

# Key figures on Europe

2016 edition



**Key figures on Europe**

**2016 edition**

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## Foreword

Our statistical book *Key figures on Europe* provides you with a selection of the most important and interesting statistics on Europe. Drawing from the huge amount of data available at Eurostat, we aim to give an insight into the European economy, society and environment — for example, how the population of the European Union is changing, how living conditions vary between EU Member States or how the economy is performing compared with large countries, such as China, Japan and the United States. I hope that you will find information of interest both for your work and your daily life.



You can find the content of this book, in a much richer form, in the continuously updated online publication *Europe in figures — Eurostat yearbook*. The latest and most complete data can be downloaded from the *Eurostat website*.

Eurostat is the statistical office of the European Union, situated in Luxembourg. Its mission is to provide high quality statistics for Europe. Working together with national statistical authorities in the European Statistical System, we produce official statistics which meet the highest possible standards of quality.

I wish you an enjoyable reading experience!

**Mariana Kotzeva**

Acting Director-General, Eurostat



## Abstract

*Key figures on Europe* presents a selection of statistical data on Europe. Most data cover the European Union and its Member States, while some indicators are provided for other countries, such as members of the European Free Trade Association, the enlargement countries, China, Japan or the United States. This publication, which presents a subset of the most popular information found in the continuously updated online publication *Europe in figures — Eurostat yearbook* (available through <http://ec.europa.eu/eurostat/statistics-explained>), may be viewed as an introduction to European statistics and provides a starting point for those who wish to explore the wide range of data that is freely available on Eurostat's website at: <http://ec.europa.eu/eurostat>.

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## For more information please consult

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Statistics Explained: <http://ec.europa.eu/eurostat/statistics-explained>

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# Introduction





## Structure of the publication

*Key figures on Europe* presents a subset of the most popular information found in the continuously updated online publication *Europe in figures* — *Eurostat yearbook* (available in [http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe\\_in\\_figures\\_-\\_Eurostat\\_yearbook](http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_in_figures_-_Eurostat_yearbook)).

It provides users of official statistics with an overview of the wealth of information that is available on Eurostat's website and within its online databases. It has been conceived as a publication that provides a balanced set of indicators, with a broad cross-section of information.

*Key figures on Europe* is divided into an introduction and 13 main chapters. The introduction includes information concerning

data extraction, the data coverage and more generally how to access to European statistics.

The main chapters of this publication treat the following areas: population; living conditions; health; education and training; labour market; economy and finance; international trade; agriculture, forestry and fisheries; industry, trade and services, science, technology and digital agenda; environment; energy; and transport.

Each of the main chapters contains data and/or background information relating to a very wide range of European statistics. A great deal more information can be found when consulting Eurostat's website, which contains subject-specific publications and online databases.

## Data extraction and coverage

### Data extraction

The statistical data presented in this publication are the ones analysed in the continuously updated online publication *Europe in figures* — *Eurostat yearbook*. The accompanying text was drafted between April and December 2016.

### Spatial data coverage

This publication usually presents information for the EU-28 (the 28 Member States of the EU), the euro area (usually based on 19 members), as well as the individual EU Member States. When figures are not available for the EU-28, results for the

EU-27 (the 27 Member States of the EU prior to the accession of Croatia in July 2013) are shown. The euro area aggregate is based on data for the 18 members (prior to the adoption of the euro as currency by Lithuania in January 2015) when data are not available for the euro area with 19 members. The order of the Member States used generally follows the protocol order; in other words, the alphabetical order of the countries' names in their respective original languages; in some of the figures the data are ranked according to the values of a particular indicator.



The EU and euro area aggregates are normally only provided when information for all of the countries is available, or if an estimate has been made for missing information. Any incomplete totals that are created are systematically footnoted. Time series for these geographical aggregates are based on a consistent set of countries for the whole of the time period (unless otherwise indicated). In other words, the time series for EU-28 refer to a sum or an average for all 28 countries for the whole of the period presented, as if all 28 Member States had been part of the EU in earlier periods.

When available, information is also presented for EFTA and enlargement countries <sup>(1)</sup>, as well as for China, Japan and the United States. In the event that data for any of these non-member countries are not available, then these have been excluded from tables and figures; however, the full set of 28 Member States is maintained in tables, with footnotes being added in figures for those EU Member States for which information is missing.

## Temporal data coverage

If data for a reference year (or reference period) are not available for a particular country, then efforts have been made to fill tables and figures with data for previous reference years (these

exceptions are footnoted). Generally, an effort has been made to go back at least two reference years, for example showing data for 2013 or 2014 for those countries (or geographical aggregates) for which 2015 data are not yet available.

## Data presentation

Eurostat online databases contain a large amount of metadata that provides information on the status of particular values or data series. In order to improve readability, only the most significant information has been included in the tables and figures. The following symbols are used, where necessary:

<i>Italic</i>	data value is forecasted, provisional or estimated and is likely to change;
:	not available, confidential or unreliable value;
–	not applicable.

Breaks in series are indicated in the footnotes provided under each table and figure.

<sup>(1)</sup> Candidate countries: Montenegro; the former Yugoslav Republic of Macedonia; Albania; Serbia and Turkey. Potential candidates: Bosnia and Herzegovina; Kosovo. The name of the former Yugoslav Republic of Macedonia is shown in tables and figures in this publication as 'MK' or as 'FYR of Macedonia' — this does not prejudice in any way the definitive nomenclature for this country, which is to be agreed following the conclusion of negotiations currently taking place on this subject at the United Nations. The designation of Kosovo is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.



## Accessing European statistics

The simplest way to access Eurostat's broad range of statistical information is through its website (<http://ec.europa.eu/eurostat>). Eurostat provides users with free access to its databases and all of its publications in portable document format (PDF) via the internet. The website is updated daily and gives access to the latest and most comprehensive statistical information available on the EU, its Member States, EFTA countries, as well as enlargement countries.

Eurostat online data codes, such as tps00001 and nama\_gdp\_c, allow easy access to the most recent data on Eurostat's website. In this statistical book these online data codes are given as part of the source below each table and figure. In the PDF version of this publication, the

reader is led directly to the freshest data when clicking on the hyper-links that form part of each online data code. Online data codes lead to either a two- or three-dimensional table in the TGM (tables, graphs, maps) interface or to an open dataset which generally contains more dimensions and longer time series using the Data Explorer interface.

By entering the online data code into the 'Search' field of the Eurostat website, users can access related dataset(s) and possibly publication(s) and metadata. By clicking on these hyperlinks, they are directed to product page(s), which provide information about each dataset/publication or set of metadata.

# 1

## Population





## Introduction

As the population of the European Union (EU) grew beyond 500 million inhabitants, its structure continued to change. Recent demographic developments show that the EU's population is slowly increasing, while its age structure is becoming older as post-war baby-boom generations reach retirement age. Furthermore, people are living longer, as life expectancy continues to increase. On the other hand, while fertility increased for several years up to 2010, and is again showing

an upward tendency, its downward path over several decades means that it remains well below a level that would keep the size of the population constant in the absence of inward or outward migration. As a result, the EU will, in the coming decades, face a number of changes associated with an ageing society which will impact on a range of areas, including labour markets, pensions and provisions for healthcare, housing and social services, as well as managing migration and migrant integration.

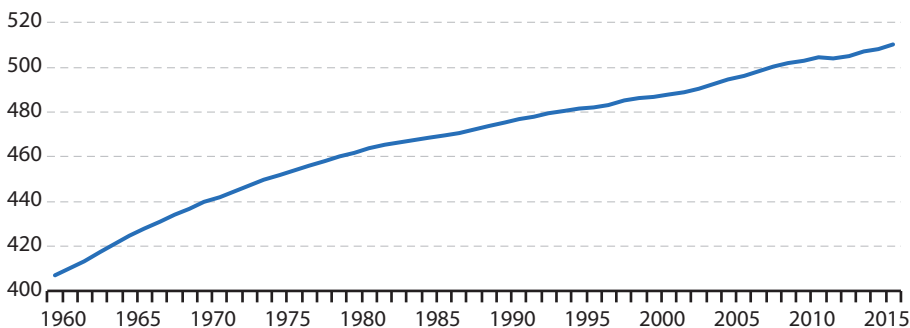
### 1.1 Population and population change

On 1 January 2016 the population of the EU-28 was estimated at 510.1 million inhabitants, which was 1.8 million more than a year before. The increase in population numbers during 2015 was bigger than that recorded during 2014 when the population of the EU-28 had risen by 1.3 million.

Over a longer period, the population of the EU-28 grew from 406.7 million in 1960 to 510.1 million

in 2016, an increase of 103.4 million people. The rate of population growth has slowed gradually in recent decades: for example, the EU-28's population increased, on average, by about 1.5 million persons per year during the period 2005–16, compared with an average increase of around 3.3 million persons per year during the 1960s.

**Figure 1.1: Population, EU-28, 1960–2016**  
(at 1 January, million persons)



Note: Excluding French overseas departments before 1998. Breaks in series: 2001, 2010–12 and 2014–16.

Source: Eurostat (online data code: [demo\\_gind](#))



In 2015, deaths outnumbered live births in the EU-28 (for the first time since the time series began in 1961), resulting in the aforementioned natural decrease in the population. As such, the increase in population recorded during 2015 for the EU-28 could be fully attributed to net migration and statistical adjustment; there were however variations in the patterns observed in

the EU Member States. In 2015, net migration and statistical adjustment accounted for an increase of 1.9 million persons, approximately twice the increase in 2014 and the largest increase recorded since the time series began in 1961; since 1992, net migration and statistical adjustment has been the main determinant of population growth in the EU-28.



**Table 1.1: Demographic balance, 2015**  
(thousands)

	Popula- tion, 1 January 2015	Live births	Deaths	Natural change <sup>(1)</sup>	Net migra- tion and statistical adjust- ment <sup>(2)</sup>	Total change between 1 January 2015 and 2016	Popula- tion, 1 January 2016
<b>EU-28 <sup>(3)</sup></b>	<b>508 293.4</b>	<b>5 091.3</b>	<b>5 226.5</b>	<b>-135.2</b>	<b>1 897.8</b>	<b>1 762.7</b>	<b>510 056.0</b>
Belgium <sup>(3)</sup>	11 209.0	122.3	110.5	11.7	69.1	80.9	11 289.9
Bulgaria	7 202.2	66.0	110.1	-44.2	-4.2	-48.4	7 153.8
Czech Republic	10 538.3	110.8	111.2	-0.4	16.0	15.6	10 553.8
Denmark	5 659.7	58.2	52.6	5.7	41.9	47.5	5 707.3
Germany	81 197.5	738.0	925.0	-187.0	1 151.5	964.5	82 162.0
Estonia <sup>(3)</sup>	1 313.3	13.9	15.2	-1.3	4.0	2.7	1 315.9
Ireland	4 628.9	65.9	30.0	36.0	-6.4	29.6	4 658.5
Greece	10 858.0	91.9	120.8	-29.0	-35.5	-64.5	10 793.5
Spain	46 449.6	417.3	420.0	-2.8	-8.4	-11.1	46 438.4
France <sup>(3)</sup>	66 415.2	800.8	600.1	200.6	45.8	246.5	66 661.6
Croatia	4 225.3	37.5	54.2	-16.7	-17.9	-34.6	4 190.7
Italy	60 795.6	485.8	647.6	-161.8	31.7	-130.1	60 665.6
Cyprus	847.0	9.2	5.9	3.3	-2.0	1.3	848.3
Latvia	1 986.1	22.0	28.5	-6.5	-10.6	-17.1	1 969.0
Lithuania	2 921.3	31.5	41.8	-10.3	-22.4	-32.7	2 888.6
Luxembourg	563.0	6.1	4.0	2.1	11.2	13.3	576.2
Hungary	9 855.6	92.1	131.6	-39.4	14.4	-25.1	9 830.5
Malta	429.3	4.3	3.4	0.9	4.2	5.1	434.4
Netherlands	16 900.7	170.0	147.0	23.0	55.4	78.4	16 979.1
Austria	8 576.3	84.4	83.1	1.3	122.9	124.2	8 700.5
Poland	38 005.6	369.3	394.9	-25.6	-12.8	-38.4	37 967.2
Portugal	10 374.8	85.5	108.5	-23.0	-10.5	-33.5	10 341.3
Romania	19 870.6	185.0	260.7	-75.7	-35.0	-110.7	19 760.0
Slovenia	2 062.9	20.6	19.8	0.8	0.5	1.3	2 064.2
Slovakia	5 421.3	55.6	53.8	1.8	3.1	4.9	5 426.3
Finland	5 471.8	55.5	52.5	3.0	12.6	15.6	5 487.3
Sweden	9 747.4	114.9	90.9	24.0	79.7	103.7	9 851.0
United Kingdom	64 767.1	777.2	602.8	174.4	399.7	574.1	65 341.2
Iceland	329.1	4.1	2.2	2.0	1.5	3.4	332.5
Liechtenstein	37.4	0.3	0.3	0.1	0.2	0.3	37.6
Norway	5 166.5	59.1	40.7	18.3	29.2	47.5	5 214.0
Switzerland	8 237.7	84.8	67.3	17.6	70.0	87.5	8 325.2
Montenegro	622.1	7.4	6.3	1.1	-0.9	0.1	622.2
FYR of Macedonia	2 069.2	23.1	20.5	2.6	-0.5	2.1	2 071.3
Albania	2 892.3	33.2	22.4	10.8	-17.1	-6.3	2 886.0
Serbia <sup>(4)</sup>	7 114.4	65.7	103.7	-38.0	0.0	-38.0	7 076.4
Turkey	77 695.9	1 325.8	405.2	920.6	124.6	1 045.1	78 741.1
Bosnia and Herzegovina <sup>(4)(5)</sup>	3 830.9	29.2	34.8	-5.6	0.0	-5.6	3 825.3
Kosovo <sup>(3)(6)</sup>	1 804.9	31.1	8.9	22.2	-55.6	-33.3	1 771.6

<sup>(1)</sup> Live births minus deaths.

<sup>(2)</sup> Total change minus natural change.

<sup>(3)</sup> Break in series.

<sup>(4)</sup> Due to a lack of data on migration, the demographic balance is based exclusively on the natural change.

<sup>(5)</sup> Demographic balance: 2014.

<sup>(6)</sup> Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data code: [demo\\_gind](#))



## 1.2 Population structure and ageing

This section looks at the impact of demographic ageing within the European Union (EU), which is likely to be of major significance in the coming decades. Consistently low birth rates and higher life expectancy are transforming the shape of the EU-28's age pyramid; probably the most important change will be the marked transition towards a much older population structure, a development which is already apparent in several EU Member States.

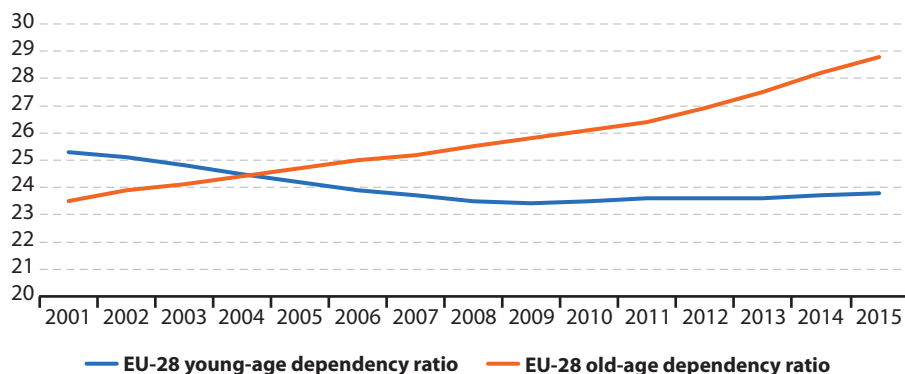
The population of the EU-28 on 1 January 2015 was estimated at 508.5 million. Young people (0 to 14 years old) made up 15.6 % of the EU-28's population, while persons considered to be of working age (15 to 64 years old) accounted for 65.6 % of the population. Older persons (aged 65 or over) had an 18.9 % share (an increase of 0.4 % compared with the previous year and an increase of 2.3 % compared with 10 years earlier).

Across the EU Member States, the highest share of young people in the total population in 2015 was observed in Ireland (22.1 %), while the lowest share was recorded in Germany (13.2 %). Regarding the share of persons aged 65 or older in the total population, Italy (21.7 %), Germany (21.0 %) and Greece (20.9 %) had the highest shares, while Ireland had the lowest share (13.0 %).

Age dependency ratios may be used to study the level of support given to younger and/or older persons by the working age population; these ratios are expressed in terms of the relative size of younger and/or older populations compared with the working age population. The old-age dependency ratio for the EU-28 was 28.8 % on 1 January 2015; as such, there were around four persons of working age for every person aged 65 or over.

**Figure 1.2: Age dependency ratios, EU-28, 2001–15**

(%)



Note: Young-age dependency ratio: population aged 0–14 to population 15–64 years.  
Old dependency ratio: population 65 and over to population 15–64 years. 2001: break in series.

Source: Eurostat (online data code: [demo\\_pjanind](#))

**Table 1.2: Population age structure by major age groups, 2005 and 2015**  
(% of the total population)

	0–14 years old		15–64 years old		65 years old or over	
	2005	2015	2005	2015	2005	2015
<b>EU-28 <sup>(1)</sup></b>	16.3	15.6	67.2	65.6	16.6	18.9
<b>Belgium <sup>(1)</sup></b>	17.2	17.0	65.6	64.9	17.2	18.0
<b>Bulgaria</b>	13.7	13.9	68.9	66.2	17.4	20.0
<b>Czech Republic</b>	14.9	15.2	71.1	67.0	14.1	17.8
<b>Denmark</b>	18.8	17.0	66.1	64.4	15.0	18.6
<b>Germany <sup>(1)</sup></b>	14.5	13.2	66.9	65.8	18.6	21.0
<b>Estonia <sup>(2)</sup></b>	15.4	16.0	68.0	65.2	16.6	18.8
<b>Ireland</b>	20.7	22.1	68.2	64.9	11.1	13.0
<b>Greece</b>	15.1	14.5	66.7	64.5	18.3	20.9
<b>Spain</b>	14.5	15.2	69.0	66.3	16.6	18.5
<b>France <sup>(1)</sup></b>	18.7	18.6	65.1	63.0	16.3	18.4
<b>Croatia <sup>(2)</sup></b>	15.9	14.7	66.7	66.5	17.3	18.8
<b>Italy</b>	14.1	13.8	66.4	64.5	19.5	21.7
<b>Cyprus</b>	19.9	16.4	68.0	69.0	12.1	14.6
<b>Latvia</b>	15.0	15.0	68.4	65.6	16.6	19.4
<b>Lithuania</b>	17.1	14.6	67.1	66.6	15.8	18.7
<b>Luxembourg <sup>(1)</sup></b>	18.6	16.7	67.3	69.2	14.1	14.2
<b>Hungary <sup>(1)</sup></b>	15.6	14.5	68.8	67.6	15.6	17.9
<b>Malta</b>	17.6	14.3	69.0	67.2	13.3	18.5
<b>Netherlands</b>	18.5	16.7	67.5	65.4	14.0	17.8
<b>Austria</b>	16.1	14.3	67.9	67.2	15.9	18.5
<b>Poland <sup>(1)</sup></b>	16.7	15.0	70.2	69.5	13.1	15.4
<b>Portugal</b>	16.0	14.4	66.8	65.4	17.2	20.3
<b>Romania</b>	17.5	15.5	68.4	67.5	14.2	17.0
<b>Slovenia <sup>(1)</sup></b>	14.4	14.8	70.2	67.3	15.3	17.9
<b>Slovakia</b>	17.1	15.3	71.3	70.7	11.7	14.0
<b>Finland</b>	17.5	16.4	66.6	63.7	15.9	19.9
<b>Sweden</b>	17.6	17.3	65.2	63.1	17.2	19.6
<b>United Kingdom</b>	18.1	17.7	65.9	64.6	15.9	17.7
<b>Iceland</b>	22.3	20.4	65.9	66.1	11.8	13.5
<b>Liechtenstein</b>	17.6	15.1	71.3	68.9	11.1	16.0
<b>Norway</b>	19.7	18.0	65.6	65.8	14.7	16.1
<b>Switzerland <sup>(1)</sup></b>	16.3	14.9	67.9	67.3	15.8	17.8
<b>Montenegro <sup>(2)</sup></b>	20.8	18.5	66.7	67.8	12.5	13.7
<b>FYR of Macedonia <sup>(2)</sup></b>	20.0	16.8	69.1	70.5	10.9	12.7
<b>Albania</b>	26.5	18.6	65.1	69.0	8.3	12.5
<b>Serbia <sup>(1)</sup></b>	15.8	14.4	67.0	67.2	17.1	18.5
<b>Turkey</b>	27.5	24.3	65.9	67.8	6.7	8.0

<sup>(1)</sup> Break in time series in various years between 2005 and 2015.

<sup>(2)</sup> The population of unknown age is redistributed for calculating the age structure.

Source: Eurostat (online data code: [demo\\_pjanind](#))



## 1.3 Marriage and divorce

Marriage, as recognised by the law of each country, has long been considered to mark the formation of a family unit. However, the analysis of trends in family formation and dissolution based on just marriage and divorce data might not offer a full picture. Legal alternatives to marriage, like registered partnership, have become more widespread and national legislation has changed to confer more rights on unmarried couples. Recent demographic data show that the number of marriages per 1 000 persons decreased within the EU-28 in recent decades, while the number of divorces increased. An increase in the proportion of children who are born to unmarried couples was also apparent.

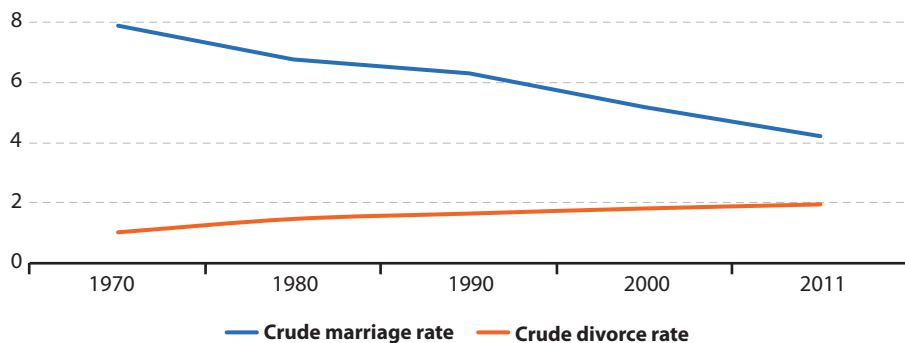
Some 2.1 million marriages and 986 thousand divorces took place in the EU-28 in 2011, according to the most recent data available for all EU Member States. These figures may be expressed as 4.2 marriages for every

1 000 persons (in other words the crude marriage rate) and 2.0 divorces for every 1 000 persons (in other words the crude divorce rate).

Since 1965, the crude marriage rate in the EU-28 has declined by close to 50 % in relative terms (from 7.8 per 1 000 persons in 1965 to 4.2 in 2011). At the same time, the crude divorce rate increased from 0.8 per 1 000 persons in 1965 to 2.0 in 2011. Part of this increase is due to the fact that in several EU Member States divorce was legalised during the period (for example, in Italy, Spain, Ireland and Malta).

The proportion of live births outside marriage in the EU-28 in 2012 was 40 %. This share has continued to increase, signalling new patterns of family formation alongside the more traditional pattern where children were born within marriage. Extramarital births occur in non-marital relationships, among cohabiting couples and to lone parents.

**Figure 1.3: Crude marriage and divorce rates, EU-28, 1970–2011**  
(per 1 000 inhabitants)



Note: There is a change in time interval on the x-axis. Excluding French overseas departments for 1970 to 1990.

Source: Eurostat (online data codes: [demo\\_nind](#) and [demo\\_ndivind](#))

**Table 1.3: Crude marriage and divorce rates, selected years, 1965–2014**  
(per 1 000 inhabitants)

	Marriages				Divorces			
	1965	2000	2011	2014	1965	2000	2011	2014
<b>EU-28 <sup>(1)</sup></b>	7.8	5.2	4.2	:	0.8	1.8	2.0	:
<b>Belgium <sup>(2)</sup></b>	7.0	4.4	3.7	:	0.6	2.6	2.5	:
<b>Bulgaria</b>	8.0	4.3	2.9	3.4	1.1	1.3	1.4	1.5
<b>Czech Republic</b>	8.4	5.4	4.3	4.3	1.7	2.9	2.7	2.5
<b>Denmark</b>	8.8	7.2	4.9	5.0	1.4	2.7	2.6	3.4
<b>Germany</b>	8.3	5.1	4.6	4.8	1.0	2.4	2.3	2.1
<b>Estonia</b>	8.2	3.9	4.1	4.7	2.3	3.0	2.3	2.4
<b>Ireland <sup>(3)</sup></b>	5.9	5.0	4.3	:	:	0.7	0.6	:
<b>Greece</b>	9.4	4.5	5.0	4.9	0.4	1.0	1.1	:
<b>Spain <sup>(3)</sup></b>	7.1	5.4	3.4	3.4	:	0.9	2.2	2.2
<b>France <sup>(1)</sup></b>	:	5.0	3.6	:	:	1.9	2.0	:
<b>Croatia</b>	9.0	4.9	4.7	4.6	1.3	1.0	1.3	:
<b>Italy <sup>(3)</sup></b>	7.7	5.0	3.4	3.1	:	0.7	0.9	0.9
<b>Cyprus <sup>(4)</sup></b>	7.6	13.4	7.3	:	0.2	1.7	2.3	:
<b>Latvia</b>	8.8	3.9	5.2	6.3	2.8	2.6	4.0	3.1
<b>Lithuania</b>	8.4	4.8	6.3	7.6	0.9	3.1	3.4	3.3
<b>Luxembourg <sup>(5)</sup></b>	6.6	4.9	3.3	3.0	0.4	2.4	2.3	2.6
<b>Hungary <sup>(5)(6)</sup></b>	8.8	4.7	3.6	3.9	2.0	2.3	2.3	2.0
<b>Malta <sup>(3)</sup></b>	6.2	6.7	6.2	6.7	:	:	0.1	0.8
<b>Netherlands</b>	8.8	5.5	4.3	3.9	0.5	2.2	2.0	2.1
<b>Austria</b>	7.8	4.9	4.3	:	1.2	2.4	2.1	:
<b>Poland <sup>(7)</sup></b>	6.4	5.5	5.4	5.0	0.7	1.1	1.7	1.7
<b>Portugal</b>	8.4	6.2	3.4	3.0	0.1	1.9	2.5	:
<b>Romania</b>	8.6	6.1	5.2	5.9	1.9	1.4	1.8	1.4
<b>Slovenia</b>	9.2	3.6	3.2	3.2	1.1	1.1	1.1	1.2
<b>Slovakia</b>	7.0	4.8	4.7	4.9	0.6	1.7	2.1	1.9
<b>Finland</b>	7.9	5.1	5.3	4.5	1.0	2.7	2.5	2.5
<b>Sweden</b>	7.8	4.5	5.0	5.5	1.2	2.4	2.5	2.7
<b>United Kingdom</b>	7.8	5.2	4.5	:	0.7	2.6	2.1	:
<b>Iceland</b>	8.1	6.3	4.6	:	0.9	1.9	1.6	:
<b>Liechtenstein</b>	6.9	7.2	4.5	:	:	3.9	2.5	:
<b>Norway</b>	6.5	5.0	4.6	4.6	0.7	2.2	2.1	1.9
<b>Switzerland <sup>(2)(7)</sup></b>	7.7	5.5	5.3	5.1	0.8	1.5	2.2	2.0
<b>Montenegro</b>	:	:	:	5.7	:	:	0.8	0.9
<b>FYR of Macedonia</b>	9.0	7.0	7.2	6.7	0.5	0.7	0.9	1.1
<b>Albania</b>	7.5	8.4	:	:	0.6	0.7	:	:
<b>Serbia <sup>(7)</sup></b>	:	5.7	4.9	5.1	:	:	1.1	1.1
<b>Turkey</b>	:	:	8.0	7.8	:	:	1.6	1.7
<b>Bosnia and Herzegovina</b>	9.3	5.6	:	:	:	:	:	:
<b>Kosovo <sup>(8)</sup></b>	:	:	9.3	:	:	:	0.8	:

<sup>(1)</sup> Excluding French overseas departments for 1965 to 1990.

<sup>(2)</sup> Marriages, 2011: break in series.

<sup>(3)</sup> Divorce was not possible by law in Italy until 1970, in Spain until 1981, in Ireland until 1995 and in Malta until 2011.

<sup>(4)</sup> Up to and including 2002: data refer to total marriages contracted in the country, including marriages between non-residents. From 2003 onwards: data refer to marriages in

which at least one spouse was resident in the country. 1980: break in series.

<sup>(5)</sup> Marriages, 2012: break in series.

<sup>(6)</sup> Divorces, 2012: break in series.

<sup>(7)</sup> Divorces, 2011: break in series.

<sup>(8)</sup> Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data codes: [demo\\_nind](#) and [demo\\_ndivind](#))



## 1.4 Fertility

In 2014, 5.1 million children were born in the EU-28, corresponding to a crude birth rate (the number of live births per 1 000 persons) of 10.1.

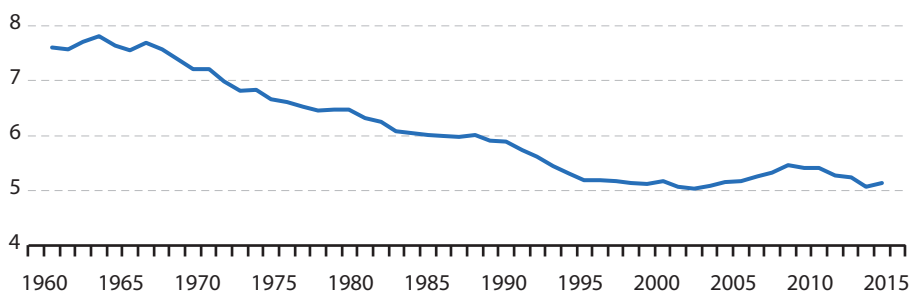
In recent decades Europeans have generally been having fewer children, and this pattern partly explains the slowdown in the EU-28's population growth. The most widely used indicator of fertility is the total fertility rate: this is the mean number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year. A total fertility rate of around 2.1 live births per woman is considered to be the replacement level in developed countries: in other words, the average number of live births per woman required to keep the population size constant in the absence of inward or outward migration. A total fertility rate below 1.3 live births per woman is described as 'lowest-low fertility'. The total fertility rate is comparable across countries since it takes into account changes in the size and structure of the population.

In 2014, the total fertility rate in the EU-28 was 1.58 live births per woman. The EU-28's fertility rate increased from a low of 1.46 in 2001 to a high of 1.62 in 2010, subsequently followed by a slight decrease to 1.58 in 2014.

Among the EU Member States, France reported the highest fertility rate in 2014, with 2.01 live births per woman. By contrast, the lowest fertility rates in 2014 were recorded in Portugal (1.23 live births per woman).

In the past 50 years, total fertility rates in the EU Member States have, in general, been converging: in 1960 and in 1980, the disparity between the highest (Ireland) and the lowest (Estonia in 1960, Luxembourg in 1980) fertility rates was around 1.8 live births per woman, while in 1970 it was around 2.0. By 1990 this difference (between Cyprus and Italy) had decreased to 1.1 live births per woman. Since 2000 it has been around 0.7 to 0.8 live births per woman.

**Figure 1.4: Number of live births, EU-28, 1961–2014**  
(million)



Note: Excluding French overseas departments before 1998. 2013 and 2014: provisional.  
2014: break in series (including births in Mayotte).

Source: Eurostat (online data code: [demo\\_gind](#))

**Table 1.4: Total fertility rate, 1960–2014**  
(live births per woman)

	1960	1970	1980	1990	2000	2010	2012	2013	2014
<b>EU-28 <sup>(1)</sup></b>	:	:	:	:	:	1.62	1.58	1.54	1.58
<b>Belgium <sup>(2)</sup></b>	2.54	2.25	1.68	1.62	1.67	1.86	1.79	1.75	1.74
<b>Bulgaria</b>	2.31	2.17	2.05	1.82	1.26	1.57	1.50	1.48	1.53
<b>Czech Republic</b>	2.09	1.92	2.08	1.90	1.15	1.51	1.45	1.46	1.53
<b>Denmark</b>	2.57	1.95	1.55	1.67	1.77	1.87	1.73	1.67	1.69
<b>Germany <sup>(3)</sup></b>	:	:	:	:	1.38	1.39	1.38	1.39	1.47
<b>Estonia</b>	1.98	2.17	2.02	2.05	1.36	1.72	1.56	1.52	1.54
<b>Ireland</b>	3.78	3.85	3.21	2.11	1.89	2.05	2.01	1.96	1.94
<b>Greece</b>	2.23	2.40	2.23	1.39	1.25	1.48	1.34	1.29	1.30
<b>Spain</b>	:	:	2.20	1.36	1.23	1.37	1.32	1.27	1.32
<b>France <sup>(3)</sup></b>	:	:	:	:	1.89	2.03	2.01	1.99	2.01
<b>Croatia</b>	:	:	:	:	:	1.55	1.51	1.46	1.46
<b>Italy</b>	2.37	2.38	1.64	1.33	1.26	1.46	1.43	1.39	1.37
<b>Cyprus</b>	:	:	:	2.41	1.64	1.44	1.39	1.30	1.31
<b>Latvia</b>	:	:	:	:	1.25	1.36	1.44	1.52	1.65
<b>Lithuania</b>	:	2.40	1.99	2.03	1.39	1.50	1.60	1.59	1.63
<b>Luxembourg <sup>(2)</sup></b>	2.29	1.97	1.50	1.60	1.76	1.63	1.57	1.55	1.50
<b>Hungary <sup>(2)</sup></b>	2.02	1.98	1.91	1.87	1.32	1.25	1.34	1.35	1.44
<b>Malta</b>	:	:	1.99	2.04	1.70	1.36	1.43	1.38	1.42
<b>Netherlands</b>	3.12	2.57	1.60	1.62	1.72	1.79	1.72	1.68	1.71
<b>Austria</b>	2.69	2.29	1.65	1.46	1.36	1.44	1.44	1.44	1.47
<b>Poland <sup>(3)</sup></b>	:	:	:	2.06	1.37	1.41	1.33	1.29	1.32
<b>Portugal</b>	3.16	3.01	2.25	1.56	1.55	1.39	1.28	1.21	1.23
<b>Romania</b>	:	:	2.43	1.83	1.31	1.59	1.52	1.41	1.52
<b>Slovenia</b>	:	:	:	1.46	1.26	1.57	1.58	1.55	1.58
<b>Slovakia</b>	3.04	2.41	2.32	2.09	1.30	1.43	1.34	1.34	1.37
<b>Finland</b>	2.72	1.83	1.63	1.78	1.73	1.87	1.80	1.75	1.71
<b>Sweden</b>	:	1.92	1.68	2.13	1.54	1.98	1.91	1.89	1.88
<b>United Kingdom</b>	:	:	1.90	1.83	1.64	1.92	1.92	1.83	1.81
<b>Iceland</b>	:	2.81	2.48	2.30	2.08	2.20	2.04	1.93	1.93
<b>Liechtenstein</b>	:	:	:	:	1.57	1.40	1.51	1.45	1.59
<b>Norway</b>	:	2.50	1.72	1.93	1.85	1.95	1.85	1.78	1.75
<b>Switzerland <sup>(2)</sup></b>	2.44	2.10	1.55	1.58	1.50	1.52	1.52	1.52	1.54
<b>Montenegro</b>	:	:	:	:	:	1.70	1.72	1.73	1.75
<b>FYR of Macedonia</b>	:	:	:	:	1.88	1.56	1.51	1.49	1.52
<b>Albania</b>	:	:	:	:	:	:	:	:	1.78
<b>Serbia <sup>(2)</sup></b>	:	:	:	:	1.48	1.40	1.45	1.43	1.46
<b>Turkey</b>	:	:	:	:	:	2.04	2.09	2.08	2.17

<sup>(1)</sup> 2012 and 2014: break in series.

<sup>(2)</sup> 2012: break in series.

<sup>(3)</sup> 2014: break in series.

<sup>(4)</sup> 2000: break in series.

Source: Eurostat (online data code: [demo\\_frate](#))



## 1.5 Mortality and life expectancy

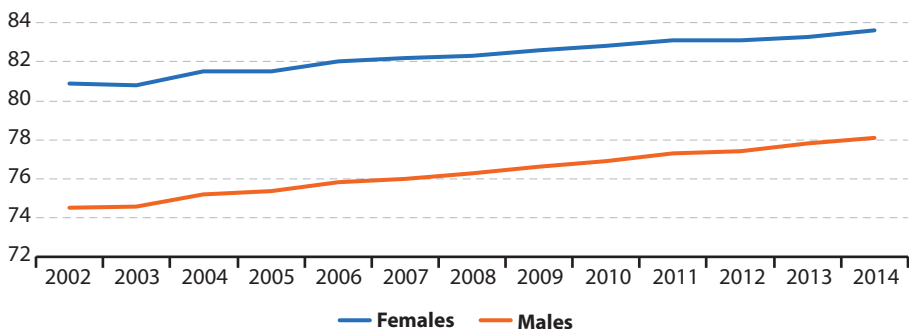
In 2014, some 4.9 million persons died in the EU-28 — this was broadly in line with the annual number of deaths recorded over the previous four decades. A peak was reached in 1993 with 5.03 million deaths. The crude death rate, which is the number of deaths per 1 000 persons, was 9.7 in the EU-28 in 2014.

The most commonly used indicator for analysing mortality is life expectancy at birth: the mean number of years that a person can expect to live at birth if subjected to current mortality conditions throughout the rest of his or her life. It is a simple but powerful way of illustrating the developments in mortality. The total number of deaths depends on the size of the population age groups (cohorts) reaching the end of their life cycle and on mortality rates. Economic development and the improvement in some environmental conditions (for example in many urban areas), improved lifestyles, advances in healthcare and medicine, including reduced infant mortality, have resulted in a continuous

increase in life expectancy at birth across Europe during the last century. This process has been going on for longer in Europe than in most other parts of the world, placing the EU-28 among the world leaders for life expectancy. Over the past 50 years, life expectancy at birth has increased by about 10 years for both men and women in the EU-28. Further gains are expected to be achieved mostly from the reduction in mortality at older ages. Besides the reduction in fertility, the gradual reduction in mortality is the main factor contributing to the ageing of the population in the EU-28.

Life expectancy at birth in the EU-28 was estimated at 80.9 years in 2014, reaching 83.6 years for women and 78.1 years for men. During more than a decade, between 2002 (the first year for which data are available for all EU Member States) and 2014, life expectancy in the EU-28 increased by 3.2 years, from 77.7 to 80.9 years; the increase was 3.8 years for women and 2.7 years for men.

**Figure 1.5: Life expectancy at birth, EU-28, 2002–14**  
(years)



Note: 2009, 2011, 2012 and 2014: breaks in series. 2013 and 2014: estimate and provisional.

Source: Eurostat (online data code: [demo\\_mlexpec](#))



While life expectancy has risen in all EU Member States, there are still major differences between and within countries. For men, the lowest life expectancy in 2014 was recorded in Latvia (69.1 years) and the highest in Cyprus (80.9 years). For women, the range was narrower, from a low

of 78.0 years in Bulgaria to a high of 86.2 years in Spain.

Around 18.8 thousand children died before reaching one year of age in the EU-28 in 2014; this was equivalent to an infant mortality rate of 3.7 deaths per 1 000 live births.

**Table 1.5: Life expectancy at birth, 1980–2014**  
(years)

	Total			Males			Females		
	2000	2010	2014	2000	2010	2014	2000	2010	2014
<b>EU-28 <sup>(1)</sup></b>	:	79.9	80.9	:	76.9	78.1	:	82.8	83.6
<b>Belgium</b>	77.9	80.3	81.4	74.6	77.5	78.8	81.0	83.0	83.9
<b>Bulgaria</b>	71.6	73.8	74.5	68.4	70.3	71.1	75.0	77.4	78.0
<b>Czech Republic</b>	75.1	77.7	78.9	71.6	74.5	75.8	78.5	80.9	82.0
<b>Denmark</b>	76.9	79.3	80.7	74.5	77.2	78.7	79.2	81.4	82.8
<b>Germany</b>	78.3	80.5	81.2	75.1	78.0	78.7	81.2	83.0	83.6
<b>Estonia</b>	71.1	76.0	77.4	65.6	70.9	72.4	76.4	80.8	81.9
<b>Ireland</b>	76.6	80.8	81.4	74.0	78.5	79.3	79.2	83.1	83.5
<b>Greece</b>	78.2	80.6	81.5	75.5	78.0	78.9	80.9	83.3	84.1
<b>Spain</b>	79.3	82.4	83.3	75.8	79.2	80.4	82.9	85.5	86.2
<b>France <sup>(2)</sup></b>	79.2	81.8	82.8	75.3	78.2	79.5	83.0	85.3	86.0
<b>Croatia</b>	:	76.7	77.9	:	73.4	74.7	:	79.9	81.0
<b>Italy</b>	79.9	82.2	83.2	76.9	79.5	80.7	82.8	84.7	85.6
<b>Cyprus</b>	77.7	81.5	82.8	75.4	79.2	80.9	80.1	83.9	84.7
<b>Latvia</b>	:	73.1	74.5	:	67.9	69.1	:	78.0	79.4
<b>Lithuania</b>	72.1	73.3	74.7	66.7	67.6	69.2	77.4	78.9	80.1
<b>Luxembourg</b>	78.0	80.8	82.3	74.6	77.9	79.4	81.3	83.5	85.2
<b>Hungary</b>	71.9	74.7	76.0	67.5	70.7	72.3	76.2	78.6	79.4
<b>Malta</b>	78.4	81.5	82.1	76.2	79.3	79.8	80.3	83.6	84.2
<b>Netherlands</b>	78.2	81.0	81.8	75.6	78.9	80.0	80.7	83.0	83.5
<b>Austria</b>	78.3	80.7	81.7	75.2	77.8	79.2	81.2	83.5	84.0
<b>Poland <sup>(3)</sup></b>	73.8	76.4	77.8	69.6	72.2	73.7	78.0	80.7	81.7
<b>Portugal</b>	76.8	80.1	81.3	73.3	76.8	78.0	80.4	83.2	84.4
<b>Romania</b>	71.2	73.7	75.0	67.7	70.0	71.4	74.8	77.7	78.7
<b>Slovenia</b>	76.2	79.8	81.2	72.2	76.4	78.2	79.9	83.1	84.1
<b>Slovakia</b>	73.3	75.6	77.0	69.2	71.8	73.3	77.5	79.3	80.5
<b>Finland</b>	77.8	80.2	81.3	74.2	76.9	78.4	81.2	83.5	84.1
<b>Sweden</b>	79.8	81.6	82.3	77.4	79.6	80.4	82.0	83.6	84.2
<b>United Kingdom</b>	78.0	80.6	81.4	75.5	78.6	79.5	80.3	82.6	83.2
<b>Iceland</b>	79.7	81.9	82.9	77.8	79.8	81.3	81.6	84.1	84.5
<b>Liechtenstein</b>	77.0	81.8	82.1	73.9	79.5	81.0	79.9	84.3	83.2
<b>Norway</b>	78.8	81.2	82.2	76.0	79.0	80.1	81.5	83.3	84.2
<b>Switzerland</b>	80.0	82.7	83.3	77.0	80.3	81.1	82.8	84.9	85.4
<b>Montenegro</b>	:	76.1	76.5	:	73.6	74.1	:	78.5	78.9
<b>FYR of Macedonia</b>	73.0	75.0	75.5	70.8	72.9	73.5	75.2	77.2	77.5
<b>Albania</b>	:	:	78.3	:	:	76.4	:	:	80.3
<b>Serbia</b>	71.6	74.4	75.4	68.9	71.8	72.8	74.4	77.0	78.0
<b>Turkey</b>	:	76.8	78.1	:	74.2	75.4	:	79.4	80.9

(<sup>1</sup>) 2010 and 2014: break in series.

(<sup>2</sup>) 2004: break in series.

(<sup>3</sup>) 2000 and 2010: break in series.

Source: Eurostat (online data code: [demo\\_mlexpec](#))



## 1.6 Migration and migrant population

Migration is influenced by a combination of economic, political and social factors: either in a migrant's country of origin (push factors) or in the country of destination (pull factors). Historically, the relative economic prosperity and political stability of the EU are thought to have exerted a considerable pull effect on immigrants.

A total of 3.8 million people immigrated to one of the EU-28 Member States during 2014, while at least 2.8 million emigrants were reported to have left an EU Member State. These total figures do not represent the migration flows to/from the EU as a whole, since they also include flows between different EU Member States.

**Table 1.6: Immigration by citizenship, 2014**

	Total immigrants (thou-sands)	Nationals		Non-nationals							
				Total		Citizens of other EU Member States		Citizens of non-member countries		Stateless	
		(thou-sands)	(%)	(thou-sands)	(%)	(thou-sands)	(%)	(thou-sands)	(%)	(thou-sands)	(%)
Belgium	124.8	17.6	14.1	105.9	84.9	64.6	51.8	41.3	33.1	0.0	0.0
Bulgaria	26.6	9.5	35.7	17.0	64.0	1.4	5.4	15.3	57.4	0.3	1.2
Czech Republic	29.9	5.8	19.3	24.1	80.7	14.8	49.3	9.4	31.4	0.0	0.0
Denmark	68.4	19.3	28.3	49.0	71.7	23.8	34.9	24.5	35.8	0.7	1.0
Germany	884.9	88.4	10.0	790.2	89.3	415.9	47.0	372.4	42.1	1.9	0.2
Estonia	3.9	2.6	65.5	1.3	34.4	0.2	4.0	1.2	29.6	0.0	0.8
Ireland	67.4	12.4	18.4	55.0	81.6	26.2	38.8	28.7	42.6	0.1	0.1
Greece	59.0	29.5	50.0	29.5	50.0	16.0	27.1	13.5	22.9	0.0	0.0
Spain	305.5	41.0	13.4	264.5	86.6	100.0	32.7	164.4	53.8	0.1	0.0
France	339.9	126.2	37.1	213.7	62.9	83.5	24.6	130.2	38.3	0.0	0.0
Croatia	10.6	4.8	45.3	5.8	54.6	2.3	21.9	3.5	32.6	0.0	0.1
Italy	277.6	29.3	10.5	248.4	89.5	68.1	24.5	180.3	64.9	0.0	0.0
Cyprus	9.2	1.4	15.3	7.8	84.7	3.7	40.8	4.0	43.9	0.0	0.0
Latvia	10.4	5.9	56.6	4.4	42.9	0.9	8.9	3.5	33.9	0.0	0.1
Lithuania	24.3	19.5	80.4	4.8	19.6	0.7	2.7	4.1	16.8	0.0	0.1
Luxembourg	22.3	1.3	5.9	21.0	94.0	16.5	74.1	4.4	19.9	0.0	0.0
Hungary	54.6	28.6	52.4	26.0	47.6	10.5	19.3	15.5	28.3	0.0	0.0
Malta	8.9	1.8	20.5	7.1	79.5	4.4	49.6	2.7	29.9	0.0	0.0
Netherlands	145.3	37.4	25.8	107.8	74.2	58.4	40.2	47.8	32.9	1.6	1.1
Austria	116.3	9.2	7.9	106.9	92.0	67.0	57.6	39.4	33.9	0.5	0.4
Poland	222.3	127.8	57.5	94.3	42.4	27.2	12.3	67.0	30.1	0.1	0.0
Portugal	19.5	10.2	52.4	9.3	47.6	3.4	17.3	5.9	30.3	0.0	0.0
Romania	136.0	123.9	91.1	12.1	8.9	1.2	0.9	10.9	8.0	0.0	0.0
Slovenia	13.8	2.5	18.3	11.3	81.7	3.3	23.6	8.0	58.1	0.0	0.0
Slovakia	5.4	2.9	54.9	2.4	45.1	2.0	36.8	0.4	8.3	0.0	0.0
Finland	31.5	7.9	24.9	23.1	73.4	9.5	30.1	13.6	43.1	0.1	0.2
Sweden	127.0	20.9	16.4	105.6	83.2	28.1	22.1	70.7	55.7	6.8	5.3
United Kingdom	632.0	81.3	12.9	550.7	87.1	263.6	41.7	287.1	45.4	0.0	0.0
Iceland	5.4	1.9	35.8	3.4	64.2	2.9	53.2	0.6	10.3	0.0	0.8
Liechtenstein	0.6	0.2	26.7	0.5	73.3	0.2	39.8	0.2	33.5	0.0	0.0
Norway	66.9	6.9	10.3	60.0	89.6	35.1	52.5	24.3	36.3	0.6	0.8
Switzerland	156.3	26.2	16.7	130.1	83.2	94.4	60.4	35.7	22.9	0.0	0.0

Note: The values for the different categories of citizenship may not sum to the total due to rounding and the exclusion of the category 'unknown citizenship' from the table.

Source: Eurostat (online data code: *migr\_imm1ctz*)

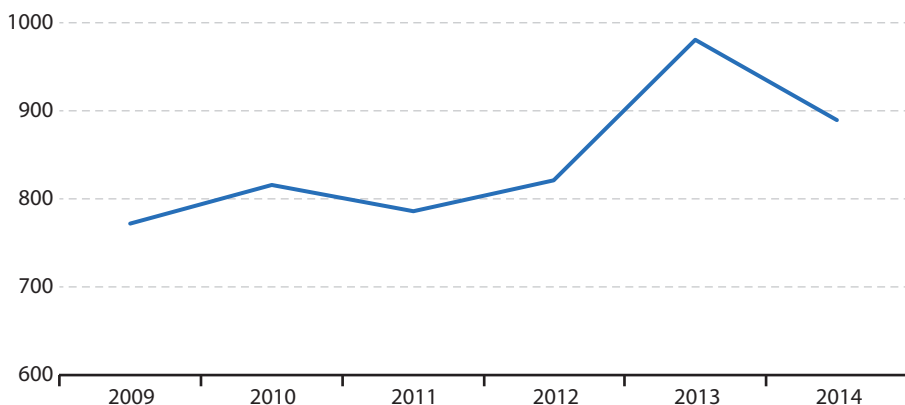


Among these 3.8 million immigrants during 2014, there were an estimated 1.6 million citizens of non-member countries, 1.3 million people with citizenship of a different EU Member State from the one to which they immigrated, around 870 thousand people who migrated to an EU Member State of which they had the citizenship (for example, returning nationals or nationals born abroad), and some 12.4 thousand stateless people.

In 2014, there were an estimated 1.9 million immigrants to the EU-28 from non-member countries. In addition, 1.8 million people previously residing in one EU Member State migrated to another Member State.

The number of people acquiring the citizenship of an EU Member State in 2014 was 889.1 thousand, corresponding to a 9% decrease with respect to 2013. This decline occurred after two consecutive years of increase.

**Figure 1.6: Number of persons having acquired the citizenship of an EU Member State, EU-28, 2009–14**  
(thousands)



Note: 2010–14: estimates. 2010–12: includes data for Romania for 2009.

Source: Eurostat (online data code: [migr\\_acq](#))



## 1.7 Asylum

Asylum is a form of international protection given by a state on its territory. It is granted to a person who is unable to seek protection in his/her country of citizenship and/or residence, in particular for fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion.

Having peaked in 1992 (672 thousand applications in the EU-15) when the EU Member States received many asylum applicants from former Yugoslavia and again in 2001 (424 thousand applications in the EU-27), the number of asylum applications within the EU-27 fell to just below 200 thousand by 2006.

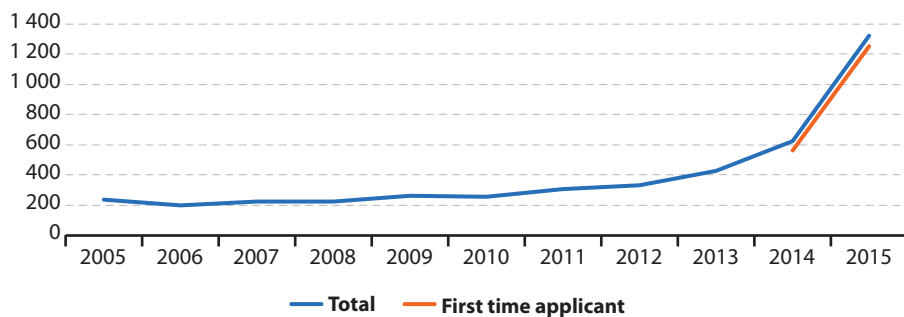
Focusing just on applications from citizens of non-member countries, there was a gradual increase in the number of asylum applications within the EU-27 and later the EU-28 through to 2012, after which the number of asylum seekers rose to 431 thousand in 2013, 627 thousand in

2014 and close to 1.3 million in 2015. The 2015 number of asylum applications within the EU-28 was almost double the number recorded within the EU-15 in 1992.

