

INDEX PRODUCTION IN CONSTRUCCIÓN (IPC)

الأمم المتحدة

اللجنة الاقتصادية والاجتماعية لغربي آسيا

UNITED NATIONS

Economic and Social Commission

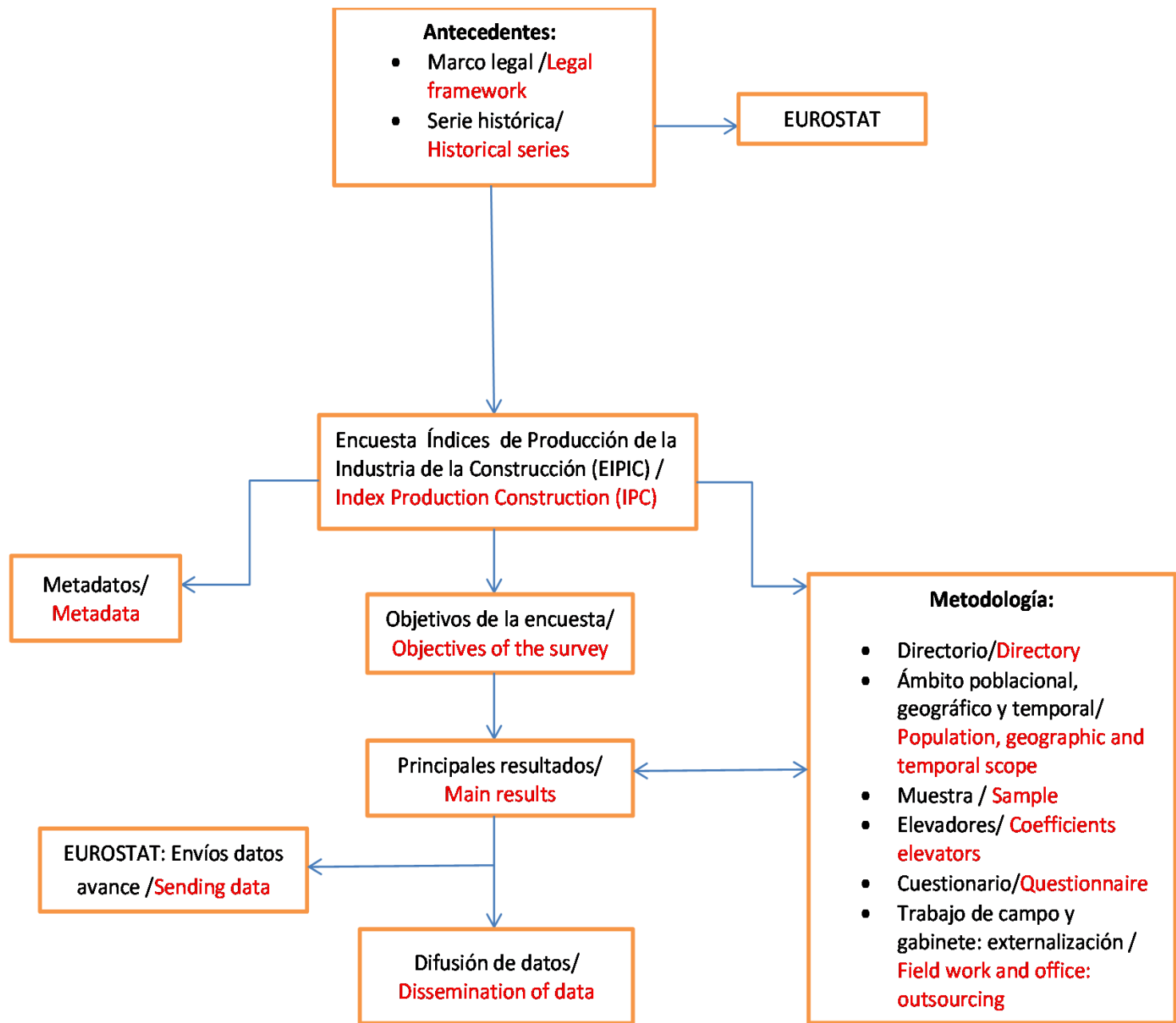
for Western Asia



NATIONS UNIES

Commission économique et s

pour l'Asie occidentale



Agenda:

INDEX PRODUCTION IN CONSTRUCCIÓN

- Main Reasons requires Index Production in Construction (IPC)
- Background: Legal framework and historical series
- Main objectives of the survey IPC
- Technical characteristics of the survey: NACE 93 Rev. 2
- Population scope: Section F of NACE 93 Rev. 2
- Geographical scope and temporal
- Population frame: Central Directory
- Calculation of the sample
- Coefficients used as elevators
- Questionnaire
- Fieldwork: outsourcing
- Main results
- Dissemination of data
- Metadata

Main drivers for an Index of Production in Construction

- ***Establishment of comparable statistical sources, comprehensive, harmonized and reliable short term.***
- ***Single Monetary Policy: The European Central Bank.***
- ***Necessary for businesses and professionals for their performance in the markets and to compare their activity and performance information associations.***
- ***To evaluate the economic cycles with statistics as methodological principles and common definitions.***
- ***Legal framework: common statistical standards that permit the production of harmonized statistics.***

OBJECTIVES OF THE SURVEY

IPC: regular statistical research to assess and analyze the evolution of the main economic variables of companies dedicated mainly to the construction activity.

IPC: a complete, coherent and homogeneous set of quantitative data on the cyclical behavior of the branch of activity "Construction".

IPC: Until December / 2008 Section F of NACE 93 Rev. 1 (NACE 1993 in Spain) was used ↔ Since January / 2009 Sección F of NACE 93 Rev. 2 (NACE 2009 in Spain) was used.

The most important thing in the new classification CNAE 93 Rev 2: the incorporation of real estate developers, Division 41, Section F Construction.

LEGAL FRAMEWORK

European Union

*COUNCIL REGULATION (EC) No 1165/98 of 19 May 1998
concerning short-term statistics*

[Archivos anexos\EIPIC\Archivos sin
internet\Reglamento 1165-98 EU.pdf](#)

**REGULATION (EC) No 1158/2005 OF THE EUROPEAN
PARLIAMENT AND OF THE COUNCIL of 6 July 2005
amending Council Regulation (EC) No 1165/98
concerning short-term statistics.**

[Archivos anexos\EIPIC\Archivos sin
internet\Reglamento 1158-2005 EU.pdf](#)

LEGAL FRAMEWORK

Spanish National legal framework

The **National Statistic Plan (PEN)**, in order, assigns to the Ministry of Fomento (PW) the responsibility to produce the CMIP, and so, it can be considered as a State Survey.

Law 12/1989 on Public Statistic Function, (9th may 1989) regulates Planning and elaboration of State's Statistics developed by State Administration and, particularly, it establishes:

- The obligation of information providers to facilitate requested data by General Directorate for Economic Planning, and the possibility of punishing the unfulfilment of this obligation.
- The commitment to keep statistical secret by all those that play any role during its elaboration.

Royal Decree 475/2007, (13th April 2007) that passes the National Activities Economic Clasification 2009 (CNAE 2009).

TECHNICAL CHARACTERISTICS

Population scope

- Companies with employees whose principal activity is the construction and belong to Section F (construction) of 1993 NACE Rev. 2.

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32007R0973&from=ES>

<http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF>

- Main activity of a company → one that provides the highest gross value added at factor cost.

TECHNICAL CHARACTERISTICS

Reliable and comparable international statistics can be produced and made available to business, financial institutions, governments and all other operators in the international market only if based on common statistical standards.

NACE is the “statistical classification of economic activities in the European Community”¹ and is the subject of legislation at the European Union level², which imposes the use of the classification uniformly within all the Member States.

It is a basic element of the international integrated system of economic classifications, which is based on classifications of the UN Statistical Commission (UNSTAT), Eurostat as well as national classifications; all of them strongly related each to the others, allowing the comparability of economic statistics produced worldwide by different institutions.

The present NACE Rev. 2, which is the new revised version of the NACE Rev. 1 and of its minor update NACE Rev. 1.1, is the outcome of a major revision work of the international integrated system of economic classifications which took place between 2000 and 2007. NACE Rev. 2 reflects the technological developments and structural changes of the economy, enabling the modernization of the Community statistics and contributing, through more comparable and relevant data, to better economic governance at both Community and national level.

Development of NACE Rev. 2 has benefited from the work preparing the fourth revision of the United Nations’ International Standard Industrial Classification of All Economic Activities (ISIC Rev. 4). Representatives from Eurostat and Member States of the EU played an important role in this work. NACE Rev. 2 has been created based on ISIC Rev. 4 and adapted to the European circumstances by a working group of experts on statistical classifications from the Member States, candidate Countries as well as EFTA Countries, with the support and guidance of the classification section at Eurostat.

Beside the classification, this publication contains also the introductory guidelines containing the main concepts, an historical background and the methodological guidelines for understanding and applying NACE Rev. 2 as well as a detailed description of the different items of the classification.

