5. Social services, cultural, entertainment and other individual services except labor, religious, and political organization and 6. Household individual services

Collected data

1. Place of Identification, 2. General Information, 3. Specific Information, 4. Workers and their payment, 5. General expenses during last month, 6. Specific expenses during last month, 7. Turnover/Income during last month, 8. Production Realization Percentage during last month, 9. Stock Value, 10. Own Capital at the end of last month, 11. Changes in Fixed Assets, 12. Capitals, and 13. Obstacles/constraints and Prospects.

LATIN AMERICA REGION

MEXICO

Economic Census

The National Institute of Geography (INEGI) is responsible for conducting economic censuses in Mexico at five yearly intervals. The latest economic census referred to the year 2009.

Objective and coverage

The objective of the census was to obtain updated and reliable basic statistical data on establishments which manufacture goods, trade merchandise and render services, in order to generate economic indicators for Mexico at a very detailed level (geographic, sector, thematic) For manufacturing, commercial activities and services:

- (a) all establishments in urban areas were included in the census,
- (b) a probabilistic sample of establishments was used in rural areas, and
- (c) large establishments were all covered, even if they were located out of the urban areas

For rest of sectors (fishing, mining, electricity and water, building activities, transportation and financial services) all establishments were covered, even if they were

located out of the urban areas. Agricultural sector was not covered in the economic census. A threshold (in terms of employment or revenue/sales, etc.), when defining the population of units to be completely enumerated in the economic census, was not applied.

Data were collected on the active economic units during the census collection period.

Data collected in 2009 strictly referred to activities carried out between January 1st and December 31st, 2008. In most economic activities the constant economic unit used was the establishment, even though in some cases it could be the enterprise. It included fixed, partly fixed and household establishments, and excluded informal trade and those persons who worked by their own account without a physical location.

Data collection method

Two main phases in the field operations for data collection could be distinguished:

- In 2008 every large establishment was visited to verify data about its name, address, economic activity performed, person who could give the information for the census questionnaires, means to return the questionnaires (Internet, questionnaire in paper, questionnaire in Excel), and other general data. A draft version of the questionnaire was delivered to each establishment at that moment, allowing them to prepare their data since then. With that information a directory was prepared, containing all those establishments; and it was called the SEG Directory. The same was done for building (construction) and transportation sectors, and the final result was also a directory; the TC Directory. Another directory was prepared for fishing and mining sectors; the PM Directory.

- In 2009 the census phase took place and related in a more detailed way below:

Five field working groups were created for data collection, in order to complete the work in all economic sectors; four of those groups were decentralized, making good use of the offices that INEGI had in each state), and the fifth one was centralized.

PYMES Group. From March 1st to May 15th, 2009 this group made a census, going block by block and asking in all the external doors. They applied a unique questionnaire in all the establishments in the urban zone, except those, which belonged to the SEG group. This questionnaire was also applied in households where there existed some economical activity. In the rural zone a sample was used in order to have the economical weight of the rural localities

SEG Group. This group collected the information of all those economic units in the SEG Directory prepared in 2008. They also collected data of those establishments which, considering their size, were transferred to them from the PYMES Group (those which were not considered in the SEG Directory).

TC Group. This group collected the information of all those economic units in the TC Directory prepared in 2008. They also collected data of those establishments which, considering their activity (if it was transportation or construction), were transferred to them from the PYMES Group (and were not considered in the original TC Directory).

PM Group. This group collected the data from all economic units whose main activity was fishing or mining, or water transportation, making use of the PM Directory prepared in 2008, and also making use of the establishments transferred from the PYMES Group. In the case of fishing units the original directory was completed with other strategies, like covering all places denominated *arriving points* of boats and fishermen, along all seaboards.

Central offices Group. Through agreements with some specific institutions and enterprises, the central area of INEGI, who was responsible of the whole economic census development, got data from those institutions so large or complicated that decentralized offices could not take the responsibility of collecting their data. This was the case of electric industry or financial firms, for example.

Items of collected data

Data were collected on the date the economic unit started operation, days worked, employment, expenditures, income, investments, assets, inventories, innovation and research, products and raw materials, type of operation, legal status, wages and foreign capital, etc.

Uses of the economic census data

Economic Census in Mexico has been the most complete source of economic information about the Mexican economy at a given moment. The valuable information obtained through the economic census, about every economic unit in Mexico, has been the main source of economic data for the National System of Statistical and Geographical Information, and provided the basis for the development of many other economic measures: economic surveys, GDP, Input Output tables, among other. Census data allowed planning of public economic policies, doing of marketing research, academic research, etc., but mainly provided data for every level of geographic desegregation, for each one of the more than 950 national industrial classification activities, and for a great number of items included in the questionnaires.

PANAMA

Censuses on manufacturing, trade and services, 1983

Panama undertook censuses on manufacturing, trade and services in 1983. In all these censuses establishments were grouped into those with five or more employed persons and those with less than five; using different questionnaires for each category. The questionnaire for the smaller manufacturing units was slightly shorter than for bigger units and contained questions grouped under the following heads: location, legal status (one person or partnership), persons employed and remunerations (outworkers were excluded), power capacity installed, fixed assets, stocks, purchases and other costs, purchase of fuel and lubricants, general expenses, production and sales, capital and profit or loss. The service and trade questionnaires were still more modest asking questions on persons employed, salaries paid, value of sales and purchases, changes in stocks, general expenses and the amount of profits or losses. These censuses were complemented by annual surveys on establishments with five or more persons employed