

**National Administrative  
Department of Statistics**



Direction of Statistical Production Methodology

DIMPE

Service Annual Survey (SAS)  
Methodology

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**NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS**

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## **PRESENTATION**

The National Administrative Department of Statistics (DANE for its acronym in Spanish), as coordinating entity of the National Statistical System (SEN for its acronym in Spanish) and within the framework of “Statistical Planning and Harmonization” projects, works towards the strengthening and consolidation of the SEN through the following processes: The production of strategic statistics; the generation, adaptation, adoption and

dissemination of standards; the consolidation and harmonization of statistical information, and the connection of instruments, stakeholders, initiatives and products. These actions are intended to improve the quality of the strategic statistical information, its availability, timeliness and accessibility, to respond to the high demand for statistical information.

In this context, DANE developed standard guidelines for the presentation of methodologies that contribute to the visualization and understanding of the statistical process. By means of this instrument, the institution prepared methodological documents on its operations and statistical research, which are made available to specialized users and the general public. These documents present the main technical characteristics of the processes and the sub-processes of each research in a standard, easy-to-read and comprehensive manner, thus enabling their analysis, control, replication and statistical assessment.

These series of documents promote transparency, trust and credibility in the institution's technical expertise, for a better understanding, comprehension and use of the statistical information that is produced in accordance with the principles of consistency, comparability, completeness and quality of the information.

## **INTRODUCTION**

The growing importance of the services sector in the Colombian economy has raised the need for statistical information on this subject matter, in order to better follow-up or keep track of and analyze its performance.

Within the framework of its institutional mission, and in a permanent effort to provide the country with timely and reliable figures, DANE has developed measurement processes aimed at covering all economic activities that lack statistical information. Accordingly, in the year 1995 the Service Annual Survey (SAS) was started, which covered the service activities of hotels, restaurants and travel agencies. Other services were added from time to time, depending on the information requirements. This is how in 1997 the advertising activity was included; in 1998 the labor recruitment and provision of personnel and security services were added; in 2000 the computer and postal activities; and finally, the telecommunications services in 2003.

From the year 2000 onwards, as part of the Plan for Improvement of the statistics on services, and as a result of the inter-institutional diagnosis and work, the SAS was adjusted into a single form and expanding the thematic coverage to other service activities, with the integration of data collection instruments. In order to further improve the analysis of information, in 2010 the collection form was redesigned and organized in a modular structure, in greater detail for the income and expenses module for a specific group of economic activities and for the module of employed personnel of the higher education activity, that specifies the staff hired by teaching hours, instructors and teaching assistants who also work under this system.

The results provide statistical information to different users for the analysis of production and employment in the sector, as an input for planning and sectoral policies and as a bargaining tool for use in international agreements.

This document describes the methodology of the survey in each of the stages and processes that are carried out for its development, such as planning that involve aspects of statistical design, programming, design of data collection instruments and data processing. In a similar manner, this paper explains the process of implementation and statistical analysis, assessment, documentation and dissemination of the survey results. Also, this document includes a panel methodology, which identifies companies that enable comparison of each of the variables over a two-consecutive-year period.

## **1. BACKGROUND**

From 1995 through 2005 SAS researched nine service activities by means of seven collection instruments as shown in Table 1. In these instruments the chapters related to

income earned, operational expenditure and investment in fixed assets were designed, according to specific characteristics for each activity.

**Table 1 - Service Activities researched through the Services Annual Survey**

<b>SAS 1995-2005</b>	<b>SAS from 2006</b>
551 and 552 Hotels and restaurants	55 Hotels, restaurants, bars and similar establishments
634 Travel Agencies	63 Supporting and auxiliary transport activities; activities of travel agencies
641 Post and Courier Activities	641 Post and courier activities
642 Telecommunications	642 Telecommunications
72 Computer Services and related activities	Section K Real estate renting and business activities
743 Advertising	70 Real estate activities
7491 Labor recruitment and provision of personnel	71 Renting of machinery and equipment without operator
	72 Computer and related activities
	73 Research and development
7492 Investigation and security services	74 Other business activities (this division includes advertising, Labor recruitment and provision of personnel and of private security service activities, amongst others)
	8050 Higher Education
	851 Human Health activities
	921 Motion Picture, radio, television and other entertainment activities
	922 News agency activities
	93 Other service Activities

Source: DANE- International Standard Industrial Classification of All Economic Activities (ISIC Rev. 3 Adapted for Colombia)

There are annual data available on the main variables (gross production, intermediate consumption, value added, employment and investment), on DANE's Website ([www.dane.gov.co](http://www.dane.gov.co)) and in press bulletins, as from the year 2004 until the latest year of their publication.

In February of 2005, DANE, the National Planning Department (DNP for its acronym in Spanish), the Banco de la República (Central Bank of Colombia) and the Ministry of Commerce, Industry and Tourism, formed a group of experts to work on the generation of statistical information for the services sector. In December of the same year a technical cooperation agreement among the aforementioned entities was signed, thus establishing the inter-institutional services technical committee.

This group performed a diagnosis of the different sources of information and the main statistical needs of each entity and of the sector users. It also revised the design of the survey and identified the aspects to be modified or adjusted according to the requirements.

As a result of this work, DANE carried out the following activities:

- A single format was designed based on the previous forms that were used for the SAS up to the year 2005, in order to collect data on income, expenses, occupied personnel, remunerations and investment of the services under study. Moreover, in order to make the data collection process more efficient, the data capture application to fill out the form on DANE's Website was improved.
- The statistical design of the survey was adjusted (e.g. sampling design, target population, scope of the investigation, etc.), and the selection criteria, the operational scheme to be followed, as well as all the corresponding documents (instructions for filling out the forms and review of the information, validation and consistency specifications, user's manual and technical card) were updated.
- A pilot test was carried out using 1,222 service companies with information from the year 2005, to check the collection instrument, the application developed to capture information and the operative scheme. The results were used as a basis to assess and further adjust the design for the 2006 survey.

Despite the good response rate obtained from the filling out of the electronic form via the Website, there were some situations that evidenced the need to update and improve the format, namely: Some sources used the printed form due to the lack of Internet access; it was necessary to provide permanent advice to the sources, especially to those companies that were surveyed for the first time. Additionally, some issues with the directory were identified: incomplete and incorrect general data, wrongly assigned activities, wrong NITs<sup>1</sup> and enterprises that presented changes (novelties) in their information.

In 2010, after discussion in several of its meetings, the Internal Committee of the Service Annual Survey made the decision to adjust the questionnaire structure to a modular scheme. This new design helped the sources to fill out the forms. Moreover, the new scheme enabled the classification of income from services rendered and costs related to the provision of services, which the unified form did not permit. This specification of revenues and costs implied that <sup>0</sup> module three of the "Income and Expenses" form was exclusive for the companies that carry out the following activities:

- Hotels, bars and restaurants
- Post and courier activities.
- Telecommunications activities
- Travel agencies activities
- Computer services and related activities
- Advertising
- Labor recruitment and provision of personnel
- Investigation and security services
- Higher private education
- Human health activities

Enterprises that develop the rest of activities that are considered in the Service Annual Survey have to fill out the general module 3.

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<sup>1</sup> Tax Identification Number (NIT as its acronym in Spanish) corresponds to a numeric code used in Colombia to identify entities for tax-related purposes and other actions

The redesign provided the sources with more versatility when completing the surveys, making it possible to work on several modules on different computers at the same time. This new structure has brought new benefits to DANE, having two specialized modules for certain economic activities that capture specific information on each sector, thus enabling further analysis in the generation of the sectoral statistics process.

In 2010 a review of the directory of enterprises belonging to the sector was carried out using different instruments that could lead to a better updating. Thus, the information provided by the Integrated Self-assessment Form for the Payment of Contributions (PILA for its acronym in Spanish - a form used for the monthly social security payments) was balanced and compared to other traditional instruments used by DANE, identifying a new group of potential enterprises to be included in the Service Annual Survey. This was how 1,482 new entities were identified, which were included in the 2010 operation for the SAS of 2009. The response rate of the addition was 76.7%, corresponding to 1,137 enterprises.

## **2. DESIGN**

### **2.1 CONCEPTUAL FRAMEWORK**

#### **2.1.1 Objectives**

##### **General objective**

To learn about the structure and economic behavior of the service activities that are investigated through the measurement of the absolute values of the main economic aggregates, (income, gross production, intermediate consumption, aggregate value added, occupied personnel, remunerations and net investment), which are defined based on the International Standard Industrial Classification (ISIC) and the work of the Internal Committee of the Service Annual Survey.

##### **Specific objectives**

- Measure income performance and its principal components
- Quantify the evolution of employed persons by type of contract and gender.
- Establish the evolution and structure of gross production, intermediate consumption and aggregate value.
- Establish the evolution of net investment.

#### **2.1.2 Reference Framework**

##### **Conceptual basis**

SAS investigates companies engaged in providing the services under study in selected sub-sectors, to obtain the necessary data to calculate the main economic aggregates and their composition in each one of them. The definition of each sub-sector is explained hereinafter in the section called "*Design of Indicators*".

Data is gathered using a single form that contains two specific modules for some economic activities and considers the enterprise as the *unit of study*. When it comes to enterprises that are active in more than one economic sector (multiple-activity) only the part of the investigated services is considered.

As regards the structure of some enterprises that provide the services under study there are combinations of activities that should be considered, such as: Hotels with restaurants and bars; restaurants with rooms; restaurants with cafés; cafés with bars and travel agencies with hotels. Moreover, other services or sales of goods different from the sector could be overlapped, such as supermarkets with restaurants, bakery industries with cafés, among others (cf. DANE, 1998); however, the research refers to the activities described according to the International Standard Industrial Classification (ISIC), Revision 3, Adapted for Colombia. Additionally, this research studies the group of tourism and non-tourism activities, due to the limiting conditions to establish a clear separation between the services intended for the tourists and the ones for other types of users, such as businessmen, students, employees, etc.

