INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION

THE INTERNATIONAL NOMENCLATURE OF EDUCATIONAL PROGRAMMES AND LEVELS

In the context of the diversity of national educational systems and the meaning given to degrees, international comparisons must first use a common framework of definitions and nomenclatures. This common framework is the outcome of a long process that began with the inception of the International Bureau of Education in 1925 and, above all, with that of Unesco in 1945, which has gradually included other institutions (OECD and Eurostat).

Adopted by Unesco in 1978, the International Standard Classification of Education (ISCED) classifies education/ training programmes (these are not "school curricula", attached to a particular grade) and the educational attainment levels in a unified nomenclature that makes it possible to conduct international statistical comparisons in education. An initial reform was carried out in 1997 that led to the creation of the ISCED 1997. It combined three types of criteria: the attainment level (from ISCED o to ISCED 6, 1.1.1); the distinction between a general stream intended for continuing education (A), a vocational stream that may give access to further education (B) and a stream that prepares students directly for the labour market (C); and lastly, the duration of the programmes. The short programmes of vocational secondary education, called "3C short cycle", the duration of which is strictly less than two years, do not validate an ISCED 3 level of attainment.

The ISCED was once again reformed in 2011 by the three organizations that co-ordinate its implementation (UNESCO, OECD and Eurostat). From then on and in connection with the Bologna Process (cf. 2.2), higher education programmes are classified on 4 levels instead of the previous two (ISCED 5 to 8) (1.1.1). Furthermore, ISCED o was split in two (ISCED 01 and 02) so as to distinguish the educational programmes taught in early childhood facilities (under 3 years old) from those of pre-primary education (children over 3; with the exception of France, where children can be enrolled at 2, and Belgium at 2.5). Each of the programmes from ISCED 2 to 5, as in ISCED 1997, was subdivided into "general" and "vocational".

The ISCED 2011 also provided greater clarity in distinguishing programmes that were previously sometimes borderline between two ISCED levels. It gave greater precision in using ISCED in surveys with households, which thus made it

possible to better identify adult attainment levels and better distinguish between formal and non-formal education. Observing a population implies distinguishing, on the one hand, between the ISCED level "attained" according to the latest validated ISCED level and the ISCED "programme" this population was studying in at the date of observation. For example, students newly enrolled in an upper secondary school have attained ISCED level 2 since their academic path has been validated in the lower secondary. They are therefore studying in the ISCED 3 "programme". It is only once they have earned a CAP (secondary school vocational training certificate), a BEP (secondary school vocational degree) or a baccalaureate that they attain ISCED level 3. Adopting ISCED 2011 has made it possible to explain the conditions for achieving an educational level, which enables the correct classification of the education levels attained.

A CLASSIFICATION THAT NONETHELESS LEAVES ROOM FOR INTERPRETATION BY EACH COUNTRY

International definitions and classifications are embedded in a past interwoven by choices and developments that have made it possible to improve the quality of international statistics whilst inevitably leaving each nation with room for interpretation. Although all countries of the European Union have their own degrees, the way in which countries gather information about these degrees in their surveys, as well as the way they are then converted into the ISCED, may have an influence on all international data (cf. 5.2, p. 48).

The two examples given in 1.1.2 make it possible to give details of codifying two French programmes. The CAP and the general baccalaureate are both programmes leading to upper secondary degrees, so their classification begins with the number 3. The second number indicates the kind of programme: the CAP is a "vocational" programme, and the general baccalaureate, a "general" programme, which are assigned the numbers 5 and 4 respectively. And the third coding number indicates whether or not the programme validates the ISCED level in question and whether it gives access to the higher ISCED level. Here, the two programmes validate the ISCED-3 level, but only the baccalaureate makes it possible to accede to higher educational levels. The codes for the CAP and the general baccalaureate are therefore "353" and "344" respectively.

See definition p. 74.

1.1.1 Correspondence table of programmes between ISCED 1997 and ISCED 2011

← UNESCO Institute For Statistics, International Standard Classification of Education - ISCED 2011, 2012.

