

New measures of labour market attachment

3 new Eurostat indicators to supplement the unemployment rate

Eurostat is releasing 3 new indicators to supplement the unemployment rate. The 2010 results for these are reported in the accompanying Statistics in Focus publication entitled ‘8.5 million underemployed part-time workers in the EU-27 in 2010’.

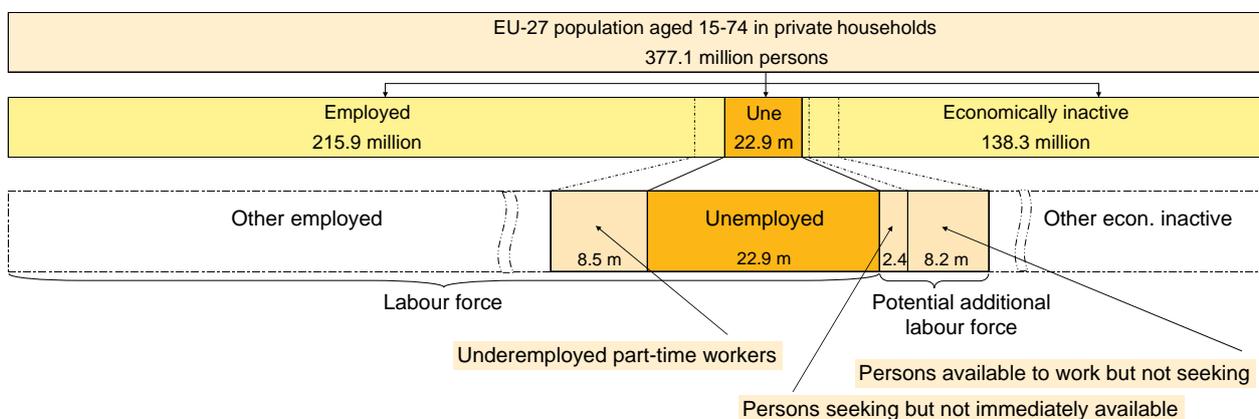
This report examines these indicators in greater depth and from a methodological viewpoint, some results being of an experimental nature. In particular, it presents the new indicators as ‘halos’ around unemployment and compares them to the ILO labour statuses in terms of their relative attachment to employment and the labour market.

The 3 new indicators cover underemployed part-time workers, persons seeking work but not immediately available and persons available for work but not seeking it. These people do not fulfil all the criteria of the unemployment definition of the International Labour Organisation (ILO) and are therefore not classified as unemployed. They do however share some characteristics with the unemployed.

Eurostat publishes unemployment statistics according to the ILO definition: unemployed persons are those aged 15 to 74 who are without work, are available for work and are actively seeking employment (see methodological notes).

Unemployment is the most widely used labour market indicator, reflecting a range of aspects that are both economic (e.g. labour underutilisation, business cycle) and social (e.g. joblessness, risk of poverty and social exclusion, etc). However with an increasingly fragmented and diversified labour market and strongly varying degrees of attachment to it, the unemployment rate indicator can on its own no longer sufficiently describe all those aspects. Indeed, there are many persons who share some characteristics with those unemployed according to the ILO definition but who do not fulfil all the criteria to be classified as such. To some extent, their situation resembles that of unemployed persons and indeed many of them perceive themselves as unemployed.

Figure 1: ILO labour statuses and new supplementary indicators, EU-27, age 15-74, 2010



Source: Eurostat (online data codes: [lfsi_sup_age_a](#) and [lfsa_pganws](#))

The three new indicators introduced

The first indicator, **underemployed part-time workers**, covers persons who, although employed, have insufficient volume of work, and are in this respect similar to unemployed persons. This indicator is defined as people employed part-time who want to work more hours and are available to do so (see methodological notes). In the EU-27 in 2010 there were 8.5 million underemployed part-time workers. This definition includes in particular persons in involuntary part-time who want to have a full-time job. The part-time requirement in the definition is important because people who work full-time and still want to work more hours have a different profile: in spite of working many hours they have insufficient income. Instead underemployed part-time highlights the situations of insufficient volume of work and underutilised labour among persons already employed.

