

EU Agricultural Economic Briefs

RURAL AREAS AND THE EUROPE 2020 STRATEGY: EDUCATION

Brief N° 4 – October 2011



European Commission
Agriculture and
Rural Development

1. INTRODUCTION

A skilled workforce, capable of contributing and adjusting to technological change with new patterns of work organisation, is a key factor to increase productivity, competitiveness, economic growth and to raise the employment rates in the EU.

Two of the five headline targets of the Europe 2020 Strategy for smart, sustainable and inclusive growth are aimed at raising employment and education levels. The latter should be achieved by reducing school dropout rates to 10% or less, and by increasing completion of third level education by people aged 30-34 years to at least 40% in 2020. According to the latest statistics, the percentage of school dropouts in the EU was 14.4% in 2009 whereas the percentage of the population aged 30-34 years with a tertiary education degree reached 32% in the same year.

In this context, rural areas deserve special attention. With the recent enlargements of the EU, the rural population has considerably increased (from 75 million to 116 million). Moreover, rural areas present, in general, lower rates of tertiary education and higher rates of school dropouts. Therefore, the improvement of both indicators in the rural areas of the EU is crucial for the attainment of the Europe 2020 headline targets.

This economic brief examines the latest statistics on school dropout rates among the people aged 18-24 years and the percentage of people aged 30-34 years with tertiary education in the EU-27. In concrete, we will focus on the situation in rural areas and their degree of achieving the targets of the Europe 2020 strategy.¹

2. DATA AND METHODS

Data on school dropouts and population aged 30-34 years with tertiary education are taken from the Eurostat Labour Force Survey. The

lowest geographical level (NUTS 3 or NUTS 2) at which data are available depends on the variable.

¹ See Annex 1 for the typology of rural areas applied to the data of the percentage of population with tertiary education and Annex 3 for the data of school dropouts.

School dropouts are defined as those people aged 18-24 years who have attained at most lower secondary education level and are not involved in further education and training. For this indicator, data were only available at national level, with the possibility of differentiating them according to the degree of urbanisation of the area (thinly populated areas or less than 100 inhabitants/km²; intermediate or between 100 and 500 inhabitants/km² and densely populated or more than 500 inhabitants/km²). For the purpose of this economic brief, we assume that thinly populated areas (with less than 100 inhabitants/km²) roughly correspond to rural areas (for more information, see Annex 3).

The percentage of the **population with tertiary education** is defined as the share of the population aged 30-34 years having attained level 5 or 6 of the International Standard Classification of Education (ISCED) (see Annex 3 for more information). Data are available at NUTS-2 level according to the degree of urbanisation. However, the typology of rural areas is only defined at NUTS-3 level. We have estimated the values at NUTS-3 level from these data at NUTS-2 level and aggregated them by type of region (predominantly rural, intermediate, and predominantly urban) according to the

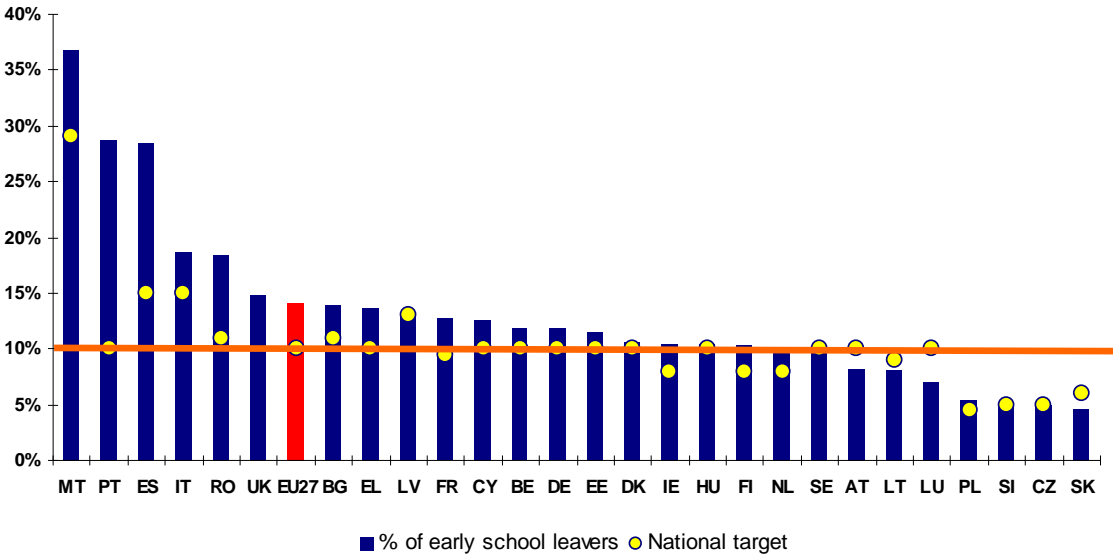
typology of rural areas defined in Annex 1 (see Annex 2 for more information about the method for estimating data at NUTS-3 level).

