

Current practices in organisation and conduct of Economic Census – an Indian Experience

Indian Economy is predominantly consists of vast unorganized and informal sectors although a large number of economic activities are also being carried out in organized sector. The transition of Indian economy from predominantly agricultural activities at the initial stage to commanding height of public sector mainly industrial sector and further to a vibrant service sector led to rapid growth in Gross Domestic Product (GDP). The current scenario of Indian economy is that share of agriculture in GDP has declined, Industrial sector has increased and contribution of service sector has increased rapidly.

2. In the above background, the data requirements for planners, policy makers and researchers have also changed. The conduct of economic census is one of important endeavours of the Central Statistical Organisation, of the Government of India. It has potential to fulfill the data requirements for non-organised sector of the economy for planners, policy makers and other users. Before the Indian experience of current practices in organisation of conduct of economic census is described in detail, a little background of origin of economic census in India will be in order.

ORIGIN OF ECONOMIC CENSUS IN INDIA

3. One of the important mandates of the Central Statistical Organisation (CSO) is creation of database for various sectors of the economy and its periodic updation so as to meet the requirements of the planners for sound and systematic planning both at the macro as well as micro level. In India, fairly reasonable database exists for Agriculture Sector where as such data base for Non-Agricultural sector is not adequate. Keeping in mind the importance of the non-agriculture sector in the economy and the non-availability of basic frame for adoption in various sampling techniques for collection of data and estimation of various parameters, Economic Census was felt necessary. In view of this, the Economic Census is an endeavour of CSO for preparing frame of establishments which could be used for various censuses as well as surveys for collection of detailed data particularly on non-agriculture sector of the economy.

4. There are various Government agencies in India who conduct census, sample surveys periodically as per their requirements. National Sample Survey Organisation (NSSO) of Ministry of Statistics and Programme Implementation is mandated for conducting large scale sample surveys through its various rounds periodically. Efforts to fill up the data gaps for the non-agricultural sector were made right from the beginning of the First Five Year Plan by the NSSO. The First National Sample Survey (NSS) round (1950-51) covered non-agricultural household establishments as one of its subject themes. Such establishments were covered regularly up to the tenth round (1955-56). Subsequently, selected activities were taken up for survey intermittently in different rounds (14th, 23rd & 29th rounds).

5. In India, decennial census is conducted by the Registrar General and Census Commissioner, Government of India. Establishment schedules were canvassed in

1971 population census. The census of unorganised industrial units was carried out during 1971-73. Census of the units falling within the purview of Development Commissioner, Small Scale Industries, was carried out during 1973-74 and a survey on distributive trade was conducted by some of the States during the Fourth Five-Year Plan period (1969-74). All such efforts made prior to 1976 to collect data on non-agricultural establishments have been partial and sporadic. Area sampling with probability proportional to population were mostly used even to capture establishments. For a survey of establishments such sample design is not only inefficient but also results in under coverage of desired number of establishments and low reliability of the estimates derived. The prolonged efforts of Statisticians and Planners in finding a way out for collection of information on amorphous areas of activity resulted in a decisive breakthrough with the advent of conduct of Economic Census.

ECONOMIC CENSUS CONDUCTED SO FAR

6. The first concerted effort was made by the Central Statistical Organisation (CSO), Government of India in 1976 by launching a plan scheme 'Economic Census and Surveys'. The scheme envisaged organising countrywide census of all economic activities (excluding those engaged in crop production and plantation) followed by detailed sample surveys of unorganised segments of different sectors of non-agricultural economy in a phased manner during the intervening period of two successive economic censuses.

7. The basic purpose of conducting the economic census was to prepare a frame for follow up surveys intended to collect more detailed sector specific information between two economic censuses. In view of the rapid changes that occur in the unorganised sectors of non-agricultural economy due to high mobility or morbidity of smaller units and also on account of births of new units, the scheme envisaged conducting the economic census periodically in order to update the frame from time to time.

8. In India CSO conducts economic census with the assistance of state governments and central ministries/departments/other organizations. In the latest economic census 2005, quite vital roles were played by Office of the Registrar General of India, Directorates of Economics and Statistics of States/UTs. State Directorates are equal partner in this important endeavour of CSO in conducting the economic census in India.

