



Directory of Institutional Units and Establishments

METHODOLOGY

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I. Introduction

The National Institute of Statistics and Censuses (INEC by its acronym in Spanish) is a public institution that has the responsibility of coordinating the National Statistics System and producing social, economic and population statistics. Among its current projects is that of compiling the Directory of Institutional Units and Establishments, to be constructed in several stages. Each stage will incorporate new data sources and improvements in the quality of the collected data. This product corresponds to the first stage, which has made it possible to construct the methodology and establish basic information, and has partial coverage regarding economic sectors and the establishment types due to the main source that it comes from.

This project, which was conducted from March 2008 to December 2009, is part of the agreement between the Central Bank of Costa Rica and the National Institute of Statistics and Censuses to support the development of the Comprehensive Implementation of the Macroeconomic Statistics System program (IISEM by its acronym in Spanish). The Directory of Institutional Units and Establishments (DUIE by its acronym in Spanish), is an organized register of the resident institutional units in Costa Rica and their establishments, and contains information that categorizes them according to identification, location, economic activity and size¹. It is a fundamental instrument in the creation of a comprehensive economic data system, since it provides, with as much coverage as possible, an updated sampling frame pertaining to companies and/or establishments, and allows for statistics to be generated concerning the structure and dynamic of Costa Rican companies and the connection among them.

The term “institutional units” refers to “an economic entity that is capable, in its own right, of possessing assets, incurring liabilities and performing economic activities and transactions with other entities” (SCN 1993, paragraph 4.2). On the other hand, an “establishment” refers to a unit that provides goods or services at a permanent location, and performs one or more activities of an economic and social nature under the direction of a holder or company.

The DEE-2008 will allow for progress to be made in the fulfillment of some of the duties stipulated in the Creation Act of the National Institute of Statistics and Censuses (N°7839), when it mentions the conduction of economic censuses and censuses resulting from economic surveys, in addition to the explicit obligation to “create population directories and keep them updated with the aim of extracting samples for surveys regarding the public and private sectors” (article 12, subsection f).

¹ The Directory of Institutional Units and Establishments does not have 100% nationwide coverage, since the information comes from administrative registers from December 2007, and a sweep of 39 districts in the country.

II. Acronyms

BCCR	Central Bank of Costa Rica
ISIC	International Standard Industrial Classification of all Economic Activities
DUIE	Directory of Institutional Units and Establishments
IISEM	Comprehensive Implementation of the Macroeconomic Statistics System
INEC	National Institute of Statistics and Censuses
SCN	System of National Accounts

III. Objectives

- To provide a sampling frame for the creation of Economic Surveys and other studies.
- To generate statistics concerning the structure and dynamic of Costa Rican companies.
- To take advantage of the data collected from administrative sources.

IV. Methodology

Considering the experiences of other countries in regard to the utilization of resources already invested in data sources – updating ease and maintenance methods, smaller investment and timelier data collection – the decision was made to use the administrative register technique² in order to compile the 2008 Directory of Institutional Units and Establishments (DUIE-2008) in its first stage.

The ideal aspect of a Statistical Directory is that it takes all the economic and institutional sectors into consideration; however, for the purposes of this first compilation of the DUIE-2008, only the private sector of the administrative register will be considered, of which, 60% were checked and filtered.

The administrative register that was used had several merits:

- It contained almost all the variables of interest.
- Nationwide coverage.
- The branch of activity is encoded according to the third revision of the International Standard Industrial Classification of all Economic Activities, ISIC-3.
- The database is persistently updated.
- The data is registered by technological means.

At the same time, in order to evaluate the coverage and quality of the administrative register (which has limitations, since its aim is not to generate statistics), three operations were established in order to evaluate those two factors: the field, Large Companies and telephone operations.

Once this work is completed, it is hoped to have a DUIE-2008 of the private sector based on administrative registers, with an update of approximately 60% and an evaluation of the administrative register. Given the complexity of this topic, this first product will be the result of the first stage of a process that will later become continuous, for which it is proposed to establish a permanent and persistent updating procedure because of the considerable dynamism of this object of study, in addition to the fact that improvement in the data quality resulting from administrative registers is gradual.

² Primary data collected from diverse administrative and statistical sources.

4.1 Field Operation

This operation had the main objective of evaluating coverage, since the administrative registers are not exhaustive.

For this reason, a sample of 30 districts located in the Central Region, in addition to 9 located in the Rest of the Country, was taken. The districts were among those that had the greatest percentage of establishments according to the administrative register, covering 50% of all establishments in the country.

The field operation was conducted from October 2008 to January 2009, and consisted in going to all of the selected districts and registering the establishments found into the directory (excluding garages, churches, schools, state institutions, foreign bodies and other entities that do not coincide with the criteria of the Directory).

