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Evaluation and Adjustment of Population Census with Application on Kalyoubia Governorate in the Arab Republic of Egypt for the Year 2006

Thesis Submitted in Partial Fulfillment of the Requirements for the Master Degree of science in applied statistics

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2009

Summary

Introduction:

The Arab Republic of Egypt is a developing country that follows the economic and social planning for the overall development. The five-year plan 1987 / 1992 had allocated a chapter for population and manpower, because population is the utmost importance of the planning process.

The General Census of Population and Housing is the largest statistical operation aims at a comprehensive coverage of population in the State, where it collects a detailed data of the various demographic, social, housing and economic conditions to satisfy all the purposes of planning.

The study problem:

The demographic data and indicators have a great importance in our life, where it is the base for planning, and assessment of national needs of goods and services. Usually the demographic data are exposed to many errors, in spite of the strong concern that the collected data especially of age and sex have to be accurate, but each census age and sex data are exposed to tow kinds of errors which are:

1- Coverage Error:

Coverage means the comprehensive coverage of all members of the society at the time of the census. Coverage error could be over-coverage or under-coverage. Over-coverage means counting some persons more than once, which leads to enlarge the size of the population. Under-coverage means missing the count of some persons, which leads to shrink the size of the population. This error could happen due to using old maps, or the difficulty of reaching some families in remote areas or non-existence of some families during the time of counting,...etc.

2- Content Error:

Content error could happen due to wrong reporting of the individual characteristics like age, sex, educational status, marital status, and place of living,… etc. In this study we concentrate on the wrong reporting of age and sex only , this error could happen as a result of the bias

caused by preferring some ages which ended by the digits zero or five or an even number. Also the content error could happen intentionally or un- intentionally.

Objective of the study:

The main objective of this study is dealing with the coverage and content errors, by evaluating and adjusting the data of the total number of population and that of age, sex. This evaluation and adjustment will be done for the Arab Republic of Egypt and the Governorate of kalyoubia in the results of 2006 census.
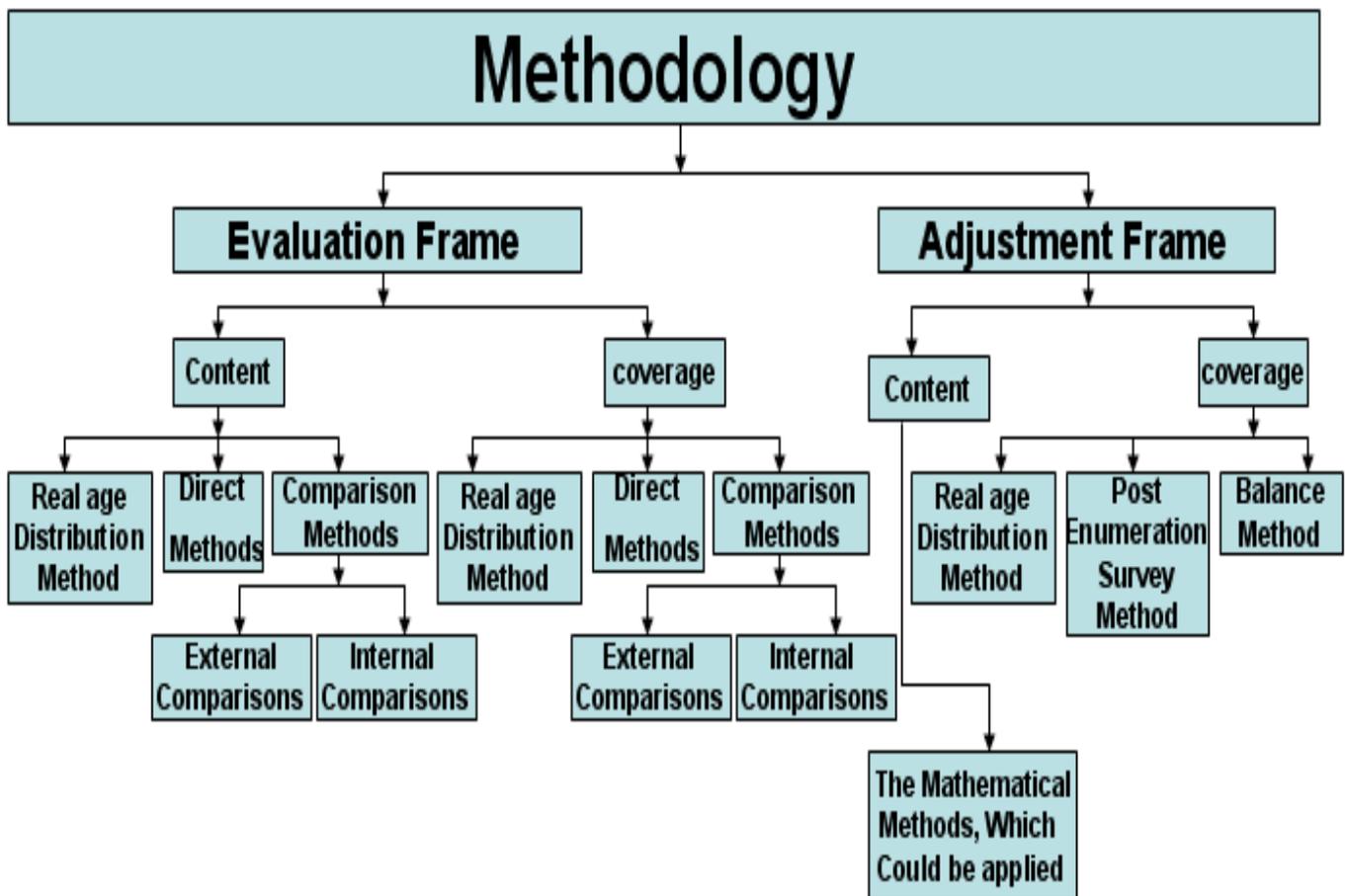
Importance of the study:

