

# The last census in Iran

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## ***Introduction***

The fifth event of Iranian decennial National Census of Population and Housing took place from 23 Oct. to 16 Nov. 1996. Comparing the previous ones, the 1996 Census enjoyed some advantages as follows:

1. To enrich the national database, the identity card number and serial number were included among the items of the Census questionnaire .
2. To complete the allocation of 10-digit postal codes in cities, towns and villages, and to expedite the assigning of the national identity number to all nationals, the place-based listing forms of the Post Co. were used in the Census.
3. To give level training to everybody involved, an educational video cassette was prepared to teach the forms and instructions.
4. To capture data from the filled-out questionnaires, the OMR method was used for the first time, which expedited the job.
5. The Census results were disseminated as printed materials and on CDs just 6 months after the field stage.
6. The last version of International Standard Classification of Occupations ( ISCO-88 ) was used for the first time .
7. Also imputation method was applied for some non-response data, which contributed to an early data dissemination - the reasonable relations between different items of the questionnaire were determined and errors were diagnosed, then the incorrect data were replaced with the correct data resulted after considering indices and expected logical relations.

### ***1. Strategies for involving Stakeholders in census activities***

In Iran, the Statistical Center of Iran is by Law responsible for implementation of the censuses. Every census is launched by the President's decree. Since there is not a permanent and continuously working organization for carrying out the censuses, a headquarters is established consisting of a group of managers and senior experts from the Statistical Center of Iran (SCI) and the representatives of the interested organizations for each census. The people gathered are then arranged in different groups and committees. The headquarters of the 1996 Census was formed in the fall of 1994, two years prior to the field operation, and began to work with discussing the Census objectives, review of former censuses and recognizing the statistical topics. As the discussions began, the significance of considering the data users notions in all stages of the job, particularly in deciding on the Census content – the topics and concepts and definitions - was deeply felt.

Accordingly the following organizations were called on :

- Nomads Affairs Organization
- Islamic Republic of Iran Broadcasting
- State Welfare Organization
- Central Bank of Iran
- Tehran City Hall
- Ministry of Labour and Social Affairs
- Ministry of Education
- Ministry of Health
- Social Security Organization
- Ministry of Culture and Higher Education
- Ministry of Housing and Urban Development
- Plan and Budget Organization
- Ministry of the Interior
- Ministry of Jihad-e-Sazandegi
- Plan and Budget Organizations of Ostans ( provinces)
- Ministry of Cooperatives

## ***2. Strategies for choosing among data collection methods as sources of demographic and social statistics: censuses, sample surveys and administrative records***

Proposals presented by the organizations and persons answering the call mostly included their intended items and in some cases, presentation and modification of definitions and concepts as well as frames of results and tables. Totally 110 proposals were offered on the census items. In the first step, these items were classified in the headquarters in three categories: general use, special use, and nonstatistical use.

The first two categories were compiled from three methods: census, registers and sample surveys. Investigation, classification and finally selection of the proposed topics were made according to the following criteria.

- ***Recognition of main characteristics of the population , household and housing within the national boundaries so as to fill the existing statistical gaps as well as meet the current statistical needs for policy and decision making***
- ***Necessity of response to national priorities and fulfillment of the development plan needs for the general information as well as information on specific groups of the population***

- *Capability of representing results and comparing them at any geographical levels and on the general and basic items with the results obtained from the previous censuses*
- *Giving priority to the frame information*
- *Achievement of international and regional comparability by taking national considerations*
- *Enjoying practical efficiency according to the reasonable costs and the planned implementation duration*

Moreover, determination of the priorities of the Census items, volume of the job, and administrative and operational limitation of the Census, as well as the nature of the Census, involving a large number of enumerators with average skills and capabilities, had to be taken into account.

Preparing a plan and planning, while considering the above mentioned principals and criteria, the Census headquarters and the related groups and committees held several seminars and meetings with the presence of the representatives of the concerned organizations, researchers and lecturers of the universities. Following different discussions, each of the new statistical items was evaluated according to the intended criteria. During the meetings, preparation of definitions and concepts, needed classifications for some topics and items firstly confirmed to be included in the census as well as the process of presentation and dissemination of the results were investigated in collaboration of the concerned organizations.

It was not necessary to persuade the concerned institutions into the reason for the exclusion of some of their needed topics which had not been confirmed in the meetings.