### Thematic content

The research covers the following service activities according to the ISIC Rev 3 A.C

**Table 2 - Thematic scope of the Service Annual Survey**

Code of activity ISIC Rev. 3, A.C.	Description of activity
Group 551	Hotels, camping sites and other provision of short-stay accommodation.
Groups 552, 553	Sale of food and beverages prepared on-site.
Division 63 (except class 6340)	Supporting and auxiliary transport activities.
Class 6340	Activities of travel agencies and tour operators; tourist assistance activities
Group 641	Post and courier activities
Group 642	Telecommunications
Divisions 70,71	Real estate activities. Renting of machinery and equipment without operator and of personal and households goods.
Division 72	Computer and related activities.

Classes 7491, 7492, 7493	Labor recruitment and provision of personnel, investigation and security activities, building-cleaning activities
Division 73, Groups 741, 742, Classes 7494, 7495, 7499	Research and development; legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling, business and management consultancy; architectural, engineering and other technical activities; photographic activities, packaging activities; other business activities.

Code of activity ISIC Rev. 3 AC	Description of the activity
Part of Group 805	higher education
Part of Group 851	Human health activities
Classes 9213, 9222	Radio and television activities and news agency activities
Groups 921 (except Class 9213) and 930	Motion picture, and other entertainment activities and other service activities.

Besides fixed or mobile stalls and homes with economic activity, the following services are excluded:

Section E Divisions 40 and 41	Electricity, gas, steam and hot water supply, Collection, purification and distribution of water
Class 5252	Commercial activities in trading or pawn shops
Divisions 60 to 62	Transport
Section J Divisions 65 to 67	Financial intermediation

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Section L - Division 75	Public administration and defense; compulsory social security
Class 8060	Non formal Education
Group 853	Social work activities
Division 90	Sewage and refuse disposal, sanitation and similar activities.
Division 91	Activities of membership organizations, Religious, political and unions organizations,
Group 924	Sporting and other recreational activities.
Group 923	Library, archives, museums and other cultural activities.
Section O - Division 99	Extra-territorial organizations and bodies.

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#### International Benchmarks

SAS takes into account UN guidelines listed in the document “International Recommendations on Distributive Trade Statistics and Services” from the Department of International Economic and Social Affairs and its Bureau of Statistics<sup>2</sup>. Similarly, SAS adopts the ISIC Rev 3 A.C.

In addition, the stages that are required in a survey are considered, raised and developed in the document “Quality Guidelines for Statistical Research” from Statistics Canada<sup>3</sup>.

Similarly, recommendations issued by the Andean Community of Nations (CAN for its acronym in Spanish) on issues related to the measurement of micro, small and medium-sized enterprises (Mypimes for the acronym in Spanish)<sup>4</sup>, and recommendations from the UNCTAD on information and communications technology (TIC for the acronym in Spanish)<sup>5</sup> were applied, as well as those coming from the International Experts Commission (CEI for its acronym in Spanish) who have evaluated the product generated by the research and whose reports are kept in the entity’s technical documentation.

In a similar manner, international experiences regarding the attainment of statistics on the services sector through both structural and circumstantial surveys, were studied and evaluated. For instance, The SAS Manual of Spain is important given the expertise gained in these investigations. This manual applies regulations of the Statistical Office of the

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<sup>2</sup> UN, *Department of International Economic and Social Affairs, Bureau of Statistics. Series M No. 57. New York, 1976.*

<sup>3</sup> STATISTICS CANADA. *Quality Guidelines for Statistical Research. Methodology Division of the Statistical Services Network 1994*

<sup>4</sup> *Report on the Second Meeting of Government Experts in Statistics on “Pymes” (acronym in Spanish for small and medium-sized enterprises) in the Andean Community –Andean Community – SG/REG.EPYMES/II/INFORME, May 6<sup>th</sup> 2005 4.27.63*

<sup>5</sup> *Manual for the Production of Statistics on the Information Economy, 2009, Revised edition - UNCTAD/SDTE/ECB/2007/2/REV.1 UNITED NATIONS PUBLICATION.*

European Community (Eurostat) and in addition to definitions; it contains examples of the forms for service activities with instructions on how to complete such forms for the enterprises.

## **2.2 STATISTICAL DESIGN**

### **2.2.1 Basic components**

#### **Type of statistical operation**

The statistical design corresponds to a census of large enterprises.

#### **Universe**

Made up of companies legally established, resident in the national territory, whose main economic activity is the provision of services.

#### **Target population**

Conformed by companies legally established, resident in the national territory, whose main economic activity is the provision of services according to the definition of their thematic coverage.

#### **Coverage and geographical disaggregation**

For all the researched activities the results are for the national total.

#### **Reference period**

The reference period for the survey is the year immediately preceding the data collection year. The publishing of results is one year behind with respect to the reference year.

#### **Collection period**

The collection period to carry out the SAS is six months; approximately from May to October every year.

#### **Statistical Units**

The statistical unit is the company with a NIT (Tax Identification Number) engaged in service activities within the national territory.

The observation and analysis unit is any legally established company that carries out service activities within the national territory, from which information can be collected.

The information unit is the accountant, manager, owner or the person that manages the enterprise's balance sheets.

#### **Statistical framework**

The framework used by the SAS is the list of enterprises of the service sector. It is of a national coverage and the Service Directory obtained in the Economic Census of 1990 was consulted.

Throughout the years the sources of the SAS have been updated with information from the Superintendence of Security Enterprises, the Superintendence of Cooperatives, the Colombian Confederation of Chambers of Commerce (Confecámaras in Spanish), private sector associations, the Vice Ministry of Tourism, the yellow pages, the cross-reference of administrative registers (like PILA) and also DANE's annual, monthly, and quarterly surveys.

Given the thematic coverage, the Services Production framework contains ancillary information on economic activity variables and partially counts on income and occupied personnel figures for every enterprise. This is indispensable information for the design, since its magnitude is related to the enterprise's infrastructure, sales and production and is also helpful in the determination of the company's size.

## Variables

### Classification Variables

- Economic Sector according to ISIC Rev.3 A.C.
- Size of the enterprise measured in terms of Occupied Personnel or Income

### Design and study variables

- Revenues
- Occupied Personnel

## Parameters to be estimated

The totals for the variables under study are estimated and grouped according to the classification variables; this measure is used since it permits to get to know the structure and economic behavior of the service sector in absolute values.

### 2.2.2 Survey Design

The Service Annual Survey (SAS) is a large-companies' census. And according to the objectives, fifteen strata are conformed, one per each service activity. The limits established for each layer can be seen in Table 3. The universe is organized in strata characterized for being homogeneous according to the following criteria: 1) By the enterprise's main economic activity, as per ISIC Rev. 3 A.C; 2) By annual income and number of occupied personnel.

**Table 3 - Strata for the researched economic activities**

Strata	Service	Personnel equal to or greater than	Annual Income (millions of legal tender pesos) equal to or greater than
H1 Group 551	Hotels, camping sites and other provision of short-stay	40	3.000

			accommodation.		
H2	Groups 552, 553		Sale of food prepared on-site, Sale of alcoholic beverages prepared on-site.	40	3.000
I1	Division 63 (except class 6340)		Supporting and auxiliary transport activities.	40	3.000
I2	Class 6340		Activities of travel agencies and tour operators, tourist assistance activities	40	3.000
I3	Group 641		Post and courier activities	40	3.000
I4	Group 642		Telecommunications	40	3.000
K1	Divisions 70,71		Real estate activities. Renting of machinery and equipment without operator and of personal and households goods	75	3.000
K2	Division 72		Computer and related activities.	75	3.000
K3	Class 7491, 7492, 7493		Labor recruitment and provision of personnel, investigation and security activities, building-cleaning activities	75	3.000
K4	Class 7430		Advertising	75	3.000
K5	Division 73, groups 741, 742, Classes 7494, 7495, 7499		Other business activities	75	3.000
M	Class 8050		Higher education	20	1.000
N	Group 851		Human health activities	40	3.000
O1	Classes 9213, 9222		Radio and television activities and news agency activities	40	3.000
O2	Groups 921 (except class 9213) y 930		Other service activities.	40	2.000

Source: DANE. Service Annual Survey (2009)

These variables of interest were analyzed within each layer for the surveyed economic activities, which enabled to determine the existence of enterprises that given their size in terms of income and/or occupied personnel could represent themselves. (Non probability “take-all” units or large enterprises)

### Size of the survey

The size of the survey is the sum of the sizes of all the strata under study. In turn the size of each stratum is the total number of non probability “take-all” enterprises.

The survey size varies from year to year, depending on the improvement of the directory and also on the behavior of the dynamics of each sector. In 2010 the total size of the SAS was of 6,748 enterprises, 5,819 of which were effective and the other 929 presented changes (some of them did not belong to the thematic coverage, others were inactive or

could not be located, among others). A total of 5,343 enterprises complied with the thematic coverage and met the SAS parameters of inclusion in the year 2010. These enterprises were distributed in the fifteen strata under study (see Table 4)

**Table 4. Sample size for the SAS**

<b>Stratum</b>	<b>Service</b>	<b>Sample Size</b>
Group 551	Hotels, camping sites and other provision of short-stay accommodation.	280
Groups 552, 553	Sale of food prepared on-site, Sale of alcoholic beverages prepared on-site.	342
Division 63 (except class 6340)	Supporting and auxiliary transport activities	324
Class 6340	Activities of travel agencies and tour operators, tourist assistance activities	103
Group 641	Post and courier activities	65
Group 642	Telecommunications	186
Divisions 70,71	Real estate activities. Renting of machinery and equipment without operator and of personal and households goods.	227
Division 72	Computer and related activities.	271
Classes 7491, 7492, 7493	Labor recruitment and provision of personnel, investigation and security activities, building-cleaning activities	1.217
Class 7430	Advertising	151
Division 73, groups 741, 742, Classes 7494, 7495, 7499	Other business activities	994
Class 8050	Higher education	154
Group 851	Human health activities	815
Classes 9213, 9222	Radio and television activities and news agency activities	54
Group 921 (except class 9213) y 930	Other service activities.	160
Total		5.343

Source: DANE – Service Annual Survey. 2010

### **Procedure to estimate totals**

The parameters to be estimated in SAS correspond to total income, gross production, and intermediate consumption; value added, occupied personnel, remunerations and net investment of the target population, from where the nominal values are obtained.

