

## AN INTERNATIONAL NOMENCLATURE OF EDUCATION PROGRAMMES AND LEVELS

In a context of diverse national education systems and the meaning given to degrees, the international comparison first of all uses a common framework of definitions and nomenclatures. This common framework is the product of a long-running process that began with the creation of the International Bureau of Education in 1925, then, and above all, with UNESCO's, created in 1945, which over time has included other organisations (OECD and Eurostat).

Adopted by UNESCO in 1978, the International Standard Classification of Education (ISCED) classifies education/training programmes and attainment levels (this is not "school curricula", attached to a particular grade) in a unified nomenclature that makes it possible to produce international statistical comparisons in education. A first reform occurred in 1997 that led to ISCED 1997. This combined three kinds of criteria, *i.e.* the level (from ISCED 0 to 6, **1.1.1**); the distinction between a general stream intended for continuing education (A), a vocational stream that may give access to upper levels of education (B) and a stream that prepares directly for the labour market (C); and lastly, the duration of programmes. Thus short-term programmes of secondary vocational teaching, called "3C short-cycle", the duration of which lasts strictly less than two years, does not allow for attaining the ISCED 3 level.

The ISCED was reformed in 2011 upon by the three organisations that co-ordinate its implementation (UNESCO, the OECD and Eurostat). From then on the tertiary learning programmes have been classified on 4 levels (ISCED 5 to 8) (**1.1.1**), and ISCED 0 is subdivided into two sections (ISCED 01 and 02) so as to differentiate the education programme provided in the framework of institutions for early childhood from those for pre-primary education. Each of the ISCED 2 to 5 programmes is, as in the ISCED 1997, subdivided into "general" and "vocational" programmes.

The observation of a population is predicated on differentiating the ISCED level "attained" by the population that corresponds to the last validated ISCED level and the

ISCED "programme" in which this population is working at the time of observation. For example, a student newly enrolled in a French high school has attained the ISCED 2 level since he/she validated the lower secondary education, and he/she is now attending an ISCED 3 programme. It is only once he has obtained a *CAP* (secondary school vocational training certificate), a *BEP* (secondary school vocational degree) or a baccalaureate (equivalent to GCE A-levels) that the student attains the ISCED 3 level.

## A CLASSIFICATION THAT LEAVES COUNTRIES ROOM FOR INTERPRETATION

The international definitions and classifications are grounded in a past woven from arbitration and evolutions that have enabled improvement in the quality of international statistics whilst inevitably leaving room for interpretation by each country. Although all European Union countries have degrees, the way in which countries gather information about these degrees in their surveys as well as the way in which the degrees are converted to the ISCED can have an influence on all of the international data (cf. 5.2, p. 48).

The two examples given in **1.1.2** show details of the coding of two French programmes. Both the *CAP* and the general Baccalaureate are programmes leading to degrees at the conclusion of upper secondary school; so their classification begins with the number 3. The second number indicates the orientation of the programme, *i.e.* the *CAP* is a "vocational" programme, whilst the general Baccalaureate, a "general" programme, so they are assigned numbers 5 and 4 respectively. Lastly, the third code number indicates whether the programme validates or not the level of the ISCED concerned and whether it gives access to the higher ISCED level. Here the two programmes make it possible to validate ISCED level 3, but only the Baccalaureate allows for accessing tertiary education. The codes of the *CAP* and the general baccalaureate are therefore "353" and "344" respectively. ■

**1.1.1 Correspondence table of programmes between ISCED 1997 and ISCED 2011**  
 G UNESCO Institute For Statistics, *International Standard Classification of Education - ISCED 2011, 2012.*

ISCED 1997		ISCED 2011	
ISCED 0	Pre-primary education <i>École maternelle</i>	ISCED 01	Early childhood educational development <i>Education programmes targeting children under the age of 3</i>
		ISCED 02	Pre-primary education <i>École maternelle</i>
ISCED 1	Primary education <i>École élémentaire</i>	ISCED 1	Primary education <i>École maternelle</i>
ISCED 2	Lower secondary education > minimum duration: 3 years <i>Collège</i>	ISCED 2	Lower secondary education > minimum duration: 3 years <i>Collège</i>
ISCED 3	Upper secondary education > minimum duration: 2 years orientation: programmes A, B or C <i>Lycée général, technologique, professionnel</i>	ISCED 3	Upper secondary education > minimum duration: 2 years orientation: programmes 4 or 5 <i>Lycée général, technologique, professionnel</i>
ISCED 4	Post-secondary non-tertiary education orientation: programmes A or B <i>Capacité en droit Diplôme d'accès aux études universitaires - DAEU</i>	ISCED 4	Post-secondary non-tertiary education orientation: programmes 4 or 5 <i>Capacité en droit Diplôme d'accès aux études universitaires - DAEU</i>
ISCED 5	First stage of tertiary education orientation: programmes A or B <i>Établissements d'enseignement supérieur (universités, grandes écoles, etc.)</i>	ISCED 5	Short-cycle tertiary education orientation: programmes 4 or 5 <i>Sections de techniciens supérieurs - STS Diplôme universitaire technologique - DUT</i>
		ISCED 6	Bachelor's or equivalent level orientation unspecified <i>Licence (LMD), Licence Professionnelle, Classe Préparatoire aux Grandes Écoles, etc.</i>
		ISCED 7	Master's or equivalent level orientation not used <i>Master (LMD), formations d'ingénieur or d'école de Commerce, etc.</i>
ISCED 6	Second stage of tertiary education orientation: unspecified <i>Établissements d'enseignement supérieur (universités, grandes écoles, etc.)</i>	ISCED 8	Doctoral or equivalent level orientation not used <i>Doctorats</i>

Note: In the ISCED 1997 nomenclature, programmes A, B or C respectively designate general, vocational and short vocational programmes.  
 In the ISCED 2011 nomenclature, programmes 4 and 5 respectively designate general and vocational programmes.