3. MORE THAN 6 MILLION SCHOOL DROPOUTS IN THE EU...

6.1 million people of 18-24 years dropped out of school before they reached more than the lower secondary education level, which represented 14.4% of the population of this age group in 2009. The largest number of early school leavers in the EU was found in the EU-15, a total of 5.1 million people, which represents 16% of the population of 18-24 years, whereas in the EU-12 there were 1 million early school leavers, which represents 9.6% and is already below the Europe 2020 target of 10%.

The highest rates of early school leavers were found in Malta (36.8%), Portugal (31.2%), Spain (31.2%) and Italy (19.2%), whereas Slovakia (4.9%), Poland (5.3%), Slovenia (5.3%) and the Czech Republic (5.4%) presented the lowest rates. In 2009 only 7 countries reached the target of 10% set by the EU 2020 (Austria, Lithuania, Luxembourg, Poland, Slovenia, Czech Republic and Slovakia). However, additional national targets, shown as dots in graph 1 have been set to reflect the particular situation in each Member State.

Graph 1: Percentage of early school leavers (18-24 years old) (*)



Source: Labour Force Survey

(*) Germany, Denmark, Latvia, Luxembourg and Sweden reported a national target below 10%.

4. ...MAINLY IN THINLY POPULATED AREAS OF THE EU-15

On average, the share of early school leavers is higher in the EU-15 than in the EU-12, for all types of areas.

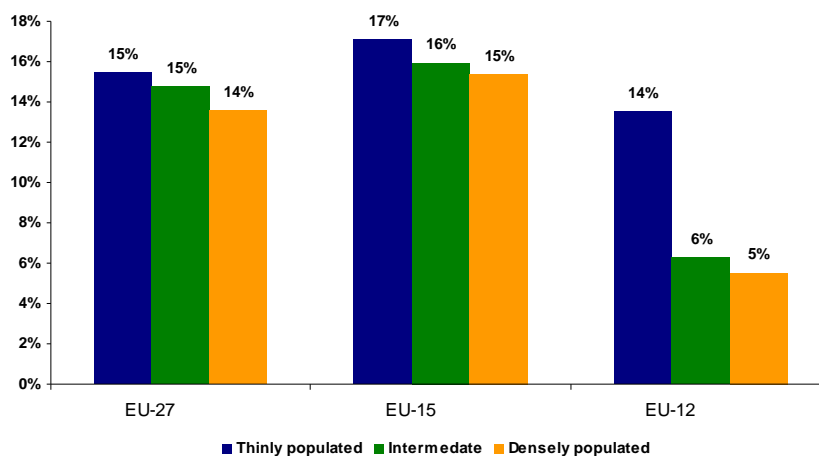
In absolute terms, the majority of early school leavers were found in **densely populated areas**, namely 2.9 million, which represents 47% out of the 6.1 million total and accounts for 13.6% of the population of this age group in densely populated areas. Of these, 2.7 million people were in the EU-15 and 0.2 million people in the EU-12, representing 15.4% and 5.5% of the total population of this age group and area, respectively.