TECHNICAL CHARACTERISTICS

Section F NACE 93 Rev. 2

- *41.1 Development of building projects:* development of projects for the construction of residential and non-residential buildings.
- *41.2 Construction of buildings:* residential and non-residential.
- *42.1 Construction of roads and railways, bridges and tunnels:* roads and motorways, railways and underground railways, bridges and tunnels.
- *42.2 Construction of utility projects:* utility projects for fluids, electricity and telecommunications.
- *42.9 Construction of other civil engineering projects:* specialized construction activities.
- *43.1 Demolition and site preparation:* demolition, site preparation, test drilling and boring.
- *43.2 Electrical, plumbing and other construction installation activities:* electrical installation, plumbing, heating and air-conditioning installation and other construction installation.
- *43.3 Building completion and finishing:* plastering, joinery installation, floor and wall covering, painting and glazing.
- *43.9 Other specialized construction activities:* roofing activities and other specialized construction activities.

TECHNICAL CHARACTERISTICS

Geographic area

It includes all statistical units (companies) included in the population field that are located in Spain.

TECHNICAL CHARACTERISTICS

Temporary field

- Until 2005, the periodicity of the survey was quarterly. For reasons of interest of the European Central Bank, and have increasingly developed indicators, since 2005, the periodicity becomes monthly.
- Information period or month t , is immediately requested to companies by the Administration once that period is finished.
- An advanced delivery to EUROSTAT is set in $t + 45$ d. Provisional are set in $t + 60$. Ultimate data at $t + 90$.

TECHNICAL CHARACTERISTICS

- *Directory used to obtain the sample, which is the basis for the realization of the corresponding survey is the Central Companies Directory, from the National Statistics Institute (INE), due it is considered to be the best existing directory.*

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=/t37/p201/&file=inebase&L=1>

TECHNICAL CHARACTERISTICS

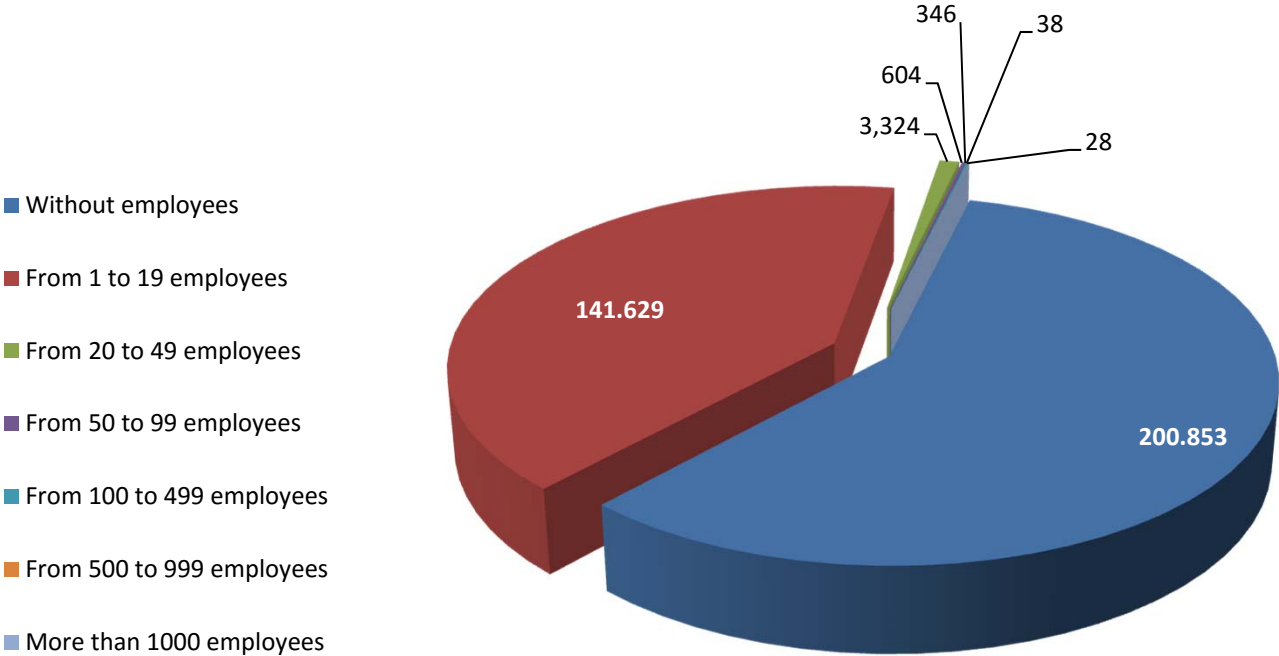
Spain

Number of companies by number of employed people. Year 2014		
<i>Source: SBS Construction</i>		
Statistical Strata		Number of companies
Without employees		200.853
From 1 to 19 employees		141.629
From 20 to 49 employees		3.324
From 50 to 99 employees		604
From 100 to 499 employees		346
From 500 to 999 employees		38
More than 1000 employees		28
TOTAL		346.822

TECHNICAL CHARACTERISTICS

Spain

Number of companies by number of employed people. Year 2014 (Source: SBS Construction)



TECHNICAL CHARACTERISTICS

Spain

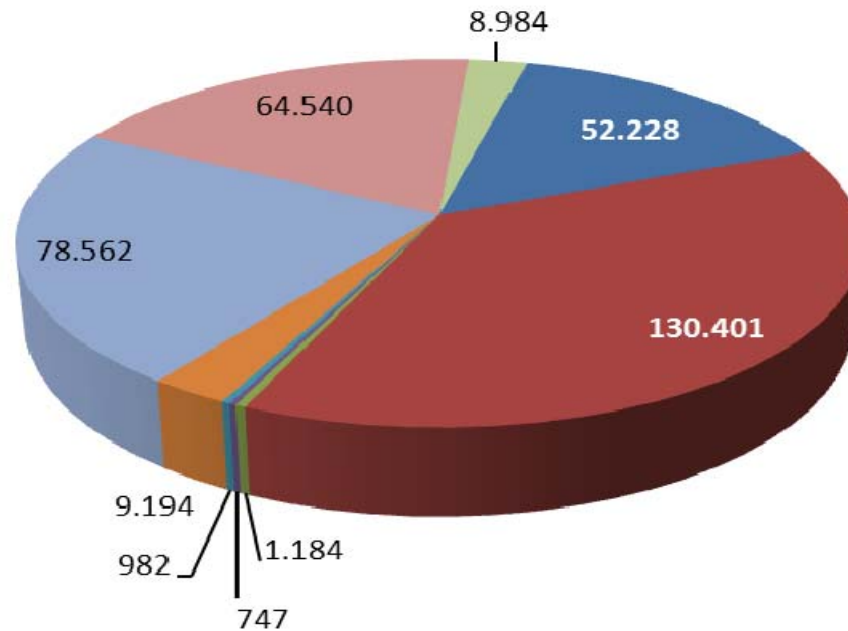
Number of companies by activity groups. Year 2014		
<i>Source: SBS Construction</i>		
NACE		Number of companies
411 - Development of building projects		52.228
412 - Construction of buildings		130.401
421 - Construction of roads, railways.....		1.184
422 - Construction of utility projects		747
429 - Construction of other civil eng. projects		982
431 - Demolition and site preparation		9.194
432 - Electrical, plumbing and other activities		78.562
433 - Building completion and finishing		64.540
439 - Other specialised construction activities		8.984
TOTAL		346.822

TECHNICAL CHARACTERISTICS

Spain

Number of companies by activity groups. Year 2014
(Source SBS Construction)

- 411 - Development of building projects
- 412 - Construction of buildings
- 421 - Construction of roads, railways.....
- 422 - Construction of utility projects
- 429 - Construction of other civil eng. projects
- 431 - Demolition and site preparation
- 432 - Electrical, plumbing and other activities
- 433 - Building completion and finishing
- 439 - Other specialised construction activities



Sample

- Sampling chosen for calculating the sampled part of the EIPIC is stratified sampling. This type of sampling is done when additional information is available. This information is provided by one or more variables that divide the elements of the population into classes or strata. These are subsets of the population such that within each stratum elements are homogeneous with respect to the variables of interest.
- The criteria used for stratification are the activity and company's size. The latter variable is classified regarding the number of employees who serve in the company on the last day of the reference month.