**1.1.2 Examples of programmes' codification in France according to ISCED 2011 nomenclature: CAP and Baccalauréat general**

CAP (Certificat d'Aptitude Professionnelle)			Baccalauréat general		
ISCED	General / Vocational	Orientation	ISCED	General / Vocational	Orientation
0			0		1
1	4	1	1		2
2		2	2		3
3	5	3	3	4	4
4		4	4		
5			5	5	
6			6		
7			7		
8			8		

## 1.2 THE DEMOGRAPHIC CONTEXT

### A MORE OR LESS PRONOUNCED AGING OF THE EUROPEAN UNION'S POPULATION, DEPENDING ON THE COUNTRY

On January 1st, 2014 the 28 member-states of the European Union (EU) had a population of 507 million, 136 million of whom were aged between 0 and 24 years, or 27% of the total EU population (1.2.1). Ten years earlier in 2003, the same age group numbered 145 million, or 30% of the total population. Thus the European Union is facing an aging demographic where half of the population is now older than 42. Nonetheless, the percentage of young people in the total population shows significant disparities from country to country, which reflects contrasting demographic dynamics within the EU. This percentage is over 30% in Ireland, Cyprus, France, the United Kingdom and Denmark, whereas the percentage in Italy, Germany, Bulgaria, Slovenia and Spain is less than 25%. The percentage of 0 to 17 year-olds varies from 17% in Italy to 26% in Ireland.

### CONTRASTING FERTILITY RATES AND MIGRATORY NUMBERS ACCORDING TO THE COUNTRY

The magnitude of the **natural balance**<sup>■</sup> and **migration balance**<sup>■</sup> respectively proves to vary widely from country to country (1.2.2). Linked to growing **life expectancy at birth**<sup>■</sup> (77.8 years in 2004 and 79.9 years in 2013), maintaining a low **total fertility rate**<sup>■</sup> average in the EU (1.47 children per woman between 15 and 49 years old in 2003; 1.55 in 2013) explains the aging phenomenon. However, fertility rates remain highly contrasted from country to country (1.2.3). Ireland, France and Sweden have rates superior to 1.75 children per woman, whereas the rate in Portugal, Spain, Poland, Greece and Cyprus does not surpass 1.3.

As seen with the latest crisis, the flow (intra- and extra-European) of migrants may be a decisive factor in demographic dynamics. In Lithuania and Latvia, for example, the

demographic drop between 2009 and 2014 is almost entirely due to considerable emigration flows. On the other hand Cyprus and Luxembourg see a large part of their demographic growth explained by a positive migratory balance. And Germany and Austria are in a situation where the migratory numbers on their own enable the two countries to maintain a growth in their population numbers. Moreover, this phenomenon is recent for Germany which has gained inhabitants only since 2011, after losing population between 2003 and 2011. The migratory situation is an important factor in demographic dynamics while it challenges education systems from the point of view of intake capacity and integrating non-native speaking pupils and their parents into schools.

### TWO-SPEED DEMOGRAPHIC PROGRESS IN EUROPE OVER THE LONG-TERM

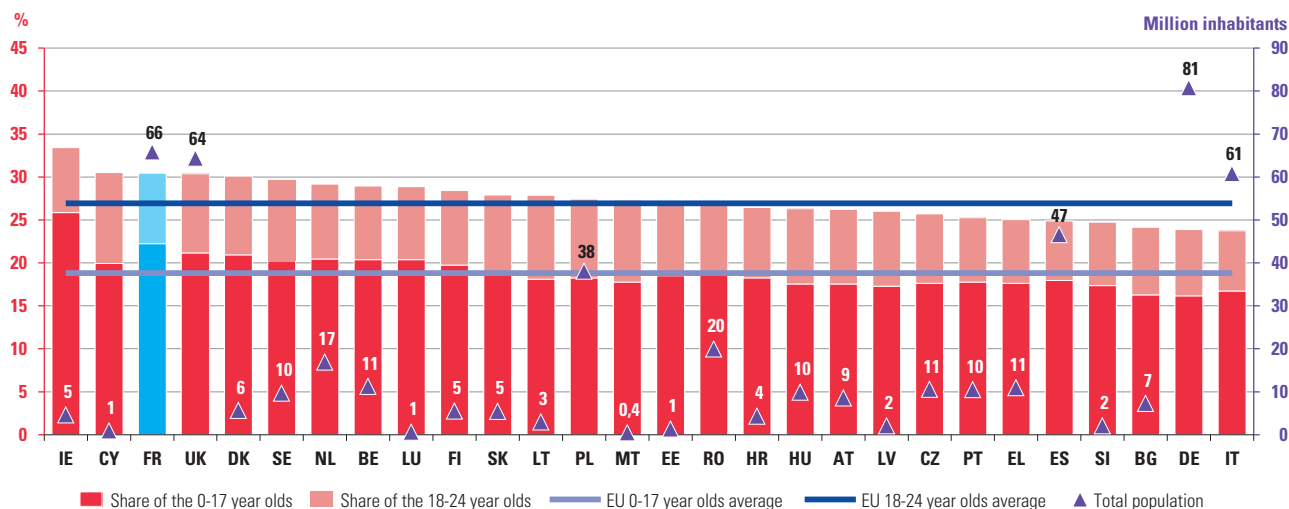
By 2030 the EU should lose inhabitants in the 0 to 24 year-old age group but expand its total population, confirming the continuing overall aging of the population (1.2.4). There are, however, two distinct groups of countries, i.e. a majority of western European countries will see simultaneous growth in their youth population and their overall population (in particular Austria, Belgium, Finland, France, Italy, Luxembourg, Sweden and the United Kingdom), whilst the eastern European countries will see joint shrinkage of their youth and overall populations (the Balkans, Spain, Greece, Portugal, central Europe and the Baltic countries).

In this scenario Italy stands out as the only country to reverse a trend, today unfavourable. With the lowest percentage of a youthful population in the European Union (1.2.1) and a negative natural variation of its population between 2009 and 2014 (1.2.2), the country will probably see an increase in its young and overall populations by 2030. With the Italian fertility rate being among the lowest in the EU (1.2.3), this turnaround will probably be due to the influx of migrants that will continue for the next few years. ■

<sup>■</sup> See definition p. 68.