The calculation of the totals obtained does not refer to estimates given that only the group of forced inclusion enterprises was considered. This group was not expanded to the universe due to the fact that each enterprise represented itself.

### 2.2.3 Design of indicators

The variables used for SAS are:

- Variables of classification: ISIC Rev. 3, A.C. legal organization and income scales and occupied personnel.
- Variables of study: Income, expenses, remunerations, occupied personnel, paid personnel, movement of fixed assets (purchases, sales and depreciation) per type of asset.
- Calculated variables: The information obtained from the collection instruments is used for the calculation of variables or economic aggregates that enable the analysis of the behavior of the services under study (see Table 5). Moreover, these variables are presented for the publication of the research. The main calculated variables are:

**Gross Production (GP):** This is defined as the generation of goods and services designed to satisfy the needs of households and enterprises, either directly or indirectly. The gross production value is equal to the income from sales of services less costs of the goods sold that are related to the service provided and other goods (without VAT). This avoids overestimation of the production activity, given that there are commercialization margins in these activities. In the case of travel agencies (ISIC Rev.3 A.C code 6340) the cost associated with the provision of the service (sale of tourist packages) is also subtracted.

In the case of entities providing post and courier services (ISIC Rev. 3 A.C Group 641), income from telex and telegraph services and income from transfer commissions are subtracted. This is because the former belong to telecommunications activities, while the latter belong to the financial activity. Nonetheless, these are considered since some enterprises in the sector provide this type of services and could be included in the income derived from post services.

**Intermediate Consumption (IC):** This represents the value of goods (excluding fixed capital assets) and mercantile services consumed by the productive unit of services for the development of its operations during the survey period. This includes input costs, expenses for work performed by third parties, fees and technical services, lease expenses, utilities (electricity, water, sewerage system, phone, mail) advertising and propaganda, insurance (except for the one related to social benefits) fuels, royalties and other expenses inherent to the activity. Expenses caused by personnel hired through other enterprises are also included.

Expenses related to occupied personnel, taxes, loan loss provision, inventory and others, as well as depreciation and repayments, are excluded from this estimate.

**Value Added:** This is the additional value created in the production of the services process by a combination of factors, and which is obtained as the difference between the value of gross production and the value of intermediate consumption.

**Gross Investment:** This is the value of durable goods acquired by the enterprises to be used in the services' production process. The variables that make up the gross investment are described in the following formula.

Assets acquired + Improvements and Renovations – Book value of assets sold – Disposals and transfers during the year (accounting period) – Depreciation during the year (accounting period)

$$GI = AA + IR - SD + L - P$$

Where:

GI: Gross investment in fixed assets

AA: Acquisitions of new or second hand assets, or transfers received. Acquisitions include purchases and the cost of the transfers received. The latter consists in the change of an asset from one account to another (e.g., constructions in progress that change to buildings and structures).

IR: Improvements and renovations. These are expenditures for improvements, additions, alterations and renovations, which prolong the service or useful life, or increase the productive capacity of fixed assets. They constitute an additional cost and should be treated as a higher value of the corresponding assets. For instance, local expansions, constructions of new floors, etc., can be mentioned in this category

SD: Sales, disposals and transfers of fixed assets. This is the value of the fixed assets sold during the year (accounting period) according to the adjusted cost at the moment of sale, to the cost of the asset when its service or useful life has finished, or according to the book value of the asset until the time of transfer to another account.

L: Loss on sale of fixed assets

P: Profit on sale of fixed assets

Net Investment: The result of deducting the depreciation from the gross investment value in the year (accounting period).

Total productivity: The relation that shows the output in additional pesos as a result of investing one peso to produce certain kind of services. It is calculated as follows.

$$\text{Total productivity} = \text{Operational Income} / (\text{Intermediate consumption} + \text{Total personnel expenses})$$

Labor Productivity: The relation between the value added and the total occupied Personnel. It can be formally expressed as:

$$\text{Labor Productivity} = \text{Value added} / \text{Occupied personnel}$$

**Table 5. Relevant information to obtain the calculated variables**

The measurement of this variable	Permits
Operating Income	To calculate gross production
Other operating income	To calculate intermediate consumption
Occupied personnel	To measure the specific employment of the activity and obtain productivity indicators of the sector.
Expenses caused by occupied personnel.	To obtain salaries, wages and benefits  To establish the income conditions of occupied personnel, employers' labor costs and also to find a variable that enables the calculation of some indirect indicators of the value added, according to the income of the economic agents.
Employer contributions	To obtain the contributions to the sector's social security.
Contributions to ICBF <sup>6</sup> and SENA <sup>7</sup>	To learn about indirect taxes on the activity.
Movement of fixed assets	To calculate the gross investment. To calculate the net investment.

Source: DANE. Service Annual Survey.

#### 2.2.4 Design of instruments

In order to achieve an improved efficiency in the collection, comprehension and analysis of the SAS information, a single collection instrument was created and redesigned under a modular structure, based on the same scheme that was used in the 2008 form (chapter structure), This new form keeps a Module I, corresponding to a single cover sheet, which has the same information and structure of the previous form.

Module II inquires about the average of occupied personnel in the year according to the type of contract (owners, permanent or temporary employees hired directly or through agencies, and apprentice personnel) and gender. This module includes a special format for the higher education activity, in which the information on teaching personnel hired per hour, lecturers, and chair and research assistants by types of contract, is requested. In

<sup>6</sup> Colombian Institute for Family Welfare (ICBF as its acronym in Spanish): Government entity dedicated to the development and all-round protection of early childhood, children and adolescents, as well as to the welfare of Colombian families.

<sup>7</sup> National Learning Service (SENA as its acronym in Spanish): Government agency chartered to provide vocational education and training.

addition to the data on personnel per gender, the information is to be provided in a disaggregated manner separated by administrative, teaching or research personnel (full time and part time). Finally, the number of worked hours by lecturers and assistants who are hired by the hour is required. The second part of the module corresponds to the costs related to the occupied personnel.

In Module III (income, costs and expenses) the information is requested as follows:

- Numeral 1: Income by services in a disaggregate manner
- Numeral 2: Income from sales of goods
- Numeral 3: Other net operating income. The total value of income is requested at the end of this section and, in the following line, the percentage of income from external markets, in case the enterprise has carried out foreign trade of services operations.
- Numeral 4: Total costs and expenditures related to services rendered and the disaggregation of these services.
- Numeral 5: Total cost of goods sold.
- Numeral 6: Other costs and expenses incurred by the company during the year for the development of its operations; and finally total costs and expenses incurred in the year are also requested.

This module also includes a disaggregation of numerals 1 and 4 for the following activities: hotels, restaurants and bars; travel agencies and travel organizations activities; post and courier activities; telecommunications; computer and other related activities; advertising; labor recruitment and provision of personnel, investigation and security activities, private higher education; and private human health services-related activities.

Module IV examines the movement of tangible fixed assets (previous year value, acquisitions, improvements, sales, value at the end of the accounting year, profits on sale of assets) and non-tangible goods, disaggregated by type of asset, depreciation and repayments within a specific year.

Module V considers the number of establishments and the number of occupied persons and the distribution in terms of income and expenditure by regional department.

Module VI, which corresponds to Information and Communications Technologies (ICT), identifies the use of implemented technologies in the researched companies.

Finally, given the need to obtain additional information for certain service activities, specifically in the telecommunications sector, as from the 2006 survey an annex module to the survey (Module VII) was included, with special questions that enable its characterization, such as the number of subscribers and differentiated rates according to the types of the services provided.

The process for filling out these forms is completed through the Website, thus data collection and consistency of the information are more efficient, while making savings in paper, given that such forms are not printed in hard copy.

## **3. STATISTICAL PRODUCTION**

### **3.1 PRELIMINARY ACTIVITIES**

#### **3.1.1 Awareness raising**

Enterprises complete the survey on DANE's Website (*www.dane.gov.co*). They receive a presentation letter, with information on the purpose of the investigation, together with an invitation to complete the survey. When filling out the form, they are instructed on how to access the electronic form and the corresponding usernames and passwords are provided. The enterprise can view on screen or print both the processing manual and the blank form.

#### **3.1.2 Training**

After performing a preliminary assessment of the survey and of all of its activities, a workshop-seminar is organized in collaboration with the Directors of the Territorial Branches, in which the new approach, clarifications and parameters for the new survey that is being launched in the period, are presented. This workshop-seminar is carried out with all the coordinators of the survey for the offices and auxiliary offices of the Territorial Branches and DANE Central.

Similarly, the coordinators in each Territorial Branch will select and train the persons that are going to participate in the survey. Subsequently, a technical visit by the Logistics and/or Theme Experts at DANE Central is made to the Territorial Branches, in order to strengthen the analysis and critique of the information process. The general training plan is as follows:

- Introduction
- General aspects of DANE as an entity
- General aspects and objectives of the investigation
- Flowchart of the process
- Formalities to consider in the distribution and collection of the information.
- Characteristics of the collection instrument. The different modules are reviewed at this point, with a description of the objectives and the main consistency specifications, as well as cross references between modules are explained.
- Directory, operation, novelties and necessary controls related to these aspects
- Concepts, codification, quality control and practical exercises to critique the information

- Analysis of variation or changes of the main variables.
- Instructions for operating the software developed for the research, considering the system's own controls to be certain that the information is submitted in a correct manner.

### **3.1.3 Staff Hiring**

In order to hire the required personnel an invitation or call is made, as per the entity's guidelines. The résumés are reviewed to verify that they meet the requirements established according to the profiles. Subsequently, applicants are invited to take the theoretical and practical test prepared by the survey's thematic group of experts.