Sample

Stratification is:

a) Activity groups

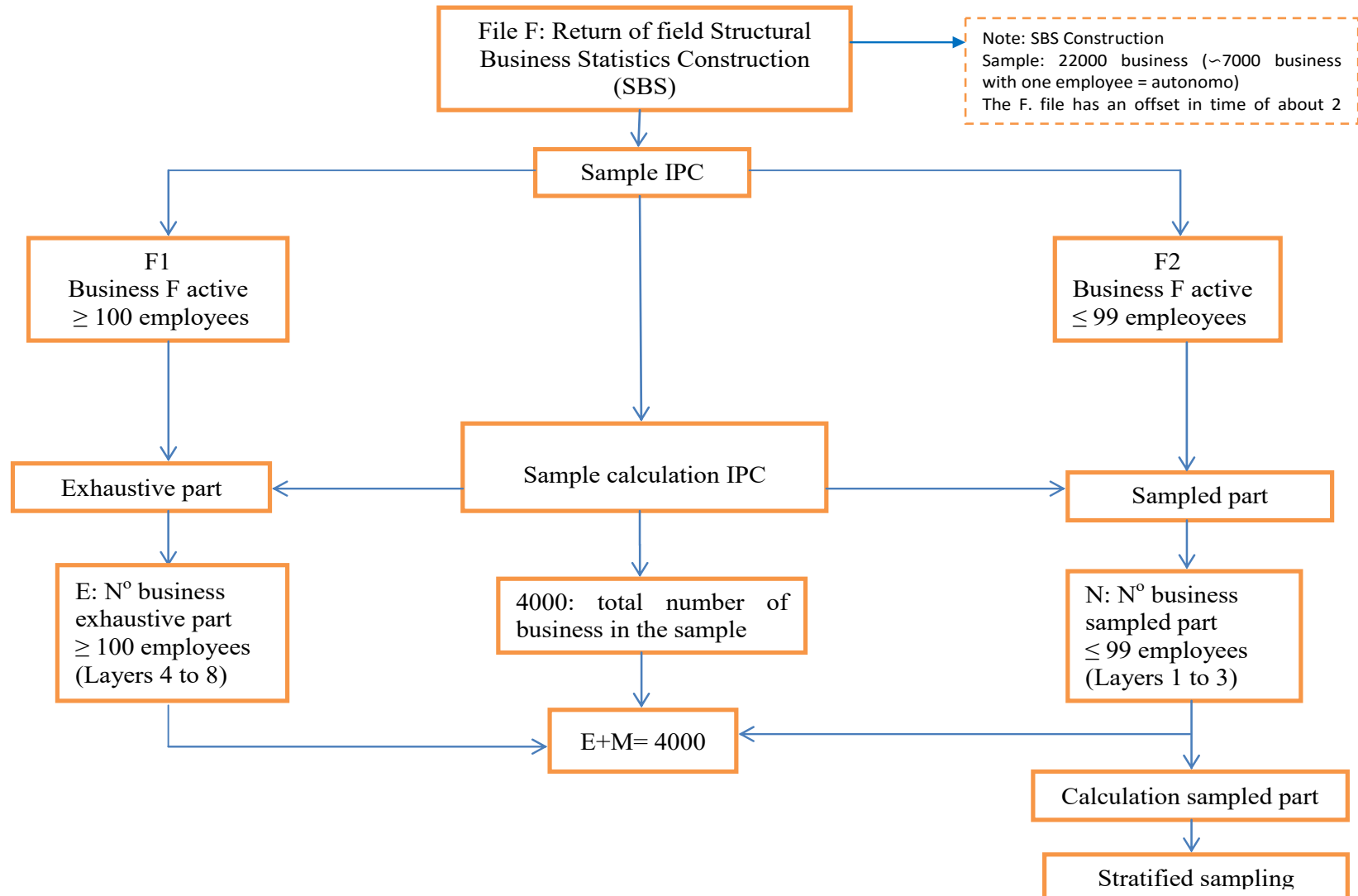
- 41.1 Development of building projects.
- 41.2 Construction of buildings: residential and non-residential.
- 42.1 Construction of roads and railways, bridges and tunnels: roads and motorways, railways and underground railways, bridges and tunnels.
- 42.2 Construction of utility projects: utility projects for fluids, electricity and telecommunications.
- 42.9 Construction of other civil engineering projects:.
- 43.1 Demolition and site preparation:.
- 43.2 Electrical, plumbing and other construction installation activities:
- 43.3 Building completion and finishing: plastering, joinery installation, floor and wall covering, painting and glazing.
- 43.9 Other specialised construction activities:

b) Business Size

- From 1 to 19 employees
- 20 to 49 employees
- 50 to 99 employees
- 100 to 199 employees
- 200 to 499 employees
- 500 to 999 employees
- From 1000 to 2499 employees
- 2500 and more employees

All in all, 9*8 = 72 POSSIBLE LAYERS

Sample



Both the F1 and F2 file, employees are updated with the Central Directory around SBS field.

Sample SBS construction

What is SBS Construction?

This survey is currently governed by Regulation (EC) No 295/2008.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:097:0013:0059:EN:PDF>

Main features:

- Annually
- National, and regional information field
- Sample size: 22000 companies. Exhaustive from companies with 50 employees or more.
- Greater volume of information provided by companies in the questionnaire.
- Delay information t-2. (In 2016 it reported 2014 data)
- [Archivos anexos\EIPIC\Datos SBS Spain 2014.xlsx](#)

Sample

- We start from a file F, that comprise companies surveid by the SBS field, having eliminated autonomous companies. This file consists of a subfile F1, with business **active** ≥ 100 employees and a subfile F2, with **active business that answered** the SBS with ≤ 99 employees.
- Total sample size: 4000
- Companies exhaustive part number: E (F1). E is a known number.
- Number of business sampled part: N (F2). $M \implies$ sample size N for companies that form the F2

- Frm the sampling fraction is calculated:
- Sampling fraction (ratio of the sample size and the population)

- Size of each stratum:
- If M is the number of sampled companies file F2 having N companies, then $M = 4000 - E$.

Sample

- M will consist of companies that are part of the 27 layers corresponding to: 411-1, 411-2, 411-3, 412-1, 412-2, 412-3, 422-1, 422-2, 422-3, 429-1, 429-2, 429-3, 431-1, 431-2, 431-3, 432-1, 432-2, 432-3, 433-1, 433-2, 433-3, 439-1, 439-2, 439-3.
- IPC sample is renewed annually according to field around SBS Construction two year before.

Sample

This is the calculation methodology for a layer, i.e. layer 412-2. For the rest of strata (26) calculations are made with the same procedure.

- a) the number of companies that stratum 412-2 between the N companies in F2 is calculated, and call N_{412-2} (made by count)
- b) The sample size that will have the stratum 412-2 will be T_{412-2}

$$T_{412-2} = N_{412-2} \cdot \text{Frm} (T_{412-2} \text{ be rounded})$$

- c) If we divide $\frac{N_{412-2}}{T_{412-2}}$ you get S_{412-2} , which we call gap (interval to be taken when choosing companies).

Sample

Companies belonging to N_{412-2} are ordered from smallest to largest number of "persons employed and NIF" and then a random number is generated, we called it "a" between 0 and the value of S_{412-2}

The first company to incorporate to the sample, " e_1 " is that which occupies the nearest position to the random number. (Note: only in the event that the nearest whole number was zero, then the first company e_1 to incorporate would be calculated as the calculation for the second company to incorporate e_2 and the second is described as described for the third and so on).

The second company to incorporate e_2 will be the nearest to whole number $n_2 = (a + S_{412-2})$.

This will be done consecutively until the company $e_{T_{412-2}}$, which will be one that occupies the nearest position to $n_{T_{412-2}} = (n_{T_{412-2}} - 1 + S_{412-2})$ and so stratum size 412-2 will be completed.

Sample

Nº de registros de población: 8559	Muestra máxima: 4000	E: 432	
Empresas Exhaustivas (CNAE): 432	M: 3568	N: 8127	Frm: 0,439031286
Empresas no exhaustivas (CNAE):Nº regs.			

Parameters of the sample strata IPC 2016

Estrato	(N)	(N')	(S)	(A)	(T)
(4111):	518	518	2,281938	0,2334	227
(4112):	40	40	2,222222	1,883	18
(4113):	15	15	2,142857	1,2695	7
(4121):	1464	1464	2,276827	0,7684	643
(4122):	260	260	2,280702	0,1883	114
(4123):	21	121	2,283019	1,8895	53
(4211):	122	122	2,259259	1,2939	54
(4212):	130	130	2,280702	0,7248	57
(4213):	61	61	2,259259	0,142	27
(4221):	62	62	2,296296	1,0537	27
(4222):	46	46	2,3	0,4691	20
(4223):	19	19	2,375	2,254	8
(4291):	122	122	2,259259	1,5681	54
(4292):	43	43	2,263158	1,7837	19
(4293):	13	13	2,166667	1,1553	6
(4311):	370	370	2,283951	0,6356	162
(4312):	103	103	2,288889	0,0535	45
(4313):	20	20	2,222222	1,7077	9
(4321):	1690	1690	2,277628	1,9645	742
(4322):	331	331	2,282759	1,387	145
(4323):	130	130	2,280702	0,8043	57
(4331):	1646	1646	2,276625	0,2225	723
(4332):	176	176	2,285714	1,9264	77
(4333):	36	36	2,25	1,3227	16
(4391):	414	414	2,274725	1,5512	182
(4392):	133	133	2,293103	0,9792	58
(4393):	42	42	2,333333	1,2159	18