In general, the prime aim of the population and housing census in every country is to meet national needs in the area of specific demographic and housing characteristics.

In some instances, when there is a discrepancy between national needs and international recommendations, the national needs should be taken into prime considerations.

Additionally, in these meetings, international advisors and overseas university professors were consulted. Also census plans available in some countries, including Malaysia, China, Japan, Australia, the United States, France, India, Pakistan and Canada were investigated.

Some items discussed in these meetings, and the reasons for acceptance or rejection of them in the 1996 Population and Housing Census are presented below.

## **2.1. Cause of migration**

This topic was not included in the census agenda owing to the following reasons, but it was to be included in the sample surveys:

- *Cause of migration does not play a significant role in the population projections*
- *Cause of migration can change over time, ,therefore, it lacks stability.*
- *In some instances, more than one factor involve in the cause of migration , thus, it is difficult to determine the main reason for migration.*

## **2.2. Information on fertility and mortality**

As a time-consuming job and the need for well - trained enumerators, collection of information on fertility and mortality was to be carried out in the sample surveys. After the end of the census-taking, a sample survey and a post- enumeration survey were immediately executed concurrently.

## **2.3. Enumeration of building instead of place of residence**

This topic was not approved owing to the complexity of the building definition and recognition thereof as well as extending the additional burden on the enumerators.

## **2.4. Means of commuting**

This topic was first approved and included in the pilot census questionnaire. However, considering the pilot results obtained, and that the traffic problems exist only in some large cities, inclusion of this topic in the main census questionnaire involving all areas of the nation, was not cost – effective.

## **2.5. Mobile nomadic households, how to satisfy the needs and tendency to be settled**

Since this topic covers a small part of the country, it should be investigated in the sample surveys. In the 1996 Population and Housing Census, frame questions were only included in the questionnaire.

## **2.6. Radio and television coverage in villages**

Because of the needs of the Islamic Republic of Iran Broadcasting for this kind of information and lack of access to this information

through other methods, inclusion of the related questions in the 1996 Census questionnaire was approved.

## **2.7.Cause and type of physical and mental disabilities**

Considering the needs of the State Welfare Organization for the frame information, and international recommendations in this regard, the question on households with the disabled person was discussed for more sample and detailed investigation. After lots of discussion, this topic was approved, but investigation on the cause of the disability and other details was left to be discussed in sample studies.

After summing up the prime results of the comments, and development of the preparatory census plan in Autumn of 1995, that is, a year following the formation of the Census headquarters, and a year prior to the 1996 Population and Housing Census, the primary census plan was tested.

It is necessary to mention that when the Census plan was being developed in the headquarters over the two years, some ad hoc tests were employed on some items in addition to the above test, and the probable inclusion of them in the questionnaire was discussed. The results obtained were very useful in final developing of the census plan.

After conducting several tests and evaluating discussion made with the representatives of organizations, executive bodies of Ostans, professors of the universities and researchers in different seminars and meetings, the final selection of topics and finalization of the census plan began.

## **3. Adapting new technologies to census operations**

In general, there are many problems in collecting information, among them the speed of collecting information and the accuracy of the data collected. By developing new technology, traditional methods are being abolished, new methods are being applied to census operations. Completing paper questionnaires is a very time-consuming operation owing to the question-answer process, and investigation of incorrect data which result in a series of estimated data.

Because of high volume of data in censuses, it might be impossible to employ the above cited methods. Making the society aware of importance of answering questionnaires is an issue which has been taken into account

by advanced countries since many years ago. Results obtained have been successful. Therefore, the data collection is carried out without the aid of the interviewer in the censuses of such countries. However, what is important is the stage following completing the questionnaires, i.e, what kind of methods are employed for data capture. They include traditional ( keyboard) data entry, optical mark reading(OMR) and optical character reading ( OCR), depending on the type of the enumerations and the expenditure each. Unfortunately, the OCR has not yet been practiced commonly in some countries, such as Iran due to the local languages. However, despite the problems existing in the employment of OMR, the use of this method in the 1996 Census decreased the data dissemination period, for the first time, to less than 6 months since the implementation of the census.

In traditional (keyboard) data entry method, ready-made packages are used for designing questionnaires. However, the use of the packages in some questionnaires is impossible for certain reasons. Therefore, programming is called for in this regard.