The second and third indicators focus on jobless persons not considered as unemployed, but as inactive according to the ILO definitions. The second indicator, **persons seeking work but not immediately available**, consists mostly of people who do not qualify as unemployed because of their limited availability to start in a new job, despite their being jobseekers. Other smaller groups are included in this indicator for completeness reasons, e.g. jobless people who have found a job they will start later (see methodological notes). There were 2.4 million persons seeking work but not immediately available in the EU-27 in 2010.

The third indicator, **persons available to work but not seeking**, consists of people wanting to work and available to do so, but who are not recorded as unemployed because they are not actively looking for a job (see methodological notes). This includes, among others, discouraged jobseekers and persons prevented from seeking work by personal or family

circumstances. There were 8.2 million persons in this situation in the EU-27 in 2010.

The sum of the two groups ‘persons seeking work but not immediately available’ and ‘persons available for work but not seeking’ is called the **potential additional labour force (PAF)**. Persons in the PAF are not part of the standard labour force, which encompasses only employed and unemployed people (see figure 1 on previous page). However they have a stronger attachment to the labour market than other economically inactive persons, as will be shown below.

The rest of this report explains the main features of the new indicators compared to other labour statuses. This will lead to comparing the 3 new indicators to the groups of unemployed (ILO definition) and the remaining employed and other economically inactive persons, hence comparing 6 categories, as shown in table 1. This categorisation will be used in the rest of this report.

These six detailed categories can be mapped onto the well-known three ILO labour statuses: the sum of the categories 1 and 2 corresponds to the employed population (ILO definition), category 3 is the same as the ILO unemployed population and the sum of categories 4 to 6 corresponds to the economically inactive population (ILO definition)

Table 1: Labour categories, EU27, 2010, 000s persons

1 Employed, not underemployed	207 397
2 Underemployed part-time workers	8 539
3 Unemployed	22 906
4 Persons seeking work but not immediately available	2 384
5 Persons available to work but not seeking	8 250
6 Other economically inactive persons	127 632

Source: Eurostat (online data codes: [lfsi_sup_age_a](#) and [lfsa_pqanws](#))

The new indicators form ‘halos’ around unemployment

The 3 new supplementary indicators capture people in situations of labour market attachment mid-way between the 3 standard ILO labour statuses (employment, unemployment and economic inactivity). Underemployed people have a lower attachment to employment than other employed persons but obviously higher than jobless people. For their part, people in the potential additional labour force have a lower attachment to the labour market than the unemployed but higher than other economically inactive persons.

The degree of labour market attachment is analysed separately for underemployed part-time workers and the groups covered by the potential additional labour force. The former are at present working whereas the latter are not. This section uses job tenure and previous work experience as variables to describe the attachment to employment and to the labour market, respectively.

Underemployed part-time workers have shorter job tenure than other employed persons. Only 50 % of underemployed part-time workers have been in their present job for more than 2 years, falling short of the

78 % among other employed persons (see table 2, first column). Conversely, 35 % of underemployed part-time workers have been less than 1 year in their

present job, a share much higher than among other employed persons (13 %). These are EU27 averages for 2010.

Table 2: Underemployed part-time workers and other employed persons by job tenure, EU27, 2010

	Time since started work				Total
	More than 2 years ago	Over 1 year ago but less than 2	Less than 1 year ago	No answer	
Employed, not underemployed	78%	8%	13%	1%	100%
Underemployed part-time workers	50%	14%	35%	1%	100%

Source: Eurostat, EU-LFS

As regards the other new indicators, which encompass people who are not presently working, the attachment to the labour market can be measured by whether or not they have previous working experience and if so, how long ago. Among the 'persons seeking work but not immediately available', a high 47 % of them have worked during the last 2 years. This share was 32% among the 'persons available to work but not seeking'. This is not as high as among the unemployed (59 %) but much higher than among other economically inactive people (11 %), see Table 3, first column. There is a clear decreasing pattern.