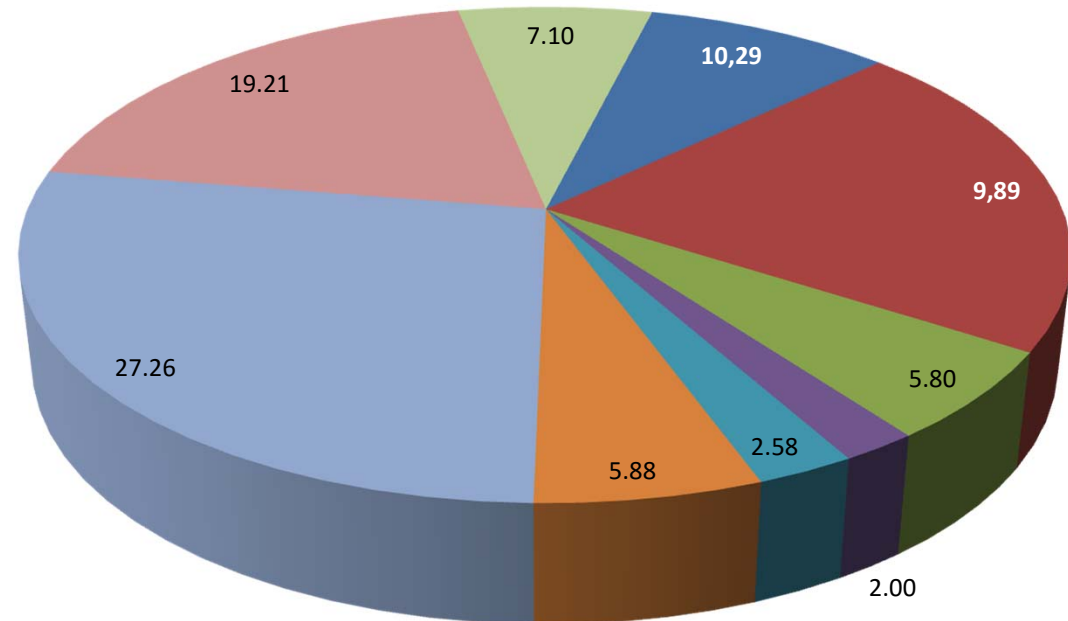
Sample IPC

NACE distribution companies of the statistical sample in 2015 (year-end data)		
NACE	Number of companies	Proportion of the total
411	360	9,00
412	846	21,16
421	232	5,80
422	80	2,00
429	103	2,58
431	235	5,88
432	1.090	27,26
433	768	19,21
439	284	7,10
TOTAL	3998	100

Sample IPC

NACE distribution companies of the statistical sample in 2015

- 411 - Development of building projects
- 412 - Construction of buildings
- 421 - Construction of roads, railways, bridges and tunnels
- 422 - Construction of utility projects
- 429 - Construction of other civil engineering projects
- 431 - Demolition and site preparation
- 432 - Electrical, plumbing and other activities
- 433 - Building completion and finishing
- 439 - Other specialised construction activities



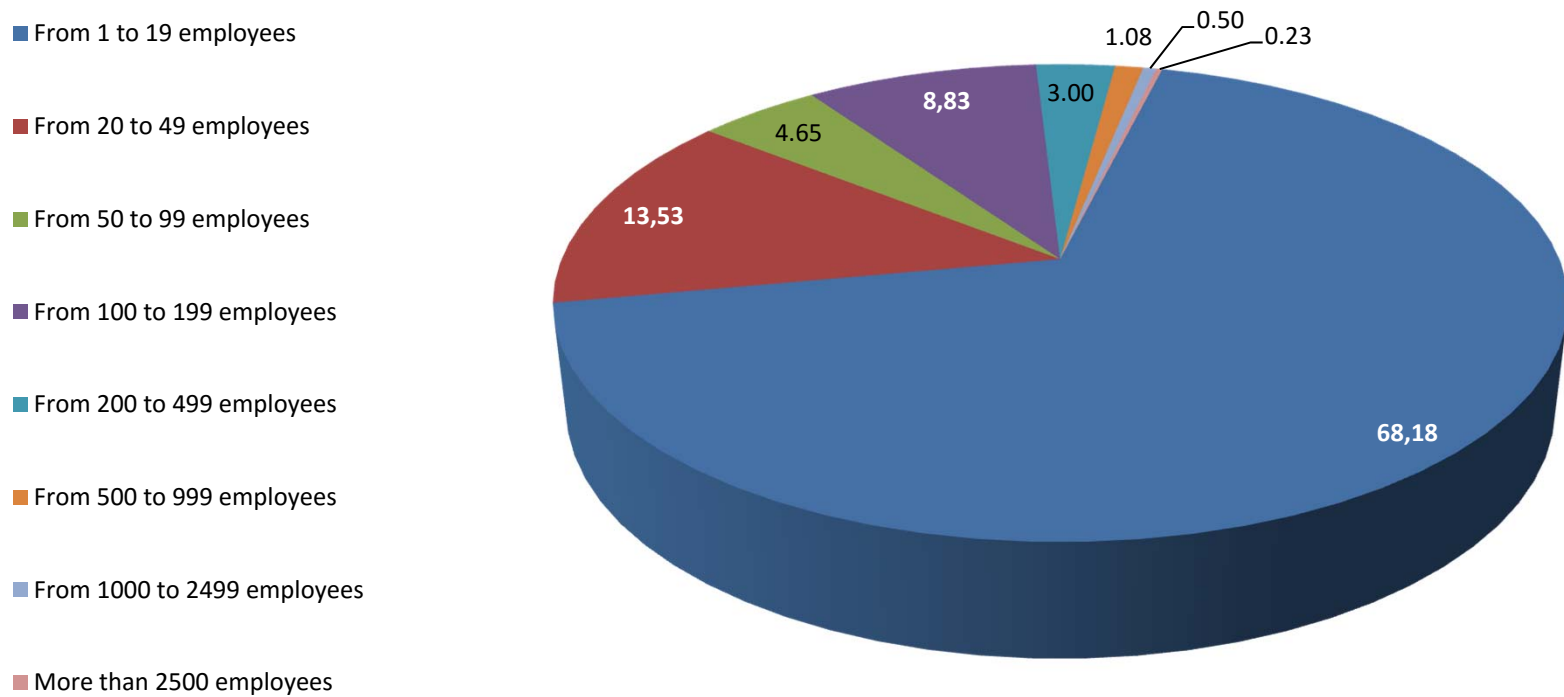
Sample IPC

Distribution by number of employed people in the statistical sample in 2015 (year-end data)

Statistical Strata	Number of companies	Proportion of the total
From 1 to 19 employees	2.726	68,18
From 20 to 49 employees	541	13,53
From 50 to 99 employees	186	4,65
From 100 to 199 employees	353	8,83
From 200 to 499 employees	120	3,00
From 500 to 999 employees	43	1,08
From 1000 to 2499 employees	20	0,50
More than 2500 employees	9	0,23
TOTAL	3.998	100,00

Sample IPC

Distribution by number of employed people in the statistical sample in 2015



Sample

- [Practical example on sample calculation.docx](#)

Coefficients (elevators)

- The coefficients are factors that applied to the data obtained in the sample, allow obtaining results for the whole population. To go from sample data to population data a matrix of elevators for each group of activity and occupational stratum is used. The variable used to obtain these factors is the number of companies for each stratum obtained from Central Directory (population group).
- Coefficient or factor N/n is the number of elements of the population represented by each element of the sample

Coefficients (elevators)

$$\text{Coefficient}_{ij} = \left[\frac{\text{Population}_{ij}}{n_{ij}} \right]$$

$$\text{Coefficient}_{ij} = [\text{Modulator E}] = \left[\frac{\text{Population}_{ij} + \text{In}_{ij} - \text{Out}_{ij}}{n_{ij}} \right]$$

$$\text{Coef}_{ij} = \frac{E_{1ij}^I}{E_{2ij}^I} \left[\frac{N_{ij}^R + \left(\sum_{(h,l) \neq (i,j)} \frac{N_{hl}^R \cdot a_{hl}}{n_{hl}^I} \right) - \frac{N_{ij}^R \cdot b_{ij}}{n_{ij}^I}}{n_{ij}^F} \right]$$

Coefficients (elevators)

$$Coef_{ij} = \frac{E_{1ij}^I}{E_{2ij}^I} \left[\frac{N_{ij}^R + \left(\sum_{(h,l) \neq (i,j)} \frac{N_{hl}^R \cdot a_{hl}}{n_{hl}^I} \right) - \frac{N_{ij}^R \cdot b_{ij}}{n_{ij}^I}}{n_{ij}^F} \right]$$

Modulator E = $\frac{E_{1ij}^I}{E_{2ij}^I}$ Try to balance the final ratio and mitigate the occasion of the ups and downs that occur in a layer.

Numerator: Average number of employees according Central Directory (DIRCE), companies sign ij stratum.

Denominator: Average number of employees according Central Directory (DIRCE), companies with valid response ij stratum.

N_{ij}^R = Central Directory: group of companies revised incidents: the UTEs (Unión Temporal de Empresas), merged companies, non-construction (NACE ≠ F), duplicate and other incidents are eliminated.