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

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 général CAP (Certificat d'aptitude professionnelle) Baccalauréat général

ISCED	General / Vocational	Orientation
0		
1	4	1
2		2
3	5	3
4		4
5		
6		
7		

Baccalauréat général				
ISCED	General / Vocational	Orientation		
0		1		
1		2		
2		3		
3	4	4		
4				
5	5			
6				
7				
8				

DEMOGRAPHIC CONTEXT

THE EUROPEAN UNION'S AGEING POPULATION MORE OR LESS PRONOUNCED DEPENDING ON THE COUNTRY

On 1 January, 2016 the 28 EU member states had a population of 510 million, including 136 million young people between the ages of o and 24, or 27% of the EU-28's overall population (1.2.1). Ten years before, in 2006, the same age group contained 142 million, or 29% of the total population. The European Union is thus faced with demographic ageing where half of its population is now older than 43. The proportion of young people in the overall population shows significant differences from one country to the next, which reflect the contrasting demographic dynamics within the EU.

Indeed, only 7 countries have a proportion of young people (o to 17) in their population greater than 20%. This segment varies from 16% in Germany to 26% in Ireland. The 18 to 24 year-old segment is less variable throughout the EU-28, ranging from 7% as the lowest in Spain and Ireland to 10% in Cyprus. Cyprus, France, Ireland and the United Kingdom, moreover, are the only countries in the EU-28 where the o to 24 year-old segment is above 30%. At the other end of the spectrum, in 7 countries (including Germany, Greece, Italy and Spain) this segment of the population is below 25%.

CONTRASTING FERTILITY AND NET MIGRATION RATES DEPENDING ON THE COUNTRY

The magnitude of **natural variations** and **net migration** respectively proves to be highly variable from country to country (1.2.2). Connected to a rise of the **life expectancy at birth** (78.9 years in 2006; estimated at 80.6 in 2015), maintaining a low fertility rate on average in the EU (1.54 children per woman from 15 to 49 in 2006; estimated at 1.58 in 2015) explains this ageing phenomenon. However, the **fertility rate** varies from country to country (1.2.3). France, Ireland and Sweden had rates higher than 1.8 children per woman; whereas in Greece, Italy, Poland, Portugal and Spain the rate did not surpass 1.35 children per woman.

As seen since the last crisis, the intra- and extra-European migratory flows may have a determining influence on demographic dynamics. Thus in Latvia and Lithuania the demographic drop between 2009 and 2014 was mostly due to large-scale emigration. In contrast, Austria, Luxembourg, Malta and Sweden saw a tangible share of their demographic growth explained by positive net migration. France and Ireland were the only countries with net growth, mostly due

to the natural variation. Lastly, Germany and Italy were in a situation where only net migration enabled them to maintain demographic growth. This phenomenon is in fact recent for Germany which has increased its population only since 2011 after losing population between 2003 and 2011. In 2016 Germany returned to the number of inhabitants that was comparable to the level it had in 2007. The migratory context is an important element in demographic dynamics at the same time as it challenges educational systems from the standpoint of schools receiving and incorporating non-native speaking students and their parents.