A linear pattern also exists in the other columns of Table 3. In particular, as many as 25 % of the persons seeking work but not immediately

available have never worked and are thus looking for their first job. Also 30 % of the persons available for work but not seeking it have never worked. These shares are higher than the share of unemployed persons who have never worked (16%) but lower than the corresponding share among other economically inactive people (32 %).

These results show that persons seeking work but not immediately available have an attachment to the labour market that is lower than the ILO unemployed but higher than the persons available but not seeking a job. The other economically inactive persons have a lower attachment level than any of the other groups. In other words, the 2 constituent groups of the potential additional labour force fall in between the unemployed and other economically inactive people.

Table 3: Potential additional labour force by work experience (comparison to ILO unemployed and other economically inactive persons included for reference), EU-27, 2010

	Time since last worked				Total
	Less than 2 years ago	2 years ago or more	Never worked	No answer	
Unemployed (ILO definition)	59%	24%	16%	1%	100%
Persons seeking work but not immediately available	47%	26%	25%	2%	100%
Persons available to work but not seeking	32%	37%	30%	0%	100%
Other economically inactive persons	11%	56%	32%	1%	100%

Source: Eurostat, EU-LFS

The 3 groups covered by the indicators show different probabilities of labour status transition

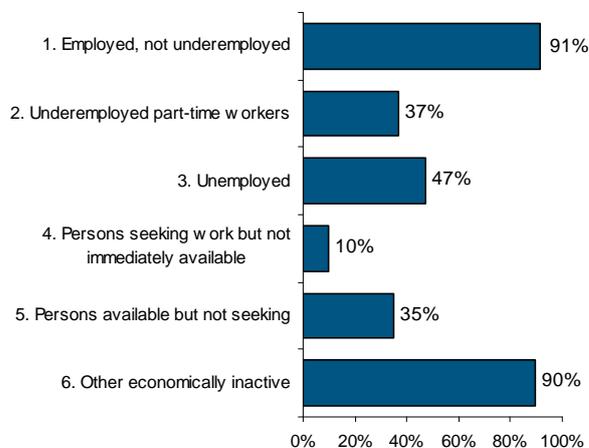
A better but more complex way to analyse the individuals' attachment to the labour market is looking at the likelihood, within a given time span, of their moving to another labour category or remaining in the present one. This approach provides more insight into the nature of the groups.

The results in this section are of an experimental nature. They are less reliable than regular official statistics; they are published here because they are very informative and sound enough for relative comparisons. EU aggregates reported in this section are the sum of Member States whose data provide satisfactory results (see methodological notes).

For the 6 labour categories introduced in Table 1, a comparison is made between the labour situation of Labour Force Survey respondents in each quarter of 2009 and four quarters later in 2010. This gives for each quarter the number of persons changing labour status year-on-year; the four quarters were summed to obtain annual estimates of labour transitions. Finally, transition probabilities were derived by dividing the number of persons changing labour status over the number of persons in the initial status.

Figure 2 reports, for each of the 6 labour categories introduced above, the percentage of those who were still in the same category 4 quarters later (also called permanence rates). For instance, the first bar means that 91 % of employed persons not underemployed part-time in 2009 remained in that situation 4 quarters on (NB this one permanence rate includes also those who changed jobs but remained in the same employment category). The remaining 9 % moved to another situation, most of them retired or became unemployed. Figure 2 shows that the categories 1 and 6 have, as expected, very high permanence rates and have proportionally few transitions to other labour categories. Conversely, categories 2 to 5 (i.e. ILO unemployment plus the 3 new indicators) are the groups with higher labour market dynamics. This is an important feature of the new indicators: they capture the groups undergoing the greatest change.