The number of first time asylum applicants in the EU-28 in 2015 was 66 thousand (about 5 %) less than the total number of applicants. The number of first time applicants more than doubled from 563 thousand in 2014 to almost 1.26 million in 2015. The main contributions to the increase were higher numbers of applicants from Syria, Afghanistan and Iraq and to a lesser extent from Albania, Kosovo (!) and Pakistan.

In 2015, the number of first time asylum applicants from Syria rose to 363 thousand in the EU-28, which was 29 % of the total. Afghan citizens accounted for 14 % of the total and Iraqis for 10 %, while Kosovans and Albanians accounted for 5 % and Pakistanis for 4 %.

**Figure 1.7: Asylum applications (non-EU) in the EU-28 Member States, 2005–15**  
(thousands)



Note: 2005–07: EU-27 and extra-EU-27. First time applicant: 2005–13 not available.

Source: Eurostat (online data codes: [migr\\_asyctz](#) and [migr\\_asyappctza](#))

(!) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo Declaration of Independence.

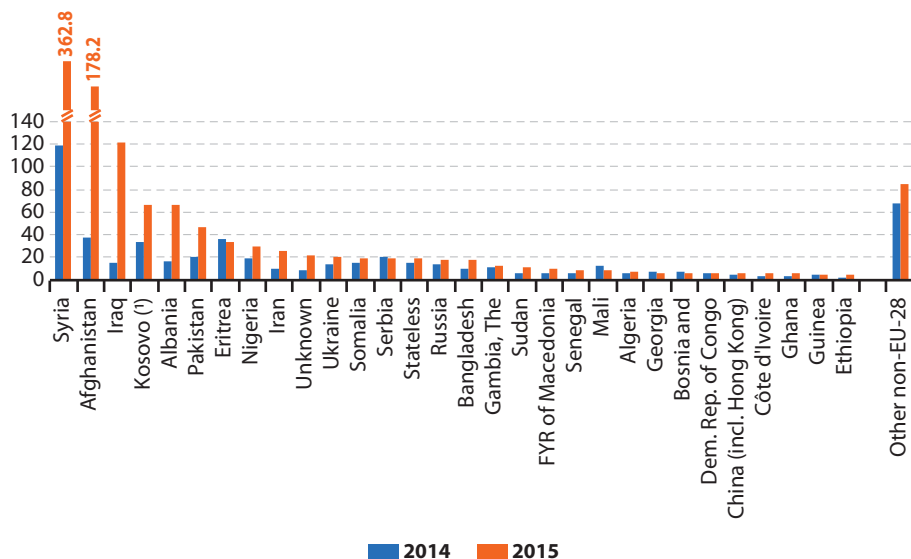
The biggest relative fall in the number of applicants, among the top countries, was recorded for Mali, as the number of Malian asylum seekers fell by more than one third between 2014 and 2015 (?).

The number of first time asylum applicants in Germany increased from 173 thousand in 2014 to 442 thousand in 2015. Hungary, Sweden and Austria also reported very large increases (all in excess of 50 thousand more first time asylum applicants) between 2014 and 2015. In relative terms, the largest increases in the number of first time applicants were recorded in Finland (over nine times as high), Hungary (over four times) and Austria (over three times), while Belgium,

Spain, Germany, Luxembourg, Ireland and Sweden all reported that their number of first time asylum applicants more than doubled. By contrast, Romania, Croatia, Lithuania, Slovenia and Latvia reported fewer first time asylum applicants in 2015 than in 2014.

More than four in five (83 %) of the first time asylum seekers in the EU-28 in 2015 were less than 35 years old; those in the age range 18–34 years accounted for slightly more than half (53 %) of the total number of first time applicants, while nearly 3 in 10 (29 %) applicants were minors aged less than 18 years old.

**Figure 1.8: Countries of origin of (non-EU) asylum seekers in the EU-28 Member States, 2014 and 2015**  
(thousands of first time applicants)



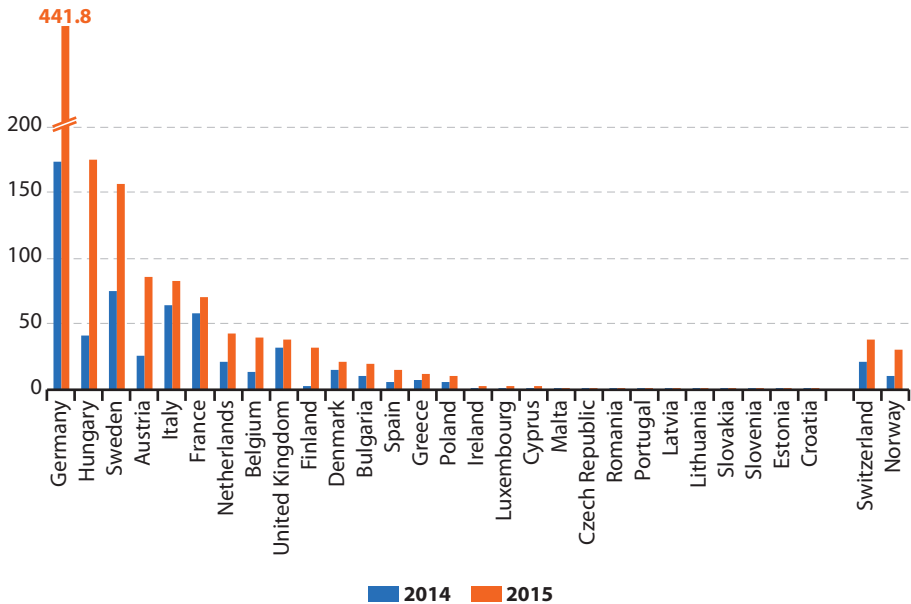
Note: Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data code: [migr\\_asyappctza](#))

(?) For the purpose of this analysis only the top 30 countries of citizenship in terms of the number of applicants for asylum were considered.



**Figure 1.9:** Number of (non-EU) asylum seekers in the EU and EFTA Member States, 2014 and 2015  
(thousands of first time applicants)



Source: Eurostat (online data code: migr\_asyappctza)

# 2

## Living conditions



## Introduction

The Europe 2020 strategy for smart, sustainable and inclusive growth put forward by the European Commission provides a growth strategy for the current decade. A European platform against poverty is one of the seven flagship initiatives of this strategy. Its goals are to:

- ensure economic, social and territorial cohesion;
- guarantee respect for the fundamental rights of people experiencing poverty and social exclusion, and enable them to live in dignity and take an active part in society;
- mobilise support to help people integrate into the communities where they live, get training and help them to find a job and have access to social benefits.

To measure progress in meeting the Europe 2020 goals, five headline targets to be met by 2020 have been agreed and translated into national targets in each EU Member State, reflecting different situations and circumstances. One of these targets is for there to be at least 20 million fewer people in or at-risk-of-poverty and social exclusion for the EU as a whole by 2020. The integrated economic and employment guidelines, first combined in 2008 and most recently specified in 2010, are assessed through the use of a joint assessment framework (JAF) within the context of the Europe 2020 strategy; guideline 10 concerns promoting social inclusion and combating poverty.

## 2.1 Social inclusion

As multi-dimensional concepts, poverty and social exclusion cannot easily be measured through statistics. As a result, both monetary and non-monetary indicators have been developed, such as the at-risk-of-poverty rate, the at-risk-of-poverty threshold, the severe material deprivation rate and the share of people living in households with very low work intensity. There is a range of other indicators that are equally relevant when analysing social inclusion,

for example: access to education and training, health, or housing.

In 2014, there were 122 million people in the EU-28, equivalent to 24.5 % of the entire population, who lived in households facing poverty or social exclusion. Compared with 2013, the number of people at-risk-of-poverty or social exclusion in 2014 had decreased by 564 thousand, equivalent to a 0.1 percentage point decrease in the share of the total population.



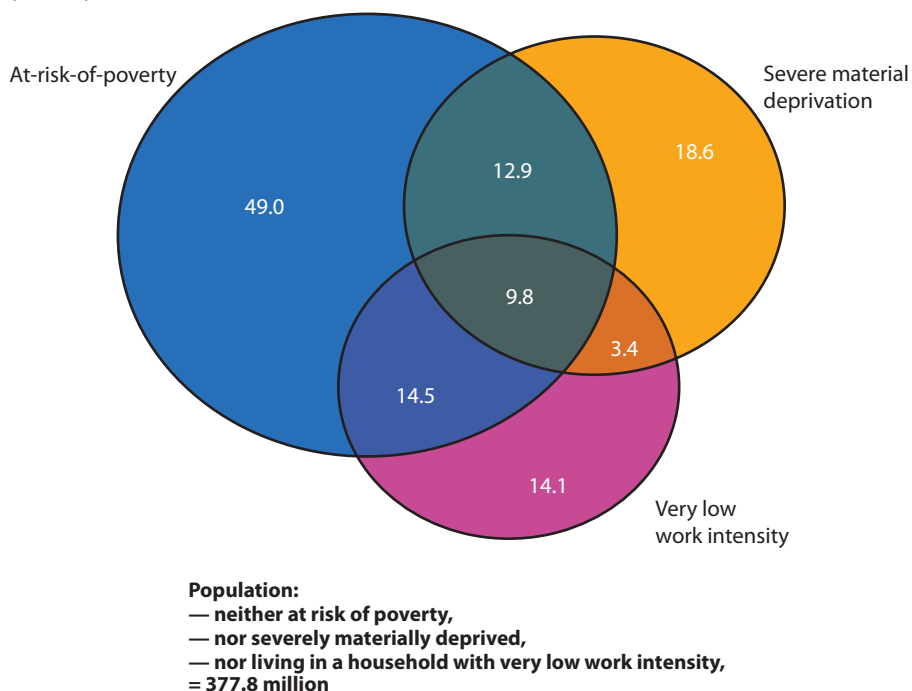


The results for the EU-28 — calculated as a weighted average of the national results — conceal considerable variations between EU Member States. In Romania (40.2 %) and Bulgaria (40.1 %), close to two fifths of the population were considered to be at-risk-of-poverty or social exclusion in 2014, while in Greece (36.0 %) the proportion was more than one third of the population. Over a quarter of the population was considered to be at-risk-of-poverty or social exclusion in 10 other EU Member States in 2014, namely Latvia, Hungary,

Croatia, Spain, Italy, Portugal, Ireland, Cyprus, Lithuania and Estonia.

The EU Member States with the lowest proportions of their populations considered to be at-risk-of-poverty or social exclusion in 2014 were the Czech Republic (14.8 %), the Netherlands (16.5 %), Sweden (16.9 %) and Finland (17.3 %); Iceland (11.2 %), Norway (13.5 %) and Switzerland (16.3 %, 2013 data) also reported relatively low shares of their respective populations as being at-risk-of-poverty or social exclusion.

**Figure 2.1: Number of persons at-risk-of-poverty or social exclusion analysed by type of risks, EU-28, 2014**  
(million)



Note: The sum of the data for the seven groups at-risk-of-poverty or social exclusion differs slightly from the total (published elsewhere) due to rounding. Estimates.

Source: Eurostat (online data code: [ilc\\_pees01](#))

**Table 2.1: Population at-risk-of-poverty or social exclusion, 2009–14**

	Proportion of the total population (%)			Number of persons (thousand)		
	2009 <sup>(1)</sup>	2013	2014	2009	2013	2014
<b>EU-28</b>	23.3	24.6	24.5	:	122 884	122 320
<b>EA-18</b>	21.6	23.1	23.5	70 323	75 745	77 019
<b>Belgium</b>	20.2	20.8	21.2	2 145	2 286	2 339
<b>Bulgaria <sup>(2)</sup></b>	46.2	48.0	40.1	3 511	3 493	2 909
<b>Czech Republic</b>	14.0	14.6	14.8	1 448	1 508	1 532
<b>Denmark <sup>(3)</sup></b>	17.6	18.3	17.9	962	1 025	1 007
<b>Germany</b>	20.0	20.3	20.6	16 217	16 212	16 508
<b>Estonia <sup>(2)</sup></b>	23.4	23.5	26.0	312	313	338
<b>Ireland</b>	25.7	29.5	27.4	1 150	1 358	1 265
<b>Greece</b>	27.6	35.7	36.0	3 007	3 904	3 885
<b>Spain</b>	24.7	27.3	29.2	11 336	12 630	13 402
<b>France</b>	18.5	18.1	18.5	11 200	11 245	11 540
<b>Croatia</b>	:	29.9	29.3	:	1 271	1 243
<b>Italy</b>	24.9	28.5	28.3	14 799	17 229	17 146
<b>Cyprus</b>	23.5	27.8	27.4	188	240	234
<b>Latvia</b>	37.9	35.1	32.7	808	702	645
<b>Lithuania</b>	29.6	30.8	27.3	943	917	804
<b>Luxembourg</b>	17.8	19.0	19.0	85	96	96
<b>Hungary</b>	29.6	34.8	31.1	2 924	3 388	3 035
<b>Malta</b>	20.3	24.0	23.8	82	99	99
<b>Netherlands</b>	15.1	15.9	16.5	2 483	2 648	2 751
<b>Austria</b>	19.1	18.8	19.2	1 577	1 572	1 609
<b>Poland</b>	27.8	25.8	24.7	10 454	9 748	9 337
<b>Portugal</b>	24.9	27.5	27.5	2 648	2 879	2 863
<b>Romania</b>	43.1	40.4	40.2	9 112	8 601	8 549
<b>Slovenia</b>	17.1	20.4	20.4	339	410	410
<b>Slovakia</b>	19.6	19.8	18.4	1 061	1 070	960
<b>Finland</b>	16.9	16.0	17.3	886	854	927
<b>Sweden</b>	15.9	16.4	16.9	1 459	1 602	1 636
<b>United Kingdom</b>	22.0	24.8	24.1	13 389	15 586	15 188
<b>Iceland</b>	11.6	13.0	11.2	36	40	35
<b>Norway</b>	15.2	14.1	13.5	724	714	682
<b>Switzerland</b>	17.9	16.3	:	1 338	1 271	:
<b>FYR of Macedonia</b>	:	48.1	43.2	:	993	894
<b>Serbia</b>	:	42.0	43.1	:	3 005	3 068
<b>Turkey</b>	63.9	:	:	45 051	:	:

<sup>(1)</sup> EU-28 data not available; EU-27 instead.

<sup>(2)</sup> 2014: break in series.

<sup>(3)</sup> 2013: break in series.

Source: Eurostat (online data code: [ilc\\_peps01](#))



## 2.2 Income distribution

The at-risk-of-poverty rate (after social transfers) in the EU-28 remained almost stable between 2011 and 2013, dropping from 16.9% to 16.7%. Between 2013 and 2014, the at-risk-of-poverty rate increased by 0.5 percentage points to reach 17.2%.

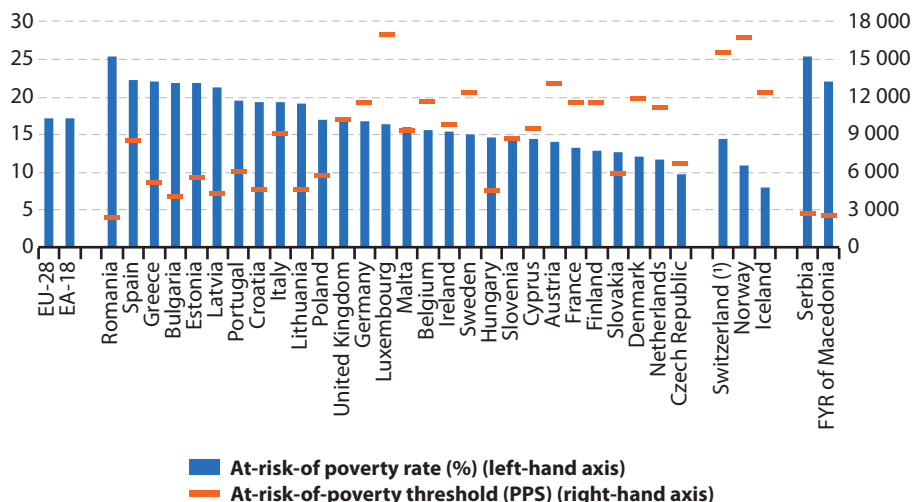
The at-risk-of-poverty threshold is set at 60% of national median equivalised disposable income. It is often expressed in purchasing power standards (PPS) in order to take account of the differences in the cost of living across countries. This threshold varied considerably among the

EU Member States in 2014 from PPS 2.4 thousand in Romania to PPS 13.0 thousand in Austria, with the threshold in Luxembourg (PPS 17.0 thousand) above this range.

Different groups in society are more or less vulnerable to monetary poverty.

The unemployed are a particularly vulnerable group: almost half (47.2%) of all unemployed persons in the EU-28 were at-risk-of-poverty in 2014, with by far the highest rate in Germany (67.4%).

**Figure 2.2: At-risk-of-poverty rate and threshold, 2014**



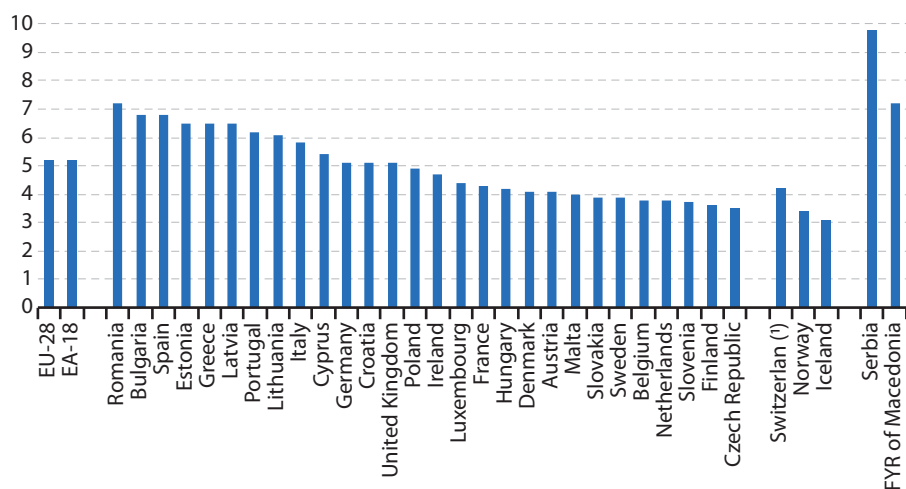
(\*) 2013.

Source: Eurostat (online data codes: [ilc\\_li01](#) and [ilc\\_li02](#))

Data on economic inequality become particularly important for estimating relative poverty, because the distribution of economic resources may have a direct bearing on the extent and depth of poverty. There were wide inequalities in the distribution of income in 2014: a population-weighted average of national figures for each of the individual EU Member States shows that the top 20% of the population (with the highest equivalised disposable income) received 5.2 times as much income as the bottom 20% (with the lowest equivalised disposable income).

The depth of poverty, which helps to quantify just how poor the poor are, can be measured by the relative median at-risk-of-poverty gap. The median income of persons at risk of poverty in the EU-28 was, on average, 24.6% below the poverty threshold in 2014; this threshold is set at 60% of the national median equivalised disposable income of all persons. The relative median at-risk-of-poverty gap was widest in Romania (35.2%) and the lowest was observed in Finland (13.9%).

**Figure 2.3: Inequality of income distribution, 2014**  
(income quintile share ratio)



(¹) 2013.

Source: Eurostat (online data codes: [ilc\\_di11](#))



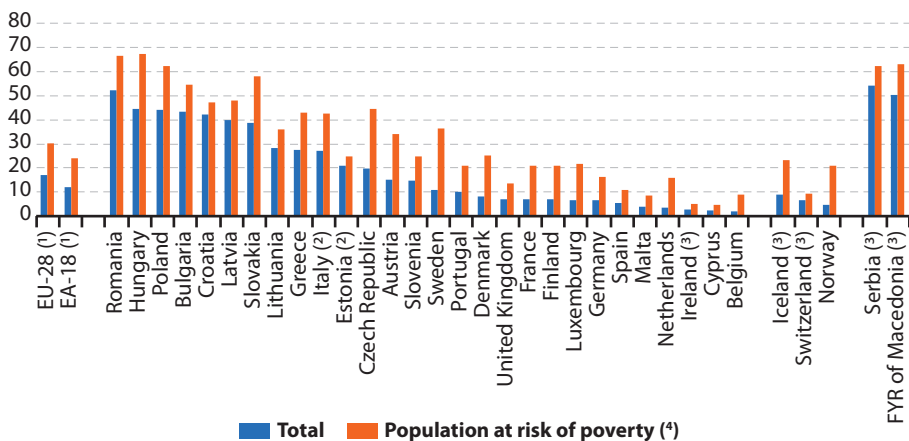
## 2.3 Housing

Decent housing, at an affordable price in a safe environment, is a fundamental need and right. Ensuring this need is met, which is likely to alleviate poverty and social exclusion, is still a significant challenge in a number of European countries.

In 2014, 4 out of every 10 persons in the EU-28 lived in flats, just over one quarter (25.6 %) in semi-detached houses and just over one third (33.7 %) in detached houses.

One of the key dimensions in assessing the quality of housing is the availability of sufficient space in a dwelling. The overcrowding rate describes the proportion of people living in an overcrowded dwelling, as defined by the number of rooms available to the household, the household's size, as well as its members' ages and their family situation. In 2014, 17.1 % of the EU-28 population lived in overcrowded dwellings.

**Figure 2.4: Overcrowding rate, 2014**  
(% of specified population)



<sup>(1)</sup> Estimates.

<sup>(2)</sup> Provisional data.

<sup>(3)</sup> 2013.

<sup>(4)</sup> Population below 60 % of median equivalised income.

Source: Eurostat (online data code: [ilc\\_lvho05a](#))

In 2014, an 11.4 % share of the EU-28 population lived in households that spent 40 % or more of their equivalised disposable income on housing.

The EU-28 average masks significant differences between Member States: at one extreme there were a number of countries where a relatively small proportion of the population lived in

households where housing costs exceeded 40 % of their disposable income, notably Malta (1.6 %) and Cyprus (4.0 %). At the other extreme, around just over two out of every five people (40.7 %) in Greece spent more than 40 % of their equivalised disposable income on housing.

**Table 2.2: Housing cost overburden rate by tenure status, 2014**  
(% of population)

	Total population	Owner occupied, with mortgage or loan	Owner occupied, no outstanding mortgage or housing loan	Tenant — rent at market price	Tenant — rent at reduced price or free
<b>EU-28</b>	11.4	7.4	6.8	27.1	12.7
<b>EA-18</b>	11.4	7.5	5.6	26.2	11.7
<b>Belgium</b>	10.4	3.1	1.8	38.1	13.3
<b>Bulgaria</b>	12.9	9.3	11.3	40.8	17.9
<b>Czech Republic</b>	10.5	8.3	6.2	29.9	7.0
<b>Denmark <sup>(1)</sup></b>	15.6	5.2	7.1	32.9	:
<b>Germany</b>	15.9	11.3	9.6	23.1	16.6
<b>Estonia <sup>(2)</sup></b>	7.2	9.2	4.8	25.6	10.4
<b>Ireland <sup>(2)</sup></b>	4.9	1.4	1.7	17.8	6.8
<b>Greece</b>	40.7	29.2	37.6	55.8	47.5
<b>Spain</b>	10.9	9.0	2.8	47.5	10.8
<b>France</b>	5.1	1.1	0.7	15.8	9.3
<b>Croatia</b>	7.5	21.0	6.2	41.3	7.7
<b>Italy</b>	8.4	5.6	2.9	31.9	10.2
<b>Cyprus</b>	4.0	6.0	0.7	19.3	1.3
<b>Latvia</b>	9.6	15.2	8.2	15.1	9.7
<b>Lithuania</b>	7.1	6.8	6.4	37.3	9.2
<b>Luxembourg</b>	6.8	0.7	0.9	26.3	8.2
<b>Hungary</b>	11.4	26.0	5.8	40.1	15.9
<b>Malta</b>	1.6	2.8	0.6	26.6	0.7
<b>Netherlands</b>	15.4	11.8	3.9	24.8	14.0
<b>Austria</b>	6.6	1.8	2.6	15.6	6.8
<b>Poland</b>	9.6	18.0	8.0	25.5	10.9
<b>Portugal</b>	9.2	7.4	3.8	33.8	6.7
<b>Romania</b>	14.9	31.2	14.4	31.6	37.3
<b>Slovenia</b>	6.4	9.7	3.6	27.4	8.2
<b>Slovakia</b>	9.0	26.2	6.1	14.9	6.5
<b>Finland</b>	5.1	2.3	2.6	16.8	9.6
<b>Sweden <sup>(1)</sup></b>	7.8	2.9	5.6	17.8	60.7
<b>United Kingdom</b>	12.1	6.3	4.3	33.2	15.7
<b>Iceland <sup>(2)</sup></b>	8.8	6.8	7.0	17.9	14.4
<b>Norway</b>	8.2	5.1	4.0	34.2	16.8
<b>Switzerland <sup>(2)</sup></b>	10.6	5.6	5.1	15.2	9.2
<b>FYR of Macedonia <sup>(2)</sup></b>	17.6	10.3	17.1	62.4	20.2
<b>Serbia <sup>(2)</sup></b>	28.0	33.4	25.2	62.4	33.1

<sup>(1)</sup> Tenants — rent at reduced price or free: unreliable.

<sup>(2)</sup> 2013.

Source: Eurostat (online data codes: [ilc\\_lvho07c](#) and [ilc\\_lvho07a](#))



## 2.4 Social protection

Social protection encompasses interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs, provided that there is neither a simultaneous reciprocal nor an individual arrangement involved.

As the impact of the financial and economic crisis was felt across the EU-28, expenditure on social protection relative to gross domestic product (GDP) increased by 2.8 percentage points between 2008 and 2009. In 2010 and 2011, the value of social protection expenditure increased by 3.8% and 1.8% respectively. In 2012, there was a change in developments, as social protection expenditure increased by 3.3% compared with GDP growth of 1.9%, resulting in a 0.4 percentage point increase in the ratio of social protection expenditure to GDP, such that it stood

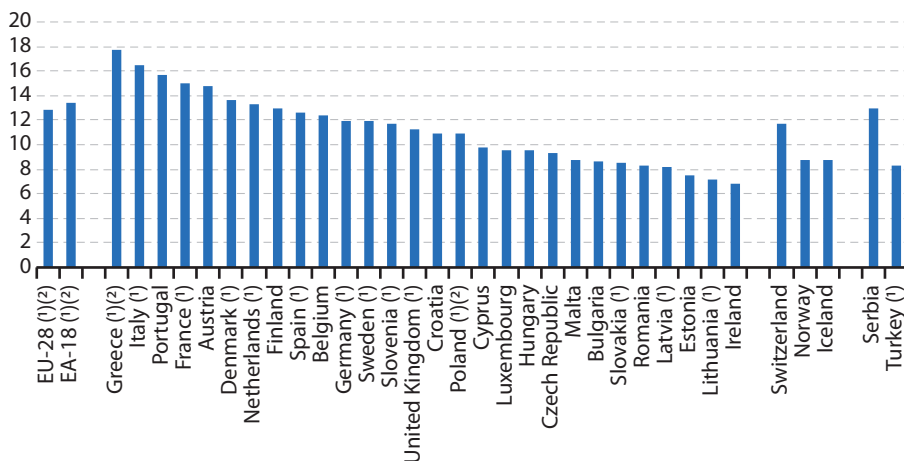
at 28.6% in the EU-28 and was 2.6 percentage points above its 2008 level (26.0%).

Among the EU Member States, the level of social protection expenditure in relation to GDP in 2013 was highest in France (33.7%) and Denmark (33.0%). By contrast, Latvia had the lowest share at 14.4%.

Expenditure on pensions across the EU-28 was equivalent to 12.8% of GDP in 2012. In 2013, among the EU Member States it ranged from a high of 16.5% in Italy to a low of 6.8% in Ireland, with the 2012 value for Greece (no data available for 2013) above this range at 17.7%.

Expenditure on care for the elderly covers care allowance, accommodation, and assistance in carrying out daily tasks. Across the EU-28, this expenditure accounted for 0.5% of GDP in 2012.

**Figure 2.5: Expenditure on pensions, 2013**  
(% of GDP)



(1) Provisional.

(2) 2012.

Source: Eurostat (online data code: [spr\\_exp\\_pens](#))

**Table 2.3: Expenditure on social protection, 2003–13**  
(% of GDP)

	2003	2008	2009	2010	2011	2012	2013
<b>EU-28</b>	:	26.0	28.8	28.6	28.2	28.6	:
<b>EA-18</b>	26.8	26.5	29.3	29.2	28.9	29.4	:
<b>Belgium</b>	27.0	27.7	30.0	29.4	29.7	29.9	30.2
<b>Bulgaria</b>	:	14.7	16.1	17.3	16.7	16.7	17.6
<b>Czech Republic</b>	18.6	17.9	20.1	20.1	20.1	20.5	20.2
<b>Denmark <sup>(1)</sup></b>	30.1	28.9	32.8	32.8	32.3	32.2	33.0
<b>Germany</b>	29.8	27.1	30.5	29.8	28.6	28.7	29.0
<b>Estonia</b>	12.6	14.7	18.8	17.6	15.6	15.0	14.8
<b>Ireland</b>	16.4	20.1	23.9	24.5	23.2	23.0	22.0
<b>Greece</b>	22.6	25.3	27.3	28.6	30.4	31.6	:
<b>Spain</b>	19.8	21.4	24.4	24.7	25.4	25.5	25.7
<b>France <sup>(2)</sup></b>	30.2	30.2	32.6	32.7	32.5	33.3	33.7
<b>Croatia</b>	:	18.6	20.7	20.8	20.4	20.9	21.7
<b>Italy</b>	24.8	26.7	28.8	28.8	28.5	29.3	29.8
<b>Cyprus</b>	16.8	17.7	19.3	20.1	20.8	21.0	22.3
<b>Latvia</b>	13.3	12.0	16.7	18.1	15.1	14.2	14.4
<b>Lithuania</b>	13.4	15.9	21.0	18.9	16.9	16.3	15.3
<b>Luxembourg</b>	22.1	21.2	23.8	22.9	22.3	23.0	23.1
<b>Hungary</b>	21.0	22.5	22.9	22.7	21.7	21.4	20.9
<b>Malta</b>	16.8	17.6	19.0	18.7	18.2	18.4	18.4
<b>Netherlands</b>	26.3	26.4	29.4	29.7	30.2	31.0	31.3
<b>Austria</b>	28.8	27.8	29.8	29.8	29.0	29.3	29.7
<b>Poland</b>	21.0	19.4	20.4	19.6	18.6	17.7	:
<b>Portugal</b>	22.8	23.4	25.8	25.8	25.8	26.4	27.6
<b>Romania</b>	13.0	14.1	16.9	17.3	16.4	15.4	14.8
<b>Slovenia</b>	23.2	21.0	23.7	24.4	24.5	24.9	25.0
<b>Slovakia</b>	18.0	15.7	18.5	18.3	17.9	18.1	18.4
<b>Finland</b>	25.5	25.1	29.0	29.2	28.8	30.1	31.2
<b>Sweden</b>	30.4	27.7	30.1	28.6	28.2	29.3	30.0
<b>United Kingdom</b>	25.4	26.4	29.1	28.8	28.7	28.8	28.1
<b>Iceland</b>	22.3	21.1	23.9	23.3	23.9	23.7	23.6
<b>Norway</b>	26.7	21.7	25.4	25.1	24.7	24.5	25.0
<b>Switzerland</b>	26.4	23.3	25.4	25.5	25.4	26.3	27.0
<b>Serbia</b>	:	:	:	23.9	22.7	24.0	23.3
<b>Turkey <sup>(3)</sup></b>	10.7	11.9	14.1	13.5	13.2	13.8	14.1

<sup>(1)</sup> 2007: break in series.

<sup>(2)</sup> 2006 and 2009: break in series.

<sup>(3)</sup> 2008 and 2012: break in series.

Source: Eurostat (online data code: [spr\\_exp\\_sum](#))





## 2.5 Crime

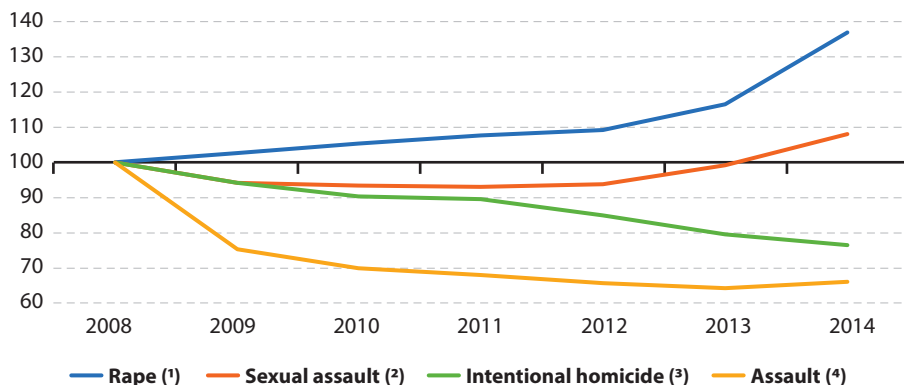
The most recent Eurostat figures on crime and criminal justice statistics show that the levels of police-recorded intentional homicide and assault steadily decreased across the EU-28 (data on assaults available for 29 jurisdictions and data on intentional homicide available for 28 jurisdictions out of the total of 30 jurisdictions).

The number of police-recorded offences of intentional homicide fell overall by 24 % between 2008 and 2014, while the number of rape offences increased by 37 % over the same period. For sexual assault (data available for 26 jurisdictions), the number of police-recorded

offences in 2014 in the EU-28 was 8 % higher than in 2008, although there was a decline between 2008 and 2011 followed by increases since 2012.

Between 2008 and 2014, the overall number of police-recorded offences of sexual violence increased by 16.6 % across the EU-28 (data available for 25 jurisdictions). After a fall in the number of police-recorded offences in 2009, the incidence of police-recorded sexual violence in the EU-28 rose slightly each year during the period 2010–12 (when it still remained below its level of 2008), but increased more rapidly in 2013 and 2014.

**Figure 2.6: Police-recorded offences by offence category, EU-28, 2008–14**  
(2008 = 100)



(1) Excluding Italy.

(2) Excluding Latvia, Luxembourg, Poland and Slovakia.

(3) Excluding the Netherlands and England and Wales (the United Kingdom).

(4) Excluding Poland.

Source: Eurostat (online data code: crim\_off\_cat)

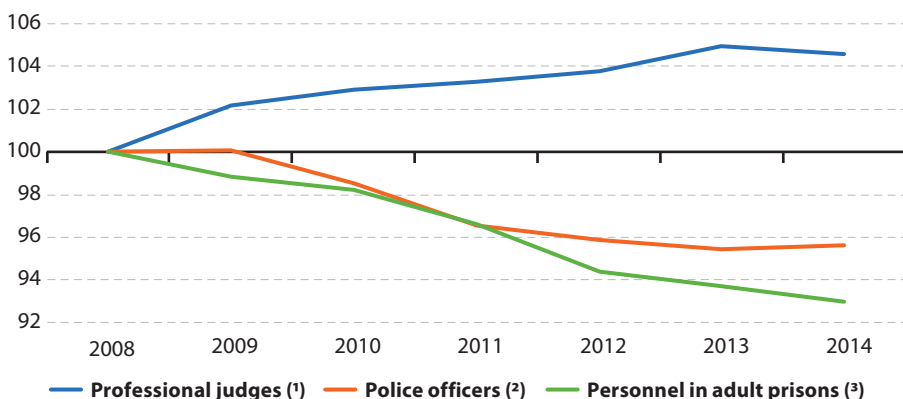
The overall number of police officers in the EU-28 (consistent data available for 23 jurisdictions) decreased from 2009 to 2013 and increased slightly in 2014. Across the EU-28 (20 jurisdictions), the number of professional judges increased each year during the period 2008–13 and fell only slightly in 2014: the overall increase in the number of judges between 2008 and 2014 was 4.6 %.

The total number of prisoners in the EU-28 (data available for 27 jurisdictions) rose gradually each

year between 2008 and 2011, stabilised in 2012, and then fell by 3.6 % in 2013 and by 3.5 % in 2014, such that the prison population in 2014 was 3.5 % below what it had been in 2008.

Men account for the vast majority of the prison population. Across the EU-28 (data available for 26 jurisdictions) adult male prisoners accounted for 95 % of the total adult prison population in 2014, a share that had remained relatively stable since 2008.

**Figure 2.7: Personnel in the criminal justice system, EU-28, 2008–14**  
(2008 = 100)



(¹) Excluding Belgium, Bulgaria, Germany, Ireland, Italy, Luxembourg, Malta, the Netherlands, England and Wales (the United Kingdom), and Northern Ireland (the United Kingdom).

(²) Excluding Germany, Estonia, Greece, Spain, Italy, Latvia and the Netherlands.

(³) Excluding Belgium, Estonia, Greece, France, Cyprus, Latvia, Luxembourg, the Netherlands and Sweden.

Source: Eurostat (online data code: [crim\\_just\\_job](#))

# 3

## Health





## Introduction

Health is an important priority for Europeans, who expect to have a long and healthy life, to be protected against illnesses and accidents, and to receive appropriate healthcare. Health issues cut across a range of topics — including consumer protection (food safety issues), workplace safety, environmental or social policies.

The competence for the organisation and delivery of health services and healthcare is largely held by the EU Member States. The EU has a mandate to complement national action on health. This consists mainly of: protecting people from health threats and disease, promoting healthy lifestyles and helping national authorities in the EU cooperate on health issues.

Population ageing will continue to be a challenge for the EU's health sector in the coming decades.

The demand for healthcare is expected to increase dramatically as a result of an ageing population and at the same time the proportion of the people in work will probably stagnate or in some cases decline. As a result, there may be staff shortages in certain medical specialisations or geographic areas. In 2014, about one third of all doctors in the EU were aged 55 or over.

The EU gathers statistical information in order to assess health issues, effectively design policies and target future actions. This statistical information needs to be based on a set of common EU health indicators, for which there is Europe-wide agreement regarding definitions, collection and use; examples include the European core health indicators (ECHI) and sustainable development indicators.

## 3.1 Healthy life years

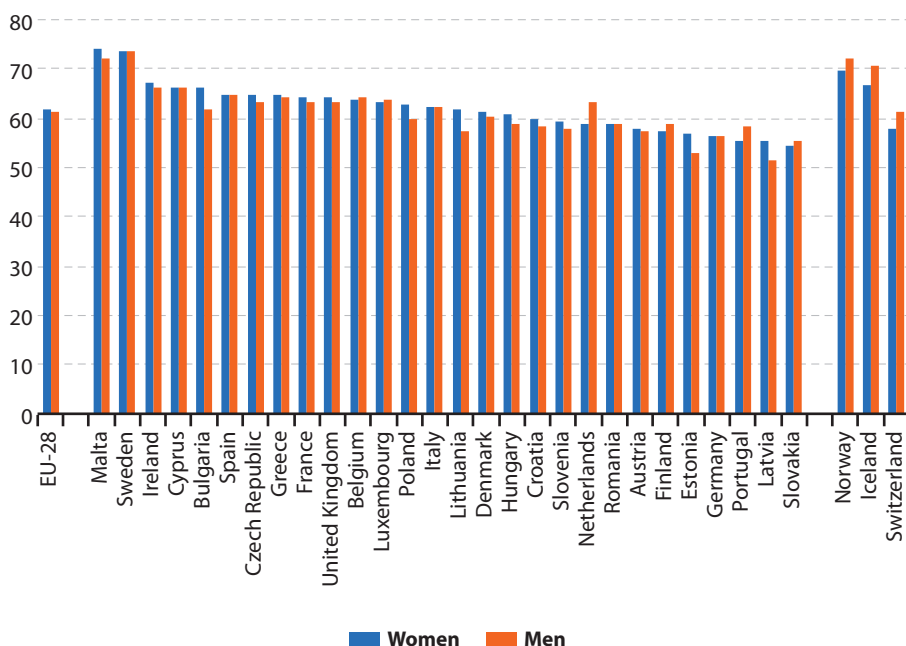
Whether extra years of life gained through increased longevity are spent in good or bad health is a crucial question. Since life expectancy at birth is not able to fully answer this question, indicators of health expectancies, such as healthy life years (also called disability-free life expectancy) have been developed. These focus on the quality of life spent in a healthy state, rather than the quantity of life — as measured by life expectancy. Healthy life years are an important measure of the relative health of populations in the EU.

In 2014, the number of healthy life years at birth was estimated at 61.4 years for men and 61.8 years for women in the EU-28; this represented approximately 79 % and 74 % of total life expectancy for men and women.

Life expectancy for women in the EU-28 was, on average, 5.5 years longer than that for men in 2014. However, most of these additional years tend to be lived with activity limitations. Indeed, the gender gap was considerably smaller in terms of healthy life years than it was for overall life expectancy — at just 0.4 years difference in favour of women in 2014. Men therefore tend to spend a greater proportion of their somewhat shorter lives free from activity limitations. The expected number of healthy life years at birth was higher for women than for men in 18 of the EU Member States, with the difference close to 4.0 years in Bulgaria and the Baltic Member States.



**Figure 3.1: Healthy life years at birth, by sex, 2014**  
(years)



Source: Eurostat (online data code: hlth\_hlye)

An analysis comparing healthy life years between the sexes at the age of 65 in 2014 shows that there were 12 EU Member States where men could expect more healthy life years than women; this was most notably the case in Cyprus

and Portugal where men aged 65 could expect to live at least one year longer free from disability than women. By contrast, women could expect to live at least one year longer free from disability than men in Estonia, Sweden and Denmark.

**Table 3.1:** Healthy life years at age 65, by sex, 2014  
(years)

	Women	Men	Difference
<b>EU-28</b>	8.6	8.6	0.0
<b>Belgium</b>	11.0	11.0	0.0
<b>Bulgaria</b>	9.6	8.7	0.9
<b>Czech Republic</b>	9.3	8.5	0.8
<b>Denmark</b>	12.8	11.0	1.8
<b>Germany</b>	6.7	6.8	-0.1
<b>Estonia</b>	6.0	4.9	1.1
<b>Ireland</b>	12.3	11.4	0.9
<b>Greece</b>	7.1	7.7	-0.6
<b>Spain</b>	9.4	10.1	-0.7
<b>France</b>	10.7	10.4	0.3
<b>Croatia</b>	5.8	6.0	-0.2
<b>Italy</b>	7.3	7.8	-0.5
<b>Cyprus</b>	8.8	10.4	-1.6
<b>Latvia</b>	4.6	4.0	0.6
<b>Lithuania</b>	6.1	6.1	0.0
<b>Luxembourg</b>	10.8	11.3	-0.5
<b>Hungary</b>	6.1	6.0	0.1
<b>Malta</b>	13.7	13.3	0.4
<b>Netherlands</b>	10.2	10.7	-0.5
<b>Austria</b>	7.7	8.4	-0.7
<b>Poland</b>	8.1	7.5	0.6
<b>Portugal</b>	5.6	6.9	-1.3
<b>Romania</b>	5.7	5.9	-0.2
<b>Slovenia</b>	8.6	7.8	0.8
<b>Slovakia</b>	3.6	4.3	-0.7
<b>Finland</b>	9.3	8.8	0.5
<b>Sweden</b>	16.7	15.2	1.5
<b>United Kingdom</b>	10.6	9.7	0.9
<b>Iceland</b>	15.1	15.4	-0.3
<b>Norway</b>	15.9	15.3	0.6
<b>Switzerland</b>	9.6	10.6	-1.0

Source: Eurostat (online data code: [hlth\\_hlye](#))



## 3.2 Causes of death

By relating all deaths in the population to an underlying cause of death, the risks associated with death from a range of specific diseases and other causes can be assessed; these figures can be further analysed by age, sex, country where the death occurred / residency of the deceased, and region (NUTS level 2), using standardised death rates.

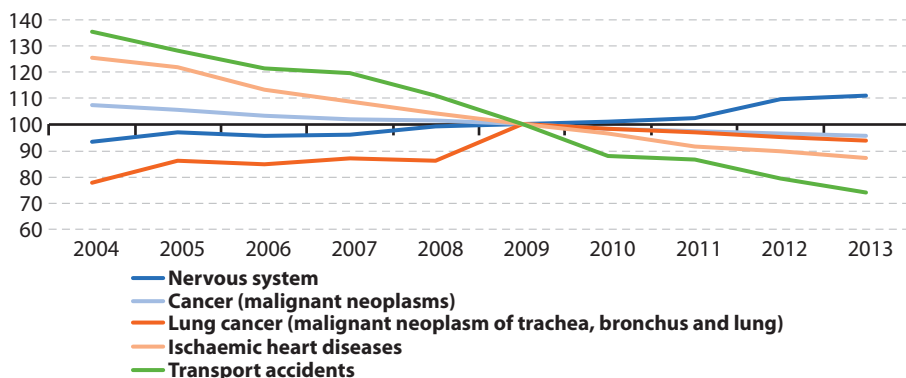
Between 2004 and 2013, there was an 11.0% reduction in EU-28 standardised death rates relating to cancer for men and a 5.9% reduction for women. Larger declines were recorded in relation to deaths from ischaemic heart disease, where death rates fell by 30.6% for men and 33.4% for women, while even greater reductions were recorded for deaths from transport accidents where rates fell by 45.3% for men and 47.0% for women.

Diseases of the circulatory system include those related to high blood pressure, cholesterol, diabetes and smoking; the most common causes of death from diseases of the circulatory system are ischaemic heart diseases and cerebrovascular diseases. Ischaemic heart diseases accounted for 132 deaths per 100 000 inhabitants across the EU-28 in 2013.

Although suicide is not a major cause of death and the data for some EU Member States are likely to be under-reported, it is often considered as an important indicator of issues that need to be addressed or considered by society. On average, there were 11.7 deaths per 100 000 inhabitants resulting from suicide in the EU-28 in 2013.

**Figure 3.2: Causes of death — standardised death rate per 100 000 inhabitants, males, EU-28, 2004–13**

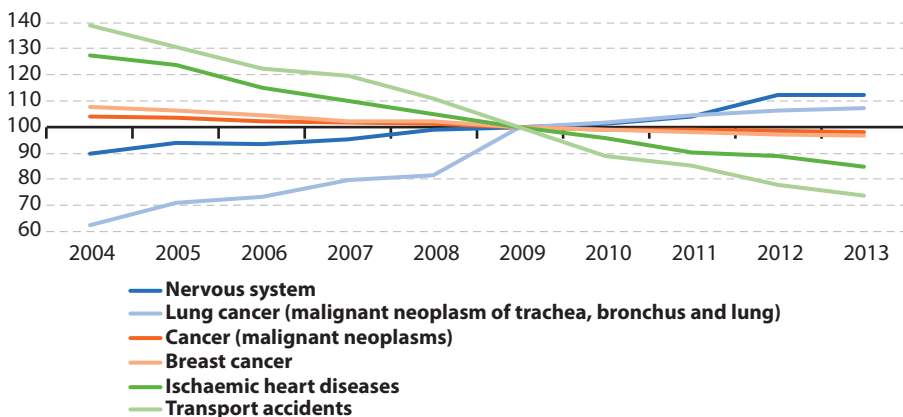
(2009 = 100)



Note: 2004, 2005 and 2010: provisional. 2011–13: for the age standardisation, among older people, the age group aged 85 and over was used rather than separate age groups for 85–89, 90–94 and 95 and over.

Source: Eurostat (online data codes: [hlth\\_cd\\_asdr](#) and [hlth\\_cd\\_asdr2](#))

**Figure 3.3: Causes of death — standardised death rate per 100 000 inhabitants, females, EU-28, 2004–13**  
(2009 = 100)



Note: 2004, 2005 and 2010: provisional. 2011–13: for the age standardisation, among older people, the age group aged 85 and over was used rather than separate age groups for 85–89, 90–94 and 95 and over.

Source: Eurostat (online data codes: [hlth\\_cd\\_asdr](#) and [hlth\\_cd\\_asdr2](#))

### 3.3 Healthcare provision

An individual's state of health and that of the population in general is influenced by genetic and environmental factors, cultural and socioeconomic conditions, as well as the healthcare services that are available to prevent and to treat illness and disease.

Non-monetary statistics may be used to evaluate how a country's healthcare system responds to the challenge of universal access to good healthcare, through measuring human and technical resources, the allocation of these resources and the demand for healthcare services by patients. This chapter presents statistics on healthcare professionals, hospital beds and hospital discharges of in-patients and day care patients.

In 2013, there were approximately 1.8 million physicians in the EU-28, an increase of 253 thousand compared with 10 years earlier. One of the key indicators for measuring healthcare personnel is the total number of physicians, expressed per 100 000 inhabitants. In 2014, Greece recorded the highest ratio among the EU Member States, at 632 per 100 000 inhabitants (data for licensed physicians). Austria (505), Portugal (443; licensed physicians), Lithuania (431), Sweden (412; 2013 data) and Germany (411) had the next highest ratios and were the only other Member States to record in excess of 400 physicians per 100 000 inhabitants. By contrast, there were 231 physicians per 100 000 inhabitants in Poland.

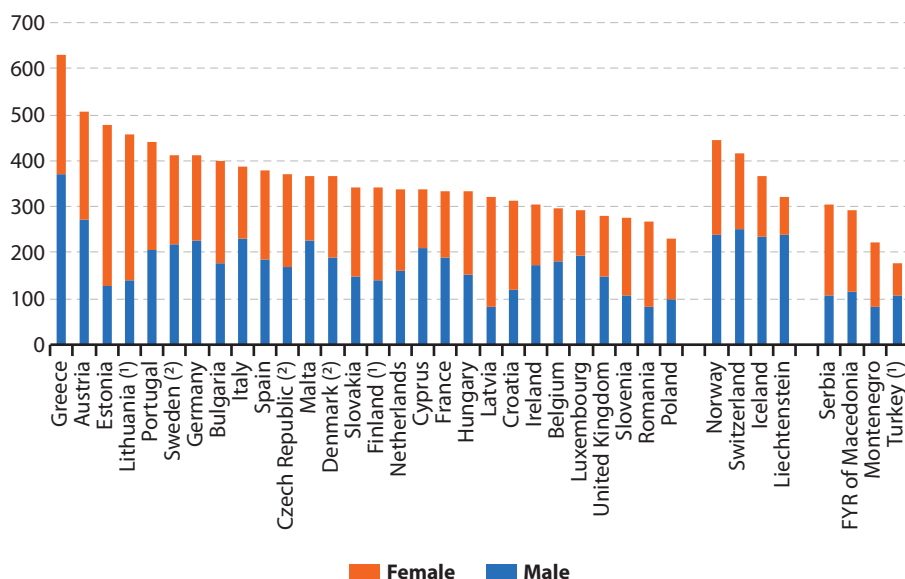




There were over 340 thousand dentists in the EU-28, over 440 thousand pharmacists and nearly 540 thousand physiotherapists. On the basis of a comparison in relation to population numbers, among the EU Member States Greece recorded the highest number of dentists, at 126 per 100 000 inhabitants (data for licensed dentists).

This was considerably higher than in any of the other EU Member States, as Cyprus and Bulgaria (both 98) had the next highest ratios. By contrast, there were fewer than 50 dentists per 100 000 inhabitants in Slovakia (49; professionally active dentists), Malta (37) and Poland (34).

**Figure 3.4: Number of physicians, by sex, 2014**  
(per 100 000 inhabitants)

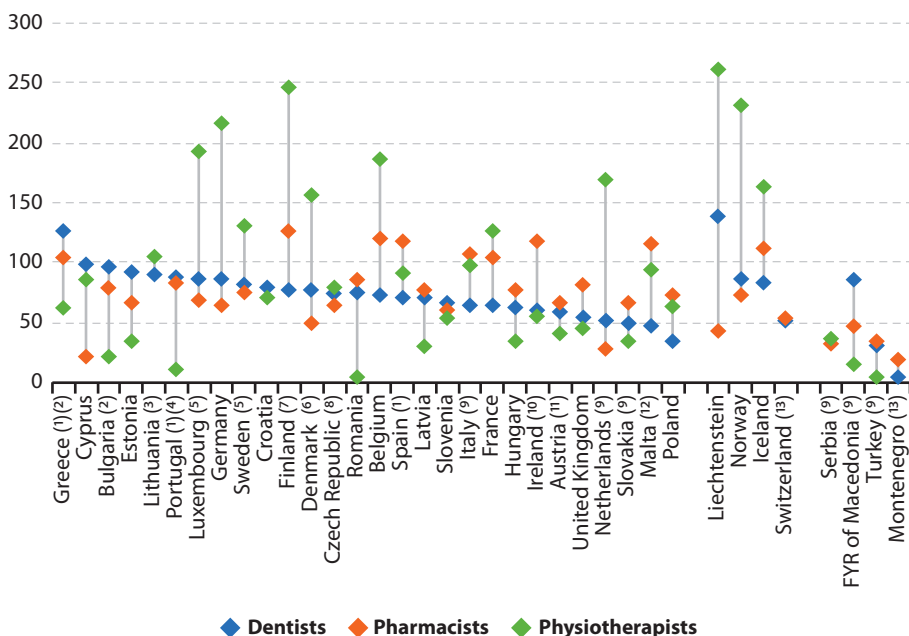


(1) Estimates.