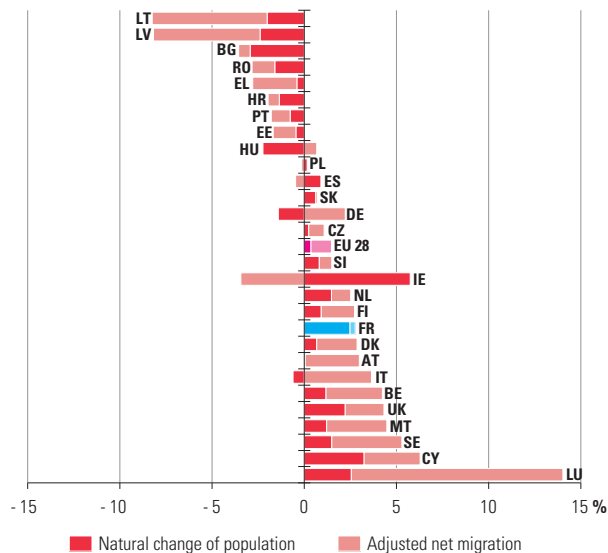
### 1.2.1 Proportion of 0-17 year olds and 18-24 year olds in the total population and population on 1 January in 2014

↳ Eurostat, demo\_pjan.



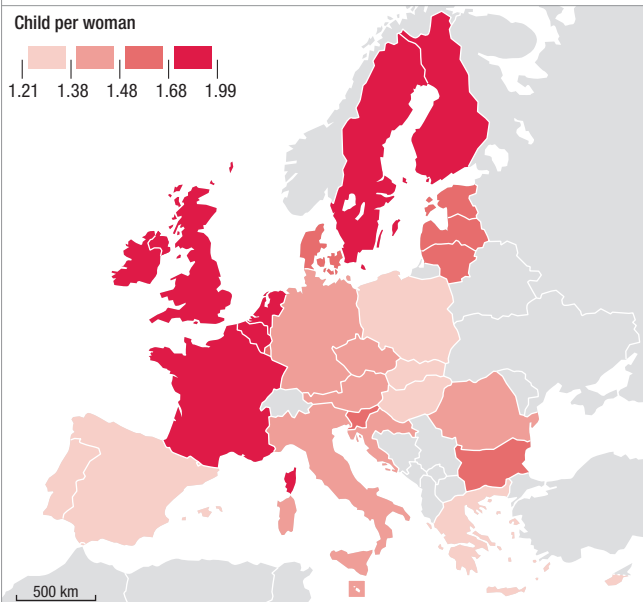
### 1.2.2 Natural change of the population and adjusted net migration – 2009/2014

↳ Eurostat, demo\_gind.



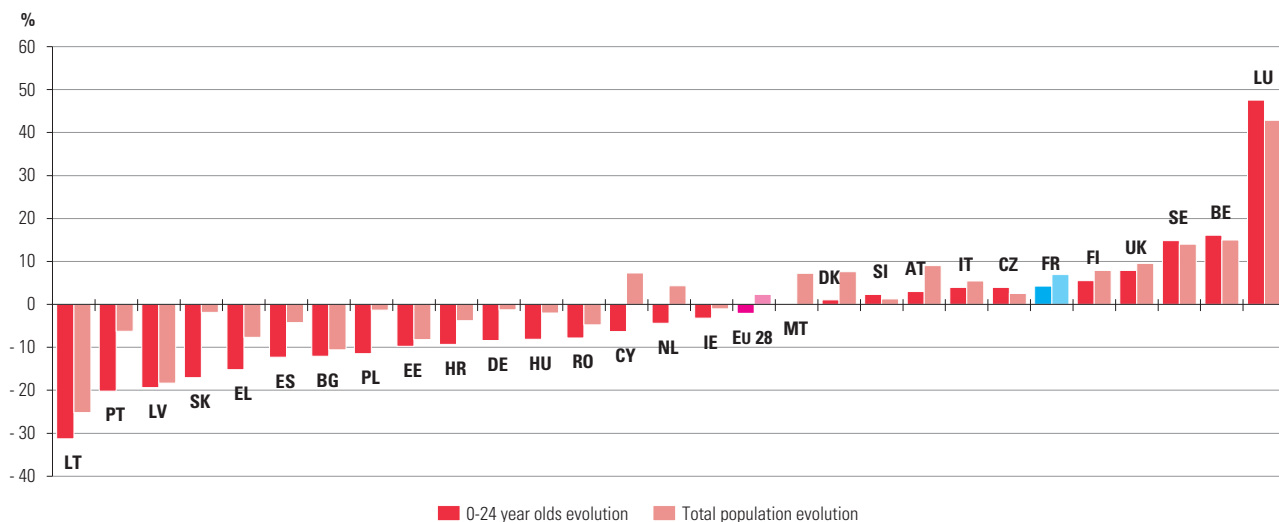
### 1.2.3 Total fertility rate in 2013

↳ Eurostat, tsdde220.



### 1.2.4 Relative projection of the evolution of 0-24 year olds population and of the total population between 2014 and 2030

↳ Eurostat, proj\_13npms.



## 1.3 THE FAMILY BACKGROUND OF THE CHILDREN

### A FAMILY OFTEN LIMITED TO ONE OR TWO CHILDREN

Is it possible to draw a “household with children profile in the European Union”? In 2013, 51% of European households with dependent children (minors or less than 24 year-olds without professional activity) had a single child, and 38% had two (1.3.1). The Benelux and Scandinavian countries, Ireland and Croatia had a 15% rate of families with 3 or more children. Only 3% of European households had 4 or more children with a maximum rate of 6% in Finland.

In France the majority of households with dependent children have at least two children. In contrast, Portugal, Bulgaria, Malta, and the Baltic countries have a family profile of an only child (about 60% of the households have only one child). Germany, Greece, Hungary, Spain and the United Kingdom have a family profile that is close to the European Union average.

### WHAT IS THE EDUCATIONAL ATTAINMENT LEVEL OF EUROPEAN PARENTS WITH YOUNG CHILDREN?

On average in the EU, 14% of the children from 0 to 17 have parents with an educational level inferior or equal to the lower secondary school, which is qualified here as low educational attainment, and 43% have parents with tertiary educational attainment (university degree or the equivalent) (1.3.2). Here, “parents’ educational attainment” refers to the highest degree between the two parents.

However it is possible to distinguish four groups of countries, *i.e.* the first, also the biggest, is composed of western European countries (France, Germany, the Netherlands and Scandinavia), which contains a majority of children whose parents have attained a tertiary educational level (at least 48% in France’s case), and symmetrically speaking, few children of parents with a low educational-attainment level.

