Future of the Population Census

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Abstract

Rising costs, growing complexities, widespread apathy and emerging alternatives have raised serious questions on the future of population Censuses in many countries. While the debate is still in its infancy in most countries, some have begun the search for alternatives. The 2010-2011 rounds of Housing and Population Censuses have thrown up an array of alternatives across the world that merit closer scrutiny. The examples of Brazil and India quickly come to mind in this context. This paper attempts to present a case study of India, where three different approaches have been implemented with a fair degree of success – a traditional Housing and Population Census (paper based); a National Population Register (biometric database) and a Socio Economic and Caste Census (direct data collection on an electronic platform). All the three exercises conducted in quick succession within a short period (2010 to 2013) have thrown up learnings that would be of tremendous interest to the community of Census takers the world over.

For the next Census in India in 2021, the country has to take into account the experiences from these three major initiatives on the one hand and the challenges of complete geographical coverage, quality issues and the rising cost on the other. Technology is the key driver of change. India has shown that innovative use of modern ICT tools can be effectively harnessed. However, mere technology without process re-engineering will not deliver optimum results. Appropriate technology blended with processes would hold the key to the future.

Keywords: Indian Census, Population, Future Census, Census 2021, National Population Register

Introduction

Rising costs, growing complexities, widespread apathy and emerging alternatives have raised serious questions on the future of population Censuses in many countries. While the debate is still in its infancy in most countries, some have begun the search for alternatives. The 2010-2011 rounds of Housing and Population Censuses have thrown up an array of alternatives across the world that merit closer scrutiny. The examples of Brazil and India quickly come to mind in this context. This paper attempts to present a case study of India, where three different approaches have been implemented with a fair degree of success – a traditional Housing and Population Census (paper based); a National Population Register (biometric database) and a Socio Economic and Caste Census (direct data collection on an electronic platform). All the three exercises conducted in quick succession within a short period (2010 to 2013) have thrown up learnings that would be of tremendous interest to the community of Census takers the world over.

Housing and Population Census

In a country like India, with a multi-ethnic, multilingual, multicultural and multilevel society, the Housing and Population Census is much more than a mere head count of the population. It gives a snapshot of not only the demographic but also the economic,

social and cultural profile of the country at a particular point of time. More often than not, it is the only available source of primary data at the level of the village and town and is widely used for formulation of policies and implementing programmes by the Government as well as non-Government agencies.

With a history of more than fourteen decades, this reliable, time tested exercise has been bringing out a veritable treasure trove of statistics every decade. The recently concluded Census 2011 is the 15th National Census of the Country in the unbroken series since 1872 and the seventh after Independence. It is remarkable that the great historical tradition of conducting a Census has been maintained in spite of several adversities like wars, epidemics, natural calamities, political unrest etc. Very few countries in the world can boast of such a glorious tradition!

The scale of operations of the Census of India 2011 was truly gigantic as it involved face to face interview of more than 240 million households in the country in a period of three weeks. Spatially, it involved covering 35 provinces, around 8000 towns and more than 600,000 villages across the entire sub-continent. Agro-climatic, cultural, ethnic and linguistic diversity made the task extremely complex. The logistics involved in managing the men (2.7 million persons) and material can well be imagined! The current approach to Census in India is a complete enumeration of all the households in the country. The operation is held in two phases – Houselisting and Housing Census and the Population Enumeration. The first phase, lists out all the houses and prepares a frame for the second phase of Population Enumeration. Information on housing characteristics is also collected in this phase. In the second phase, information on individual particulars, e.g., socio-economic, demographic, migration particulars, etc, is collected.

National Population Register

The National Population Register has been conceived as a digital database of all usual residents of the country. The database would contain certain basic demographic characteristics of every usual resident of India along with 3 biometric attributes, namely, 10 fingerprints, 2 iris prints and photograph. At present, the demographic data required for the creation of the National Population Register has been collected and digitized. The process of collection of biometrics is under way. Once the collection of biometrics is done, the database would be subjected to de-duplication on the basis of biometrics. The details of all residents would also be subjected to field verification and authentication after which the register would "go live". It is envisaged that the register would be a dynamic one with linkages to the Civil Registration System (CRS) to ensure that every birth & death would be properly reflected in the electronic database. What makes the Indian experiment unique is that it is the largest biometric database anywhere in the world. The technical challenges of biometric de-duplication, data storage and continuous updation are huge but have been overcome in a systematic way.

The question which arises in the community of census takers is whether this Register would replace the need for conducting censuses in future. Suggestions have also been made that once the registers are in place, the need to conduct a house to house enumeration would cease. The author is, however, of the view that the national population register is still 'work under construction' and would take at least a couple of more years to complete and stabilize. The next census would, therefore, definitely be required. Moreover, as was mentioned earlier, headcounts could be generated from the National Population Register, but the demographic, social, economic and cultural data on a wide range of subjects would still have to be collected from the field. Therefore, the traditional census would still continue for some time to come.

Socio Economic and Caste Census

The need for a Socio-Economic and Caste Census (SECC) arose out of a felt need to collect data on ethnic groups in the country. The data was not collected in the Housing and Population Census in 2011. The unique feature of this Census is that it has been conducted on a paperless mode. Electronic handheld devices have been used to capture the data from the respondents. The instant upload of data from the field has enabled the conduct of quality checks on a real time basis and re-enumeration wherever deficiencies were noticed. The methodology of direct data capture in this Census has exciting implications for the future of census in India. Given the convenience and flexibility of such an 'electronic Census', it is not difficult to assume that the next Housing and Population Census in India would utilize a similar electronic platform.

Challenges

I. Coverage

The first challenge relates to complete coverage of the population. With rising urbanization, increased mobility and growing density of population, complete coverage has become a casualty. Coverage of population living in far-flung and difficult to access areas is also a concern. Similarly, there are difficult to access persons like nomads and the homeless. Enumerating certain vulnerable sections among the population, like members of certain ethnic communities, the elderly and even women who don't figure in the Census counts on account of social, religious and gender prejudices, are areas of serious concern. Yet another challenge is the coverage of areas that have disturbed civil conditions. The concerns of privacy and non-co-operation from the respondent have made the task even more difficult. An effective Information, Education and Communication (IEC) strategy, combined with effective training and use of modern mapping and ICT tools have definitely helped to ensure better coverage. In future ever more effective strategies will have to be devised to ensure comprehensive coverage.

II. Quality

The next set of challenges relate to quality issues, which are summarized below:

    (a) Manpower: In Census 2011, 2.7 million functionaries were engaged for enumeration. Primary School Teachers comprised a bulk of this work force. The major concern would be the availability of such a large army of functionaries in future.

    (b) Training: Imparting uniform and standardized training to the Enumerators/Supervisors so that they are able to understand the different concepts and definitions and are in a position to collect quality data would continue to be a major challenge.

    (c) Indifference: General apathy among the Enumerators/Supervisors to take up Census work is a concern, which will have to be overcome by suitable means.

Rising Cost of Census

10. Comparatively speaking, the Indian Census is one of the most cost-effective Censuses in the world. The per capita cost for the Housing and Population Census was only USD 0.4. The National Population Register is estimated to cost USD 1.2 per capita and the SECC around USD 0.6 per person. Given the large population to be covered, the increasing costs of men and material, printing, logistics, publicity, data processing and data dissemination is likely to pose a stiff challenge to future Censuses. The key would be to optimize costs.

Conclusion

Technology is the key driver of change. India has shown that innovative use of modern ICT tools can be effectively harnessed. However, mere technology without process re-engineering will not deliver optimum results. Appropriate technology blended with processes would hold the key to the future.