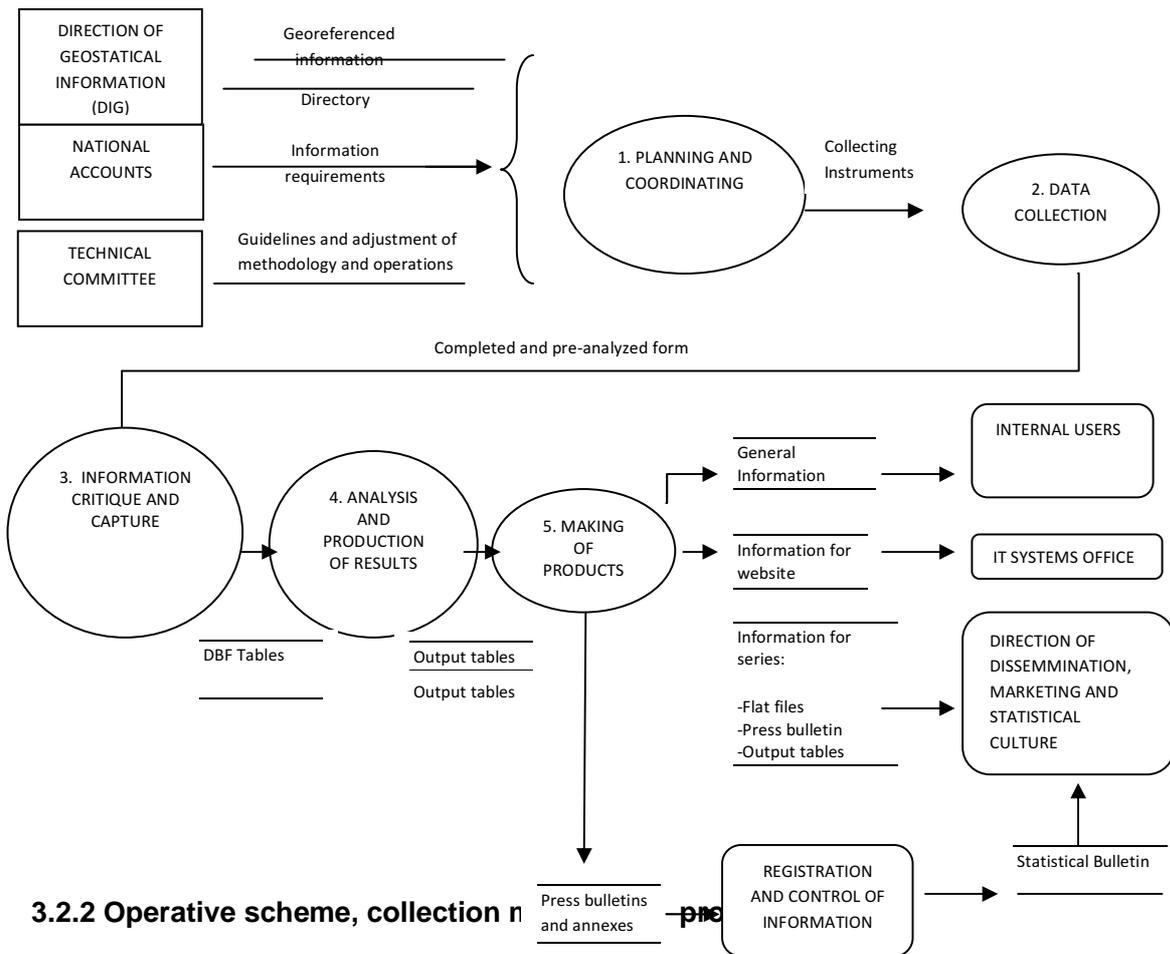
The required profiles at the Direction of the Territorial Branch level are: Technical Assistant, Field and Critique Supervisor, Collectors and Data Entry clerks. In DANE Central a Group Coordinator, Professional Support, Professional Analyst, and Technical Analyst are required.

## **3.2 DATA COLLECTION**

### **3.2.1 Operative flowchart**

Diagram 1 registers the general context of the investigation, to determine the main processes of the system, the information flows from one process to the other, whether in physical or electronic means, and the interaction of the five processes that are carried out in the development of the investigation, both at Dane Central and at the Directions of the Territorial Branches, which are necessary to obtain the SAS products.

**Diagram 1- Functional Structure of the SAS**



**3.2.2 Operative scheme, collection n**

**Operative scheme**

The operative process begins in DANE Central where all the thematic, logistics, design and IT aspects of the investigation are planned and coordinated, based on recommendations, methodological and operational adjustments and geo-referenced information.

After development of the schedule of activities, the budget and terms of reference of the necessary human resources, the following activities are carried out:

1. The design or modification of the form
2. The development or adjustment of user's manuals
3. The critique and filling out
4. The design or adjustment of the capture application
5. The selection and maintenance of the sample.

Once these activities are concluded, the training of personnel of the different work teams of the research is carried out, both at DANE Central and in the Territorial Branches. The training includes objectives of the form, novelties, critique specifications and the application system.

In the Direction of the Territorial Branches this process implies the organization, preparation and coordination of operative aspects, such as the planning of activities and the training and induction of the required staff that is going to participate in the survey's operative processes. Subsequently, the letters are organized; planning the routes by zones for their direct distribution to the sources.

Letters are sent to the auxiliary offices, so that they can in turn distribute them to each one of their sources. Similarly, the Directors of the Territorial Branches deliver these letters to the sources in their cities. The directory is updated when the sources are notified about the novelties that may arise (e.g. unallocated, inactive, liquidated, change of sector, among others)

Data collection is performed through DANE's Territorial Branches over approximately five months. The staff in charge of collecting the information and its critique is also responsible for advising and providing the necessary technical assistance to those enterprises that so require it, whether in person, by email, or by phone.

A previous critique of the information is performed in the Territorial Branches, aiming at the improvement of the quality of the response and to advise the source on how to minimize the amount of possible errors, as well as on the return of forms for processing. If the form presents errors, a list of such errors is prepared and the source is required to make the respective corrections. Once the source has made the necessary corrections and submits the form, DANE issues an acknowledgement of receipt.

The capture of information process is carried out using an electronic form that can be found on DANE's Website, and which the sources can access using the assigned password to log on. The directory with the available data on the enterprises is included in the system; therefore the general identification information on each source has been previously filled out in the form. The company will verify this information and make the necessary corrections or updates, and report them accordingly in the space reserved for comments.

As the source includes the requested data, the system performs verifications on the consistency of the information and in the event that an error is found, the corresponding alerting message is displayed and the enterprise is required to correct the error, or take a note of it.

### **3.3 DATA TRANSMISSION AND PROCESSING**

#### **3.3.1 Data Transmission to DANE Central**

According to the established schedule for the development of the operation DANE Central performs regular partial closings through the Logistics of Services division, for which the Directions of the Territorial Branches are required to achieve the percentage of progress requested on specific dates.

##### **Consolidation of files**

Upon capturing the information, the system automatically starts to consolidate the database online. Additionally, the Territorial Branches monitor the quality of the collected information, as well as coverage by Branch and auxiliary office.

#### **3.3.2 Data Processing**

##### **Verification of the internal consistency of data and settings**

The fundamental objective of this stage is to be able to achieve consistency of the information, according to the established parameters in the manual with instructions on the completion and analysis of the survey form, for further cleansing in the system. The procedure is as follows:

- Detection of missing, invalid or incompatible data.
- Location of outliers through the comparison with others reported by the same sources in previous operations and with the results of other surveys such as Quarterly Services Sample (QSS), the Hotels Monthly Sample (MMH for its acronym in Spanish), among others.
- Verification of the accuracy of the pre-filled information.
- Completion of missing information with the help of the source.
- Verification that the information has been cross-checked on the form, since this prevents further drawbacks in the process of the recording of information.
- Whenever a gap or inconsistency is found in any box of the form, the corresponding explanations and clarifications should be given to the informant; also, the observations are recorded and the corrections and modifications are made. This improves the quality and efficiency of the research in a permanent manner.

The data capture application designed for the investigation includes a series of reports in the menu that enable users to have control of the sources that have not rendered any

information. Additionally, it is possible to identify the missing sources if there are novelties different from the lack of information. These cases may include: Enterprises that are not located in the address provided in the directory; or enterprises that are not economically active; or enterprises that do not exist anymore, amongst others.

For the design and settings of the application specifications related to consistency are previously established, in order to detect the inconsistent data within each form at the moment of data capture. When this occurs, the program sends a message requesting correction or a clarifying note.

These verifications are individually performed at enterprise level. The detection of other possible inconsistencies (such as extreme values, outliers, and not according to validation specifications) is performed using statistical packages (for instance SAS)<sup>8</sup> outside the application, prepared according to specific requests.

### **Imputation and/or coverage adjustments**

This stage seeks to obtain a defined procedure or methodology that would help to impute the missing data of the records or sources that have not yielded the requested information, or of those sources that present any novelty different from the lack of information (as it happens with those sources that are not located at the address provided in the directory or those that are not economically active, or that have been already liquidated, amongst others).

The imputation can be carried out through the use of some methods that are outlined in this methodology, depending on the situation of the enterprise and that are explained as follows:

*Donor based imputation (imputation through the use of a donor source):* This method is used when the source does not present the SAS in the current period and there is no information for the current period of the Monthly Service Sample (MSS), the Travel Agencies Quarterly Sample (TAQS), or the Hotels Monthly Sample (HMS), depending on the activity of the source. In this case a source that yields information for the current period that belongs to the same economic activity, to the same city and that has the same number of personnel and amount of income in the previous year. Variations of the required variables of this donor source are calculated and applied to the same variables of the source to be imputed for the current period (missing period)

*Imputation with information of the MSS, TAQS and HMS:* This method is used for the enterprises that did not provide information to the SAS in the survey period (current), but that did report the information in another research of the services sector (for instance MSS, TAQS or HMS).

The total amount of income in the year reported by the circumstantial survey plus the average of occupied personnel in the reported year are used to impute income and personnel figures in the current year of the source in the SAS.

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<sup>8</sup> In this case, SAS corresponds to "Statistical Analysis Software" different from the acronym SAS that has already been used in this document, and which stands for Service Annual Survey.

With this information it is possible to obtain the income and personnel variations. When applying the income variation, the expenses imputation is carried out.

### **Generation of output tables**

The main codification criterion of the enterprises under study is their main economic activity according to the ISIC. The codification for the SAS is prefilled in the capture application. An order number is assigned to each company for its identification; this number remains in the system for processing of data and the development of the survey in subsequent years.

