

INSTITUTO NACIONAL DE ESTADISTICA



Economically Active Population Flow Statistics

**Methodology for the
calculation of flows in
absolute values**

**Subdirectorato General for Labour Market Statistics
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1 Objectives

The Economically Active Population Flow Statistics (EAPFS) monitor the population, or specific groups therein, over time, referring to their relationship with the labour market.

As a base, they use the Economically Active Population Survey (EAPS), ongoing quarterly research compiled by the National Statistics Institute.

The simple difference between the quarterly results of the EAPS provides the net variations, but does not give an idea of the gross difference hidden behind them. It is also necessary to have level estimates, that is, estimates in absolute figures, which reflect the variations among the employment, unemployment and economic inactivity situations from one quarter to the next.

The objective of this substantial methodological change in the Economically Active Population Flow Statistics is to estimate the gross transitions among the employment, unemployment and economic inactivity situations from one quarter to the next.

2 Type of operation

The EAPFS is a longitudinal study that uses the information available in a sample survey targeting the population (the Economically Active Population Survey), linking the data given over time by the interviewed persons, and calculating new elevation factors.

3 Content

3.1 POPULATION SCOPE

The target population of study of the EAPFS is the population aged 16 years old and over residing in **main family dwellings**, which are those used throughout the year or for most of it as a regular or permanent dwelling. Therefore, so-called group households (hospitals, residences, barracks, etc.) are not included, nor are secondary or seasonal dwellings (summer homes, weekend homes, etc.). However, those families that, comprising an independent group, reside in said group establishments (for example, the director or concierge of the centre), are included.

A more detailed reference of the design may be viewed at: http://www.ine.es/en/docutrab/epa05_disenc/epa05_disenc_en.pdf

3.2 GEOGRAPHICAL SCOPE

As in the EAPS, the EAPFS covers the entire **country**, including the Autonomous Cities of Ceuta and Melilla.

3.3 REFERENCE PERIOD

The reference period for the results is the quarter, expressing the estimates as transfers between the labour situation of the persons in the current quarter and in the previous quarter.

In general, the reference period of the variables is the survey reference week (the week prior to the week of the interview in the EAPS, according to the calendar). There are variables with special reference periods:

- The employment search methods, the peculiarities of the working day and those relating to permanent training refer to the four weeks prior to the interview.
- The availability to work refers to the two weeks following the Sunday of the reference week.
- The age of the interviewee refers to her/his age on the last day (Sunday) of the reference week. The same occurs with registration in the Administration employment office.
- Labour situation and residence one year ago.

3.4 STUDY AND CLASSIFICATION VARIABLES

The Economically Active Population Flow Survey may initially use all of the variables in the EAPS. Nonetheless, the EAPFS sample is obtained, as described below, through the crossing of the files of the Economically Active Population Survey over the course of two consecutive quarters, for the purpose of linking the answers given by the same person for the two periods. On the one hand, this implies that the sample size is smaller than that of the survey it is based on. On the other hand, it implies that the coverage or content errors, which are generally compensated for in transversal research, are not counteracted in a longitudinal study. Both circumstances lead to not being able to use all of the EAPS variables, and to having to limit the breakdown of those that are used.

The main study variable of the EAPFS is the **classification with regard to economic activity**. This is based on the recommendations of the International Labour Organization (ILO) in the Thirteenth and Sixteenth International Conference of Labour Statisticians (Geneva, 1982 and 1998, respectively), in the version of the Statistical Office of the European Union (Eurostat).

According to said recommendations, the **economically active** population includes all those persons aged 16 years old or over who, during the reference week, meet the conditions necessary for their inclusion among the employed or unemployed persons, as defined below.

Employed persons are those persons aged 16 years old or over who, during the reference week, have worked for others or carried out a freelance economic activity, according to the following definitions:

a) **Persons who work for others, or wage earners**, are all those persons who are in any of the following categories:

- *working*: persons who, during the reference week, have worked, even sporadically or occasionally, for at least one hour, in exchange for a salary, wage or other type of remuneration, in cash or in kind.
- *with a job, but not working*: persons who, having worked in their current job, are absent during the reference week, but are closely linked to the job. Moreover, it must be verified that the total period of absence is less than or equal to three months, or if it is longer, that the percentage of the wages received is 50% or more.

b) Persons with **freelance, or self-employed**, activity are considered to be all those included in the following activities:

- *working*: persons who, during the reference week, have worked, even sporadically or occasionally, for at least one hour, in exchange for a benefit or family earnings, in cash or in kind.
- *with work, but not working*: persons who, during the reference week, had to carry out work in exchange for a benefit or family earnings, but have been temporarily absent from the work, due to illness or accident, holidays, public holiday, bad weather or other similar reasons.