(2) 2013.

Source: Eurostat (online data codes: [hlth\\_rs\\_phys](#) and [demo\\_pjan](#))

**Figure 3.5:** Number of dentists, pharmacists and physiotherapists, 2014  
(per 100 000 inhabitants)



Note: Ranked on dentists.

(1) Dentists: licensed to practise.

(2) Pharmacists: professionally active.

(3) Pharmacists: licensed to practise.

(4) Physiotherapists: estimate.

(5) Excluding stomatologists and maxillofacial surgeons.

(6) 2013.

(7) Dentists and pharmacists: 2012.

(8) Estimates.

(9) Dentists and pharmacists: professionally active.

(10) Dentists and pharmacists: licensed to practise.

(11) Physiotherapists: the self-employed and those employed by institutions other than hospitals are excluded.

(12) Pharmacists: estimate.

(13) Physiotherapists: not available.

Source: Eurostat (online data code: [hlth\\_rs\\_prs1](#))



### 3.4 Healthcare expenditure

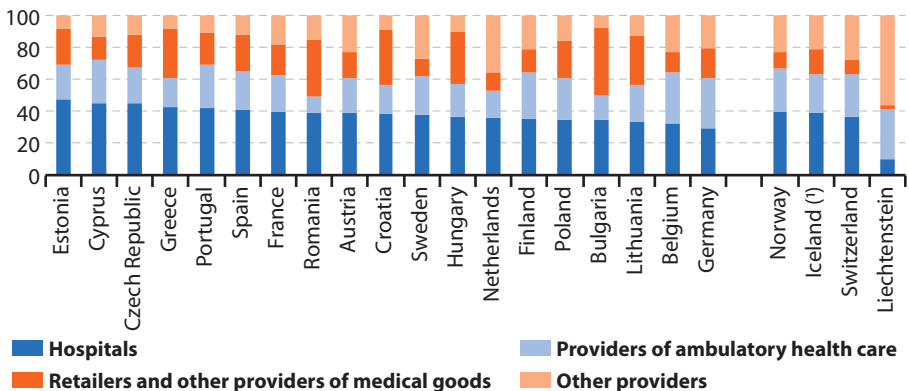
Healthcare systems are organised and financed in different ways across the EU Member States, but most Europeans would agree that universal access to quality healthcare, at an affordable cost to both individuals and society at large, is a basic need. Moreover, this is one of the common values and principles in EU health systems.

The level of current healthcare expenditure in Germany was EUR 309 billion in 2013, equivalent to 10.9 % of GDP. In France, current healthcare expenditure (EUR 231 billion) was also equivalent to 10.9 % of GDP, while the Netherlands (11.0 %) and Sweden (11.1 %) were the only EU Member States for which data are available to report higher ratios; note that current healthcare expenditure in Switzerland was equivalent to 11.2 % of GDP. By contrast, current healthcare expenditure accounted for less than 6.5 % of GDP in Poland, Lithuania and Estonia, with Romania recording the lowest ratio (5.2 %).

Hospitals generally accounted for the highest proportion of current healthcare expenditure in 2013, ranging from 29.5 % of the total in Germany to 47.6 % in Estonia. Germany and Bulgaria were the only EU Member States, among those for which data are available, to report that hospitals did not have the highest share of healthcare expenditure, as ambulatory health care providers accounted for 31.1 % of total healthcare expenditure in Germany, while retailers and other providers of medical goods accounted for 42.4 % of total healthcare expenditure in Bulgaria.

The second most important category was generally that of ambulatory health care providers, their share of healthcare expenditure ranging from 10.4 % in Romania to more than 30.0 % in Germany and Belgium; ambulatory health care providers in Liechtenstein accounted for 31.7 % of total healthcare expenditure.

**Figure 3.6: Healthcare expenditure by provider, 2013**  
(% of current healthcare expenditure)



Note: Denmark, Ireland, Italy, Latvia, Luxembourg, Malta, Slovenia, Slovakia and the United Kingdom: not available.

(\*) Definitions differ.

Source: Eurostat (online data code: [hlth\\_sha11\\_hp](#))

**Table 3.2: Current healthcare expenditure, 2013**

	Million EUR	EUR per inhabitant	PPS per inhabitant	% of GDP
<b>Belgium</b>	40 907	3 658	3 263	10.4
<b>Bulgaria</b>	3 298	454	1 034	7.9
<b>Czech Republic</b>	10 895	1 036	1 593	6.9
<b>Denmark</b>	:	:	:	:
<b>Germany</b>	308 526	3 826	3 739	10.9
<b>Estonia</b>	1 136	862	1 222	6.0
<b>Ireland</b>	:	:	:	:
<b>Greece</b>	15 777	1 439	1 710	8.8
<b>Spain</b>	92 700	1 988	2 110	9.0
<b>France</b>	231 060	3 515	3 262	10.9
<b>Croatia</b>	3 171	745	1 177	7.3
<b>Italy</b>	:	:	:	:
<b>Cyprus</b>	1 244	1 443	1 529	6.9
<b>Latvia</b>	:	:	:	:
<b>Lithuania</b>	2 147	726	1 253	6.1
<b>Luxembourg</b>	:	:	:	:
<b>Hungary</b>	7 408	749	1 369	7.4
<b>Malta</b>	:	:	:	:
<b>Netherlands</b>	71 453	4 252	3 731	11.0
<b>Austria</b>	32 729	3 860	3 521	10.1
<b>Poland</b>	25 262	664	1 264	6.4
<b>Portugal</b>	15 477	1 480	1 844	9.1
<b>Romania</b>	7 431	372	767	5.2
<b>Slovenia</b>	:	:	:	:
<b>Slovakia</b>	:	:	:	:
<b>Finland</b>	19 319	3 552	2 854	9.5
<b>Sweden</b>	48 375	5 039	3 540	11.1
<b>United Kingdom</b>	202 721	3 161	2 736	9.9
<b>Iceland (!)</b>	1 013	3 130	2 789	8.8
<b>Liechtenstein</b>	287	7 762	:	:
<b>Norway</b>	35 130	6 916	4 134	8.9
<b>Switzerland</b>	57 651	7 127	4 573	11.2

(!) Definition differs.

Source: Eurostat (online data code: [hlth\\_sha11\\_hf](#))



## 3.5 Accidents at work

This chapter presents main statistical indicators concerning non-fatal and fatal accidents at work in the EU collected within the framework of the European statistics on accidents at work (ESAW) administrative data collection.

An accident at work is defined in ESAW methodology as a discrete occurrence during the course of work which leads to physical or mental harm. Fatal accidents at work are those that lead to the death of the victim within one year. Non-fatal accidents at work collected within ESAW are those that imply at least four full calendar days of absence from work (they are sometimes also called 'serious accidents at work').

In 2013, there were just over 3.1 million non-fatal accidents that resulted in at least four calendar days of absence from work and 3 674 fatal accidents in the EU-28, a ratio of approximately 850 non-fatal accidents for every fatal one. There was a slight reduction in the number of accidents at work in the EU-28 between 2012 and 2013, with 38 thousand fewer non-fatal accidents and 244 fewer fatal accidents. Men were considerably more likely than women to have an accident at work. In the EU-28, more than two out of every three (69.8%) non-fatal accidents at work involved men.

It should be noted that fatal accidents are relatively rare events. Because of this, incidence rates for fatal accidents can vary greatly from one year to the next, in particular in some of the smaller EU Member States.

The likelihood of having an accident is related to the economic activity in which a person works and the relative importance of different activities varies between countries. To account for this, standardised incidence rates are calculated. These assume that the relative sizes of economic activities within each national economy are the same as within the EU as a whole.

Across the EU-28 there were, on average, 2.3 fatal accidents per 100 000 persons employed in 2013 while there were 1 696 non-fatal accidents per 100 000 persons employed.

Within the EU-28, the construction, manufacturing, transportation and storage, and agriculture, forestry and fishing sectors together accounted for almost two thirds (65.7%) of all fatal accidents at work and just under half (47.0%) of all non-fatal accidents at work in 2013. More than one in five (21.4%) fatal accidents at work in the EU-28 in 2013 took place within the construction sector, while the manufacturing sector had the next highest share (16.6%).

**Table 3.3: Number of non-fatal and fatal accidents at work, 2013**  
(persons)

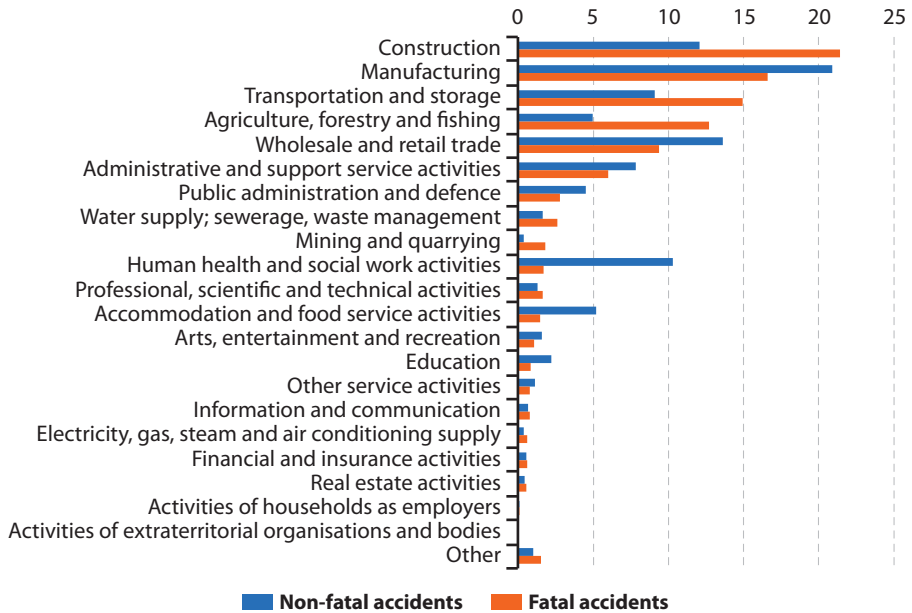
	Accidents at work involving at least four calendar days of absence from work			Fatal accidents at work
	Total	Male	Female	Total
<b>EU-28</b>	3 127 546	2 183 802	943 412	3 674
<b>Belgium</b>	56 405	41 444	14 954	66
<b>Bulgaria</b>	2 164	1 540	624	87
<b>Czech Republic</b>	44 070	30 838	13 232	130
<b>Denmark</b>	55 931	33 506	22 235	39
<b>Germany</b>	852 061	635 030	217 031	444
<b>Estonia</b>	6 175	3 801	2 373	20
<b>Ireland</b>	18 049	11 690	6 278	40
<b>Greece</b>	9 676	7 424	2 252	22
<b>Spain</b>	370 176	253 483	116 692	270
<b>France</b>	567 407	375 263	192 144	553
<b>Croatia</b>	11 709	7 850	3 854	29
<b>Italy</b>	329 404	240 540	88 864	517
<b>Cyprus</b>	1 529	1 076	453	9
<b>Latvia</b>	1 707	1 113	594	31
<b>Lithuania</b>	3 043	1 955	1 088	58
<b>Luxembourg</b>	7 055	5 619	1 436	6
<b>Hungary</b>	18 899	12 414	6 486	55
<b>Malta</b>	2 601	2 164	437	4
<b>Netherlands</b>	152 214	101 189	51 025	42
<b>Austria</b>	64 646	51 275	13 371	143
<b>Poland</b>	77 339	50 976	26 363	277
<b>Portugal</b>	123 137	86 554	36 583	160
<b>Romania</b>	3 453	2 726	726	269
<b>Slovenia</b>	12 537	9 411	3 126	20
<b>Slovakia</b>	8 741	5 931	2 810	55
<b>Finland</b>	47 432	32 630	14 802	22
<b>Sweden</b>	36 188	21 058	15 130	35
<b>United Kingdom</b>	243 798	155 302	88 449	271
<b>Iceland</b>	1 787	1 182	605	0
<b>Norway</b>	22 807	12 945	9 862	48
<b>Switzerland</b>	86 039	68 060	17 979	77

Note: Non-fatal accidents reported in the framework of ESAW are accidents that imply at least four full calendar days of absence from work (serious accidents).

Source: Eurostat (online data codes: hsw\_n2\_01 and hsw\_n2\_02)



**Figure 3.7: Fatal and non-fatal accidents at work by economic activity, EU-28, 2013**  
(% of fatal and non-fatal accidents)



Source: Eurostat (online data codes: hsw\_n2\_01 and hsw\_n2\_02)

# 4

## Education and training





## Introduction

Education, vocational training and more generally lifelong learning play a vital role in both an economic and social context. The opportunities which the European Union (EU) offers its citizens for living, studying and working in other countries make a major contribution to cross-cultural understanding, personal development and the achievement of the EU's full economic potential. Each year, well over a million EU citizens of all ages benefit from EU-funded educational, vocational and citizenship-building programmes.

Political cooperation within the EU was strengthened through the education and training 2010 work programme which integrated previous actions in the fields of education and training. The follow-up to this programme, the strategic framework for European cooperation in education and training (known as ET 2020), was adopted by the Council in May 2009. It sets out four strategic objectives for education and training in the EU: making lifelong learning and mobility a reality; improving the quality and efficiency of education and training; promoting equality, social cohesion and active citizenship; and enhancing creativity and innovation (including entrepreneurship) at all levels of education and training. This strategy set a number of benchmarks to be achieved by 2020.

In 2014, recent progress was assessed and priorities reviewed: in November 2015 the Council adopted a set of six new priorities for the period 2016–20 based on a joint report (2015/C 417/04) from the European Commission and the Member States. The priority areas for further work towards 2020 are:

- relevant and high-quality knowledge, skills and competences developed throughout

lifelong learning, focusing on learning outcomes for employability, innovation, active citizenship and well-being;

- inclusive education, equality, equity, non-discrimination and the promotion of civic competences;
- open and innovative education and training, including by fully embracing the digital era;
- strong support for teachers, trainers, school leaders and other educational staff;
- transparency and recognition of skills and qualifications to facilitate learning and labour mobility;
- sustainable investment, quality and efficiency of education and training systems.

The measurement of progress requires a range of comparable statistics on enrolment in education and training, numbers of graduates and teachers, language learning, student and researcher mobility, educational expenditure, as well as data on educational attainment and adult learning. Education statistics cover a range of subjects, including: expenditure, personnel, participation rates, and attainment. The standards for international statistics on education are set by three international organisations:

- the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) institute for statistics (UIS);
- the Organisation for Economic Cooperation and Development (OECD);
- Eurostat, the statistical office of the European Union.



## 4.1 Early childhood and primary education

School helps young people acquire basic life skills and competences that are necessary for their personal development. The quality of a pupil's school experience affects not only their development, but also his or her place in society, level of educational attainment, and employment opportunities. The quality of education may be linked to teaching standards, which in turn are related to the demands placed upon teachers, the training they receive, the roles they are asked to fill and the resources that are made available for them to carry out their tasks.

In the EU-28 there were just over 15 million pupils in pre-primary education in 2013. The number of pupils in primary education was 1.9 times as high, at just over 28 million.

There were 1.2 million pre-primary school teachers in the EU-28 (excluding Denmark and Ireland) in 2013 and 2.0 million primary school teachers.

An indicator of the quality of schooling is the pupil–teacher ratio, which provides an indication of the average number of pupils there are for

each teacher. In 2013, pupil–teacher ratios were particularly low — which may generally be considered to be beneficial — in early childhood development, with ratios among the six EU Member States for which data are available ranging from 5.1 in Germany to 9.5 in Croatia. In all of these Member States the ratios for early childhood development were lower than for pre-primary education.

The pupil–teacher ratio for pre-primary education ranged among the EU Member States from 9.0 in Estonia (the ratio also covers early childhood development) to 16.6 in Cyprus, Romania and Portugal, with France (21.6) above this range and Sweden (6.4) below it. In a small majority of EU Member States, 14 out of the 26 for which data are available, pupil–teacher ratios were lower for primary education than for pre-primary education.

**Table 4.1: Number of early childhood and primary education students, 2013**  
(thousands)

	Early childhood development			Pre-primary			Primary		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>EU-28 <sup>(1)</sup></b>	:	:	:	15 058.8	7 765.9	7 292.8	28 343.8	14 221.0	13 796.3
<b>Belgium</b>	:	:	:	457.0	234.3	222.7	764.1	390.3	373.8
<b>Bulgaria</b>	:	:	:	235.0	121.3	113.8	253.7	131.2	122.5
<b>Czech Republic</b>	:	:	:	358.1	185.9	172.2	491.8	252.4	239.4
<b>Denmark</b>	113.7	58.3	55.4	192.2	99.9	92.3	469.6	241.3	228.3
<b>Germany</b>	677.9	346.7	331.2	2 207.1	1 139.1	1 068.0	2 890.5	1 487.7	1 402.8
<b>Estonia <sup>(2)</sup></b>	:	:	:	67.0	34.5	32.5	75.6	38.9	36.7
<b>Ireland</b>	:	:	:	78.1	39.8	38.3	527.8	270.5	257.3
<b>Greece</b>	49.5	:	:	167.1	86.1	80.9	633.5	early	307.1
<b>Spain</b>	449.4	233.6	215.9	1 465.6	755.7	709.9	2 934.6	1 502.1	1 432.5
<b>France</b>	:	:	:	2 560.8	1 309.9	1 250.8	4 171.0	2 137.6	2 033.4
<b>Croatia</b>	23.0	12.2	10.9	105.0	54.5	50.5	160.3	82.2	78.1
<b>Italy</b>	:	:	:	1 686.1	874.6	811.5	2 861.0	1 475.3	1 385.7
<b>Cyprus</b>	:	:	:	22.8	11.7	11.1	54.1	27.8	26.3
<b>Latvia</b>	:	:	:	79.7	40.9	38.8	114.1	58.6	55.4
<b>Lithuania</b>	19.0	9.7	9.3	93.6	48.0	45.6	109.0	56.0	53.0
<b>Luxembourg</b>	:	:	:	16.5	8.4	8.1	35.3	18.1	17.1
<b>Hungary</b>	:	:	:	340.2	175.7	164.5	385.5	199.0	186.4
<b>Malta</b>	:	:	:	8.9	4.6	4.3	23.7	12.1	11.5
<b>Netherlands <sup>(3)</sup></b>	:	:	:	521.3	266.8	254.5	1 251.0	642.8	608.3
<b>Austria</b>	36.7	18.9	17.8	237.3	122.1	115.3	327.2	168.4	158.8
<b>Poland</b>	:	:	:	1 216.5	625.9	590.6	2 160.9	1 107.4	1 053.5
<b>Portugal</b>	:	:	:	266.7	138.9	127.7	693.0	361.0	332.1
<b>Romania</b>	:	:	:	581.1	297.5	283.7	932.0	482.5	449.4
<b>Slovenia</b>	24.9	12.8	12.1	58.2	30.3	28.0	109.2	56.2	53.1
<b>Slovakia</b>	:	:	:	154.7	80.0	74.6	211.4	109.0	102.4
<b>Finland</b>	50.1	25.7	24.5	194.5	99.6	94.9	348.4	178.7	169.7
<b>Sweden</b>	160.3	82.5	77.8	429.7	221.6	208.1	733.4	366.0	367.4
<b>United Kingdom</b>	257.9	131.3	126.6	1 258.2	658.3	599.9	4 622.2	2 367.8	2 254.4
<b>Iceland</b>	6.1	3.1	3.0	13.5	7.0	6.6	29.6	15.1	14.5
<b>Liechtenstein</b>	:	:	:	0.8	0.4	0.4	2.0	1.0	0.9
<b>Norway</b>	102.5	52.6	49.9	183.7	94.2	89.5	425.0	217.2	207.8
<b>Switzerland</b>	:	:	:	158.2	81.8	76.5	453.9	233.8	220.1
<b>FYR of Macedonia</b>	5.9	3.1	2.8	21.0	10.7	10.3	109.9	56.7	53.2
<b>Serbia</b>	31.5	16.2	15.3	156.9	80.7	76.2	:	:	:
<b>Turkey</b>	:	:	:	1 077.9	562.2	515.8	5 593.9	2 862.7	2 731.2

<sup>(1)</sup> Pre-primary education: includes early childhood educational development for Estonia. Primary education: includes only the public sector for the Netherlands.

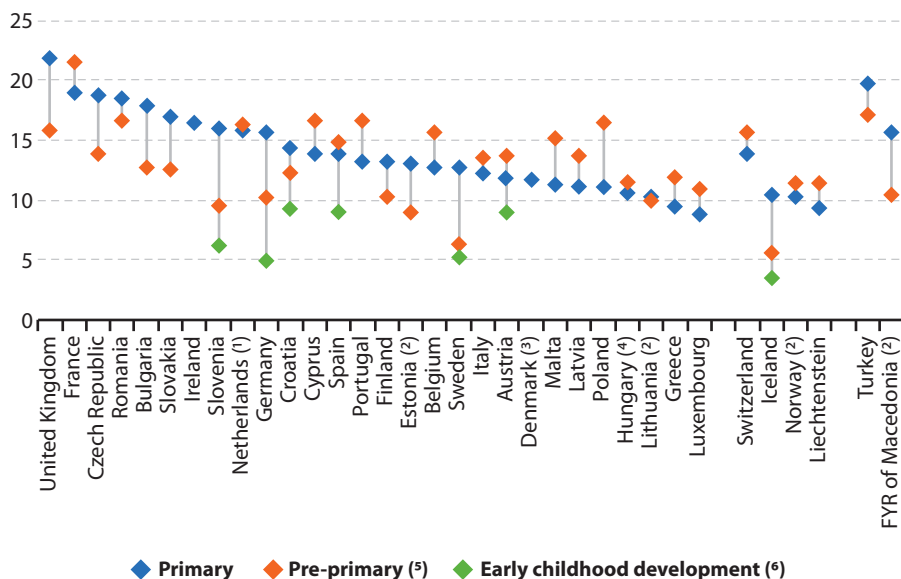
<sup>(2)</sup> Pre-primary education: includes early childhood educational development.

<sup>(3)</sup> Primary education: public sector only; the number of students in private institutions is negligible.

Source: Eurostat (online data codes: [educ\\_uoe\\_enrp01](#) and [educ\\_uoe\\_enrp04](#))



**Figure 4.1: Pupil–teacher ratios in early childhood and primary education, 2013**  
(number of pupils per teacher)



Note: ranked on ratio for primary education.

(1) Primary education: 2012.

(2) Pre-primary education: includes early childhood educational development.

(3) 2011. Primary education: includes lower secondary education.

(4) Includes management personnel.

(5) Denmark and Ireland: not available.

(6) Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Ireland, Greece, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Finland, United Kingdom, Liechtenstein, Norway, Switzerland, FYR of Macedonia and Turkey: not available.

Source: Eurostat (online data codes: [educ\\_uoe\\_perp04](#) and [educ\\_iste](#))

## 4.2 Secondary education

Pupils enter lower secondary education (ISCED level 2) typically between the ages of 10 and 13 (age 12 being the most common). Pupils enter upper secondary education (ISCED level 3) typically between ages 14 and 16. In general, compulsory education is completed at the end of lower secondary education, although in some countries it continues into upper secondary education. On average, compulsory education lasts nine or ten years in most of the EU Member States. As its name suggests, post-secondary non-tertiary education (ISCED level 4) starts after the completion of upper secondary education.

In the EU-28 there were just over 20 million pupils in lower secondary education in 2013, of which the vast majority (81.9%) were in the public sector; note this share excludes the Netherlands. The number of pupils in upper secondary education in the EU-28 was slightly higher, at just over 21 million, with a smaller, but nevertheless a clear majority (75.2%; again excluding the Netherlands) of pupils in the public sector; a small majority (51.7%) of upper secondary school pupils followed general programmes with the remainder following vocational programmes.

Post-secondary non-tertiary education was by far the smallest of the three education levels, with 1.7 million pupils in the EU-28 (excluding Greece and Spain; this education level does not

exist in Denmark, Croatia, Slovenia or the United Kingdom) in 2013, with the vast majority (90.8%) following vocational programmes.

There were 1.8 million lower secondary teachers in the EU-28 (excluding Ireland) in 2013, 1.8 million upper secondary teachers and 136 thousand post-secondary non-tertiary education teachers.

In 2013, pupil–teacher ratios in lower and upper secondary education were broadly similar to those observed for primary education. The pupil–teacher ratio for lower secondary education ranged among the EU Member States from less than 8.0 in Latvia, Malta, Lithuania and Greece, to 15.4 in France, with the ratio in the United Kingdom (18.5) above this range.

Pupil–teacher ratios for lower secondary education were lower than those reported for upper secondary education. France had a particularly low ratio for upper secondary education (10.1 pupils per teacher) compared with its ratio for lower secondary education (15.4).

Pupil–teacher ratios for post-secondary non-tertiary education are available for 16 of the EU Member States in 2013 and in all of these except three the ratio was higher than for upper secondary education.



**Table 4.2:** Number of secondary education students, 2013  
(thousands)

	Lower secondary			Upper secondary			Post-secondary non-tertiary		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
		(% of total)			(% of total)			(% of total)	
<b>EU-28 <sup>(1)</sup></b>	20 188.4	81.9	18.1	21 388.8	71.8	28.2	1 670.6	60.1	39.9
<b>Belgium</b>	432.9	42.2	57.8	773.7	41.1	58.9	62.0	27.2	72.8
<b>Bulgaria</b>	235.5	94.0	6.0	284.1	95.6	4.4	2.5	13.3	86.7
<b>Czech Republic</b>	365.2	97.1	2.9	436.1	85.4	14.6	58.5	88.2	11.8
<b>Denmark</b>	244.1	73.1	26.9	311.2	98.0	2.0	–	–	–
<b>Germany</b>	4 713.7	90.4	9.6	2 575.7	92.0	8.0	828.7	74.9	25.1
<b>Estonia</b>	36.9	95.9	4.1	43.9	96.6	3.4	10.6	92.8	7.2
<b>Ireland <sup>(2)</sup></b>	189.5	100.0	0.0	153.4	98.4	1.6	55.6	98.8	1.2
<b>Greece</b>	323.9	95.3	4.7	371.0	95.9	4.1	:	:	:
<b>Spain</b>	1 663.5	70.6	29.4	1 632.9	75.1	24.9	:	:	:
<b>France</b>	3 332.3	78.1	21.9	2 581.5	68.4	31.6	34.8	68.0	32.0
<b>Croatia</b>	190.9	99.6	0.4	188.2	96.0	4.0	–	–	–
<b>Italy</b>	1 813.9	96.1	3.9	2 780.4	90.9	9.1	8.2	0.0	100.0
<b>Cyprus</b>	28.7	83.6	16.4	32.1	80.9	19.1	0.2	100.0	–
<b>Latvia</b>	55.3	98.8	1.2	71.6	97.6	2.4	3.5	96.2	3.8
<b>Lithuania</b>	203.0	98.1	1.9	91.2	98.9	1.1	15.4	99.5	0.5
<b>Luxembourg</b>	21.8	81.0	19.0	24.4	83.2	16.8	0.8	100.0	0.0
<b>Hungary</b>	390.3	85.3	14.7	500.4	73.5	26.5	74.3	47.8	52.2
<b>Malta</b>	13.2	56.1	43.9	17.8	71.8	28.2	2.4	100.0	0.0
<b>Netherlands</b>	:	:	:	:	:	:	1.6	100.0	–
<b>Austria</b>	336.7	90.7	9.3	369.8	89.6	10.4	19.8	59.9	40.1
<b>Poland</b>	1 188.2	94.5	5.5	1 589.5	84.1	15.9	323.4	16.5	83.5
<b>Portugal</b>	400.5	87.3	12.7	398.4	79.1	20.9	10.3	87.8	12.2
<b>Romania</b>	812.2	99.7	0.3	851.5	97.8	2.2	92.9	51.5	48.5
<b>Slovenia</b>	54.6	99.7	0.3	93.0	96.3	3.7	–	–	–
<b>Slovakia</b>	259.2	93.3	6.7	222.3	84.8	15.2	18.4	83.3	16.7
<b>Finland</b>	181.4	95.2	4.8	359.6	81.2	18.8	24.2	84.1	15.9
<b>Sweden</b>	321.1	84.7	15.3	517.5	82.1	17.9	22.7	41.2	58.8
<b>United Kingdom</b>	2 379.8	47.7	52.3	4 117.2	26.0	74.0	–	–	–
<b>Iceland</b>	12.7	99.1	0.9	25.5	80.2	19.8	0.9	34.9	65.1
<b>Liechtenstein</b>	1.6	92.9	7.1	1.8	98.2	1.8	–	–	–
<b>Norway</b>	190.5	96.5	3.5	252.1	89.1	10.9	4.9	20.6	79.4
<b>Switzerland</b>	296.9	91.8	8.2	349.3	85.4	14.6	13.5	15.3	84.7
<b>FYR of Macedonia</b>	86.6	100.0	–	90.4	98.2	1.8	0.3	100.0	–
<b>Turkey</b>	5 567.0	97.0	3.0	4 995.6	96.9	3.1	–	–	–

Note: According to the UOE classification, the distinction between public and private is made according to whether a public agency or a private entity has the overall control of the institution and not according to which sector provides the majority of the funding. This means that conventionally considered "private" institutions, are only a subgroup of the total private institutions and are referred to as the independent private institutions. These latter

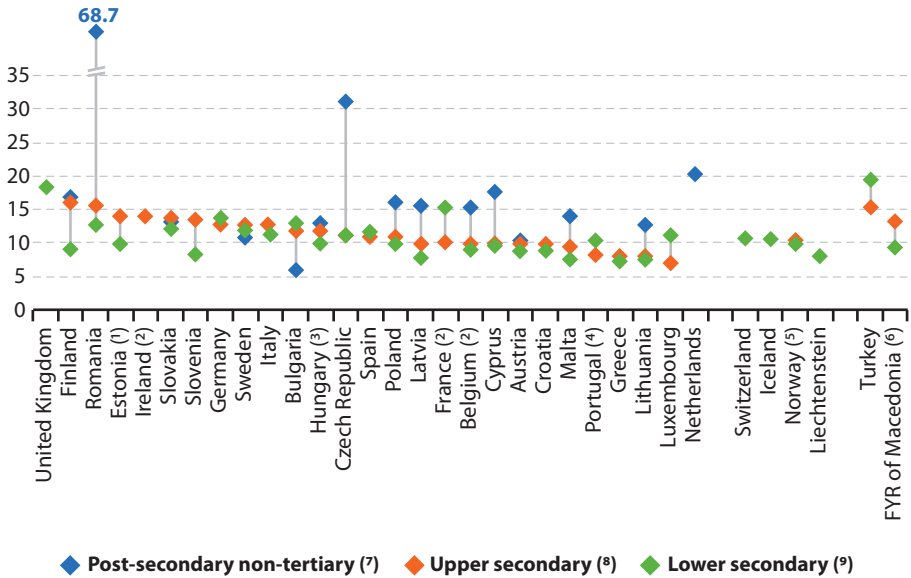
institutions make up, for example in the United Kingdom, only about 5 % of all institutions in secondary education.

<sup>(1)</sup> Lower and upper secondary education: excluding the Netherlands, except for public education. Post-secondary non-tertiary education: sum of available data for EU Member States.

<sup>(2)</sup> Post-secondary non-tertiary education: excluding students in combined school and work-based programmes.

Source: Eurostat (online data codes: [educ\\_uoe\\_ens01](#), [educ\\_uoe\\_ens04](#) and [educ\\_uoe\\_ens07](#))

**Figure 4.2: Pupil–teacher ratios in secondary education, 2013**  
(number of pupils per teacher)



Note: Ranked on ratio for upper secondary education. Denmark: not available.

(1) Upper secondary education: includes post-secondary non-tertiary education.

(2) Independent private institutions: excluded.

(3) Includes management personnel.

(4) Post-secondary non-tertiary vocational education: included either in upper secondary education or tertiary education.

(5) Upper secondary education: includes post-secondary non-tertiary vocational education and short-cycle tertiary education.

(6) Upper secondary education: includes post-secondary non-tertiary vocational education.

(7) Ireland, Greece, Spain, France, Italy, Luxembourg, Iceland and Switzerland: not available. Croatia, Slovenia, the United Kingdom, Liechtenstein and Turkey: not applicable.

(8) The Netherlands, Iceland and Switzerland: not available.

(9) Ireland and the Netherlands: not available

Source: Eurostat (online data codes: [educ\\_uoe\\_perp04](#) and [educ\\_iste](#))



## 4.3 Tertiary education

Tertiary education — provided by universities and other higher education institutions — is the level of education following secondary schooling. It is seen to play an essential role in society, by fostering innovation, increasing economic development and growth, and improving more generally the wellbeing of citizens.

In the EU-28 there were 19.6 million tertiary education students in 2013, of which 7.5 % were following short-cycle tertiary courses, 60.7 % were studying for Bachelor's degrees, 28.1 % for Master's degrees and 3.7 % for Doctoral degrees.

In 2013, more students were studying for Bachelor's degrees than for any other level of tertiary education in all EU Member States.

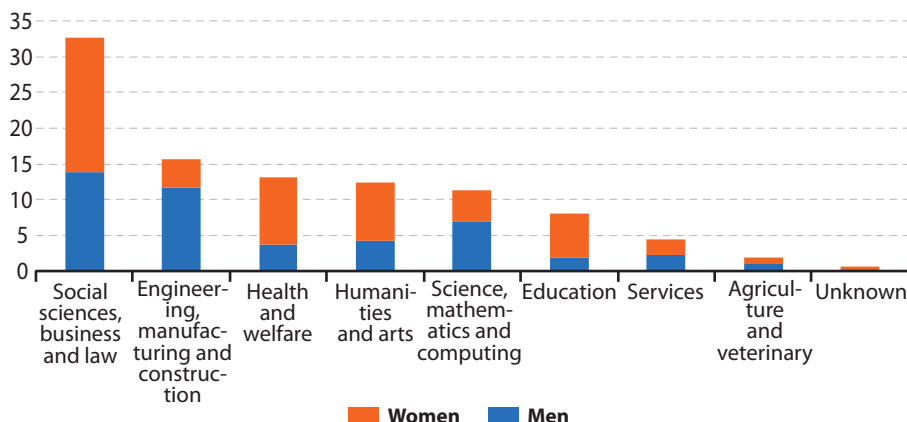
Across the EU-28, one third (32.7 %) of all students in tertiary education were studying social sciences, business or law in 2013, with more female than male students in this field of education. The second most common field of education was engineering, manufacturing and construction-related studies which accounted

for 15.7 % of all tertiary education students. In this field, three quarters of the students were male. The third largest field of study was health and welfare, with 13.2 % of all tertiary education students. In health and welfare close to three quarters of the students were female.

Approximately 4.8 million students graduated from tertiary education establishments in the EU-28 in 2013. The United Kingdom had the largest number of graduates, 792 thousand, followed by France (734 thousand), some way ahead of Poland (598 thousand) and Germany (496 thousand).

There were 1.4 million people teaching in tertiary education in the EU-28 in 2013, of which 83.9 thousand provided short-cycle tertiary courses. More than one quarter (26.7 %) of the tertiary education teaching staff in the EU-28 were located in Germany, with just over one tenth each in Spain (10.9 %) and the United Kingdom (10.5 %).

**Figure 4.3: Distribution of tertiary education students by field and sex, EU-28, 2013**  
(%)



Source: Eurostat (online data code: educ\_uoe\_enrt03)



**Table 4.3: Number of tertiary education students by level and sex, 2013**  
(thousands)

	Tertiary total		Short-cycle tertiary		Bachelor's or equivalent		Master's or equivalent		Doctoral or equivalent	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>EU-28 <sup>(1)</sup></b>	8 969.1	10 663.2	688.2	787.3	5 541.8	6 371.6	2 344.6	3 162.7	394.5	341.5
<b>Belgium</b>	216.3	272.2	9.2	15.0	160.2	204.0	39.0	46.5	8.0	6.6
<b>Bulgaria</b>	129.1	154.9	–	–	91.9	103.8	34.6	48.4	2.6	2.7
<b>Czech Republic</b>	182.0	245.4	0.4	0.6	115.3	152.4	52.2	81.3	14.2	11.0
<b>Denmark</b>	125.5	165.7	16.2	15.5	75.3	107.0	29.1	38.4	4.8	4.8
<b>Germany</b>	1 469.9	1 310.1	0.1	0.4	913.3	722.6	429.7	500.6	126.8	86.4
<b>Estonia</b>	26.9	37.9	–	–	19.5	25.3	6.2	10.8	1.3	1.8
<b>Ireland</b>	98.8	100.6	24.4	17.3	56.9	64.3	13.4	15.0	4.1	4.1
<b>Greece</b>	337.7	321.6	–	–	305.4	282.8	20.2	27.9	12.1	10.9
<b>Spain</b>	914.8	1 054.6	174.5	171.9	497.5	587.5	230.5	283.8	12.3	11.4
<b>France</b>	1 062.6	1 275.6	251.6	253.3	387.2	544.6	387.1	444.9	36.7	32.8
<b>Croatia <sup>(2)</sup></b>	71.7	92.9	:	:	48.2	54.6	21.9	36.3	1.7	2.0
<b>Italy</b>	804.1	1 068.5	1.9	0.6	497.2	611.1	288.1	438.9	16.9	18.0
<b>Cyprus</b>	14.3	17.7	1.4	1.9	9.5	10.5	3.0	4.9	0.4	0.5
<b>Latvia</b>	38.7	55.7	7.0	10.3	26.4	36.9	4.2	7.1	1.1	1.4
<b>Lithuania</b>	66.4	93.2	–	–	54.4	70.1	10.9	21.6	1.1	1.6
<b>Luxembourg</b>	3.2	3.4	0.1	0.2	1.7	1.7	1.2	1.2	0.3	0.2
<b>Hungary</b>	160.9	198.1	13.5	23.5	110.7	127.0	32.9	44.1	3.8	3.6
<b>Malta</b>	5.6	7.0	1.1	1.3	3.0	3.9	1.4	1.7	0.0	0.0
<b>Netherlands</b>	327.1	347.7	3.0	2.3	272.7	285.7	44.5	52.9	6.9	6.8
<b>Austria</b>	196.8	225.9	35.6	41.2	84.5	95.7	63.2	76.9	13.6	12.1
<b>Poland</b>	764.6	1 138.1	2.0	8.9	542.7	723.8	200.0	383.0	19.8	22.5
<b>Portugal</b>	173.7	197.3	–	–	107.5	124.1	57.2	62.8	9.1	10.4
<b>Romania</b>	284.9	333.2	–	–	199.1	210.5	75.0	112.2	10.8	10.5
<b>Slovenia</b>	41.5	56.2	7.6	5.8	23.0	31.9	9.2	16.6	1.7	1.9
<b>Slovakia</b>	84.5	125.0	0.9	1.9	49.7	71.1	28.2	46.7	5.7	5.2
<b>Finland</b>	143.1	165.9	0.1	0.0	109.1	119.2	24.1	36.0	9.9	10.7
<b>Sweden</b>	176.0	260.6	13.1	12.9	93.2	159.8	58.6	77.4	11.0	10.5
<b>United Kingdom</b>	1 048.0	1 338.2	124.5	202.3	686.7	840.0	178.9	244.7	58.0	51.1
<b>Iceland</b>	7.2	11.9	0.2	0.2	5.4	8.4	1.4	3.0	0.2	0.3
<b>Liechtenstein</b>	0.6	0.3	–	–	0.4	0.2	0.2	0.1	0.1	0.0
<b>Norway</b>	105.2	150.2	7.3	2.5	69.8	112.2	24.5	31.8	3.6	3.8
<b>Switzerland</b>	141.3	138.5	4.5	6.3	94.7	91.7	29.6	30.4	12.5	10.2
<b>FYR of Macedonia</b>	27.6	33.1	–	–	25.9	31.0	1.6	2.0	0.1	0.1
<b>Turkey</b>	2 706.9	2 268.8	827.8	699.9	1 657.5	1 395.2	176.0	138.8	45.6	34.8

<sup>(1)</sup> Short-cycle tertiary education: excluding Croatia. Bachelor's or equivalent: includes short-cycle tertiary education for Croatia.

<sup>(2)</sup> Bachelor's or equivalent: includes short-cycle tertiary education.

Source: Eurostat (online data code: [educ\\_uae\\_enrt01](#))



## 4.4 Early leavers from education and training

Early leavers from education and training may face considerable difficulties in the labour market: for example, they may find it difficult to obtain a secure foothold as employers may be more reluctant to take them on with their limited education.

The strategic framework for European cooperation in education and training (known as ET 2020) adopted a benchmark to be achieved by 2020, namely, that the share of early leavers from education and training should be not more than 10% in the EU-28.

An average of 11.0% of young people (aged 18–24) in the EU-28 were early leavers from education and training in 2015, in other words having completed at most a lower secondary education and not being in further education or training during the four weeks preceding the survey. In this chapter, the terms ‘early leavers’ and ‘early leavers from education and training’ are used interchangeably.

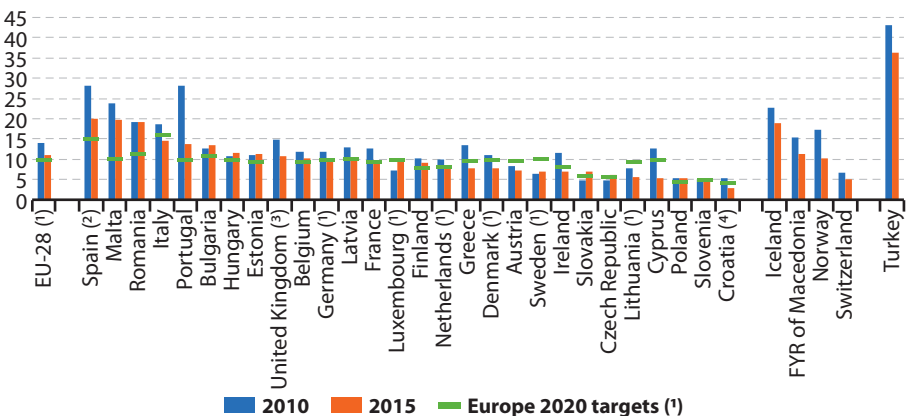
The overall share of early leavers from education and training fell in the EU-28 by 2.9 percentage points between 2010 and 2015.

The proportion of early leavers from education and training in 2015 in the EU-28 was 2.9 percentage points higher for young men (12.4%) than for young women (9.5%). In the EU-28, the proportion of early leavers fell between 2006 and 2015: the overall proportion fell 4.3 percentage points while the proportions for young men and for young women fell 5.0 and 3.7 percentage points respectively.

Early leavers not employed and not wanting to work accounted for 2.1% of the population aged 18–24 in the EU-28 in 2015, but this proportion was 1.5% among young men and nearly twice as high, 2.7% among young women.

In 2015, the lowest proportion of early leavers in the EU-28 was reported in cities (just under 1 in 10 young people). In towns and suburbs the proportion of early leavers rose to 11.5%, while it was higher still in rural areas, at 12.2%.

**Figure 4.4: Early leavers from education and training, 2010 and 2015**  
(% of population aged 18–24)



Note: Breaks in series.

(1) For the target to be achieved, the share of early leavers from education and training should be below the target value.

(2) Europe 2020 target is defined as the school drop-out rate.

(3) No Europe 2020 target.

(4) 2015: low reliability.

Source: Eurostat (online data codes: t2020\_40)

**Table 4.4:** Distribution of early leavers from education and training aged 18–24 by labour status, 2015  
(% of early leavers)

	Total (young men and women)					Total young men employed and not employed	Total young women employed and not employed
	of which						
	Total (employed and not employed)	Employed	Not employed	of which			
Would like to work				Not wanting to work			
EU-28	11.0	4.6	6.4	4.3	2.1	12.4	9.5
Belgium	10.1	3.7	6.4	4.3	2.1	11.6	8.6
Bulgaria <sup>(1)</sup>	13.4	2.9	10.5	4.4	6.1	13.3	13.4
Czech Republic	6.2	2.2	4.0	1.7	2.3	6.4	6.0
Denmark	7.8	3.8	4.0	2.1	1.9	9.7	5.7
Germany	10.1	4.5	5.6	3.5	2.1	10.4	9.8
Estonia <sup>(2)</sup>	11.2	6.2	5.0	2.5	2.4	13.2	9.0
Ireland <sup>(3)</sup>	6.9	1.8	5.1	2.8	2.3	8.4	5.4
Greece	7.9	3.0	4.9	3.4	1.5	9.4	6.4
Spain	20.0	7.8	12.1	9.9	2.2	24.0	15.8
France	9.3	3.1	6.2	4.3	1.9	10.1	8.5
Croatia <sup>(4)</sup>	2.8	0.5	2.3	1.6	0.7	3.6	2.1
Italy	14.7	4.7	10.0	8.0	2.0	17.5	11.8
Cyprus <sup>(5)</sup>	5.3	2.3	2.9	2.1	0.8	7.7	3.2
Latvia <sup>(6)</sup>	9.9	6.2	3.8	2.3	1.4	13.4	6.2
Lithuania <sup>(7)</sup>	5.5	2.1	3.4	:	1.9	6.9	4.0
Luxembourg <sup>(8)</sup>	9.3	5.6	3.7	2.9	:	10.5	8.1
Hungary	11.6	4.7	6.9	4.0	2.9	12.0	11.2
Malta <sup>(9)</sup>	19.8	13.9	5.9	4.1	1.9	22.9	16.6
Netherlands	8.2	5.0	3.2	2.0	1.2	9.9	6.4
Austria	7.3	3.5	3.8	2.5	1.3	7.8	6.8
Poland <sup>(10)</sup>	5.3	2.0	3.3	1.8	1.5	7.2	3.2
Portugal	13.7	7.4	6.3	5.2	1.1	16.4	11.0
Romania	19.1	9.3	9.7	4.4	5.3	19.5	18.5
Slovenia <sup>(11)</sup>	5.0	1.7	3.3	2.1	1.2	6.4	3.4
Slovakia <sup>(10)(12)</sup>	6.9	1.6	5.3	3.2	2.1	6.9	6.8
Finland	9.2	3.5	5.7	3.2	2.4	10.6	7.9
Sweden	7.0	3.9	3.1	2.0	1.1	7.6	6.4
United Kingdom	10.8	5.5	5.3	3.2	2.1	11.7	9.8
Iceland	18.8	14.9	3.9	2.6	:	24.9	12.4
Norway	10.2	6.8	3.4	2.1	1.3	12.4	8.0
Switzerland <sup>(13)</sup>	5.1	2.8	2.3	1.9	0.5	5.3	5.0
FYR of Macedonia <sup>(12)</sup>	11.4	3.2	8.2	3.7	4.5	10.0	12.9
Turkey	36.4	17.2	19.2	5.2	13.9	35.0	37.6

(1) Young women employed: low reliability.

(2) Young men not employed and would like to work: low reliability. Young women employed, would like to work and not wanting to work: low reliability.

(3) Young women would like to work: low reliability.

(4) Low reliability.

(5) Total would like to work and not wanting to work: low reliability. Young men employed, not employed and would like to work: low reliability. Young women: low reliability.

(6) Total not wanting to work: low reliability. Young men would like to work: low reliability. Young women employed: low reliability.

(7) Total employed and not wanting to work: low reliability.

Young men not employed: low reliability. Young women: low reliability.

(8) Young men and young women not employed and would like to work: low reliability.

(9) Total not wanting to work: low reliability. Young women: would like to work and not wanting to work: low reliability.

(10) Young women employed: low reliability.

(11) Total employed, would like to work and not wanting to work: low reliability. Young men employed, not employed, would like to work and not wanting to work: low reliability. Young women: low reliability.

(12) Young men not wanting to work: low reliability.

(13) Not wanting to work: low reliability.

Source: Eurostat (online data code: edat\_lfse\_14)



## 4.5 Lifelong learning

Lifelong learning encompasses all purposeful learning activity, whether formal, non-formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. The intention or aim to learn is the critical point that distinguishes these activities from non-learning activities, such as cultural or sporting activities.

In 2015, the proportion of persons aged 25 to 64 in the EU-28 who participated in education or training was 10.7 %; a share that was 1.4 percentage points higher than the corresponding share for 2010.

The proportion of the population who had participated in such lifelong learning was higher among women (11.7 % in 2015) in the EU-28 than among men (9.7 %); the shares for men and women were both higher in 2015 than they had been five years earlier.

Information on education and training is available from the adult education survey (AES). The most recent wave of the survey was conducted

between July 2011 and June 2012. According to this survey, in 2011 40.3 % of persons in the EU-27 aged 25 to 64 took part in education and training (during the 12 months preceding the interview), the majority of which participating in non-formal education and training.

For the EU-27 as a whole, participation rates in education and training in the 12 months preceding the interview were almost the same for men and women. An analysis by age shows that the participation of younger persons (aged 25–34) in the EU-28 was nearly twice as high as that of older workers (aged 55–64) in 2011. The likelihood of participation in education and training was related to the level of educational achievement: persons with a tertiary level education reported the highest participation rates (61.3 % for the EU-27 in 2011), while those having completed at most lower secondary education were the least likely to have participated (21.8 %).