Figure 2: Permanence rates between 2009 and 2010, by labour category, EU



Source: Eurostat, EU-LFS

We then examine separately and in greater detail the unemployment category and the 3 new supplementary indicators (categories 2 to 5). Figure 3a reports the transition probabilities of underemployed part-time workers (category 2) in the EU between 2009 and 2010. Each bar in Figure 3 represents the percentage of those who were still in the same category 4 quarters later in 2010 (darker shading), or moved to a different category (lighter shading). The total is 100 %, leaving aside small differences because of rounding effects.

Some 37 % of underemployed part-time workers remain underemployed part-time workers one year later. Those underemployed persons who change situation tend to move up into another employment situation (category 1: 45 %) rather than down into unemployment (category 3: 10 %) or into economic inactivity (categories 4-6 combined: 8 %). All in all, the group of underemployed part-time workers has moderately high permanence rates, and group leavers move up rather than down.

Underemployed part-time workers, however, are more likely to move into unemployment than other employed people, respectively 10 % (see Figure 3a) and 3 % (not shown).

Figure 3b shows the transition probabilities of unemployed persons, reported here for reference. 47 % of them remain unemployed one year on. Unemployed persons are more likely to move up into employment (category 1: 27 %) than to move down into categories 5 or 6 (persons available to work but not seeking or other economically inactive persons: 19 % combined). They only rarely move into categories 2 and 4.

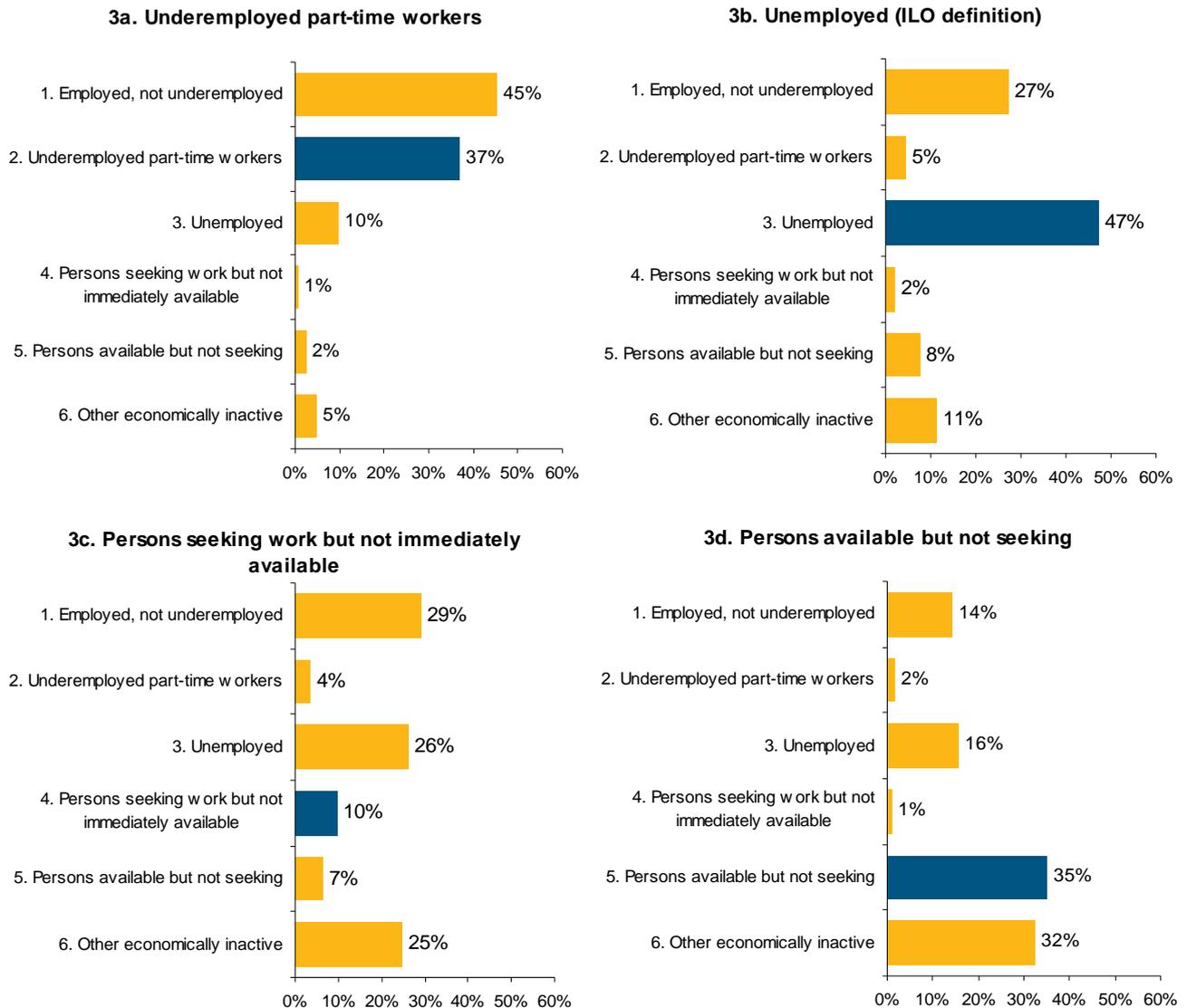
The group in the indicator ‘persons seeking work but not immediately available’ (category 4) is unsurprisingly very volatile, only 10 % remain one year on (Figure 3c). They either move up (to unemployment if their availability improves or to employment if they find a job) or down, the probabilities of each being similar at around 20 - 30 %. Very few of them (7 %) move into the group of persons available but not seeking. This indicates a weak link between categories 4 and 5 reflecting their opposite features: one dynamic, active group but with limited availability, the other available for work but not actively seeking it.