Intermediate areas of the EU-27 had 1.6 million early school leavers in 2009, which accounted for 25% of all early school leavers and for 15% of the population aged 18-24 years in these areas. Of these, 1.5 million people were in the EU-15, whereas the remaining 0.1 million people lived in the EU-12, representing 16% and 6.3% of the total population of this age group, respectively.

Among the 1.7 million people of 18-24 years in the **thinly populated areas** of the EU who left school at the lowest level of secondary education, 1 million (60%) were from an EU-15 country and the remaining 0.7 million from the EU-12 in 2009. This represents 15.5% of the people of 18-24 years in thinly populated areas of the EU-27, reaching 17.1% in the EU-15 and 13.5% for the EU-12.

The situation is much more severe in certain Member States, especially in the EU-15: 35% of the people aged 18-24 years in the thinly populated areas of Spain and 31% in Portugal left school after finishing the lower secondary education. Romania and Bulgaria had the highest rate of school dropouts in the EU-12 in 2009 (24.1% and 22.3% respectively). The lowest rates in thinly populated areas are found in Slovenia (4.6%), the Czech Republic (5.5%), Austria (5.6%) and Slovakia (6.2%). Thinly populated regions of 7 countries were below the EU 2020 target of 10% of early leavers (Slovenia, Czech Republic, Austria, Slovakia, Poland, Germany and the Netherlands).

Graph 2: Percentage of early school leavers by degree of urbanisation in 2009 (*)



(*) See Annex 1 for the definition of rural areas

These figures are the result of the aggregation of the data available at regional level (see Map 1)

TABLE 1: PERCENTAGE OF EARLY SCHOOL LEAVERS BY DEGREE OF URBANISATION IN 2009 .(*)

Country	Thinly populated	Intermediate	Densely populated		Total
Belgium	10.9	8.9	12.7	excl. 1/11 NUTS-2	11.1
Bulgaria	22.3	14.4	7.4		14.7
Czech Republic	5.5	5.1	5.5		5.4
Denmark	13.7	10.2	7.9		10.6
Germany	9.1	10.1	12.2	excl. 24/39 NUTS-2	11.1
Estonia	16.5	22.7	10.6		13.9
Ireland	12.7		8.3		11.3
Greece	19.1	12.2	10.3	excl. 1/13 NUTS-2	14.5
Spain	35.0	34.5	27.5	excl. 2/19 NUTS-2	31.2
France	12.1	12.2	12.5	excl. 3/22 NUTS-2	12.4
Italy	20.6	18.9	19.0	excl. 1/21 NUTS-2	19.2
Cyprus	13.4	10.6	11.3		11.7
Latvia	15.7	8.6	11.9		13.9
Lithuania	12.3		3.4		8.7
Luxembourg	10.9	4.8	8.8		7.7
Hungary	14.9	10.3	6.6		11.2
Malta	29.5	28.4	38.3		36.8
Netherlands	9.4	11.1	10.6		10.9
Austria	5.6	10.0	11.1	excl. 4/9 NUTS-2	8.7
Poland	6.8	4.2	3.8		5.3
Portugal	31.1	33.0	29.9		31.2
Romania	24.1	11.3	5.4		16.6
Slovenia	4.6	5.6	6.3		5.3
Slovakia	6.2	5.1	1.5	excl. 1/4 NUTS-2	4.9
Finland	10.7	9.3	8.7	excl. 1/5 NUTS-2	9.9
Sweden	10.7	11.6	9.1	excl. 1/8 NUTS-2	10.7
United Kingdom	15.1	17.5	15.2	excl. 6/37 NUTS-2	15.7
EU-27	15.5	14.7	13.6	excl. 45 NUTS-2	14.4
EU-15	17.1	16.0	15.4	excl. 44 NUTS-2	15.9
EU-12	13.5	6.3	5.5	excl. 1 NUTS-2	9.6

