# **Working Paper No 1**

17 April 2007

## **ECONOMIC COMMISSION FOR EUROPE**

## STATISTICAL COMMISSION

CONFERENCE OF EUROPEAN STATISTICIANS

Meeting of Experts on Business Registers

Tenth meeting Geneva, 18-19 June 2007

# BRAZILIAN STATISTICAL BUSINESS REGISTER - AN OVERVIEW

Submitted by Brazil\*

The meeting is organised jointly with the Commission of the European Communities (Eurostat) and the Organisation for Economic Co-operation and Development (OECD)

<sup>\*</sup> This paper has been uploaded on the Web as submitted by the Brazilian Institute of Geography and Statistics (IBGE).

#### **SUMMARY**

In the first quarter of the nineties the Brazilian Institute of Geography and Statistics - IBGE has started an extensive revision of its economic statistics program involving the transition of the organization based in the Economic Censuses to an integrated system of business surveys whose core instrument is a Central Business Register merging data from IBGE surveys and from administrative files covering all business units in the country.

This paper describes the role of the Business Register in economic statistics program, historical background and the challenge with the transition to a new version of the National Classification of Economic Activities – CNAE 2.0.

# I. The role of the Business Register in economic statistics program

The Statistical Business Register maintained by IBGE is a comprehensive database, which contains data for the universe of enterprises and their local units in the Brazilian economy. It includes all legal units that compose the formal productive sector of the country, that is, the units registered in the Internal Revenue Services with a unique legal identification number. It includes also public administration organizations and non-profit entities.

The Business Register (BR) comprised in 2004 around 5,3 million of records for active enterprises and other entities: 4,8 million for active enterprises, 18 thousand for governmental entities and 505 thousand for non-profit institutions corresponding to 5,7 million of active local units. The total of records kept in the register is around 9,1 million of enterprises and other entities corresponding to 10 million local units.

The BR verifies the existence of the enterprises, their split in local units (addresses), identifying them by name (legal situation), location, unique legal identification number, activity code, size (based on the variable number of employees, salaries paid, income) and other elements needed to the administration of the register, constituting the reference base for the sampling design of the business surveys. It is also used for other specific uses like studies on the demographic dynamics of the companies, on regional or by kind of activities distribution of the productive units, etc.

Sampling design of all business surveys held by IBGE are based in the BR information on the four basic elements for the identification of the enterprises and their local units: the unique legal identification number, the location, the activity code and the size variables (volume of employees and salaries paid). On the other hand, IBGE economic surveys feedback the BR with the information collected and analyzed.

# II. Historical Background<sup>1</sup>

Brazilian Statistical Business Register has progressed in the first quarter of the nineties as *IBGE* started an extensive revision of its economic statistics program involving the transition to an integrated system of business surveys which core instrument was a central business register. Previously, the organization of economic statistics program was based in Economic Census.

As part of this revision program of economic surveys, a National Classification of Economic Activities - CNAE (derived from ISIC 3) was developed to be progressively implemented in the Statistical System and in Public Administration agencies.

The main challenges by that time were to implement the new classification in the BR and to keep it updated. The BR should cover the universe of enterprises in order to be used as the central frame for sample design of the economic surveys. This aim has been achieved through the merging of statistical data with data from the administrative databases.

The development of CNAE was an essential factor in the articulation with administrative agencies, especially in obtaining the access to individual business information from administrative files of Labor Ministry, the Social Security Administrative Record named RAIS, which was defined as the main external source to update the statistical business register.

The existence of a legal single identification code<sup>2</sup> for business units, the use of a national standardized classification of economic activities and the adoption of the same basic unit of the administrative records by the Statistical Business Register were the main support for the redesign of the BR.

Since 1995, through institutional agreement with the Ministry of Labor, IBGE receives, in regular basis, the annual and monthly employment files, the RAIS, with updated individual business information. This source provides data on name, location, type of business activity (classification of activity code), number of employees, total of salaries paid, as well as information on new enterprises created every year in the country.

At that time the BR, originally developed with data from 1985 Economic Census, faced the challenge of the changes in two crucial elements in economic statistics: the classification of economic activities because it was being revised and the basic statistical unit used in economic surveys.

<sup>&</sup>lt;sup>1</sup> Based in the paper presented by Magdalena Cronemberger Góes in the International workshop on Economic Census in Beijing China in 2006

Census in Beijing, China in 2006.

Administrative records as well as Statistical Business Register use a unique identification number for legal units. It is a 14-digit key-number, which enables a linkage between administrative and statistical business registers and also links enterprises to its local units.

Working Paper No 1 page 4

Due to the extension of the changes in the structure of the classification of economic activities brought by CNAE, an inevitable consequence was the impossibility of exact conversion between the new codes and the previous classification codes, restricting the effectiveness of automatic procedures of reclassification.

In the Business Survey Program, IBGE decided to adopt the local unit concept as the basic statistical unit, which is close to the definition of legal unit in administrative files, in substitution of previous concept of establishment, which was close to the statistical definition of homogeneous unit of production.

The difficulties to deal with these two changes made unfeasible the simple conversion of codes. In this context, the need of a field operation was clear – the organization of a special survey with the explicit objective of attributing the new code CNAE to the statistical units in the BR making the transition to a new classification and the adjustments to implement the new basic statistical units.

