

Census: Where will it take us?

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12/03/2010

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In India the Registrar General of Census conducts the census operations at an interval of 10 years. In the uninterrupted series of decennial censuses of India since 1872 the 14th or the Millennium Census is due on 1st March 2001.

The proposed census for 2001, coming at the crossroad of the millennium, is supposed to provide a benchmark at a turning point in the history. It is supposed to be more meaningful from development point of view. Census data, which is much useful for generating economic and demographic profiles, may focus on the effective distribution of financial utilities in the rural and urban areas. The idea regarding the benefits of the development strategies like 'Poverty Alleviation Programme' etc. may be derived with the help of the data on the number of customers of banks, especially in the rural areas. The identification of the existing non-beneficiaries or non-customers all over the country should necessarily be identified to have a broader idea about the regional disparities in the economic development. The census alone can enlighten this sector as both the All India Debt and Investment Survey by the Reserve Bank of India and the Consumer Expenditure Surveys of National Sample Survey Organisation are unable to provide the same. It is remarkable that the bank customer data of 2001 AD would indicate the effectiveness of public sector banking for last forty years in India. On the basis of such data the mode of preference (for providing banking facility) to be given to various places/states might be easy to finalise to achieve overall sustainable development.

Already 30 versions of questionnaires have been drafted and discussed on the basis of a cross section of suggestions emerged from the All India Data Users Conference in 1998. With the help of camera-ready copies (CRCs) supplied by the census organisation the time and effort for printing out census volumes have been reduced. The data of the census is also expected to be available much sooner than before. The data will be easy accessible as those will be available both in printed publications, floppies and compact discs. Besides a website www.censusindia.net will give a complete overview of the census and will serve as a curtain-raiser to the census.

Cartographic Techniques in Census: Some new trends The census data, being connected with human activities, always are related with land. The smallest sub-unit of land is called 'parcel', which consists of four dimensions such as geographic coordinates – latitude and longitude, height above mean sea level and time. Till now there is no system in census operations where the data could be collected on the basis of map. So the raw data, after processing, are given life with the help of some cartographic or mapping techniques.

In the census operations the use of map is two-fold : maps may be used for the identification of the locations of the areas for which data is to be collected, or may be used to present the statistical data, collected through the census operations, in a cartographic manner. Therefore, in census two phases of mapping are found:

Pre-enumeration mapping and Post-enumeration mapping

The maps, prepared before the enumeration and used during enumeration, are under 'Pre-enumeration mapping'. The base maps prepared in this stage are as follows: (a) State / Union Territory map State / Union Territory map, (b) District map District map, (c) Tahsil / Taluka / Police Station maps and other maps, (d) Urban maps, (e) Rural maps. The maps generally prepared after enumeration are: (a) Union Census Atlas, (b) State / UT Atlas, (c) District Census Handbook Maps District Census Handbook Maps, (d) Urban Landuse Maps, (e) SUA Maps, (f) Other Maps.

The various stages of cartographic presentation of data remove the lifeless condition of raw data. But as those are usually prepared manually, there is a large scope of inaccuracy in mapping procedure. Within a very limited period of time the maps are mostly prepared by non-technical or short-trained personals. So there are gaps of scaled maps unlike developed countries. To reduce the manual faults, to complete the mapping work within stipulated short period of time, to improve the quality as well as the speed of the whole procedure some new advanced scientific mapping techniques are planned to be introduced to census. Among those new mapping technologies GIS Arc / Info is most suitable hence adopted in census mapping. With the help of GIS the pre-enumeration mapping can be done within very short period of time. The primary aim of GIS is to take raw data and transform it into new information via overlays and analytical operations. This new information can support the decision making process. The digital database will be implemented in the 2001 census.

How perfect the census is!

The complain against gaps and inaccuracies in some data of census is very much common. Such complain usually comes from the researchers who often deal with census data in their research works. The faults in data usually hamper the serious research works. The definitions and concepts in the census are so much changed from time to time that it is very difficult to compare the data for more than one consecutive year. Statistical analysis and socio-economic interpretation of the available information are also difficult enough. On the other hand, some sorts of short-term changes in physical, social or economic environment causing vast change in the entire regional development are not properly mentioned or even sometimes completely ignored in the census. Some essential data for district level, such as data on income, life expectancy at birth etc. are not

available. For that reason the researchers have to use the data on the per capita net value of agricultural production and infant mortality rate (IMR) as complement of those two indicators. Another problem of census data is that the district-level data, whatever available is not always of standard quality mainly due to the limitations of census enumeration.

The census of India is occasionally affected by the number of people and logistics. The other factor influencing the census is political developments which, from the very beginning of the census operation, influences the entire task. For instance the influence of the Sepoy Mutiny in 1857, Rowlatt Satyagraha on the 1921 census, the Second World War on the 1941 census in the pre-independence stage are most remarkable. After Independence the census operation is not at all devoid of the political issues which are evident by the elimination of Assam in the 1981 census and that of Jammu & Kashmir in the 1991 census. The political influences, which are not easy to overcome, may have some impacts on the census operation. But the major objection usually raised by the research personnel is related with the defects in the manual proceedings in data collection, processing and generation.

Expectations

The earlier census efforts have been criticised by several experts from various points of views especially because of the errors in data. Whatever the case may be, till now we've to depend on the census for any research, any socio-economic analysis, study etc. Census, literally "the silent ambassadors of India all over the world" as described by M.W.M. Yeatts, commissioner of the 1941 census, provides the information on almost every aspect of the people of the country. It is the single largest source of information on India which has the potential to focus on the demographic, economic, social and cultural characteristics of the nation at a decennial intervals. The day to day changes in each and every sector of the country make the census operation more complicated, more difficult and more time consuming. The preliminary work on the coming census began last year when the officials started the planning to update the information on the jurisdictional changes from local level up to the state level. It is evident that the number of districts have already been changed from 466 (in the 1991 census) to around 530, and the number is supposed to be around 550 by 2001. This figure indicates how rapidly the complicity in the task of data collection and generation is increasing. But here it should also be mentioned that the advancement of science and technology is also supporting the entire operation network side by side reducing the complicity as well. The use of advanced GIS techniques for mapping may improve the quality of cartographic presentation of census and may also reduce the loopholes of the traditional manual techniques. The census officials should be more cautious about the accuracy of data and above all, the data must be easy accessible to the users as soon as possible. It's a matter of hope that the millennium census is going to be prepared on the basis of some sorts of new and advanced techniques to make it more easily accessible, accurate and user-friendly. Now we've to wait for the millenium census which will hopefully contribute a better sense for us.

