

Changing The System From Traditional Census To Register Base Census In Turkey

TASTI, Enver
Turkish Statistical Institute,
Head of Social Statistics Department
Necatibey Cad. No: 114
Anittepe, 06100 Ankara - TURKEY
envertasti@tuik.gov.tr

DEMIRCI, Meryem
Turkish Statistical Institute,
Head of Population and Demography Group
Necatibey Cad. No: 114
Anittepe, 06100 Ankara - TURKEY
meryemdemirci@tuik.gov.tr

1. Introduction

Turkey with around 71.5 million population is 17th populated country in the world and relatively large country with total surface area of 769 604 km². Proportion of population living in province and district center (957 units) is 75% and the rest of the population living in towns and villages (36 127 units). Total fertility rate is 2.14 children and life expectancy at birth is around 73.6 years. Population size is gradually increasing with the growth rate of 1.3 % per year.

The first population census was carried out in 1927 and the next population censuses were carried out between 1935 and 1990 regularly, in years ending with 0 and 5 in Turkey. After 1990, population censuses have been decided to be carried out in years ending with 0. According to the Official Statistical Programme of Turkey, next census is going to be carried out in 2011.

All population censuses were carried out with traditional method in one day by application of a curfew with “de facto” definition. Information on usual residence (de jure) population and household structure are not available from past censuses because of listing only present persons on the census day. However main problem in the census was overcounting of population (imaginary population) and out of date because of ten years interval. Therefore, Turkish Statistical Institute (TurkStat) aimed to change the method of population census in order to produce more reliable and up to date information on population size and characteristics.

For this purpose, population registration system has been improved to cover usual residence address of all people living in the country. This system is considered as a base source for the next census.

Main purpose of this paper is to present the method of how to establish Address Based Population Registration and how to improve this system.

2. Establishment of Address Based Population Registration System

MERNIS (Central Population Registration System) database implemented by the General Directorate of Population and Citizenship Affairs (GDPCA) of the Ministry of Interior keeps population registers of Turkish Citizens in the form of family ledgers. The system provides information on vital events and relationship between members of generations. However, no information on address of usual residence of Turkish Citizen and foreigners is available. In order to develop registration system based on usual residence of people living in the

country, first step was to prepare a legislation for defining responsibility of organizations on establishing, maintaining the system and basic definitions.

Legal base for the project is The Population Registration Law which was approved in April 2006. Turkish Statistical Institute was charged to establish two databases, Address Based Population Registration System (ABPRS) and National Address Database (NAD), and General Directorate of Population and Citizenship Affairs, Ministry of Interior was charged for updating and maintenance of the systems.

The project was realized by application of five stages given in Population Services Law: i) establishment of the National Address Database, ii) field application for collecting information on usual residence addresses, iii) data processing, iv) checking the usual residence addresses and v) updating the system.

All works related to the establishment of the system were coordinated by Turkish Statistical Institute and carried out by the executive committees which were headed by governors and members were the head of municipality, the head of district/province registration office, a head of special administration of province, a head of local administration and supervisor of the district/province (staff of TukStat).

Stages of Establishment of the System

The five consecutive stages of establishment of the system are given below:

i) Establishment of the National Address Database

According to the Address and Numbering Regulation, name of streets and building number are given by municipalities in localities having municipal organizations, and by special provincial administrations in villages and all data entered to the system through web-base programme developed by TurkStat. In order to eliminate the problems related with changes of name of streets, unique code is given to each street. During this stage, around 40 million addresses were entered in the NAD.

After establishment of NAD, 10 percent of the addresses in the municipality were selected and controlled. After controlling, problems related to addresses (wrong or not found in the field or were not present in the NAD) were solved and corrections were done in the database. In this manner, the NAD and addresses in the field became identical.

ii) Field application for collecting information on usual residence addresses

The field application was carried out by TurkStat in order to collect information on the place of residence, age, sex, relationship between household members and completed level of education of Turkish citizens and foreigners living in Turkey. Two different forms were used to collect information for households and institutional places. Also, separate form was used for persons who were not registered in MERNIS and did not have ID number.

Interviewing the forms was made by enumerators who were employed temporary for several months in cities. In villages, mostly teachers and religious persons were worked as enumerators and controllers. The forms were filled by enumerators by face-to-face interviewing technique with the reference person of the household. In the case of absence of reference person, the enumerators interviewed with one of the adult household members. Otherwise, leaving the forms in the households and then getting back the filled forms (drop off, pick-up) method is used by the enumerators.