The Business Register has adopted the same definition of legal units used by the administrative records, that is, the enterprises are the legal units registered in the Internal Revenue Service and each of their different addresses is treated as an establishment. This means that the smallest unit in the statistical register (and in all IBGE business surveys) is a mix of local unit and establishment theoretical definition: one location, one or more activity, one legal identification (usually one for each local unit, but in a few cases it might be found more than one legal identification for the same localization).

A special and extensive business survey (sized 430 thousand enterprises and 600 thousand local units surveyed) was conducted in 1995 with the specific aim to improve the quality of the economic identification (CNAE code) at the local unit level in the BR.

After the absorption of the business survey results, the BR was ready for its first use as frame for the sampling of economic surveys. 1996 Mining and Manufacturing and Trade annual surveys, revised to the new parameters, were the first surveys to have their sampling design based in BR content and to adopt as statistical units the same concept of legal units used by the administrative records, that is, the enterprise and its local units/establishments (corresponding to one specific address) as registered in the Internal Revenue Service.

Nowadays all economic surveys in IBGE, annual and monthly surveys (mining, manufacturing, construction, trade and services) have their samples defined using the BR.

Besides using the information of the BR as a sampling frame, the annual surveys conducted by IBGE also feedback information to update the enterprises and local units, such as main economic activity, employment and operating status. The survey information prevails over the administrative data and includes all the largest business in each economic activity researched.

It is well known that the development and maintenance of a statistical business register is a long lasting project and that its good quality is achieved over the time. Specific checking processes of the consistence of the information are largely used in view of the quality parameters of the BR.

At the same time, a set of indicators is used to follow the evolution of the quality of the BR data. Along the time the improvements on its quality become evident.

The BR has many other uses, besides serving as frame for sampling business surveys, like to serve as frame for other surveys, as a source to provide economic activity codes for every one interested in enterprises classification, annual statistics on the BR, etc.

# III. A challenge for the Brazilian Statistical Business Register: the transition to a new version of CNAE

In the last three years, IBGE, as the custodian of the National Classification of Economic Activities - CNAE has coordinated a revision program for the update of the national classification according to ISIC 4.0 revision. The new version of the classification, CNAE 2.0, has had its implementation started since January 2007.

The main challenge in the implementation of CNAE 2.0 is to coordinate a synchronized transition to the new version of CNAE in Statistical System and in Public Administration databases, which uses economic activity as reference.

The database of the Social Security Administrative Record – RAIS, used as the main source for the annual update of the BR, is of great importance for the Statistical System specifically for the identification of new enterprises. Since 2007 the activity code informed by the enterprises for Public Administration records has to be referred to CNAE 2.0.

IBGE Business Register will receive data from RAIS in September 2007 and by the beginning of 2008 the BR shall be totally converted to CNAE 2.0.

Around 53% of this universe will be re-coded automatically. Besides, for the enterprises covered by production surveys – mining, manufacturing, construction, trade and selected services – recoding will be done on the base of a very detailed product list. For all other statistical units information on CNAE 2.0 code will come from the database of employment (self-coded) mentioned before.

For 2007 and 2008, units in the BR will be double coded, in CNAE1.0 and in CNAE 2.0. Studies for the sampling redesign of economic surveys are already been carried out and for reference years 2007 and 2008, the annual economic surveys shall produce results in both versions of CNAE.

The quality of BR data is unequal according to the size of enterprises. The quality of information is better for the enterprises included in the certainty stratum<sup>3</sup> of the economic surveys covering the universe of business with 20 or more employees for trade and services activities and 30 or more employees for mining, manufacturing and construction activities. Besides, those enterprises are responsible for the most significant part of the total revenue in their activities (for manufacturing, mining, transport, information and communication services they represent more

<sup>&</sup>lt;sup>3</sup> The certainty stratum of economic surveys includes around 180 thousand enterprises.

Working Paper No 1 page 6

than 90% of the total revenue). CNAE codes for the enterprises in the certainty stratum are more accurate as they are defined according to the information of production given by the enterprises in the business surveys.

To improve the quality of data of the statistical business register, IBGE intends to implement from 2007 on an annual business register survey using a telephone assisted interview procedure. A pilot survey for 25 000 enterprises in the sampled stratum will be developed in 2007. The main objective will be to collect updated information about the economic activity of enterprises in the segments that were split in CNAE new version.

Nowadays all economic surveys, annual and monthly, have their samples designed using information from the BR and all of them give feedback to update the BR. The BR has already improved its quality along last years but certainly needs to pursue new improvements.

#### References

GÓES, Magdalena C. *Transition to an Integrated System of Business Surveys – The Brazilian Case*. Presented at International Workshop on Economic Census. Beijing – China. July 26 to 29, 2005.

SILVA, P. L. do N. et al. Sample Redesign for Annual Business Surveys in Brazil. Proceedings Joint IASS/IAOS Conference – Statistics for Economic and Social Development: Aguascalientes: 1998. 8p.

ZACHARIAS, Maria Luiza B. Cadastros estatísticos de empresas construídos a partir de registros administrativos. Documento apresentado na Conferência de Estatísticas das Américas da CEPAL. Santiago, Chile, 2003. 17 p.

ZACHARIAS, Maria Luiza B. Brazilian central business register – overview. Presented at 16th International Roundtable on Business Survey Frames. Lisboa, Portugal, 2002. 9 p.