**Table 4.5: Lifelong learning, 2010 and 2015**

(% of the population aged 25 to 64 participating in education and training)

	Total		Male		Female	
	2010	2015	2010	2015	2010	2015
<b>EU-28<sup>(1)</sup></b>	9.3	10.7	8.4	9.7	10.2	11.7
<b>Belgium</b>	7.4	6.9	7.2	6.5	7.6	7.3
<b>Bulgaria</b>	1.6	2.0	1.5	1.9	1.7	2.1
<b>Czech Republic<sup>(1)</sup></b>	7.8	8.5	7.6	8.3	8.0	8.6
<b>Denmark</b>	32.6	31.3	26.0	25.3	39.2	37.3
<b>Germany</b>	7.8	8.1	7.9	8.2	7.7	8.0
<b>Estonia</b>	11.0	12.4	8.6	10.6	13.1	14.1
<b>Ireland</b>	7.0	6.5	6.6	6.0	7.5	7.0
<b>Greece</b>	3.3	3.3	3.4	3.3	3.2	3.3
<b>Spain<sup>(1)</sup></b>	11.2	9.9	10.3	9.2	12.1	10.7
<b>France<sup>(1)</sup></b>	5.0	18.6	4.5	15.9	5.4	21.1
<b>Croatia</b>	3.0	3.1	3.0	2.7	3.0	3.6
<b>Italy</b>	6.2	7.3	5.9	6.9	6.5	7.7
<b>Cyprus</b>	8.1	7.5	7.9	7.0	8.2	8.0
<b>Latvia</b>	5.4	5.7	3.6	4.1	7.0	7.2
<b>Lithuania</b>	4.4	5.8	3.5	5.1	5.2	6.5
<b>Luxembourg<sup>(1)</sup></b>	13.5	18.0	12.9	18.2	14.2	17.8
<b>Hungary<sup>(1)</sup></b>	3.0	7.1	2.9	6.8	3.1	7.5
<b>Malta</b>	6.2	7.2	5.9	6.9	6.4	7.5
<b>Netherlands<sup>(1)</sup></b>	17.0	18.9	16.4	18.4	17.7	19.4
<b>Austria</b>	13.8	14.4	12.8	13.3	14.9	15.4
<b>Poland<sup>(1)</sup></b>	5.2	3.5	4.7	3.3	5.7	3.8
<b>Portugal<sup>(1)</sup></b>	5.7	9.7	5.7	9.7	5.7	9.8
<b>Romania</b>	1.4	1.3	1.3	1.3	1.4	1.3
<b>Slovenia</b>	16.4	11.9	14.3	10.7	18.5	13.3
<b>Slovakia<sup>(1)</sup></b>	3.1	3.1	2.5	2.7	3.7	3.4
<b>Finland</b>	23.0	25.4	18.9	21.8	27.1	29.1
<b>Sweden</b>	24.7	29.4	18.3	22.3	31.3	36.7
<b>United Kingdom</b>	20.1	15.7	16.9	13.9	23.3	17.5
<b>Iceland</b>	25.4	28.1	21.3	23.5	29.6	32.7
<b>Norway</b>	18.2	20.1	16.7	18.3	19.8	22.0
<b>Switzerland</b>	30.6	32.1	31.6	32.8	29.6	31.4
<b>FYR of Macedonia</b>	3.5	2.6	3.4	2.7	3.6	2.5
<b>Turkey<sup>(1)</sup></b>	2.9	5.5	3.1	5.6	2.8	5.3

<sup>(1)</sup> Break in series.Source: Eurostat (online data code: [trng\\_lfs\\_01](#))



**Table 4.6:** Participation rate in education and training, 2011  
(%)

	Type of training			All types of training						
	All	Formal	Non-formal	Sex		Age		Level of educational achievement (ISCED levels)		
				Men	Women	Age 25–34	Age 55–64 <sup>(1)</sup>	Lower secondary or less (levels 0–2) <sup>(2)</sup>	Upper secondary & post-secondary (levels 3 and 4)	Tertiary (levels 5 and 6)
<b>EU-27</b>	40.3	6.2	36.8	40.7	39.9	48.5	26.6	21.8	37.7	61.3
<b>Belgium</b>	37.7	7.4	33.1	38.6	36.9	49.5	19.9	15.2	33.2	62.9
<b>Bulgaria</b>	26.0	2.4	24.4	27.5	24.6	31.0	15.1	12.3	24.8	40.1
<b>Czech Republic</b>	37.1	3.7	34.9	37.2	37.0	44.2	20.4	10.5	33.9	64.2
<b>Denmark</b>	58.5	12.6	52.7	55.2	61.8	68.4	45.5	38.0	54.7	75.2
<b>Germany</b>	50.2	3.8	48.5	52.8	47.6	57.4	38.6	27.0	45.2	68.4
<b>Estonia</b>	49.9	6.6	48.0	46.1	53.3	64.5	32.6	22.9	41.6	67.0
<b>Ireland</b>	24.4	6.7	18.7	24.5	24.4	29.2	16.4	10.8	20.6	37.7
<b>Greece</b>	11.7	2.6	9.6	10.3	13.1	20.3	3.1	3.2	9.8	25.5
<b>Spain</b>	37.7	7.0	34.1	38.8	36.6	47.8	23.2	22.5	40.3	57.7
<b>France</b>	50.5	3.5	49.1	50.2	50.8	61.1	32.8	28.0	49.0	72.5
<b>Croatia</b>	:	:	:	:	:	:	:	:	:	:
<b>Italy</b>	35.6	2.9	34.3	37.3	34.0	43.0	22.3	19.2	42.2	65.9
<b>Cyprus</b>	42.3	3.7	40.9	43.1	41.5	50.2	27.8	16.9	36.1	63.0
<b>Latvia</b>	32.3	4.3	30.0	26.9	37.3	38.0	19.7	10.6	24.6	54.3
<b>Lithuania</b>	28.5	4.0	25.9	23.4	33.1	37.3	16.2	7.2	16.0	54.5
<b>Luxembourg</b>	70.1	9.9	68.0	71.6	68.5	81.4	49.4	55.3	67.6	81.7
<b>Hungary</b>	41.1	6.5	37.6	43.0	39.4	51.8	21.7	24.7	39.8	58.1
<b>Malta</b>	35.9	4.4	34.2	37.7	34.1	43.7	20.1	22.6	53.6	72.6
<b>Netherlands</b>	59.3	12.3	54.8	62.8	55.8	72.4	38.2	33.0	62.2	78.2
<b>Austria</b>	48.2	5.9	45.5	48.7	47.6	55.4	35.7	24.8	46.5	72.4
<b>Poland</b>	24.2	5.4	21.0	23.2	25.2	36.0	9.6	5.8	16.7	51.7
<b>Portugal</b>	44.4	10.4	39.6	43.5	45.2	59.9	21.9	32.3	61.1	74.2
<b>Romania</b>	8.0	1.4	6.9	8.0	8.0	13.1	2.0	1.4	7.0	21.8
<b>Slovenia</b>	36.2	2.3	34.7	34.5	37.9	43.3	22.8	13.2	34.5	62.8
<b>Slovakia</b>	41.6	5.8	38.3	41.4	41.9	49.4	21.9	:	35.5	63.5
<b>Finland</b>	55.7	12.0	51.3	48.5	63.1	65.8	35.5	34.5	51.2	71.7
<b>Sweden</b>	71.8	13.5	67.0	69.2	74.4	78.7	57.5	44.2	69.5	84.9
<b>United Kingdom</b>	35.8	14.8	24.3	33.6	37.9	42.6	26.5	17.9	33.5	45.8
<b>Norway</b>	60.0	7.6	56.9	59.2	60.9	71.5	40.6	33.4	53.7	74.2
<b>Switzerland</b>	65.5	9.0	63.1	65.0	66.0	73.0	54.0	29.8	62.7	82.6
<b>Serbia</b>	16.5	4.0	13.6	16.8	16.1	27.4	5.9	:	14.0	33.8
<b>Turkey</b>	17.8	4.2	15.1	20.6	15.1	26.8	5.5	10.1	26.0	46.4

(1) Greece: unreliable.

(2) Greece, Lithuania, Romania, Slovakia and Serbia: unreliable.

Source: Eurostat (online data codes: [trng\\_aes\\_100](#), [trng\\_aes\\_101](#) and [trng\\_aes\\_102](#))

## 4.6 Educational expenditure

Expenditure on education may help foster economic growth, enhance productivity, contribute to people's personal and social development, and help reduce social inequalities.

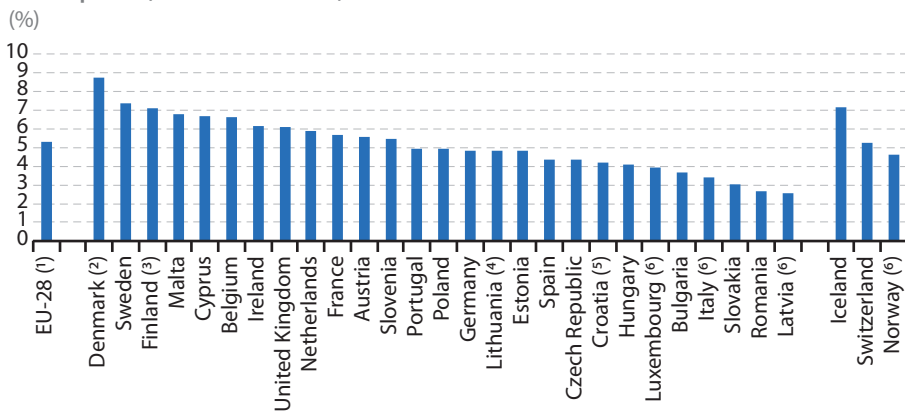
Within the EU, the proportion of financial resources devoted to education is one of the key choices made by national governments. In a similar vein, enterprises, students and their families also make decisions on the financial resources that they are able or willing to set aside for education.

Among EU Member States, expenditure on education mainly comes from government, with a smaller role for non-educational private sources (including for example households, enterprises, non-profit organisations and religious institutions) and generally an even smaller role for international organisations.

Public expenditure on education within the EU-28 in 2012 was in excess of EUR 672 billion (no recent data available for Greece or Croatia). In 2011, expenditure on education in the EU-28 was equivalent to an estimated 5.3 % of gross domestic product (GDP).

The highest public spending on education relative to GDP was observed in Denmark (8.8 % of GDP, 2011 data), while in 2012 public expenditure on education equivalent to 6.5 % or more of GDP was also reported in Sweden, Finland (including also expenditure from international organisations), Malta, Cyprus and Belgium. Most EU Member States reported public expenditure on education within a range between 3.1 % and 6.2 % of their GDP, with only Latvia and Romania below this range — note that the data for Latvia exclude tertiary education.

**Figure 4.5: Public expenditure on education (excluding early childhood educational development) as a share of GDP, 2012**



Note: Greece: not available.

(1) 2011. Estimate.

(2) 2011. Excludes R & D expenditure. Excludes independent private institutions.

Source: Eurostat (online data codes: [educ\\_uoe\\_fine06](#) and [educ\\_figdp](#))

(3) Includes also expenditure by international organisations.

(4) Includes also early childhood educational development.

(5) 2011. Excluding public transfers to private entities other than households.

(6) Excluding tertiary.



**Table 4.7:** Main indicators for public expenditure on education (excluding early childhood educational development), 2012

	Value of expenditure	Expenditure as a share of GDP	Expenditure as a share of GNI	Expenditure as a share of public expenditure
	(million EUR)		(%)	
<b>EU-28 <sup>(1)</sup></b>	:	5.3	5.3	10.8
<b>Belgium</b>	24 817	6.6	6.6	12.0
<b>Bulgaria</b>	1 469	3.7	3.7	10.3
<b>Czech Republic</b>	6 616	4.3	4.7	9.7
<b>Denmark <sup>(2)</sup></b>	17 029	8.8	8.5	15.2
<b>Germany</b>	129 076	4.8	4.7	10.8
<b>Estonia <sup>(3)</sup></b>	842	4.8	5.1	12.3
<b>Ireland</b>	10 106	6.2	7.5	14.5
<b>Greece</b>	:	:	:	:
<b>Spain</b>	44 690	4.3	4.4	9.1
<b>France</b>	115 479	5.7	5.6	10.0
<b>Croatia <sup>(4)</sup></b>	:	4.2	4.3	8.7
<b>Italy <sup>(5)(6)</sup></b>	65 884	3.4	3.5	6.7
<b>Cyprus</b>	1 181	6.7	6.9	14.6
<b>Latvia <sup>(7)</sup></b>	811	2.6	2.7	7.0
<b>Lithuania <sup>(8)</sup></b>	1 590	4.8	5.0	13.4
<b>Luxembourg <sup>(7)</sup></b>	1 693	3.9	5.8	9.0
<b>Hungary</b>	3 942	4.1	4.3	8.3
<b>Malta</b>	467	6.8	7.2	15.7
<b>Netherlands</b>	35 327	5.9	5.8	11.7
<b>Austria</b>	17 084	5.6	5.6	10.8
<b>Poland</b>	18 736	4.9	5.1	11.6
<b>Portugal</b>	8 149	4.9	5.1	10.4
<b>Romania</b>	3 476	2.6	2.7	7.2
<b>Slovenia</b>	1 922	5.4	5.5	11.3
<b>Slovakia</b>	2 169	3.1	3.1	8.0
<b>Finland <sup>(9)</sup></b>	13 696	7.1	7.1	12.6
<b>Sweden</b>	30 108	7.4	7.2	14.2
<b>United Kingdom</b>	115 951	6.1	6.0	12.7
<b>Iceland</b>	758	7.2	8.0	15.1
<b>Norway <sup>(6)</sup></b>	25 636	4.6	4.5	10.6
<b>Switzerland</b>	25 724	5.2	5.1	15.4

<sup>(1)</sup> 2011.

<sup>(2)</sup> Value includes also early childhood educational development; excluding upper secondary. Expenditure as a share of GDP, GNI and as a share of public expenditure: 2011; excludes R&D expenditure; excludes independent private institutions.

<sup>(3)</sup> Expenditure as a share of GNI and as a share of public expenditure: includes also early childhood educational development.

Source: Eurostat (online data codes: [educ\\_uoe\\_fine01](#), [educ\\_uoe\\_fine06](#), [educ\\_uoe\\_fine08](#) and [educ\\_figdp](#))

<sup>(4)</sup> 2011. Excluding public transfers to private entities other than households.

<sup>(5)</sup> Value: excluding short-cycle tertiary.

<sup>(6)</sup> Expenditure as a share of GDP, GNI and as a share of public expenditure: excluding tertiary.

<sup>(7)</sup> Excluding tertiary.

<sup>(8)</sup> Includes also early childhood educational development.

<sup>(9)</sup> Includes also expenditure by international organisations.



# 5

## Labour market



## Introduction

Labour market statistics are at the juxtaposition of economic and social domains. Market outcomes within the labour market directly affect not only the economy, but also the personal lives of virtually all Europeans. From an economic viewpoint, these statistics address labour as an input for economic activity, providing measures in relation to hours worked, labour productivity, vacant posts, wage levels, labour costs, and so on. However, labour market statistics also shed light on social and socioeconomic matters, such as the jobless (unemployed persons), earnings and their structural components, social inequalities (for example, the gender pay gap), working patterns and social integration. As such, Eurostat statistics cover both the supply and the demand side of the labour market, offering data for short-term and structural analyses, as well as in monetary and non-monetary terms.

With the aim of stimulating economic recovery, the European Commission set up the Europe 2020 strategy for smart, sustainable and inclusive growth.

One of the main priorities of the College of Commissioners that entered into office in 2014 is to focus on boosting jobs, growth and investment, with the goal of cutting regulation, making smarter use of existing financial resources and public funds. In November 2014, the European Commission provided an outline of its strategy through the annual growth survey (AGS), which launched the European Semester. In February 2015, it published a series of country reports, analysing the economic policies of EU Member States and providing information on EU Member States priorities for the coming year to boost growth and job creation. In the same month, the European Commission also proposed to make EUR 1 billion from the Youth Employment Initiative available in 2015 so as to increase by up to 30 times the pre-financing EU Member States could receive to boost youth employment rates, helping up to 650 000 young people into work.

## 5.1 Employment

Labour market statistics are at the heart of many EU policies following the introduction of an employment chapter into the Amsterdam Treaty in 1997. The employment rate, in other words the proportion of the working age population that is in employment, is considered to be a key social indicator for analytical purposes when studying developments within labour markets.

In 2015, the EU-28 employment rate for persons aged 20 to 64, as measured by the EU's labour force survey (EU LFS), stood at 70.1 %. The EU-28 employment rate peaked in 2008 at 70.3 % and decreased during successive years to stand at 68.4 % in 2012 and 2013. This fall during the

global financial and economic crisis and its aftermath resulted in an overall reduction of 1.9 percentage points. There followed a return to the upward path observed prior to the crisis, with increases for the EU-28 employment rate of 0.8 and 0.9 percentage points in 2014 and 2015 to reach 70.1 % in 2015, just 0.2 percentage points below the pre-crisis peak.

Employment rates are generally lower among women and older workers. In 2015, the employment rate for men aged 20–64 stood at 75.9 % in the EU-28, as compared with 64.3 % for women. A longer-term comparison shows that while the employment rate for men in 2015



**Table 5.1: Employment rate, age group 20–64, 2005–15**  
(%)

	2005	2008	2012	2013	2014	2015
<b>EU-28</b>	67.9	70.3	68.4	68.4	69.2	70.1
<b>EA-19</b>	67.9	70.2	68.0	67.7	68.2	69.0
<b>Belgium</b>	66.5	68.0	67.2	67.2	67.3	67.2
<b>Bulgaria</b>	61.9	70.7	63.0	63.5	65.1	67.1
<b>Czech Republic</b>	70.7	72.4	71.5	72.5	73.5	74.8
<b>Denmark</b>	78.0	79.7	75.4	75.6	75.9	76.5
<b>Germany</b>	69.4	74.0	76.9	77.3	77.7	78.0
<b>Estonia</b>	72.0	77.1	72.2	73.3	74.3	76.5
<b>Ireland</b>	72.6	72.2	63.7	65.5	67.0	68.7
<b>Greece</b>	64.4	66.3	55.0	52.9	53.3	54.9
<b>Spain</b>	67.5	68.5	59.6	58.6	59.9	62.0
<b>France <sup>(1)</sup></b>	69.4	70.5	69.4	69.5	69.3	69.5
<b>Croatia</b>	59.9	64.9	58.1	57.2	59.2	60.5
<b>Italy</b>	61.5	62.9	60.9	59.7	59.9	60.5
<b>Cyprus</b>	74.4	76.5	70.2	67.2	67.6	67.9
<b>Latvia</b>	69.1	75.4	68.1	69.7	70.7	72.5
<b>Lithuania</b>	70.7	72.0	68.5	69.9	71.8	73.3
<b>Luxembourg <sup>(2)</sup></b>	69.0	68.8	71.4	71.1	72.1	70.9
<b>Hungary</b>	62.2	61.5	61.6	63.0	66.7	68.9
<b>Malta</b>	57.4	59.2	63.1	64.8	66.4	67.8
<b>Netherlands</b>	75.1	78.9	76.6	75.9	75.4	76.4
<b>Austria</b>	70.4	73.8	74.4	74.6	74.2	74.3
<b>Poland</b>	58.3	65.0	64.7	64.9	66.5	67.8
<b>Portugal</b>	72.2	73.1	66.3	65.4	67.6	69.1
<b>Romania</b>	63.6	64.4	64.8	64.7	65.7	66.0
<b>Slovenia</b>	71.1	73.0	68.3	67.2	67.7	69.1
<b>Slovakia</b>	64.5	68.8	65.1	65.0	65.9	67.7
<b>Finland</b>	73.0	75.8	74.0	73.3	73.1	72.9
<b>Sweden</b>	77.9	80.4	79.4	79.8	80.0	80.5
<b>United Kingdom <sup>(3)</sup></b>	75.2	75.2	74.1	74.8	76.2	76.8
<b>Iceland</b>	85.5	85.3	81.8	82.8	84.9	86.5
<b>Norway</b>	78.2	81.8	79.9	79.6	79.6	79.1
<b>Switzerland</b>	:	:	82.0	82.1	82.3	82.8
<b>FYR of Macedonia</b>	:	46.3	48.2	50.3	51.3	51.9
<b>Turkey <sup>(4)</sup></b>	:	48.4	52.8	53.4	53.2	53.9

(1) 2005–13: excluding overseas departments and territories.

(2) 2015: break in series.

(3) 2008: break in series.

(4) 2014: break in series.

Source: Eurostat (online data code: lfsi\_emp\_a)

was the same as 10 years earlier (75.9 % in 2005), there was a marked increase in the proportion of women in employment — rising 4.3 percentage points from 60.0 % in 2005.

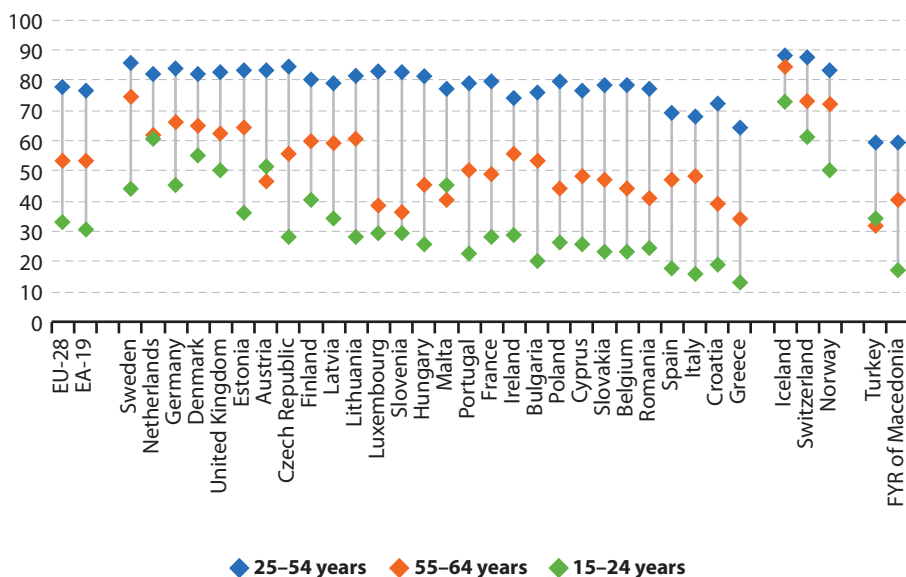
As with the female employment rate, there was evidence that the employment rate of older workers (aged between 55 and 64) increased at a rapid pace despite the financial and economic crisis. For the EU-28, the employment rate of older workers reached 53.3 % in 2015; the rate increased every year from 2002 (the start of the time series for the EU-28) up to and including 2015 (the latest information available). In 2015, there were 11 EU-28 Member States that had employment rates for older workers that were

between 50 % and 66 %, while by far the highest rate was recorded in Sweden at 74.5 %.

Employment rates also vary considerably according to the level of educational attainment. The employment rate of those who had completed a tertiary (short-cycle tertiary, bachelor's, master's or doctoral levels (or equivalents)) education was 82.7 % across the EU-28 in 2015, much higher than the rate (52.6 %) for those who had attained no more than a primary or lower secondary education. The EU-28 employment rate of persons with at most an upper secondary or post-secondary non-tertiary education was 70.7 %.

**Figure 5.1: Employment rates by age group, 2015**

(%)



Note: The figure is ranked on the overall employment rate.

Source: Eurostat (online data code: [lfsi\\_emp\\_a](#))



## 5.2 Unemployment

Unemployment levels and rates move in a cyclical manner, largely related to the general business cycle. However, other factors such as labour market policies and demographic changes may also influence the short and long-term development of unemployment.

The overall unemployment rate in the EU-28 fell from 10.2 % in 2014 to 9.4 % in 2015, a decrease of 0.8 percentage points, following a similar decrease (0.7 percentage points) the previous year.

The unemployment rate fell in 22 of the 28 EU Member States between 2014 and 2015, while it rose in four Member States and remained unchanged in two. The largest decreases in annual average unemployment rates between 2014 and 2015 were recorded in Spain (– 2.4 percentage points), Bulgaria (– 2.2 points) and Ireland (– 1.9 points). By contrast, the highest

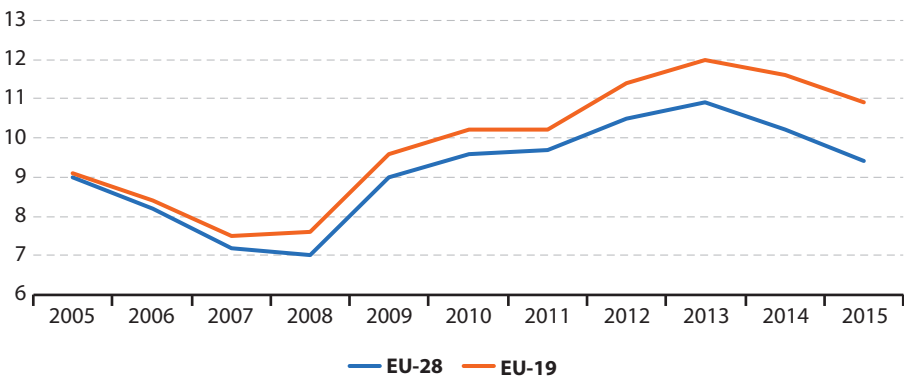
increases were reported in Finland, where the unemployment rate rose by 0.7 percentage points, and in Luxembourg (up 0.4 points).

At 24.9 % and 22.1 %, Greece and Spain recorded by far the highest overall unemployment rates among the EU Member States in 2015.

At the other end of the range, the lowest unemployment rates were recorded in Malta (5.4 %), the United Kingdom (5.3 %), the Czech Republic (5.1 %) and Germany (4.6 %).

Between 2014 and 2015, unemployment rates for men and women across the EU-28 decreased: the unemployment rate for men fell from 10.1 % to 9.3 %, while the rate for women fell from 10.3 % to 9.5 %. In the euro area (EA-19), unemployment rates for men and women decreased at a slower pace between 2014 and 2015, from 11.5 % to 10.7 % and from 11.8 % to 11.0 % respectively.

**Figure 5.2: Unemployment rate, 2005–15**  
(%)



Source: Eurostat (online data code: [une\\_rt\\_a](#))

Youth unemployment rates (covering persons between 15 and up to 24 years) are generally much higher, sometimes more than double the total unemployment rate for persons of all ages (15–74). The youth unemployment rate in the EU-28 was more than double the overall unemployment rate in 2015, standing at 20.4%. As such, around one out of every five young persons in the labour force was not employed, but looking and available for a job. There was however a reduction in the youth unemployment rate between 2014 and 2015, with a fall of 1.8 percentage points. In the euro area, the youth unemployment rate was somewhat higher at 22.4% and it fell at a slower pace between 2014 and 2015, declining by 1.4 percentage points.

High youth unemployment rates reflect, to some degree, the difficulties faced by young people in finding jobs. However, this does not necessarily mean that the group of unemployed persons aged between 15 and 24 is large, as many young people are studying full-time and are therefore neither working nor looking for a job (so they are not part of the labour force which is used as the denominator for calculating the unemployment rate). For this reason, the youth unemployment ratio is calculated as an alternative indicator for

the purpose of analysis — it presents the share of unemployed youths among the whole of the youth population. The youth unemployment ratio in the EU-28 was, unsurprisingly, much lower than the youth unemployment rate. The youth unemployment ratio did however rise from 2008 through to 2013 due to the effects of the financial and economic crisis on the labour market. The latest EU-28 youth unemployment ratio shows that 8.4% of those aged 15–24 were unemployed in 2015.

Long-term unemployment is one of the main concerns of policymakers. Apart from its financial and social effects on personal life, long-term unemployment negatively affects social cohesion and, ultimately, may hinder economic growth. In total, 4.5% of the labour force in the EU-28 in 2015 had been unemployed for more than one year; more than half of these, 2.8% of the labour force, had been unemployed for more than two years. Although both of these figures were lower in 2015 than in 2014, they still represented a sizeable increase when compared with the data from 2008 (at the onset of the financial and economic crisis), when 2.6% of the EU-28's labour force had been unemployed for more than one year and 1.5% for more than two years.

**Table 5.2: Unemployment rate, EU-28, selected years**  
(%)

	2005	2008	2012	2013	2014	2015
<b>Men</b>	8.4	6.6	10.4	10.8	10.1	9.3
<b>Women</b>	9.8	7.5	10.5	10.9	10.3	9.5
<b>Less than 25 years</b>	19.0	15.9	23.3	23.7	22.2	20.4
<b>Between 25 and 74 years</b>	7.7	5.9	9.1	9.5	9.0	8.3
<b>Long-term unemployment rate</b>	4.0	2.6	4.6	5.1	5.0	4.5
<b>Male</b>	3.7	2.4	4.6	5.1	5.0	4.5
<b>Female</b>	4.4	2.8	4.6	5.1	5.0	4.5
<b>Very long-term unemployment rate</b>	:	1.5	2.5	2.9	3.0	2.8

Source: Eurostat (online data codes: [une\\_rt\\_a](#) and [une\\_ltu\\_a](#))



## 5.3 Wages and labour cost

Labour plays a major role in the functioning of an economy. From the point of view of businesses, it represents a cost (labour costs) that includes not only the wages and salaries paid to employees but also non-wage costs, mainly social contributions payable by the employer. Thus, it is a key determinant of business competitiveness, although this is also influenced by the cost of capital (for example interests on loans and dividends on equity) and non-price elements such as innovation and the brand/products positioning on the market.

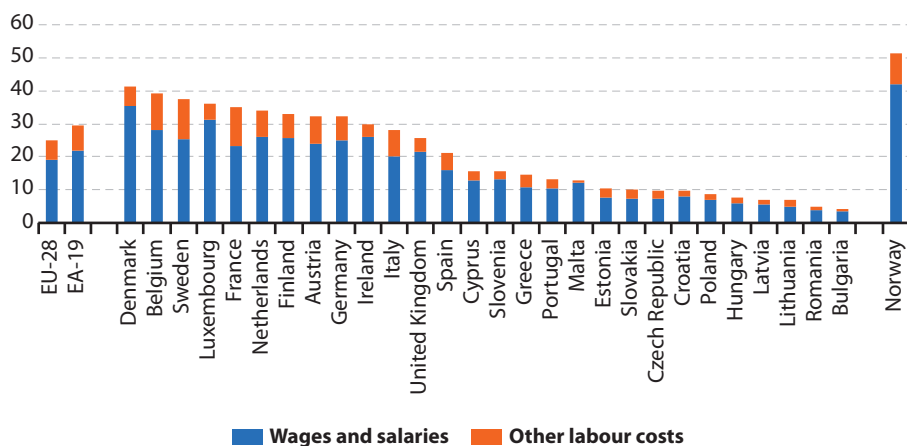
The average hourly labour cost in the EU-28 was estimated at EUR 25.03 in 2015 and at EUR 29.50 in the euro area (EA-19). However, this

average masks significant differences between EU Member States, with hourly labour costs ranging between EUR 4.08 and EUR 41.31.

Labour costs are made up of costs for wages and salaries plus non-wage costs such as employers' social contributions. The share of non-wage costs for the whole economy was 24.0 % in the EU-28, while it was 26.0 % in the euro area.

Low-wage earners are defined as those employees earning two thirds or less of the national median gross hourly earnings in a particular country. In 2010, 16.9 % of employees were low wage earners in the EU-27, whereas the proportion was 14.7 % in the euro area (EA-17).

**Figure 5.3: Estimated hourly labour costs, 2015**  
(EUR)



Note: Enterprises with 10 or more employees. NACE Rev. 2 Sections B to S excluding O.  
Provisional data.

Source: Eurostat (online data code: [lc\\_lci\\_lev](#))

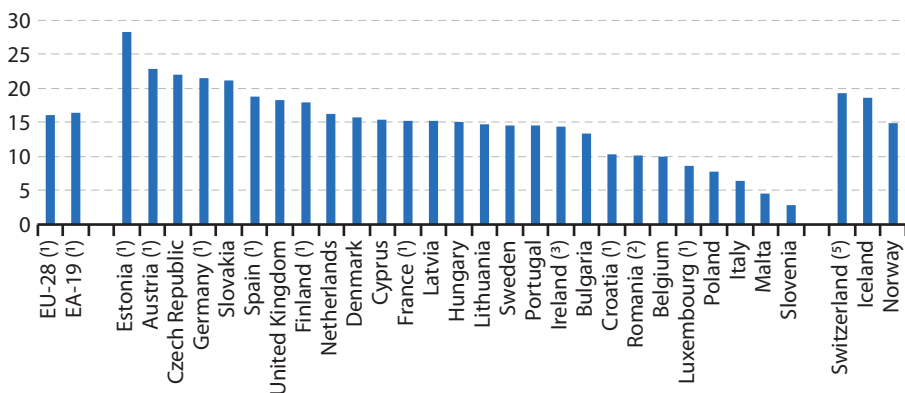
Despite some convergence, there remains a substantial difference between the average earnings of men and women in the EU, a concept commonly known as the gender pay gap. In 2014, in the EU-28 as a whole, women were paid, on average, 16.1 % less than men. The smallest differences in average pay between the sexes were found in Slovenia, Malta, Italy, Poland, Luxembourg and Belgium (less than 10.0 % difference). The biggest gender pay gaps were identified in Estonia (28.3%), Austria (22.9%), the

Czech Republic (22.1 %), Germany (21.6 %) and Slovakia (21.1 %).

Various effects may contribute to these gender pay gaps, such as: differences in labour force participation rates, differences in the occupations and activities that tend to be male- or female-dominated, differences in the degrees to which men and women work on a part-time basis, as well as the attitudes of personnel departments within private and public bodies towards career development and unpaid and/or maternity leave.

**Figure 5.4: Gender pay gap, 2014**

(% difference between average gross hourly earnings of male and female employees, as % of male gross earnings, unadjusted form)



Note: Enterprises with 10 or more employees. NACE Rev. 2 Sections B to S excluding O. Greece: not available.

(1) Provisional.

(2) Estimate.

(3) 2012. Provisional.

(4) 2013.

Source: Eurostat (online data code: [tsdsc340](#))





## 5.4 Minimum wages

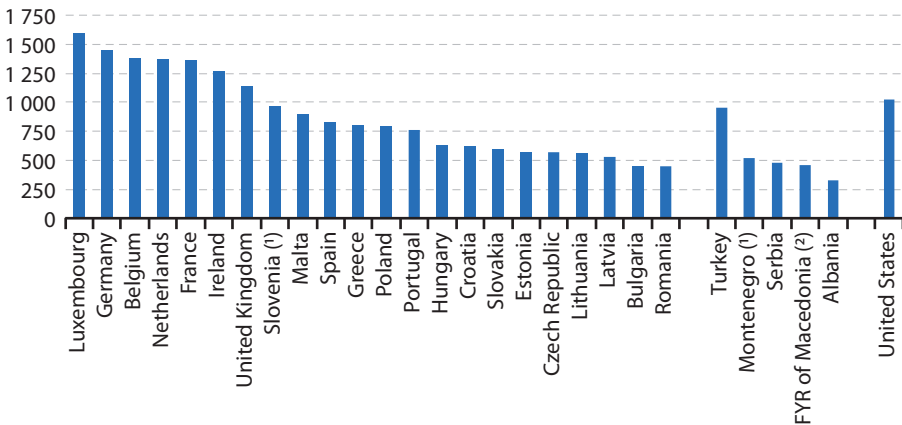
In January 2016, 22 out of the 28 EU Member States (Denmark, Italy, Cyprus, Austria, Finland and Sweden were the exceptions) had a national minimum wage. As of 1 January 2016, monthly minimum wages varied widely, from EUR 215 in Bulgaria to EUR 1 923 in Luxembourg.

As might be expected, adjusting for differences in price levels reduces the variation between countries. The disparities in minimum wage rates between the EU Member States were reduced from a ratio of 1:9 in euro terms to a ratio of

1:4 in PPS terms. Across the EU Member States, monthly minimum wages ranged from 445 PPS in Romania to 1 597 PPS in Luxembourg.

In 2014, the level of gross minimum wages across the EU Member States varied from 33 % to just over 50 % of average gross monthly earnings for those persons working in industry, construction or services (activities of households as employers and extra-territorial organisations and bodies are excluded) as covered by NACE Rev. 2 Sections B–S.

**Figure 5.5: Minimum wages, January 2016**  
(PPS per month)



Note: Estimates. Denmark, Italy, Cyprus, Austria, Finland and Sweden: no national minimum wage.

Source: Eurostat (online data code: [earn\\_mw\\_cur](#))

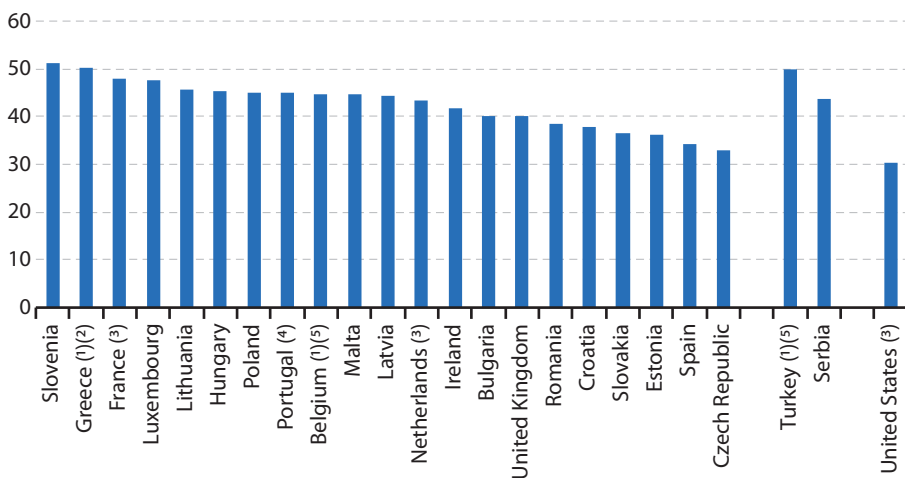
(1) July 2015.

(2) January 2015.

The level of minimum wages in relation to the mean value of average gross monthly earnings was highest in Slovenia (51.3 %, 2011) and Turkey (50.0 %, 2010). At the lower end

of the ranking, the United States (2013 data), the Czech Republic and Spain each reported that the level of their minimum wage was less than 35 % of average gross monthly earnings.

**Figure 5.6: Minimum wages as a proportion of the mean value of average gross monthly earnings, 2014**  
(%)



Note: NACE Rev. 2 Sections B–S. Denmark, Germany, Italy, Cyprus, Austria, Finland and Sweden: no national minimum wage in 2014.

<sup>(1)</sup> Excluding NACE Rev. 2 Section O.

<sup>(2)</sup> 2011.

<sup>(3)</sup> 2013.

<sup>(4)</sup> Excluding NACE Rev. 2 Sections O–Q.

<sup>(5)</sup> 2010.

Source: Eurostat (online data code: [earn\\_mw\\_avgr2](#))

## 5.5 Job vacancies

EU policies in the area of job vacancies aim to improve the functioning of the labour market by trying to help to match supply and demand more closely.

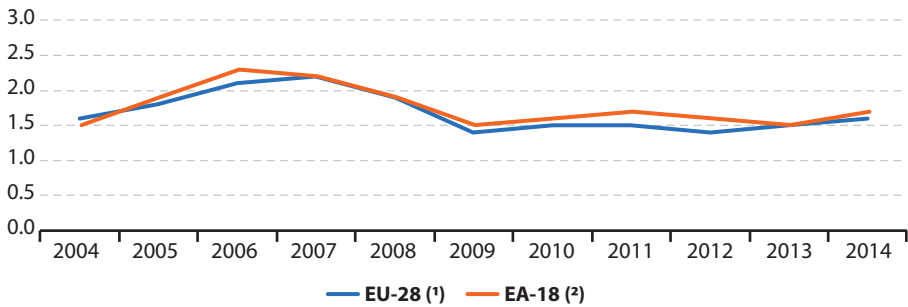
There was an upward development in the annual job vacancy rate (the percentage of posts that are vacant) in the EU-27 from 2003 to 2007, with the rate peaking at 2.2% at the end of this period. Thereafter, the job vacancy rate contracted in successive years: it fell to 1.9% in 2008 and the

EU-28 job vacancy rate fell to a historic low of 1.4% in 2009 (at the height of the global financial and economic crisis). Since 2009 the rate has been relatively stable. In 2010 there was a slight recovery, as the EU-28 <sup>(1)</sup> job vacancy rate stood at 1.4% and the same rate was registered in 2011. In 2012, the rate dipped down to 1.4% before increasing by 0.1 percentage points in each of the next two years to reach 1.6% in 2014, its highest rate since 2008.

<sup>(1)</sup> Note that there is a break in the series, with all data before 2009 relating to the EU-27, while the information from 2009 onwards concerns the EU-28. The difference between the rates of the two aggregates was negligible.

**Figure 5.7: Job vacancy rate, 2004–14**

(%)



Note: 2004–08: NACE Rev. 1.1 Sections A to O. Since 2009: NACE Rev. 2 Sections B to S. 2008–2014, provisional.

(1) 2004–08: EU-27.

(2) 2004–08: EA-16.

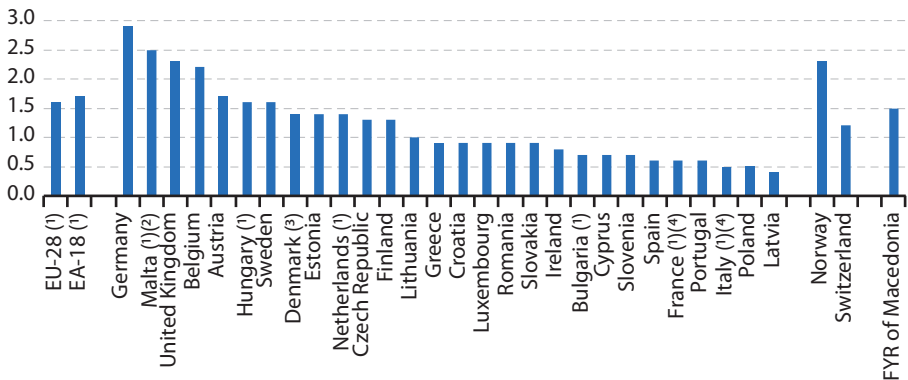
Source: Eurostat (online data codes: jvs\_a\_nace1 and jvs\_a\_nace2)

Among the EU Member States, the annual job vacancy rate in 2014 was highest in Germany (2.9%), Malta (2.5 %) (2), the United Kingdom (2.3%) and Belgium (2.2%). The job vacancy rate

was lower than 1.0% in 15 out of 28 EU Member States in 2014, with the lowest rate recorded in Latvia (0.4%).

**Figure 5.8: Job vacancy rate, 2014**

(%)



Note: NACE Rev. 2 Sections B to S.

(2) Units with 10 or more employees.

(1) Provisional.

(3) NACE Rev. 2 Sections B to N.

(4) Business units with 10 or more employees.

Source: Eurostat (online data code: jvs\_a\_nace2)

(2) In Malta, job vacancies do not cover the whole economy; only units with 10 employees or more are surveyed.

# 6

## Economy and finance



## Introduction

In 2014, the European Commission set out a list of 10 key priorities. Three of these were of particular relevance for economic statistics, namely: the top priority to boost jobs, growth and investment; the EU's internal market; and economic and monetary union.

It is envisaged that the European Commission's jobs, growth and investment package will focus on cutting regulation, making smarter use of existing financial resources and making flexible use of public funds in order to provide up to EUR 300 billion in additional private and public investment over three years. This investment should be targeted towards: infrastructure; education, research and innovation; renewable energy and energy efficiency; youth employment.

The internal market is seen as the best asset for meeting the challenges of globalisation. Strengthening the industrial base of the economy in the EU — by bringing industry's share of GDP in the EU back to 20% by 2020 — is intended to ensure that Europe maintains its

global leadership in strategic sectors with high value jobs. Among the objectives for this priority is creating a capital markets union, intended to make it easier for small businesses to raise money and make Europe a more attractive place for investment.

Concerning economic and monetary union, the European Commission's objectives are to: make decisions about support for struggling euro area countries more democratically legitimate; evaluate support and reform programmes not only for financial sustainability but also for their impact on citizens; review the fiscal and macroeconomic surveillance legislation and budgetary rules; encourage further structural reforms in euro area countries.

Delivering a deeper and fairer economic and monetary union was one of the priorities and in June 2015 a report by the presidents of the European Council, the European Parliament, the European Commission, the European Central Bank and the Eurogroup was presented providing a plan how to achieve this.

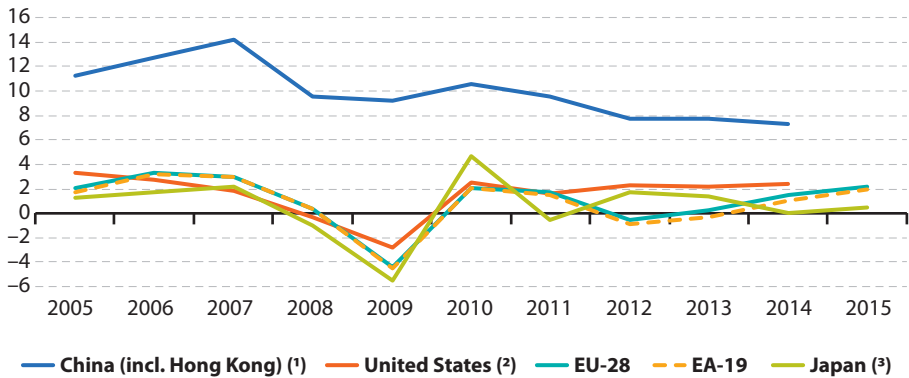
## 6.1 National accounts — GDP

National accounts are the source for a multitude of well-known economic indicators which are presented in this chapter. Gross domestic product (GDP) is the most frequently used measure for the overall size of an economy, while derived indicators such as GDP per capita — for example, in euro or adjusted for differences in price levels — are widely used for a comparison of living standards, or to monitor the process of convergence across the EU.

The global financial and economic crisis resulted in a severe recession in the EU, Japan and the United States in 2009, followed by a recovery in 2010. The crisis was already apparent in 2008 when there had been a considerable reduction in the rate of increase for GDP in the EU-28 and this was followed by a fall in real GDP of 4.4 % in 2009. The recovery in the EU-28 saw the volume index of GDP based on chain linked volumes increase by 2.1 % in 2010 and there was a further gain of



**Figure 6.1: Real GDP growth, 2005–15**  
(% change compared with the previous year)



Note: Based on chain linked volumes.

(¹) 2005–10: estimates. 2015: not available.

(²) 2014: estimate. 2015: not available.

(³) 2015: estimate.

Source: Eurostat (online data code: [naida\\_10\\_gdp](#)), OECD and World Bank

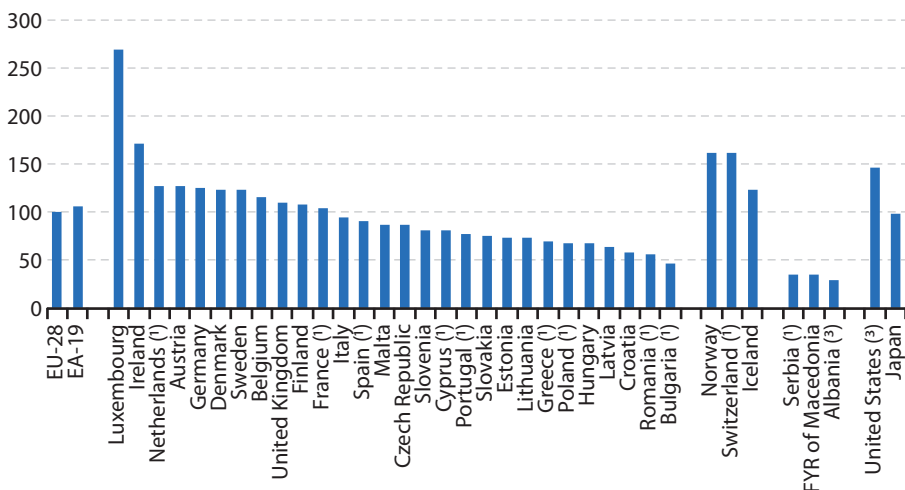
1.7 % in 2011; subsequently real GDP contracted 0.5 % in 2012, before progressively larger positive rates of change were recorded in 2013 (0.2 %), 2014 (1.5 %) and 2015 (2.2 %). In the euro area (EA-19) the corresponding rates of change were very similar to those in the EU-28 through to 2010, while the growth recorded in 2011 was slightly weaker (1.5 %) and the contraction in 2012 was stronger (– 0.9 %) and was sustained into 2013 (– 0.3 %). In 2014 and 2015, real GDP growth in the euro area was somewhat weaker than that in the EU-28 as a whole.

To evaluate standards of living, it is commonplace to use GDP per capita in PPS terms, in other words, adjusted for the size of an economy in terms of its population and also for differences in price levels across countries. The average GDP

per capita within the EU-28 in 2015 was PPS 28.8 thousand, which was above the previous peak (PPS 26.1 thousand) reached in 2008 prior to the effects of the financial and economic crisis being felt. The relative position of individual countries can be expressed through a comparison with this average, with the EU-28 value set to equal 100. The highest value among the EU Member States was recorded for Luxembourg, where GDP per capita in PPS was about 2.7 times the EU-28 average in 2015 (which is partly explained by the importance of cross-border workers from Belgium, France and Germany). On the other hand, GDP per capita in PPS was less than half the EU-28 average in Bulgaria in 2015.

**Figure 6.2: GDP per capita at current market prices, 2015**

(EU-28 = 100; based on PPS per inhabitant)



(1) 2015: provisional.

(2) 2013 instead of 2015.

(3) 2014 instead of 2015.

Source: Eurostat (online data codes: [naida\\_10\\_gdp](#), [nama\\_10\\_pc](#) and [naida\\_10\\_pe](#)), OECD and World Bank

## 6.2 Sector accounts

Economic developments in production, income generation and (re)distribution, consumption and investment may be better understood when analysed by institutional sector. In particular, the EU's sector accounts provide several key indicators for households and non-financial corporations, like the household saving rate and business profit share.

The household saving rate in 2014 was 2.2 percentage points higher in the 19 member euro area (EA-19; 12.5 %) than in the EU-28 (10.3 %). This gap is, at least in part, explained by the relatively high saving rates in Germany (16.9 %), Slovenia and France (both 14.1 %).

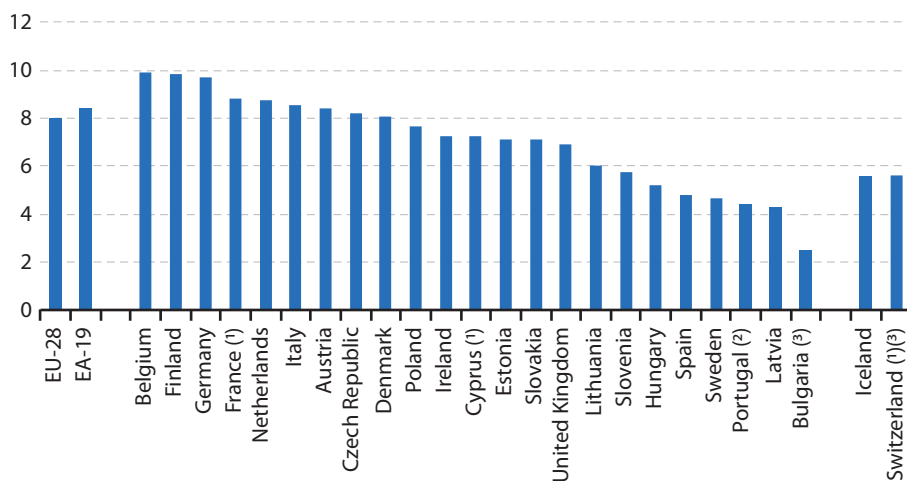
In 2014, the household investment rate was 8.0 % in the EU-28. This rate ranged (among the 23 EU Member States for which data are available) from 9.9 % in Belgium and Finland and 9.7 % in Germany and down to 2.5 % in Bulgaria (2013 data).

In 2014, the household debt-to-income ratio in the euro area was 94.7 % (no data available for the EU-28). It should be borne in mind that high household debt may to some extent mirror high levels of financial assets. It may also mirror the ownership of non-financial assets, such as dwellings, or be impacted by national provisions that foster borrowing (for example, the deduction of interest from taxes).



**Figure 6.3: Household investment rate (gross), 2014**

(%)



Note: Including non-profit institutions serving households. Greece, Croatia, Luxembourg, Malta and Romania: not available.

<sup>(1)</sup> Provisional.

<sup>(2)</sup> Estimate.

<sup>(3)</sup> 2013.

Source: Eurostat (online data code: [nasa\\_10\\_ki](#))

The business investment rate (for non-financial corporations) in 2014 was 21.7 % in both the EU-28 and the euro area. The highest business investment rates among the 26 EU Member States (for which data are available) were recorded in Bulgaria (2013 data), the Czech Republic, Romania, Slovakia, Sweden, Spain, Latvia, Croatia, Belgium, Estonia and Austria, all above 25.0 %. The lowest rates were recorded in Greece (15.1 %) and Cyprus (10.5 %).

The profit share of non-financial corporations was 39.3 % in the EU-28 in 2014 and 0.5 percentage points higher for the euro area. The lowest profit shares among the 27 EU Member States for which data are available were recorded in Croatia (29.7 %) and France (30.4 %), while in Ireland the share rose to a high of 60.7 %.



**Table 6.1: Key ratios of sector accounts, non-financial corporations, 2014**

	Investment rate	Profit share	Investment rate	Profit share
	(%)		Change from 2013 (percentage points)	
<b>EU-28</b>	21.7	39.3	0.3	0.0
<b>EA-19</b>	21.7	39.8	0.3	0.0
<b>Belgium</b>	26.0	40.6	1.5	0.4
<b>Bulgaria (*)</b>	28.8	48.6	:	:
<b>Czech Republic</b>	28.6	51.2	-1.9	2.7
<b>Denmark</b>	20.5	39.5	-0.1	-1.3
<b>Germany</b>	19.7	41.3	0.4	-0.3
<b>Estonia</b>	25.9	46.9	-1.9	-1.8
<b>Ireland</b>	23.9	60.7	2.5	-1.1
<b>Greece</b>	15.1	55.8	1.0	-4.0
<b>Spain</b>	26.7	42.9	1.5	-0.4
<b>France</b>	22.8	30.4	0.2	0.4
<b>Croatia</b>	26.0	29.7	-0.1	-2.2
<b>Italy</b>	18.7	40.7	-0.7	-0.4
<b>Cyprus</b>	10.5	46.1	-3.5	-1.8
<b>Latvia</b>	26.1	49.5	-0.4	-3.1
<b>Lithuania</b>	17.5	56.7	0.5	-0.8
<b>Luxembourg</b>	:	:	:	:
<b>Hungary</b>	24.8	48.3	0.4	1.2
<b>Malta</b>	:	53.7	:	0.7
<b>Netherlands</b>	16.4	41.1	-0.1	0.0
<b>Austria</b>	25.4	40.7	0.3	-1.0
<b>Poland</b>	22.1	51.0	0.5	0.6
<b>Portugal</b>	20.1	41.6	0.6	-0.3
<b>Romania</b>	27.2	56.9	-1.9	-0.2
<b>Slovenia</b>	20.1	35.5	-2.0	0.9
<b>Slovakia</b>	27.2	51.7	-0.4	-1.5
<b>Finland</b>	20.0	40.3	-0.6	0.2
<b>Sweden</b>	27.1	35.9	1.6	0.5
<b>United Kingdom</b>	16.9	36.3	0.1	1.4
<b>Iceland</b>	19.6	40.5	2.0	-1.6
<b>Norway</b>	21.5	53.3	0.0	-1.2
<b>Switzerland (*)</b>	25.6	31.5	:	:

(\*) 2013.