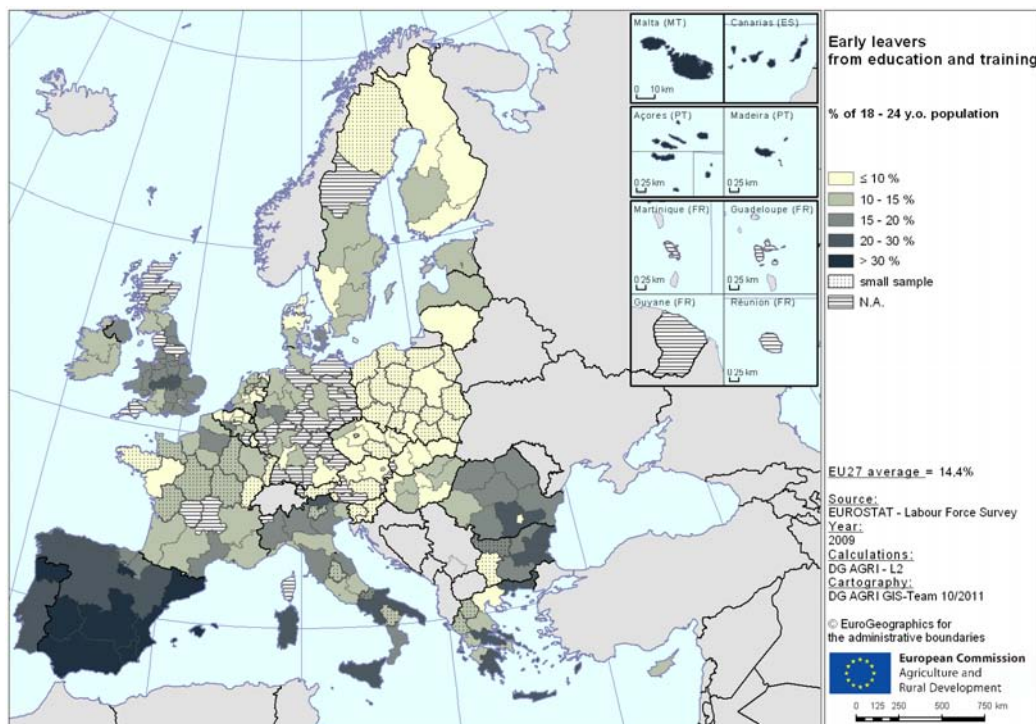
(*) See Annex 1 for the definition of rural areas

These figures are the result of the aggregation of the data available at regional level (see Map 1)

Map 1 shows the percentage of early school leavers as a percentage of the people in the same age group. All regions with rates over 30% are located in Spain and in Portugal. Other regions also present relatively high

rates and they are found in southern Italy, the central United Kingdom, Romania and Greece. Most of the remaining of regions are below the average rate of 14.4%.

Map 1: Percentage of early school leavers of 18-24 years in 2009.



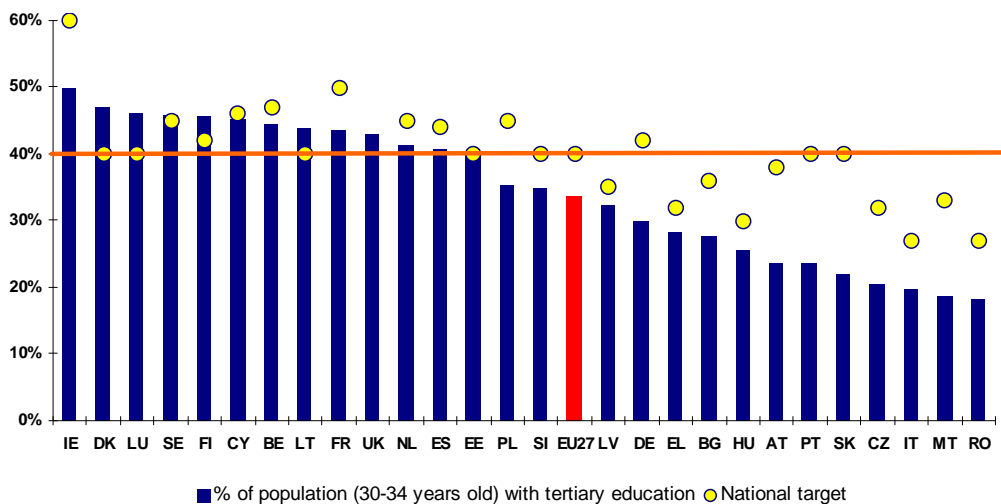
5. TERTIARY EDUCATION: HIGHER ATTAINMENT IN THE EU-15 ...