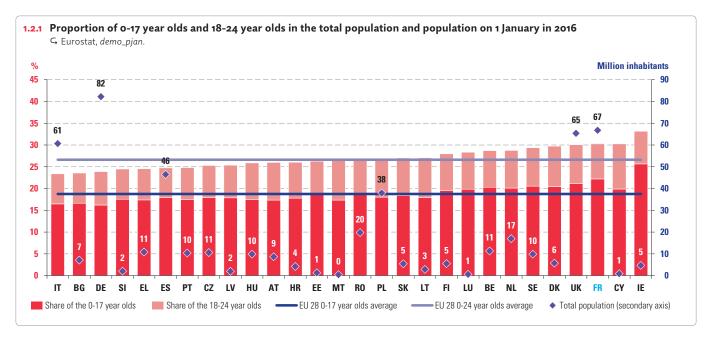
TWO-SPEED DEMOGRAPHIC PROGRESS IN EUROPE IN THE LONG TERM

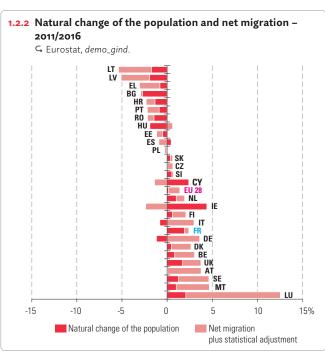
By 2035 the EU should see its overall population increasing by 3% with the segment of the 0-24 year-olds decreasing by 2%, which confirms the continuing trend of the population's general ageing (1.2.4). However two groups should be differentiated from one another. Firstly, those countries with a positive dynamic demographic in 2016 will most likely still have one in 2035 (with the exception of Cyprus), i.e. Denmark, France, the Netherlands, Sweden (with a 20% increase of its total population) and the United Kingdom. Despite these positive dynamics, the overall populations of these countries will grow faster than their young populations. With a 41% total population growth Luxembourg is a particular case; this increase however concerned a total population of less than 600,000 in 2016.

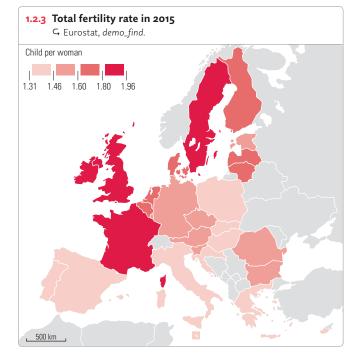
In contrast, the countries in the second group have at present an unfavourable demographic dynamic and risk losing a sometimes considerable portion of their population. Between now and 2035, 6 countries will have lost more than 10% of their overall population with this loss being as high as 22% in Lithuania. Here again in the majority of cases the portion of young people will fall faster than that of the total population.

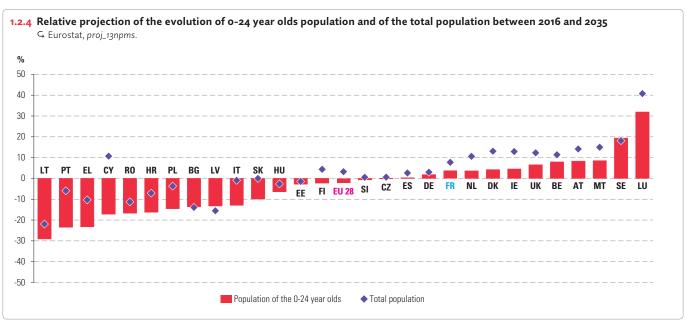
In this scenario Germany is the only country that will reverse a trend which is unfavourable today. With the lowest population proportion of the o to 18 year-old group in the EU-28 (1.2.1) and a negative natural variation of its population between 2011 and 2016 (1.2.2), Germany should see a rise in both its young and overall population before 2035. The German fertility rate is located in the estimated European average range (1.2.3), which means that this change would mostly be attributable to migratory inflows which the country will continue to see in the coming years.

See definition p. 74.









FAMILY ENVIRONMENT OF DEPENDENT CHILDREN

A LARGE MAJORITY OF EUROPEAN HOUSEHOLDS LIVE WITHOUT CHILDREN

In 2016, in the 28 EU member states 70% of households had no **dependent children** (minors or under-24-year-olds without a professional activity) (1.3.1). However this percentage was highly variable from country to country, with a minimum of 58% in Ireland and a maximum of 78% in Finland and Germany. It was not necessarily only a matter of countries with flagging demographic dynamics, for some countries, such as Denmark, Malta, the Netherlands and Sweden, the demographic variations of which were positive, had very high rates of childless households (cf. 1.2).

In the majority of countries over half of these childless households were adults living alone. Denmark, Finland, Germany, Lithuania and Sweden were the only countries that had their proportion of childless adults surpass 40% of all households. In Sweden's case this proportion was 52%.