The capture application saves the information as it is taken; and is directly recorded in a single file for the respective period. Backup copies of the files are made, thus enabling the recovery of the information in case of data damage or loss.

Once the consistency analysis is performed, the database is consolidated and sent to the individual responsible for processing the output tables for the press release. Through a program in SAS<sup>9</sup>, variables and indicators are calculated and graphs are produced according to the format that has previously been designed by the thematic area, based on the requirements and the disaggregation level to be published. The Service Annual Survey results are presented in charts classified by activity and by legal organization. It is necessary to bear in mind that the user cannot access the micro-data directly, according to the statistical reserve of the information.

## **3.4 METHODOLOGY FOR PANEL CONSTRUCTION**

### **3.4.1 Objective**

To design a methodology that could measure the evolution of the variables studied in the SAS, based on the information obtained in this research on an annual basis.

### **3.4.2 Justification**

Given the incorporation of new enterprises to the SAS, as a result of the improvement of the Economic Directories that DANE has been completing, the direct comparability between results is lost (for instance, 2008 to 2009), due to the different sizes of the directories (affected by the enterprises that are added).

In order to connect the results of these two years in the calculation of evolution it is necessary to isolate the effect of different events to those that are proper of the dynamics of the economy. For this reason, DANE developed and implemented a panel methodology that enabled the identification of the enterprises' events that are part of this dynamics and of those that are not related to it. With the first group of companies the calculations of evolution of each variable researched in the survey are performed.

### 3.4.3 Panel design

The following scheme illustrates the main events identified as part of the economic dynamics, which determine that the company DOES make part of the panel for the calculations of the activity's evolution indicators.

**Diagram 2 - Companies that are part of the Panel**



Status of the enterprises in year t-1	Status of the enterprises in year t
Active	Active
Active	Liquidated or inactive
Inactive	Active, inactive or liquidated
Active	Merged, absorbed or divided
Does not exist	Started activities in the year t
Active	Change of activity

Source: DANE

According to the codes established in the Manual of Novelties of the SAS, the novelty codes of the enterprises that enter the panel can be found in table 6. The description of novelties is found in table 7.

**Table 6. Criteria for the construction of the panel – comparison of novelties**

Entering the panel	year t-1	year t
Enterprises with novelty code	99	1,2,3,10,12, 13, 98, 99, 41
	98	1,2, 3,10,12, 13, 98, 99,41

9	1,2,3,10,12, 13, 98, 99,41
3	1,2, 10,12, 13, 99,41,3
1,3,10,12,13	99
-	9
1	1
41	1

Source: DANE

### Diagram 3 Companies not entering the panel

On the other hand, the events that are not part of said dynamics and, in that sense are NOT part of the panel:



Status of the enterprise in the year t-1	Status of the enterprise in the year t
With no information	They enter the SAS but were created before 2009
Active	Not located
Not located	Appeared and submitted information

Source: Dane

**Table 7. Novelty codes – Service Annual Survey**

Code	Description
1	Liquidated, did not operate during the reference period of the research.
97	Liquidated with a partial period of operations.
2	Changed sector by the operative process
19	Changed sector by wrong classification and does not belong to the universe under study.
3	Inactive
4	Not located, with higher probability of transfer.
41	Not located, with higher probability of closing.
5	Still pending to provide information
6	Duplicated.

7	Relocated to another regional
8	Enters by transfer from another regional.
9	Enters the sample as new (New enterprises in the economy)
10	Merged
12	Split
13	Absorbed.
18	Housing developing an economic activity.
98	For the imputed as novelty 9 with operations starting in the previous year or with wrong information.
99	Provided information

Source: DANE

### **3.5 QUALITY CONTROL METHODS AND MECHANISMS**

#### **3.5.1 Validation and consistency rules**

Some specifications are made for each variable of the form for the validation and consistency of the information. Those specifications are included in the capture application, in which the following are detailed: The mnemonic name; the type and length of the field; the value that the variable should have; the condition for its consistency; the message that should be presented in case it is not consistent; and the type of error.

Thus, if the enterprise completes the form using the Website, the system will indicate if there are missing or inconsistent data and will give the option of recording the information, editing it, or of including the corresponding observation/remark. In a similar manner, this application shows the inconsistencies presented (total sum of rows and columns, inter-module crosses), which have to be verified with the source in order to correct and make the respective remark when needed.

Some of the so-called forced errors can be validated under the full responsibility and knowledge of the survey coordinator. Finally, the system produces the general disaggregated variables, as well as the data of the previous year, in order to examine the variation between the two years. If this variation is high (more than 20% over the previous year value) this is indicated in red color. The source has to provide the corresponding explanations where necessary. These values were agreed in discussions with the internal working groups and based on the behavior of the historic information.

#### **3.5.2 Control instruments for supervision**

In the different stages of the collecting process, some activities are carried out in order to monitor and guarantee quality. Mainly, the material to be distributed is verified, the proofs of delivery are prepared and the directory is updated daily with the novelties presented in the delivery of the material, in the reception and in the review of the information. In addition, the verification of inconsistencies is performed through the capture program, the pre critique and critique, and also partial submissions to DANE Central are made.

#### **3.5.3 Indicators for the quality control of the research processes**

To obtain the indicator all of the forms assigned by the system to each operator should be verified together with the respective analysis to all the variables in the card; this is carried out with the help of the diagnosis and checks between modules that the application generates for each of the sources. The technical assistant is responsible for completing the quality indicator module that can be found in the survey application to obtain the indicator for each selected form. Through this module the report from the person responsible of the process and the report from the Direction of the Territorial Branch are obtained.

In the first place, a quality indicator (QI) for every responsible of the process should be calculated. This is defined as the arithmetic average of the scores for each one of the forms that were revised by the technical assistant of the project.

$$QI(PR)_{sample} = \frac{\sum QI(form)}{\#forms};$$

In this way, the quality indicator (QI) of the critique process for the Territorial Branch is calculated as the average of the indicators for every person responsible of the process (PR) in the SAS. If in the Territorial Branches there are k persons responsible for the process, then the QI per Territorial Branch is:

$$IQ(Territorial) = \frac{\sum QI(PR)}{k};$$

Where the ideal value is 100%. Those values below 92% have to generate a corrective action.

### **3.5.4 Opportunity Indicator**

On the other hand, the opportunity indicator is developed in order to keep track of and monitor the main activities that are part of the processes of production, analysis and dissemination of results, enabling the identification of the reasons that caused delays in the programming, accompanied by action plans that can guarantee the accomplishment in the delivery of the product to the users satisfaction.

To obtain the indicator the following are recorded: The activity, the person responsible of the grading, the date scheduled, the date executed, the corresponding rating (1 if it satisfies and 0 if it does not satisfy), the cause for unfulfilment, actions taken in view of this breach and the respective evidences.

### **3.5.5 Response rate by source (TRF as its acronyms in Spanish)**

The objective of this indicator is to determine the level of coverage in terms of the researched sources versus the number of effective sources. This is defined as the number of enterprises collected (including enterprises that provide information and whose novelties are verified), different from the enterprises that are missing information (in debt) (see novelty 5) divided by the total of enterprises sent to the field. The formula is:

$$\%TRF = [(TD-FD) / TD] * 100 \%$$

Where:

TD = Total directory of enterprises sent to the field.

SD = Sources missing information (in debt)

### **3.5.6 Non-imputation Indicator at central level (INIC as its acronym in Spanish)**

The objective of this indicator is to determine the non-imputation level to which the research is submitted to, in which the completeness and consistency of the consolidated information is established. The indicator also enables to give a mark to the missing data, the outliers or the inconsistent data in the information total.

$$INIC = (TD - FNC) / TD * 100\%$$

Where:

TD = Total directory or expected sources sent to the field

FNC = Non coverage sources (Total of sources with imputed information for missing data)

100% is the ideal value. Values below 92% have to generate a corrective action.

### **3.5.7 Reliability Indicator (ICFA as its acronym in Spanish)**

This indicator is the simple average of all the indicators of the processes in the chain that enable the delivery of the research results, from those calculated in the Territorial Branches to the ones calculated at DANE Central. The objective of this indicator is to determine the level of reliability of the investigation's productive processes, as well as the difference between the average of the calculated indices and the reference level established. Its formula is:

$$ICFA = (TRF + INIC+ IC) / 3$$

Where:

TRF = Response rate by source

INIC = Non-imputation index at central level

IC = Quality index\*

(\*) Applicable to every virtual closing carried out by the Territorial Branches, Offices and Auxiliary offices

100% is the ideal value. Values below 92% have to generate a corrective action

## **4. ANALYSIS AND DISCUSSION OF RESULTS**

## **4.1 STATISTICAL ANALYSIS**

The Services Annual Survey arises from the need to have information for the monitoring and analysis of the behavior of the services sector in Colombia. Based on this premise, the descriptive analysis consists in the calculation of all the variables measured in the survey, in the first instance. Economic characteristics are determined and the population observed in the sample is described as from the results of the frequencies of the descriptive variables.

The SAS receives feedback from different sources, both at domestic level and from abroad, which provide important information for the development of the research. These sources are:

- International organizations like the UN, EUROSTAT, UNCTAD, CEPAL, among others.
- National organizations mainly Ministries, Superintendences and some guilds or trade entities
- Producer Price Index
- Companies
- Consumer Price Indices
- National Accounts
- Inter-institutional Committee
- Geostatistics Direction
- Technical committee

## **4.2 CONTEXT ANALYSIS**

In order to reinforce the analysis of consistency of the information process, some background documents by activity are prepared, wherein the most crucial aspects of the country's economic behavior in the period under study are described. Additionally, according to the availability of data for each of the activities studied, the results of the survey are compared with other sources of information in order to verify the consistency of the results that are published in the SAS. These sources can come from either internal production (such as the annexes of the GDP bulletin prepared by the Direction of Synthesis and National Accounts, and the statistical annexes of the MMH and the QSS), or from external sources such as the information produced by guilds, ministries, superintendences, research institutes, etc.