Diametrically opposite to the first group, a second profile (Bulgaria, Italy, Luxembourg, Malta, Portugal and Romania) shows a high level of children whose parents have a low educational attainment level (reaching 48% and 45% in Portugal and Malta respectively). Spain alone comprises a third profile that combines a high rate of children whose parents have low educational attainment levels and a high rate of children whose parents have tertiary education degrees. And finally, the fourth profile (Croatia, Czech Republic, Poland and Slovakia) is characterised by a very large majority of children whose parents have a upper secondary degree (59% in Slovakia and 65% in the Czech Republic).

### HOUSING COMFORT: LARGE DISPARITIES FROM COUNTRY TO COUNTRY

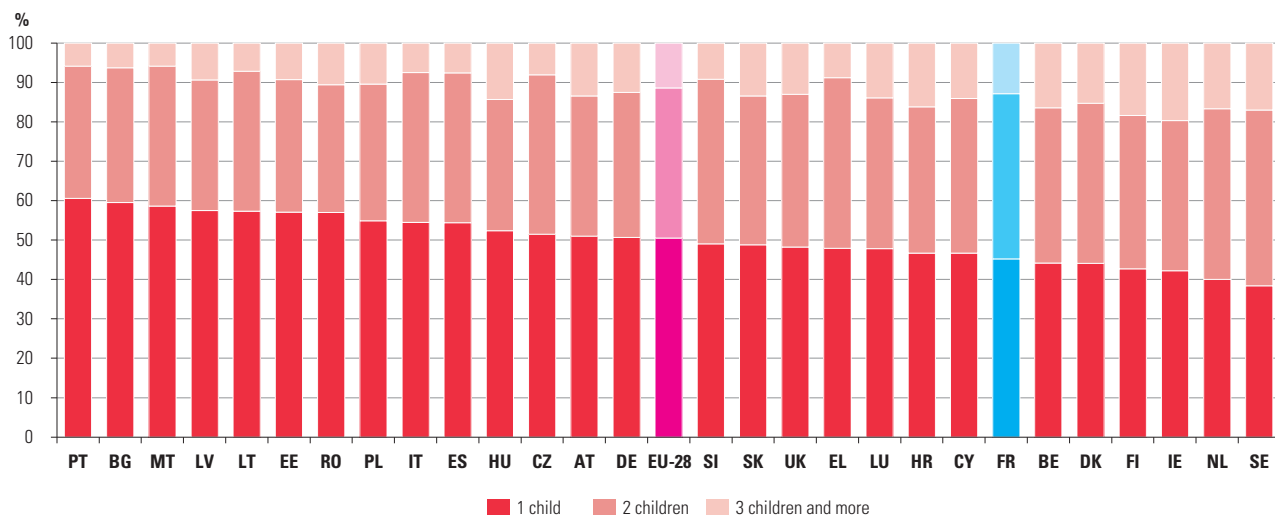
Two indicators have been selected here to gauge the living conditions of young school-age children, *i.e.* on the one hand the **overcrowding rate**<sup>68</sup>, and, on the other hand, the percentage of children living in households without access to either a bath or shower (1.3.3). The first indicator makes it possible to distinguish between the western European countries and those of eastern Europe. Indeed, with the exception of Italy and Austria, there is no country in western Europe where the overcrowding rate for households with dependent children surpassed 17% in 2013. In contrast, this rate was notably higher in central European countries and the Balkans; in Romania it reached 70%.

The second indicator – the hygienic conditions in dwellings – also shows a notable disparity between western and eastern Europe (1.3.4). Romania (36%), Bulgaria (19%) and the Baltic countries show a lack of access to hygiene in the young person’s dwelling. All western European countries have distinctly more favourable access to hygiene. Ireland (the data of which are from 2013) is unique in that it combines a low rate of over-crowding (4%) and a relatively high rate of lack of access to hygiene compared to other western European countries (1.5% of its children do not have a shower or bath in their dwelling). ■

<sup>68</sup> See definition p. 68.

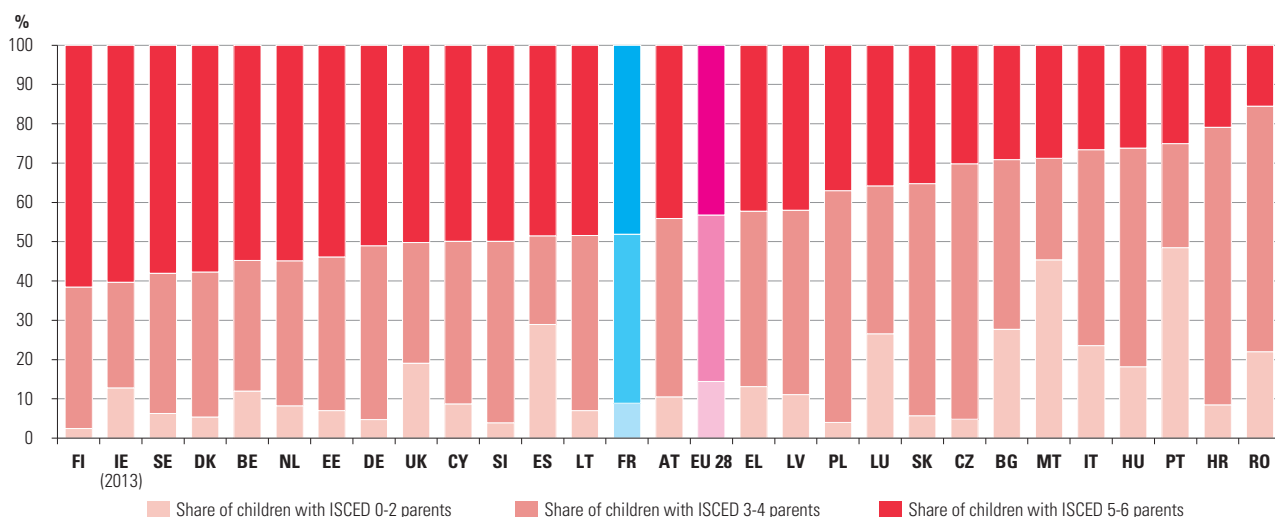
### 1.3.1 Siblings: distribution of households with children by number of children in 2014

↳ Eurostat, *ilc\_lvph05*.



