

Economic Censuses in Egypt and the World

Mohamed Ismail^{1,2} and Nany Abd El-kader²

1. *Department of Statistics, Faculty of Economics, Cairo University, Egypt.*

2. *Central Agency for Public Mobilization and Statistics, Cairo, Egypt.*

Email: mismail@feeps.edu.eg

Abstract

The economic census is a national project for many countries of the world because of its importance in constructing comprehensive frameworks for all enterprises and economic activities, databases for different economic activities and estimation the national accounts at the country level. The growing role of unregulated economic activities whose data is unavailable in the business records stresses the necessity of economic census. This study comes as a part of preparatory work conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS) for the fourth Egyptian economic Census to be held in 2013. In addition, the study reflects the CAPMAS' interest in applying scientific methodologies and benefitting from international experiences in implementing the next stages of the EC. The study describes the basic features of the economic census including; the concept of the census, objectives, periodicity and coverage and methodology. The study also reviews results of the United Nations survey about the features of the economic censuses in different countries of the world in 2006. Finally, the study sheds light on Egyptian pilot survey and economic census 2013.

Keywords: CAPMAS, Egyptian economic census 2013, Pilot survey, UN survey (2006).

1. Introduction

The economic census draws its importance from being the main source, of economic statistics which are used in the formulation of the government's plans and investment policy. It is also the main source for detailed data on the number and distribution of economic units in the various sectors of the country with different activities at a certain point in time.

Egypt has a long history in the field of economic censuses, extended back to 1942 when the first

establishments' census was conducted in Egypt. This was followed by many similar censuses till 1991, when the first economic census in Egypt was held, and since then Egypt has been keen on conducting the economic census on a regular basis.

The second section of this study presents the basic features of the economic censuses. Section three discusses the result of the UN survey 2006. Egyptian Economic censuses and pilot survey conducted in 2012 are explained in section 4, section 5 conclude the study.

2. Basic Concepts of Economic Censuses

This section sheds lights of some basic features of economics censuses such as the concept, objectives, periodicity and coverage, methodology, data collection and publishing results.

2.1 The Concept of the Economic Census

The economic census linguistically means counting every economic unit and recording the characteristics of each unit separately from the other units we have, in order to collect the properties and common features of these units. The Economic Census is idiomatically known as a huge survey which is conducted on all economic units in the country, in a certain time period through the complete census of all economic units. Sometimes it's difficult to cover all of economic units, therefore economic census is then conducted using the sampling method and in this case it is called, partial census or sampling census.

2.2 Objectives of the Economic Census

The main objectives of the economic census include among others.

- a) Identifying the structure of economic activities and their geographical distribution.
- b) Development of a framework of all the establishments in the country.