The results and any press releases are submitted to the Inter-institutional Services Committee before their publication. This Committee is made up of a delegate from the Banco de la República (Central Bank of Colombia), the Ministry of Commerce, Industry and Tourism, the National Planning Department (DNP for its acronym in Spanish) and DANE.

## **5. DISSEMINATION**

### **5.1 DATA REPOSITORY MANAGEMENT**

Since 1995, the information captured in the SAS has been organized in DBF format and stored in DANE's server (systema20)

The processing information on all the survey is in SAS format and it is stored in DANE's server (systema44)

### **5.2 DISSEMINATION PRODUCTS AND INSTRUMENTS**

DANE fulfills its obligation to disseminate information through data banks in the principal cities of the country. SAS information is disseminated through press bulletins, with its respective annexes, or press releases and presentations, which can be found on DANE's Website or in the data banks.

A descriptive analysis of the main variables is performed in the press bulletins by activity and legal organization. The main variables calculated are: Gross production, intermediate consumption, value added, employment and certain indicators as average remuneration, labor productivity and technical coefficient. The corresponding statistical tables are appended to this document, which contain detailed information by the sections defined in the thematic content. These tables are described as follows:

Table 1 Part 1 Main Variables, average remuneration, and productivity of the services under study

Table 1 Part 2 Main variables, personnel expenses.

Table 1 Part 3 Main variables: Gross production, intermediate consumption, value added.

Table 1-1 Part 1 Main variables: Occupied personnel

Table 1-1 Part 2 Main Variables: Occupied personnel (conclusion)

Table 1-2 Main variables: Personnel remuneration

Table 1-3 Main Variables: Components of intermediate consumption

Table 1-4 Main Variables: Other costs and expenses that are non-components of intermediate consumption.

Glossary

Once the endorsement for the publication has been received from DANE's Director, the press office publishes the press bulletin and sends the press release. The Direction of the Economic Thematic of Services updates the data in the charts published on DANE's Website, along with the series of the main variables for each one of the activities. This information is received both by internal and external clients.

Internal Users:

- Data Bank
- National Accounts
- Press Office
- IT Office
- Editions

External Users

- Government
- Guilds
- Researchers
- Media
- International organizations

## **6. RELATED DOCUMENTATION**

The related documentation is disaggregated as follows:

- SAS Methodology (previous versions: 1 to 5): This document summarizes the complete permanent revision process, updating and modernization of the survey.
- Valuation of processes: This document is a guide for this research, describing the interaction and interrelation of the processes and sub-processes that are necessary to carry out the activities that participate in said research and applies the methodology of background diagrams and of levels

- Methodological card: Describes all the important information of the survey in a succinct manner.
- Procedure to produce and analyze results: This presents the results of the research through activities like consolidation, validation, purification, calculation, revision and analysis of the processed information.
- Manuals for filling out the SAS: They include instructions for the correct filling out of the survey by the researched enterprises.
- Critique or Reviewing Manual: Describes the guidelines to be followed by the reviewer of the information, to ensure data consistency, once it is sent to DANE Central, as well as the instructions for the analysis of the information by the Logistics area.

## GLOSSARY<sup>10</sup>

**Annual variation:** Percentage variation calculated between the reference period and the same period of the previous year.

(OECD, Data and Metadata Reporting and Presentation Handbook, 2007, Page 52 [http://ec.europa.eu/eurostat/ramon/coded\\_files/OECD\\_data\\_metadata\\_report\\_handbook\\_EN.pdf](http://ec.europa.eu/eurostat/ramon/coded_files/OECD_data_metadata_report_handbook_EN.pdf))

**Apprentice personnel:** This refers to employees hired through apprenticeship contracts for a definite time, not exceeding two years, and who are granted a monthly allowance ranging between 50% and 100% of the minimum wage, according to their degree or level of training. (C.f. Article 30 Act 789 of 2002.)

**Compliance:** Fulfillment of a requirement (DANE, Annex 1, "Manual del sistema de gestión de la calidad: Definiciones y conceptos" (Manual of the Quality Management System: Definitions and Concepts), August 2010, page 1)

**Data Collection:** Surveys and other methods to obtain information from different sources, including administrative sources. European Union, Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics (Official Journal of the European Union No L 87, 31.3.2009, p.164 - 173).

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:087:0164:0173:EN:PDF>

Context: In the case of the SAS, the field work procedure that has been established to visit the informant sources and to fill out the forms according to the source's service activity. As from 2006, the SAS data collection is mainly carried out by means of an electronic questionnaire.

**Enterprise:** An institutional unit in its capacity as a producer of goods and services. This is an economic agent with autonomy to adopt financial and of investments decisions and with the authority and responsibility to assign resources to the production of goods and services, and that is able to carry out one or several productive activities. The enterprise is the statistical unit for which financial statistics are compiled for the income and expenditures accounts and for the capital financing accounts, in the System of National Accounts – SCN (for its acronym in Spanish) (DANE, International Standard Industrial Classification ISIC Revision 3 A.C., 1998)

**Establishment:** An enterprise, or part of an enterprise, which independently engages in one, or predominantly one, kind of economic activity, at or from one location, or within one geographic area, for which, data exist or can be gathered with some precision as a statistical unit of observation, or can meaningfully be compiled. Also they permit the calculation of production and its costs. (United Nations, Department of Economic and Social Affairs, Statistics Division, International Standard Industrial Classification of All Economic Activities Rev.4, 2009, page16).

**Fixed Assets:** The present value of all the goods owned by the economic unit- whose service life is longer than one year- that have the capacity to produce or provide the

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<sup>10</sup> International Standard Industrial Classification of All Economic Activities, Revision 3 Adapted for Colombia. 1998.

International Recommendations on Statistics of the Distributive Trades and Services DIESA Department of International Economic and Social Affairs, Statistics Division, UN Series M No. 57, New York, 1976.

necessary conditions for the generation of goods and services. This includes: Fixed assets owned by the economic unit rented to third parties; fixed assets normally used by the economic unit, even when they are temporarily assigned to other economic units of the same company; those produced by the economic unit for their own use and fixed assets obtained in leasing activities. It excludes: Fixed assets that are normally used by other economic units of the same company; fixed assets in operating leasing; minor repairs of fixed assets; and maintenance and repair expenses. "Instituto Nacional de Estadística y Geografía" (the National Institute of Statistics and Geography) México, (cf. INEGI (for its acronym in Spanish), 2009: 5).

<http://www.inegi.org.mx/est/contenidos/espanol/proyectos/censos/ce2009/glosario.asp>

**Income:** A value received by the enterprise in return for the services rendered to other enterprises and households. (EUR Lex – Fourth Council Directive 78/660/CEE of 25 July 1978, based on Article 54 (3)(g) of the Treaty on the annual accounts of certain types of companies.

[http://unstats.un.org/unsd/publication/SeriesM/SeriesM\\_67rev1S.pdf](http://unstats.un.org/unsd/publication/SeriesM/SeriesM_67rev1S.pdf)

**Integral Salary:** The integral salary may not be less than ten (10) times the minimum monthly wage, plus the benefits factor corresponding to the company, which shall not be less than thirty percent (30%) of that amount. The amount of the benefits factor is exempt from withholding tax (Substantive Labor Code)

[http://www.secretariassenado.gov.co/senado/basedoc/codigo/codigo\\_sustantivo\\_trabajo\\_pr004.html](http://www.secretariassenado.gov.co/senado/basedoc/codigo/codigo_sustantivo_trabajo_pr004.html)

**Intermediate consumption:** Represents the value of non-durable goods and services used as inputs in the production process to produce other goods and services. (cf. United Nations Organization, System of National Accounts, 1993, paragraph 6,147.)

<http://unstats.un.org/unsd/sna1993/tocLev8.asp?L1=6&L2=8>

**Labor Productivity:** A measure that relates the value added to the total of occupied personnel. It measures labor efficiency and indicates that, in average, each employee produces a certain amount of value added. Gross value added per worker per hour worked (cf. "Estudios de métodos, Serie F, No. 85 Manual de contabilidad nacional Cuentas nacionales: introducción práctica" (Studies on methods, Series F., No. 85 National Accounting Manual, National Accounts: Practical introduction), 2006, page 13, [http://unstats.un.org/unsd/publication/seriesf/Seriesf\\_85S.pdf](http://unstats.un.org/unsd/publication/seriesf/Seriesf_85S.pdf))

**Local services unit:** An enterprise or part of an enterprise (for example, a workshop, a factory, a warehouse, a store, an office, a mine or a distribution station) that performs production activities in or from a single location. United Nations, Department of Economic or Social Affairs, Statistics Division, Statistical Report, Series M, No. 4/Rev. 4, International Standard Industrial Classification ISIC Revision 3 A.C.2009, page 17)

**Press Bulletin:** A document that presents the results of the statistical research for a specific reference period. (cf. DANE, 2009: 52).

<http://www.dane.gov.co/files/investigaciones/fichas/IPP.pdf>

**Non-compliance:** Unfulfilment of one requirement. (c.f. Annex 1 al "Norma técnica de calidad de la Gestión pública" (Technical Quality Standard in Public Management) NTCGP, 2009, page 29)

**Context:** in the case of the SAS the definition applies to the deviation or the absence of one or more characteristics related to quality, including security in the operation, or in one or more elements of the quality system in relation to specified requirements.

**Occupied personnel:** Personnel that works in the enterprise or establishment hired directly by it or through specialized companies; also the owners, partners and family without fixed remuneration.

**Periodicity:** Frequency of performance or execution of a specific activity.

**Permanent employment:** The average number of occupied persons with an undefined term contract. (Consider article 47 of the “Código Sustantivo del Trabajo” (Substantive Work Code)).

**Productivity:** it is commonly defined as the ratio between a measure of output volume and a measure of input volume. While there is no disagreement on this general notion, a look at the productivity literature and its various applications very quickly reveals that there is neither a unique purpose for, nor a single measure. (OECD, <http://stats.oecd.org/glossary/search.asp>)

**Reference Period:** The year for which the information is collected.

*Context:* In the SAS the reference period for the survey is the year immediately preceding the year of data collection.