A portable PDA (personal digital assistant) was used as a data collection mechanism. The PDA came pre-installed with a tailor-made application, developed with Visual Studio Professional 2005 programming language, allowing for data to be registered in a database developed in SQL server compact edition. The use of portable devices guaranteed cost reduction and the timelier collection of results, given that the interviewers categorized the business activity with the help of a search function. Furthermore, interviewers were able to determine, with each business' identification number, if said business was categorized as a Large Company or not, with the aim of avoiding duplications. With the help of predetermined parameters, the interviewer was able to identify which variable he/she was missing in order to complete the interview, and the PDA jumped automatically between questions, among other functions.

4.2 Telephone Operation

The aim of the telephone operation was to verify the quality of the data collected from the administrative register and to fill in any missing data. The operation consisted in using a telephone and a computer (at a call center) at the same time in order to verify and update the information. This mechanism had the advantage of simultaneously registering and checking the information while minimizing time and errors. The data gathering program was developed in CS-PRO language and is integrated with an intelligent input platform.

The registers that were called did not belong to any of the 39 districts of the Field Operation or the Large Companies Operation, allowing for the integration of all three without any duplications.

There were a few problems in this operation related to data collection, mainly due to the quality of the telephone numbers listed in the administrative register (absence, wrong numbers and numbers that did not coincide with the intended business), in addition to the distrust of informants when an interview is done telephonically.

4.3 Large Companies Operation

Included in this operation were those businesses which, due to their special financial, accounting or legal structure, needed to be analyzed individually. At the same time, the companies located in Free-Trade Zones, which have some advantages for belonging to this regime, were taken into consideration.

The criteria that were used to categorize a register or business as a Large Company were based on data collected from administrative registers as at December 2007, concerning the number of employees and the economic activity of a given business, as is shown in the following table:

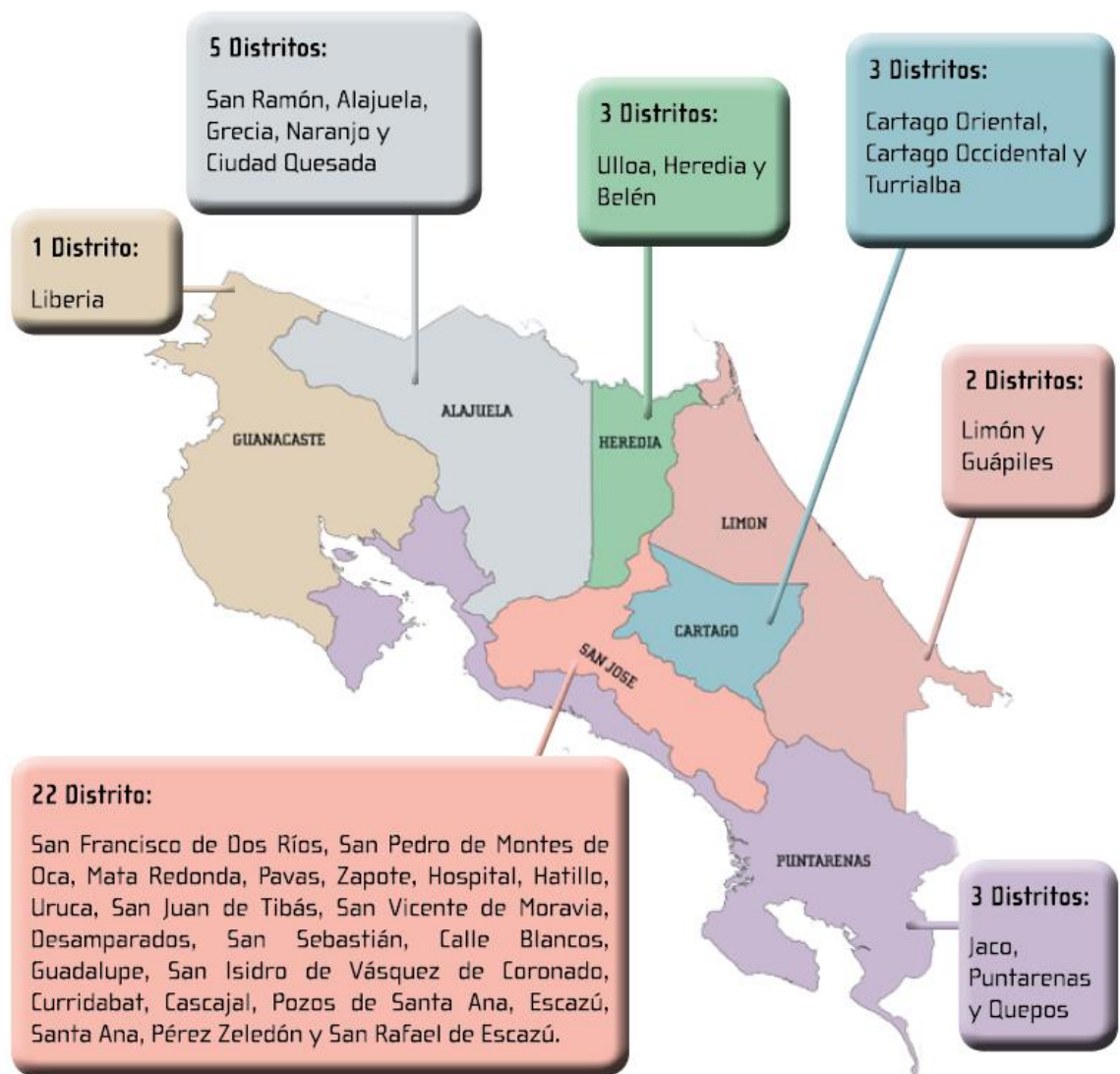
Large Companies Criteria (According to ISIC Rev.4)			
Branch of Activity	From	To	Employee Range
· Agriculture, Livestock, Forestry and Fishing.	0111.01	0322.99	Greater than or equal to 100.
· Mining and Quarrying	0510.00	0990.00	Greater than or equal to 100.
· Manufacturing Industries.	1010.01	3320.00	Greater than or equal to 100.
Electricity, gas, steam and air conditioning supply	3510.01	3530.00	Greater than or equal to 100.
Water supply; sewerage, waste management and remediation activities	3600.01	3900.00	Greater than or equal to 100.
· Construction.	4100.00	4390.00	Greater than or equal to 100.
· Wholesale and retail trade; repair of motor vehicles and motorcycles	4510.00	4799.00	Greater than or equal to 100.
· Transportation and storage.	4911.00	5320.00	Greater than or equal to 100.
· Accommodation and food service activities.	5510.01	5630.00	Greater than or equal to 100.
· Information and communication.	5811.00	6399.00	Greater than or equal to 100.
· Financial services and insurance.	6411.00	6630.00	Greater than or equal to 100.
· Real estate activities	6810.00	6820.00	Greater than or equal to 100.
· Professional, scientific and technical activities.	6910.00	7500.00	Greater than or equal to 100.
· Administrative activities and support services	7710.01	8299.00	Greater than or equal to 100.
· Education	8510.01	8550.00	Greater than or equal to 100.
· Human health and social work activities	8610.01	8890.00	Greater than or equal to 100.
· Arts, entertainment and recreation.	9000.00	9329.00	Greater than or equal to 100.
· Other community service activities.	9411.00	9609.00	Greater than or equal to 100.