Finally, the group of persons available but not seeking (category 5) has a 35 % permanence rate one year on, see Figure 3d. Those who change situation have a greater likelihood of moving down to category 6 (other economically inactive persons: 32 %) than up to category 3 (unemployment: 16 %) or 1 (employment not underemployment: 14 %)

one year on. This last point means that the group in category 5 is rather distant from employment but still more dynamic than those in category 6, who have a 90 % probability of remaining one year on, as shown in figure 2.

Note also that the probability of joining the labour market among persons seeking work but not immediately available (i.e. combined categories 1-3 in Figure 3c) is 59 %, which means that more than half of them will become employed or unemployed one year on. The probability of joining the labour market among persons available for work but not seeking it is a lower but significant 32 % (i.e. combined categories 1-3 in figure 3d). Instead, the corresponding probability of joining the labour force among other economically inactive people is only 7 % (not shown). This justifies the term ‘potential additional labour force’ for the categories 4 and 5 together.

Figure 3: Transition probabilities between 2009 and 2010, EU



Source: Eurostat, EU-LFS

Self-perceived labour status sheds light on personal circumstances

It is possible to know more about who are the people covered in the new supplementary indicators by looking at how they perceive themselves, i.e. what they consider to be their main status. This self-reported status differs from the labour status in the ILO definitions, which is based on objectively measurable individual behaviour.

Table 4 reports the 6 labour categories introduced above by self-perceived status. All these shares are EU-27 averages in 2010, excluding Germany and the United Kingdom, for which no data on self-reported status are available.

Rows 1 and 2 show a similar pattern for underemployed part-time workers and for other employed persons. Employed persons excluding underemployed part-time workers are a most homogeneous group: 97 % of them see themselves as employed (Table 4, first row). Among underemployed part-time workers this share is 88%; another 6 % think of themselves as unemployed and 4 % of them report they are students.

Rows 3 to 5 show a common pattern for unemployed persons (ILO definition) and persons

in the potential additional labour force. In row 3, an overwhelming majority of unemployed persons under the ILO definition see themselves as unemployed: 89 %. This share is 57 % for persons seeking work but not immediately available and 43% for persons available for work but not seeking it. For these two categories, unemployment is by far the most frequent self-perceived labour situation. Most other people in the potential additional labour force report they are students (19% and 10 % respectively), fulfilling domestic tasks (8 % and 19 % respectively) or other inactive persons (9 % and 17 % respectively). Only 3 % and 1 % respectively see themselves as employed.