9. Five economic censuses have been conducted in the years 1977, 1980, 1990, 1998 and 2005 till now. The geographical coverage of these censuses has been all over India except some areas where it was not possible to conduct the census due to some special circumstances and also due to some other compelling reasons. Scope and coverage has been more or less the same in all the economic censuses from 2nd Census onwards i.e. all establishments engaged in economic activities both agricultural and non-agricultural whether employing any hired workers or not except those engaged in crop production and plantation. However, in first economic census the coverage was restricted to only non-agricultural establishment at least one hired

worker on a fairly regular basis. In the intervening period between two economic censuses follow up surveys/ detailed studies were carried out on the basis of economic census frame.

Legal Provisions

10. There are no specific legal provisions under which economic censuses are being conducted in India. However, there is an Act, Collection of Statistics Act, 1953 which is an ombudsman Act. The Collection of Statistics Act, 1953 has since been replaced by Collection of Statistics Bill, 2008.

FIFTH ECONOMIC CENSUS (2005)

11. The Fifth Economic Census was conducted in 2005. The earlier census was conducted in 1998. The periodicity of economic census in India has not been firmed up as yet. India is a federal country comprised of various States and UTs. The Statistical system of states is not directly controlled by the CSO, Govt. of India. In most of the states the nodal agency for statistical activities are Directorates of Economics and Statistics (DEs). Although the overall responsibility for organisation and conduct of Economic Census rested with the CSO, the DEs of respective States and UTs were made responsible for conducting the field work and preparing the report concerning to their States.

SCOPE AND COVERAGE

12. The Fifth Economic Census was conducted in all the States/UTs. All economic activities (agricultural and non-agricultural), except those involved in crop production and plantation, related to production and/or distribution of goods and/or services other than for the sole purpose of own consumption were covered.

However the following activities were kept out of the purview of the Fifth Economic Census.

- (i) Establishments of shelter-less and nomadic population, which keep on moving from place to place and camp either without shelter or with makeshift shelter.
- (ii) Establishments engaged in some activities like smuggling, gambling, beggary, prostitution, etc.
- (iii) Domestic servants, whether they work in one household or in a number of households, drivers, etc. who undertake jobs for others on wages.
- (iv) All wage-paid employees of casual nature.
- (v) Household members engaged in household chores.
- (vi) Persons doing different types of jobs depending on the availability of work e.g. loading, unloading, helping a mason or a carpenter, doing earthwork for a contractor.
- (vii) Household members working for other households and earning some money which is insignificant.

- (viii) Households in which none of the members is engaged in any gainful activity i.e. households depending on remittance, rent, interest, pension etc.
- (ix) Owners of tube-wells, tractors, bullock carts, etc. who utilise their spare capacity to earn extra money, if the spare capacity utilisation is occasional and not on regular basis.

COMMITTEES AND WORKING GROUPS

13. A Standing Committee was constituted under the Chairmanship of Director General, Central Statistical Organisation to look into various aspects relating to the conduct of Fifth Economic Census. The Members of the Committee included Registrar General and Census Commissioner of India, Advisers from the Planning Commission, Chief Economic Adviser, Ministry of Finance, representatives from various concerned Central Ministries/Departments like Ministry of Small Scale Industries, Commerce and Industry, Women & Child Development and Labour; and Six State Governments represented by their respective Directors, Directorate of Economics & Statistics. The Committee was assisted by three Working Groups for development of concepts & definitions, strategy for conduct of field work, tabulation of data, publicity & dissemination of results. All the technical and secretarial assistance were provided by the Economic Statistics Division of CSO. At State HQ/ District HQ levels coordination committees were formed.

14. State Level Co-ordination Committees (**SLCC**) under the chairmanship of Chief Secretaries and District Level Coordination Committees (**DLCC**) under the chairmanship of District Collectors were constituted to review the progress of work and take appropriate measures for smooth conduct of the Census within the prescribed time frame for different activities. Overall coordination at all India level and guidance were provided by the CSO.

15. Some of the new initiatives which were taken in the latest Economic Census are as follows:-

- (i) Separate "Address Slip" of the establishments employing 10 workers or more were canvassed for compilation of a Directory of larger establishments. This will also be included in Volume-II and released in soft form.
- (ii) ICR technology was used for the first time to process the data.