**Services:** Services are heterogeneous products generated every time they are requested, over which the user cannot establish ownership rights. Services cannot be traded separately from their production, nor transported or stored. It is sold the right to use a service whenever is required. (United Nations Organization, System of National Accounts, 1993, paragraph 6, 8.)

Group of activities developed by economic units towards the generation or making available a wide range of intangible products to households or enterprises. Services have a variety of features according to the needs of those who request them. (United Nations. International Standard Industrial Classification of All Economic Activities. ISIC, Rev. 4 A.C.)

**Social benefits incurred:** The amounts that a worker regularly or occasionally receives from an employer in accordance with the Law, such as: Common employer social benefits, special and extra bonuses or agreed social benefits, other than wages and salaries, as stipulated in the Colombian Labor Regime and the Substantive Labor Code. (United Nations [http://unstats.un.org/unsd/publication/SeriesM/SeriesM\\_48rev1S.pdf](http://unstats.un.org/unsd/publication/SeriesM/SeriesM_48rev1S.pdf)).

**Source of Statistical information:** This refers to the unit providing statistical information (cf. SDMX, Statistical Data and Metadata Exchange initiative, sponsored by BIS, ECB, Eurostat, IMF, OECD, UNSD and World Bank, 2009)

**Subscriber:** A natural or legal person, governed by private or public law that has signed a contract with a specific entity for the provision of a telecommunications service. (Glossary of Terms, “Reglamento General a la Ley de Telecomunicaciones Reformada” (General Regulations on the Amended Act of Telecommunications), RO 404: 4-Sep-2001).

**Technical Coefficient:** The percentage ratio between intermediate consumption and gross production. This indicator measures the amount of goods and services of other economic sectors used during the reference period in the production of the service. (DANE, Methodology of National Accounts of Colombia. Goods and services operations)

**Temporary occupied personnel:** The average number of occupied personnel temporarily hired by the enterprise. In all cases the fixed-term labor contract has to be in writing and its duration cannot exceed three years. (cf “Código Sustantivo del Trabajo Colombiano” (Colombian Substantive Labor Code), Article 46).

**Temporary occupied personnel hired directly by the enterprise:** Personnel hired on a fixed-term contract to carry out specific tasks for an agreed remuneration.

**Temporary occupied personnel provided by specialized companies:** Temporary personnel without any labor or contractual obligations with the enterprise or establishment, hired through companies specialized in the provision of personnel.

**Universe of the study:** Economic units formally established (with Tax Identification Number (NIT for its acronym in Spanish) and mercantile registration certificate<sup>11</sup>), located in the national territory and engaged in the provision of services such as: Accommodation, activities of travel agencies, post and courier activities, computer and related services, advertising, labor recruitment and provision of personnel, research and security, and telecommunications. (U.S. Bureau of Labor Statistics, Online glossary. <http://www.bls.gov/bls/glossary.htm>)

**Validation or verification:** The process of confirmation that the particular requirements for a specific intended use are fulfilled, by means of examination and provision of objective evidence (ISO 8402 defines the basic and fundamental terms related to quality concepts)

**Value Added:** The greater value created in the production process of services due to a combination of factors. It is obtained as the difference between the value of gross output and intermediate consumption.

(International Recommendations on Statistics of the Distributive Trades and Services (IRS DTS), Page 62, 1976  
[http://unstats.un.org/unsd/publication/SeriesM/SeriesM\\_57S.pdf](http://unstats.un.org/unsd/publication/SeriesM/SeriesM_57S.pdf))

**Wages and Salaries Incurred:** The total remuneration, fixed or ordinary, in cash or in kind, payable to the employee whether periodically or deferred, as compensation for the services provided to the business enterprise during the accounting period, before deductions such as social security contributions, taxes, unions or employees cooperatives. (United Nations, International Recommendations for Industrial Statistics, Statistical Report, Series M 48 Rev.1, 1984, page 41.

[http://unstats.un.org/unsd/publication/SeriesM/SeriesM\\_48rev1S.pdf](http://unstats.un.org/unsd/publication/SeriesM/SeriesM_48rev1S.pdf)

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<sup>11</sup> *The Mercantile Registry enables all entrepreneurs engaged in any commercial activity to act publicly as traders or certify themselves as merchants, as well as the access to information to meet potential clients. Moreover, it provides business legal security and serves as a gateway for funding, training and business support programs. All natural and legal persons engaged in merchant activities in Colombia are required to be registered in the Mercantile Registry.*

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# ANNEXES

## Service Annual Survey's form



### SERVICE ANNUAL SURVEY

Economic Activity For use by DANE only

**IMPORTANT:** Data requested by Dane in this form are strictly confidential and have not taxation purposes and cannot be used as evidence in court. Act 79 of 1993, Article 5

**1. IDENTIFICATION**

Serial Number	TIN	1	ID	2	F.I.C.	3	Mercantile Registration Certificate/ Non-for-profit entities / Bidders	
		1		2		1	2	1
	No. _____			D. V. _____			Chamber	Enrollment

**2. GENERAL INFORMATION**

1. Company name	_____
2. Trading name	_____ 3. Acronym _____
4. Main company address	_____
5. Municipality	_____ 6. Department _____
7. Phone	_____ 8. Fax _____
9. E-mail	_____ 10. Website _____
11. Mailing address	_____ 12. Municipality _____
13. Department	_____ 14. Phone _____
15. Fax	_____ 16. Email _____
17. Website	_____

**3. Type of company**

General Partnership	01	Comandite or limited copartnership	02	Joint-stock company	03	Limited liability company	04
Stock or chartered company	05	Mixed-economy company (partly private and partly	06	Branch of a foreign company	07	Industrial and commercial State company	08
Sole proprietorship	09	De facto corporations / Temporary associations for	10	Natural person	11		
		Cooperative enterprise	12,1	Pre-cooperative	12,2	Auxiliary institutions of solidarity economy	12,3
		Services company with a public cooperative Administration	12,4	Employees Fund	12,5	Associated work cooperative	12,6
		Mutual Association	12,7	Solidarity-based health company	12,8	Community company	12,9
		Federation and confederation	12,10	Associative Work Company	12,11		
Non-for-profit Entities	13	Simplified joint-stock company	14	Other	99,0	Which _____	

**4. Effective dates**

From: | y | y | y | y | m | m | d | d |

Until: | y | y | y | y | m | m | d | d |

**5 SOCIAL CAPITAL COMPOSITION**

1. National	1.1 Public _____ %	2. Foreign	2.1 Public _____ %
	1.2 Private _____ %		2.2 Private _____ %

**6. Company Status**

Active   Pre-operational Stage   In agreement with creditors

Intervened   In liquidation   Restructuring Agreement

Other   Which \_\_\_\_\_

**7. NUMBER OF ESTABLISHMENTS that make up the company according to the economic activity performed.** \_\_\_\_\_

1. Agriculture \_\_\_\_\_ 2. Mining \_\_\_\_\_ 3. Manufacturing \_\_\_\_\_ 4. Utilities \_\_\_\_\_

5. Building and civil works \_\_\_\_\_ 6. Commercial activities \_\_\_\_\_ 7. Restaurants and Hotels \_\_\_\_\_ 8. Transport and storage \_\_\_\_\_

9. Post and communications \_\_\_\_\_ 10. Financial and other business services \_\_\_\_\_ 11. Community and personal services \_\_\_\_\_

**8. ECONOMIC ACTIVITIES THE COMPANY IS ENGAGED IN** \_\_\_\_\_

( Describe the main economic activities in order of importance )

Company's economic activity	ISIC REV . 3 A.C (4 digits)	Percentage of total income
1.		
2.		
3.		
4.		
5.		
<b>TOTAL AMOUNT OF INCOME EARNED BY THE COMPANY DURING THE YEAR (the sum of percentages should not exceed 100%)</b>		

**3. PERIOD OF OPERATION OF THE COMPANY** \_\_\_\_\_

1. Year of initiation of operations

2. Months of operation in the year

3. If the number of months of operation were below 12, indicate the reason

Liquidation   Enlargement

Strike   Merger

Transfer   Other

\_\_\_\_\_

Specify others \_\_\_\_\_

Number of departments with service activities provided by the company.

COMPLEMENTARY INFORMATION OF THE COMPANY

1. STRUCTURE OF THE COMPANY

1. Is the company a subsidiary of another company?  YES 1  NO 2
2. If YES, ¿what is the nationality of the parent company? \_\_\_\_\_
3. Does the company control one or more affiliates or subsidiaries?  YES 1  NO 2
4. Does the company control foreign affiliates or subsidiaries?  YES 1  NO 2
5. If you answered YES to question 4, how many foreign subsidiaries are there, and in which countries?

Countries	Country Code	Number of affiliates	Number of subsidiaries

6. Does the company control branches or agencies?  YES 1  NO 2
7. If the answer to question 6 is YES, how many branches or agencies are there are per country?