11.1 million people in the EU-27 of 30-34 years held a degree of tertiary education in 2009 and this corresponds to a share of 32% of the population of this age group. Among all EU Member States, this share is particularly high in Ireland (49%), Denmark (48.1%),

Luxembourg (46.6%) and Finland (45.9%). The lowest shares were found in Romania (16.8%), the Czech Republic (17.5%), the Slovak Republic (17.6%) and Italy (19%).

Again, national targets have been set to reflect each country's specific circumstances (shown as dots in Graph 3).

Graph 3: Percentage of population (30-34 years old) with tertiary education (*)



Source: Eurostat, Labour Force Survey.

(*) The United Kingdom did not present a national target; Denmark presented a target of at least 40%.

6. ...BUT LOWEST IN RURAL AREAS OF THE EU-12

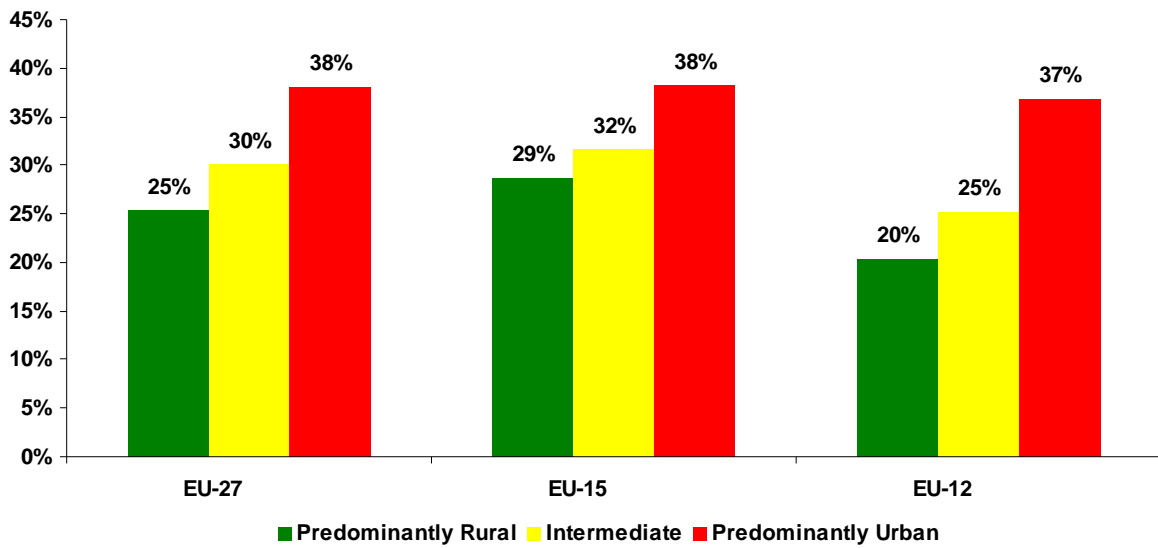
The absolute number of people aged 30-34 years with a tertiary degree is highest in **predominantly urban areas** (about 5.4 million), which corresponds to a share of 38% for this age group. In **intermediate areas**, this same figure reached 3.5 million in 2009, which represents 30% of the population.

About 25% of the population of 30-34 years in **predominantly rural areas** have completed the tertiary level of education in 2009, i.e. almost 2.1 million people, of which 1.4 million were in the EU-15 and 0.7 million in the EU12,

representing 28.7% and 20.4% respectively of the population of this age group.

The share of the population of 30-34 years with tertiary education in predominantly rural areas is particularly small in Romania (11.7%), the Czech Republic (15.1%) and Hungary (17.1%) for the EU-12 and Portugal (16%), Italy (17.7%) and Austria (18%) for the EU-15. The highest rates are found in Ireland (44.7%), and Finland (42.4%). The highest rate among EU-12 countries was in Lithuania (36.9%) and Estonia (32.5%).