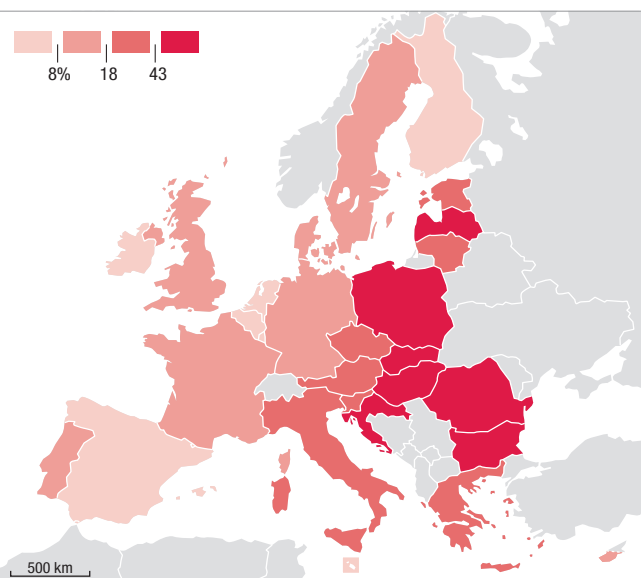
### 1.3.2 Distribution of 0-17 year old children by educational attainment level of their parents (ISCED 1997) in 2014

↳ Eurostat, *ilc\_lvps25*.



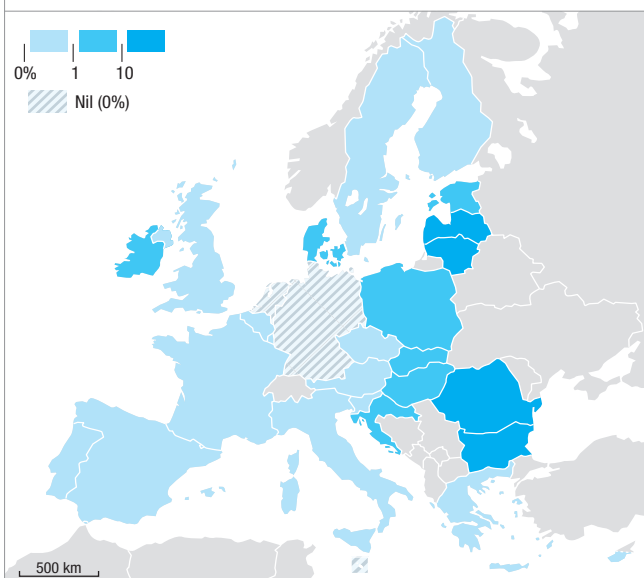
### 1.3.3 Overcrowding rate of households with 0-17 year old children in 2014

↳ Eurostat, *ilc\_lvho05b*.



### 1.3.4 Share of 0-17 year olds having neither a bath, nor a shower in their dwelling in 2014

↳ Eurostat, *ilc\_mdho02c*.



## 1.4 HOUSEHOLD INCOME AND RISK OF POVERTY

### VERY DISPERSED INCOME IN EUROPE

The Eurostat **EU-SILC**<sup>■</sup> survey (*EU Statistics on Income and Living Conditions*) gives European statistics on the total disposable income of households, i.e. the income that remains disposable to households after the deduction of fiscal and social charges. What are counted are all earned income and capital, inter-household transfers and social transfers (excepting rent paid to owners). Median income denotes the value for which the population is split into two equal parts, i.e. those with income higher than the median and those with income lower.

**ZOOM**

The median **household disposable income**<sup>■</sup> of households with dependent children varies a lot within the European Union (**1.4.1**). The highest income is found in Austria, the Benelux countries, France, Germany and the Scandinavian countries. It is worth noting that within this group Luxembourg is an extreme case with a median income of households with dependent children above 25,000 **purchasing power standard (PPS)**<sup>■</sup>. The former Soviet Union countries have a lower level of income, sometimes up to 7-fold less than of Luxembourg (Romania: 3,590 PPS in 2014). With a median dependent-children household income of 9,730 PPS, Portugal is the western European country with the lowest income level.

### THE CRISIS-DRIVEN IMPACT ON HOUSEHOLD INCOME, FROM COUNTRY TO COUNTRY

Although all countries faced the financial and economic crisis of 2008, the European countries did not, for all that, suffer the same impact. In the period from 2008 to 2014 (**1.4.2**), net household disposable income saw differing evolutions from one country to the next. Admittedly contained, there was a drop in disposable income in Italy as early as 2008, whereas this drop had a much steeper curve in Greece where it continued unabated from 2009 to 2014, especially because of the influence of the budgetary policy adjustments. Both Spain and the United Kingdom also saw a decrease in disposable household income starting in 2009, deepening between 2011 and 2012 in Spain's case whilst there was a slight upturn over the same period in the United Kingdom. Outside of the euro zone, as with the United Kingdom, Sweden maintained net positive growth in disposable household income between 2008 and 2014. On the other hand the impact evolved weakly throughout the entire period in Germany and France where the social buffers managed to come into play.

### A VERY HIGH LEVEL OF THE RISK OF POVERTY AND EXCLUSION IN UNDER-QUALIFIED HOUSEHOLDS

There are highly contrasting proportion of young people at **risk of poverty or social exclusion**<sup>■</sup> in the European Union (**1.4.3**), from 15% in the Czech Republic and 17% in Sweden, Finland and the Netherlands, to 40% in Bulgaria. The rates are very high in the Balkans and the Baltic countries but also in Spain (29%), Italy (28%) and Ireland (27%). The rates of poverty risk and social exclusion of young people from 0 to 17 are systematically higher when the parents have a lower level of educational attainment (**1.4.3**).

#### Measuring the risk of poverty or social exclusion

**ZOOM**

Eurostat offers a summary measurement of the number of people at risk of poverty and social exclusion, i.e. those whose income is located below the poverty line set at 60% of the national median of disposable income after social transfers and/or those who live in material want (a lack of access to certain staple foods and goods) and/or live in very low labour-intensive households (under 20% of potential work time).

Two groups stand out in the case of children whose parents have a low level of educational attainment. The first, composed only of eastern European countries (Bulgaria, the Czech Republic, Hungary, Romania and Slovakia), shows a high risk of poverty for the children of these households. Whereas the second group shows a lower risk of poverty (Austria, Finland, Luxembourg, Malta, the Netherlands, and Portugal).