Finally, the other economically inactive persons, i.e. not counting those in the potential additional labour force (table 4, bottom row) are a heterogeneous group in which only 2 % report they are unemployed and 1% employed. Instead they are mostly retired or disabled (46 %), students (25%), persons fulfilling domestic tasks (15 %) or other inactive persons (12 %). The composition of this final group is very different from the other rows in the table.

Table 4: Labour categories by self-perceived labour situation, EU-27, 2010

	Self-perceived labour situation						Total
	Employed	Unemployed	Fulfilling domestic tasks	Student	Retired or permanently disabled	Other inactive person	
1 Employed, not underemployed	97%	0%	0%	1%	1%	0%	100%
2 Underemployed part-time	88%	6%	1%	4%	1%	1%	100%
3 Unemployed (ILO definition)	1%	89%	2%	4%	1%	2%	100%
4 Persons seeking but not available	3%	57%	8%	19%	4%	9%	100%
5 Persons available but not seeking	1%	43%	19%	10%	10%	17%	100%
6 Other economically inactive	1%	2%	15%	25%	46%	12%	100%

Note: Data for Germany and United Kingdom not available

Source: Eurostat, EU LFS

Filling the gap between ILO unemployment and self-reported unemployment

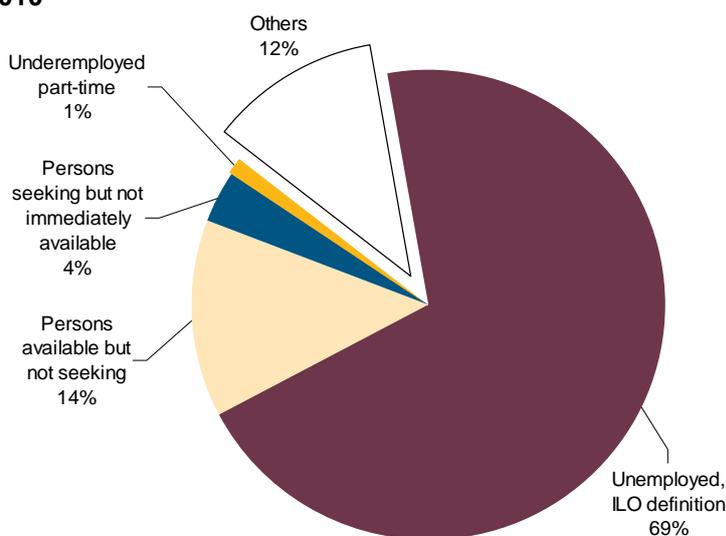
As seen above, many people perceive themselves as unemployed whereas they do not fulfil the requirements of the ILO-based unemployment definition, and vice versa. Indeed, ILO unemployment and self-reported unemployment are different concepts. Generally, there are far more self-reported unemployed than ILO unemployed.

The supplementary indicators fill much of the gap between ILO unemployment and self-reported unemployment. This is an unintended feature but it

shows that the supplementary indicators succeed in capturing labour situations on the periphery of the official ILO unemployment concept.

Of all persons who spontaneously report they are unemployed, 88 % are either ILO unemployed or in one of the 3 supplementary indicators in the EU-27 in 2010. Most of the remaining 12 % self-reported unemployed are jobless people who are neither looking for work nor available for work.

Figure 4: Coverage of self-perceived unemployment by ILO unemployed and supplementary indicators, EU-27, 2010



Note: Data for Germany and United Kingdom not available

Source: Eurostat, EU LFS

ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

Sources: All statistics in this publication are derived from the European Union Labour Force Survey (EU-LFS). The EU-LFS is a quarterly, large sample survey providing results for the population in private households in the EU, EFTA, and the Candidate Countries (except Liechtenstein).

