



UNITED NATIONS - NATIONS UNIES
ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC
STATISTICAL INSTITUTE FOR ASIA AND THE PACIFIC (SIAP)

Regional Training Course on Computer Assisted Personal Interviewing (CAPI)

For Agricultural Surveys and Price Reporting

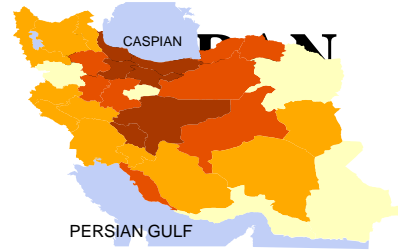
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Total Area: **1.63** million square km

Population(2011): **77** million

Agriculture area (2014): **16.5** million ha

Temporary crops area (include fallow land): **14.7** million ha

Permanent crops area: **1.8** million ha

No. of Holdings : **4.3** million

Percentage of employed population in agriculture sector
(**18.3%**)

What is Computer-assisted personal interviewing (CAPI)?

CAPI is an interviewing technique in which the respondent or interviewer uses a computer to answer the questions. It is similar to [computer-assisted telephone interviewing](#), except that the interview takes place in person instead of over the telephone. This method is usually preferred over a telephone interview when the questionnaire is long and complex. It has been classified as a personal interviewing technique because an interviewer is usually present to serve as a host and to guide the respondent. If no interviewer is present, the term **Computer-Assisted Self Interviewing (CASI)** may be used. An example of a situation in which CAPI is used as the method of data collection is the [British Crime Survey](#).

Characteristics of this interviewing technique are:

- Either the respondent or an interviewer sits at a computer terminal and answers a questionnaire using the keyboard or mouse.
- Help screens and courteous error messages are provided.
- Colorful screens and on and off-screen stimuli can add to the respondent's interest and involvement in the task.
- This approach is used in shopping malls, preceded by the intercept and screening process.
- It is also used to conduct business-to-business research at trade shows or conventions. (https://en.wikipedia.org/wiki/Computer-assisted_personal_interviewing)

Advantages of using CAPI

This form of interview is substantially cheaper when a large number of respondents is required, because:

- There is no need to recruit or pay interviewers. Respondents are able to fill in the questionnaires themselves (only true for CASI).
- There is no need to transcribe the results into a computer form. The computer program can be constructed so as to place the results directly in a format that can be read by statistical analysis programs such as [PSPP](#) or [DAP](#).
- The program can be placed on a web site, potentially attracting a world-wide audience.

(https://en.wikipedia.org/wiki/Computer-assisted_personal_interviewing)

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Disadvantages

- The survey is likely to attract only respondents who are "computer savvy", thus introducing potential bias to the survey.
- The survey can miss feedback and clarification/quality control that a personal interviewer could provide. For example, a question that should be interpreted in a particular way, but could also be interpreted differently, can raise questions for respondents. If no interviewer is present, these questions will not be answered, potentially causing bias in the results of the questionnaire (only true for CASI). (https://en.wikipedia.org/wiki/Computer-assisted_personal_interviewing)

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CAPI in iran

Iran has capi experiences by using tablet.this method is not the same as using capi but somehow ls .

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Agriculture Census in Iran

History of Agricultural
Census

1973, 1988, 1993, 2003, 2014

Organizing the census

- Statistical Center of Iran (SCI) was responsible for designing, implementation and processing the results of the Census
- Ministry of agriculture – Jihad & provinces governor (preparation, implementation and collection of data)

Legal Basis:

According to the Law of the SCI, this organization is responsible for carrying out the National Census of Agriculture jointly with the Ministry of Jihad-e-Agriculture.

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Agriculture Census in Iran (continued)

Census base

- 1- Studying and assessing the Censuses of Agriculture in other countries
- 2- Using the Definition & Concepts provided by the FAO (World Programme for the Census of Agriculture 2010)
- 3- Studying the possibility of turning the paper questionnaire into electronic one

Funds

about 15 million dollars (Us) , that was funded by the national government .

Technical assistance

We have used IT equipment (Tablet) for collecting data.

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2014 National Census of Agriculture

- The implementation of the 2014 National Census of Agriculture was put into the agenda of the SCI in 2011.
- The 2014 National Census of Agriculture was carried out for 40 days , from September 27 to November 9, 2014.



Importance of the Census of Agriculture

- 1- Census plays an important role in the statistical system of Iran (SSI).
- 2- The Census of Agriculture provides the most important up to date data on the frame list of holdings in the agriculture sector.
- 3- The obtained frame list from the census provides the foundation for conducting sample surveys between the censuses.