Countries	Country Code	Number of affiliates	Number of subsidiaries

2. The company carried out foreign trade operations of services during the year

YES  NO

3. PERIOD OF OPERATION OF THE COMPANY

1. Year of initiation of operations
2. Months of operation throughout the year
3. In case the months of operation during the year are less than 12, please indicate the cause
- Liquidation  1  Enlargement  4
- Strike  2  Merger  5
- Transfer  3  Other  6
- \_\_\_\_\_ Specify others

Number of departments with service activities provided by the company

City and date of processing			Legal representative of the company		Person that completed the form and who may be contacted in case of questions	
City: _____			Name: _____		Name _____	
Day	Month	Year	_____		Position: _____ Phone: _____	
			_____		Mobile Phone _____	
					E-mail: _____	

**MODULE II- AVERAGE OF OCCUPIED PERSONNEL AND EXPENSES FOR  
REMUNERATIONS INCURRED IN THE YEAR**

Do not include indirect taxes (VAT and consumption taxes) in the partial totals

<b>AVERAGE OCCUPIED PERSONNEL IN THE YEAR</b>			
<b>Type of contract</b>	<b>Average personnel occupied/year</b>		
	Women (1)	Men (2)	Total (3) = (1 + 2)
1. Owners, partners and family (without fixed remuneration)			
2. Permanent personnel (indefinite-term contract)			
3. Temporary personnel hired directly by the company			
companies (only for companies specialized in the provision of personnel)			
5. Temporary personnel provided by other companies			
6. Apprentices or students hired under agreement (with universities, or with technological or vocational institutions)			
7. TOTAL (lines 1 to 6)			

<b>COSTS AND EXPENSES INCURRED BY OCCUPIED PERSONNEL IN THE YEAR (in thousands of pesos)</b>	
1. Integrated salary for permanent personnel	
2. Wages and salaries of permanent personnel (including payments in cash and in-kind, overtime and Sunday surcharges, commissions on sales, permanent per	
3. Social benefits of permanent personnel (holidays, legal and extra bonuses' payments, severance payments, interests on severance payments)	
4. Salaries and benefits of temporary personnel hired directly by the company	
5. Salaries and benefits of temporary personnel on mission (only for companies specialized in the provision of personnel)	
6. Compulsory employer contributions to health, labor occupational hazards insurance (ARP for its acronym in Spanish) and pension funds, for permanent and temporary personnel hired directly by the company, temporary personnel on mission, and apprentices (excluding pension payments for apprentices)	
7. Payroll contributions (SENA (Government agency chartered to provide vocational education to the Colombian workforce), family compensation funds, and the ICBF - Colombian Family Welfare Institute - Government entity in charge of protecting minors (girls, boys and adolescents) and quaranteeing their rights)	
8. Voluntary contributions to life insurance or prepaid health systems	
9. Expenses incurred by apprentice personnel or students hired under agreement (with universities, technological, or vocational institutions)	
10. Other personnel expenses not included above (e.g. transportation allowance). Please specify under Observations	
<b>11. TOTAL EXPENSES INCURRED BY OCCUPIED PERSONNEL (lines 1 to 10)</b>	

**MODULE III. INCOME EARNED, COSTS AND EXPENSES INCURRED IN 2011 (thousands of pesos)**

Do not include indirect taxes (VAT and consumption taxes) in partial totals

**NET INCOME EARNED THROUGHOUT THE YEAR**

<b>1. Income by services rendered</b>		
CPC Code	Name of the services rendered	Value of income earned throughout the year (thousands)
	Specify in observations/comments/remarks	
Total income by services rendered		

<b>2. Income in the year by sale of goods</b>	
---	--

<b>3. Other income earned throughout the year</b>		
Number	CONCEPT	Other Income earned in the year (thousands of pesos) (1)
	LEASING OF REAL ESTATE	
	Specify in observations/comments/remarks	
Total other income earned throughout the year		

PERCENTAGE OF INCOME from foreign markets	
---	--

**COSTS AND EXPENSES (Thousands of pesos)**

<b>4. Costs and expenses related to the services rendered</b>	
CONCEPT	Costs and expenses earned throughout the year (thousands of pesos)
Specify	
Total expenses related to the services rendered	

<b>5. Cost of goods sold</b>	
------------------------------	--

<b>6. Other costs and expenses incurred throughout the year</b>	
---	--

	CONCEPT	VALUE in thousands of pesos (1)
1	Fees for professional and technical services (including legal, financial and technical advice, etc.)	
2	Expenses incurred for outsourcing, except cleaning and security	
3	Expenses incurred for cleaning and security services contracted with specialized companies	
4	Expenses incurred for temporary personnel supplied by other companies	
5	Expenses related to uniforms, work wear and industrial safety	
6	Lease of movable property (without purchase option)	
7	Lease of real estate (without purchase option)	
8	Contributions and memberships (excluding subscriptions to newspapers, books and magazines)	
9	Insurance premiums, except those related to social benefits	
10	Utilities (water, sewerage and public works, electricity and gas)	
11	Telecommunications expenses (telephone, telex, fax, Internet, mobile communication, and other telecommunications)	
12	Freight and transportation	
13	Advertising and promotions	
14	Maintenance, repairs, adjustments and minor installations of fixed assets	
15	Occasional travel expenses (including accommodation, food and transportation)	
16	Commissions on sales to third parties (without employment)	
17	Entertainment expenses and public relations	
18	Stationery, supplies and photocopying expenses	
19	Fuels and lubricants	
20	Royalties (brands, patents, copyright, rights on the use of trade names, licenses, SAYCO-ACINPRO, and others)	
21	Tax on industry and Commerce	
22	Other taxes (property taxes, vehicles, 4 per mil, etc., except for industry and trade, VAT, income and heritage)	
23	Outlays for provisions for uncollectible accounts receivable, inventories and others	
24	Others not included above (specify), such as environmental health costs, and those for fire-fighters and chamber of commerce, amongst other Line 24 is disaggregated when its value is greater than, or equal to, 20% of "Other Costs and Expenses Incurred in the Year"	
	<b>Total other costs and expenses incurred during the year (sum lines 1 to 24)</b>	

<b>Total costs and expenses incurred during the year (sum lines 4 +5 +6)</b>	
--	--

**MODULE IV FIXED ASSETS AND INVESTMENTS MADE THROUGHOUT THE YEAR**

**Numeral 1. Tangible fixed assets**

CONCEPT	Land	Buildings and structures	Machinery and equipment	Computer equipment (hardware) and communications	Furniture and office equipment	Transportation equipment	Other depreciated assets ncp	TOTAL
	1	2	3	4	5	6	7	8 = 1 to 7
<b>1. BOOK VALUE AT THE BEGINNING OF THE YEAR</b>								
2) Purchase of assets (new and used)								
3) Value throughout the year by the construction in progress								
4) Value incurred throughout the year the machinery under assembly								
5) Value incurred throughout the year for improvements and reforms								
6) Value incurred throughout the year for own-use of assets produce								
7) Value incurred throughout the year for purchases financial leasing								
<b>8) Total investment in fixed assets ( = rows 2 to 7)</b>								
9) Valuations throughout the year								
10) Devaluation throughout the year								
11) Withdrawals and transfers throughout the year								
12) Book value of assets sold throughout the year								
<b>13). BOOK VALUE AT THE END OF THE YEAR (Without deducting the depreciation throughout the year) (= rows 1 + 8 + 9 - 10 - 11 - 12)</b>								
14) Accumulated depreciation at the beginning of the year								
15) Depreciation incurred in the year								
16) Accumulated depreciation of sold assets throughout the year								
<b>17) Value of the accumulated depreciation at the end of the year (= rows 14 + 15 - 16)</b>								
18) Profit for the year earned for the sale of assets								
19) Loss for the year incurred for the sale of assets								

**Numeral 2. Intangible fixed assets**

CONCEPT	Administrative concessions, patents and trademarks	Computer applications (software), licenses programs, etc	Know How	Rights (author copyright, of concession, by mortgage services, marketing, trust, non computer licenses)	Good will	Research and development	Others (original, literary, artistic and recreational, client list and others)	TOTAL
	1	2	3	4	5	6	7	8 = 1 to 7
<b>1 BOOK VALUE OF INTANGIBLE ASSETS AT THE BEGINNING OF THE YEAR</b>								
2) Value of intangible acquisitions purchased in the year								
3) Value of intangible sales incurred in the year								
<b>4) BOOK VALUE OF INTANGIBLE ASSETS AT THE END OF THE YEAR (undiscounted amortization incurred in the year) (= rows 1 + 2 - 3)</b>								
<b>5. AMORTIZATION INCURRED IN THE YEAR</b>								



**.MODULE VI INFORMATION TECHNOLOGIES AND COMMUNICATIONS - ICT AND E-COMMERCE**

Complete this module exclusively for the services sector provided by the company, according to the situation at 31 December 2011

1. How many computers does the company have in use? (including leased and owned, see instructions) \_\_\_\_\_

2. Of the total annual average number of employed persons Module II row 7 (for the education activity Module II Row 8 ); what is the percentage using the Internet for their work? (At least once a week) \_\_\_\_\_ %

3. Does the company have a Website or presence on the web? YES   NO   skip to question 4

3.1. Is the web page owned by the company? YES   NO

4. Select the network types used by the company (choose any as appropriate)

Intranet   4.1 Local area network (LAN)   4.2 Extranet   4.3 None   4.4

5. Did the company use Internet in the reference year? YES   skip to 5.1 and 5.2 NO   2

5.1. In the company's premises? YES   1 NO   2

5.2. Outside the company? YES   1 NO   2

6. The total annual average number of employed persons Module II row 7 ( row 8 for education activity), what is the percentage that uses a PC at work? (At least once a week) \_\_\_\_\_ %

7. Select the type of internet connection used by the company for Internet access?

Analog Modem   1 RDSI   2 ADSL   3 Dedicated cable / Fiber optics, Frame relay   4

Wireless (Wi-Fi, Wimax)   5 Mobile internet (GPRS- EDGE- GSM- UMTS- HSDPA- HSUPA)   6

8. Select the broadband speed that the company uses to access the Internet (in kbps)

From 0 to 256   1 from 257 to 1024   2

from 2025 to 2048   3 faster or equal to 2049   4

9. Which activities or services does the company use the internet for? (The answer may be multiple)

Communication (e-mail)   9.1 Finding information about goods and services   9.2 Finding information about government departments and authorities   9.3

Transactions with government agencies   9.4 Customer Service   9.5 Electronic banking and other financial services   9.6

products and services online   9.7 Receive orders via the internet   9.8 Ordering over the internet   9.9

**ELECTRONIC COMMERCE - Definition**  
E-commerce is defined as transactions over networks based on the Internet Protocol (TCP / IP) or other computer networks. Goods or services are contracted or booked through these networks, but the payment or delivery of the product can be made online or offline, through any other channel.

10. Does the company use an application or electronic platform for order requests and/or stocks of goods or services (i.e., to sell their products through e-commerce)? YES   1 NO   2 (If no, skip to question 12)

11. Of the total sales reported in Module III, section 1, what percentage corresponds to order requests and/or stocks of goods or services received through e-commerce? \_\_\_\_\_ %

12. Of the total reported purchases in Module III, row "Total costs and expenses incurred in the year (4 +5 +6)", what percentage is for orders and/or reserves of goods or services provided by the company through e-commerce? \_\_\_\_\_ %