Large Companies were contacted by phone, fax, email and personal visits. This operation was conducted from August 2008 to January 2009, using the same data collection system that was employed in the Telephone Operation.

After completing the different operations, the data collected from each of the operations was analyzed and validated, independently and collectively, in order to eliminate inconsistencies, duplications, and outliers, among other irregularities.

V. Geographical Coverage

- Geographical coverage that the Administrative Register provided in the Private Sector for the Telephone and Large Companies Operations.
- A sweep of thirty-nine districts (30 within and 9 outside of the Central Region) for the Field Operation, which are detailed in the following figure:



VI. Thematic Coverage

- **Business size:** measured by the number of employees that work for the business, whether temporarily or permanently, at least 20 hours per week.
- **Economic activity:** the International Standard Industrial Classification of all Economic Activities, Revision 4 (ISIC-4), applied to Costa Rica³ (All the registers from the ISIC-3 administrative source were incorporated into this classification).
- **Geographical location:** according to Administrative Territorial Division.
- **Private sector** of the December 2007 administrative register.
- **Excluded:**
 - ➔ Land on which agricultural activities are performed, unless it has offices or sales points.
 - ➔ Hawkers or sidewalk sales points that do not have a permanent structure.
 - ➔ Government institutions.
 - ➔ Transportation professionals: taxi, bus or truck drivers, etc., who do not have an office or exclusive parking garage.
 - ➔ Organizations outside of the country.
 - ➔ Residences where there is no evidence of economic activity.

³ This Classification is under revision and will be soon published.

VII. Variables

Each interviewed company or establishment, for purposes of coverage and quality control, was given an update form containing 38 questions divided into 9 sections: Location, Identification of Institutional Unit, Number of Employees, Characteristics of the Institutional Unit, Company Information, Starting Year, Membership of a Group, Foreign Control and Informant Data.

The following are the basic variables:

- **Identification:** This refers to the variables that allow for a business to be distinguished from others.

- Corporate name
- Corporate or personal identification number
- Type of company

- Company: This is a business that performs activities in one or several locations. This category may apply to a business in which the “main offices” are located in a separate location, different from the other units that make up the business.