Unemployed persons are those persons aged 16 years old or over who simultaneously meet the following conditions:

- *without work*, that is, who have not had work for others or self-employed work during the reference week.
- *seeking work*, that is, who have taken specific measures to look for a wage-earning job or who have taken steps to establish themselves as self-employed workers the previous month.
- *available to work*, that is, able to begin working within a two-week period following the Sunday of the reference week.

Those persons aged 16 years old or over, who during the reference week, have not had work and have not sought employment, because they have already found a job that they will be starting within the three months following the reference week, will also be considered unemployed.

The **economically inactive** population encompasses all those persons aged 16 years old or over who are not classified as employed or unemployed during the reference week.

The following functional categories are included:

- *Homemakers*: persons who, without performing any economic activity, take care of their own homes; for example, housewives/husbands and other family members who take care of the house and the children.
- *Students*: Persons who, without performing any economic activity, receive systematic instruction at any educational level.
- *Retired persons*: persons who have had previous economic activity, and who, due to age or other causes, have stopped that economic activity, receiving a pension (or early retirement income) as a result of their previous economic activity.
- Persons who receive a pension other than *retirement* or *early retirement pensions*.
- *Persons who have carried out unpaid social work, charity-type activities, etc.* (excluding family assistance activities).
- *Incapacitated to work*.
- *Another situation*: persons who, without performing any economic activity, receive public or private aid, and all those persons who are not included in any of the above categories, such as independently wealthy persons.

The main **classification variables** used in the EAPFS are as follows:

- Sex
- Age (ten-year groups)
- Nationality (Spanish, foreign)
- Large groups, according to the educational level attained
- Professional situation of employed persons (wage earners, self-employed persons)
- Large occupation groups
- Activity sector
- Type of contract
- Autonomous Communities

4 Characteristics and methodology of the Economically Active Population Flow Statistics

These statistics offer representative level estimates of the population for current quarter, t , according to their situation the previous quarter, $t-1$.

To this end, the common sample between the two quarters is considered. Specifically, this considers those persons aged 16 years old and over who are in the sample for both quarters, those who, being in both quarters, during the reference quarter are 16 years old, and in the previous quarter, were 15 years old, and lastly, those who have arrived in Spain in the last 3 months.

The elevation factors are calculated, taking, as a reference, the population for current quarter, t , by the customary EAPS procedure ¹, that is, the deducted weights are obtained from the survey design, and they are calibrated by sex, age (five-year age groups) and nationality (Spanish and foreign) for each Autonomous Community, and by population (aged 16 years old and over) for each province. Moreover, this procedure introduces new calibration variables including the totals for employed, unemployed and economically inactive persons by Autonomous Community, taking as an external source, the quarterly estimates of the EAPS for t , for the purpose of the results being consistent with the transversal results of the survey for those totals.

The new EAPFS has the following advantages:

- It is the calculation of the origin flows, which are used more than the evolution flows, that enables publishing them at the same time as the quarterly EAPS results for t
- The marginal totals of the relationship with economic activity (employed, unemployed and economically inactive persons) coincide with those for quarter t
- The customary calculation of factors in the quarterly EAPS is respected
- The results are consistent with demographic migration and vital statistics data available
- The sample well represents the universe considered in t

For the purpose of explaining this last advantage, the following equality must be borne in mind:

¹ The Economically Active Population Survey has a stratified two-stage sample design in each province. The first-stage units are the census sections, and the second-stage units are the selected dwellings. All of the persons resident in a dwelling are interviewed.

Sample stratification is established, based on the demographic significance of each municipality in the province, and according to the socio-economic characteristics of the census sections.

$$P(t) - P(t-1) = D16(t-1, t) + I(t-1, t) - F(t-1, t) - E(t-1, t)$$

With $P(t)$ = population in t
 $P(t-1)$ = population in $t-1$
 $D16(t-1, t)$ = persons who turn 16 years old between $t-1$ and t
 $I(t-1, t)$ = immigrants arriving in Spain between $t-1$ and t
 $F(t-1, t)$ = persons who have died between $t-1$ and t
 $E(t-1, t)$ = emigrants between $t-1$ and t

And also:

$$P(t) = P(t-1, t) + D16(t-1, t) + I(t-1, t)$$

With $P(t-1, t)$ being the common population aged 16 years old and over between $t-1$ and t .

This does not account for changes in residence between family and group dwellings occurring between $t-1$ and t , as these changes are considered to be scant in quantity.

In this way, the chosen sample (integrated by that which is common for the two quarters, by those who have turned 16 years old from one quarter to the next, and by those who have arrived in Spain during the period²) represents the entirety of the universe considered in t .

² The latter may be identified, with a good approximation, through the EAPS variables relating to the reference date of the interview and the month of arrival in Spain.