Source: Eurostat (online data code: [nasa\\_10\\_ki](#))

## 6.3 Government finances

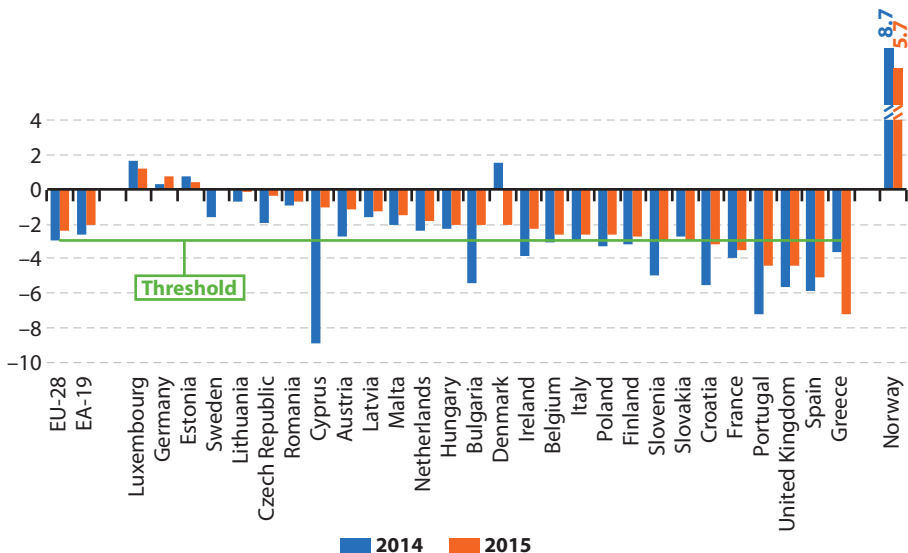
These statistics are crucial indicators for determining the health of the economies of the EU's Member States. Under the terms of the EU's Stability and Growth Pact (SGP), Member States pledged to keep their deficits and debt below certain limits: a Member State's government deficit may not exceed – 3 % of its gross domestic product (GDP), while its debt may not exceed 60 % of GDP. If a Member State does not respect these limits, the so-called excessive deficit procedure (EDP) is triggered.

In the EU-28 the government deficit-to-GDP ratio decreased from – 3.0 % in 2014 to – 2.4 % in 2015

and in the EA-19 it decreased from – 2.6 % to – 2.1 %. Three EU Member States — Luxembourg, Germany and Estonia — registered government surpluses in 2015. Sweden reported a balance with neither a surplus nor a deficit (0.0 %). There were 17 EU Member States, namely Lithuania, the Czech Republic, Romania, Cyprus, Austria, Latvia, Malta, the Netherlands, Hungary, Bulgaria, Denmark, Ireland, Belgium, Italy, Poland, Finland and Slovenia which recorded deficits in 2015 that were lower than – 3.0 % of GDP.

**Figure 6.4: Public balance, 2014 and 2015**

(net borrowing or lending of consolidated general government sector, % of GDP)



Note: Data extracted on 21.04.2016.

Source: Eurostat (online data code: [tec00127](#))

In the EU-28 the government debt-to-GDP ratio decreased from 86.8% at the end of 2014 to 85.2% at the end of 2015, and in the EA-19 from 92.0% to 90.7%. A total of 17 EU Member States reported a debt ratio above 60% of GDP in 2015.

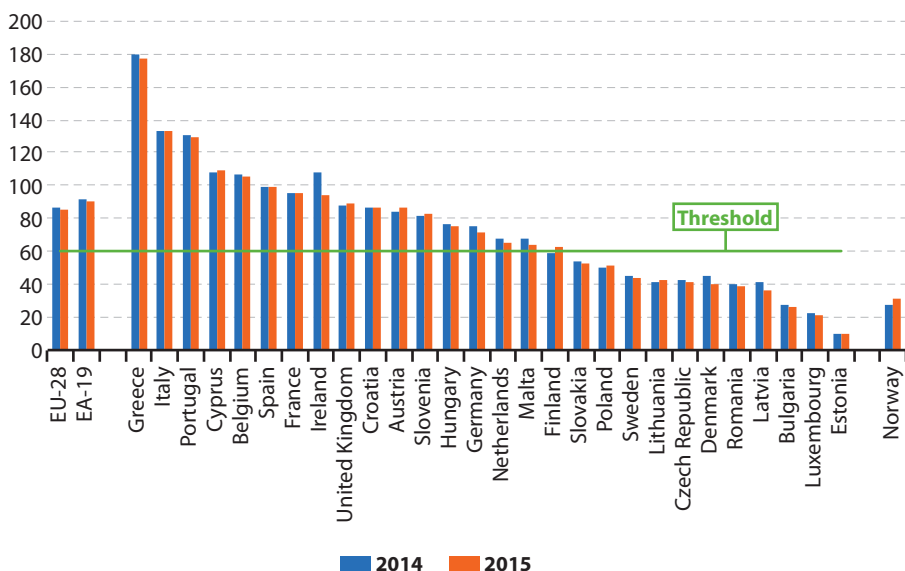
At the end of 2015, the highest debt-to-GDP ratios were registered by Greece (176.9%), Italy (132.7%), Portugal (129.0%), Cyprus (108.9%) and Belgium (106.0%), while the lowest ratios of government debt-to-GDP were recorded in Estonia (9.7%), Luxembourg (21.4%) and Bulgaria (26.7%).

The importance of the general government sector in the economy may be measured in terms of total general government revenue and expenditure as a percentage of GDP. In the EU-28,

total government revenue in 2015 amounted to 45.0% of GDP (down from 45.2% in 2014), and expenditure amounted to 47.4% of GDP (down from 48.2% in 2014). In the EA-19, total general government expenditure amounted to 48.6% of GDP in 2015 (down from 49.3% in 2014) and total revenue to 46.6% of GDP (down from 46.8% in 2014).

In absolute terms, general government total expenditure grew at a slow pace over the period from 2005 to 2015 in both the EU-28 and the EA-19 (except for a slight decrease in the EA-19 between 2010 and 2011). Revenue grew at a steadier pace throughout the period from 2009 to 2015, thereby leading to a decrease in the deficit. However, between 2008 and 2009, general government revenues fell in both areas.

**Figure 6.5: General government debt, 2014 and 2015**  
(general government consolidated gross debt, % of GDP)



Note: Data extracted on 21.04.2016.

Source: Eurostat (online data code: tsdde410)

## 6.4 Exchange rates and interest rates

This chapter starts by considering the development of exchange rates across the EU, as well as exchange rate fluctuations between the euro and several currencies of non-member countries, in particular the Japanese yen, the Swiss franc and the United States dollar (all of which are important reserve currencies). The second half of the chapter examines interest rates — in other words, the cost of borrowing and/or lending money. At the macroeconomic level, key interest rates are generally set by central banks, as a primary tool for monetary policy with the goal of maintaining price stability and controlling inflation.

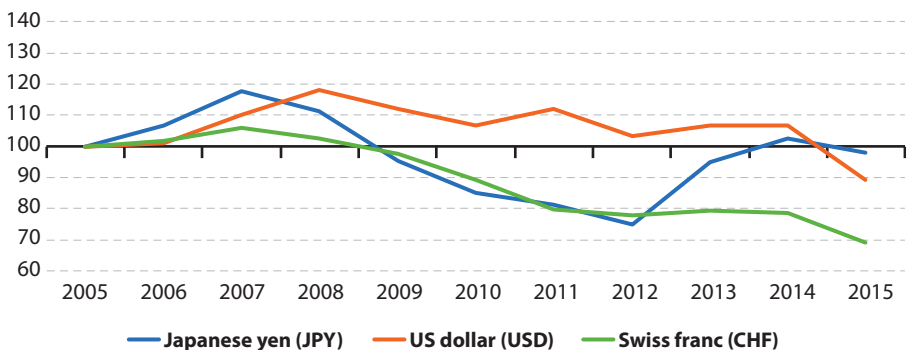
The indices presented in the various parts of Figure 6.6 start in 2005, towards the end of a period when the euro was still appreciating from historically low levels against many other currencies.

There was a marked appreciation in the value of the euro compared with the Japanese

yen through until 2007 (8.5 % per year) after which the euro depreciated rapidly, falling, on average, by 8.7 % per year between 2007 and 2012. Initially, a similar pattern was observed against the United States dollar, with the euro appreciating 5.7 % per year until 2008. Thereafter, a more gentle but less regular depreciation was observed through to 2014 (– 1.7 % per year), followed by a sharper depreciation (– 16.5 %) in 2015, such that the euro was worth 10.8 % less against the dollar in 2015 than it had been in 2005. By contrast, the euro appreciated less against the Swiss franc, increasing by 3.0 % per year between 2005 and 2007. Between 2007 and 2011, the euro depreciated at an accelerating pace against the Swiss franc.

The stabilisation that started in September 2011 resulted from the Swiss central bank introducing a minimum exchange rate of CHF 1.20 = EUR 1.00, effectively capping the Swiss franc's appreciation.

**Figure 6.6: Exchange rates against the euro, 2005–15**  
(2005 = 100)



Note: A reduction in the value of the index shows an appreciation in the value of the foreign currency and a depreciation in the value of the euro. Note that the y-axis does not start at 0.

Source: Eurostat (online data code: [ert\\_bil\\_eur\\_a](#))

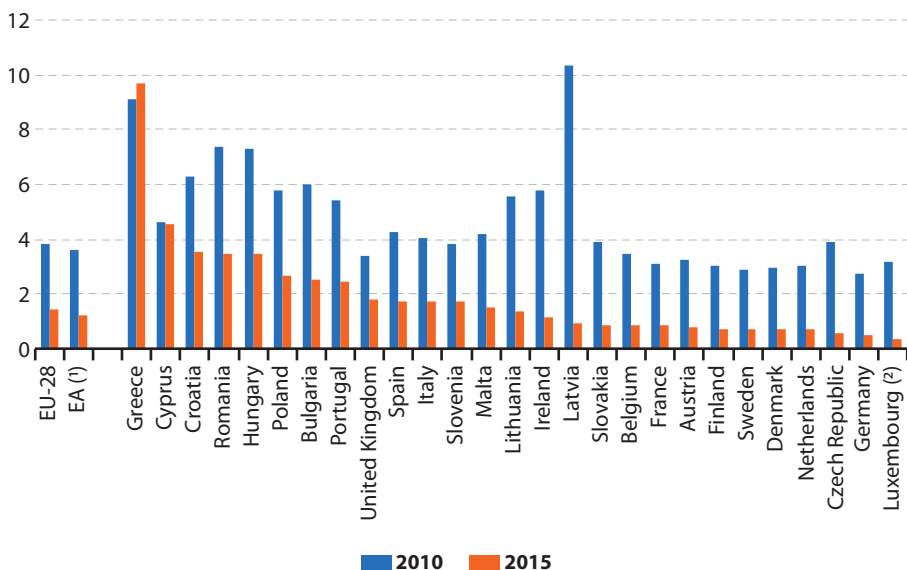
This minimum exchange rate was maintained until 15 January 2015: after its removal the Swiss Franc appreciated 30 % in inter-day trading and closed up 23 %; overall, the euro depreciated 12.1 % against the Swiss franc in 2015 compared with 2014, such that the euro had depreciated 31.0 % overall between 2005 and 2015.

With regard to interest rates, the overall pattern in bond yields for the EU-28 (weighted) average was that yields were lower in 2015 than in 2010, a time when yields had been increasing in some countries due to issues linked to financing sovereign debt. In the EU-28, bond yields more than halved from 3.82 % to 1.45 %, with a similar fall of just under 2.4 percentage points observed

in the euro area. In fact, yields fell by more than 40 % in all EU Member States (no data available for Estonia), except for two: in Cyprus the yield in 2015 was 4.54 %, slightly lower than the yield of 4.60 % in 2010; in Greece the yield in 2015 was 9.67 %, slightly higher than the 9.09 % yield in 2010. As well as recording the only increase in bond yields between 2010 and 2015, Greece's yield in 2015 was the highest among the EU Member States, more than double the yield in Cyprus, which was the next highest. A total of 22 EU Member States recorded bond yields that were below 3.00 % in 2015, of which 19 were below 2.00 % and 12 below 1.00 %.

**Figure 6.7: EMU convergence criterion bond yields (Maastricht criterion), 2010 and 2015**

(%)



Note: Estonia: not available.

(1) 2010: EA-16. 2015: EA-19.

Source: Eurostat (online data code: [tec00097](#)), ECB

(2) The indicator for Luxembourg is based on a basket of long-term bonds, which have an average residual maturity close to 10 years; the bonds are issued by a private credit institution.



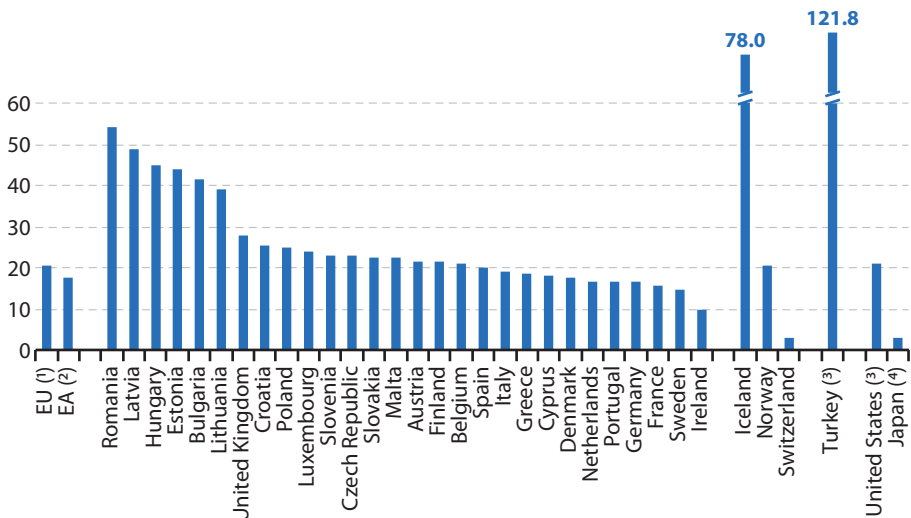
## 6.5 Consumer prices — inflation and comparative price levels

Inflation is the increase in the general level of prices of goods and services in an economy; the reverse situation is deflation when the general level of prices falls. Inflation and deflation are usually measured by consumer price indices or retail price indices. Within the EU, a specific consumer price index has been developed — the harmonised index of consumer prices (HICP). Other factors (such as wages) being equal, inflation in an economy means that the purchasing power of consumers falls as they are

no longer able to purchase the same amount of goods and services with the same amount of money.

After relatively sharp movements during the period 2008–12, the rate at which prices were rising slowed to 1.5 % in 2013, 0.5 % in 2014 and in 2015 there was no change (0.0%); these last two rates — for 2014 and 2015 — were the lowest inflation rates since records began. Moreover, during several months of 2013, 2014 and 2015 negative inflation rates were recorded.

**Figure 6.8: HICP all-items, inflation rate, 2005–15 (%)**



<sup>(1)</sup> The data refer to the official EU aggregate, its country coverage changes in line with the addition of new EU Member States and integrates them using a chain-linked index formula.

<sup>(2)</sup> The data refer to the official euro area aggregate, its country coverage changes in line with the addition of new EA Member States and integrates them using a chain-linked index formula.

<sup>(3)</sup> Definition differs.

<sup>(4)</sup> National CPI: not strictly comparable with the HICP, 2014 data.

Source: Eurostat (online data codes: [prc\\_hicp\\_a](#) and [prc\\_ipc\\_a](#))

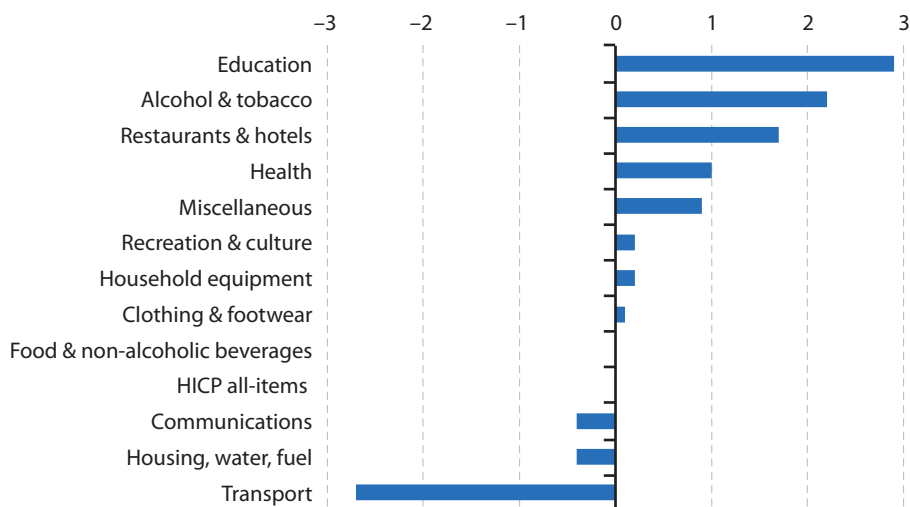
Among EU Member States, Romania registered the biggest increase in the HICP between 2005 and 2015 (an increase of 54.1 %), while Ireland experienced the lowest rise in the same period (9.5 %). The overall change in prices in the EU was an increase of 20.7 %, similar to the change in prices recorded in the United States (21.2 %), while prices rose at a much slower pace in Japan (2.5 %; 2005–14).

As regards the main components of the HICP, energy prices in the EU rose at the highest rate (an increase of 39.6 %) between 2005 and 2015, despite the drops recorded in 2014 and 2015, while non-energy industrial goods

prices increased by 4.6 % over the same period. The rates for food (30.7 %) and for services (23.6 %) increased at a slightly faster pace when compared with the all-items index (20.9 %).

Looking in more detail, the prices of education and alcoholic beverages and tobacco in the EU rose at the highest rates (increases of 51.7 % and 50.7 % respectively) between 2005 and 2015. Over the same 10-year period the price of communications fell by 13.5 %. In 2015 (compared with 2014), prices fell not only for communications (– 0.4 %), but also for housing, water and fuel (– 0.4 %) and transport (– 2.7 %).

**Figure 6.9: HICP main headings, annual average inflation rates, EU-28, 2015**  
(%)



Source: Eurostat (online data code: [prc\\_hicp\\_aind](#))



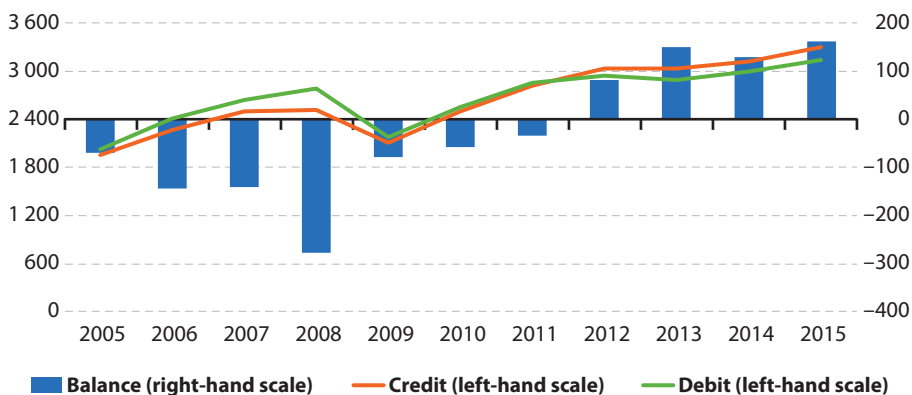
## 6.6 Balance of payments

The balance of payments records all economic transactions between resident and non-resident entities during a given period. The balance of the current and capital accounts balance determine the exposure of an economy to the rest of the world, whereas the financial account explains how it is financed.

The current account surplus of the EU-28 was EUR 161.6 billion in 2015, corresponding to 1.1 % of gross domestic product (GDP). By contrast, in 2014 the current account surplus was EUR 129.6

billion. The latest developments for the EU-28's current account show a continuation of the pattern established since 2008: while the current account deficit peaked in 2008 at 2.1 % of GDP, it gradually diminished, and in 2012 turned into a surplus equivalent to 0.6 % of GDP; the surplus was equivalent to 1.1 % of GDP in 2013 and 0.9 % in 2014. The current account surplus for 2015 was based on deficits for primary and secondary incomes (0.1 % and 0.5 % of GDP) and surpluses in the current accounts for goods (0.7 % of GDP) and services (1.0 %)

**Figure 6.10: Current account transactions, EU-28, 2005–15**  
(billion EUR)



Note: EU-28 vis-à-vis extra-EU-28.

Source: Eurostat (online data code: [bop\\_eu6\\_q](#))

Among the partner countries and regions, the EU-28's current account deficit was largest with China, standing at EUR 145.7 billion in 2015, followed by Russia (EUR 33.2 billion). The highest current account surpluses were recorded

with the United States (EUR 101.0 billion) and Switzerland (EUR 70.6 billion), while surpluses were also achieved with Brazil, Hong Kong, Canada and India.



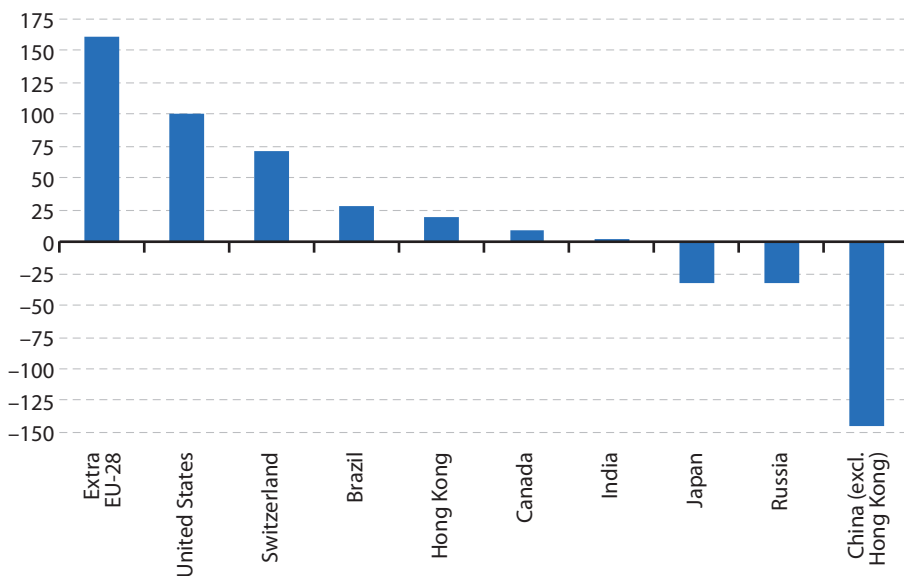
Traditionally the capital account of the EU-28 has recorded a deficit, with considerable capital transfers to the rest of the world. In 2015, this trend was continued with a capital account deficit of EUR 45.0 billion, equivalent to 0.3 % of GDP, which was mainly the result of a large capital account deficit for the Netherlands (EUR 35.2 billion).

The net financial account is interpreted as net lending to the rest of the world when positive, and net borrowing from the rest of the world when negative. A total of 23 EU Member States were net lenders to the rest of the world in 2015, showing surpluses in their net financial accounts,

with the highest value relative to GDP reported by Malta (10.4 % of GDP). Five EU Member States appeared to be net borrowers, most prominently the United Kingdom and France.

In absolute terms, the largest net lender, by far, in the EU-28 was Germany, with net lending of EUR 232.2 billion in 2015. The euro area was also a net lender to the rest of the world in 2015 with EUR 306.6 billion of net lending, equivalent to 2.9 % of GDP. The EU-28 remained a significant net lender of capital (such as loans) to the rest of the world in 2015 (net lending equivalent to 1.7 % of GDP).

**Figure 6.11: Current account balance with selected partners, EU-28, 2015**  
(billion EUR)



Source: Eurostat (online data code: [bop\\_eu6\\_q](#))



## 6.7 Foreign direct investment

After having increased during the years 2009–13 the EU outward flows (Member States' direct investments in countries outside the EU) declined sharply in 2014 and were at their lowest level during the period 2009–14. This big fall was mainly due to large disinvestments in some traditional partner countries — the United States (EUR – 69.8 billion) and Switzerland (EUR – 20 billion).

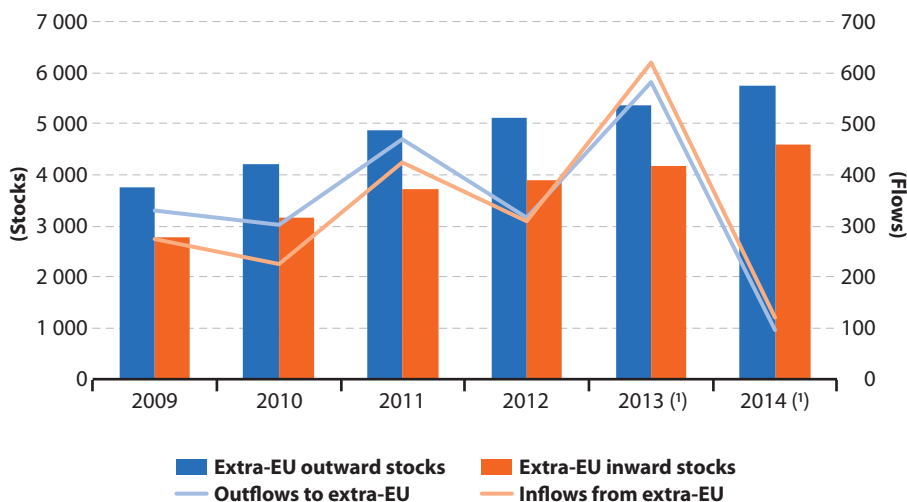
EU Member States' direct investments also fell significantly in Central America, but remained positive at a total of EUR 20.7 billion. This was mainly due to decreased EU FDI activities with offshore financial centres located in this area, where special-purpose entities play an important role. EU Member States' direct investments

increased significantly in Canada from EUR 11.8 billion in 2013 to EUR 23.4 billion in 2014.

Direct investments in EU Member States from non-member countries (inward flows) also fell in 2014, thus mirroring the development for outward flows. Again this was largely due to the flows with relation to the United States changing from EUR 433.4 billion in 2013 to EUR – 20.3 billion in 2014.

Direct investments in the EU also declined from both South America and Asia. Brazil went from direct investments of EUR 14.3 billion in 2013 to EUR 1.0 billion in 2014, while Singapore went from EUR 12.9 billion of investment to EUR – 5.5 billion of disinvestments.

**Figure 6.12: FDI flows and stocks, EU-28, 2009–14**  
(billion EUR)



Note: Different scale on the left and right axis.

<sup>(1)</sup> Based on international standards BPM6 and BD4.

Source: Eurostat (online data codes: [bop\\_fdi\\_main](#), [bop\\_fdi6\\_flow](#) and [bop\\_fdi6\\_pos](#))

Between end 2013 and end 2014, EU-28 outward stocks grew 7.6% and inward stocks grew 9.6%. At the end of 2014, North America had the biggest share (40.2%) of EU-28 FDI stocks abroad. The United States alone accounted for some 34.5% (EUR 1 985 billion) of all EU-28 outward stocks.

European countries outside the EU accounted for 20.6% of EU-28 outward stocks at the end of 2014. Switzerland was the second most important location, accounting for 11.0% of EU-28 outward stocks, its main activity being financial intermediation. At the end of 2014, Brazil was the third main location with a 6% share of EU-28 FDI outward stocks, with Canada in fourth place.

At the end of 2014, the United States held close to 40% of total EU-28 FDI inward stocks from the rest of the world. The United States thus maintained its position as the major holder of FDI stocks in the EU-28, having invested, as of the end of 2013, mostly in the financial services sector, followed by manufacturing; one third of the latter was in the manufacture of petroleum, chemical, pharmaceutical, rubber and plastic products, and another third in the manufacture of food products, beverages and tobacco products.

The figures for 2013 and 2014 have been compiled according to the new international standards (BPM6 and BD4) and therefore they cannot be directly compared with figures for previous years.

**Table 6.2: Top 10 countries as extra EU-28 partners for FDI positions, EU-28, end 2012–14**  
(billion EUR)

	Outward				Inward			
	Value (billion EUR)			Share (%)	Value (billion EUR)			Share (%)
	2012	2013 (!)	2014 (!)		2012	2013 (!)	2014 (!)	
<b>Extra EU-28</b>	5 112.0	5 344.4	5 748.6	100.0	3 905.9	4 179.7	4 582.5	100.0
<b>United States</b>	1 627.8	1 812.6	1 985.3	34.5	1 543.9	1 756.0	1 810.8	39.5
<b>Switzerland</b>	664.8	665.9	632.3	11.0	500.6	484.1	509.4	11.1
<b>Brazil</b>	257.1	278.2	343.6	6.0	81.1	99.4	113.6	2.5
<b>Canada</b>	247.1	234.7	274.7	4.8	135.5	135.5	165.9	3.6
<b>Russia</b>	193.5	189.9	171.5	3.0	75.3	63.5	74.4	1.6
<b>China</b>	120.7	124.9	144.2	2.5	27.4	22.3	20.7	0.5
<b>Mexico</b>	82.4	109.6	119.2	2.1	21.4	23.8	28.3	0.6
<b>Australia</b>	141.0	126.9	115.3	2.0	30.7	24.2	26.4	0.6
<b>Hong Kong</b>	132.1	113.4	106.3	1.8	50.7	57.4	71.2	1.6
<b>Singapore</b>	92.6	91.9	102.9	1.8	47.7	35.7	43.8	1.0

(!) Based on international standards BPM6 and BD4.

Source: Eurostat (online data codes: [bop\\_fdi\\_main](#) and [bop\\_fdi6\\_pos](#))

# 7

## International trade



## Introduction

International trade in goods can be seen as the first step in the process of economic globalisation. From the beginning it has allowed countries to specialise in the production of certain goods while relying on trade to obtain others following their comparative advantages.

Services play a major role in all modern economies: as well as those supplied directly to the households, services such as transport, communications and business services provide vital support to other parts of the economy. Increased international trade in services and the widespread availability of services may boost economic growth by improving the performance of other activities, since services can provide key intermediate inputs, especially in an increasingly interlinked and globalised world.

The value of international trade in services is typically less than that in goods. Part of this difference may be due to the nature of some services, for example, the immediacy of the relationship between supplier and consumer means that many services are non-transportable; in other words, they require the physical proximity of the service provider and the consumer.

The EU has a common international trade policy, often referred to as the common commercial policy. In other words, the EU acts as a single entity on trade issues, including issues related to the World Trade Organisation (WTO). In these cases, the European Commission negotiates trade agreements and represents Europe's interests on behalf of the EU Member States.

The EU's trade policy aims to make the EU competitive in foreign markets. Being an open economy, the EU seeks to secure improved market access for its industries, services and investments, and to enforce the rules of free and fair trade. A coordinated trade policy takes on even greater importance in an era of globalisation, where economies and borders have opened-up more and more, leading to an increase in trade and capital movements, and the spread of information, knowledge and technology, often accompanied by deregulation. The economic impact of globalisation on the EU is felt through trade in goods and services, as well as through financial flows and the movement of persons linked to cross-border economic activity.

## 7.1 International trade in goods

EU-28 international trade in goods with the rest of the world (the sum of extra-EU exports and imports) was valued at EUR 3 517 billion in 2015. Both imports and exports increased in comparison with 2014, but this increase was larger for exports (EUR 88 billion) than for imports (EUR 35 billion). As a result, the EU-28's trade surplus increased from EUR 11 billion in 2014 to EUR 64 billion in 2015.

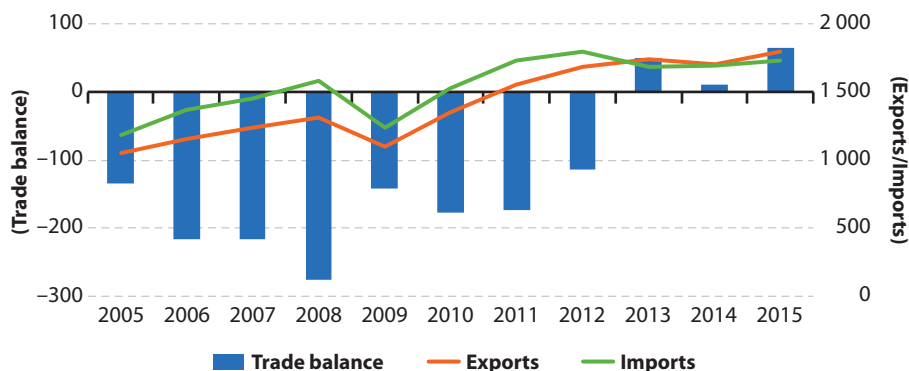
After experiencing a sharp fall in both exports and imports in 2009, the EU-28 saw its exports

rise 58.7 % over four years to a record level of EUR 1 737 billion in 2013. Exports then fell 1.9 % in 2014 before rising 5.1 % to a new peak in 2015 of EUR 1 791 billion. By contrast, the increase in imports after 2009 was 45.5 % over three years to peak in 2012 at EUR 1 798 billion. Imports fell 6.2 % in 2013 before stabilising (up 0.3 %) in 2014 and increasing by 2.0 % in 2015, still below the value reached in 2012.

The United States remained, by far, the most common destination for goods exported from



**Figure 7.1: Development of international trade, EU-28, 2005–15**  
(billion EUR)



Note: External trade flows with extra EU-28. Different scale on the left and right axis.

Source: Eurostat (online data code: [ext\\_it\\_intertrd](#))

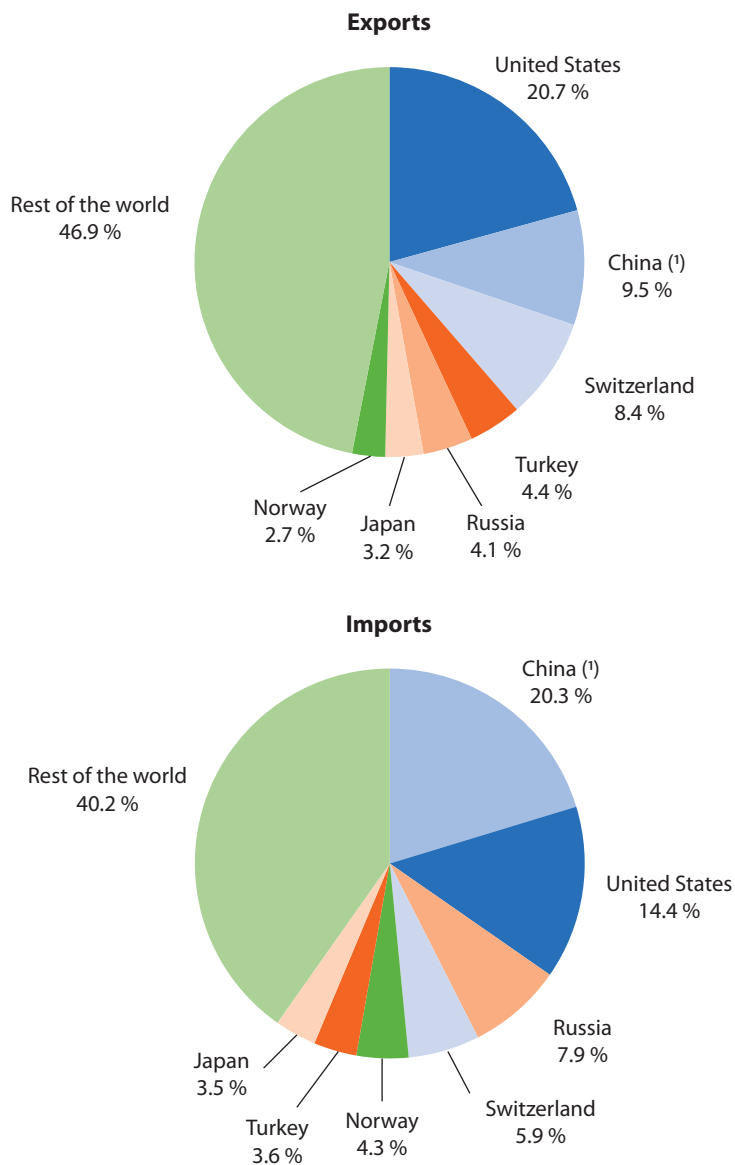
the EU-28 in 2015, although the share of EU-28 exports destined for the United States fell from 28.0 % of the total in 2002 to 16.7 % in 2013 before recovering to 20.7 % by 2015. China was the second most important destination market for EU-28 exports in 2015 (9.5 % of the EU-28 total), followed by Switzerland (8.4 %). In 2015, Turkey overtook Russia to be the fourth largest destination for EU-28 exports of goods. The seven largest destination markets for EU-28 exports of goods — China, the United States, Russia, Switzerland, Norway, Turkey and Japan — accounted for more than half (53.1 %) of all EU-28 exports of goods.

The seven largest suppliers of EU-28 imports of goods were the same countries as the seven largest destination markets for EU-28 exports, although their order was slightly different. These seven countries accounted for a larger share of the EU-28's imports of goods than their share of EU-28 exports of goods: nearly three fifths (59.8 %) of all imports of goods into the EU-28 came from these seven countries. China was the origin for more than one fifth (20.3 %) of

all imports into the EU-28 in 2015 and was the largest supplier of goods imported into the EU-28. The United States' share of EU-28 imports of goods (14.4 %) was around 6 percentage points lower than that of China, while the share of Russia (7.9 %), which was the third largest supplier of goods to the EU-28, was a further 6 percentage points smaller. In 2015, Turkey overtook Japan to be the sixth largest supplier of EU-28 imports of goods.

Between 2010 and 2015, the value of the EU-28's imports and exports increased for all product groups, except for the imports of mineral fuels and lubricant products which fell 14.7 %. The highest growth rate for exports was reported for food, drinks and tobacco for which an increase of 49.5 % was observed. The imports of these products also increased strongly (up 33.8 %), but this growth was surpassed by chemicals and related products where growth of 34.8 % was recorded.

**Figure 7.2:** Main trading partners for exports and imports, EU-28, 2015  
(% share of extra EU-28 exports and imports)



(¹) Excluding Hong Kong.

Source: Eurostat (online data code: [ext\\_lt\\_maineu](#))

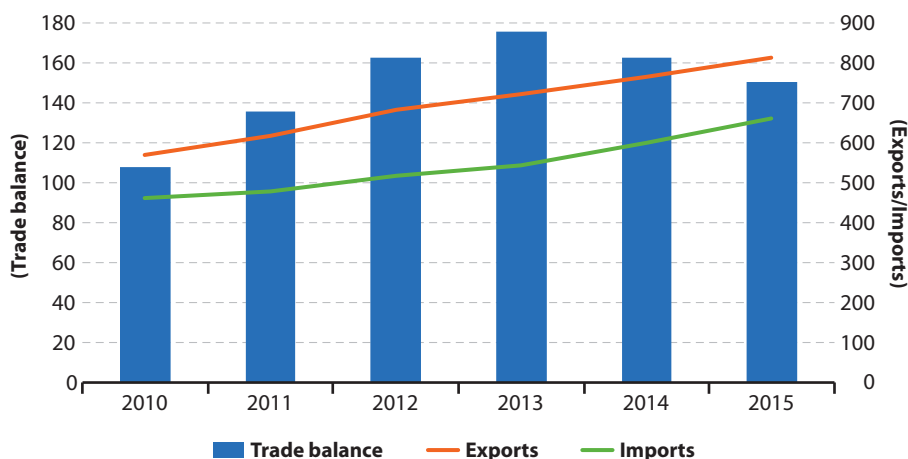


## 7.2 International trade in services

The EU-28's exports of services to non-member countries increased from EUR 569 billion in 2010 to EUR 811 billion in 2015, whereas EU-28 imports of services from non-member countries during the same period progressed from EUR 462 billion to EUR 660 billion, resulting in the surplus for trade in services increasing from EUR 108 billion to EUR 151 billion.

From 2010 onwards, the combined exports and imports of services traded with non-member countries increased at a relatively rapid pace, with growth peaking at 10.7 % in 2015 (when compared with 2014).

**Figure 7.3: International trade in services with non-member countries (extra-EU), EU-28, 2010–15**  
(billion EUR)



Note: 2015 provisional. Different scale on the left and right axis.

Source: Eurostat (online data code: [bop\\_its6\\_tot](#))

In 2015, the United States remained, by far, the largest destination for EU-28 exports of services, with this trade valued at EUR 212 billion, representing more than one quarter (26 %) of all exports to non-member countries. The next largest destinations were Switzerland (14 %), China, Japan (both 4 %), Russia (3 %), Canada, India and Brazil (all 2 %).

The main countries of origin for EU-28 imports of services were the same as the destinations. Again, the United States accounted for the largest value of imported services, some EUR 203 billion which was equivalent to 31 % of the total from non-member countries. The next highest shares were from Switzerland (10 %) and China (4 %).

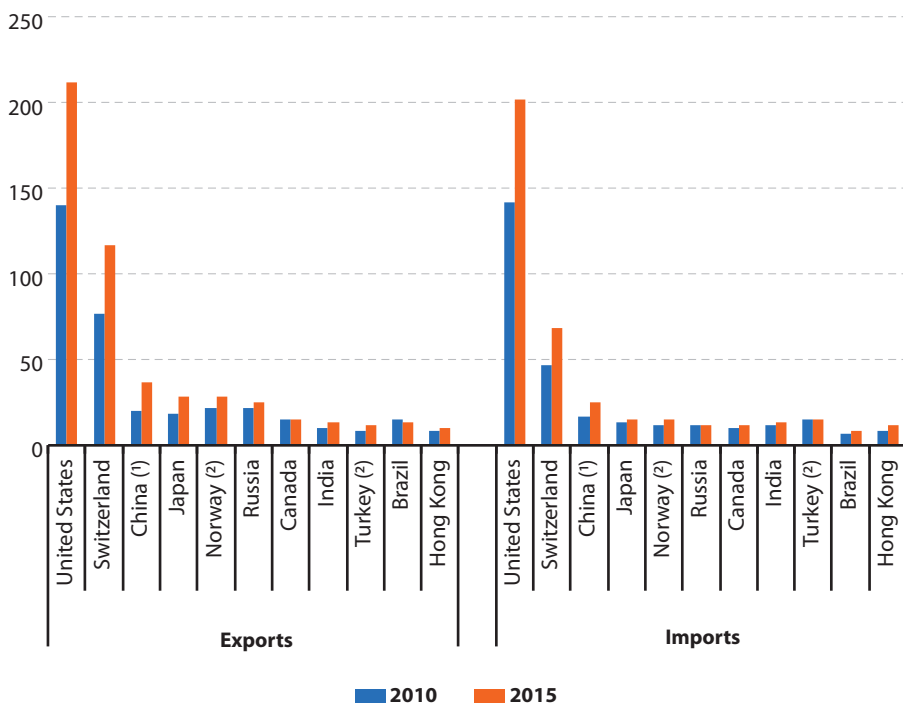


In 2015, other business services represented the bulk of services exported to non-member countries, the EUR 223 billion of such exports from the EU-28 representing 27 % of total exports, which was equivalent to a 3 percentage point increase in comparison with 2010.

Transport constituted the second largest group of services exported by the EU-28 to non-member countries in 2015, valued at

EUR 144 billion, equivalent to 18% of the services total, down 4 percentage points compared with 2010. This was followed by travel which represented approximately 14% of all services exported in 2010 and in 2015, telecommunications, computer and information services which represented 12 % of all services exports in 2015 (up from 11 % in 2010), and financial services which represented 10% of all services exports in both 2010 and 2015.

**Figure 7.4: Trade in services with non-member countries (extra-EU), main partners, EU-28, 2010 and 2015**  
(billion EUR)



Note: Ranked on the average value of exports and imports.

(1) Excluding Hong Kong.

(2) 2014 instead of 2015.

Source: Eurostat (online data code: [bop\\_its6\\_det](#))

# 8

## Agriculture, forestry and fisheries



## Introduction

EU agricultural statistics were initially designed to monitor the main objectives of the common agricultural policy (CAP), for example the production and supply of agricultural products and income in the agricultural sector. Today, agricultural statistics cover topics as diverse as: farm structure, use of farm land, labour input, production, supply/use, prices, and the composition of agricultural income.

Agriculture was one of the first sectors of the economy (following coal and steel) to receive the attention of EU policymakers. Article 39 of the Treaty of Rome on the EEC (1957) set out the objectives for the first CAP; this was focused on increasing agricultural productivity as a way to ensure a fair standard of living for the agricultural community, stabilising markets, and ensuring security of supply at affordable prices for consumers.

As the primary objective of producing more food within Europe was achieved, food surpluses accrued, distorting trade and raising environmental concerns. These were the principal drivers for changes in the common agricultural policy, a process that started in the early 1990s and which resulted in a change from

support for production towards a more market-oriented and environmentally-friendly and sustainable agriculture.

While the EU has no separate policy on forestry, forests are affected by a broad array of EU sectoral policies. Environmental forest functions have attracted increasing attention in relation to the protection of biodiversity and in the context of energy policies and the impact of climate change.

The European Commission presented proposals for a reform of the common fisheries policy (CFP) which were adopted in December 2013 and became effective on 1 January 2014. The CFP is designed to conserve fish stocks and to manage them as a common resource; it gives all European fishing fleets equal access to EU waters and fishing grounds. It aims to ensure that the EU's fishing industry is environmentally, economically and socially sustainable, through high long-term fishing yields for all stocks (at the latest by 2020); this is referred to as maximum sustainable yield. Another increasingly important aim of the CFP is to reduce unwanted catches and wasteful practices to the minimum or avoid them altogether.

## 8.1 Agricultural output, price indices

The gross value of EU-28 crop output fell to a relative low of EUR 177.2 billion in 2009. This was followed by a rebound and four years of consecutive growth through to 2013 (peaking at EUR 220.2 billion). However, the latest information available reveals that crop output in the EU-28 fell by 3.9% in 2014 to EUR 211.6 billion, before stabilising (+ 0.6%) in 2015, when output was valued at EUR 212.9 billion.

EU-28 gross animal output at basic prices also recorded a relative low in 2009 (EUR 138.0 billion),

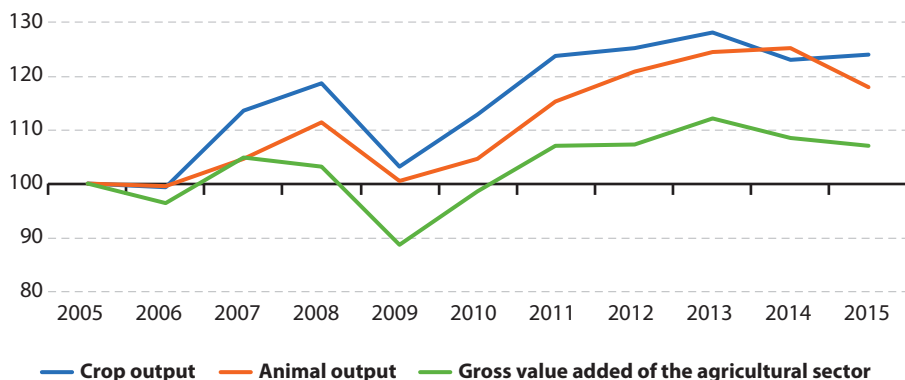
but then grew for five consecutive years to 2014. The rate of change slowed towards the end of this period and in 2014 there was almost no change (up 0.5%) in the value of animal output in the EU-28, which reached EUR 171.5 billion. In 2015 there was a considerable fall in the animal output of the EU-28, which was valued at EUR 161.7 billion, some 5.8% lower than the year before.



The increases in the EU-28's gross output during the period 2009–13 were offset to some extent by an increase in the value of intermediate consumption of goods and services at basic prices. Here too there was a period of relatively rapid growth followed by more modest growth rates and then reductions of 0.6 % in 2014 and 2.5 % in 2015.

As a result, from a relative low of EUR 135.9 billion in 2009, the gross value added at basic prices of the EU-28's agricultural sector rose for four consecutive years to reach a relative high of EUR 171.7 billion in 2013, before falling by 3.2 % to EUR 166.3 billion in 2014 and falling a further 1.3 % to EUR 164.1 billion in 2015.

**Figure 8.1: Agricultural output and gross value added at basic prices, EU-28, 2005–15**  
(2005 = 100)



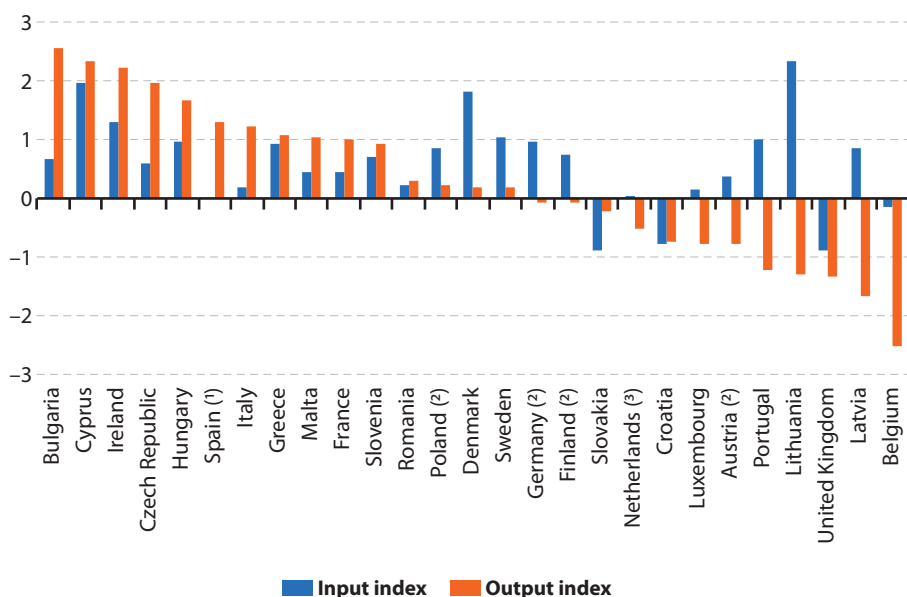
Note: 2015 estimate.

Source: Eurostat (online data code: [aact\\_eaa05](#))

Changes in the value of agricultural output comprise a volume and price component. One important strand of recent changes in agricultural policy has been to move away from price support mechanisms, so that prices more accurately reflect market forces and changes in supply and demand. During the period 2010–15 there were considerable differences between the EU Member States in the development of deflated agricultural output prices; such deflated prices show the extent to which agricultural prices have changed compared with consumer prices.

For 13 of the 26 EU Member States for which data are available, the average annual rate of change in deflated input prices was greater than the change in deflated output prices, with the largest (percentage point) differences observed for Portugal, Belgium, Latvia and Lithuania (all of which recorded falling deflated output prices). Among the 13 EU Member States where deflated output price changes exceeded the change in deflated input prices the greatest differences were observed for Italy, the Czech Republic and Bulgaria.

**Figure 8.2:** Change in deflated price indices of agricultural input and output, 2010–15 (average annual rate of change, %)



Note: Estonia not available.

(1) Input index: not available.

(2) Output index: provisional.

(3) The value of the input index is 0.02.

Source: Eurostat (online data codes: [apri\\_pi10\\_ina](#) and [apri\\_pi10\\_outa](#))

## 8.2 Farm structure

The structure of agriculture in the Member States of the EU varies as a function of differences in geology, topography, climate and natural resources, as well as the diversity of regional activities, infrastructure and social customs.

In 2013, there were 10.8 million agricultural holdings within the EU-28. An analysis by

economic size shows that among these there were 6.5 million (or 59.8%) that had a standard output in excess of EUR 2 000. The utilised agricultural area (UAA) in the EU-28 was almost 175 million hectares (some 40.0% of the total land area), giving an average size of 16.1 hectares per agricultural holding.



The total farm labour force in the EU-28 was the equivalent of 9.5 million annual working units in 2013, of which 8.7 million (92 %) were regular workers. The overall change in the EU-28's farm labour force during the period 2007–13 was a fall of 2.3 million annual work units (AWU), equivalent to a reduction of 19.8 %.

The EU-28's livestock herd was 130 million livestock units (LSU) in 2013. The total number of livestock in the EU-28 decreased between 2007 and 2013 by 6.6 million LSU, equivalent to a fall of 4.8 %.