- Single Company Endeavor: This is a business that does not depend on another; its operations are performed at one location and it does not have any branches.

- **Location:** This refers to the physical location variables of the business within national territory, and the variables concerning contact via electronic media.

- Directions to company from nearby landmarks
- Address in terms of province, canton and district
- P.O. Box
- E-mail

- **Size:** This is the variable for determining the size of the business, with the aim of categorizing it by strata.

- Number of employees

- **Economic Activity:** This refers to the variable that identifies the main and secondary activities (performed in one or several places) that the establishment is devoted to. The main activity is defined as the most important one in terms of added value and sales volume. If this information is not available, then the main activity is determined in terms of personnel or time invested.

- Branch of economic activity (ISIC Rev.4 code, nationalized)

- **Dynamic:** This refers to the variable that describes the start of the business.

- m Starting date: the registered date on which activities started.

- **Informant:** This is the proprietor, administrator, manager, or any other person in the company who knows everything regarding the personnel that work there, as well as the information concerning expenses, income and other related data.

- Informant's name

- Informant's telephone number

- Informant's e-mail

- Informant's position

- **Others:** These are variables that could be necessary for later studies and the updating of the Directory. These variables are not available in the administrative registers, but rather in the companies or establishments that were consulted in the course of the conducted operations.

- Activities in the same location: these are the activities, in addition to the main one, that the business performs at the same location.

- Activities in another location: these are the activities, in addition to the main one, that the business performs in another location.

- Foreign control: If the business receives foreign investments or has shareholders from another country.

- Transactions with other countries: If the business makes an agreement or business deal, at least once a month, with foreign countries residing in other countries.

VIII. Product

There will be a register of the resident companies in the country that form part of the Directory of Institutional Units and Establishments (DUIE) and are devoted to the production of goods and services for the private sector, with basic information regarding location, economic activity, identification and number of employees.

It is important to keep in mind that the product is a photograph of the period between August 2008 and January 2009, for which reason the changes in each business after this period will not be reflected.

IX. Data Summary

After completing the different operations, the data collected from each of the operations was analyzed and validated, independently and collectively, in order to eliminate inconsistencies, duplications, and outliers, among other irregularities. The resulting DUIE-2008 contained:

- a. 29,319 interviewed registers in the course of the conducted Field Operation
- b. 6,528 interviewed registers in the course of the conducted Telephone Operation
- c. 1,717 interviewed registers in the course of the conducted Large Companies Operation
- d. 8,324 registers taken from the Administrative Register

Totaling 45,888 registered companies; however, upon itemizing the activity variables by same and other locations, the number of entries rises to 56,203.

The DUIE -2008 for the private sector does not cover 100% of the national territory.

X. Number of Assigned Personnel

Sixty-nine people were employed to conduct this project, of which, 50 participated in the Field Operation; 8 in the Telephone Operation; 5 in the Large Companies Operation; and 6 on the technical support team.

XI. NEXT STAGE: Updating the DUIE-2008

Upon finishing the first stage of the 2008 Directory of Institutional Units and Establishments' compilation, and considering that a part of the administrative register's private sector was verified, along with the dynamism of the economic units, it is necessary to create a mechanism for updating the directory and improving its quality, so that it provides updated registers of the different economic sectors in a timely and reliable way for both internal and external users.

XII. Bibliography

1- Comisión de las Comunidades Europeas. Grupo Intersecretarial de trabajo sobre cuentas nacionales. Sistema de Cuentas Nacionales, 1993. 1 313 p.

2- Costa Rica. Instituto Nacional de Estadística y Censos. 1998. Ley N°7839. La Gaceta. Alcance N°77-B. 4 de noviembre 1998.

XIII. Project Cost

The total cost of the project was ₡371,223,261, of which the Central Bank of Costa Rica provided ₡326,247,923, and the National Institute of Statistics and Censuses, ₡44,975,338.

NATIONAL INSTITUTE OF STATISTICS AND CENSUSES (INEC)

The INEC was created by Act N° 7839, published in the Official Newspaper, “La Gaceta”, on November 4th, 1998, as an autonomous institution under public law, with legal status and its own assets. Its responsibility is to be the technical governing body of national statistics and coordinator of the National Statistics System.

The INEC has the duty to provide the public with the results of statistical activity, as well as the methods employed, in a clear and timely fashion. It also promotes the investigation, development, perfection and implementation of statistical methods.

Among the main national statistics that it must generate are: vital, demographic, foreign trade and construction statistics. Also generated are statistics resulting from national censuses regarding population, housing, agriculture and the economy; additionally, those related to household surveys with various aims, to surveys concerning agriculture, to surveys covering household income and expenses, and to surveys regarding the economy and price indexes, among others.

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