Graph 4: Percentage of population 30-34 years with tertiary education by type of region in 2009 (*)



Source: Eurostat, Labour Force Survey

(*) See Annex 1 for the definition of rural areas and Annex 2 for the estimation method of data at NUTS-3 level from data at NUTS-2 level.

This is the aggregation of the data at regional level; in some regions the data were totally unavailable or partially available (see Map 2).

Map 2: Percentage of population 30-34 years old with tertiary education in 2009

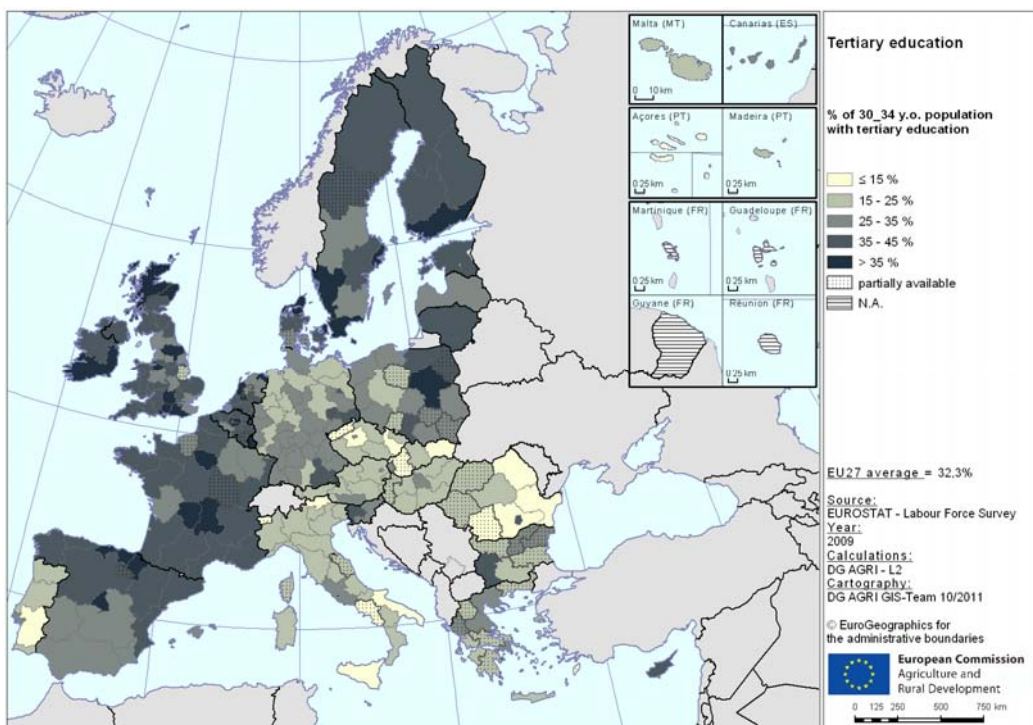


Table 2: Percentage of population of 30-34 years with tertiary educational attainment in 2009 (*)

	Predominantly Rural	Intermediate	Predominantly Urban	Country average
BE	42.0	42.1	42.0	42.0
BG	22.6	25.1	46.7	27.9
CZ	15.1	15.7	23.4	17.5
DK	38.7	44.3	58.4	48.1
DE	24.1	27.6	32.6	29.4
EE	32.5	40.3		35.9
IE	44.7		53.1	49.0
GR	19.9	27.4	32.5	26.5
ES	33.7	37.5	42.4	39.4
FR	38.3	41.2	48.6	43.2
IT	17.7	17.9	21.3	19.0
CY		44.7		44.7
LV	26.2	28.1	35.0	30.1
LT	36.9	43.7	44.8	40.6
LU		45.8		46.6
HU	17.1	22.9	39.1	23.9
MT			21.1	21.0
NL	29.2	34.8	41.9	40.5
AT	18.0	24.0	29.4	23.5
PL	27.0	33.6	39.9	32.8
PT	16.0	14.9	26.8	21.1
RO	11.7	16.7	36.6	16.8
SI	26.0	36.3		31.6
SK	15.0	16.2	31.6	17.6
FI	42.4	44.3	51.9	45.9
SE	34.6	43.6	50.5	43.9
UK	39.4	39.0	41.9	41.5
EU-27	25.3	30.0	38.0	32.3
EU-15	28.7	31.7	38.2	34.3
EU-12	20.4	25.2	36.8	25.7

Source: Eurostat, Labour Force Survey

(*) See Annex 1 for the definition of rural areas and Annex 2 for the estimation method of data at NUTS-3 level from data at NUTS-2 level.