Figure (1): summaries the main objectives of the Economic census

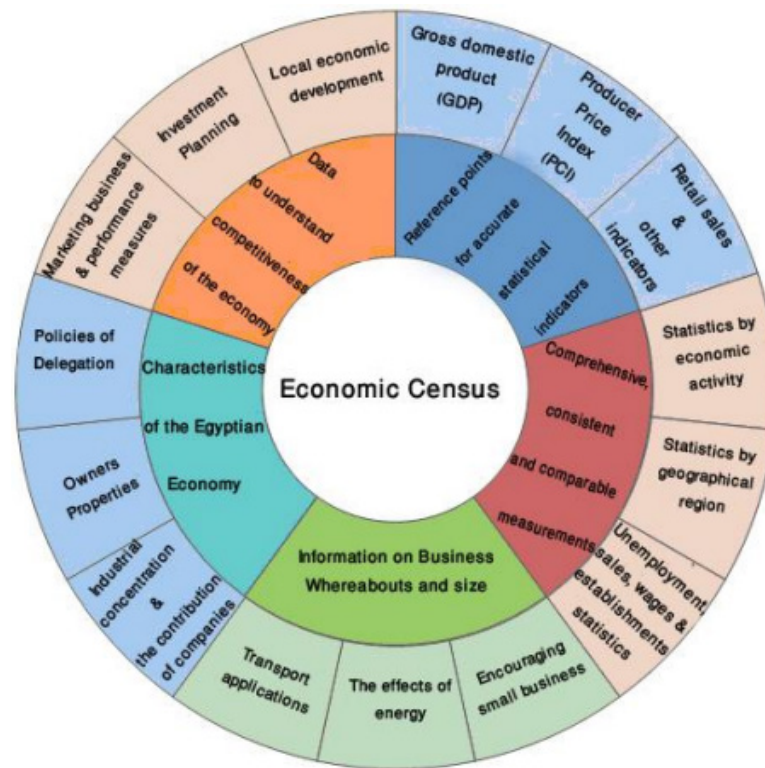


Figure 1. The objectives of the economic census

Source: United States Department of Commerce

2.3 Periodicity and Coverage

The International Statistical Standards recommends conducting economic censuses at regular intervals every five or ten years to serve as the basis of comparable economic statistics. Generally, the economic census covers all economic units in the country. In many countries, the economic census excludes the agricultural and the public administration sectors where they are conducted separately besides the economic census. Most countries of the world apply the census in its broad concept covering all geographical areas within the country.

2.4 Methodology

The methodology of conducting economic census consists of the following stages:

a. Unit count: The establishment is considered the unit count in the economic census. The establishment is defined as a unit of economic activity, which has a fixed place with a specific address held by one holder with the existence of records that enable the fulfillment of the required data for every single activity.

b. Design of census questionnaire: Content of the economic census questionnaire is designed and set up in consultation with academics and representatives from different sectors and from data users. A number of questionnaires is designed to cover the various sectors included in the census. Each questionnaire is divided into two sections. The first section consists of a group of general questions that apply to all facilities such as metadata of the facility and includes the legal entity of the facility and the starting year of the activity and other questions. The second section deals with the characteristics and in-depth information about the facility in each sector separately such as expenses and the purchase value of goods and the value of fixed assets and capital expenditures, depreciation and rent payments and inventory among others. The number of questionnaires that are designed for the U.S. economic census in 2007 reached 530 questionnaires to cover all economic establishments in all sectors, while the number of questionnaires in the Egyptian census to be implemented in 2013 is 10 questionnaires.

c. Data collection: The process of collecting census data is accomplished in a specified time period according to the plan of the field work, where the enumerators go the establishments in the region of count in order to fulfill their questionnaires. The next step after the survey data collection is offline scanning in some areas to determine the margin of error in the data and their quality and taking advantage of it next time.

2.5 Publishing Results

The process of publishing census results is performed in most countries in two phases:

Phase I: A tabular display of the important characteristics of establishments is done.

Phase II: More detailed results are obtained and presented.

3. UN Survey (2006)

3.1 Introduction

The statistical Commission in United Nation has set up a survey in 2006 to identify the basic features of the ECs in the countries of the world. A questionnaire was designed in a way that allows for the comparison between the countries that conduct economic census and the countries that do not.

The questionnaire includes questions about the basic features of the economic census. Egypt was one of 114 countries have responded to the questionnaire out of 210 countries with response rate 54.3%. The survey result was presented at the 58th session (Feb. –Mar. 2007) of the United Nations Statistical Commission regarding the economic census.

The survey results indicate that 39 countries out of 114 countries (34.2%) depend on the economic census in collecting basic economic statistics. These (39) countries are distributed as follows, 31(80%) developing countries, 2 (5%) emerging countries and 6 (15%) developed countries.

The percentage of countries that do not conduct economic census has its a maximum (85%) in European and the minimum (42%) in Central and East and Southeast Asia, for more details see Figure (2)

In addition, the survey results showed that nearly two-thirds of those responding to the questionnaire (66%) did not conduct the economic census and compile key economic statistics using other methods such as business records, economic surveys and administrative records. Table (1) shows distribution of countries that do not conduct economic census inside economic groups according to the methods of collecting economic statistics.