Country codes: European Union (27 countries) is written as EU-27 and consists of Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK).

The figures for France do not include overseas departments.

Reference periods: All the data are annual averages of quarterly data for 2010Q1-2010Q4, except data in the section on self-perceive labour situation, which uses annual 2010 data, as that variable is not available on a quarterly basis.

Labour status definitions: The concepts and definitions used in the EU-LFS follow the guidelines of the International Labour Organisation (ILO).

- **Employment** covers persons who during the reference week performed work, even for just one hour, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent for example because of illness, holidays, temporary lay-off, flexible working time arrangements, industrial dispute or education and training.

While employment statistics are typically published for the age group 15-64, this report publishes employment for the age group 15-74 (16-74 in Italy,

Spain, UK and Iceland). This is to allow comparability with unemployment, which is normally published for ages 15-74, also in this report.

- **Unemployment** covers persons aged 15-74 (16-74 in Italy, Spain, UK and Iceland) who:
 - were without work during the reference week;
 - were available to start work within the next two weeks;
 - and had either been actively seeking work in the past four weeks or had already found a job to start within the next three months.
- **Economically inactive population** are persons who are neither employed nor unemployed.

Self-perceived unemployment and other labour situations. This variable is not available for Germany and United Kingdom; EU-27 estimates in this report are the sum of the 25 Member States available.

Definitions of indicators to supplement unemployment:

1. **Underemployed part-time workers** are persons aged 15-74 working part-time who wish to work additional hours and are available to do so. Part-time work is recorded as self-reported by individuals.
2. **Persons seeking work but not immediately available** are the sum of persons aged 15-74 neither employed nor unemployed who:
 - Are actively seeking work during the last 4 weeks but not available for work in the next 2 weeks;
 - Found a job to start in less than 3 months and are not available for work in the next 2 weeks;
 - Found a job to start in 3 months or more;

- Are passively seeking work during the last 4 weeks and are available for work in the next 2 weeks. Passive job search includes, for example, waiting for the results of a job interview.

The first of those 4 groups is the biggest by far. The 3 latter groups are included in this indicator for completeness because they are not ILO unemployed but share many characteristics with people in the first group.

3. **Persons available to work but not seeking** are persons aged 15-74 neither employed nor unemployed who want to work, are available for work in the next 2 weeks but are not seeking work.

These definitions come from recent methodological work at EU level.

Transition probabilities. Data reported on pages 4-5 were specially calculated for this publication, based on the following microlinking technique. In most countries LFS respondents are interviewed several times during a period up to 6 quarters long. Eurostat targeted the respondents having the 2nd or 3rd interview exactly 4 quarters after the original one, e.g. in 2009Q1 and again in 2010Q1 (only a part of the sample fulfils this condition). Eurostat

linked the answers of these respondents and compared their labour situation in each period. Linked sample units were grossed up to the country population using the sampling weightings in the 2nd period compared, once calibrated for the part of the sample lost in the linking process. This gave the estimated number of persons flowing from one labour situation to another between 2009Q1 and 2010Q1, 2009Q2 and 2010Q2, etc. The 4 quarterly flows were then summed to obtain the annual number of flows. Finally, transition probabilities were derived from the number of persons, calculated as the ratio between persons having status *i* in 2009 and status *j* in 2010 over persons having status *i* in 2009.

The EU figures reported in this study are the sum of Member States for which this technique was successful, namely: BG, CY, CZ, EE, ES, FI, FR, EL, HU, IT, LT, MT, NL, RO, SE and SK. For the following countries it was not possible to link a part of the sample representative of the changes in the overall population: AT, IE, LV, PT, PL, SI and UK. For the following countries this technique was not possible either because there is no repeated interview or Eurostat could not link the units: BE, DK, DE and LU.

Further information

Eurostat Website: <http://ec.europa.eu/eurostat>

Data on 'EU-LFS Statistics'

http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/database

Further information about 'EU-LFS Statistics'

http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/introduction

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