This is the aggregation of the data at regional level; in some regions the data were totally unavailable or partially available.

7. CONCLUSIONS

A better educated labour force is a key element for the competitiveness of the economy. Reduced school dropout rates and the attainment of tertiary education by a greater share of the population serve as indicators for measuring the realization of Europe 2020 headline targets.

As regards **school dropout rates**, a striking difference can be observed between the EU-15 and the EU-12, the latter performing much better on average. The problem is particularly prevalent in the southern Mediterranean countries (Malta, Portugal, Spain and Italy). Furthermore, thinly populated (rural) areas show higher rates of early school leavers across the EU and this is particularly significant in the EU-15. A special effort thus needs to be made to address school dropout

rates in these regions, even if absolute numbers are higher in urban areas.

In contrast, the attainment of **tertiary education** is higher on average in the EU-15 than in the EU-12. Again, rural areas are lagging behind across the EU. Young people in predominantly rural areas of the EU-12 have the lowest rate (20.4%), whereas in predominantly rural areas of the EU-15 this rate, though below that in other types of regions, was higher (28.7%). Lack of opportunities among young professionals in predominantly rural areas of EU-12 could be one of the causes of this low rate of tertiary education, leading people to migrate to other regions or countries. In fact, these regions already present negative net migration rates.²

In the light of the inclusive growth objective of Europe 2020 and the aims of social and territorial cohesion within and also between Member States, these differences in educational achievements between rural and urban areas need to be specifically addressed.

² For more information about migration in rural areas, see page 127 of the annual report "Rural development in the EU, statistical and economic information", page 127. http://ec.europa.eu/agriculture/agrista/rurdev2010/RD_Report_2010_Chapter2-25.pdf

ANNEXES

1: DEFINITION OF RURAL AREAS

The European Union (EU) typology of 'predominantly rural', 'intermediate' or 'predominantly urban' regions is based on a variation of the OECD methodology.

This typology uses a population grid of one square kilometre resolution. The method builds on a simple approach to create clusters of urban grid cells with a minimum population density of 300 inhabitants per km² and a minimum population of 5 000. All the cells outside these urban clusters are considered as rural.

To determine the urban clusters, the grid cells are grouped based on contiguity (including the diagonals). If the central cell is above the density threshold, it will be grouped with each of the other surrounding eight cells that exceed the density threshold.

The population living in rural areas is the population living outside the urban areas identified through the method described above.

Local administrative units level 2 (LAU2) are classified based on the share of population in rural cells following the majority principle (a LAU2 is rural if at least 50% of the residents lives in rural areas), resulting in 28% of the EU-27 population living in rural LAU2s.

This new typology is applied to the NUTS 3 level into two main steps:

- It groups NUTS 3 regions of less than 500 km² with one or more of its neighbours solely for classification purposes, i.e. all the NUTS 3 regions in a group are classified in the same way.
- It classifies NUTS 3 regions based on the share of population in rural grid cells. More than 50% of the total population in rural grid cells = predominantly rural, between 20% and 50% in rural grid cells = intermediate and less than 20% = predominantly urban.

Nevertheless this new typology considers the presence of large urban centres in the same way of the OECD methodology:

- a "predominantly rural" region (or group of regions) is re-classified as "intermediate" if there is an urban centre > 200.000 inhabitants representing no less than 25% of the regional population
- an "intermediate" region (or group of regions) is re-classified as "predominantly urban" if there is an urban centre > 500.000 inhabitants (in EU) representing no less than 25% of the regional population

At the EU-27 level, it results in 24% of the population living in NUTS 3 regions classified as "predominantly rural", which is 4% more compared to the results obtained with the OECD methodology.