(I, j) and (h, l) = subscript referring to the strata: NACE 93 Rev. 2, three digits and number of employees.

n_{ij}^I = Number of valid questionnaires have come on the field in the layer (i, j).

n_{ij}^F = Number of valid questionnaires have become field belonging to stratum (ij).

a = Number of companies that go IN in the stratum (i, j), which come from stratum (h, l).

b = Number of companies that go OUT of the stratum (i, j).

Coefficients (elevators)

[Elevadores julio 2016.xlsx](#)

Coefficients (elevators)

[Archivos anexos\EIPIC\EJEMPLOS
PRACTICOS CALCULO COEFICIENTE
ELEVADOR english.docx](#)

FULL EXERCISE

[FULL EXERCISE.docx](#)

Questionnaire

- To carry out the collection of information to be provided by construction companies for the development of this statistic, a questionnaire is designed that is used to meet the requirements of Regulation (EC) No. 1165/98 of 19 May 1998 on the term statistics.
- The requested economic data are adapted to the General Accounting Plan of construction companies and, in order to facilitate the response , after the the requested variable, reference to the account, accounts or groups of accounts that correspond to such information has been included.

Questionnaire

Main variables

Number of remunerated persons

The term “remunerated persons” means all persons who work or perform tasks for an undertaking in exchange for a given economic remuneration or salary. This includes both persons who perform tasks directly associated with the productive activities of the undertaking (labourers, site supervisors, officials, trainees, etc.) and those whose tasks are not directly related to the production process (directors, managers, technicians, office and administrative staff, auxiliaries, sales staff, etc.).

Unremunerated persons are those who direct or take an active role in the tasks of the undertaking without receiving a fixed remuneration or salary and work for at least 1/3 of the normal working hours. These include owners and active shareholders, family members providing assistance and other unremunerated persons.

Number of persons employed

This is the total number of remunerated and unremunerated persons.

This figure does not include persons performing tasks for another undertaking, members of the Management Board who are paid solely for attending Board meetings, persons on leave of absence or limited leave, retired persons and those performing military or alternative community service. This figure also does not include those workers made available to the undertaking by temporary employment undertakings.

Questionnaire

Main variables

Hours worked by remunerated persons.

Hours worked by remunerated persons” means the total number of hours actually worked by those persons during the reference month for the survey. This concept includes hours actually worked (both normal and extraordinary working hours) during working periods (including, as appropriate, holidays, nights, etc.); time spent in the workplace preparing tools, completing time sheets, etc.; the duration of any downtime in the workplace resulting from occasional work shortages, machinery stoppages, accidents, etc., and the time corresponding to brief rest periods in the workplace (breakfast, snack breaks, etc.). It must, however, exclude any hours agreed (and paid) but not worked as a consequence of sick leave, weather conditions, strikes, holidays, public holidays, etc., meal breaks and time spent travelling between home and the workplace.

If the number of hours worked is not known it may be estimated on the basis of the theoretical number of working hours and the average percentage of absences (sickness, maternity, etc.).

Contracts signed for the month (amounts net of VAT)

Includes the total budget for new building projects, restoration, major repairs, preservation and maintenance works for which firm contracts were signed with clients (natural and/or legal persons, under public or private ownership) during the reference month, regardless of when the work is to be carried out. It also includes the budgets for buildings and other constructions on which work began during that month and that are to be used by the declaring undertaking or are intended for later sale or rental to third parties by the same.

Staff costs

Wages and salaries: The remunerations - fixed and casual - paid in cash and in kind by the undertaking during the reference month.

Compensation: The amounts paid to staff of the undertaking in compensation for any damage suffered. This specifically includes compensation for dismissal and early retirements.

Social security contributions made by the undertaking: This includes the amounts paid by the undertaking to social security bodies for the various services they provide.

Contributions to the supplementary pensions system: Amount of contributions paid into pension plans or other equivalent system providing cover for retirement, invalidity or death, in relation to the staff of the undertaking.

Other social costs: Social expenditure in compliance with a legal provision or on a voluntary basis by the undertaking (subsidies for staff restaurant, company store, childcare facilities, etc.).

Questionnaire

Main variables

Production values (sales and income) (amounts net of VAT)

Sales:

Covers the total amount of sales made during the reference month, including:

- Income from sales of work completed, terminated, certified or pending certification, sub-products and residuals. Sales should be net, i.e. not including any callbacks, returns and the like, and must include any product subsidies.
- Income from services provided corresponds to the services proper to construction activity; income from subcontracts taken on is included.
- Income from sales of commercial stocks includes the sale of goods (including plots of land and building sites) in the same condition in which they were purchased (resales); the net value must be recorded, i.e. not including any callbacks, returns and the like.

Other production values

- Changes in inventories for ongoing and completed work:

Changes in inventories should be obtained by calculating the difference between final and initial inventories. Changes in inventories for ongoing and completed work must be taken into account here. The (+/-) sign must be used.

- Work performed by the undertaking on its fixed assets:

Work performed by the undertaking on its fixed assets must include work relating to tangible assets, completed or ongoing, using own materials and labour; work on intangible assets, including: research and development work, using computer applications, for industrial property and for other intangible assets (goodwill, transfer rights, etc.); setting-up expenditure made by the undertaking and the inventories included in the fixed assets. These shall be valued at cost price, to be calculated by adding the purchase price to the costs that can directly or indirectly be attributed to the product.

- Operating subsidies:

Operating subsidies shall include current subsidies: official operating subsidies received from the public authorities and other operating subsidies received from businesses or private individuals.

- Other management income:

This shall include the income (other than extraordinary income) received by the undertaking during the reference month in the form of: share of profits from joint ventures, rents, transfer of industrial property, commissions, services to staff, income from services provided to temporary consortia and miscellaneous services

Questionnaire

[Archivos anexos\EIPIC\Cuestionario-
Instrucciones\Cuestionario 10092010 2-c.pdf](#)

Questionnaire

Online questionnaire:

The monthly questionnaire has basic controls on completeness and sums. Some other rules are controlled from validation.

- <https://investpd.es/eipic/>
- usuario: RF3215
- contraseña: RD81

Questionnaire

Input type questionnaires

INPUT TYPE	2013	2016
POST	6,90%	2,54%
FAX	31,20%	6,10%
WEB	61,90%	91,36%
TOTAL	100,00%	100,00%

Questionnaire

- **ENCUESTA DE ÍNDICES DE PRODUCCIÓN DE LA INDUSTRIA DE LA CONSTRUCCIÓN: Instrucciones para cumplimentación del cuestionario**
- Esta encuesta se enmarca dentro del Plan General de Estadística del Sector de la Industria de la Construcción, propugnado por la Oficina Estadística de la Comisión Europea y recogida en el Plan Estadístico Nacional vigente, como estadística de cumplimiento obligatorio.
- Los objetivos son actualizar y ampliar la información de las empresas del sector.
- El cuestionario debe ser cumplimentado por todas aquellas empresas que tengan en la construcción su actividad principal.
- Deberán cumplimentarse todas las casillas del cuestionario en el orden secuencial en el que aparecen. No deberán cumplimentarse las casillas sombreadas.
- Los datos contables que se solicitan en el cuestionario se refieren a todas las actividades ejercidas por la empresa en el mes de referencia, bien sean de construcción, industriales o de servicios y deberán expresarse en euros con dos decimales, sin incluir el IVA (o IGIC). Las normas de valoración y las definiciones serán las de adaptación del Plan General de Contabilidad a las empresas constructoras, habiéndose incluido para cada variable solicitada la referencia a la cuenta, cuentas o grupo de cuentas de dicho plan. No obstante, si surgiese cualquier duda a la hora de cumplimentar cualquier apartado contable ponemos a su disposición un ANEXO 2 adjunto, ampliando los contenidos a que se refiere cada cuenta contable.
- Todos los valores contables se incluirán en euros con dos decimales y los porcentajes se pondrán siempre sin decimales.
- El cuestionario correspondiente al mes de referencia deberá cumplimentarse dentro de los 20 días siguientes a la finalización de dicho mes.
- - Etiqueta identificativa y modificaciones con respecto a los datos de la etiqueta
- Si los datos observados en la etiqueta han sufrido alguna modificación o variación, se deberá indicar en el espacio reservado al efecto, cumplimentando únicamente aquel o aquellos apartados correspondientes que usted considere necesario su actualización.
- - Indicar detalladamente la actividad principal ejercida por la empresa o persona física
- Será actividad principal, aquella ejercida por la empresa y que represente el mayor porcentaje en la cifra de negocios en el mes al que se refieren los datos.