Table 1. Distribution of countries that do not conduct economic census inside economic groups according to the methods of collecting economic statistics*

Economic Group Method	Developed Countries (%)	Growing Countries (%)	Developing Countries (%)	Total (%)
Business records	97	80	47	71
Regular economic surveys	79	88	66	75
Administrative records	93	88	71	82

* Note that the percentages in the table are not summed to 100%, because the questionnaire's question has multiple answers.

The following are the important results of the survey for the basic features of the economic census.

3.2 Periodicity

Survey results show that more than half (56%) of the countries that perform the census, performs it every five years, compared to (26%) that conduct it every ten years. Moreover, all countries of Oceania and 80% of the Asian countries are keen to conduct economic census every five years. In North America, the United States of America is the oldest countries that perform economic census every five years.

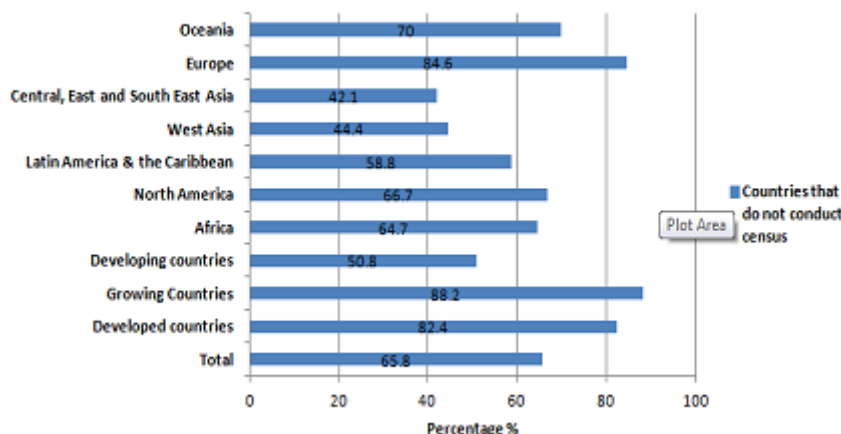


Figure 2. Percentage distribution of the countries that do not conduct the economic censuses according to the geographical group.

On the other hand, the Latin American and the Caribbean Gulf countries (57.1%) tend to conduct the economic census every 10 years compared to 28.6% of the countries that makes it every five years in the same area.

3.3 Coverage

(A) Activities excluded from the census: According to the Survey results show that nearly 64.1% of countries, which conducts economic census, excludes agriculture and public administration. Some countries mentioned that there is a list of other activities that are excluded from the census. On the top of this list came fishing, insurance, financial brokerage and nonprofit facilities and organizations that operate outside the territorial boundaries and self employed individuals.

(B) Covered units in the census: More than half of the countries (54%) that perform economic census cover all units in the economic census without reference to a certain threshold of the number of employees or revenue. Developing countries and Western Asia never put a certain threshold for small units, on the other side; North America and Africa tend to use a certain threshold of the number of employees to define the small units.

(C) Methods of covering small economic units: The survey results show that the sampling survey is the most common practical method in covering the small units, it was found that about 44% of countries use the sample survey to cover these units.

3.4 Conducting the Future Census

The percentage of countries that are planning to conduct economic censuses in the coming years was 48.2%, compared with 35.3% of the countries, which have conducted it effectively. This percentage attained its highest value in Africa (76.5%), while the lowest value in Europe (23.1%). A number of countries had requested support and technical assistance from Statistical Commission of the United Nations to help them in conducting economic census.

4. Egyptian Economic Census and the Pilot Survey

The Central Agency for Public Mobilization and Statistics (CAPMAS) in Egypt is responsible for the implementation of the general census of the population and establishments and economic census. Since 1960, 13 establishments comprehensive census has been implemented in the Arab Republic of Egypt. Table (2) shows the number of establishments including in some of establishment censuses.

Table 2. the number of establishments in the various establishments' censuses that were conducted in Egypt since 1960

Census year	Number of establishments	Census year	Number of establishments
1960	472410	1976	752580
1964	493808	1986	1951766
1967*	585989	1996	3072601
1972**	640581	2006	4591965

*Industrial census ** Does not include the governorates of North and South Sinai

4.1 Pilot Survey of the Fourth Economic Census

CAPMAS conducted a pilot survey of 10000 establishments during the period 31/3/2012 to 31/8/2012. The pilot survey covered the main 10 activities in the private sector with 2011 as the reference year. The establishments of the public sector are excluded from the pilot survey since they are covered by the regulated statistics collected by the CAPMAS.