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2014 National Census of Agriculture *(continued)*

The SCI conducted two Pilot Censuses in 2012 and 2013 in selected provinces in order to test the electronic forms and questionnaires.

Workload and staff requirements in Tests of Agriculture Census 2012,2013

Description	No of Selected Rural Rural District & Cities	No of Staff		No of Tablets
		Enumerators	Experts (supervisor enumerators)	
Pilot 2012	3+1	34	10	44
Pilot 2013	31+5	139	37	176

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2014 National Census of Agriculture (continued)

- The first Pilot Census was conducted in 2012 in three provinces; (One selected rural district in each province) and one city in the whole country to determine the amount of daily workload, comprehensively review the data items, the methods of data collection, and data extraction.
- The SCI conducted the second pilot Census in 2013 in all provinces (One selected rural district in each province) and five cities in the whole country in order to familiarize the authorities of the provinces with the method of collecting data with IT device (Tablet).

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2014 National Census of Agriculture (continued)

- Conducting two pilot censuses has approved the efficiency of using IT device (tablet) rather than paper questionnaires for collecting data. Meanwhile, the decrease in the number of the questions of the Holding and Village questionnaires was a result of conducting the Pilot Censuses.

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2014 National Census of Agriculture *(continued)*

Technical Staffs of the 2014 National Census of Agriculture

No of villages, Cities & town			No of Staff		No of Tablet
Villages	Cities	Total Census staff	Experts (supervisor enumerators)	Enumerators	
97697	1427	12326	1835	5549	7384

Other members (Technical and training deputy, Executive director province, Vehicle, etc): 4942 persons

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2014 National Census of Agriculture *(continued)*

- **Electronic forms and questionnaires:**
 - ✓ **Four frame list forms (households, unsettled holders , nomadic people and companies)**
 - ✓ **Holdings questionnaire**
 - ✓ **Village questionnaire**

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2014 National Census of Agriculture *(continued)*

Statistical Unit:

Statistical unit of this census is an agricultural holding. According to the definition, all agricultural activities run by a single management is an agricultural production unit, which is called agricultural holding. This unit is managed by the members of one or more households (natural persons) or by an authorized company or a public institution (legal entity).

Census Frame:

The frame of rural areas in the 2014 Census of Agriculture is the list of villages based on the latest geographical divisions and the frame for the urban areas is the comprehensive list of urban blocks map.

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2014 National Census of Agriculture *(continued)*

Statistical Period

In this census two statistical periods as "enumeration day" and "crop year" are used.

Enumeration day: some of the questions include information on the census day. For example: The number of livestock

Crop year: we got information about crops which are planted from September 2013 to September 2014. (we mean the beginning and end date for special crops like wheat)

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2014 National Census of Agriculture (continued)

Statistical Coverage: Whole country was covered by the National Census of Agriculture (urban and rural). In order to exclude little and non-profit holdings, the following criteria were used:

Farming: holding with at least 400 square meters of arable land;

Horticulture: holding with at least 200 square meters of orchards and nurseries;

Raising of large livestock (cow, buffalo and camel): holdings which have at least one large livestock;

Small livestock (sheep and goat): holdings which have at least two small livestock

Raising poultry: holdings which have at least 10 chickens and any other types of poultry

Other agricultural activities: green house holdings, sericulture, and apiculture activities in every size.

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Data Collection Method

• Rural areas have been divided into two parts. Rural areas with agricultural activities (non-selected) and rural areas without agricultural activities (non-selected)

1- The enumerator in rural areas without activities (non-selected) makes the list of all places, identifies the holder households, and completes the questionnaire of agricultural holdings for all of the holdings in the area of the village under enumeration through interview.

2- In the rural areas having less than 6 percent agricultural holdings (obtained from the results of the 2003 National Census of Agriculture) which are considered as selective rural areas, the enumerator by using the list of agricultural holdings updated by the local trustees, has gone to the location of these holders and completed the questionnaire of agricultural holdings for them.

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Data Collection Method (continued)

Urban areas were divided to

- selected urban areas
- non-selected urban areas

1- Non-selected urban areas: the same activity in the non-selected rural areas is done there.

2- Selected urban areas: in the big cities in which the ratio of agricultural holdings to the population is low, making list over places is impossible. The enumerator in these cities by using the updated list in the year 2014 went to the location of the holding household and interviewed them to complete the questionnaire of agricultural holdings.