The majority of households with children was composed of adults in couples (20% of all households in the EU-28, or two-thirds of households with children). Here too countries had highly variable situations. The proportion of households composed of an adult couple with children varied two-fold, ranging from 14% in Lithuania to 28% in Ireland. The portion of single-parent households had been 4% in the EU-28 since 2009. In 2016 this portion ranged from 2% in Croatia, Finland and Greece to 9% in Denmark. Is it possible to establish a "household with children" profile in the EU? In 2015 50% of European households with dependent children had a single child, and 38% two, with these averages covering the differences according to the country, largely explained by the national fertility rates (cf. 1.2).

HOUSING COMFORT: WIDE DISPARITIES BETWEEN COUNTRIES

Two indicators have been used here to assess the conditions in which school-age children live: on the one hand, the **overcrowding rate in housing**, and on the other, the portion of children living in households without access to either a bath or shower (1.3.2). The first indicator makes it possible to distinguish the western European countries from the eastern European countries. Except for Austria and Italy, in 2015 there were no western European countries where the over-crowding rate of households with dependent children rose beyond 17%. Inversely this rate was tangibly higher in the central European countries and those of the Balkans, reaching 68% in Romania.

The second indicator concerning the hygienic conditions in housing also showed a tangible difference between western and eastern Europe (1.3.3). On EU-28 average 2% of the children from 0 to 17 had no access to a shower or bath in 2015. Romania (35%), Bulgaria (17%), Latvia (14%) and Lithuania (12%) had a severe lack of access to hygienic conditions in children's housing. The western European countries were in a much more favourable situation concerning access to hygiene. It is notable however that there was a trend, though slow, to improvement, i.e. in 2010 the rate in Romania was 44%, and the EU-28 average was 3%.

THE EDUCATION-ATTAINMENT LEVEL OF PARENTS OF YOUNG EUROPEANS

What is meant by "parents' education-attainment level" is the highest degree obtained by the father or mother.

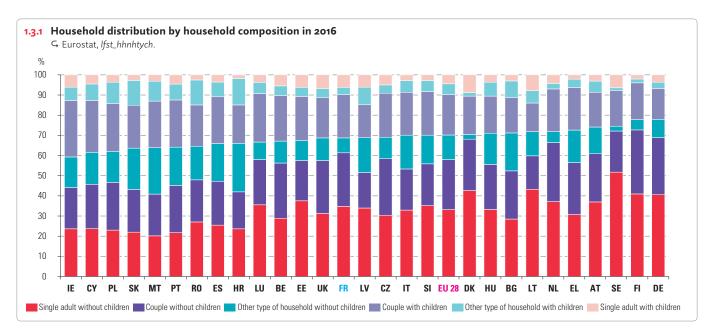
ZOOM

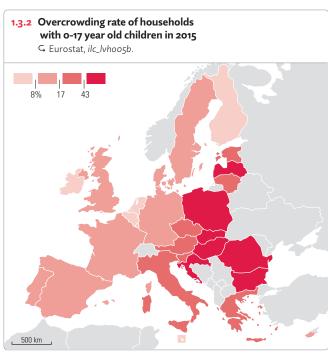
In 2015, on average in the EU-28 15% of children from 0 to 17 had parents with an education-attainment level lower or equal to lower secondary education, which is considered here as a low educational attainment level, and 44% had parents with an higher education-attainment level (university degree or equivalent) (1.3.4).

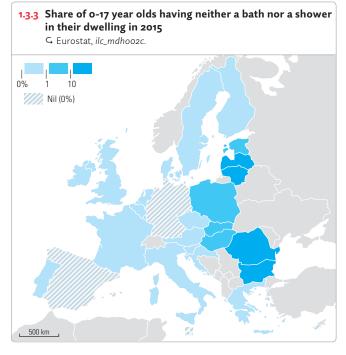
However four country groups can be differentiated: the first and the biggest, composed of western European countries (Finland, France, Germany, the Netherlands and Scandinavia) contained a majority of children whose parents had obtained a higher-education degree (at least 49% in France's case) and symmetrically few children of parents with a low level of education.