The data of age and sex in any society is of a great importance in planning for social and economic development, population projections according to age and sex , estimating the number of the students at each educational level , population in labor force ,…etc. If these data is accurate the process of planning will be accurate also, and vise versa. Then evaluating and adjusting the age and sex data will help to achieve the following:

1- Ensuring the quality of data and to what extent the planner can depend on it to get reliable results.

2 – Allowing the researchers to reach to reliable results in their researches.

3 - Knowing the real change for the population of the State in terms of size and characteristics.

 4 – Knowing the real changes in the population to compare it with the previous years.

5 - Developing economic, education, health, and housing, ... etc plans on the basis of a correct data for reaching reliable out-put of these plans.

Methodology

This study contains the application of several techniques to evaluate and adjust the data of coverage and content of the 2006 census. These techniques are summarized in the following diagram:

Data sources:

The main sources of the data are:

1- The preliminary and final results of 2006 census of population and housing in Egypt.

2- The final results of the previous censuses especially 1960,1966,1976,1986, and 1996.

3- The vital statistics.

Organization of the study:

This study includes the following seven chapters:

Chapter one: Introduction:

This chapter includes the following:

.Study problem.

.Objective of the study.

. Importance of the study.

. Methodology

. Data sources

. Organization of the study.

Chapter two: The previous Egyptian censuses and review of literature:

This chapter contains an introduction about the main definitions related to the censuses, the bases of conducting the censuses , and the stages of conducting it, in addition to review of literature.

Chapter three: Methodology:

This chapter displays the different techniques and methods, which we used in evaluating and adjusting the age and sex composition.

Chapter four: Variables of the study:

This chapter contains the variables of the study as follows:

Variable one: Coverage.

Variable two: Content (Age and Sex composition).

Chapter five: Data Evaluating:

This chapter has the evaluation of coverage and content data for the Republic and Kalyoubia Governorate in 2006 census and also in 1996 census.

Chapter six : Adjustment of Kalyoubia Governorate Data:

This chapter has the adjustment of coverage and content data of the Kalyoubia Governorate in 2006 census. .

Chapter seven: Conclusion and Recommendations:

This chapter includes the findings of the study and the desired recommendations for the future.