Persons living in households, persons residing in institutional places, nomads, homeless people and foreigners living in Turkey were covered in the field application. Turkish Citizens residing abroad were not included.

iii) Data processing

Data entry offices were established regionally and forms which were collected in the registration offices were transferred to these offices regularly. Data entry was done by using web-base programme developed by

TurkStat. Operators were employed temporary for this work. During data entry, firstly, unique address code of the form was entered into the system and operator checked the information on the form with information appeared on the screen. Secondly, household information was entered into the system. Thereafter, for each household member on the form, identification number was entered by the operator and personal information written in the form and information came from MERNIS through identification number was checked before matching individual information with addresses. In case of unmatched information with MERNIS, all individual information was entered to the system manually by the operator. Information for these individuals was sent to the registration office to check and correct information by enumerators. For foreign citizens, passport numbers and personal information was entered to the system by the operator manually. Data entry for each member was finalized by entering information on educational status and relationship to the household responsible.

iv) Checking the usual residence addresses

After the finishing data entry including checking information in the field, according to the Law, all personal information by address of usual residence on the bases of household were demonstrated at the offices of the heads of the quarters (muhtars)/head of the villages for 60 days. During this stage, responsible person or any adult from the household visited the office and confirmed the address of usual residence of each household member on the list. In addition to that, controlling the usual residence addresses was also possible from the web site of TurkStat. The applications for correcting and updating information were made during this period and evaluated in the local registration offices.

v) Updating the system

After establishment of the system by TurkStat, it was transferred to the GDPCA. The system is going to be maintained by General Directorate of Population and Citizenship Affairs according to the Law. When people change the place of residence, they have to apply to district registration office for updating information in the system. For institutional places, authorities of the places have to declare the registration offices about persons who left or come to the institutional places. Changes in the border of the administrative units are updated by the GDPCA. District registration offices are able to reach only addresses within the boundaries of districts.

3. Results of the Address Based Population Registration System

According to the Official Statistical Programme, population size and basic characteristics of population by administrative units will be announced every year. In this context, first results referring December 31, 2007 and second results referring December 31, 2008 were announced to the public on January 21, 2008 and January 26, 2009, respectively.

In the first year, information on population size, age-sex structure and nationality were presented. In the second year, information on completed level of education, legal marital status and internal migration were also announced by TurkStat.

All information is available on the web site of TurkStat (www.turkstat.gov.tr). According to the Law, governmental organizations and establishments will use this system in all their administrative works.

4. Improving Address Based Population Registration

After the establishment of ABPRS, TurkStat started to work with related organizations to improve information available in the system. In this context, studies are carried out to cover information on the completed level of education, marital status, internal migration, place of birth, relationship to the household members, registered employed and retired persons.

a) *Completed level of education:* Information covers Turkish citizens residing within the boundaries of the country with 6 years of age and over population. After establishment of the ABPRS, the completed level of

education available in the system was updated with the registers of students and graduates taken from Ministry of Education and all universities. This information will be updated annually.

b) *Marital Status*: Information covers Turkish citizens residing within the boundaries of the country with 15 years of age and over population. Registers on legal marital status were taken from MERNIS database and added to ABPRS by matching records with Turkish Citizen identification number. The information will be updated annually.

c) *Internal Migration*: 2007 and 2008 ABPRS records were matched and individuals whose address changed in province level within the last year (address in ABPRS 2007 differs from address in ABPRS 2008) were defined as “migrant”. The information covers all Turkish citizens living within the boundaries of the country. The information is available for in-migration, out-migration, net migration and net migration rate by province level.

Studies on place of birth, employed-retired persons and relationship to between household members are still going on.

5. Conclusion

The changing the system from traditional census to administrative registers has many advantages to produce more up-to-date and reliable statistics. From the statistical point of view, sample frame for the household surveys are determined by NAD which is updated daily. Basic statistics on population is compiled on an annual basis without any expenditure. In addition, the method of next census of 2011 Population and Housing Census will be developed based on registers (ABPRS and others) and it will reduce the cost compared to the traditional census.

For administrative purpose, all national institutions and offices are able to use addresses in the NAD and usual address of individuals in ABPRS according to the Population Registration Law through the protocol for confidentiality of individual information. This will provide more effective programme carried out by governmental organizations.

REFERENCES

- TurkStat, *Address Based Population Registration System 2008 Population Census Results*, January 26, 2009, Turkey.
- TurkStat, *Address Based Population Registration System 2007 Population Census Results*, January 21, 2008, Turkey.
- Turkish Statistical Institute web pages (www.tuik.gov.tr).
- Population Registration Law No. 5490 dated April 25, 2006, Turkish Parliament, Turkey.
- UNECE/EUROSTAT, 2006, *Conference of European Statisticians Recommendations for the 2010 Censuses of Population and Housing*, New York and Geneva,
- UN, 1992, *Handbook of Population and Housing Censuses, Part I Planning, Organization and Administration of Population and Housing Censuses*, New York,
- UN, 1998, *Principles and Recommendations for Population and Housing Censuses, Rev.1*, New York.