ALL- INDIA CONFERENCE/ WORKSHOP ON INTELLIGENT CHARACTER RECOGNITION (ICR) TECHNOLOGY

16. An All-India Conference of State Secretaries in-charge of Planning and Statistics and Directors of Economics & Statistics to discuss various issues relating to

implementation of the scheme was organized at Vigyan Bhawan, New Delhi on 22nd December 2004. A workshop on ICR technology in processing of Economic Census data was conducted on August 2005 at New Delhi. The purpose of the workshop was to introduce the State/UT Government officers to the concept of ICR technology step by step. Detail demonstration and discussion of the ICR technology was conducted by the officers of RGI in presence of senior officers of CSO, State/UT Governments including some invitees from other Ministries/Depts. of Government of India.

TRAINING OF TRAINERS AND FIELD PERSONNEL

17. Four regional workshops for core group of Trainers consisting of officers from CSO, NSSO and senior officers from Directorates of Economics & Statistics of State/UT Governments were organized at Kolkata, Lucknow, Chandigarh and Bangalore. Subsequently, two officers, one officer from CSO/NSSO and one officer from State/UT Governments, imparted training to the State and district officials who in turn organized training to the lower level officials like Charge officers, enumerators and supervisors.

BUDGET PROVISIONS AND EMPLOYING THE STAFF

18. The "Fifth Economic Census" was taken as Central Sector Plan Scheme and fully funded by MOSPI. The total budgeted outlay of Rs. 99.20 crores was spent primarily through State/UT governments. The Directorates of Economics and Statistics were the nodal agencies for executing the scheme in the States/UTs. Funds were allocated to them as per their requirement. State/UT Governments were also allowed to create temporary posts at DES headquarters for two years. However, no posts were sanctioned at CSO for Economic Census work. The entire economic census work in CSO was carried out by the existing officers of Economic Statistics Division.

PLANNING OF ECONOMIC CENSUS

19. For identification of the primary units in rural and urban areas 20 digit location codes were adopted to prepare directory of primary units separately for rural and urban sectors in each State/UT. The list of villages as per 2001 Population Census with geo code structure already adopted under Population Census 2001 was used for preparation of rural directory. The unit of survey in urban areas was the block(s) carved out by NSSO-FOD under the urban frame survey. The above rural and urban directories were made available to State/UT Governments for updation before canvassing the schedules in the respective States/UTs. The same were updated and subsequently used while canvassing the schedules. The next step was formation of enumeration blocks for canvassing of the schedules by the enumerators. The State/UT Governments were advised to carve out Enumeration Blocks (EB) broadly covering 200-230 households in rural areas. Each UFS block was treated as one EB for urban areas. The above criteria of forming EB were relaxed in hilly and difficult terrains. Data were collected on voluntary basis by contacting head of the unit/household or from responsible persons. Economic activities are assigned 4-digit codes as per National Industrial Classification (NIC) 2004. The list of major agricultural and non-agricultural activity groups along with their NIC codes was identified. To facilitate quick coding of

economic activities, for the first time Alphabetic Index was prepared and made available to State/ UT Governments.

RAISING AWARENESS AMONG PUBLIC/ PUBLICITY

20. In order to give wide publicity the MOS & PI televised a 30-second video/audio clippings in electronics media on television channels and issued advertisement seeking public cooperation in about 100 newspapers in various languages throughout the country through the Directorate of Audio and Visual Publicity, Ministry of Information and Broadcasting, prior to the commencement of fieldwork. In addition to this, publicity measures were also undertaken by the State/UT Governments.

FIELD OPERATIONS

21. The fieldwork of Fifth Economic Census started in April 2005 and was over by December 2005 except in Bihar and Andaman & Nicobar Islands. Because of elections in Bihar and Tsunami rehabilitation work in Andaman & Nicobar Islands, the fieldwork was completed by early March 2006. About four (4) lakh enumerators were deployed to collect information from about 42 million establishments. Establishments with fixed premises were covered at the place of their operation. On the other hand, economic activities that are carried out without any fixed premises or location were covered through households.