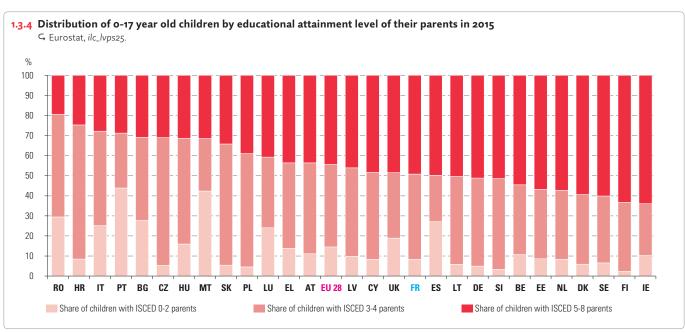
Diametrically opposed to the first, the second group of countries (Bulgaria, Italy, Luxembourg, Malta, Portugal and Romania), showed a high rate of children whose parents had obtained a low level of education (attaining 44% and 42% in Portugal and Malta respectively). Spain comprises the third group on its own by combining a high rate of children whose parents had low levels of education and a high rate of children with parents with higher-education degrees. Finally, the fourth group (Croatia, the Czech Republic, Poland, and Slovakia) was characterised by a large majority of children whose parents had obtained an upper secondary degree (56% in Poland and 67% in Croatia).

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HOUSEHOLD INCOME AND RISK OF POVERTY

HIGHLY DISPERSED INCOME IN EUROPE

The Eurostat EU-SILC survey (Statistics on income and living conditions) provides European data on the gross disposable income of households, i.e. the income that remains disposable to households once social-security contributions and tax charges have been deducted. Included in the calculation is all income from labour and investments, transfers between households and social transfers (excluding rents paid to landlords). The median income denotes the value at which the population is split into two equal groups, i.e. those whose income is above the median and those whose income is below it.

The **equivalent disposable median income** of households with dependent children in 2015 varied widely within the 28 EU member states (1.4.1). In 2015, the highest incomes were found in Austria, the Benelux countries, Germany and the Scandinavian countries. It is worth noting that within this group Luxembourg occupied an extreme situation with a median income of households with dependent children at a **purchasing power standard** (PPS) of 26,900 PPS. The eastern European countries had a lower income level, sometimes up to 7-fold lower than Luxembourg's (e.g. Romania: 3,860 PPS in 2015). With a median income of households with dependent children of 10,060 PPS, Portugal was the western European country with the lowest income level.

INCOME INEQUALITIES HAVE REMAINED STABLE SINCE THE CRISIS

The Gini coefficient is a synthetic indicator of salary inequalities (*income*, *living standards*, *etc.*). It varies between 0 and 1 (here shown from 0 to 100). It is equal to 0 in situations of perfect equality where all salaries, income, living standards, etc. are equal. At the other extreme, it is equal to 1 in the most unequal situation possible, i.e. where all salaries (income, standards of living, etc.) but one are zero. A drop in the Gini Index observed between two dates therefore indicates an overall reduction of inequalities; a rise indicates the reverse.

In 2015, on average in the EU-28 countries, the **Gini coefficient** of the equivalent disposable income was 31, on a par with 2007 (1.4.2). This apparent stability did not however translate the sometimes significant changes in certain countries over the period. Three country groups stood out. The first, composed of 7 countries including Finland, Ireland, the Netherlands and Portugal, saw its coefficient fall since 2007. In this group income after taxes and social-security contributions was less unequal than before the advent of the crisis. Nonetheless, even after the crisis, Portugal (38) still had a coefficient well above that of Finland (25) or the Netherlands (27). Moreover, a recession can mechanically induce a reduction of income inequality (a larger fall of the

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highest incomes) while simultaneously increasing the risk of poverty of the most fragile segment of the population (cf. infra).