Questionnaire

- Indíquese de las siguientes actividades, el porcentaje que cada una de ellas representó en la cifra de negocio en el mes al que se refieren los datos de este cuestionario.
- A.1. Construcción (Edificación, Ingeniería Civil, Instalaciones, etc.)
- Indíquese el porcentaje total de las actividades consideradas dentro del marco del estudio sobre el sector de la construcción, si tuviesen cualquier duda ponemos a su disposición el ANEXO 1 donde podrá consultar los distintos tipos de actividades.
- A.2. Promociones de inmuebles
- Cuando la empresa realice la actividad de promoción de inmuebles, sin ser responsable de la construcción sino actuando como mero intermediario y la facturación tenga el concepto de comisión de venta de inmuebles, deberá especificar cuál es el porcentaje que dicha actividad representa en su cifra de negocio en el mes de referencia.
- A.3. Otras actividades distintas de la construcción (especificar)
- Se especificarán hasta tres actividades distintas a las anteriores, en el caso de que la empresa las realice, señalándose de mayor a menor importancia en cuanto a su cifra de negocio.
- B. Gastos, efectivos y nº de horas trabajadas por el personal de la empresa
- B.1. Gastos de personal
- Anotaremos el valor en euros con 2 decimales de las subcuentas del grupo 64 que se especifican.
- B.2. Efectivos de personal
- B.2.1. Número de personas remuneradas
- Se entiende por personal remunerado al conjunto de personas que trabajan o realizan tareas para una empresa a cambio de una determinada remuneración económica o salario. Se incluyen tanto las personas que realizan funciones directamente asociadas a las actividades productivas de la empresa (obreros, jefes de taller, oficiales, aprendices, etc.), como aquellas otras cuyas tareas no están ligadas directamente al proceso productivo (directores a sueldo, gerentes, técnicos, personal de oficina y administrativos, subalternos, vendedores, etc.).
- B.2.2. Número de personas no remuneradas
- Son las personas que dirigen o participan activamente en las tareas de la empresa sin recibir remuneración fija o salario y que trabajan al menos 1/3 de la jornada laboral normal. Se incluyen propietarios y socios activos, ayudas de familiares y otras personas no remuneradas.
- B.2.3. Total número de personas ocupadas (remuneradas y no remuneradas)
- Es la suma del número de personas remuneradas y no remuneradas.
- No se incluye como personal ocupado las personas que efectúan trabajos por cuenta de otra empresa, los miembros del Consejo de Administración que estén remunerados exclusivamente por asistencia a dichos Consejos, las que se encuentran en condiciones de excedencia o licencia limitada, jubilados o prestando servicio militar o la prestación social sustitutoria. Tampoco se deben incluir aquí los trabajadores puestos a disposición de la empresa por Empresas de Trabajo Temporal (ETT).
- B.3. Número total de horas trabajadas por el personal remunerado
- Se entiende por horas trabajadas por el personal remunerado el número total de horas efectivamente trabajadas por dicho personal durante el mes de referencia de la Encuesta. Este concepto comprende las horas realmente trabajadas (tanto normales como extraordinarias) durante los períodos de trabajo (incluyendo si procede las correspondientes a festivos, noches, etc.); el tiempo dedicado en el lugar de trabajo a la preparación de herramientas, elaboración de fichas de control, etc.; duración de los tiempos muertos que hayan podido producirse en el lugar de trabajo tanto por falta ocasional de trabajo como por paro de máquinas, accidente, etc., así como el tiempo correspondiente a breves períodos de descanso en el lugar de trabajo (desayuno, bocadillo, etc.). Sin embargo, deben excluirse las horas pactadas (y pagadas) pero no trabajadas como consecuencia de bajas por enfermedad, causas meteorológicas, huelgas, vacaciones, días festivos, etc., las interrupciones para las comidas y las horas empleadas en el trayecto del domicilio al lugar de trabajo y viceversa.
- Si el número de horas trabajadas no se conoce, puede estimarse en función del número teórico de horas de trabajo y del porcentaje medio de ausencias (enfermedad, maternidad, etc.).

Questionnaire

- C. Contratación en firme (Importes sin incluir el IVA)
- C.1. Contratación en firme del mes
- Se incluye el importe total de los presupuestos de las obras de nueva planta, restauración, gran reparación, conservación y mantenimiento, contratadas en firme, por encargo de clientes (personas físicas y/o jurídicas de titularidad pública o privada), en el mes de referencia, independientemente de cuándo se vayan a ejecutar. También se incluyen los presupuestos de los edificios y otras construcciones, cuya obra se ha iniciado durante el mes, que vayan a ser utilizadas por la propia empresa declarante o se destinen a ser vendidas o alquiladas posteriormente, a terceros, por la misma.
- Se deberá además indicar para la contratación en firme, el porcentaje referido a construcción, diferenciando entre las actividades de Edificación e Ingeniería civil y por otra parte el porcentaje referido a otras actividades.
- D. Valores de Producción (Ventas e ingresos) (Importes sin incluir el IVA)
- Total Ventas: Se anotará el valor en euros con 2 decimales. Se deberá distribuir dichas ventas porcentualmente por tipo de actividad y por el destino geográfico de las mismas.
- Otros valores de producción: Se traspasará el valor contable de las cuentas que se especifican, teniendo en cuenta para el caso de “Variación de existencias de obra en curso y terminadas” no olvidar el signo.
- E. Valores de Consumo (compras y otros gastos de producción) (Importes sin incluir el IVA)
- Compras: Se anotará el valor en euros con 2 decimales. Se deberá distribuir dichas compras porcentualmente por tipo de actividad y por el origen geográfico de las mismas.
- Otros valores de consumo: Se traspasará el valor contable de las cuentas que se especifican, teniendo en cuenta el signo para el caso de “Variación de existencias de materias primas y otros aprovisionamientos”, “Variación de existencias comerciales” y “Tributos ligados a la producción y los productos”. Se indicará su desagregación porcentual por tipo de actividad donde se aplicaron.
- Persona responsable de la cumplimentación
- En este apartado se consignará el nombre y apellidos de la persona que por parte de la empresa ha cumplimentado el cuestionario, así como el/los teléfono/s de contacto. También deberá estamparse el sello de la empresa para autenticar los datos.
- Una vez finalizada su cumplimentación se puede remitir por correo, a franquear en destino, utilizando el sobre adjunto para reenvío o remitirse por fax a los siguientes números: 91.721.62.53 ó 91.388.16.86. Si lo desean tienen la posibilidad de cumplimentarlo vía internet según instrucciones del ANEXO 3
- Ante cualquier duda tienen a su disposición el teléfono 91.300.50.60 para atención de esta encuesta, donde en horario normal de oficina, le resolveremos en lo posible, cualquier duda o consulta que se les pueda plantear.
- Igualmente estarán a su disposición los responsables de esta encuesta dentro de la Subdirección de Estadística y Estudios del Ministerio de Fomento, en el teléfono: 91.597.79.37.

FIELD WORK and Office: OUTSOURCING

Hiring outside company for edition and codification work, field work and validation of questionnaires.

The Ministry of Public Works, together with the external company performs the following work:

- Compare and contrast the data with historical information provided in: comparative analysis
- Detecting invalid values
- Unresponsiveness estimate: replacement of companies in the sample by others of equal characteristics.
- Supervision and inspection fieldwork.
- Other permanent controls on the flow of information.

FIELD WORK and Oficce: OUTSOURCING

[Archivos anexos\EIPIC\diagrama de actividadesEIPICen.PPTX](#)

FIELD WORK and Office: OUTSOURCING

- The development of a questionnaire is a laborious and complex process and needs to check out its usefulness before application.
- Validate a questionnaire means to have coded it before sending it, check out its completeness, consistency and complies with the rules and ratios established.
- Only when the questionnaire is validated it can be part of the process of elevation to get results.

FIELD WORK and Office: OUTSOURCING

Validation rules used in IPC

The main validation rules are classified into four types:

Completeness questionnaire (CU)

Completeness and consistency between variables (CH)

Data analysis completed (AN)

Ratios between data and variables (RA)

FIELD WORK and Office: OUTSOURCING

- Validation rules used in IPC
- [Archivos anexos\EIPIC\Cuestionario codificación campos.PDF](#)

[Archivos anexos\EIPIC\Validaciones y correcciones\Validaciones mensuales\(Nueva CNAE2009\).xls](#)

Rules of completing, consistency, analysis and ratios.

