

ANNUAL STATISTICAL SURVEY ON CONSTRUCTIONS

The Annual Statistical Survey on Constructions is carried out according to the regulation 58/97 (E.U.) for structural statistics.

Tables include data of basic economic sizes, per year, for each 3-digit level economic activity branch in country total as well as in time series.

Basic concepts and variable definitions included in tables

REMUNERATED EMPLOYMENT: Includes the total of remunerated employees.

LABOUR REMUNERATIONS: Includes the total of salaries and wages.

GROSS PRODUCTION VALUE: Includes the production value of products, the income from services to third parties and rest operative income.

VALUE OF CONSUMPTION: Includes the value of raw and auxiliary material, fuel, electric energy and other consuming materials.

VALUE ADDED: The gross production value minus expense value of consumption.

GROSS INVESTMENTS: Includes the investments effected during the reference year.

Analytical results of the Annual Statistical Survey of Constructions are presented in detailed tables, which are included in the annual publications of this survey.

A methodological note describing the design of the survey follows.

Annual survey on constructions

TYPE

Sampling survey. The sampling method used is the single stratified random sampling. The enterprises included in the survey are stratified as following:

- By region - NUTS II
- By Class of NACE Rev.1.1 (4digit level of economic activity), within each administrative region
- By size class of the enterprise. In each of the major strata (major stratum = Geography x Economic Activity), the enterprises were stratified into L = 5 size classes, according to their size, determined by their annual turnover in the business register, as follows.

Size Class	Turnover (in €)
Class 1	1 – 89.999
Class 2	90.000 – 249.999
Class 3	250.000 – 1.499.999
Class 4	1.500.000 – 9.999.999
Class 5	10.000.000+

Let h be one of the final strata (Final stratum = Geography X Economic Activity X Size Class). The final strata that contain size classes with $L = 4,5$, are census strata (take-all).

Survey characteristics estimation

a. Symbols

Defining with index i the selection order of an enterprise from the sampling frame in the stratum h and symbolizing with the y one of the survey characteristics, we can define the following:

y_{hi} : The value of the survey characteristic y of the enterprise of order i in the stratum h

Y_h : The sum of the values of the characteristic y for all enterprises falling into the survey and belonging to the stratum h

Y : The sum of the values of the characteristic y for all enterprises under the survey of the stratum h . That is: $Y = \sum_h Y_{hi}$

N_h : The number of all enterprises falling into the survey and belonging to the stratum h

n_h : The sample size in the stratum h

m_h : The number of respondent units in the stratum h

r_h : Response rate in the stratum h ($r_h = \frac{m_h}{n_h}$)

W_{hi} : The extrapolation factor of the enterprise of order i belonging to the stratum h , ($W_{hi} = 1/(\text{Probability of selected unit } i \text{ in stratum } h) \cdot r_h^{-1} = \frac{N_h}{n_h} \cdot \frac{n_h}{m_h} = \frac{N_h}{m_h}$)

b. Estimation process

The estimation of Y_h and Y is given by the following formulas:

$$\hat{Y}_h = \frac{N_h}{m_h} \sum_{i=1}^{m_h} y_{hi}$$

$$\widehat{Y} = \sum_h \widehat{Y}_h$$

c. Variance estimation

The variance estimation of \widehat{Y}_h and \widehat{Y} is given by:

$$V(\widehat{Y}_h) = \frac{N_h(N_h - m_h)}{m_h} S_h^2,$$

Where:

$$S_h^2 = \frac{1}{m_h - 1} \left[\sum_{i=1}^{m_h} y_{hi}^2 - \frac{\left(\sum_{i=1}^{m_h} y_{hi} \right)^2}{m_h} \right],$$

$$V(\widehat{Y}) = \sum_h V(\widehat{Y}_h)$$

The coefficient of variation (%) of total estimation \widehat{Y} is given by:

$$CV(\widehat{Y}) = \frac{\sqrt{V(\widehat{Y})}}{\widehat{Y}} * 100$$