The second group, composed of 8 countries, including Germany, Greece, Italy and the United Kingdom, was characterised by a status quo similar to the average of the EU countries. And lastly, the third group, the largest in number (13 countries), including Denmark, France and Sweden saw inequalities increase. Yet the Gini coefficient remained less than 30 in these three countries.

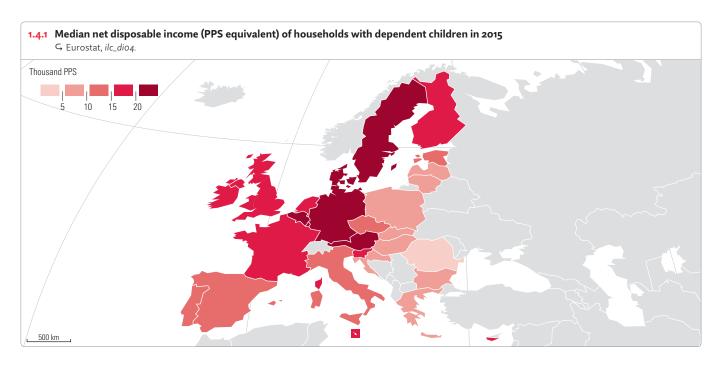
A VERY HIGH RISK OF POVERTY AND EXCLUSION FOR LOW-QUALIFIED HOUSEHOLDS

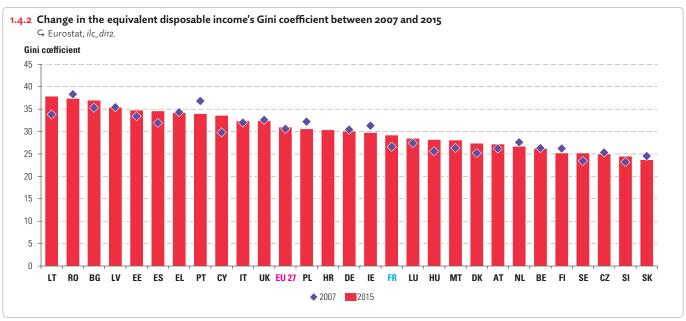
Eurostat's measurement of the risk of poverty and social exclusion offers a synthetic measurement of the number of people at risk of poverty and social exclusion, i.e. those people whose disposable income is located below the poverty threshold set at 60% of the national median disposable income after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

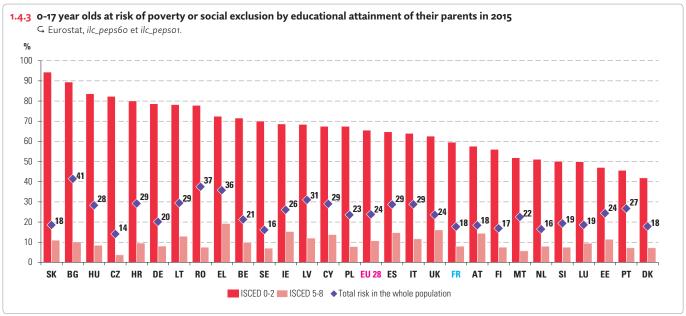
The rate of the risk of poverty and social exclusion saw highly contrasting levels within the EU-28 (1.4.3), ranging from 14% in the Czech Republic and 16% in Sweden and the Netherlands to 41% in Bulgaria. Spain and Italy (29%) and Ireland (26%), as well as 9 other countries surpassed 25% in the total population. The risk of poverty and social exclusion of the 0 to 17 year-old age group was systematically higher when the parents had a low educational attainment level (1.4.3).

Two groups stood out in cases of children of parents with low educational attainment levels, i.e. the first, composed of numerous eastern European countries but also Belgium, Germany and Sweden showed a high risk of poverty for the children in these households. The second group showed a lower risk of poverty (Denmark, Estonia, Luxembourg, Malta, Portugal and Slovenia).