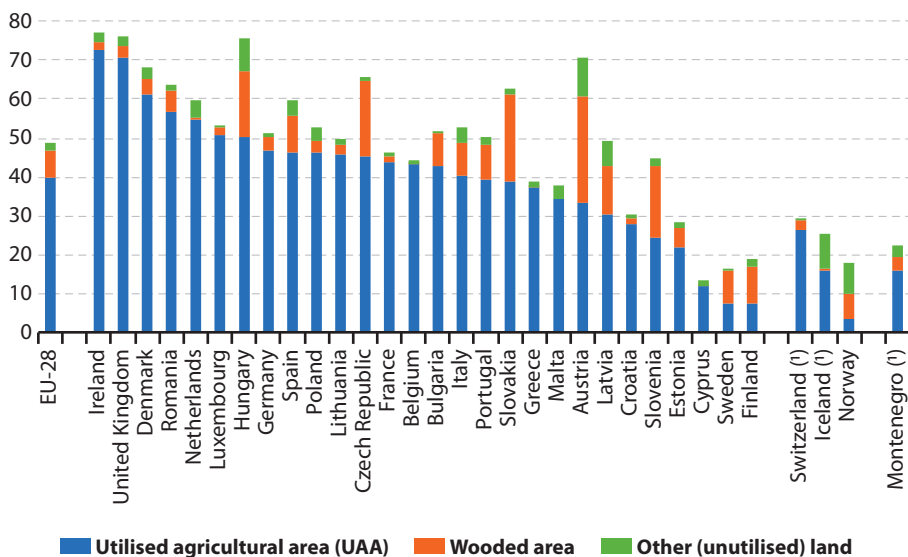
Utilised agricultural area accounted for two fifths (40.0 %) of the total land area of the EU-28 in

2013, with a further 9.0 % of the land belonging to agricultural holdings, either in the form of wooded areas (6.7 %) or other land not used for agriculture (2.3 %).

Arable land (which includes land for cereals and other arable land) accounted for three fifths (59.8 %) of the utilised agricultural area in the EU-28 in 2013, with permanent grassland and meadow (which is composed of pasture, meadow and rough grazing) accounting for just over one third (34.2 %). Permanent crops, such as vineyards, olive trees and orchards, accounted for a 5.9 % share, with the remaining 0.2 % mainly attributed to kitchen gardens.

**Figure 8.3: Land belonging to agricultural holdings, 2013**

(%)



Note: Denmark, Germany, France, Italy, Hungary, Poland, Portugal and Montenegro: as a share of total area instead of land area. EU-28: as a share of the area based on a sum of the available data for total area or land area for the Member States.

(\*) 2010.

Source: Eurostat (online data codes: [demo\\_r\\_d3area](#) and [ef\\_oluft](#))

**Table 8.1: Labour force, 2007–13**

	Labour force (1 000 annual work units)		
	2007	2010	2013
<b>EU-28</b>	11 850	9 946	9 509
<b>Belgium</b>	66	62	57
<b>Bulgaria</b>	494	407	320
<b>Czech Republic</b>	137	108	105
<b>Denmark</b>	56	52	54
<b>Germany</b>	609	546	523
<b>Estonia</b>	32	25	22
<b>Ireland</b>	148	165	164
<b>Greece</b>	569	430	464
<b>Spain</b>	968	889	814
<b>France</b>	805	780	725
<b>Croatia</b>	189	184	175
<b>Italy</b>	1 302	954	817
<b>Cyprus</b>	26	19	17
<b>Latvia</b>	105	85	82
<b>Lithuania</b>	180	147	145
<b>Luxembourg</b>	4	4	4
<b>Hungary</b>	403	423	434
<b>Malta</b>	4	5	4
<b>Netherlands</b>	165	162	153
<b>Austria</b>	163	114	111
<b>Poland</b>	2 263	1 897	1 919
<b>Portugal</b>	338	363	323
<b>Romania</b>	2 205	1 610	1 553
<b>Slovenia</b>	84	77	82
<b>Slovakia</b>	91	56	51
<b>Finland</b>	72	60	58
<b>Sweden</b>	65	57	59
<b>United Kingdom</b>	306	266	275
<b>Iceland</b>	:	4	:
<b>Norway</b>	56	46	44
<b>Switzerland</b>	117	96	:
<b>Montenegro</b>	:	48	:

Source: Eurostat (online data code: [ef\\_kvaareg](#))



## 8.3 Agricultural products

There is a wide diversity of natural environments, climates, economic conditions and farming practices across the EU. They are reflected in the broad array of food and drink products that are made available for human consumption and animal feed, as well as a range of inputs for non-food processes. Indeed, agricultural products contribute to the cultural identity of Europe's people and regions.

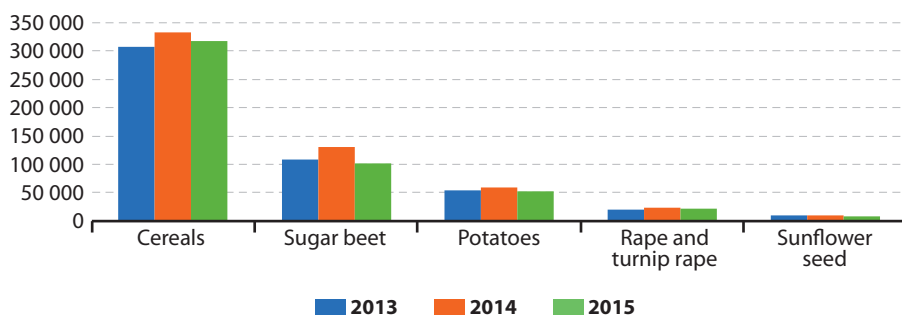
In 2015, the EU-28 produced 317.0 million tonnes of cereals (including rice). This was 5.7 % above the average for the previous five years (2010–14).

The EU-28 produced 101.9 million tonnes of sugar beet in 2015, which was 12.9 % less than

the average for the previous five years. The production of the other main root crop in the EU-28 — potatoes — was 53.1 million tonnes, 7.0 % less than the average for the previous five years.

Oilseeds production has followed an upward pattern in recent years mainly due to the increased use of oilseeds for bioenergy production. However, as for cereals and the two root, at 7.9 million tonnes the production of sunflower seeds was relatively low in 2015, 5.5 % below the average for the previous five years. By contrast, at 21.7 million tonnes the production of rape and turnip rape was 4.3 % higher than the five year average.

**Figure 8.4: Production of main agricultural crops, EU-28, 2013–15**  
(thousand tonnes)



Source: Eurostat (online data code: [apro\\_acs\\_a](#))

Dairy production has a diverse structure across the EU Member States, in terms of farm and dairy herd sizes, as well as milk yields. 29.3 % of the whole milk that was utilised in the EU-28 in 2015 was used for fresh products, mainly as drinking milk or cream. The remaining 70.7 % was transformed into manufactured products; with

36.3 % of all whole milk converted into cheese, and 24.4 % into butter.

The total collection of cows' milk (in other words, cows' milk delivered to dairies) in the EU-28 in 2015 amounted to an estimated 152 million tonnes. Germany and France recorded the highest quantities of cows' milk collected in 2015



and they also accounted for the highest levels of production for butter and cheese; together they contributed between 38 % and 44 % of the EU-28's total production for each of these three dairy products.

The principal meat product in the EU-28 was pig meat (23.0 million tonnes in 2015), with the weight of production three times as high as the share recorded for meat from bovines (beef/veal), which stood at 7.6 million tonnes; the production of sheep meat in the EU-28 was relatively modest (0.7 million tonnes).

**Table 8.2: Agricultural production related to animals, 2015**  
(thousand tonnes)

	Raw cows' milk delivered to dairies	Butter	Cheese	Meat from:		
				bovines	pigs	sheep
<b>EU-28 (*)</b>	151 588	1 890	9 525	7 590	22 958	724
<b>Belgium</b>	3 988	32	101	268	1 124	3
<b>Bulgaria</b>	488	1	77	5	61	:
<b>Czech Republic</b>	2 482	25	123	68	228	0
<b>Denmark</b>	5 278	45	391	121	1 599	2
<b>Germany</b>	31 879	456	1 900	1 124	5 562	21
<b>Estonia</b>	720	5	43	10	42	0
<b>Ireland</b>	6 585	187	207	564	276	58
<b>Greece</b>	603	1	188	42	90	55
<b>Spain</b>	6 800	32	465	634	3 896	117
<b>France</b>	25 323	368	1 950	1 451	1 968	81
<b>Croatia</b>	513	4	34	42	73	1
<b>Italy</b>	10 500	95	1 207	788	1 486	34
<b>Cyprus</b>	173	0	23	5	43	3
<b>Latvia</b>	808	6	38	17	29	0
<b>Lithuania</b>	1 438	14	101	44	66	0
<b>Luxembourg</b>	333	:	:	9	12	0
<b>Hungary</b>	1 536	5	80	26	409	0
<b>Malta</b>	42	0	:	1	6	0
<b>Netherlands</b>	13 331	:	845	383	1 456	13
<b>Austria</b>	3 103	32	185	229	528	7
<b>Poland</b>	10 874	170	773	471	1 906	1
<b>Portugal</b>	1 935	32	73	89	377	11
<b>Romania</b>	919	11	82	44	330	9
<b>Slovenia</b>	554	:	15	34	20	0
<b>Slovakia</b>	865	7	36	8	45	1
<b>Finland</b>	2 394	55	88	86	192	1
<b>Sweden</b>	2 933	16	90	144	234	5
<b>United Kingdom</b>	15 191	:	403	883	898	300
<b>Iceland</b>	:	:	:	4	7	10
<b>Norway</b>	1 570	19	98	:	:	:
<b>Switzerland</b>	3 457	43	189	142	240	4
<b>Montenegro</b>	:	:	:	4	0	1
<b>Albania</b>	:	:	:	9	8	2
<b>Serbia</b>	862	3	41	:	:	:
<b>Turkey</b>	8 934	0	666	98	0	59
<b>Bosnia and Herzegovina</b>	:	:	:	23	9	1

(\*) EU-28 Eurostat estimates, made for the purpose of this publication, include confidential data. They were rounded to safeguard the national confidential values.

Source: Eurostat (online data codes: [apro\\_mk\\_pobta](#) and [apro\\_mt\\_pann](#))



## 8.4 Forestry

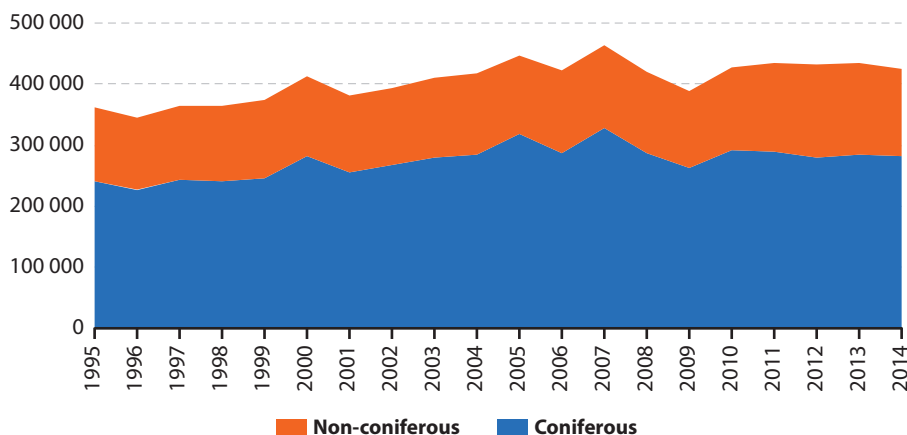
Roundwood production is a synonym for removals; it comprises all quantities of wood removed from forests and other wooded land or other felling sites during a given period; it is reported in cubic metres (m<sup>3</sup>) underbark (in other words, excluding bark). Sawnwood production is wood that has been produced either by sawing lengthways or by a profile-chipping process and that exceeds 6 mm in thickness.

In 2015, the EU-28 had approximately 182 million hectares of forests and other wooded land,

corresponding to an estimated 41 % of its total area.

EU-28 roundwood production (for coniferous and non-coniferous species combined) rebounded strongly in 2010 (10.1 %) and continued to rise in 2011, but at a much more modest pace (1.4 %). This was followed by two years when there was almost no change in the level of output. In 2014, there was a 2.1 % reduction in EU-28 roundwood production, such that output stood at 425 million m<sup>3</sup>, some 37 million m<sup>3</sup> (or 8.0 %) lower than its pre-crisis high of 2007.

**Figure 8.5: Annual production of roundwood, EU-28, 1995–2014**  
(thousand m<sup>3</sup>)



Note: Estimates. 2011: provisional.

Source: Eurostat (online data code: [for\\_remov](#))

Among the EU Member States, Sweden produced the most roundwood (70.1 million m<sup>3</sup>) in 2014, followed by Finland, Germany and France (each producing between 52 million and 57 million m<sup>3</sup>). Some 99 million m<sup>3</sup> of sawnwood

were produced in the EU-28 in 2014, just over two thirds of which came from the five largest producing EU Member States, namely, Germany (22.0 %), Sweden (17.6 %), Finland (11.0 %), Austria (8.4 %) and France (8.0 %).

**Table 8.3: Wood production, 2000–14**  
(thousand m<sup>3</sup>)

	Roundwood production			Sawnwood production		
	2000	2010	2014	2000	2010	2014
<b>EU-28</b>	411 764	427 611	425 351	100 706	100 815	99 208
<b>EA (1)</b>	236 540	234 993	225 127	61 337	59 673	55 133
<b>Belgium</b>	4 510	4 827	:	1 150	1 383	:
<b>Bulgaria</b>	4 784	5 668	5 570	312	554	:
<b>Czech Republic</b>	14 441	16 736	15 476	4 106	4 744	3 861
<b>Denmark</b>	2 952	2 669	3 180	364	448	358
<b>Germany</b>	53 710	54 418	54 356	16 340	22 059	21 787
<b>Estonia</b>	8 910	7 200	8 460	1 436	1 771	1 600
<b>Ireland</b>	2 673	2 618	2 831	888	772	907
<b>Greece</b>	2 245	1 048	:	123	118	:
<b>Spain</b>	14 321	16 089	15 911	3 760	2 038	2 047
<b>France</b>	65 865	55 808	51 671	10 536	8 316	7 901
<b>Croatia</b>	3 669	4 477	5 003	642	677	780
<b>Italy</b>	9 329	7 844	:	1 630	1 200	1 430
<b>Cyprus</b>	21	9	9	9	4	2
<b>Latvia</b>	14 304	12 534	12 597	3 900	3 150	3 657
<b>Lithuania</b>	5 500	7 097	7 351	1 300	1 272	1 345
<b>Luxembourg</b>	260	275	:	133	94	:
<b>Hungary</b>	5 902	5 740	5 671	291	133	121
<b>Malta</b>	0	0	0	0	0	0
<b>Netherlands</b>	1 039	1 081	1 337	389	231	227
<b>Austria</b>	13 276	17 831	17 089	10 390	9 603	8 351
<b>Poland</b>	26 025	35 467	40 565	4 262	4 220	4 615
<b>Portugal</b>	10 831	9 648	:	1 427	1 045	:
<b>Romania</b>	13 148	13 112	15 068	3 396	4 323	5 762
<b>Slovenia</b>	2 253	2 945	5 099	439	760	700
<b>Slovakia</b>	6 163	9 599	:	1 265	2 576	:
<b>Finland</b>	54 542	50 952	57 033	13 420	9 473	10 940
<b>Sweden</b>	63 300	72 200	70 100	16 176	16 750	17 500
<b>United Kingdom</b>	7 791	9 718	11 184	2 622	3 101	3 764
<b>Iceland</b>	0	:	:	0	:	:
<b>Liechtenstein</b>	:	25	19	:	4	0
<b>Norway</b>	8 156	10 443	12 386	2 280	2 118	2 407
<b>Switzerland</b>	9 238	4 938	4 709	1 625	1 457	1 140
<b>Montenegro</b>	:	915	915	:	52	53
<b>FYR of Macedonia</b>	1 052	631	691	36	5	4
<b>Turkey</b>	15 939	20 597	22 835	5 528	6 243	6 635
<b>Brazil</b>	235 402	235 432	264 443	21 300	17 452	15 397
<b>Canada</b>	201 845	142 013	154 259	50 465	38 667	43 351
<b>China</b>	323 646	350 633	347 512	6 675	37 231	68 440
<b>India</b>	318 553	358 066	357 226	7 900	6 889	6 889
<b>Indonesia</b>	137 830	113 849	115 232	6 500	4 169	4 169
<b>Russia</b>	158 101	175 499	203 000	20 000	28 870	33 900
<b>United States</b>	466 549	376 572	398 693	91 076	60 013	74 803

(1) EA-11 for 2000, EA-12 for 2005, EA-16 for 2010, EA-17 for 2011–13, EA-18 for 2014.

Source: Eurostat (online data codes: [for\\_remov](#) and [for\\_swpan](#))



## 8.5 Fisheries

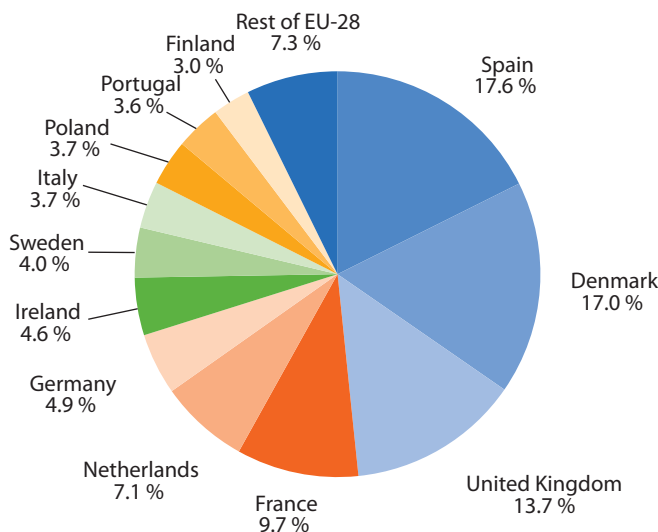
Fish are a natural, biological, mobile (sometimes over wide distances) and renewable resource. Aside from fish farming, fish cannot be owned until they have been caught. For this reason, fish stocks continue to be regarded as a common resource, which needs to be managed collectively. This has led to a range of policies that regulate the amount of fishing that is conducted in EU waters, as well as the types of fishing techniques and gear used in fish capture.

The EU-28's fishing fleet in 2015 had a combined capacity of 1.6 million gross tonnes and a total engine power of 6.4 million kilowatts (kW). By far, the largest fishing fleets among the EU Member

States, in terms of power, were those from France, Italy, Spain and the United Kingdom.

Having peaked in 1995 at 7.6 million tonnes of live weight, the total EU-28 catch (calculated as the sum of catches in the seven regions for which statistics are covered by EU legal acts) fell almost every year until 2007. Thereafter, the weight of EU-28 catches was relatively stable up until 2013, with a marked jump in 2014 (up 11.5%). A smaller reduction followed in 2015 (– 5.0%), with the total EU-28 catch amounting to 5.1 million tonnes. This quantity was 7.0% less than 10 years earlier and approximately one third lower than in 1995.

**Figure 8.6: Total catches in selected fishing regions, EU-28, 2015**  
(% of total catches)



Note: Total catches in the seven regions covered by legal acts, namely: 21 — Atlantic, Northwest; 27 — Atlantic, Northeast; 34 — Atlantic, Eastern Central; 37 — Mediterranean and Black Sea; 41 — Atlantic, Southwest; 47 — Atlantic, Southeast; and 51 — Indian Ocean, Western. Consequently

Source: Eurostat (online data code: [fish\\_ca\\_main](#))

catches in inland waters are excluded. Rest of EU-28: Latvia, Croatia, Estonia, Greece, Lithuania, Belgium, Bulgaria, Romania, Malta, Cyprus and Slovenia. Not applicable for Czech Republic, Luxembourg, Hungary, Austria and Slovakia (landlocked countries without a marine fishing fleet).

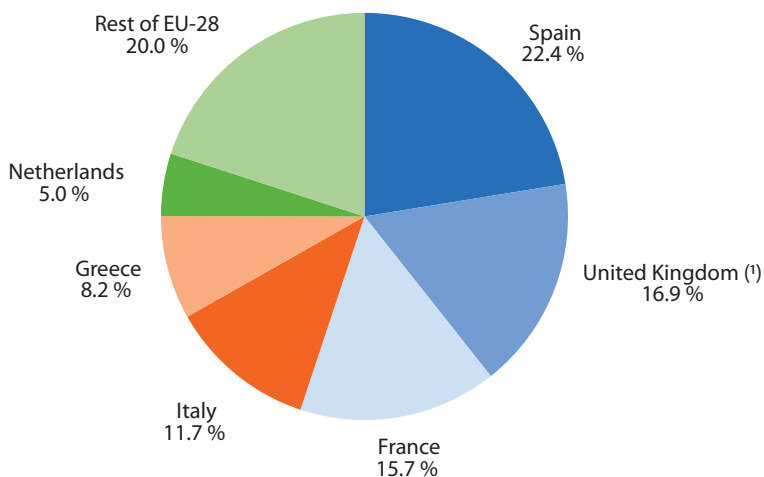
The EU-28 had a stable output of aquaculture products during the period 2004–14, with a production quantity fluctuating around 1.2–1.3 million tonnes live weight. The lowest quantity was 1.18 million tonnes recorded in 2013 and the highest 1.33 million tonnes recorded in 2004.

The five largest aquaculture producers among the EU Member States in 2014 were Spain

(285 thousand tonnes), the United Kingdom, France, Italy and Greece, which together accounted for three quarters of the EU-28 total; none of the other EU Member States reported a level of production above 100 thousand tonnes of live weight.

**Figure 8.7: Aquaculture production, EU-28, 2014**

(% of total live weight)



Note: Excluding production from hatcheries and nurseries, fish eggs for human consumption, ornamental and aquarium species. Rest of EU-28: Poland, Denmark, Ireland, Germany, Czech Republic, Hungary, Croatia, Finland, Sweden, Portugal, Romania, Malta, Bulgaria, Cyprus, Austria, Lithuania, Slovenia, Slovakia, Estonia, Latvia and Belgium. No data available for Luxembourg.

(¹) Break in series.

Source: Eurostat (online data codes: [fish\\_aq\\_q](#) and [fish\\_aq\\_2a](#))

# 9

## Industry, trade and services





## Introduction

Business statistics cover industry, construction, trade and services, including tourism. Several other statistics also relate to businesses, for example some science, technology and digital society statistics as well as many social statistics related to the labour market.

The European Commission's enterprise policies aim to create a favourable environment for business to thrive within the EU, thus creating higher productivity, economic growth, jobs and wealth. Policies are aimed at reducing administrative burden, stimulating innovation, encouraging sustainable production, and ensuring the smooth functioning of the EU's internal market.

The 22.6 million small and medium-sized enterprises (SMEs) in the EU-28 in 2013 represented 99.8 % of enterprises in the non-financial business economy, and are regarded as a key driver for economic growth, innovation, employment and social integration. The European Commission aims to promote

successful entrepreneurship and improve the business environment for SMEs, to allow them to achieve their full potential in the global economy.

COSME is an EU programme for the competitiveness of enterprises and SMEs; it will run from 2014 to 2020 with a planned budget of EUR 2.3 billion. It aims to support SMEs in the following areas: improving access to finance; access to markets; supporting entrepreneurs; and improving conditions for competitiveness.

The Entrepreneurship 2020 action plan (COM(2012) 795 final) proposes action to increase Europe's entrepreneurial potential, to remove existing obstacles and to transform the culture of entrepreneurship in Europe. The plan has four main parts: educating young people about entrepreneurship; highlighting entrepreneurial opportunities for women and other groups; creating an environment based on easy administrative requirements; and making it easier for entrepreneurs to attract investors.

## 9.1 Structural business statistics

Structural business statistics can provide answers to questions on the wealth creation (value added), investment and labour input of different economic activities. The data can be used to analyse structural shifts, for example between industry and services, country specialisations in particular activities, sectoral productivity and profitability, as well as a range of other topics.

In 2013, a total of EUR 6 240 billion of gross value added at factor cost was generated in the EU-28's non-financial business economy. The non-financial business economy workforce reached 133 million persons employed, around three fifths (63.0 %) of those employed in the EU-28.

Among the NACE Rev. 2 sections in the non-financial business economy, manufacturing was the largest in terms of value added: 2 million manufacturing enterprises generated EUR 1 630 billion of value added in 2013, while providing employment for about 29.7 million persons. Distributive trades enterprises had the largest share of employment: these enterprises provided employment to 32.5 million persons and generated EUR 1 147 billion of value added. Professional, scientific and technical activities had the third highest value added but only the fifth largest workforce, behind administrative and support services as well as construction.

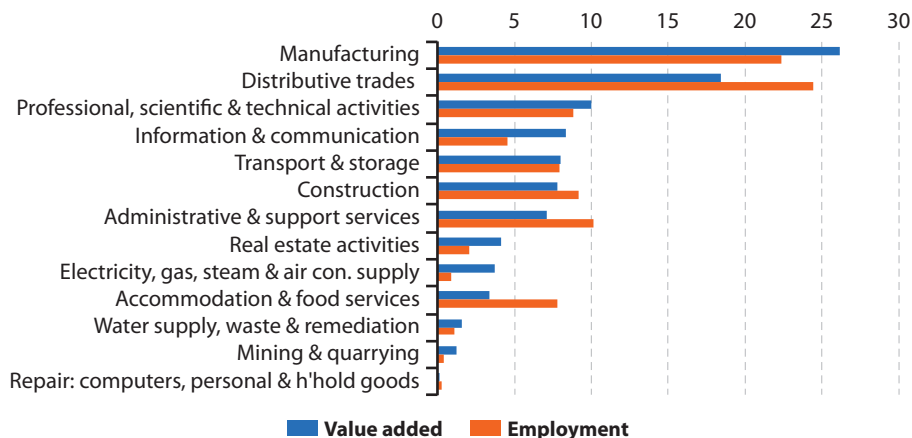


Figure 9.1 contrasts the value added and employment contributions of the various sectors to the non-financial business economy. The industrial activities of mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply, waste and remediation contributed more in terms of value added than employment to the overall non-financial business economy, indicating an above average apparent labour productivity. This was also the case in some of the service activities, namely information and communication services, real estate activities, as well as professional, scientific and technical activities. By contrast, the construction sector and a number of services

— notably accommodation and food services; administrative and support services (which includes cleaning and security services, as well as employment services such as the provision of temporary personnel); repair of computers and personal and household goods; and distributive trades — reported relatively low levels of apparent labour productivity. It should be noted that the employment data presented are in terms of head counts and not, for example, full-time equivalents, and there may be a significant proportion of persons working part-time in some of the activities covered; this may explain, at least to some degree, the relatively low levels of apparent labour productivity for some activities.

**Figure 9.1: Analysis of non-financial business economy value added and employment, EU-28, 2013**

(% of non-financial business economy value added and employment)



Note: Estimates.

Source: Eurostat (online data code: [sbs\\_na\\_sca\\_r2](#))

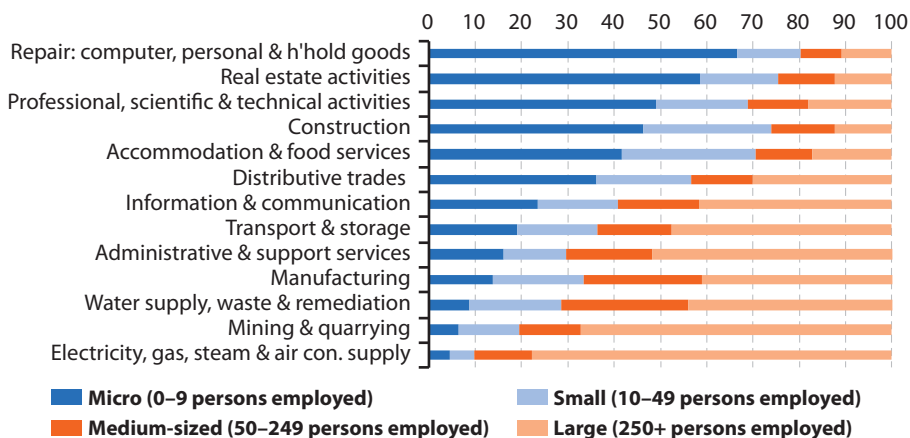


The overwhelming majority (99.8%) of enterprises active within the EU-28's non-financial business economy in 2013 were micro, small and medium-sized enterprises (SMEs) — some 22.6 million — together they contributed 57.8% of the value added generated within the EU's non-financial business economy. More than 9 out of 10 (92.9%) enterprises in the EU-28 were micro enterprises (employing less than 10 persons) and their share of value added within the non-financial business economy was considerably lower, around one fifth.

Perhaps the most striking phenomenon of SMEs is their contribution to employment. No less than two thirds (66.8%) of the EU's non-financial business economy workforce was active in an SME in 2013. Some 22.8 million persons worked in SMEs in the distributive trades sector,

17.5 million in manufacturing and 10.7 million in construction; together, these three activities provided work to 57.4% of the non-financial business economy workforce in SMEs. Micro enterprises employed more people than any other enterprise size class in all service sectors (at the section level of detail), with the exception of administrative and support service activities. This pattern was particularly pronounced for the repair of computers, personal and household goods where an absolute majority of the workforce in this sector worked in micro enterprises. By contrast, in mining and quarrying as well as electricity, gas, steam and air conditioning supply large enterprises employed more than half of the workforce, as they also did in administrative and support service activities.

**Figure 9.2: Enterprise size class analysis of employment, EU-28, 2013**  
(% of sectoral total)



Note: Estimates.

Source: Eurostat (online data codes: [sbs\\_sc\\_ind\\_r2](#), [sbs\\_sc\\_con\\_r2](#), [sbs\\_sc\\_dt\\_r2](#) and [sbs\\_sc\\_1b\\_se\\_r2](#))



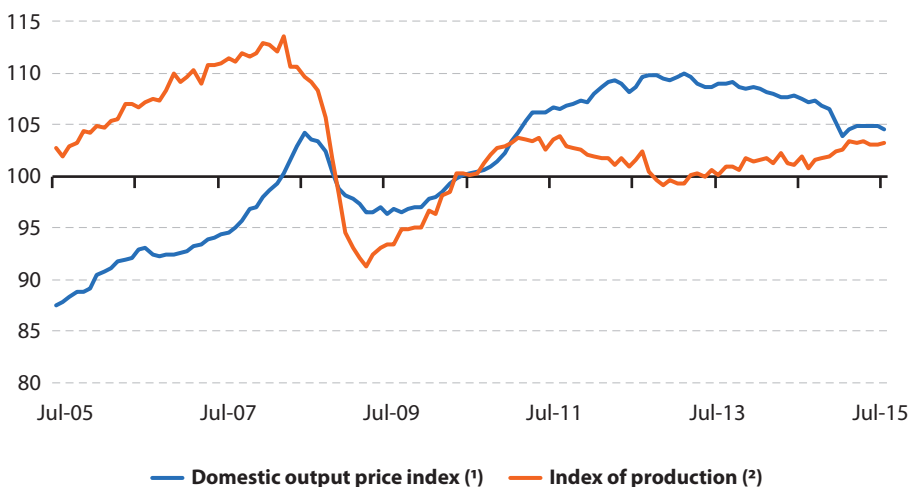
## 9.2 Industry and construction

Short-term business statistics (STS) are provided in the form of indices that allow the most rapid assessment of the economic climate within industry and construction, providing a first evaluation of recent developments for a range of economic activities. STS show developments over time, and so may be used to calculate rates of change, typically showing comparisons with the month or quarter before, or the same period of the previous year.

Industrial output in the EU-28 recovered during a period of slightly more than two years from its relative low in April 2009, recording positive

month-on-month rates of change for 22 out of 28 months through to a peak in August 2011: this peak was 13.9% above the April 2009 low but nevertheless 8.4% below the pre-crisis peak of April 2008. Thereafter, there was a gradual decline in EU-28 industrial output observed through until November 2012 during which time output contracted by 4.7%; subsequently industrial output grew at a relatively slow pace to July 2015 (the latest data available at the time of writing), increasing 4.3% over the course of two years and eight months.

**Figure 9.3: Production and domestic output price indices for industry (excluding construction), EU-28, 2005–15**  
(2010 = 100)



(1) Unadjusted series.

(2) Seasonally and working-day adjusted. July 2015: estimate.

Source: Eurostat (online data codes: sts\_inppd\_m and sts\_inpr\_m)

By contrast, the return to positive rates of change for EU-28 industrial output prices in August 2009 heralded a more sustained and longer period of price increases. The industrial output price index passed its pre-crisis peak in February 2011 and continued an almost unbroken climb until April 2012 when it stood some 13.5 % above the low recorded during the crisis and 4.9 % above the pre-crisis peak (nearly four years earlier). From April 2012 onwards, the development of industrial output prices in the EU-28 followed an irregular pattern with almost no overall change in prices through to the autumn of 2013. Thereafter, industrial output prices fell at a relatively modest pace during a period of more than one year, reaching a low in January 2015, since when prices have been relatively stable.

The downturn in activity for construction within the EU-28 lasted longer than for industry. Despite occasional short-lived periods of growth, the EU-28 index of production for construction fell from a peak in February 2008 to a low in March

2013, a decline that lasted in total five years and one month and left construction output 26.2 % lower than it had been. Construction output expanded by a total of 7.6 % during the next 13 months and between then (April 2014) and the most recent period for which data are available (July 2015) output remained relatively stable.

The long and deep downturn in construction activity was widespread within the EU-28, illustrated by the fact that nearly every EU Member State experienced at least two years of contraction in construction output during the most recent five-year period (2010–14) for which data are available, despite the fact that this period excludes the first two years of the downturn. By 2012, the number of Member States reporting an expansion had fallen to just five, although this increased to nine in 2013 and 18 in 2014 when the EU-28 recorded its first annual increase in construction output since 2007.



**Table 9.1: Annual growth rates for industry (excluding construction), 2010–14**  
(%)

	Index of production <sup>(1)</sup>					Domestic output price index <sup>(2)</sup>				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
<b>EU-28</b>	6.8	3.1	-2.1	-0.5	1.1	3.1	6.1	2.8	0.0	-1.5
<b>EA-19</b>	7.3	3.4	-2.4	-0.7	0.8	2.7	5.7	2.8	-0.2	-1.5
<b>Belgium</b>	11.1	4.1	-2.1	0.9	1.0	5.4	8.1	3.5	0.6	-4.6
<b>Bulgaria</b>	2.1	5.9	-0.2	-0.1	1.7	7.1	8.6	5.3	-1.3	-0.9
<b>Czech Republic</b>	8.2	5.9	-0.8	0.1	5.0	1.3	5.5	2.1	0.8	-0.8
<b>Denmark</b>	2.0	1.9	0.1	0.4	0.8	6.4	7.8	2.5	2.2	-2.3
<b>Germany</b>	10.9	7.2	-0.3	0.2	1.3	1.5	5.1	1.7	0.0	-0.9
<b>Estonia</b>	22.9	19.7	1.5	4.2	2.4	1.7	4.6	3.4	9.9	-2.3
<b>Ireland</b>	7.5	-0.4	-1.5	-2.2	20.9	1.5	6.5	3.1	1.5	-0.3
<b>Greece</b>	-6.1	-5.8	-2.1	-3.2	-2.0	6.1	7.4	4.9	-0.7	-0.8
<b>Spain</b>	0.8	-1.7	-6.9	-1.7	1.3	3.7	6.9	3.8	0.6	-1.3
<b>France</b>	5.0	2.4	-2.6	-0.7	-1.1	2.7	5.4	2.8	0.3	-1.3
<b>Croatia</b>	-1.6	-1.2	-5.3	-2.0	1.3	4.3	6.4	7.0	0.4	-2.7
<b>Italy</b>	6.8	1.2	-6.3	-3.2	-0.5	3.1	5.1	4.1	-1.2	-1.8
<b>Cyprus</b>	-1.7	-7.7	-9.6	-13.5	-0.9	4.0	5.9	8.1	-2.1	-3.1
<b>Latvia</b>	14.4	8.8	6.2	-0.4	-0.9	-0.2	8.8	5.3	1.1	0.1
<b>Lithuania</b>	6.1	6.6	3.7	3.3	0.2	3.9	10.4	5.6	-0.3	-5.1
<b>Luxembourg</b>	8.7	1.9	-5.3	-3.9	5.7	1.5	4.4	3.6	1.3	-4.8
<b>Hungary</b>	10.3	5.7	-1.4	1.5	7.2	7.3	6.1	5.3	-0.5	-2.1
<b>Malta</b>	8.6	-0.1	5.4	-5.3	-5.8	11.5	2.2	2.3	0.9	-1.2
<b>Netherlands</b>	7.8	-0.7	-0.5	0.5	-3.0	4.2	9.8	3.8	-1.3	-3.2
<b>Austria</b>	6.7	6.8	-0.3	0.8	0.8	4.0	4.8	0.9	-1.0	-1.5
<b>Poland</b>	11.1	6.7	1.2	2.3	3.4	3.7	7.6	3.6	-1.2	-1.4
<b>Portugal</b>	1.6	-1.0	-6.1	0.5	1.8	3.6	6.0	2.9	0.1	-1.2
<b>Romania</b>	4.9	7.9	2.5	7.5	6.3	4.0	6.6	4.8	3.7	0.2
<b>Slovenia</b>	6.9	2.1	-0.5	-1.4	1.7	2.0	3.8	1.0	0.3	-1.1
<b>Slovakia</b>	8.2	5.3	8.0	5.2	3.7	-2.8	2.7	3.8	-0.2	-3.6
<b>Finland</b>	5.3	1.7	-1.5	-3.2	-2.1	6.7	5.8	2.3	0.9	-0.9
<b>Sweden</b>	8.7	2.6	-1.2	-4.6	-1.7	3.0	0.9	-0.3	-0.7	0.1
<b>United Kingdom</b>	3.1	-0.6	-3.0	-0.2	1.5	5.4	9.7	2.2	1.0	-2.3
<b>Norway</b>	-5.4	-4.5	2.7	-5.0	3.6	8.5	8.0	-0.1	2.9	0.4
<b>Switzerland</b>	:	:	:	:	:	0.6	0.2	-0.5	-0.1	-0.7
<b>Montenegro</b>	:	-10.2	-7.1	10.6	-11.4	:	:	:	:	:
<b>FYR of Macedonia</b>	-4.8	6.9	-2.8	3.2	4.8	8.7	12.4	4.6	0.4	-1.2
<b>Serbia</b>	1.1	2.5	-2.6	6.0	-6.6	12.1	14.4	5.6	3.0	1.0
<b>Turkey</b>	12.6	9.5	2.4	3.5	3.5	6.2	12.3	6.1	5.7	10.1
<b>Bosnia and Herzegovina</b>	4.2	2.3	-3.6	5.2	0.1	:	:	:	:	:

(1) Calendar adjusted.

(2) Unadjusted series.

Source: Eurostat (online data codes: sts\_inprgr\_a and sts\_inppdgr\_a)

## 9.3 Services

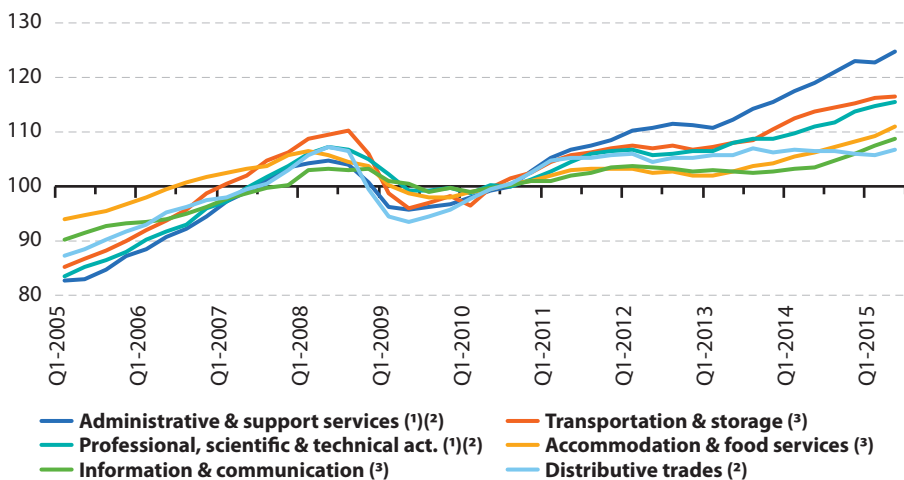
Traditionally, short-term business statistics were concentrated on industrial and construction activities, and to a lesser extent retail trade. Since the middle of the 1990s, major developments in official statistics within the EU have seen short-term data collection efforts focus increasingly on services.

Services turnover (in current price terms) fell by 8.8 % in the EU-28 in 2009 compared with the year before, but rebounded in 2010 and 2011 increasing by 4.7 % and 5.0 % respectively. Growth continued in 2012, 2013 and 2014, but at a more modest pace (rising by 0.4 %, 0.9 % and 1.4 %).

Having peaked in various quarters of 2008, EU-28 turnover for all six of the services shown

in Figure 9.4 reached a low point in the second or third quarter of 2009, or the first quarter of 2010. From these lows, the strongest growth in turnover across the different services through to the second quarter of 2015 was recorded for administrative and support services (30.3 %), followed by transportation and storage services (21.4 %). Professional, scientific and technical activities, distributive trades and accommodation and food services also recorded double-digit growth between their mid-crisis lows and their latest levels (second quarter of 2015), with turnover rising by 16.9 %, 14.0 % and 13.2 % respectively. The rate of change for information and communication services was a more modest 9.8 %.

**Figure 9.4: Index of turnover, selected service activities, EU-28, 2005–15**  
(2010 = 100)



Note: Seasonally and working-day adjusted.

(1) As required by the STS Regulation.

(2) 2005–09: estimates. Q2-2015: estimates.

(3) 2005–09 and 2015: estimates.

Source: Eurostat (online data codes: sts\_trtu\_q and sts\_setu\_q)



**Table 9.2:** Annual growth rates for the index of turnover, selected services, 2013–14  
(%)

	Distributive trades		Transportation and storage		Accommodation and food services		Information and communication activities		Professional, scientific and technical activities (*)		Administrative and support services (*)	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
<b>EU-28</b>	1.7	0.2	1.3	5.0	0.5	3.3	-0.5	1.6	1.7	3.3	2.1	6.1
<b>EA-19</b>	-0.5	0.5	0.1	1.6	0.0	2.0	-1.7	1.4	-0.3	1.3	0.0	4.3
<b>Belgium</b>	0.8	1.3	-7.9	-4.7	3.3	5.4	0.6	1.0	5.6	-0.8	8.7	16.6
<b>Bulgaria</b>	3.5	-10.2	8.8	-3.2	6.0	5.8	1.6	-4.0	-3.8	-0.4	6.7	2.1
<b>Czech Republic</b>	1.1	4.3	3.0	4.1	1.1	2.5	-3.6	0.7	-6.5	-1.9	2.4	3.6
<b>Denmark</b>	-2.3	-5.5	:	:	:	:	:	:	:	:	:	:
<b>Germany</b>	-0.1	0.7	0.3	2.1	1.0	3.6	-0.4	3.0	2.2	4.9	0.4	9.1
<b>Estonia</b>	15.2	-1.0	-5.9	-3.5	8.1	7.5	3.1	2.2	-9.0	17.5	-6.7	-2.9
<b>Ireland</b>	-5.0	-2.4	:	:	-1.9	10.9	:	:	:	:	:	:
<b>Greece</b>	-10.1	1.0	-4.4	-1.0	4.8	12.7	-9.3	-1.7	-8.9	-2.3	-3.5	-1.2
<b>Spain</b>	-1.8	3.0	-0.4	4.2	0.1	4.2	-5.1	-0.3	-3.8	-0.3	-3.1	0.9
<b>France</b>	0.0	-0.6	0.5	1.0	-0.8	-1.2	-1.7	-0.5	0.0	0.8	0.0	2.2
<b>Croatia</b>	1.2	-1.4	-0.3	1.1	19.3	1.7	-4.2	-1.7	-0.8	2.3	0.8	-6.1
<b>Italy</b>	-2.5	0.7	0.0	1.1	-2.4	-0.1	-5.7	-3.4	-2.2	-2.1	-4.2	-1.7
<b>Cyprus</b>	-10.1	-0.9	-1.3	-0.6	-3.9	2.0	16.0	-3.3	-11.1	7.2	-12.8	-3.7
<b>Latvia</b>	4.9	-0.5	-2.1	-0.4	6.9	7.9	8.2	2.8	4.8	-2.9	16.3	4.3
<b>Lithuania</b>	6.8	3.0	8.3	6.0	7.5	7.5	2.9	2.8	12.6	10.5	12.9	7.5
<b>Luxembourg</b>	4.5	3.9	2.0	4.6	5.0	2.9	4.7	1.1	8.5	8.1	9.3	5.2
<b>Hungary</b>	4.7	8.4	10.6	12.8	14.9	22.5	16.9	1.5	10.6	15.6	18.6	3.2
<b>Malta</b>	0.7	2.4	5.7	1.1	1.3	9.9	1.9	-9.4	6.4	13.3	-3.3	-8.9
<b>Netherlands</b>	-3.1	-1.8	0.6	2.2	0.9	5.1	-2.5	2.6	-0.5	2.8	1.1	4.1
<b>Austria</b>	-2.3	-1.4	1.1	-0.4	3.9	3.7	0.2	-0.1	1.1	3.3	2.8	-0.3
<b>Poland</b>	3.7	0.5	5.0	7.4	5.8	5.7	2.8	1.8	5.4	3.9	9.1	15.1
<b>Portugal</b>	-3.5	-2.3	0.9	0.1	-3.4	3.9	-5.5	-3.8	-7.9	-5.2	-5.2	-0.2
<b>Romania</b>	2.7	0.5	9.9	4.0	2.8	3.6	4.6	7.5	4.1	5.9	14.7	4.2
<b>Slovenia</b>	-0.6	1.6	0.5	6.1	-1.2	2.1	-0.1	1.2	-2.2	-2.5	3.0	2.4
<b>Slovakia</b>	2.6	5.5	10.4	4.9	3.2	3.3	4.6	3.3	18.7	-1.8	16.0	7.2
<b>Finland</b>	-3.2	-0.8	-1.5	-0.8	1.1	0.8	2.5	8.5	0.8	3.0	-0.4	0.5
<b>Sweden</b>	-0.6	4.9	-1.6	0.5	5.2	4.8	-1.0	4.5	-0.1	7.6	0.5	2.6
<b>United Kingdom</b>	8.9	-0.5	3.1	7.1	0.9	6.4	2.7	1.6	7.8	8.1	7.8	11.4
<b>Turkey</b>	9.0	12.0	11.0	12.3	15.4	13.3	8.7	6.9	9.7	-0.5	11.0	10.8

Note: Working day adjusted.

(\*) As required by the STS Regulation.

Source: Eurostat (online data codes: sts\_trtu\_a and sts\_setu\_a)

## 9.4 Tourism

Residents (aged 15 and above) from within the EU-28 made an estimated 1.2 billion tourism trips in 2014, for personal or business purposes. Short trips (of one to three nights) accounted for more

than half (57.4%) of the total number of trips made, while three quarters (74.9%) of all trips made were to domestic destinations, with the remainder abroad.

**Table 9.3: Tourist accommodation establishments, 2014**

	Number of establishments (units)	Number of bed places (thousands)	Nights spent by residents and non-residents (millions)
<b>EU-28 <sup>(1)</sup></b>	<b>570 268</b>	<b>30 913.0</b>	<b>2 684.0</b>
Belgium	5 139	366.2	32.6
Bulgaria	3 163	314.3	21.7
Czech Republic	9 013	710.4	42.9
Denmark	1 118	420.0	29.6
Germany	50 925	3 318.6	366.5
Estonia	1 419	58.1	5.8
Ireland	6 574	205.9	29.2
Greece	34 522	1 238.6	95.1
Spain	47 689	3 483.0	404.0
France	28 895	5 109.9	402.3
Croatia	67 724	893.8	66.1
Italy	158 412	4 849.4	378.2
Cyprus	802	87.6	13.7
Latvia	644	39.1	4.2
Lithuania	2 062	72.9	6.5
Luxembourg	434	64.9	2.9
Hungary	4 176	435.6	26.1
Malta	166	41.9	8.8
Netherlands	9 214	1 373.6	99.8
Austria	20 329	993.6	110.4
Poland	9 885	694.0	66.6
Portugal	3 429	519.9	55.0
Romania	6 191	309.0	20.2
Slovenia	2 900	106.6	9.5
Slovakia	2 687	149.1	10.8
Finland	1 408	251.0	19.8
Sweden	4 269	805.3	52.3
United Kingdom <sup>(2)</sup>	87 079	4 001.0	303.6
Iceland <sup>(3)</sup>	916	:	4.3
Liechtenstein	86	2.0	0.1
Norway	2 707	575.3	30.6
Switzerland <sup>(4)</sup>	5 541	398.6	41.3
Montenegro <sup>(5)</sup>	524	149.3	9.2
FYR of Macedonia	441	43.4	1.5
Serbia	987	102.4	6.0
Turkey	:	:	130.0

<sup>(1)</sup> Estimate made for the purpose of this publication, based on available data.

<sup>(2)</sup> Number of establishments and bed places: 2013. Number of nights spent: 2012.

Source: Eurostat (online data codes: [tour\\_cap\\_nat](#) and [tour\\_occ\\_ninat](#))

<sup>(3)</sup> 2013.

<sup>(4)</sup> Excluding holiday and other short-stay accommodation establishments.

<sup>(5)</sup> 2012.



In some EU Member States, over half of the total number of tourism trips made in 2014 were to destinations abroad; this was the case for Luxembourg, Belgium, Malta and Slovenia (as well as Switzerland). However, 10.0 % or less of the trips taken by residents of Romania, Spain and Portugal were abroad. These figures appear to be influenced by both the size of the Member States and their geographical location (smaller and more northerly countries tended to report a higher propensity for their residents to travel abroad).

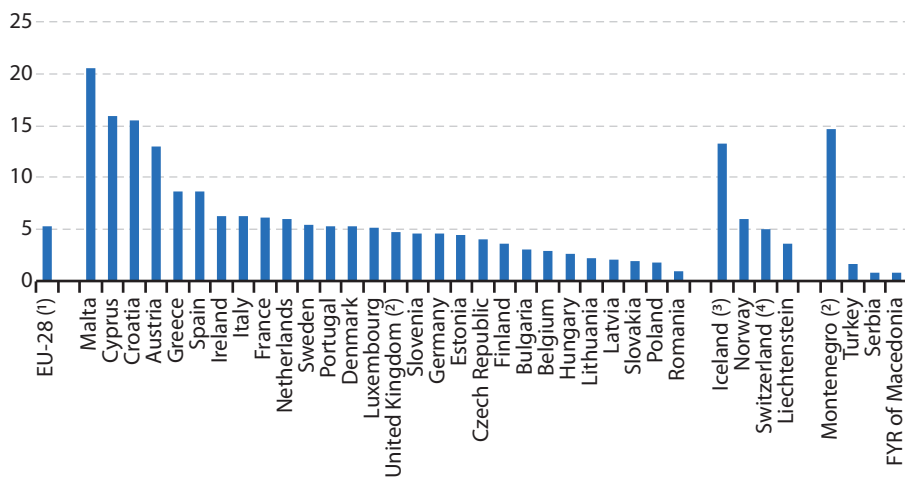
When taking into account a country's size in terms of its population, Luxembourg was the EU Member State whose residents spent the most nights abroad per inhabitant (an average of 24.6 nights in 2014), followed by Cyprus (20.3). At the other end of the spectrum, residents of

Romania, Bulgaria and Greece spent, on average, less than one night abroad in 2014.

In 2014, Spain was the most common tourism destination in the EU for non-residents (people coming from abroad), with 260 million nights spent in tourist accommodation establishments, or 21.5 % of the EU-28 total. Across the EU, the top four most popular destinations for non-residents were Spain, Italy (187 million nights), France (131 million nights) and the United Kingdom (105 million nights, data for 2013), which together accounted for more than half (56.6 %) of the total nights spent by non-residents in the EU-28. The least common destinations were Luxembourg and Latvia; the effect of the size of these Member States should be considered when interpreting these values.

**Figure 9.5: Tourism intensity, 2014**

(nights spent by residents and non-residents at tourist accommodation establishments per inhabitant)



<sup>(1)</sup> Estimate made for the purpose of this publication, based on available data.

<sup>(2)</sup> 2012.

Source: Eurostat (online data code: [tour\\_occ\\_ninat](#))

<sup>(3)</sup> 2013.

<sup>(4)</sup> Excluding nights spent in holiday and other short stay accommodation establishments.



# 10

## Science, technology and digital agenda



## Introduction

European Union (EU) statistics in the fields of science, technology and innovation cover a range of issues, most notably: research and development (R & D) statistics, innovation statistics and statistics on human resources in science and technology.

Science is part of almost every aspect of our lives: at the flick of a switch, we have light; when we are ill, medicines help us get better; when we want to talk to a friend we just pick up the telephone or send a text message or e-mail. Europe has a long tradition of excellence in research and innovation. The EU is a global player in a range of cutting-edge industrial sectors, for example, biotechnology, pharmaceuticals, telecommunications or aerospace.

R & D is often considered as one of the driving forces behind growth and job creation. However, its influence extends well beyond the economic sphere, as it can potentially — among others — resolve environmental or international security threats, ensure safer food, or lead to the development of new medicines to prevent and fight illness and disease.

In October 2010, the European Commission launched a Europe 2020 flagship initiative titled 'Innovation union' (COM(2010) 546 final) which sets out a strategic approach to a range of challenges like climate change, energy and food security, health and an ageing population.