22. All types of establishments (both perennial and seasonal) were covered in the census. The reference period for data collection in respect of perennial establishment was the last calendar year (i.e Jan-Dec.2004) and for seasonal establishments, it was last working season. For the establishments that have started operation recently, (i.e operated less than a year for perennial establishments and did not complete a season for seasonal establishments) , the information as on the date of the census was collected. The work of the enumerators was supervised by high level officers.

TYPES OF SCHEDULES CANVASSED

23. Mainly three types of schedules were canvassed in economic census 2005. These schedules were (i) House List (ii) Establishment Schedule (iii) Address Slip. Separate schedules were used for rural and urban areas. The fourth schedule namely, the Establishment Abstract (EA) was completed from the entries contained in the Establishment Schedule. The schedules were designed and printed as per the requirement of the ICR technology and in consultation with O/o the RGI .

POST ENUMERATION CHECK

24. The reliability of any census or survey is measured by Post Enumeration Check (PEC). In the latest economic census -2005, Post Enumeration Check (PEC) was conducted in all States/UTs immediately after completion of the field work. Two villages and two urban blocks were selected at random in each district through out the country. Same schedules were canvassed by the Field Operations Division of National Sample Survey Organisation in the selected villages/ blocks in all States/UTs, except Arunachal Pradesh, Manipur, Mizoram and Tripura, where PEC was done by the DESs of respective States. It was an administrative internal exercise, which would provide managerial input for experience building, improvement in future operations and extent of error in the data.

25. In order to meet the immediate needs of various users, arrangements were made for quick tabulation of Economic Census data. The important parameters of the census data compiled through establishment abstract schedule like number of establishments, employment, adult female workers, hired workers, etc. classified according to agriculture/non-agricultural activities, rural/urban and State/UT-wise were released on 12th June, 2006.

DATA PROCESSING

26. Intelligent Character Recognition (ICR) technology, which is also known as Automated Forms Processing, was used for the first time to process the EC-2005 data. Automated Forms Processing technology enables the user to process documents from their images or directly from paper and convert them to computer readable data. Automated forms are forms designed to be scanned to a digital format so that the data on the form can be "extracted" by software rather than keyed by data entry personnel. The schedules of the Fifth EC were scanned/digitized at the fifteen regional Data Processing Centres of RGI. After running the edit programme, the error list files were handed over to the State Governments for corrections. The DES officials of the State Government corrected the error files in two/three cycles and then sent the data files to RGI Headquarters to give final touch before sending to Computer Centre, MOSPI. The data files were made completely error free by applying auto corrections at the Computer Centre.

27. In earlier census data were processed by the individual State/UT Government, however in the latest census the data processing work was done centrally by the Computer Centre, MOSPI using the software developed in house for all the States/UTs. The final tables required for writing the State/UT level reports were provided to respective State/UT Governments.

TABULATION PLAN

28. In the EC-2005 a series of tables were generated. These tables are (a) main tables and (b) special tables. The main tables were to provide State/UT-wise results in

respect of principal characteristics of the establishments and employment therein classified by major activity groups, type of establishments, ownership type, social group of owner, size class of employment, power/fuel used, source of finance, etc., The special tables were to reflect major characteristics of data at all India level.

29. It was also envisaged that All-India report would be prepared in two volumes. Volume-I of the report would be based on the data collected through Establishment List and would be analyzed as was done in earlier census. Volume-II of report would be based on the data collected through House List Schedule and Address Slip. Volume-II of the report would contain list of units classified by various characteristics like type of structure, address of the establishments employing 10 or more workers. Volume-II will be published in soft form.

FUTURE PLANS AND KEY ISSUES

30. As mentioned earlier, economic census could form the basis of preparation business register in India. CSO, Ministry of Statistics and Programme Implementation is seized of the matter in this regard through brain-storming session and other activities. The first step in this direction has already been taken in the form of preparation of "Directory of Establishment of 10 or more workers" from the data collected from the 5th Economic Census, 2005. The discussion is also going on as to how economic census data can be made more useful for the planners, researchers and other users in India. The deliberations of workshop at Seoul, Republic of Korea will be able to throw some light in this direction so that new initiative could be taken to make economic census data more useful in India.

References

1. Economic Census 2005 – All India Report, Ministry of Statistics and Programme Implementation, Government of India.
2. Report of the National Statistical Commission, Government of India.
3. Economic Survey 2006-2007, Ministry of Finance, Government of India.