When the profiles of households whose parents had a high educational attainment level (the highest degree attained by the father or mother) were observed, here too, two groups stood out, i.e. the first, with a relatively high rate of risk of poverty and social exclusion of the o to 17 year-olds (greater than 15%), was composed of Greece, Ireland and the United Kingdom. The second group, including the Czech Republic, Finland, France and Slovenia, showed a rate of less than 10%. In Slovakia, this rate showed the largest spread according to the parents' educational attainment level with an 83% differential between the children of parents with a low level of educational attainment and those whose parents had a higher education degree.







Note: In 2015, in France, the poverty or social exclusion risk of the total population is 18%. This rate amounts to 8% for children whose parents have an ISCED 5-8 educational attainment, and goes up to 60% for children with parents that have an ISCED 0-2 educational attainment.

UNEMPLOYMENT, EMPLOYMENT AND INTERGENERATIONAL MOBILITY

EVERYWHERE, THE LEAST QUALIFIED INDIVIDUALS ARE MORE AFFECTED BY UNEMPLOYMENT

With the crisis in 2008 the **unemployment rate** tangibly increased in the entire European Union (EU). However in the countries of the EU-28 a slight fall in unemployment was seen between 2009 and 2016 (1.5.1). In 14 of the 28 countries there was an occasionally clear-cut decline in unemployment such as in the Baltic countries (minus 8 percentage points in Latvia and minus 7 in Estonia). Unemployment in the other countries rose rather weakly, ranging from 1 to 4 percentage points in countries such as France, Italy, the Netherlands and Spain. Two countries stood out significantly, i.e. Cyprus and Greece with a respective rise of 8 and 14 percentage points over the period.

The unemployment rate in all European Union countries was higher for individuals without degrees. On average in the EU-28 countries the unemployment rate of the population with a low level of educational attainment was two-fold higher than the whole active population, but this ratio could reach 3 in the case of Bulgaria and Sweden, and even 5 in the Czech Republic. In 2016 the unemployment rate of those without degrees stood above the threshold of 25% in Greece, Lithuania, Slovakia and Spain and was less than or equal to 10% in 7 countries, including Denmark, Germany and the Netherlands.

LOWER EMPLOYMENT RATES IN SINGLE-PARENT HOUSEHOLDS

The employment situation of parents varied with the kind of household (single-parent families or not) (1.5.2). Single-parent families with children were out of work more often than families of adult couples with children. In Europe single parenthood involved women in nearly 90% of the cases, and the activity rates¹¹ of single men with children were much higher than those of women in the same situation. A 10 percentage point spread was seen between the employment rates of parents living in couples and those living alone, with extremes seen in the Netherlands (20 points), Belgium and Ireland (21 points) and indeed Malta (22 points). France was unfavourably positioned in relation to the EU-28 average with a 14 point difference against an average of 9 points in the other EU countries.

The proportion of children aged from 0 to 17 living in a jobless household was over 10% in nearly half of the EU-28 countries, including Bulgaria, France, Spain and the United Kingdom (1.5.3), even though there was a very favourable trend in unemployment between 2009 and 2016 in the UK. Only Slovenia at 5% had a lower rate in 2016.