The European innovation scoreboard is used to monitor the implementation of the innovation union. This tool aims to provide a comparative assessment of the performance of the EU Member States as well as a range of non-member countries.

Horizon 2020 is the framework programme for research and innovation for the period running from 2014 through to 2020. By coupling research and innovation, Horizon 2020 emphasises excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together to deliver innovation.

The policy context for ICT is a European Commission Communication concerning 'A digital agenda for Europe' (COM(2010) 245 final/2), which presented a strategy to promote a thriving digital economy in the EU by 2020. The digital agenda for Europe is one of seven flagships initiatives under the Europe 2020 strategy for smart, sustainable and inclusive growth. The agenda outlines seven priority areas for action including the creation of a digital single market.



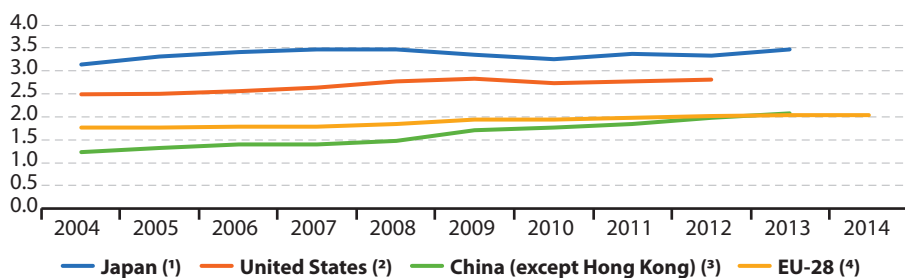
## 10.1 R & D expenditure

One of the key objectives of the EU during the last couple of decades has been to encourage increasing levels of investment, in order to provide a stimulus to the EU's competitiveness. The Europe 2020 strategy adopted in 2010 maintained a long-standing objective for the EU to devote 3 % of gross domestic product (GDP) to R & D activities; this is one of the five key targets of this strategy.

Gross domestic expenditure on R & D (GERD) stood at EUR 284 billion in the EU-28 in 2014, which was a 3.4 % increase on the year before, and 42.0 % higher than 10 years earlier (in 2004) — note that these rates of change are in current prices and so reflect price changes as well as real changes in the level of expenditure.

In order to make figures more comparable, GERD is often expressed relative to GDP, also known as R & D intensity. This ratio increased modestly in the EU-28 during the period from 2004 to 2007, rising from 1.76 % to 1.78 %. Between 2007 and 2012 it increased more rapidly, reaching 2.01 %, despite a small decline in 2010; R & D intensity increased slightly to 2.03 % in 2013 where it stayed in 2014. Despite the increase in recent years, the EU-28's R & D expenditure relative to GDP remained well below the corresponding ratios recorded in Japan (3.47 %, 2013 data) and the United States (2.81 %, 2012 data), as it has for a lengthy period of time. In 2013, R&D intensity in China surpassed that of the EU-28, with Chinese R & D expenditure equivalent to 2.08 % of GDP.

**Figure 10.1: Gross domestic expenditure on R & D, 2004–14**  
(% of GDP)



<sup>(1)</sup> 2008: break in series.

<sup>(2)</sup> Excludes most or all capital expenditure. 2012: provisional.

Source: Eurostat (online data code: tsc00001)

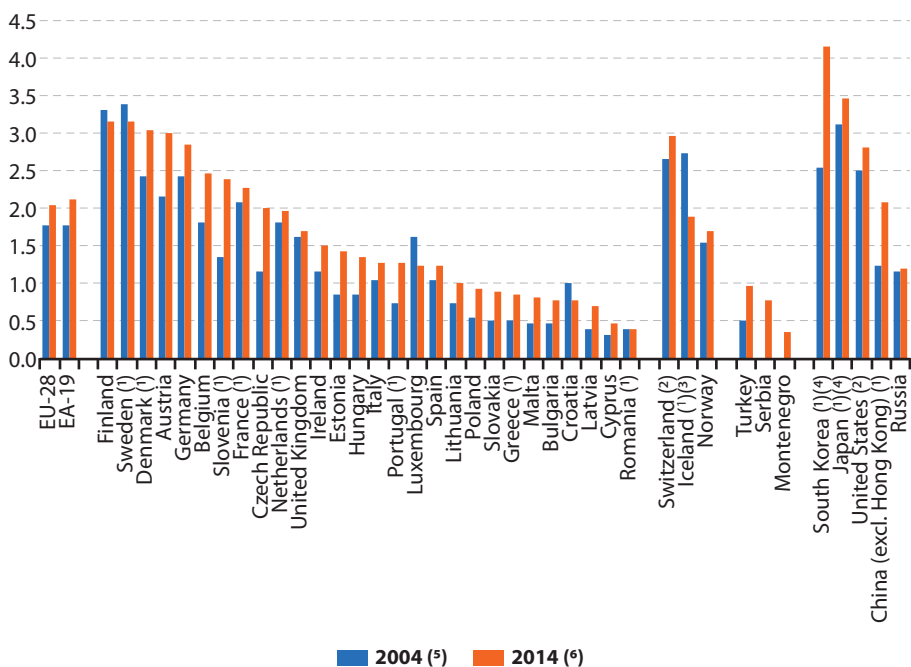
<sup>(3)</sup> 2009: break in series.

<sup>(4)</sup> 2014: provisional.

Nearly all EU Member States reported a higher R & D intensity in 2014 than in 2004, the exceptions being the two Member States with the highest intensities, Finland and Sweden, as well as Luxembourg and Croatia; there was no change in R & D intensity in Romania during the

period under consideration. At the other end of the range, the biggest increases in R & D intensity (in percentage point terms) between 2004 and 2014 were recorded in Slovenia, the Czech Republic and Austria.

**Figure 10.2:** Gross domestic expenditure on R & D, 2004 and 2014  
(% of GDP)



(1) Break in series.

(2) 2012 instead of 2014.

(3) 2003 instead of 2004.

(4) 2013 instead of 2014.

(5) Portugal and Sweden: estimates. South Korea and the United States: definition differs.

(6) EU-28, EA-19, Belgium, the Czech Republic, Denmark, Germany, Ireland, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal, Sweden, the United Kingdom and the United States: estimates or provisional. The United States: definition differs.

Source: Eurostat (online data codes: t2020\_20 and rd\_e\_gerdtot)



## 10.2 R & D personnel

The number of researchers in the EU-28 has increased in recent years: there were 1.76 million researchers (in full-time equivalents (FTE)) employed in the EU-28 in 2014, which marked an increase of 441 thousand (or 33.6%) when compared with 2004.

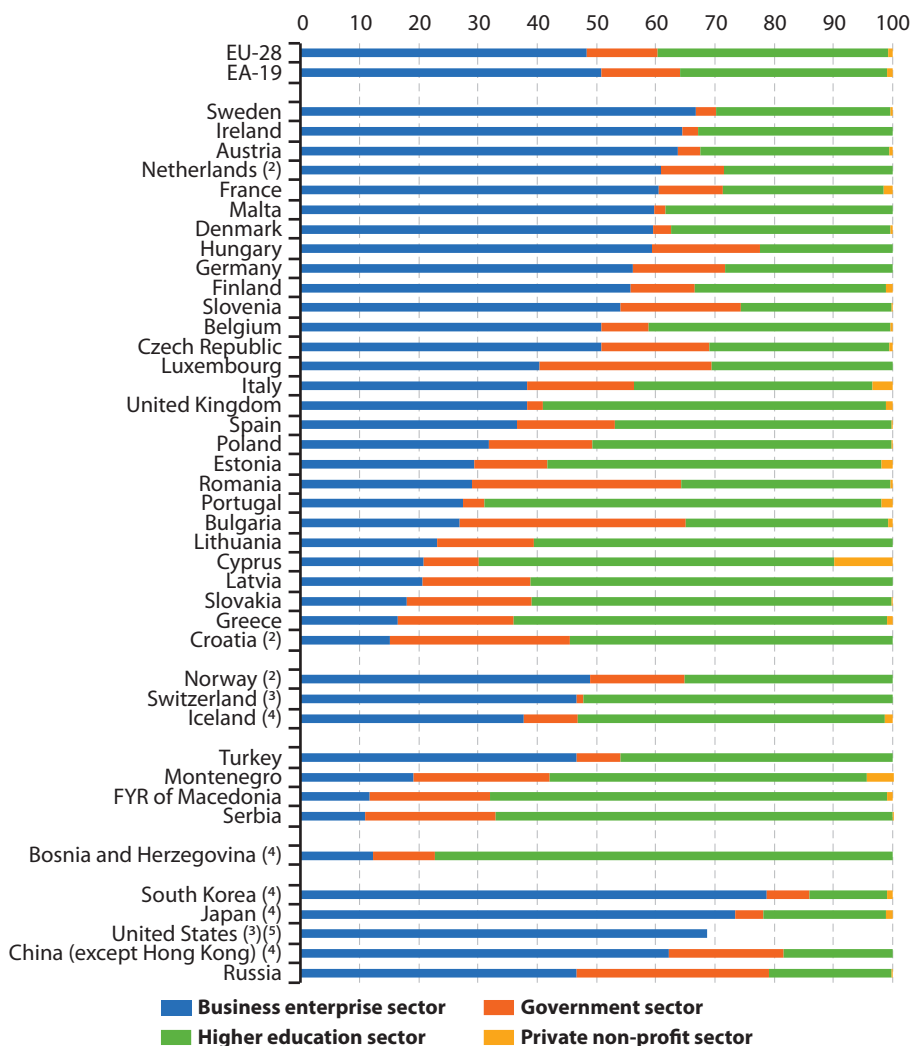
An analysis of R & D personnel by sector in 2014 shows that in the EU-28 there was a high concentration of researchers in the business enterprise sector (48%) and the higher education sector (39%), while 12% of the total number of researchers were working in the government sector. The relative importance of the different sectors varied considerably across the EU Member States, with business enterprises accounting for three fifths or more of all researchers in Sweden, Ireland, Austria, the Netherlands, France, Malta and Denmark. By contrast, the government sector employed the highest share of researchers in Bulgaria (38%) and in Romania (35%). Around three fifths of all researchers working in Cyprus, Lithuania, Slovakia, Latvia and Greece were employed within the higher education sector, with this share reaching two thirds (67%) in Portugal.

An analysis of researchers by sex shows that men accounted for 67% of the EU-28's workforce in 2013. Women accounted for half or more of the total number of researchers in 2013 in Bulgaria, Lithuania and Latvia, and their share was also close to parity in Croatia.

R & D personnel from all sectors together made up 2.0% of the labour force in Denmark and Finland and 1.9% in Luxembourg in 2014, compared with an EU-28 average of 1.1%. Aside from these three Member States, this share ranged from 0.3% in Cyprus and Romania to 1.6% in Sweden.

An analysis of science and technology graduates by sex shows that men (aged 20–29) were more likely to graduate in these fields than women: in 2014, the EU-28 registered 24.5 tertiary graduates in these fields per 1 000 men aged 20–29 and 12.7 graduates per 1 000 women of the same age, a difference of 11.8 per 1 000. A gender gap was observed in all EU Member States in 2014, ranging from 3.0 per 1 000 in Luxembourg to 24.1 per 1 000 in Ireland.

**Figure 10.3: Researchers in full-time equivalents (FTE), by sector, 2014 <sup>(1)</sup>**  
(% of total)



<sup>(1)</sup> EU-28, EA-19, Belgium, the Czech Republic, Denmark, Germany, Ireland, France, Italy, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Sweden and the United Kingdom: estimates or provisional.

<sup>(2)</sup> Definition differs.

<sup>(3)</sup> 2012.

<sup>(4)</sup> 2013.

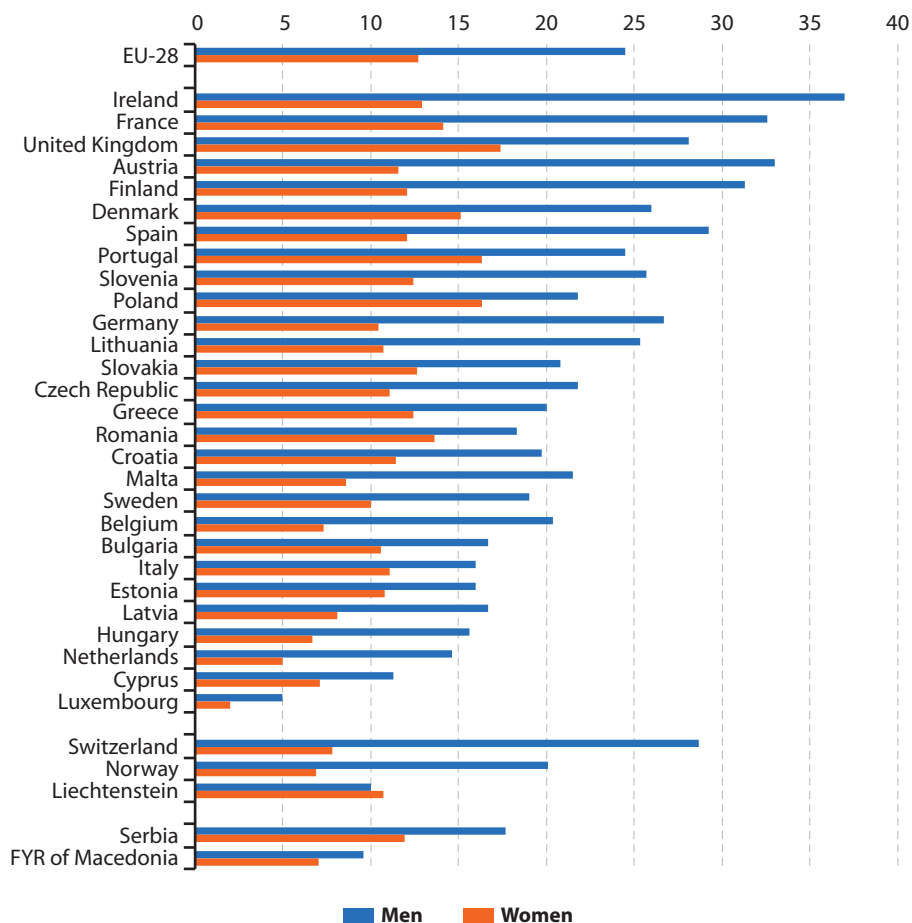
<sup>(5)</sup> Data only available for the business enterprise sector.

Source: Eurostat (online data code: tsc00004)



**Figure 10.4: Science and technology graduates, 2014**

(tertiary graduates in science and technology per 1 000 persons aged 20–29 years)



Source: Eurostat (online data code: educ\_uoe\_grad04)

## 10.3 Innovation

Innovation forms part of the Europe 2020 strategy for its role in creating job opportunities, making enterprises more competitive in the global market, improving the quality of life and in contributing to a more sustainable growth. Encouraging and stimulating innovation is one of the main objectives of European policies.

Almost half of all enterprises in the EU-28 reported innovation activity (48.9%) during the period 2010–12. Compared with the period 2008–10 the share of innovative enterprises decreased by 3.9 percentage points.

For the EU-28 as a whole, more than one quarter (27.5 %) of enterprises reported organisational innovation. Marketing innovation ranked second, being implemented in 24.3 % of all enterprises. Product innovation (innovation that encompasses new or significantly improved goods or services) was introduced in 23.7 % of enterprises. Relatively few enterprises (21.4%) implemented process innovations. It is important to note that individual enterprises may have introduced more than one type of innovation.

Based on the available data, the most common novelty or improvement among process innovators was related to the methods to manufacture or produce goods and services. New or significantly improved supporting activities for processes, such as maintenance

systems or operations for purchasing, accounting, or computing were implemented in nearly three fifths (58.9%) of the process innovative enterprises across the EU. Less common implementation in the process innovation context was process innovations related to new or significantly improved logistics, delivery or distribution methods for inputs, goods or services, as this was undertaken by just over one third (34.9 %) of the process innovative enterprises in the EU.

More than 6 in 10 (61.9%) product and / or process innovative enterprises in the EU used lead time advantage over competitors (in other words, reducing the time lag between the initiation and the implementation of their innovations) to improve their competitiveness between 2010 and 2012. Slightly more than one quarter (28.5 %) of these enterprises considered this method as highly important. A similar proportion (60.6 %) of product and / or process innovative enterprises used the complexity of goods or services to maintain or increase their competitiveness. Less than half of these considered this method highly important. These two leading methods (among those surveyed) were closely followed by the use of secrecy, which was used by just over half (51.2 %) of product and / or process innovative enterprises in the EU.



**Table 10.1:** Share of process innovative enterprises by implementation type, 2010–12

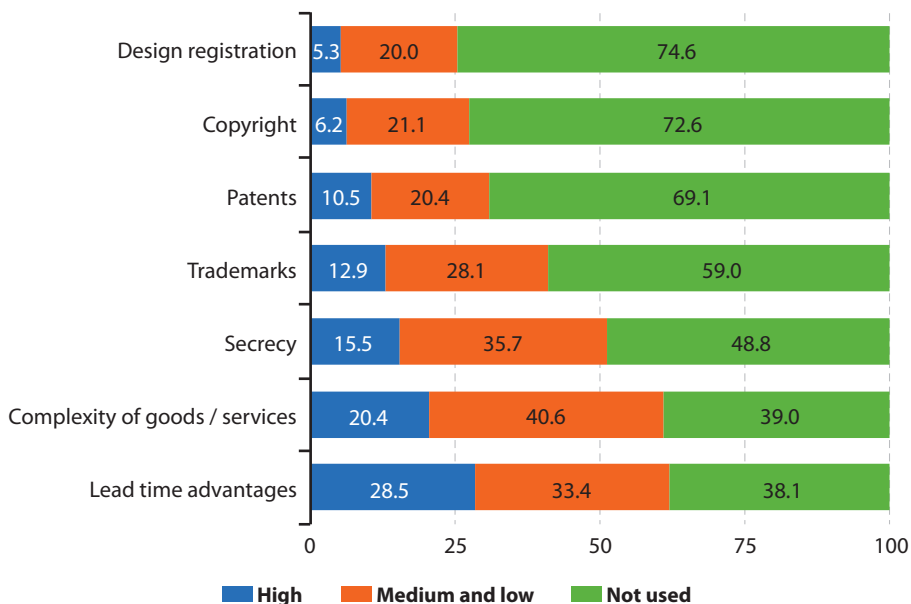
	Process innovative enterprises	Enterprises that developed process innovation by introducing new or improved logistics, delivery or distribution methods	Enterprises that developed process innovation by introducing new or improved methods to manufacture or produce goods or services	Enterprises that developed process innovation by introducing new or improved supporting activities for processes
	(% of all enterprises)	(% of all process innovative enterprises)		
<b>EU-28 <sup>(1)</sup></b>	21.4	34.9	65.5	58.9
<b>Belgium</b>	31.1	35.2	60.3	53.3
<b>Bulgaria</b>	9.3	28.1	61.7	48.7
<b>Czech Republic</b>	24.0	39.6	68.0	59.2
<b>Denmark</b>	22.9	37.7	41.9	77.8
<b>Germany</b>	25.5	44.1	74.9	53.3
<b>Estonia</b>	23.8	25.4	65.9	48.4
<b>Ireland</b>	25.9	40.5	59.9	70.0
<b>Greece</b>	25.6	28.3	59.7	63.3
<b>Spain</b>	15.1	20.3	61.8	56.1
<b>France</b>	24.1	35.9	72.4	48.0
<b>Croatia</b>	19.0	40.8	65.3	69.0
<b>Italy</b>	30.4	31.3	61.3	66.8
<b>Cyprus</b>	28.2	95.7	57.8	84.7
<b>Latvia</b>	12.7	32.6	71.9	42.3
<b>Lithuania</b>	13.1	25.4	70.1	58.3
<b>Luxembourg</b>	32.8	41.7	59.1	64.9
<b>Hungary</b>	8.3	19.6	58.9	55.1
<b>Malta</b>	26.4	52.4	57.8	74.8
<b>Netherlands</b>	25.9	32.7	62.1	55.4
<b>Austria</b>	28.7	32.5	55.4	72.8
<b>Poland</b>	11.0	29.2	61.7	54.1
<b>Portugal</b>	33.5	37.2	60.7	72.2
<b>Romania</b>	4.6	31.6	69.3	34.9
<b>Slovenia</b>	22.5	34.1	68.2	66.6
<b>Slovakia</b>	13.5	38.6	62.9	64.4
<b>Finland</b>	29.3	33.9	64.0	62.9
<b>Sweden</b>	23.9	32.0	57.2	61.2
<b>United Kingdom</b>	14.1	:	:	:
<b>Norway</b>	11.9	25.4	60.8	47.4
<b>Serbia</b>	22.0	40.9	49.9	74.8
<b>Turkey</b>	20.4	45.3	79.9	58.4

Note: The survey reference period covers the three years from 2010 to 2012.

Source: Eurostat (online data code: [inn\\_cis8\\_spec](#))

<sup>(1)</sup> Excluding the United Kingdom for the specific types of implementation.

**Figure 10.5:** Methods for maintaining or increasing competitiveness in product and/or process innovative enterprises by degree of importance, EU-28, 2010–12  
(% of all product and / or process innovative enterprises)



Note: Excluding the Czech Republic, Denmark, Ireland, Spain, France, Latvia and the United Kingdom. The survey reference period covers the three years from 2010 to 2012.

Source: Eurostat (online data code: [inn\\_cis8\\_comp](#))



## 10.4 Patents

Patents reflect inventive activity and they also show the capacity to exploit knowledge and translate it into potential economic gains. In this context, indicators based on patent statistics are widely used to assess the inventive performance of countries or regions.

The total number of patent applications to the European Patent Office (EPO) was 142.7 thousand in 2014. Applications from EU-28 Member States reached 56.6 thousand in 2014 (or 39.6 % of the total), an increase of 1.1 thousand compared with 2004, or a gain of 2.0 % in relative terms.

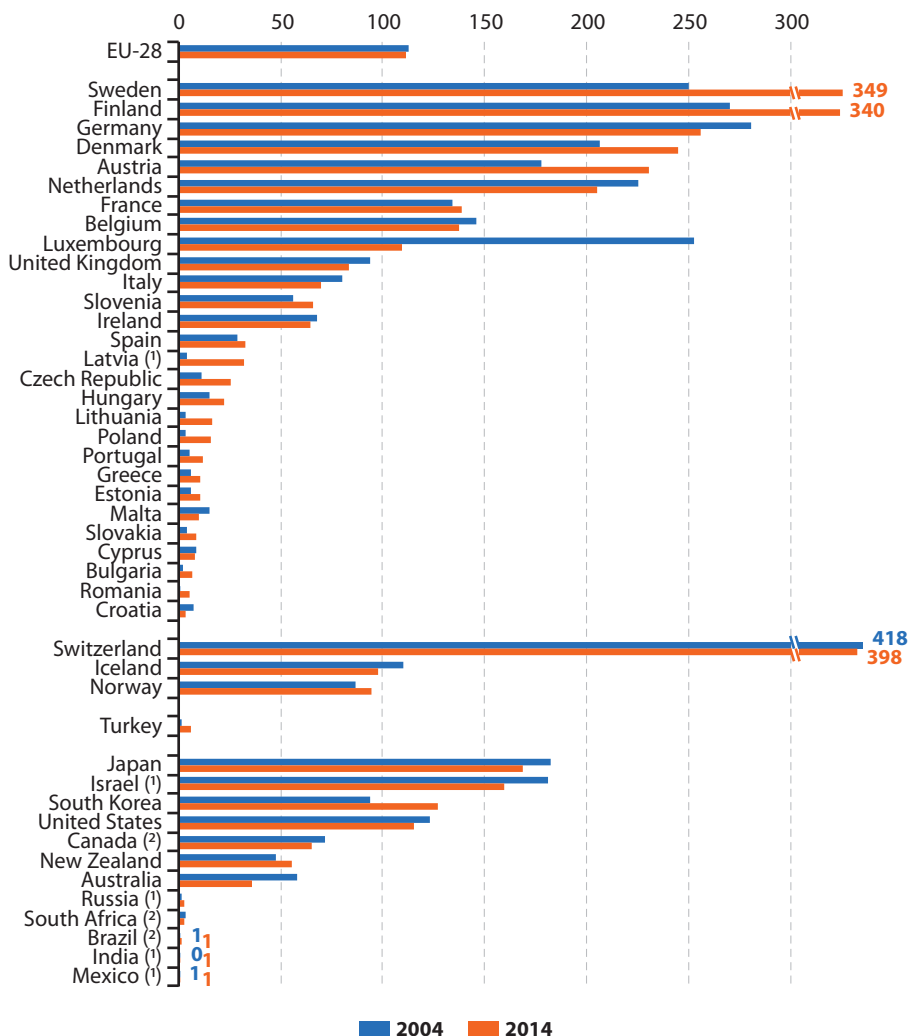
Among the EU Member States, Germany had by far the highest number of patent applications to the EPO in 2014, some 20.7 thousand (36.5 % of the EU-28 total), followed by France (9.1 thousand), the United Kingdom (5.3 thousand), Italy (4.2 thousand), the Netherlands (3.5 thousand) and Sweden (3.4 thousand). From non-member countries, the highest numbers of patent applications were recorded from the United States (36.8 thousand) and Japan (21.3 thousand), followed by China (7.5 thousand) and South Korea (6.4 thousand).

Relative to its population, Sweden reported the highest number of patent applications in 2014, some 349 per million inhabitants, followed by Finland (340), Germany (256), Denmark (244),

Austria (230) and the Netherlands (205). With the exception of Italy (70 patent applications per million inhabitants) and Slovenia (66), all of the southern and eastern EU Member States as well as the Baltic Member States reported less than 50 patent applications per million inhabitants in 2014.

Patent applications for information and communication technologies (ICT) represented almost one third (31.5 %) of the total applications made to the EPO in 2012. The relative share of the EU Member States in the number of ICT patents was quite low, as they accounted for 32.0 % of all ICT applications. ICT patent applications to the EPO were relatively concentrated in a small group of EU Member States. The highest numbers of ICT patent applications were recorded in Germany, France, the United Kingdom, Sweden, the Netherlands, Italy and Finland, all of which reported more than 500 applications. Collectively, these seven Member States filed 87.2 % of the ICT patent applications made from within the EU-28 in 2012. The number of ICT patent applications from non-member countries was particularly high in the United States (11.9 thousand) and Japan (7.6 thousand), while China and South Korea each made a greater number of applications than any of the EU Member States apart from Germany.

**Figure 10.6: Patent applications to the EPO, 2004 and 2014**  
(per million inhabitants)



Note: 2013 and 2014: estimates.

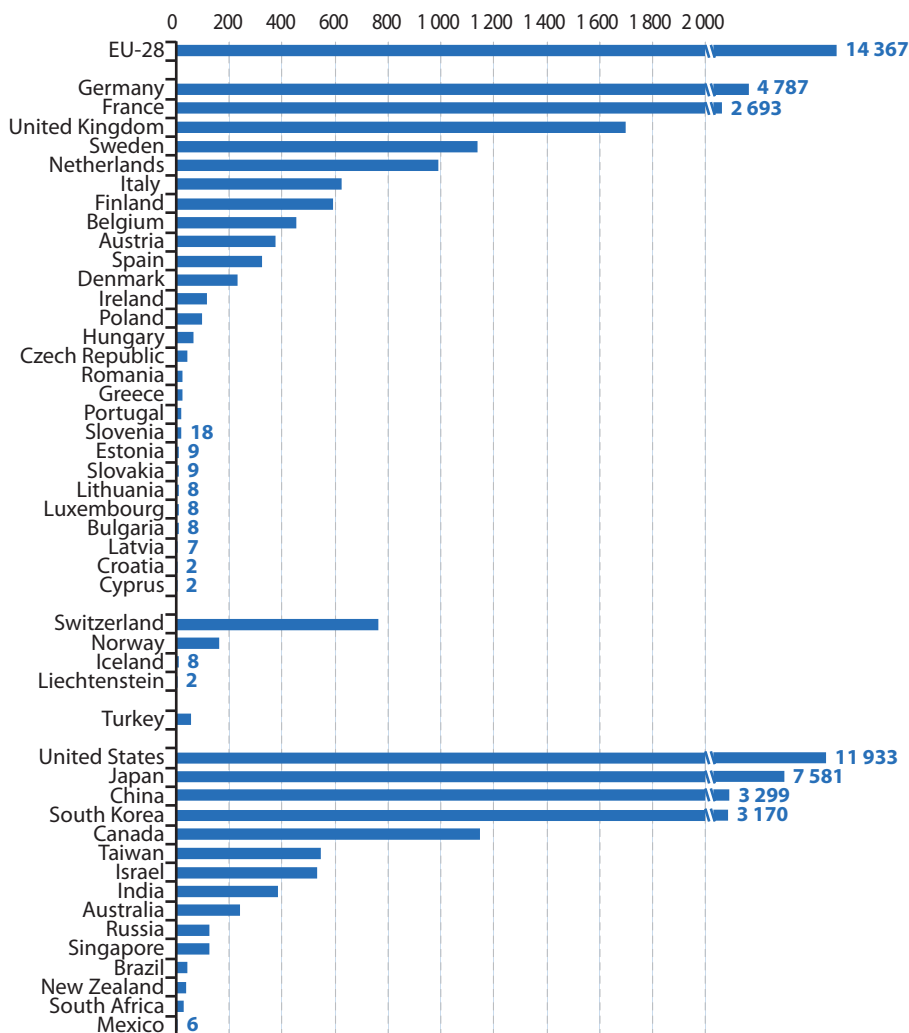
(<sup>1</sup>) 2013 instead of 2014.

(<sup>2</sup>) 2012 instead of 2014.

Source: Eurostat (online data code: [pat\\_ep\\_ntot](#))



**Figure 10.7: Patent applications to the EPO — ICT, 2012**  
(number)



Note: Malta: not available.

Source: Eurostat (online data code: pat\_ep\_nict)

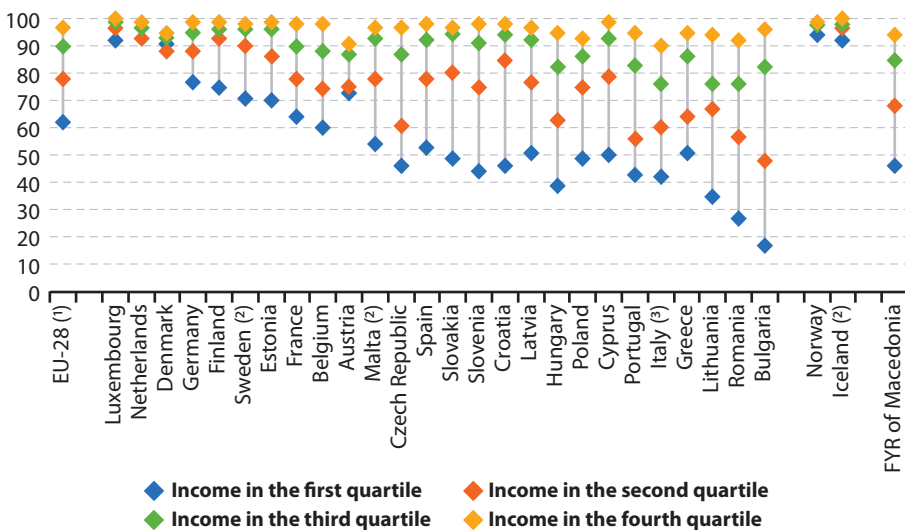
## 10.5 Information society — households and individuals

The development of the information society is regarded as critical to meet the demands of society and the EU economy. Information and communication technologies affect people's everyday lives in many ways, both at work and in the home, for example, when communicating or buying online. EU policies range from regulating entire areas such as e-commerce to trying to protect an individual's privacy.

ICTs have become widely available to the general public, both in terms of accessibility as well as cost. The level of income can influence the level of internet access by households. For the EU-28, the proportion of households with

internet access in 2015 ranged from 62 % among households in the first income quartile (the 25 % of households with the lowest income), increasing through the second and third income quartiles, to reach 97 % among households in the fourth income quartile (the 25 % of households with the highest income). In general, Member States with high overall internet access, such as Luxembourg, reported relatively little difference in internet access between income quartiles. By contrast, larger differences were generally noted among those Member States with lower overall levels of internet access, mainly in southern and eastern EU Member States and some of the Baltic Member States.

**Figure 10.8: Internet access in households by income quartile, 2015**  
(% of all households)



Note: Ranked on overall internet access. Ireland and the United Kingdom: not available.

(1) Excluding Ireland and the United Kingdom.

(2) 2014.

(3) 2013.

Source: Eurostat (online data code: [isoc\\_bde15b\\_h](#))

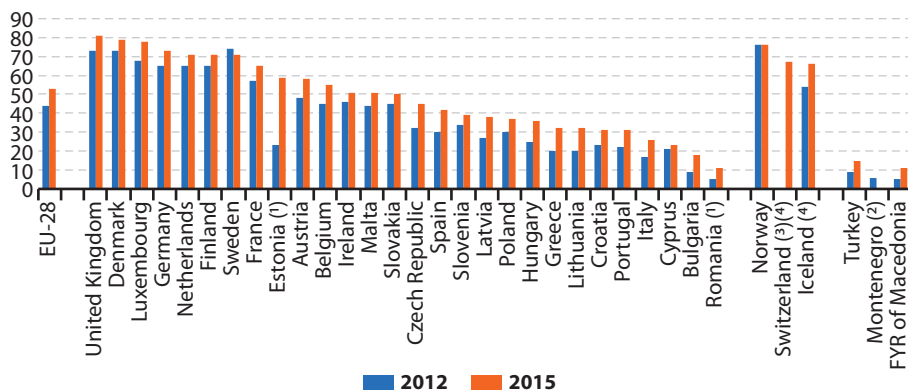


In 2015, two thirds (67 %) of individuals accessed the internet on a daily basis, with a further 9 % using it at least once a week (but not daily). As such, 76 % of individuals were regular users (at least weekly) of the internet, a level of use just surpassing the digital agenda target of 75 % for 2015. The proportion of daily users among internet users (those who had used the internet within the previous three months) ranged among the EU Member States from 66 % in Romania, 76 % in Poland and 77 % in Slovakia, to 91 % in Denmark, Malta, the Netherlands and Finland to 94 % in Italy and 95 % in Luxembourg. Norway (92 %) and Iceland (96 %, 2014 data)

also reported a high share of daily internet users among all internet users.

One of the most common online activities in the EU-28 in 2015 was participation in social networking. Half (50 %) of individuals aged 16 to 74 used the internet for social networking, for example using sites such as Facebook or Twitter. Around two thirds (66–68 %) of people in the United Kingdom, Belgium and Luxembourg used social networking sites, in Norway the proportion reached 73 % and in Iceland it was 83 % (2014 data). At the other end of the scale, there were three EU Member States where less than 4 in 10 people used such sites, namely France, Italy and Slovenia.

**Figure 10.9: Individuals who ordered goods or services over the internet for private use in the 12 months prior to the survey, 2012 and 2015**  
(% of individuals aged 16 to 74)



<sup>(1)</sup> Break in series.

<sup>(2)</sup> 2015: not available.

Source: Eurostat (online data code: [isoc\\_ec\\_ibuy](#))

<sup>(3)</sup> 2012: not available.

<sup>(4)</sup> 2014 instead of 2015.

The proportion of individuals aged 16 to 74 in the EU-28 who ordered goods or services over the internet for private use continued to rise: in 2015, it reached 53 %, an increase of 9 percentage points compared with 2012. The digital agenda target to have 50 % of the population buying online had already been achieved in 2014 and was surpassed in the target year (2015).

More than 70 % of individuals in the United Kingdom, Denmark, Luxembourg, Germany, the Netherlands, Finland and Sweden ordered goods or services over the internet in 2015, whereas the proportion was nearer one person in four in Italy and Cyprus, less than one in five in Bulgaria and around 1 in 10 in Romania.

## 10.6 Information society — enterprises

Progress in the development of the digital economy is regarded as critical to improve the competitiveness of EU industry and, more generally, to meet the demands of the EU economy. ICTs have fast become an integral part of how enterprises function: indeed, their extensive use is having a profound impact on how businesses are run, touching upon a range of aspects such as how they organise their internal communications, share their information with business partners, or communicate with their customers.

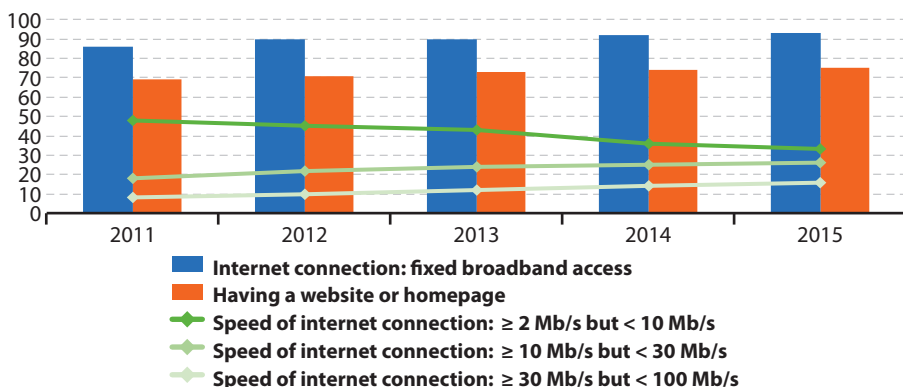
In 2015, the vast majority (93 %) of enterprises in the EU-28 with at least 10 persons employed made use of a fixed broadband connection to access the internet); as such, the share of enterprises with a broadband connection was close to saturation. With almost all enterprises connected to the internet, the attention of policymakers has more recently switched to the uptake of mobile internet connections (as

enterprises increasingly equip their staff with portable computers, smartphones and other mobile devices) and to the speed of fixed broadband connections.

The use of ICTs has the potential to make significant changes to the way that enterprises are run, the adoption of ICT-based solutions within business processes is often referred to using the generic term of 'e-business'. In 2015, three quarters (75 %) of EU-28 enterprises gave importance to their visibility on the internet and had either a website or homepage. This share was eight percentage points higher than it had been in 2010, when 67 % of enterprises had a website or homepage.

Over the last decade there has been a shift away from static webpages towards web applications which draw on user data. Enterprises have not only progressively embraced this new generation of highly dynamic web applications, but have also adopted new behaviours.

**Figure 10.10: Enterprises connecting to the internet using fixed broadband and enterprises having a website or homepage, EU-28, 2011–15**  
(% of enterprises)



Source: Eurostat (online data codes: [isoc\\_ci\\_it\\_en2](#) and [isoc\\_ciweb](#))





In 2015, some 39% of EU-28 enterprises made use of social media, this proportion rose at a relatively fast pace, growing by nine percentage points since 2013. Social media refers to internet-based applications, for example, social networks, blogs, multimedia content-sharing sites or wikis. Most enterprises that use social media tend to do so for image building and/or marketing products, in order to reach as wide an audience as possible.

In 2015, more than one third (36%) of EU-28 enterprises used social networks, while some 13% of enterprises used blogs and microblogs, and multimedia content-sharing websites; the share of enterprises using wiki-based knowledge-sharing tools was considerably lower, at 5%.

Among those EU-28 enterprises that used social media in 2015, just over one quarter (26%) collaborated with business partners or other organisations, while identical shares of enterprises using social media exchanged views, opinions or knowledge within their enterprise or involved customers in the development/innovation of goods or services. More than one third (38%) of EU-28 enterprises that used social media did so for recruiting employees, while the share of enterprises making use of social media rose to just over half (51%) in relation to those enterprises using it to obtain/respond

to customers' opinions/reviews/questions and peaked at almost four fifths (79%) for those enterprises using social media to develop their enterprise's image or to market products.

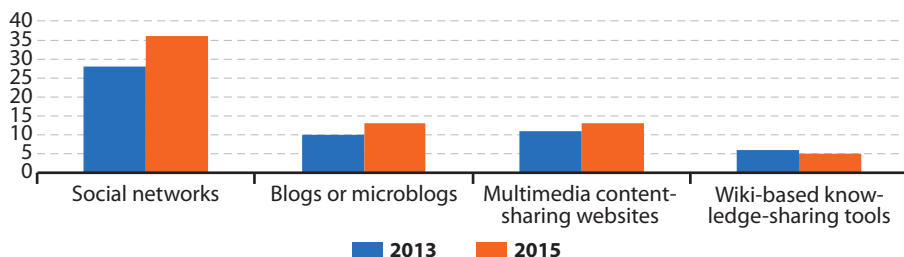
E-commerce refers to the trading of goods or services over computer networks such as the internet. These statistics are divided into e-commerce sales (e-sales) and e-commerce purchases (e-purchases) according to whether an enterprise makes or receives orders.

In 2014, more than twice as many enterprises in the EU made e-purchases as e-sales: 40% of enterprises in the EU-28 made e-purchases, while 19% received orders/made e-commerce sales. The proportion of EU-28 enterprises that made e-purchases rose by three percentage points between 2009 and 2014, while the share of enterprises making e-sales rose by four percentage points over the same period.

In 2014, e-sales accounted for 17% of the total turnover generated by EU-28 enterprises; as such, less than one fifth of total sales in the EU-28 were accounted for by e-commerce. The share of e-sales in total turnover rose by three percentage points between 2009 and 2014, as the share of e-sales in total turnover had stood at 14% at the start of the period under consideration.

**Figure 10.11: Enterprises using social media, by type of social media, EU-28, 2013 and 2015**

(% of enterprises)



Source: Eurostat (online data code: isoc\_cismt)

# 11

## Environment



## Introduction

Eurostat produces statistics and accounts on environmental pressures, impacts on the state and change of environmental quality and on the measures to avoid or mitigate impacts on the environment. Environmental accounts describe the relationship of the environment with the economy, including the impacts of the economy on the environment and the contribution of the environment to the economy.

Environmental accounts analyse the links between the environment and the economy by organising the environmental information in a way that is consistent with the accounting principles of national accounts. Environmental economic accounts can be used, for example, to identify: which are the most polluting activities or the ones that most deplete natural resources; what is the role of government and

households; how expensive it is to protect the environment and who pays for it; how large is the environmental economy within the overall economy; how large is the production and consumption of natural resources and energy.

Environment action programmes have guided the development of the EU's environment policy since the early 1970s. The current EU environment action programme — referred to as the 7th EAP — was adopted by Decision 1386/2013 of the European Parliament and Council in November 2013 under the title 'Living well, within the limits of our planet'; it guides the EU's environment policy up to 2020. The programme draws on a number of recent strategic initiatives, including the resource efficiency roadmap, the biodiversity strategy and the low carbon economy roadmap.

## 11.1 Land cover and land use

Land is the basis for most biological and human activities on Earth. Agriculture, forestry, industry, transport, housing and other services use land as a natural and/or an economic resource. Land is also an integral part of ecosystems and indispensable for biodiversity and the carbon cycle.

Land can be divided into two interlinked concepts:

- land cover refers to the bio-physical coverage of land (for example, crops, grass, broad-leaved forest, or built-up area);
- land use indicates the socioeconomic use of land (for example, agriculture, forestry, recreation or residential use).

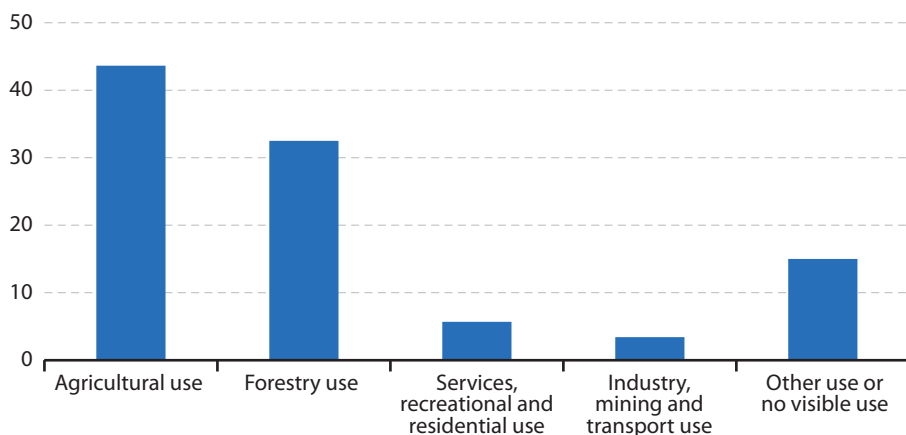
Forests and other wooded areas occupied 37.1 % of the total area of the EU-27 in 2012, cropland nearly a quarter (24.8 %) of the area, grassland just over one fifth (20.7 %) while built-up and other artificial areas, such as roads and railways had a 4.1 % share. Woodland was the prevailing land cover in northern parts of Europe in 2012 and for a number of EU Member States whose topography is dominated by mountains and hilly areas. The share of woodland in the total area reached 60.0 % or higher in Finland, Sweden and Slovenia (Alpine).

Denmark and Hungary were the EU Member States that reported the highest proportion of their total area covered by cropland, its share rising close to 50.0%. Natural and agricultural grasslands dominate the landscape in Ireland (63.6%) and the United Kingdom (43.2%). Malta and the Benelux countries had the highest proportions of built-up areas: this was particularly

true in Malta where artificial land accounted for 32.6% of the total area.

Agricultural land use is the most common primary <sup>(1)</sup> land use category in the EU-27; it accounted for 43.5% of the total area in 2012. Areas used for forestry covered 32.4% of the EU-27's land area, while 5.7% was used for services, residential and recreational purposes.

**Figure 11.1: Main land use by land use type, EU-27, 2012**  
(% of total area)



Source: Eurostat (online data code: lan\_lu)

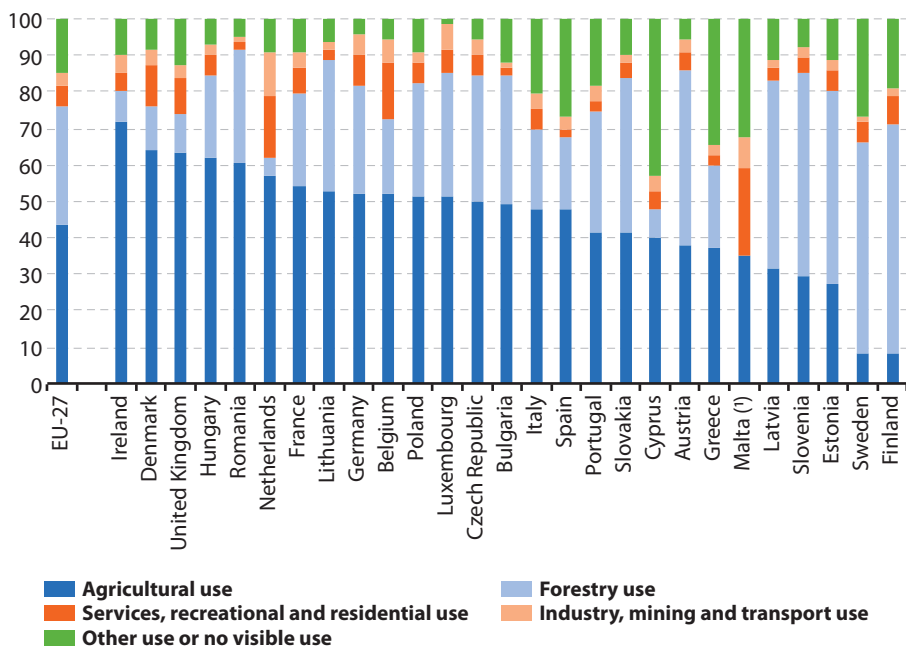
In 13 out of 27 EU Member States, more than half of the land area was used for agricultural purposes in 2012. The highest share of agricultural land was recorded in Ireland (71.5%), while Denmark, the United Kingdom, Hungary and Romania each reported shares of more than 60.0%.

In Finland, Sweden, Slovenia, Estonia and Latvia more than 50.0% of the total land area was used

for forestry purposes, Commerce (distributive trades), community services, recreational and residential areas covered 5.7% of the EU-27's land area in 2012. Just over half (52.1%) of this total in the EU was devoted to residential areas, more than one third (34.9%) to recreational purposes, 8.9% to community services, and just 4.1% to commerce.

<sup>(1)</sup> The same area can be used in parallel for many purposes (for example, a forest can be used for forestry, hunting and recreation); the statistics presented are based on the primary use.

**Figure 11.2: Primary land use by land use type, 2012**  
(% of total area)



Note: Croatia: not available.

(†) Forestry use: not available.

Source: Eurostat (online data code: lan\_lu)



## 11.2 Greenhouse gas emissions by industries and households

This chapter analyses the emissions of three greenhouse gases (GHGs) in the EU by the industries and households that are responsible for their generation. These gases are carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>).

In 2013, GHG emissions generated by industries and households stood in the EU-28 at 4.61 billion tonnes of CO<sub>2</sub> equivalents.

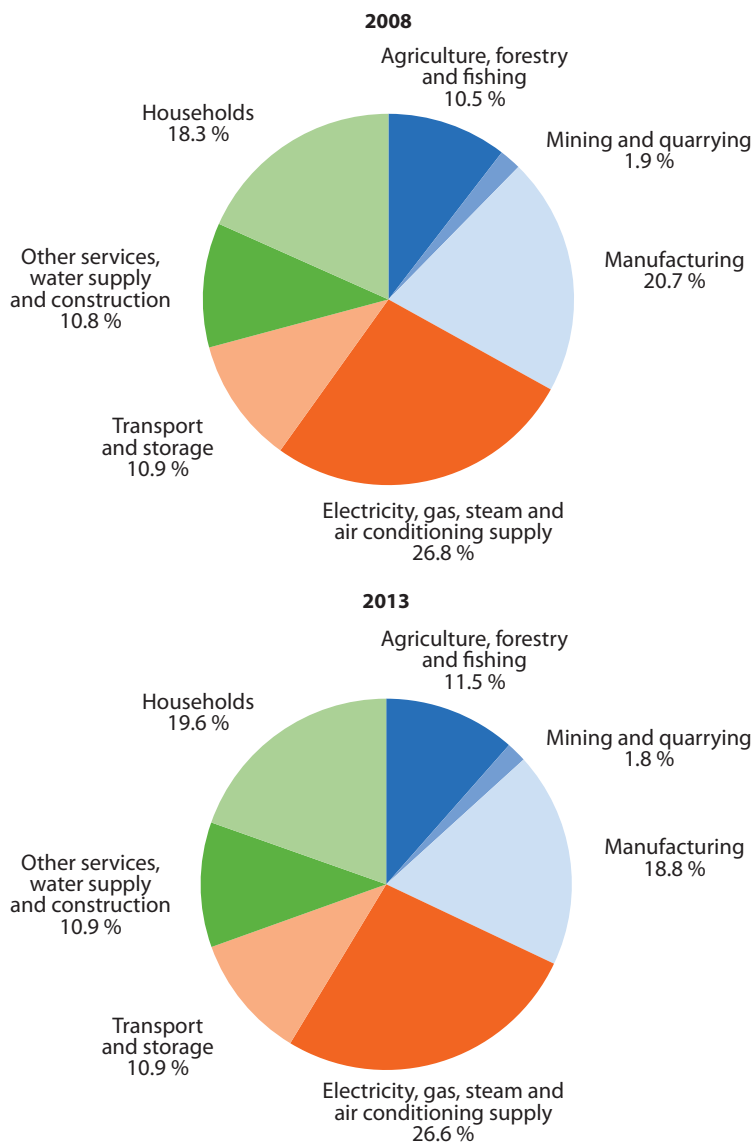
In 2013, the electricity, gas, steam and air conditioning supply activities (NACE Section D) had the largest share of the EU-28's greenhouse gas emissions, accounting for 26.6% of the total. The share of manufacturing (NACE Section C) in all emissions was 18.8%, meaning that producers engaged in these two groupings of activities together contributed nearly half (45.4%) of all greenhouse gas emissions in the EU-28 in 2013. Households accounted for 19.6% of greenhouse gas emissions, while producers in agriculture, forestry and fishing (NACE Section A) were responsible for a further 11.5%. The grouping of services (other than transport),

water supply and construction (NACE Sections E to G and I to U) accounted for 10.9% of greenhouse gas emissions. While transportation and storage services had a relatively low share of all emissions in 2013 (10.9%) it should be noted that this encompasses only businesses whose main activity is transport, and so excludes the operation of motor vehicles by businesses not operating in the transport activities as well as motor vehicles operated by private households. Mining and quarrying (NACE Section B) accounted for the remaining 1.8% of the total.

In 2013, the EU-28 overall greenhouse gas emissions were 11.8% lower than they had been in 2008, in other words, 617 million tonnes less of CO<sub>2</sub> equivalents were emitted in 2013.

In absolute terms, the largest decrease was recorded in manufacturing, falling from 1.08 billion tonnes of CO<sub>2</sub> equivalents in 2008 to 865 million tonnes in 2013, a decrease of 20.1%. Households in the EU-28 reduced their emissions by 54.6 million tonnes of CO<sub>2</sub> equivalents (a reduction of 5.7%) during the same time period.