FIELD WORK and Office: OUTSOURCING

Follow-up fieldwork

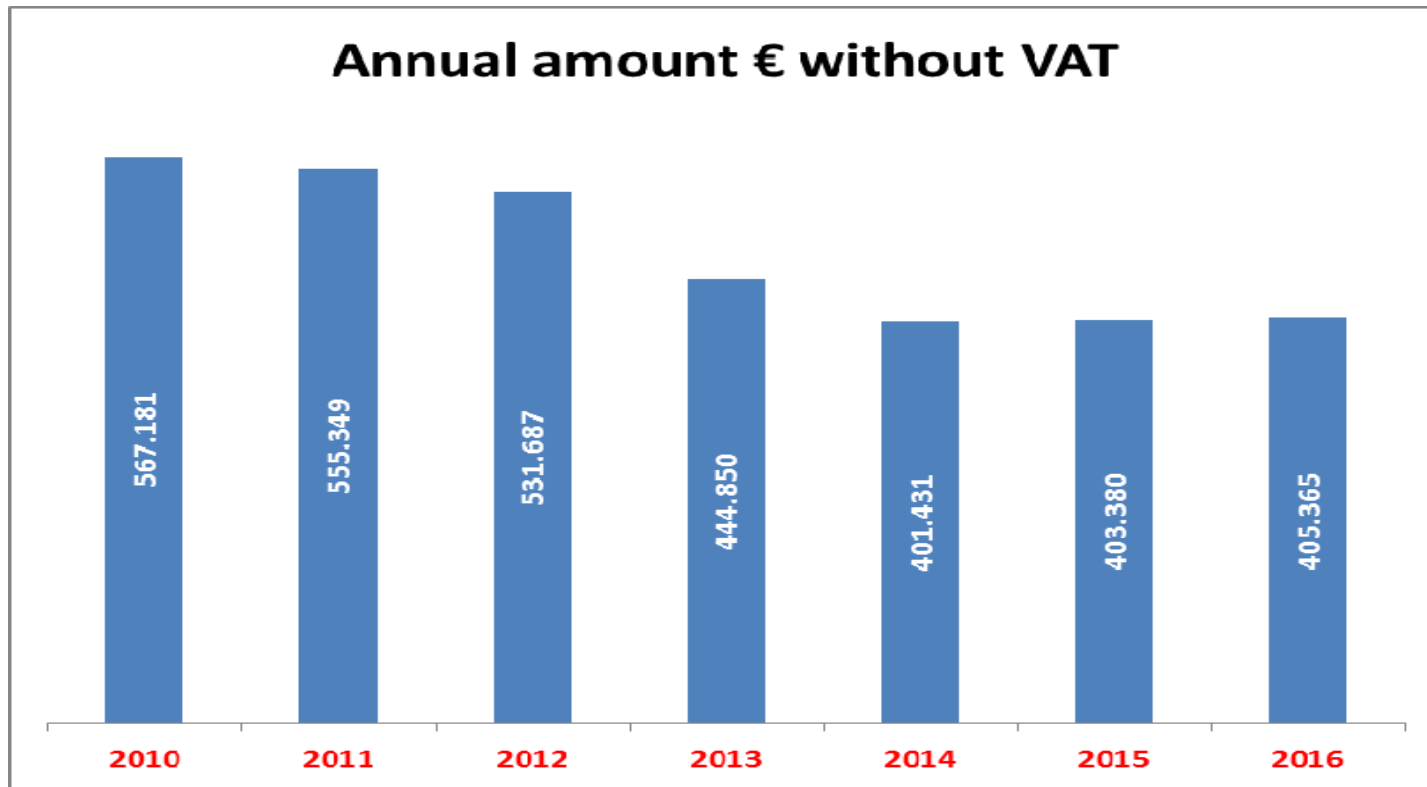
<https://investpd.es/eipic/cliente>

Usuario: eipic

Contraseña: 647895

FIELD WORK and Office: OUTSOURCING

External work Cost



Main results

- To obtain results auxiliary tables and reports information ratios, statistical, completeness, inconsistencies etc are considered. This information is necessary to review the data.
- Auxiliary tables and reports are obtained from the computer application.

Main results

1. New Contracts. Total National. (thousand €)				
Year/Month	Total	Buildings	Civil Engineering	Other activities
August/2014	6.233.249,66	4.448.709,70	1.754.378,51	30.161,39
September/2014	7.104.770,49	4.242.296,05	2.810.145,96	52.328,52
October/2014	8.470.731,92	5.237.811,47	3.051.929,90	180.990,54
November/2014	7.669.857,61	4.583.294,24	3.056.082,62	30.480,74
December/2014	9.295.783,90	6.512.605,02	2.724.043,83	59.134,99
January/2015	7.064.430,12	4.746.448,18	2.289.193,59	28.788,36
February/2015	7.537.990,93	5.159.096,93	2.337.425,88	41.468,11
March/2015	7.794.388,08	4.781.230,80	2.917.569,69	95.587,75
April/2015	9.856.604,95	8.142.863,11	1.653.528,22	60.213,57
May/2015	9.786.720,73	7.862.731,79	1.859.484,18	64.504,80
June/2015	8.383.620,34	5.694.375,57	2.617.334,21	71.910,65
July/2015	7.771.454,67	5.530.938,42	2.078.075,75	162.440,52
August/2015	6.405.815,39	4.494.046,14	1.865.961,25	45.808,02
September/2015	9.315.289,51	5.472.112,06	3.730.899,34	112.278,15
October/2015	9.151.802,15	5.825.234,79	3.216.304,09	110.263,16
November/2015	10.338.556,03	7.072.236,70	2.995.411,91	270.907,44
December/2015	9.461.085,41	6.547.979,87	2.690.672,39	222.433,20
January/2016	7.251.039,96	4.759.273,46	2.396.089,42	95.677,08
February/2016	8.002.081,46	5.373.655,89	2.421.808,10	206.617,43
March/2016	7.894.273,01	4.751.719,20	3.013.937,18	128.616,66
April/2016	10.043.767,63	8.057.698,64	1.871.001,91	115.067,25
May/2015	10.442.600,86	7.838.172,10	2.161.466,44	442.962,28
June/2016	10.771.149,57	7.505.464,48	2.626.008,04	639.676,92
July/2016	8.890.890,32	6.421.446,05	2.336.740,84	132.703,66

Main results

2. Production: Work Performed by Companies by Activity (thousand €)						
Year/Month	Total Construction	Buildings			Civil Engineering	Other activities
		Total Buildings	Residential Building	Non Residential Building		
August/2014	19.691.789,53	16.554.390,41	9.855.054,36	6.699.336,43	2.789.572,92	347.826,25
September/2014	20.124.579,54	16.894.770,29	9.945.933,89	6.948.836,50	2.829.550,58	400.258,85
October/2014	21.511.227,59	17.910.494,76	11.596.217,94	6.314.277,02	3.181.711,78	419.021,08
November/2014	21.654.237,64	18.090.805,07	10.593.948,68	7.496.856,51	3.154.621,24	408.811,23
December/2014	23.016.628,41	18.559.791,83	10.693.947,08	7.865.844,52	3.993.004,11	463.832,49
January/2015	19.368.922,46	16.365.492,32	9.334.179,06	7.031.313,33	2.609.729,47	393.700,62
February/2015	17.823.408,43	14.791.286,36	9.111.424,99	5.679.861,14	2.696.782,99	335.339,12
March/2015	19.723.906,39	16.254.106,12	9.365.077,64	6.889.028,59	3.144.390,38	325.409,80
April/2015	22.189.344,23	18.794.295,69	11.492.168,24	7.302.127,94	3.004.886,55	390.162,05
May/2015	22.102.777,84	18.741.005,29	10.996.832,95	7.744.172,14	2.977.776,89	383.995,56
June/2015	20.527.571,33	16.781.470,24	10.525.125,85	6.256.344,55	3.277.117,23	468.983,99
July/2015	21.772.517,12	18.153.908,11	11.609.016,38	6.544.892,05	3.232.772,71	385.836,26
August/2015	19.843.225,53	16.226.418,60	10.882.120,79	5.344.298,18	3.196.823,62	419.974,81
September/2015	20.494.327,30	17.012.539,25	11.123.645,96	5.888.893,22	3.059.079,61	422.708,79
October/2015	21.651.509,50	17.833.349,87	11.770.205,09	6.063.144,54	3.318.353,98	499.801,78
November/2015	22.152.346,51	18.495.213,35	12.189.365,00	6.305.848,13	3.177.565,16	479.568,16
December/2015	24.664.061,96	20.466.553,27	13.861.311,51	6.605.242,02	3.548.206,01	649.302,62
January/2016	20.031.184,47	17.140.672,10	10.803.082,59	6.337.588,85	2.576.688,17	313.824,27
February/2016	20.574.130,02	17.405.577,02	12.194.661,88	5.210.914,95	2.733.776,85	434.776,27
March/2016	20.081.073,61	16.456.246,41	11.583.413,60	4.872.833,60	3.183.421,74	441.405,45
April/2016	22.467.548,76	18.598.997,58	12.799.780,63	5.799.216,49	3.508.082,10	360.469,41
May/2015	22.491.959,62	18.627.385,69	11.466.741,88	7.160.643,65	3.447.124,91	417.449,25
June/2016	21.829.095,84	17.806.409,69	11.466.033,30	6.340.376,23	3.633.318,92	389.367,20
July/2016	22.689.943,57	18.478.115,52	12.121.132,62	6.356.983,01	3.779.672,21	432.155,73