### **3.1. Data -processing**

After collection of data, it is necessary to edit, correct and process data generated in the census. In traditional method, using conventional files is a common practice. After collection and sorting of data in the cited files, the collected data are investigated. This is carried out through traditional programming and using ready-made packages. Data capture operation is the next stage which is done by using traditional programming or software packages such as IMPS.

## **4. Maintaining census-related activities during the intercensal years**

As mentioned before, customarily the Center establishes a provisional preparatory headquarters, usually two years before the census which basically comprise of the experienced experts of the Center who are responsible for planning and administrative conduction of the Census. The headquarters, by taking advantage of its different groups and committees, manages the pre-, during and post-census activities. These activities consist of selection of topics, questionnaire preparation, cartographic work, planning for training and control, census publicity, staff recruitment, budgeting, and the like for pre-census training, field works, control, and report on the progress of the work during the census, and finally post-enumeration survey, preliminary review of the results, data entry and data processing, data capture, tabulation and dissemination

after the census. Along with the above activities and as a part of it, a committee is organized for documentation and recording whose main responsibility is to collect and classify all the documents related to various stages of the Census and store them for future utilization by the Center experts and other users.

After the end of the census, documentation group as other census divisions will be dissolved and its members will return to their previous routine duties in the Center. All documents prepared by the group are kept in the library of the Center. The questionnaire with the census information is released after the data processing as publications in various geographical regions for the public use.

After the completion of the census by the headquarters and its related groups and committees, all the related activities concerning the census, such as ad hoc studies, using census information, would be performed through departments of the Statistical Center of Iran which are concerned with socio-economic statistics .

## **5. Identifying and resolving problems of census mapping**

Major problems emerged in Iranian 1996 Census mapping, mentioned here as general problems:

a) Base map-related problems -- Though the Statistical Center of Iran is not legally in charge of developing maps at national level, due to the difficulties and inefficiencies concerned with developing the base map, the Center is forced to produce, correct and update the maps required for implementation of censuses and surveys . In each case, however, a part of the maps is provided by the National Cartography Center, and the Statistical Center of Iran just adapts them to the project's framework.

b) Lack of adequate facilities, technical and financial support, and expertise needed for developing the maps and updating them at different stages of surveys and censuses .

c) Inability in attracting professionals at national and subnational levels, because of recruitment restrictions and.

d) Suffering from lack of permanent geographical units for a certain period to be able to compare collections of statistical data in different time series. In the 1996 Census it stalled determining enumeration districts .

e) Frequent changes in administrative divisions which usually brings about some problems and, moreover, it is a heavy burden to update the maps accordingly.

f) Lack of an accurate base map for developing a GIS which could greatly contribute to the removal of problems concerned with updating and making use of maps in censuses and other statistical projects .

g) Map-related problems emerged in operation stage, which root from inefficient update of the maps and inadequate training of the enumerators which in turn originate from the above-mentioned problems.

Since the completion of the 1996 Census, the Statistical Center of Iran has been seeking strategies to remove totally or partly the problems encountered during the Census - the most noteworthy of which is providing the preliminaries for development of a GIS . The project started 6 years ago and the progress is satisfactory with regard to the financial and technical potentials. One step taken is digitization of all rural maps in scales of 1:50000 and 1:100000.

The mapping staff in the SCI are working hard to resolve all the problems they experienced in the last census to get ready for the next one.

## **6. Post Enumeration Surveys : Are they worth it or not ?**

In the 1996 Population and Housing Census, the post enumeration survey, aiming at estimating underenumeration of population in terms of different factors such as lack of complete coverage of places and household members, was executed. The results of the post enumeration survey were not used for adjustment of the Census results. However, analysis of the PES results helped to diagnose the factors contributing to the undercount, so as to prevent them to affect the 2006 Census.

It should be noted that there were following changes in the 1996 Census compared with the previous ones.

- *Decrease in the lines of the household questionnaire*
- *Increase in the questionnaire sheet( from one sheet to two sheets)*
- *Inclusion of the identity card number and serial number in the items of the Census questionnaire*
- *Household lists existing in the Post Company of the Islamic Republic of Iran were used in most urban areas*

Some of these changes increased the undercount of the population. Moreover, the undercount in urban and rural areas as well as in different areas varied. It seems that the analysis of the PES results may decrease the undercount of the population in the 2006 Census.

We hope that the post enumeration survey plan is designed as such that the results of the census could be adjusted.