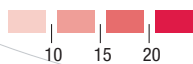
When the profiles of households of parents with a high educational attainment level are observed, two groups stand out. The first, with a relatively high risk rate for young people from 0 to 17 (greater than 15%), is composed of Cyprus, Ireland, and the United Kingdom Latvia. The second group, comprising the Czech Republic, Finland, France and Slovenia shows a risk rate of poverty and social exclusion of less than 10% for the same age group. The Czech Republic whose risk of poverty is the lowest in Europe (15%) is also the country with the widest spread of risk according to the parents' level of educational attainment with an 82 point differential between those children with poorly educated parents and those whose parents have attained a tertiary education degree. ■

<sup>■</sup> See definition p. 68.

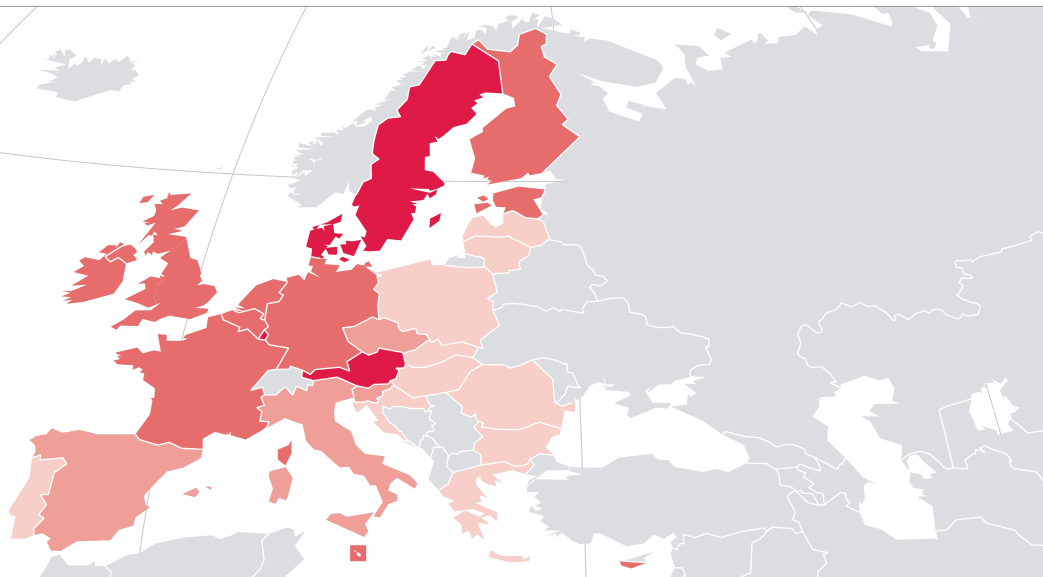
#### 1.4.1 Median net income (PPS equivalent) of households with children in 2014

↳ Eurostat, *ilc\_dio4*.

Thousand PPS

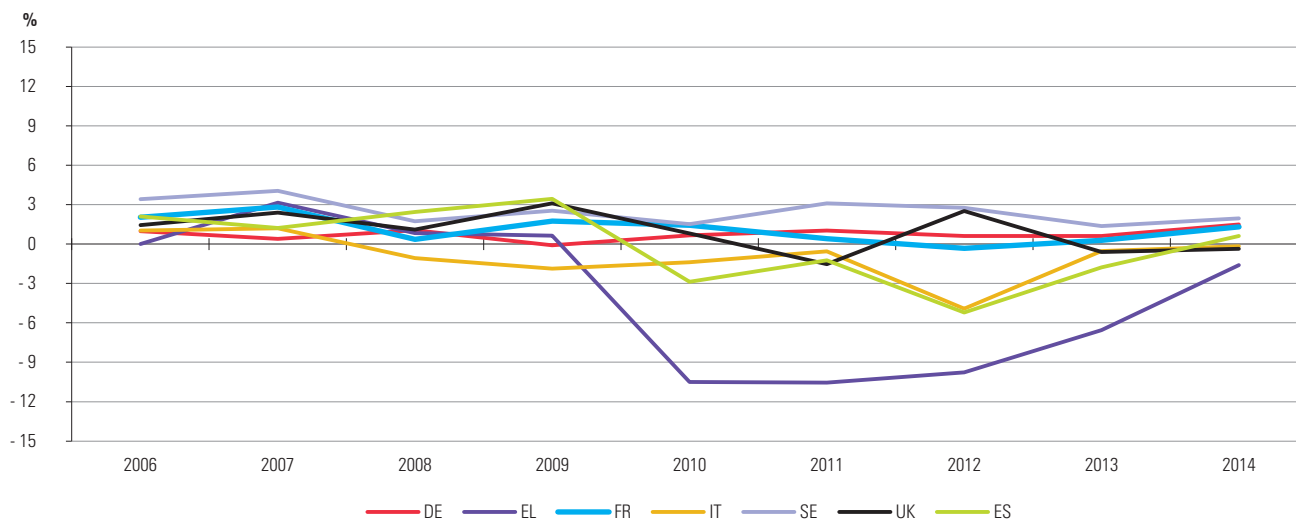


500 km



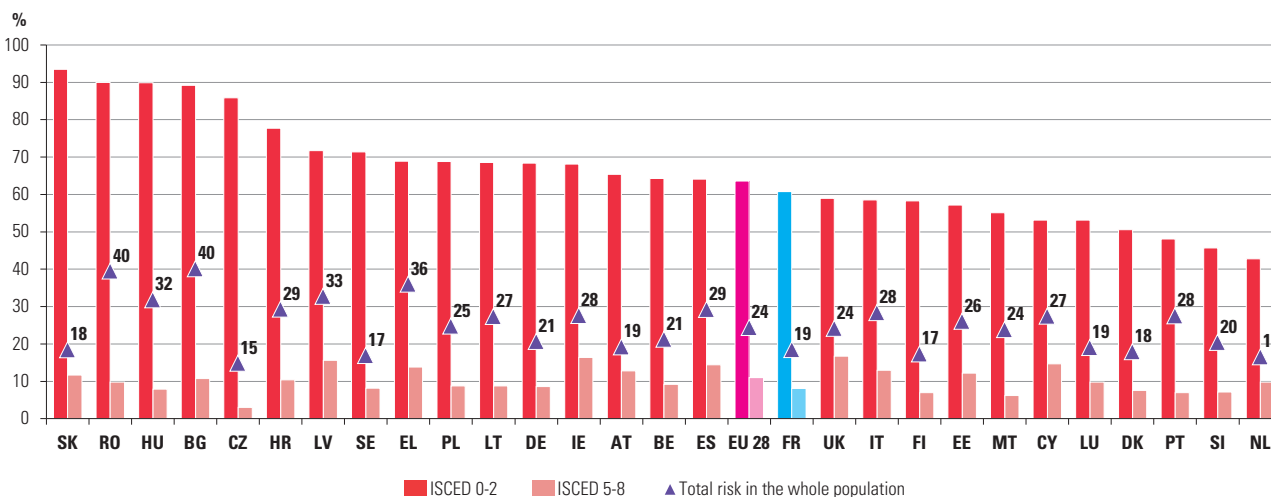
#### 1.4.2 Annual gross rate of the household disposable income between 2006 and 2014

↳ OECD, *data.oecd.org*.