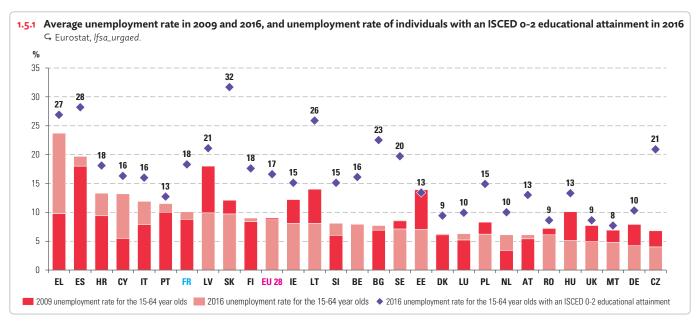
ADULTS ON AVERAGE HOLDING MORE DEGREES THAN THEIR PARENTS

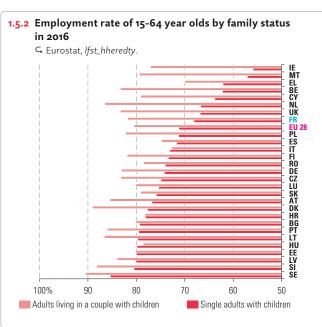
PIAAC (Programme for international assessment ZOOM of adult competencies) is an international OECD survey that uses a series of items to assess the proficiency in literacy and numeracy of individuals from 16 to 65 years old. Literacy means the ability to understand and use information contained in written texts in various contexts. It encompasses a variety of skills from the coding of words and phrases to understanding, interpreting and assessing complex texts. Numeracy means the ability to use, apply, interpret and communicate mathematical information and ideas. The average of OECD countries contained in part the findings of countries using 2015 as the reference year. The statistics for Denmark, France and Germany used 2012 for their reference year. The PIAAC is carried out in multi-year rounds. The first round (2011-2012) involved 24 countries, the second (2014-2015) 9 new countries, and the third round (2016-2017) a group of 6 countries, 5 of which were new, as well as the United States which had already participated in the first round.

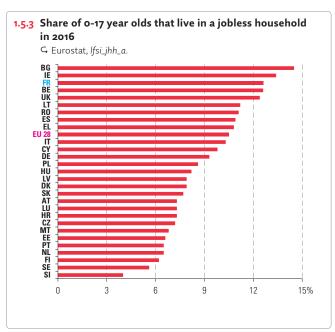
The PIAAC survey enables the comparison of people's educational levels with those of their parents (the highest degree attained by the father or mother). On average in the OECD countries 44% of those from 55 to 64 years old whose parents had low educational attainment (ISCED 0-2) did reach an identical educational level. This percentage fell to 31% for people between 25 and 34 (1.5.4). Among the people from 55 to 64 whose parents held higher education degrees, 60% obtained an equivalent degree level, while such was the case for 67% of those from 25 to 34. The intergenerational mobility in matters of educational level became more marked for the more recent generations. Not all countries, however, were in the same configuration.

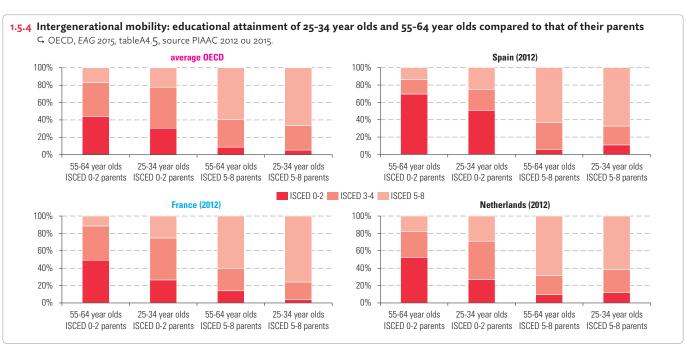
France was characterized by a upper secondary education massification that translated into both a tangible drop in the proportion of children with a low educational attainment and a big rise of children with higher education degrees, whether or not these latter had parents with higher education degrees. The Netherlands was typical of a mobility model through vocational education, i.e. no matter what degree level held by the parents, there was a rise in the proportion of children with secondary or non-upper post-secondary education degrees. Spain offered a diametrically opposed configuration: children of parents with low-level degrees also mostly held low-level degrees, including more recent generations (25-34); symmetrically, children with parents holding higher education degrees continued to accede massively to higher education. Germany is not presented here because of the high proportion of 25 to 34 year-old migrants, predominantly in ISCED 0-2, without being able to tell where these latter received their schooling (cf. 6.2).

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Note: In France, 26% of the 25-34 year olds that have parents with an ISCED 0-2 educational attainment have an ISCED 0-2 educational attainment; 45% of the same 25-34 year olds have an ISCED 5-8 educational attainment. The OECD average is calculated on either 2012 or 2015, according to the most recent data available.