The purpose of the pilot survey is to test questionnaires and methodology proposed for economic census and provides information useful in determining the sample size for each ISIC activity, as its highest classification level.

The sampling frame for the pilot survey was based on the 2006 census of establishments. The frame was sorted by major ISIC activity and governorate within each activity (hence with systematic selection Implicit stratification for both these two stratifying variables are introduced). The sample was selected

systematically by the application of complex Sample Module of SPSS. Ten questionnaire forms with long and short versions are designed and evaluated by several experts from various international organizations.

CAPMAS organized four workshops attended by representatives of the beneficiaries of the census data to know their needs and benefits from their advices and recommendations concerning the census methodology. In addition, CAPMAS studied the other countries experiences in the field of ECs and received technical support from the Canadian International Development Agency (CIDA).

The survey results showed that 67% of the sample establishments covered in 2006 was still operating. Moreover, the results indicate that 5649 (85.3%) out of 6622 establishments did not change their activities. In addition, the pilot survey results indicate activity change for a substantial number of establishments. This finding has considerable implication on sample size determination for each ISIC activity.

Pilot survey uncovered two main shortcomings with the proposed methodology. First, sample units were spaced which increases the cost of data collection. Second, given the dynamic nature of the Egyptian economy, there were many changes of activities and many establishments that began operations after 2006 census, so these establishments would not be represented in the census frame. Therefore, it was concluded that it would not be effective to use the 2006 census of establishment as a list frame for the 2013 economic census.

4.2 The Fourth Egyptian Economic Census 2013

CAPMAS started to conduct the 2013 economic census in march 2013 with a reference to the calendar year 2012 and financial year 2011/2012 for the private and public sectors respectively. The overall objectives of the economic census are to provide economic statistics on production input, output, capital formation, fixed assets, value added, employment and wages among other economic and financial information.

The census covering all economic activities will be based on a sample of up to 250000 establishments.

The proposed strategy is first identifying a list frame of all large and important establishments that are not covered by the regular statistics. Then, the smaller establishments and the larger establishments missing from the list frame and not included in the regular statistics will be covered by the area frame.

A stratified two-stage sample design is used, with enumeration areas (EAs) selected at the first sampling stage and establishments selected at the second stage. The stratification of the sampling frame is by governorate at the first stage and the listed establishment is stratified by economic sector at the second

sampling stage. The EAs are selected systematically with probabilities proportional to size (PPS). The establishments are selected systematically with equal probabilities of selection within each EA.

CAPMAS expects to publish summery results of the 4th Economic census by the end of 2013. More detailed results may be available later on.

5. Conclusion

The paper introduces the concept of economic census and explains its importance. Moreover, the paper sheds light on basic features of economics census such as the coverage, periodicity among others. The results of UN survey 2006 are summarized. The Egyptian methodology of Pilot survey and the 4th Egyptian economic census are introduced and explained.

References

- [1]. David, DesRoches, (2008), "A proposal to improve our understanding of entrepreneurship using the US economic census", Kauffman Symposium on Enterpreneurship and Innovation Data.
- [2]. United Nations Statistics Division, (2007), "The results of the UNSD survey of country practices in economic census", Thirty-eighth session, 27 February - 2 March 2007.
<http://unstats.un.org/unsd/statcom/doc07/BG-EconomicCensus.pdf>.
- [3]. [http://unstats.un.org/unsd/newsletter/unsd_workshops/country/Economic% 20Census% 20in% 20Egypt1.pdf](http://unstats.un.org/unsd/newsletter/unsd_workshops/country/Economic%20Census%20in%20Egypt1.pdf).
- [4]. <http://unstats.un.org/unsd/statcom/doc07/BG-EconomicCensus.pdf>