#### 1.4.3 0-17 year old children at risk of poverty or social exclusion by educational attainment level of their parents (ISCED 1997) in 2014

↳ Eurostat, *ilc\_peps60* and *ilc\_peps01*.



Note: In 2014, in France, the poverty or social exclusion risk of the total population is 19%, while it goes up to 61% for children with parents that have a lower secondary education level.



# 1.5 UNEMPLOYMENT, EMPLOYMENT AND INTERGENERATIONAL MOBILITY

## THE LESS QUALIFIED EVERYWHERE ARE HARDER HIT BY UNEMPLOYMENT

The **unemployment rate**<sup>68</sup> in the entire European Union (EU) made a palpable increase because of the 2008 crisis, rising from an average of 7% in 2007 to 11% in 2014 **(1.5.1)**. Greece and Spain in particular saw their unemployment rates increase three-fold between 2007 and 2014. In most of the EU's southern countries, the unemployment rate in the working population rose beyond the 15% threshold. Only three countries bucked the trend in the EU, i.e. Germany, Malta and Poland. Although the unemployment rate receded very slightly over the period in Malta and Poland, it was cut nearly in half in Germany where **slack work**<sup>68</sup> measures made it possible to buffer the shock of the crisis and jobs were created in large part through part-time employment.

Unemployment rates were higher in the entire European Union for those without degrees. In 2014 it stood at over the 30% threshold in Lithuania, Slovakia and Spain where it was three times higher than for the average of the working population.

## A LOWER EMPLOYMENT RATE OF SINGLE-PARENT FAMILIES

The employment situation of parents varies with the kind of household they have (single-parent families or not) **(1.5.2)**. So single-parent families are more often jobless than families composed of adult couples with children. Single-parent families mean women in 85% of the cases in Europe, and the **activity rates**<sup>68</sup> are much higher among single men with children than women in the same situation. In a lot of northern European families there is an important gap between the employment rates of parents living as a couple and those of single parents, sometimes surpassing 20% (Belgium, Ireland, the Netherlands and the United Kingdom). France occupies an intermediate position with a difference of 12 points.

The percentage of children from 0 to 17 living in a household where no family member is in work is high in Bulgaria, Greece, Ireland and Spain, but also in Belgium and the United Kingdom **(1.5.3)**. In Belgium and the United Kingdom, the rise in unemployment was relatively contained

in the 2008 to 2014 period. Italy's intermediate position is similar to France's and the European average where in 2014 about 11% of the 0 to 17 year-olds lived in jobless families.

## ON AVERAGE ADULTS WITH HIGHER DEGREES THAN THEIR PARENTS

**PIAAC**<sup>68</sup> (*Programme for International Assessment of Adult Competencies*) is an international survey by the OECD that seeks to measure, through a range of items, the literacy and numeracy skills of the 16 to 65 year-old population. Literacy represents the ability to understand and use information from written texts in a variety of contexts. It comprises a range of skills, from the coding of words and sentences to the comprehension. Numeracy is defined as the ability to use, apply, interpret, and communicate mathematical information and ideas. The initial findings (PIAAC 2012, done in 24 countries/economies, including 16 European ones) were published in October of 2013. **ZOOM**

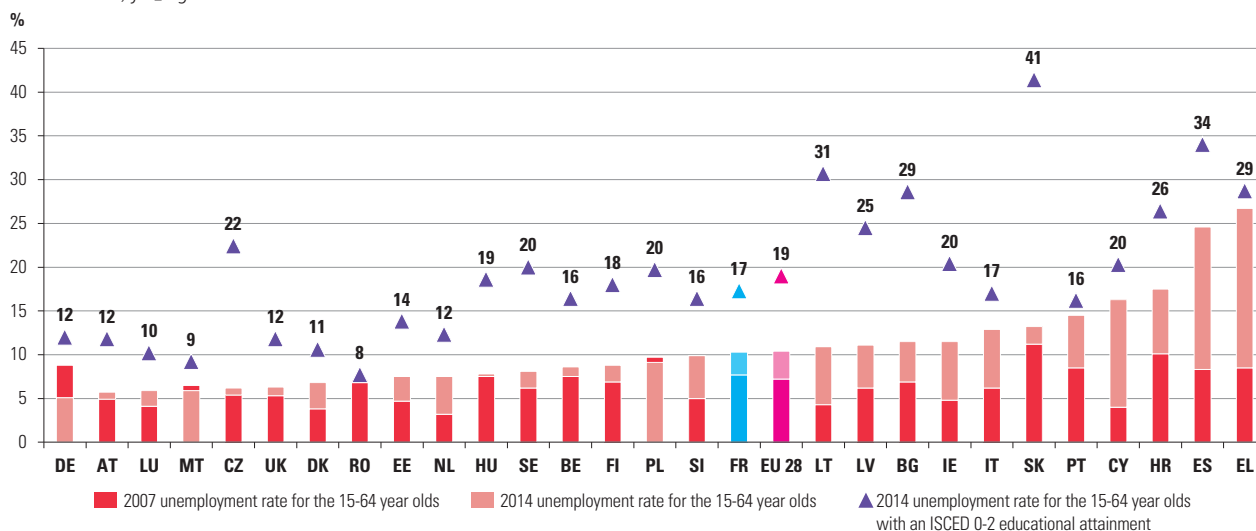
On average, of the countries participating in the OECD PIAAC 2012 survey, 39% of adults from 25 to 64 attained a higher level of education than their parents (the highest degree of the two parents). This proportion reached 56% in Finland and 45% in France and Ireland. On the other hand, it was only 21% in the Czech Republic and 24% in Germany **(1.5.4)**.