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Description of the advanced technologies used for data capture and compilation

Enumeration method used :

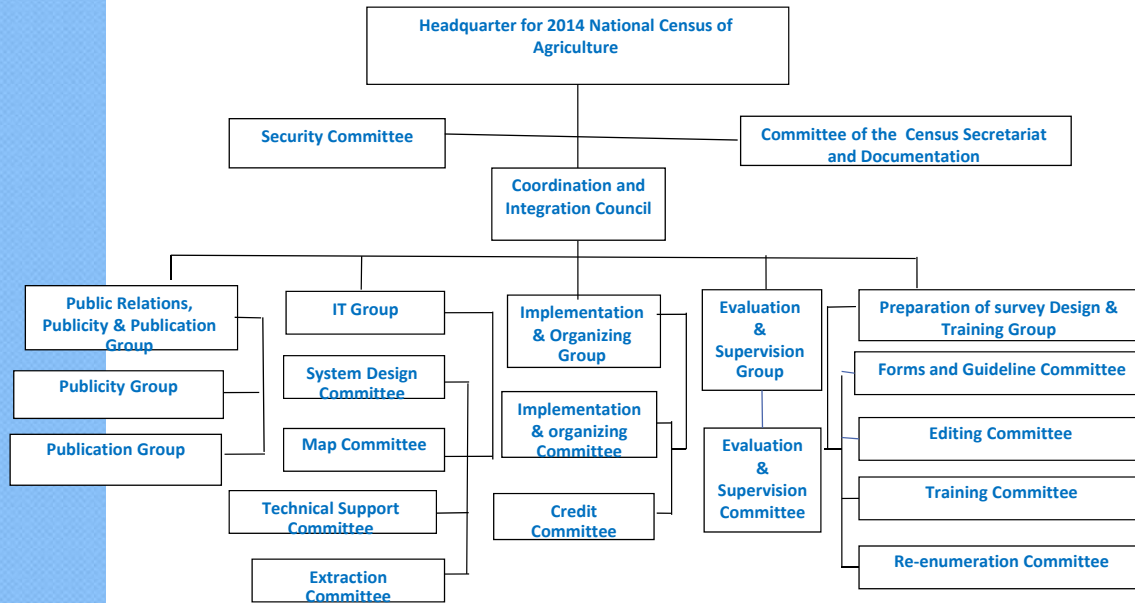
Paperless Census

For the first time in the census history in Iran, the 2014 Census of Agricultural Census was carried out by using tablet without using any paper form (paperless). Using tablet resulted in increasing the accuracy of the collected data, decreasing the time needed for data dissemination and reducing the cost.

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Organization of the field work



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Description of the advanced technologies used for data capture and compilation

- Hardware and software used/developed for data capture and compilation
- Tablets used for census: Samsung Galaxy 7“ (for Enumerators), LG and Asus 8” (for the Supervisors)
- Online data editing was designed at two levels:
 - 1- Data editing in tablets (by the enumerators)
 - 2- Data editing in web-based system (by the Supervisors)

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Lessons learnt

Substantial reduction of the census costs :

- ✓ Omission of data editors(data reviewer) and editors experts;
- ✓ Elimination of data entry, verifying and data editing process;
- ✓ Elimination of the expenditure for buying paper and printing documents;
- ✓ Reducing the space needed for storing massive amounts of paper documents
- * Using map software in the tablet (determining the enumerators working area)
- * Using the same Tablet devices for other statistical surveys (Labor force and Prices indices)

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Lessons learnt (continued)

Benefits :

- Eliminating the need for paper forms and questionnaires (paperless census)
- Substantial reduction of the costs of Census (no formal estimation)
- Accelerating the data editing procedure through online data editing especially on the tablet
- Transferring data from remote/hard- to- access places to the census servers in a very short time
- Receiving online daily report from each enumerator and the upper levels of the Census staff
- Receiving online daily reports from the census progress from all executive levels

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Lessons learnt (continued)

Difficulties:

- Restrictions on the use of tablets in the rainy and cold weather
- Reflection of light on the tablets screen
- Low performance of the tablets when a large amount of data was stored in them (particularly in the final days of the census)
- Failures and lack of proper functioning in some of the tablets

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Lessons learnt (continued)

What type of technology for data capture and compilation is your country planning to use in the next census and which changes are planned to be made?

- Collection of data in the 2016 National Population and Housing Census, planned to be conducted in the September and October 2016, will be done through the internet (e-census) and face to face interviews by means of tablet;
- Improving the design of forms (questionnaires) in the tablets;
- Speeding up the extraction of the results of the censuses and statistical projects.

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THANKS FOR
YOUR
ATTENTION