Main results

3 Operating Income (thousand €)						
Year/Month	Total Construction	Buildings			Civil Engineering	Other activities
		Total Buildings	Residential Building	Non Residential Building		
August/2014	23.914.910,53	19.931.328,90	11.740.673,44	8.190.656,01	3.576.617,80	406.963,79
September/2014	24.122.504,06	19.792.981,44	11.338.293,37	8.454.688,23	3.877.097,99	452.424,74
October/2014	25.926.663,36	21.259.312,84	13.348.404,28	7.910.908,79	4.214.052,06	453.298,49
November/2014	26.791.896,08	21.484.682,40	12.163.178,45	9.321.504,12	4.861.723,29	445.490,42
December/2014	28.247.104,09	22.338.909,36	12.686.499,09	9.652.410,08	5.394.205,48	513.989,24
January/2015	22.676.698,59	18.960.581,51	10.744.834,13	8.215.747,39	3.296.992,68	419.124,40
February/2015	21.672.109,59	17.747.507,34	10.649.896,46	7.097.610,93	3.552.133,43	372.468,70
March/2015	24.019.494,24	19.604.678,40	11.072.488,23	8.532.190,01	4.032.360,26	382.455,38
April/2015	26.847.157,39	22.500.296,89	13.403.466,62	9.096.830,54	3.908.186,06	438.674,38
May/2015	26.618.360,69	22.310.991,15	12.701.574,25	9.609.416,48	3.873.730,00	433.639,39
June/2015	25.233.203,46	20.639.561,47	12.427.400,89	8.212.160,52	4.098.740,39	494.901,71
July/2015	26.266.006,78	21.745.989,32	13.449.899,95	8.296.089,85	4.106.081,60	413.935,81
August/2015	24.270.508,59	19.696.840,39	12.802.773,41	6.894.067,16	4.129.032,21	444.636,06
September/2015	25.700.043,90	21.169.952,82	13.333.007,41	7.836.945,70	4.074.319,46	455.771,81
October/2015	26.176.886,18	21.340.284,36	13.684.532,00	7.655.752,18	4.261.348,07	575.253,80
November/2015	27.239.536,21	22.541.602,24	14.614.079,83	7.927.522,14	4.119.660,38	578.273,59
December/2015	31.994.863,73	26.606.452,30	17.994.353,66	8.612.098,38	4.677.437,84	710.973,73
January/2016	23.978.489,97	20.395.259,36	12.461.740,05	7.933.518,55	3.224.012,51	359.218,23
February/2016	24.992.678,83	20.722.773,57	14.145.997,96	6.576.775,62	3.802.902,65	467.002,89
March/2016	25.340.135,85	20.581.309,19	13.639.809,24	6.941.500,96	4.280.739,60	478.087,20
April/2016	27.844.759,59	22.974.066,17	15.148.028,52	7.826.036,60	4.482.854,76	387.839,12
May/2015	27.527.204,79	22.610.177,91	13.671.801,41	8.938.376,06	4.471.963,89	445.063,36
June/2016	27.489.124,26	22.216.284,09	13.909.802,86	8.306.481,19	4.832.983,53	439.856,56
July/2016	27.525.619,91	22.155.418,72	14.240.034,00	7.915.384,84	4.916.117,30	454.083,70

Main results

4 Subcontracts Assigned to Other Companies				
(thousand €)				
Year/Month	Total	Buildings	Civil Engineering	Other activities
August/2014	4.223.121,04	3.376.938,51	787.044,98	59.137,57
September/2014	3.997.924,12	2.898.210,85	1.047.547,36	52.165,90
October/2014	4.415.435,90	3.348.818,13	1.032.340,38	34.277,45
November/2014	5.137.658,03	3.393.876,99	1.707.101,88	36.679,18
December/2014	5.230.475,62	3.779.117,61	1.401.201,27	50.156,78
January/2015	3.307.776,40	2.595.089,28	687.263,23	25.423,77
February/2015	3.848.701,26	2.956.221,16	855.350,42	37.129,58
March/2015	4.295.587,56	3.350.572,07	887.969,79	57.045,58
April/2015	4.657.813,01	3.706.001,28	903.299,48	48.512,34
May/2015	4.515.582,58	3.569.985,63	895.953,22	49.643,78
June/2015	4.705.632,33	3.858.091,37	821.623,34	25.917,70
July/2015	4.493.489,47	3.592.081,20	873.308,73	28.099,54
August/2015	4.427.283,23	3.470.421,73	932.208,73	24.661,29
September/2015	5.205.716,54	4.157.413,61	1.015.240,00	33.063,01
October/2015	4.525.376,70	3.506.934,33	942.994,25	75.452,09
November/2015	5.087.189,48	4.046.388,91	942.095,08	98.705,47
December/2015	7.330.801,51	6.139.898,59	1.129.231,74	61.671,08
January/2016	3.947.305,61	3.254.587,30	647.324,37	45.393,98
February/2016	4.418.548,90	3.317.196,49	1.069.125,73	32.226,62
March/2016	5.259.062,22	4.125.062,67	1.097.317,82	36.681,75
April/2016	5.377.211,03	4.375.068,58	974.772,83	27.369,67
May/2015	5.035.244,88	3.982.792,04	1.024.838,72	27.614,11
June/2016	5.660.028,38	4.409.874,37	1.199.664,73	50.489,42
July/2016	4.835.676,39	3.677.303,22	1.136.445,00	21.927,97

Main results

5 Staff Employed at the End of the Period (people/thousand hours/thousand €)				
Year/Month	Total Staff Employed	Total Paid Staff	Number of hours worked by paid staff	Wages and Salaries
August/2014	1.324.938,83	1.293.804,58	192.432,51	2.493.542,19
September/2014	1.340.091,83	1.307.536,28	204.453,00	2.528.817,65
October/2014	1.346.136,03	1.314.526,03	210.863,31	2.625.896,10
November/2014	1.352.242,00	1.319.359,51	202.962,43	2.617.627,82
December/2014	1.342.330,29	1.309.781,25	194.361,01	3.381.309,90
January/2015	1.347.555,78	1.316.526,22	195.428,23	2.508.375,11
February/2015	1.357.870,03	1.327.245,10	201.240,67	2.571.885,97
March/2015	1.367.296,69	1.337.542,61	209.040,10	2.658.429,46
April/2015	1.387.189,32	1.356.902,06	206.969,27	2.668.743,96
May/2015	1.408.426,81	1.377.702,74	214.168,74	2.767.167,37
June/2015	1.421.481,26	1.392.120,04	218.983,28	3.367.642,28
July/2015	1.432.759,16	1.403.279,24	225.016,90	2.949.542,43
August/2015	1.426.981,98	1.397.092,85	216.139,61	2.798.498,64
September/2015	1.438.482,40	1.406.923,62	222.832,46	2.811.253,77
October/2015	1.445.614,43	1.415.937,59	223.677,37	2.840.810,17
November/2015	1.456.814,20	1.427.071,50	223.312,46	2.842.201,60
December/2015	1.435.121,41	1.403.824,38	208.309,46	3.727.570,07
January/2016	1.442.266,75	1.414.332,69	210.638,69	2.723.487,63
February/2016	1.451.728,35	1.423.403,92	222.629,70	2.774.861,63
March/2016	1.455.083,86	1.427.720,78	221.880,01	2.897.197,01
April/2016	1.466.717,35	1.433.587,76	224.495,47	2.849.646,58
May/2015	1.476.142,34	1.441.825,82	226.980,76	2.840.850,67
June/2016	1.490.790,77	1.457.745,14	231.682,53	3.524.111,10
July/2016	1.495.073,95	1.463.709,37	225.544,49	3.018.255,17

Dissemination of data

- http://www.fomento.gob.es/MFOM/LANG_CASTELLANO/ATENCION_CIUDADANO/INFORMACION_ESTADISTICA/Construccion/EI_PIC/default.htm

USE OF IPC FOR MACROECONOMICS

Quarterly National Accounts

The data obtained from the (IPC) EIPIC are used by the national accounts.

Production in construction is used to produce a synthetic indicator that gives us an estimate of:

- GVA (Gross Value Added) of the Construction Sector in relation to GDP Offer.
- GFCF (Gross Fixed Capital Formation) in the housing sector (residential and nonresidential) in relation to GDP demand

In the manufacture of these synthetic indicators also involved other variables such as employment according to Active Population Survey (EPA); mortgages constituted; buying and selling of homes; projects visa; tax data and other

Seasonal adjustment

Main objective of seasonal adjustment is to filter fluctuations series: movements that occur with similar intensity in every month, every quarter or every season and are expected to keep on occurring.

Statistical offices and central banks and other institutions and both public and private study services that work with economic time series or economic analysis, are continually making data seasonal adjustment.

Seasonal adjustment is also under continuous debate due to the different methods that can be applied and also different software tools. In addition, it is questioned also possible manipulation of the original data through seasonal adjustment.

Seasonal adjustment

EUROSTAT currently does not require member states to make seasonal adjustments in the STS series states. EUROSTAT does perform this activity with the series received from all countries.

European Union is in the process of approving a new regulatory framework requiring member states to make seasonal adjustments of their series .

Seasonal adjustment of a time series should be performed when at least 5-year data are available.

Seasonal adjustments are made today in most EU countries with software applications. One of the commonly used is TSW, conducted by the Bank of Spain. (tramo seat works).

Seasonal adjustment

<http://ec.europa.eu/eurostat/documents/3859598/6830795/KS-GQ-15-001-EN-N.pdf>

Seasonal adjustment

Applications

http://www.bde.es/bde/en/secciones/servicios/Profesionales/Programas_estadi/Programas.html

Metadata

http://ec.europa.eu/eurostat/cache/metadata/EN/sts_cons_pro_esms_es.htm

شكرا على اهتمامك!