It is, of course, the expanding educational systems that reflect this rising mobility. Moreover, 50% of adults from 25 to 64 have the same educational attainment as their parents. The size of the age group explains in part the relative inertia of the distribution of educational attainment from one generation to the next. Nonetheless these "status quo" situations can assume different configurations from one country to the next. In Denmark, Estonia and Germany 18% of adults have tertiary-education degrees as do their parents; whereas in Italy 51% of adults have a low educational attainment, which is also the case of their parents. And in the Czech Republic 56% of adults have an ISCED 3 or 4 degree, on a par with their parents. Descending mobility between generations is less common but far from inexistent, i.e. the proportion of adults from 25 to 64 in these situations varies from 4% in Italy to 18% in Germany and Sweden. ■

<sup>68</sup> See definition p. 68.

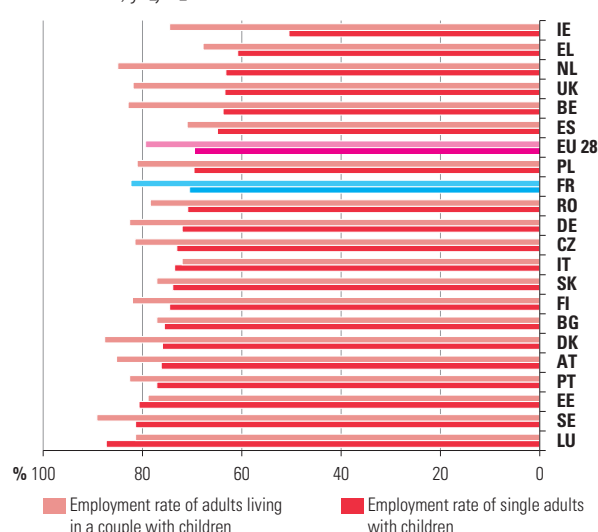
### 1.5.1 Average unemployment rate in 2007 and 2013, and unemployment rate of individuals with an ISCED o-2 educational attainment in 2014

↳ Eurostat, *lfsa\_urgaed*.



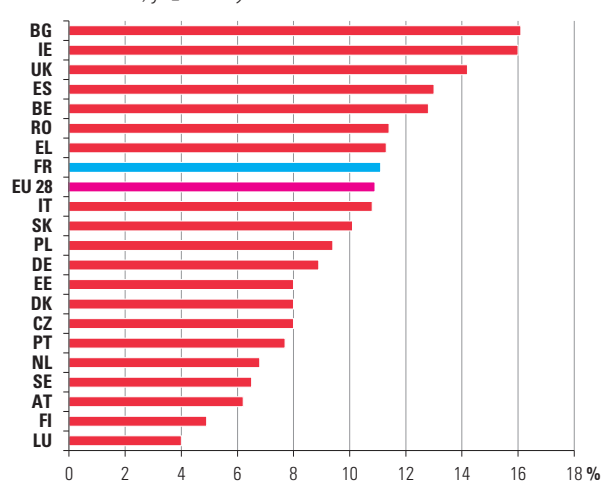
### 1.5.2 Employment rate of 15-64 year old mothers by family status in 2014

↳ Eurostat, *lfsl\_jhh\_a*.



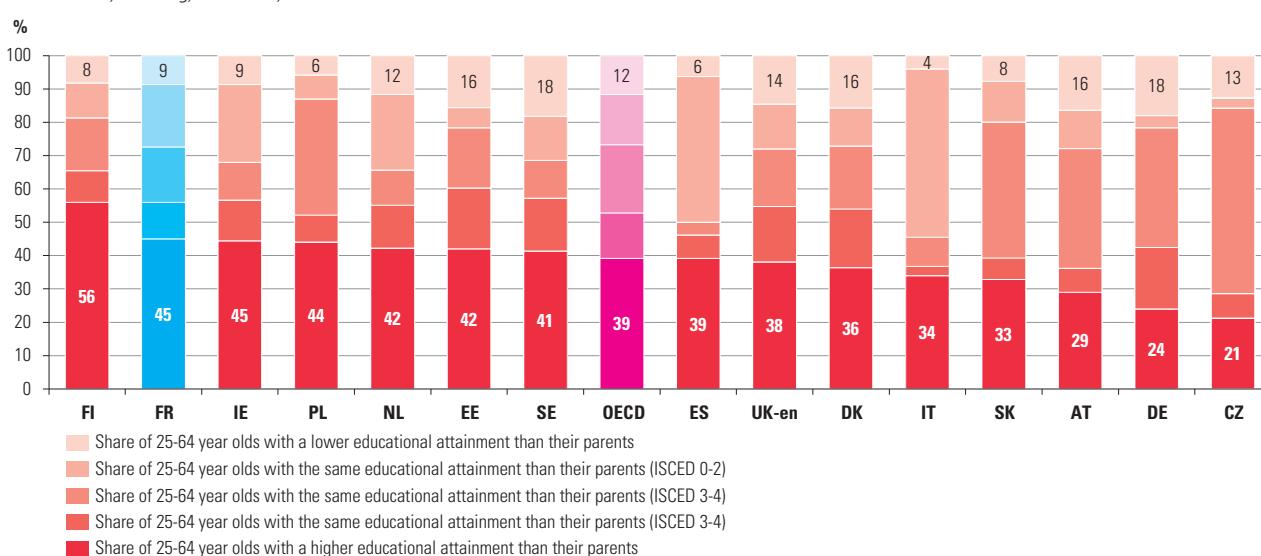
### 1.5.3 Share of 0-17 year old children that live in a jobless household in 2014

↳ Eurostat, *lfst\_hheredy*.



### 1.5.4 Intergenerational mobility: educational attainment of 25-64 year olds relative to their parents' educational attainment in 2012 (ISCED 1997)

↳ OECD, EAG 2015, tableA4.1a, source PIAAC 2012.



Note: In 2012, in Finland, among 100 individuals between 25 and 64 years old, 56 have higher educational attainment than their parents; 36 have the same level of education as their parents; and 8 have a lower educational attainment than their parents. Among the 36 that have the same educational attainment than their parents, 10 have an ISCED 5-6 degree, 16 have an ISCED 3-4 degree and 10 have an ISCED 0-2 degree.