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Urban-rural_typology

2: METHOD FOR ESTIMATING DATA AT NUTS-3 LEVEL

Data of the population of 30-34 years old with tertiary education come from the Labour Force Survey, the lowest level of availability being NUTS-2.

The database resulting from this survey includes a variable which indicates the level of urbanisation of the local administrative unit (LAU2) of the respondent, measured by the population density:

- 1) Thinly populated or less than 100 inhabitants/km²
- 2) Intermediate or from 100 to 500 inhabitants/km².
- 3) Densely populated or more than 500 inhabitants/km²

The proportion of population by level of urbanisation within a concrete NUTS 3 region is available in the data from the Census, in this case the closest is 2001. By weighing the indicator per level of urbanisation according

to the share of population within the NUTS 3 region in each level of urbanisation, one can create a NUTS 3 estimate.

The estimated data at NUTS-3 level is aggregated by type of region according to the definition of rural areas (see Annex 1). Therefore, the estimations prepared are always aggregated and we never present the data individually (i.e.: the maps are presented with the official data at NUTS-2 level).

Data of early leavers from education and training by degree of urbanisation are just available at national level. In some cases, it is also available at NUTS-2 level, but not by the degree of urbanisation of the respondent. Data of early leavers are therefore presented according to the level of urbanisation of the LAU2 (thinly populated, intermediate and densely populated), which differs from both the new typology of rural areas and the OECD definition presented in Annex 1.

3: DATA BY DEGREE OF URBANISATION (EARLY LEAVERS FROM EDUCATION AND TRAINING)

Data of early leavers from education and training by degree of urbanisation are just available at national level. For some countries they are also available at NUTS-2 level, but the degree of urbanisation of the respondent was excluded from the series. In consequence, the estimation method of data at NUTS-3 level explained in Annex 2 could not be applied for this series and the classification of regions according to the new typology of rural areas (see Annex 1) could not be used.

Summary tables for early leavers are therefore presented according to the level of urbanisation of the LAU2 (thinly populated, intermediate and densely populated), which differs from both the new typology of rural areas and the OECD definition presented in Annex 1.

4: DEFINITION OF TERTIARY EDUCATION AND EARLY LEAVERS FROM EDUCATION AND TRAINING

The classification of educational activities is based on ISCED - the International Standard Classification of Education - UNESCO 1997. It consists of the following categories:

ISCED 0 - PRE-PRIMARY EDUCATION

ISCED 1 - PRIMARY EDUCATION OR FIRST STAGE OF BASIC EDUCATION

ISCED 2 - LOWER SECONDARY EDUCATION OR SECOND STAGE OF BASIC EDUCATION

ISCED 3 - (LOWER / UPPER) SECONDARY EDUCATION

ISCED 4 - POST-SECONDARY NON TERTIARY EDUCATION

ISCED 5 - FIRST STAGE OF TERTIARY EDUCATION (NOT LEADING DIRECTLY TO AN ADVANCED RESEARCH QUALIFICATION)

ISCED 6 - SECOND STAGE OF TERTIARY EDUCATION (LEADING TO AN ADVANCED RESEARCH QUALIFICATION)

Early leavers from education and training (formerly 'early school leavers') denotes the percentage of the population aged 18-24 having attained at most lower secondary education and not being involved in further education or training. The numerator of the indicator refers to persons aged 18-24 who meet the following two conditions:

(a) the highest level of education or training they have attained is ISCED 0, 1, 2 or 3c short and

(b) They have not received any education or training in the four weeks preceding the survey.

The denominator in the total population consists of the same age group, excluding the respondents who have not answered the questions 'highest level of education or training attained' and 'participation to education and training'.

Tertiary education corresponds to levels 5 and 6 of the ISCED classification. The percentage of population with tertiary education is defined as the sum of the population having attained level 5 or 6 as a percentage of a give age group. .

http://www.unesco.org/education/informatio/n/nfsunesco/doc/isced_1997.htm