**Figure 11.3: Greenhouse gas emissions by economic activity, EU-28, 2008 and 2013**  
(% of total emissions in CO<sub>2</sub> equivalents)



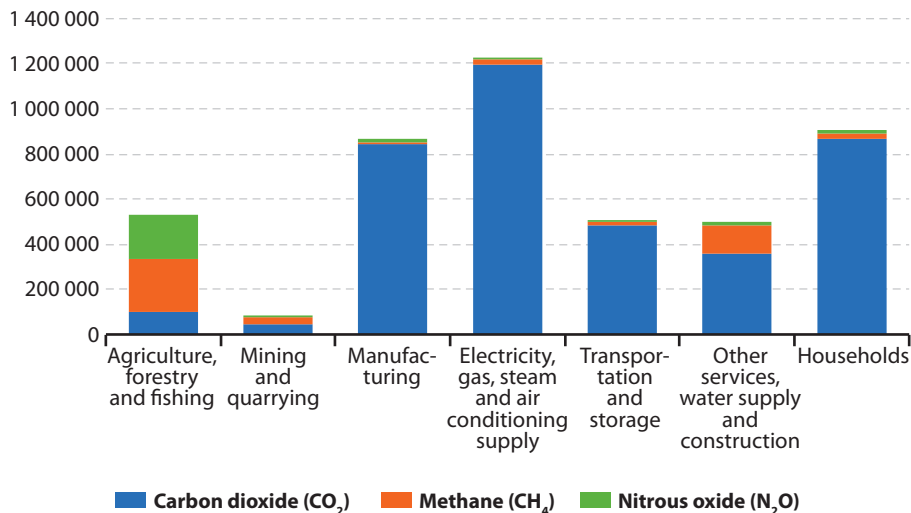
Note: Estimates.

Source: Eurostat (online data code: [env\\_ac\\_ainah\\_r2](#))



**Figure 11.4: Greenhouse gas emissions by economic activity and by pollutant, EU-28, 2013**

(thousand tonnes of CO<sub>2</sub> equivalents)



Note: Estimates.

Source: Eurostat (online data code: env\_ac\_ainah\_r2)

## 11.3 Carbon dioxide emissions from final use of products

CO<sub>2</sub> emissions induced by the final use of products within the EU-28 economy (consumption perspective) are also referred to as the 'carbon footprint'. The EU-28 final use of products encompasses the consumption by private households and government as well as the use of products for gross fixed capital formation (in other words investments such as buildings, plant and machinery, motor vehicles, and infrastructure). In 2012, the 'carbon footprint' of EU-28 final use was composed of about 1.67 tonnes per person (t/person) associated with the direct emissions by private households when burning fossil fuels (for example for heating

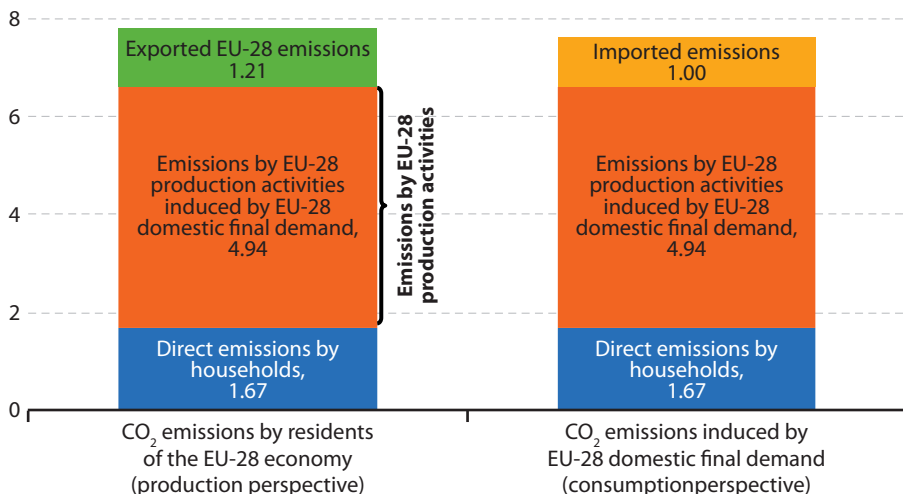
dwelling and fuelling private vehicles) and 5.94 t/person induced indirectly along the production chains of products which were either consumed or are investments within the EU. A majority of the latter — 4.94 t/person — stemmed from domestic production activities actually located in the EU. A smaller part, equal to 1.00 t/person, is estimated to have originated from production activities outside the EU that created intermediate and final products that were then imported into the EU for final use. The EU-28's total carbon footprint was equal to 7.61 tonnes CO<sub>2</sub> per person in 2012.



Carbon dioxide emissions may also be analysed from a production perspective, in other words, emissions generated by the EU-28 economy. In 2012, these amounted in total to 7.82 tonnes CO<sub>2</sub> per person. CO<sub>2</sub> emitted by the EU economy was made up of 1.67 t/person direct emissions by private households (for example for heating and private transport) and 6.15 t/person coming from

domestic production activities, in other words from EU production activities. The majority of the latter relate to the production of goods and services for the EU domestic final use (4.94 t/person). A smaller part of the EU production emissions is due to the production of goods and services that are exported outside the EU (1.21 t/person).

**Figure 11.5: CO<sub>2</sub> emissions — production and consumption perspective, EU-28, 2012**  
(tonnes CO<sub>2</sub> per inhabitant)



Note: Estimates.

Source: Eurostat (online data codes: [env\\_ac\\_io10](#) and [demo\\_gind](#))



**Table 11.1:** Domestic and imported CO<sub>2</sub> emissions induced by final use of products, EU-28, 2012

CPA product	Final consumption expenditure		Gross capital formation		Domestic final use, total	
	Domestic emissions	Imported emissions	Domestic emissions	Imported emissions	Global emissions	
	(kg of CO <sub>2</sub> per inhabitant)					(%)
Electricity, gas, steam and air-conditioning	928	42	3	0	973	12.8
Constructions and construction works	29	4	565	84	682	9.0
Food products, beverages and tobacco products	329	60	4	1	394	5.2
Coke and refined petroleum products	139	118	8	7	271	3.6
Retail trade services, except of motor vehicles and motorcycles	194	23	8	1	225	3.0
Accommodation and food services	196	27	0	0	223	2.9
Public administration and defence services; compulsory social security services	185	26	1	0	212	2.8
Wholesale trade services, except of motor vehicles and motorcycles	151	25	31	5	212	2.8
Land transport services and transport services via pipelines	187	17	5	0	210	2.8
Real estate services (excl. imputed rents)	170	21	4	1	197	2.6
Human health services	159	27	0	0	186	2.4
Motor vehicles, trailers and semi-trailers	84	23	44	12	163	2.1
Air transport services	127	32	0	0	160	2.1
Education services	99	9	0	0	108	1.4
Products of agriculture, hunting and related services	77	19	7	2	104	1.4
Machinery and equipment n.e.c.	2	1	68	32	103	1.4
Scientific research and development services	10	2	66	16	94	1.2
Textiles, wearing apparel and leather products	38	50	1	2	91	1.2
Other products	822	205	205	108	1 339	17.6
<b>Total</b>	<b>3 925</b>	<b>730</b>	<b>1 019</b>	<b>271</b>	<b>5 945</b>	<b>78.1</b>
Direct emissions by private households	1 666	0	0	0	1 666	21.9
<b>All CPA products plus direct emissions by private households</b>	<b>5 592</b>	<b>730</b>	<b>1 019</b>	<b>271</b>	<b>7 612</b>	<b>100.0</b>

Note: Estimates.

Source: Eurostat (online data codes: [env\\_ac\\_io10](#) and [demo\\_gind](#))

## 11.4 Material flow accounts and resource productivity

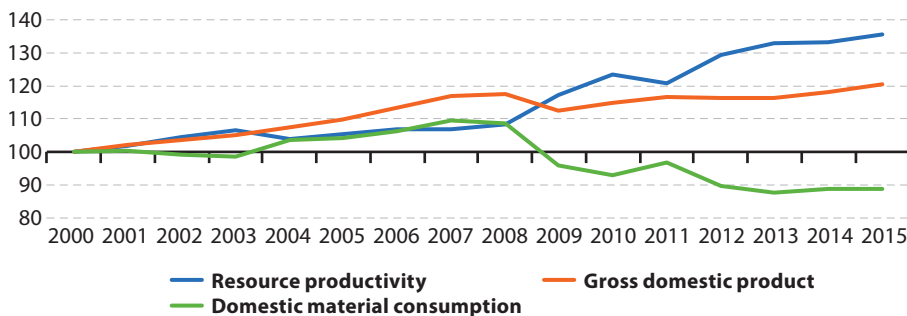
Eurostat's material flow accounts are a comprehensive data framework that systematically records the inputs of materials to European economies. Resource productivity quantifies the relation between economic activity and the consumption of natural resources, and sheds light on whether they go hand-in-hand or the extent to which they are decoupled. Natural resources include biomass, metal ores, non-metallic minerals and fossil energy materials.

The resource productivity components are gross domestic product (GDP) in chain linked volumes and domestic material consumption (DMC). The

latter measures the total amount of materials directly consumed in an economy by businesses for economic production and by households.

EU-28 resource productivity increased from 1.48 EUR/kg in 2000 to 2.00 EUR/kg in 2015, an increase of 35.4 %. This was not a steady increase: in particular the financial and economic crisis marked a change in 2008. Indeed, resource productivity reported a steady but modest increase from 2000 to 2008 (8.2 %). From 2008 to 2014 resource productivity surged from 1.60 to 2.00 EUR/kg, despite a dip in 2011. During this period annual growth was highest in 2009 (8.4 %) and 2012 (7.2 %).

**Figure 11.6: Development of resource productivity in comparison with GDP and DMC, EU-28, 2000–15**  
(2000 = 100)



Note: GDP in chain-linked volumes, reference year 2010.

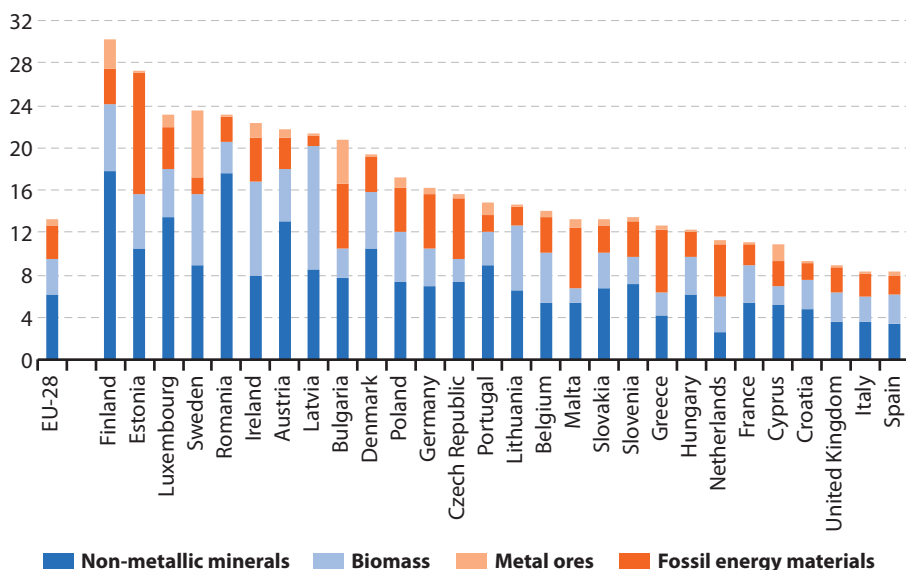
Source: Eurostat (online data codes: [nama\\_10\\_gdp](#) and [env\\_ac\\_mfa](#))

The level of DMC differed greatly among the EU Member States, ranging from around 8 tonnes per capita in Spain and Italy to 30.6 tonnes per capita in Finland in 2015. Furthermore, the structure of DMC — by main material category — varies between the Member States. The

composition of DMC in each Member State is influenced by domestic extraction and by natural endowments with material resources, and the latter may form an important structural element of each economy.



**Figure 11.7: Domestic material consumption by main material category, 2015**  
(tonnes per capita)



Source: Eurostat (online data codes: env\_ac\_mfa and demo\_gind)

## 11.5 Waste

Waste, defined by Directive 2008/98/EC Article 3(1) as 'any substance or object which the holder discards or intends or is required to discard', potentially represents an enormous loss of resources in the form of both materials and energy. In addition, the management and disposal of waste can have serious environmental impacts. Landfill, for example, takes up land space and may cause air, water and soil pollution, while incineration may result in emissions of air pollutants.

In 2014, the total waste generated in the EU-28 by all economic activities and households amounted to 2 598 million tonnes. There were considerable variations across EU-28 Member

States in 2014, both in the amount of waste generated and in the activities that mostly contributed to waste generation.

The average amount of waste generated across the EU-28 in 2014 was equivalent to more than five tonnes (5 118 kg) per inhabitant. Construction contributed 33.5 % of the total in 2014 (with 871 million tonnes) in the EU-28 and was followed by mining and quarrying (29.8 % or 774 million tonnes), manufacturing (9.8 % or 256 million tonnes), households (8.1 % or 209 million tonnes) and energy (3.7 % or 95 million tonnes); the remaining 15 % was waste generated from other economic activities, mainly including waste

and water services (8.8 %) and services (3.8 %). Almost two thirds (65 %) of the total waste generated in the EU-28 was mineral waste.

Among the waste generated in the EU-28 in 2014, some 95.6 million tonnes (3.7 % of the total) were classified as hazardous waste. This was equivalent to an average of 188 kg of hazardous waste per inhabitant in the EU-28.

In 2014, some 2 145 million tonnes of waste were treated in the EU-28; this includes the treatment of waste imported into the EU and the reported amounts are therefore not directly comparable with those on waste generation.

More than two fifths (43.6 %) of the waste treated in the EU-28 in 2014 was subject to disposal operations other than waste incineration. A further 39.0 % of the waste treated in the EU-28 in 2014 was sent to recovery operations other than energy recovery and backfilling. Just over one tenth (10.8 %) of the waste treated was backfilled, where backfilling is the use of waste in excavated areas for the purpose of slope reclamation or safety or for engineering purposes in landscaping. The remaining 6.5 % of the waste treated in the EU-28 was sent for incineration,

either with energy recovery or without. Significant differences could be observed among the EU Member States concerning the use they made of the various treatment methods.

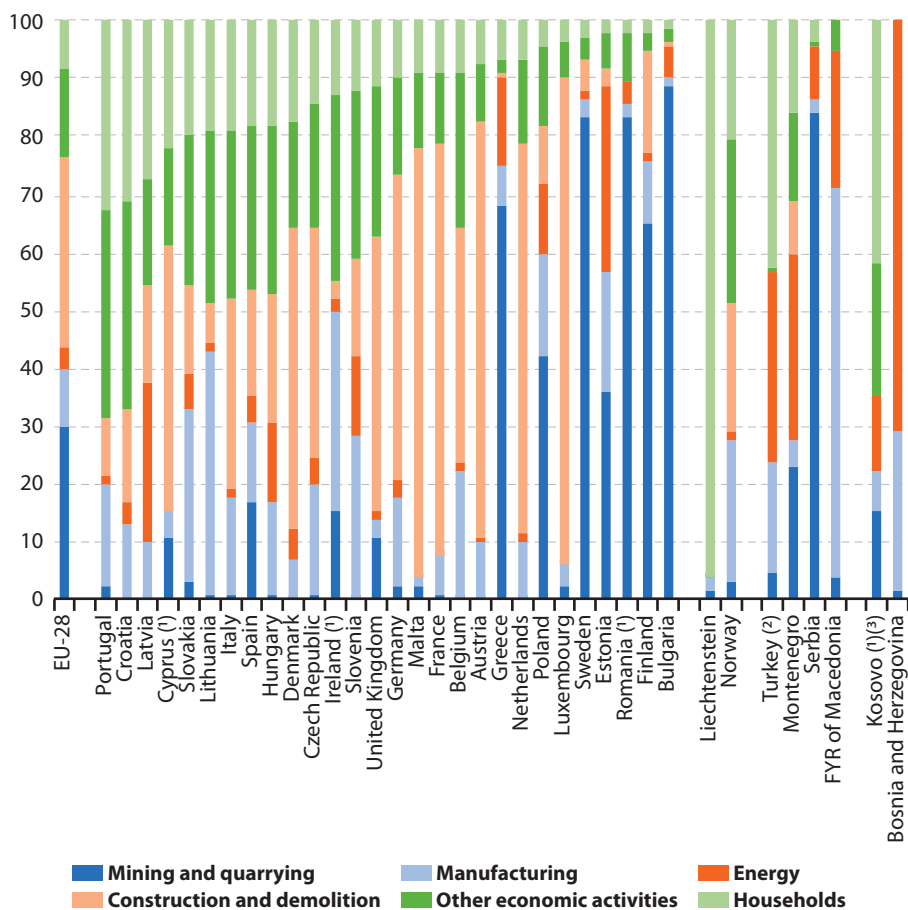
The quantity of waste landfilled in 2014 was 16 % lower than it had been in 2004. The quantity of waste recovered (excluding energy recovery), in other words recycled or used for backfilling, grew by 20.1 % from 890 million tonnes in 2004 to 1 069 million tonnes in 2014; as a result, the share of such recovery in total waste treatment rose from 42.1 % in 2004 to 49.9 % by 2014. Waste incineration (including energy recovery) saw an overall increase between 2004 and 2014 of 29.6 % and its share of the total rose from 5.1 % to 6.5 %.

In total, 75.6 million tonnes of hazardous waste were treated in the EU-28 in 2014. Nearly half (49.1 %) of this total was deposited into or onto land or through land treatment and release into water bodies (disposal other than incineration). Some 6.0 % of all hazardous waste was incinerated without energy recovery and a further 7.4 % with energy recovery. 37.5 % of hazardous waste in the EU-28 was recovered (recycled or used for backfilling) in 2014.



**Figure 11.8: Waste generation by economic activities and households, 2014**

(%)



<sup>(1)</sup> 2012.

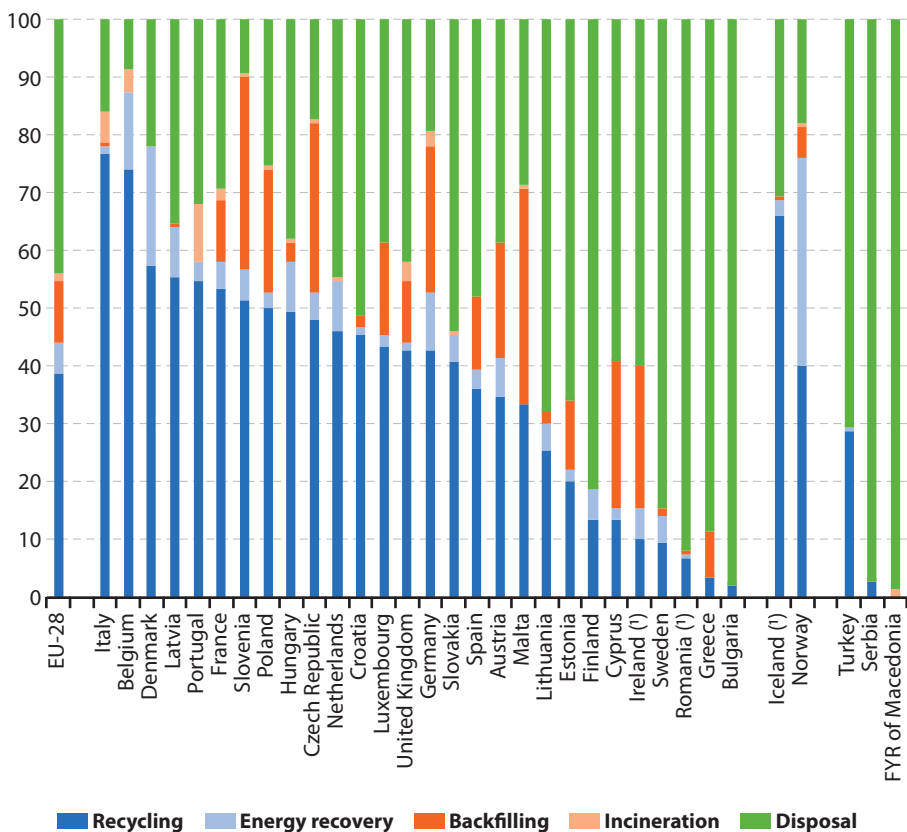
<sup>(2)</sup> Construction and demolition: not available.

<sup>(3)</sup> Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data code: [env\\_wasgen](#))

**Figure 11.9: Waste treatment, 2014**

(% of total)



(¹) 2012.

Source: Eurostat (online data code: [env\\_wastrt](#))



## 11.6 Water

Water is essential for life, it is an indispensable resource for the economy, and also plays a fundamental role in the climate regulation cycle. The management and protection of water

resources, of fresh and salt water ecosystems, and of the water we drink and bathe in is therefore one of the cornerstones of environmental protection.

**Table 11.2: Freshwater resources — long-term annual average**  
(billion m<sup>3</sup>)

	A. Precipitation	B. Evapotranspiration	C. Internal flow (C. = A. – B.)	D. External inflow	E. Freshwater resources (E. = C. + D.)	Outflow
Belgium	28.9	16.6	12.3	7.6	19.9	15.6
Bulgaria	69.9	52.3	17.6	89.1	106.7	108.0
Czech Republic	54.7	39.4	15.2	0.7	16.0	16.0
Denmark	38.5	22.1	16.3	0.0	16.3	1.9
Germany	307.0	190.0	117.0	75.0	188.0	182.0
Estonia	29.0	:	12.3	:	12.3	:
Ireland	80.0	32.5	47.5	3.5	51.0	:
Greece	115.0	55.0	60.0	12.0	72.0	:
Spain	346.5	235.4	111.1	0.0	111.1	111.1
France	500.8	320.8	180.0	11.0	186.3	168.0
Croatia	65.7	39.6	26.1	85.6	111.7	111.7
Italy	241.1	155.8	85.3	30.5	115.8	115.9
Cyprus	3.0	2.7	0.3	0.0	0.3	0.1
Latvia	42.7	25.8	16.9	16.8	33.7	32.9
Lithuania	44.0	28.5	15.5	9.0	24.5	25.9
Luxembourg	2.0	1.1	0.9	0.7	1.6	1.6
Hungary	55.7	48.2	7.5	108.9	116.4	115.7
Malta	0.2	0.1	0.1	0.0	0.1	0.1
Netherlands	31.6	21.3	10.3	81.5	91.8	90.9
Austria	98.0	43.0	55.0	29.0	84.0	84.0
Poland	193.1	138.3	54.8	8.3	63.1	63.1
Portugal	82.2	43.6	38.6	35.0	73.6	34.0
Romania	154.0	114.6	39.4	2.9	42.3	17.9
Slovenia	31.7	13.1	18.6	13.5	32.1	32.3
Slovakia	37.4	24.3	13.1	67.3	80.3	81.7
Finland	222.0	115.0	107.0	3.2	110.0	110.0
Sweden	342.2	169.9	172.6	13.6	186.2	186.2
United Kingdom	287.6	127.3	161.4	6.5	172.9	171.0
Iceland	200.0	30.0	170.0	0.0	170.0	170.0
Norway	470.7	112.0	380.7	12.3	393.0	393.0
Switzerland	61.2	21.4	39.8	12.6	52.4	53.1
FYR of Macedonia	19.5	:	:	1.0	:	6.3
Serbia	56.1	43.3	12.8	162.6	175.4	175.4
Turkey	503.1	275.7	227.4	6.9	234.3	178.0

Note: The minimum period taken into account for the calculation of long term annual averages is 20 years.

Source: Eurostat (online data code: [env\\_wat\\_res](#))

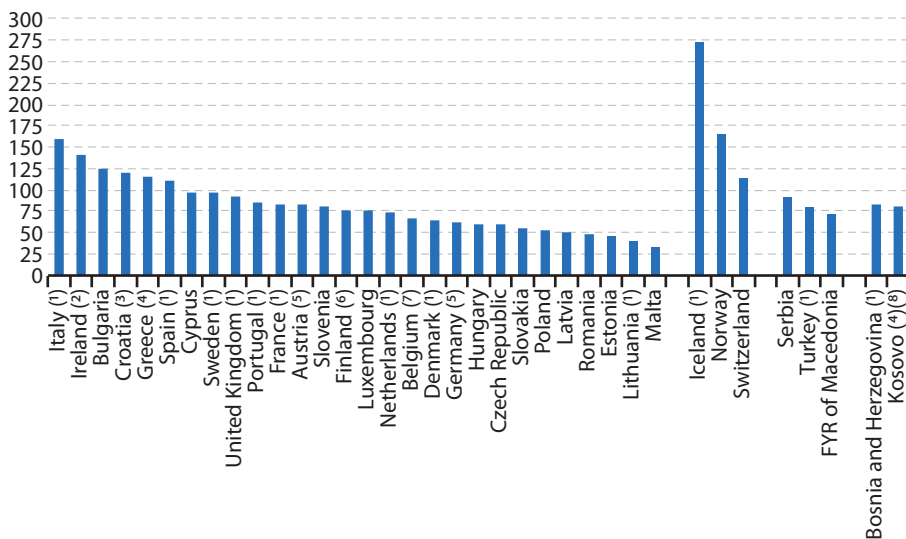


Water resources refer to the water available for use in a territory and include surface waters (in other words, coastal bays, lakes, rivers and streams) and groundwater. Renewable water resources are calculated as the sum of internal flow (which is precipitation minus actual evapotranspiration) and external inflow. Freshwater availability in a country is determined by climate conditions, geomorphology, land uses and transboundary water flows (in other words, external flows). Therefore, there are significant differences among countries: the United Kingdom, Sweden, France and Germany had the highest amount of freshwater resources, with

long-term annual averages ranging between 172.9 and 188.0 billion m<sup>3</sup>.

In 2013, freshwater abstraction by public water supply ranged across the EU Member States from a high of 159.1 m<sup>3</sup> of water per inhabitant in Italy (2012 data) down to a low of 32.7 m<sup>3</sup> per inhabitant in Malta. Some of the patterns of freshwater abstraction from public supply reflect specific conditions in the EU Member States: for example, in Ireland (140.3 m<sup>3</sup> per inhabitant in 2007) the use of water from the public supply was still free of charge, while in Bulgaria (125.1 m<sup>3</sup> per inhabitant in 2013) there were particularly high losses from the public network.

**Figure 11.10: Total freshwater abstraction by public water supply, 2013**  
(m<sup>3</sup> per inhabitant)



(1) 2012.

(2) 2007.

(3) Provisional.

(4) 2011.

(5) 2010.

(6) Estimate.

(7) 2009.

(8) Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data code: [env\\_wat\\_abs](#))



## 11.7 Environmental economy — employment and growth

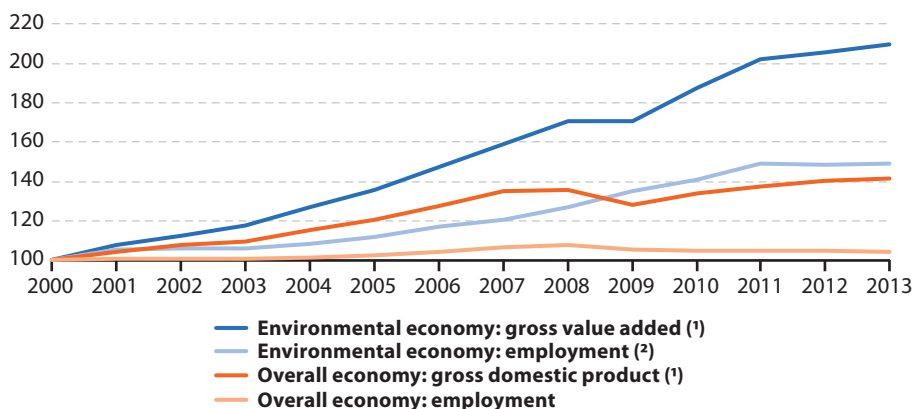
The environmental economy encompasses two broad groups of activities and/or products: 'environmental protection' — all activities related to preventing, reducing and eliminating pollution and any other degradation of the environment; 'resource management' — preserving and maintaining the stock of natural resources and hence safeguarding against depletion.

According to Eurostat estimates, employment in the EU-28's environmental economy rose from

2.8 million full-time equivalents (FTEs) in 2000 to 4.2 million FTEs in 2013. The environmental economy in the EU-28 generated EUR 699 billion of output and EUR 284 billion of value added in 2013. Between 2000 and 2013, the environmental economy consistently outperformed the overall economy in terms of the growth of its employment and value added/GDP, with the exception of employment in 2003 and value added in 2012.

**Figure 11.11: Development of key indicators for the environmental economy and the overall economy, EU-28, 2000–13**

(2000 = 100)



Note: Estimates.

(<sup>1</sup>) In current prices.

(<sup>2</sup>) In full-time equivalents.

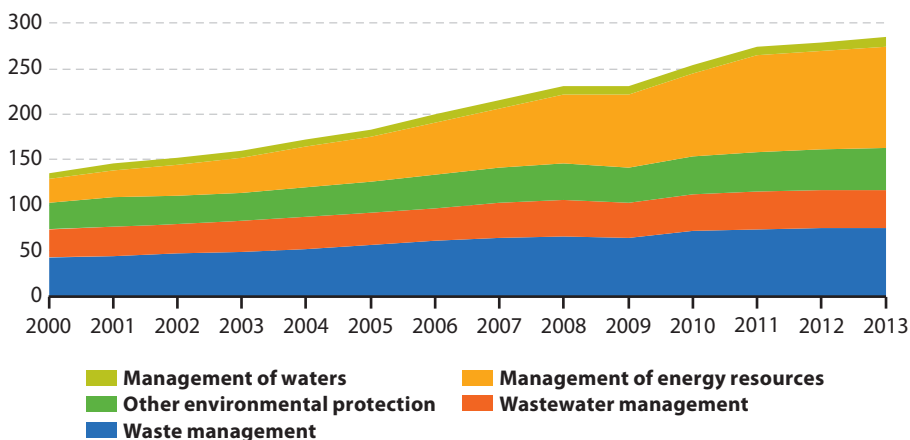
Source: Eurostat (online data codes: [env\\_ac\\_egss1](#), [env\\_ac\\_egss3](#), [nama\\_10\\_pe](#) and [nama\\_gdp\\_c](#))

The growing number of persons employed within the environmental economy since 2000 was mainly due to growth in the management of energy resources, especially those concerning the production of energy from renewable sources (such as wind and solar power) and the production of equipment and installations for heat and energy saving. Employment in this environmental domain increased from 547 thousand full-time equivalents in 2000 to 1.6 million full-time equivalents in 2013, in other words an increase of more than a million full-time equivalents (or 187%). The second most important contribution to employment growth in the environmental economy came from the domain of waste management, with employment rising from 828 thousand full-time

equivalents in 2000 to 1.1 million full-time equivalents in 2013 (an overall increase of 34%).

The development of the gross value added of the environmental economy since 2000 is shown in Figure 11.12. This increased from EUR 135 billion in 2000 to EUR 284 billion in 2013 (note these developments are shown in current price terms), as the environmental economy's contribution to overall GDP increased from 1.5 % to 2.2 % during the period under consideration. Gross value added of the environmental economy rose steadily between 2000 and 2008 to reach EUR 231 billion. It remained unchanged during 2009 as a result of the impact of the financial and economic crisis, but subsequently followed an upward development in the following years (2010–13).

**Figure 11.12: Gross value added of the environmental economy, by domain, EU-28, 2000–13**  
(billion EUR)



Note: Estimates.

Source: Eurostat (online data code: [env\\_ac\\_egss2](#))

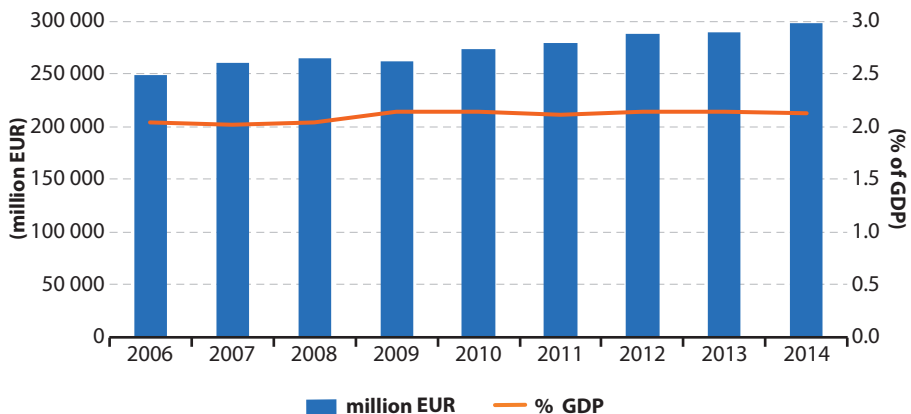
## 11.8 Environmental protection expenditure

The environmental protection expenditure accounts (EPEA) describe consumption, investment, transfers and some production and employment in environmental protection activities.

In 2014, national expenditure on environmental protection amounted to EUR 297 billion in the

EU-28. Between 2006 and 2014 it grew by 20 % at current prices. In the first three years of that period a growth of 7 % was registered followed by a slight decrease (1 %) between 2008 and 2009, as the global financial and economic crisis unfolded. During the years 2009 to 2014 national expenditure on environmental protection grew more strongly again, by 13 % in total.

**Figure 11.13: Expenditure on environmental protection, EU-28, 2006–14**  
(million EUR and % of GDP)



Note: Estimates. Different scale on the left and right axis.

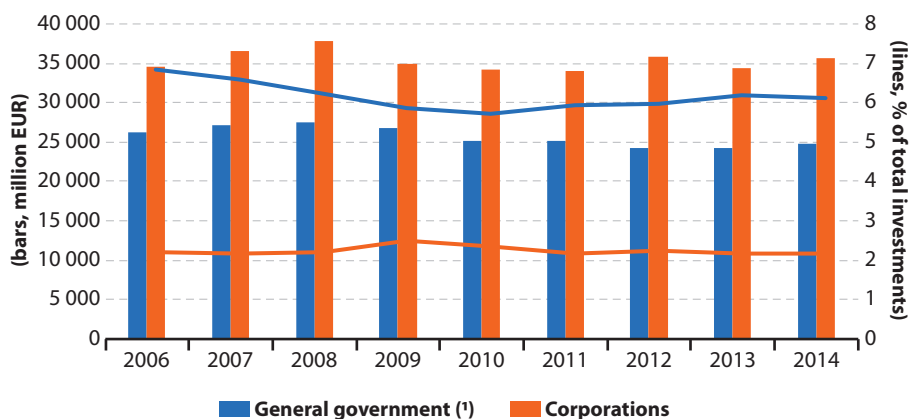
Source: Eurostat (online data codes: env\_ac\_pepsgg, env\_ac\_pestsp, env\_ac\_pepsnsp and nama\_10\_gdp)

In the EU-28, households spent some EUR 63 billion on environmental protection in 2014, accounting for about 57 % of the total final consumption expenditure on environmental protection. General government (including also non-profit institutions serving households (NPISH)) spent about EUR 47 billion (the remaining 43 % of the total).

In 2014, corporations in the EU-28 invested some EUR 36 billion (about 59 % of the total) for environmental protection. The general government had an investment of about EUR 25 billion (the remaining 41 % of the

total). Between 2006 and 2014, corporations' investment for environmental protection grew by 3.2 % at current prices, while general government's investment decreased by 5.2 %. Between 2006 and 2008 general government's environmental protection investment grew by 5 % while between 2008 and 2014 a drop of 9 % was registered. A similar development could be observed for corporations: between 2006 and 2008 a growth of 10 % was registered whereas between 2008 and 2014 investment decreased by 6 %, although this development was regular than for general government.

**Figure 11.14: Investment for environmental protection, EU-28, 2006–14**  
(million EUR and % of total investment)



Note: Estimates. Investment comprises gross fixed capital formation and acquisitions less disposals of non-financial non-produced assets.

(<sup>1</sup>) Including non-profit institutions serving households (NPISH). Estimates for the total investment of general government and NPISH (used as the denominator for the share in %) do not include the total investment by NPISH.

Source: Eurostat (online data codes: env\_ac\_pegsgg, env\_ac\_pegssp, env\_ac\_pegnsnp and nasa\_10\_nf\_tr)

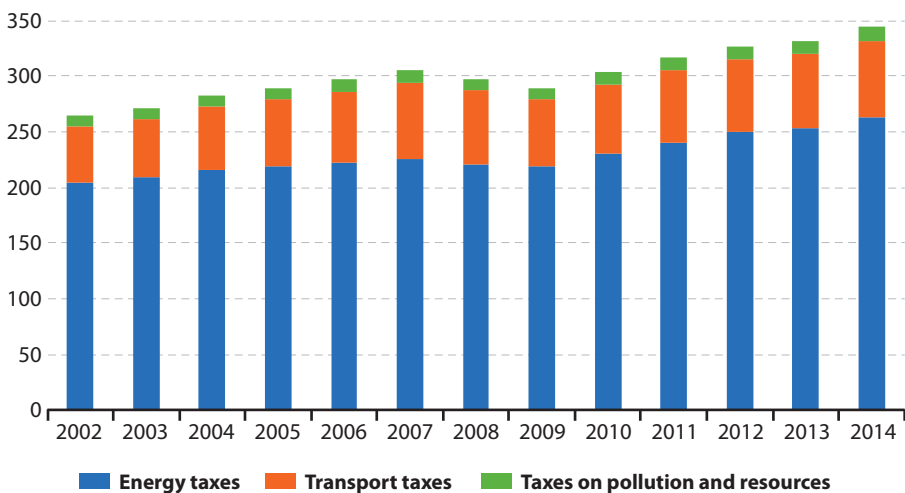
## 11.9 Environmental taxes

The total revenue from environmental taxes in the EU-28 in 2014 was EUR 343.6 billion; this figure equates to 2.5 % of GDP and to 6.3 % of the total revenues derived from all taxes and social contributions.

From 2002 to 2014, the total environmental tax revenue in the EU increased by 2.2% per year (at current prices) on average whereas GDP at

market prices rose at an annual average of 2.5%. In 2014, the level of environmental tax revenues was some EUR 79 billion higher than in 2002. However, from 2008 onwards the financial and economic crisis caused a reduction in economic activity in the EU, leading to lower tax receipts in 2008 and 2009. In 2010, environmental tax revenues returned to an upward path.

**Figure 11.15:** Total environmental tax revenue by type of tax, EU-28, 2002–14 (billion EUR)



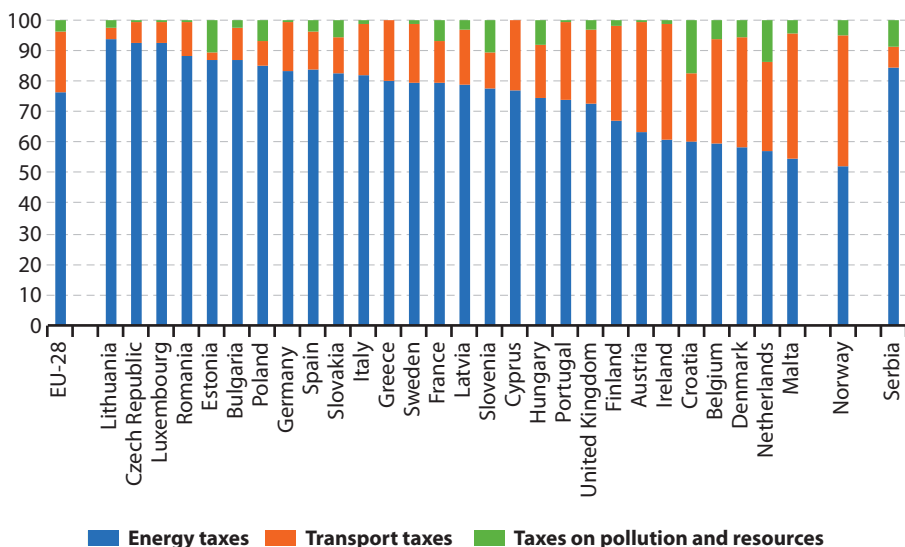
Source: Eurostat (online data code: env\_ac\_tax)

Energy taxes (which include taxes on transport fuels) represented by far the highest share of overall environmental tax revenue, accounting for 76.5 % of the EU-28 total in 2014. Energy taxes were particularly prominent in Lithuania, the Czech Republic and Luxembourg, where they accounted for more than nine tenths of total environmental tax revenues. By contrast, energy taxes slightly exceeded 50 % of the revenues from environmental taxes in Malta, as was also the case in Norway. Transport taxes represented the second most important contribution to total environmental tax revenues, with 19.9 % of the

EU-28 total in 2014. Pollution and resource taxes represented a relatively small share (3.6 %) of total environmental tax revenues in the EU-28 in 2014. This category of taxes was implemented more recently in most European countries.

Across the EU Member States, businesses paid a little more than half (53 %) of all energy tax revenue collected by governments, while the contribution of households rose to 45 %. The remainder (2 %) was paid by non-residents or not allocated.

**Figure 11.16: Environmental taxes by tax category, 2014**  
(% of total environmental taxes)



Source: Eurostat (online data code: [env\\_ac\\_tax](#))

# 12

## Energy





## Introduction

A competitive, reliable and sustainable energy sector is essential for all advanced economies. The energy sector has been under the spotlight in recent years due to a number of issues that have pushed energy to the top of national and European Union (EU) political agendas.

One of the 10 priorities of the European Commission is an Energy Union. It is intended that a European Energy Union will ensure secure, sustainable, competitive and affordable energy. In February 2015, the European Commission set out its plans for a framework strategy for a

resilient energy union with a forward-looking climate change policy in a Communication COM(2015) 80. The Communication proposes five dimensions for the strategy:

- energy security, solidarity and trust;
- a fully integrated European energy market;
- energy efficiency contributing to moderation of demand;
- decarbonising the economy, and
- research, innovation and competitiveness.

## 12.1 Energy production and imports

Production of primary energy in the EU-28 totalled 771 million tonnes of oil equivalent (Mtoe) in 2014. This continued the generally downward development observed in recent years, with 2010 the main exception as production rebounded following a relatively strong fall in energy production in 2009 that coincided with the financial and economic crisis. When viewed over a longer period, the production of primary energy in the EU-28 was 17.3 % lower in 2014 than it had been a decade earlier.

Primary energy production in the EU-28 in 2014 was spread across a range of different energy sources, the most important of which in terms of the size of its contribution was nuclear energy (29.4 % of the total).

Close to one quarter (25.5 %) of the EU-28's total production of primary energy was accounted for by renewable energy sources, while the share for solid fuels (19.4 %, largely coal) was just below one fifth and the share for natural gas was somewhat lower (15.2 %). Crude oil (9.1 %) was the only other major source of primary energy production.

The growth of primary production from renewable energy sources exceeded that of all the other energy types; this growth was relatively uniform during the period covering 2004–14, with a small dip in production in 2011.

Over this 10-year period the production of renewables increased by 73.1 %. By contrast, the production levels for the other primary sources of energy generally fell over this period.

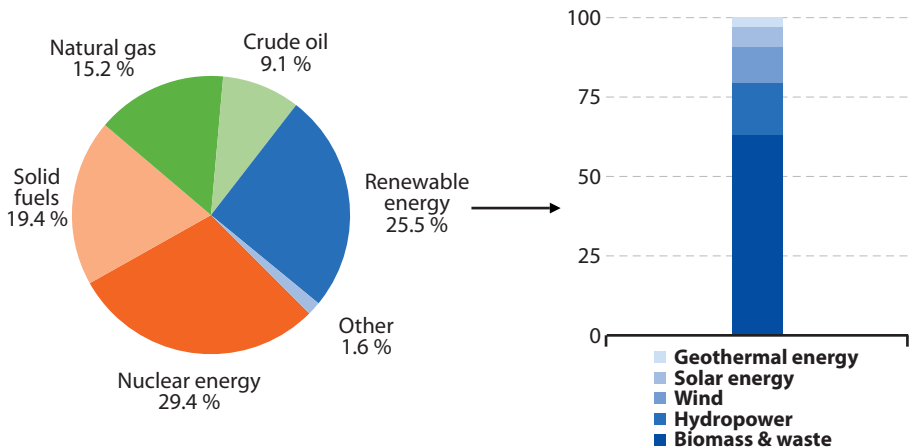


The downturn in the primary production of hard coal, lignite, crude oil, natural gas and more recently nuclear energy led to a situation where the EU was increasingly reliant on primary energy imports in order to satisfy demand, although this situation stabilised in the aftermath of the financial and economic crisis. The EU-28's imports of primary energy exceeded exports by some 881 Mtoe in 2014. The largest net importers of primary energy were generally the most

populous EU Member States, with the exception of Poland (where some indigenous reserves of coal remain).

EU-28 dependency on energy imports increased from less than 40% of gross energy consumption in the 1980s to reach 53.5% by 2014. This latest figure marked a slight decrease in the dependency rate, which had peaked at 54.5% in 2008.

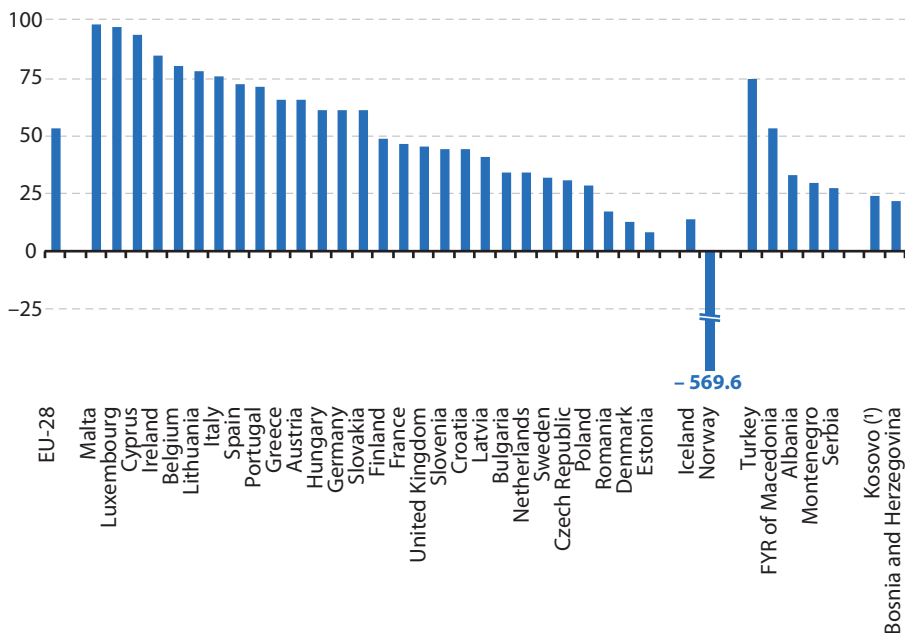
**Figure 12.1: Production of primary energy, EU-28, 2014**  
(% of total, based on tonnes of oil equivalent)



Source: Eurostat (online data codes: [nrg\\_100a](#) and [nrg\\_107a](#))

**Figure 12.2: Energy dependency rate — all products, 2014**

(% of net imports in gross inland consumption and bunkers, based on tonnes of oil equivalent)



(¹) Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data code: tsdcc310)



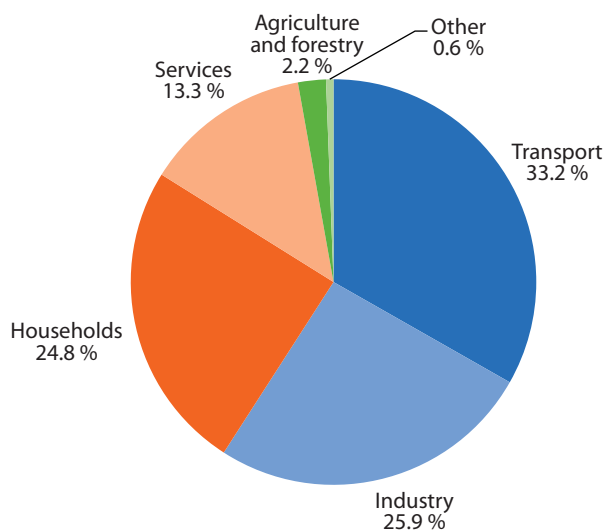
## 12.2 Consumption of energy

Gross inland consumption of energy within the EU-28 in 2014 was 1 606 Mtoe. Having remained relatively unchanged during the period from 2003 to 2008, gross inland consumption of energy decreased by 5.8 % in 2009; some of this change may be attributed to a lower level of economic activity as a result of the global financial and economic crisis, rather than a structural shift in the pattern of energy consumption. In 2010, there was a 3.7 % rebound in the level of gross inland consumption of energy in the EU-28 although this was followed by a similarly large (– 3.7 %) fall in 2011. After these three years of relatively large changes, 2012

and 2013 saw more modest rates of change as consumption fell by 0.8 % and 1.1 %. This pattern intensified in 2014, as the latest year-on-year change revealed gross inland consumption falling by a further 3.6 %.

The gross inland consumption of each EU Member State depends, to a large degree, on the structure of its energy system, the availability of natural resources for primary energy production, and the structure and development of each economy; this is true not only for conventional fuels and nuclear power, but also for renewable energy sources.

**Figure 12.3: Final energy consumption, EU-28, 2014**  
(% of total, based on tonnes of oil equivalent)



Source: Eurostat (online data codes: nrg\_100a)

An analysis of the final end use of energy in the EU-28 in 2014 shows three dominant categories: namely, transport (33.2 %), industry (25.9 %) and households (24.8 %).

There was a marked change in the development of energy consumption for transport after 2007. Until that year consumption had consistently

increased, rising each year from the start of the time series in 1990. However, in 2008, as the financial and economic crisis started, the consumption of energy for transport purposes fell before an increase of 1.3 % was registered in 2014. Overall, between the 2007 peak and the low of 2013, energy consumption for transport in the EU-28 fell by 9.1 %.



**Table 12.1: Gross inland consumption of energy, 1990–2014**  
(million tonnes of oil equivalent)

	1990	2000	2010	2013	2014	Share in EU-28, 2014 (%)
<b>EU-28</b>	1 667.9	1 730.0	1 763.7	1 666.7	1 605.9	100.0
<b>Belgium</b>	48.6	59.3	61.2	56.5	53.4	3.3
<b>Bulgaria</b>	27.6	18.5	17.8	16.8	17.7	1.1
<b>Czech Republic</b>	49.9	41.1	44.7	42.2	41.5	2.6
<b>Denmark</b>	17.9	19.7	20.0	18.2	16.9	1.1
<b>Germany</b>	356.3	342.3	333.0	324.5	313.0	19.5
<b>Estonia</b>	9.9	5.0	6.2	6.7	6.7	0.4
<b>Ireland</b>	10.3	14.4	15.2	13.7	13.6	0.8
<b>Greece</b>	22.3	28.3	28.8	24.3	24.4	1.5
<b>Spain</b>	90.1	123.6	130.3	119.3	116.7	7.3
<b>France</b>	227.8	257.5	267.1	258.9	248.5	15.5
<b>Croatia</b>	9.5	8.4	9.4	8.6	8.2	0.5
<b>Italy</b>	153.5	174.2	177.9	159.5	151.0	9.4
<b>Cyprus</b>	1.6	2.4	2.7	2.2	2.2	0.1
<b>Latvia</b>	7.9	3.9	4.6	4.5	4.5	0.3
<b>Lithuania</b>	15.9	7.1	6.8	6.7	6.7	0.4
<b>Luxembourg</b>	3.5	3.7	4.6	4.3	4.2	0.3
<b>Hungary</b>	28.8	25.3	25.7	22.7	22.8	1.4
<b>Malta</b>	0.6	0.8	0.9	0.9	0.9	0.1
<b>Netherlands</b>	66.7	78.1	86.1	80.4	76.8	4.8
<b>Austria</b>	25.0	29.0	34.3	33.7	32.7	2.0
<b>Poland</b>	103.3	88.6	100.7	98.0	94.3	5.9
<b>Portugal</b>	18.2	25.3	24.3	22.4	22.1	1.4
<b>Romania</b>	58.1	36.6	35.8	32.4	32.3	2.0
<b>Slovenia</b>	5.7	6.5	7.3	6.9	6.7	0.4
<b>Slovakia</b>	21.8	18.3	17.9	17.0	16.2	1.0
<b>Finland</b>	28.8	32.4	37.1	34.1	34.6	2.2
<b>Sweden</b>	47.4	48.9	50.8	49.1	48.2	3.0
<b>United Kingdom</b>	210.6	230.6	212.5	202.2	189.3	11.8
<b>Iceland</b>	2.4	3.3	5.9	6.1	6.1	–
<b>Norway</b>	21.4	26.4	34.3	33.7	29.2	–
<b>Montenegro</b>	–	–	1.2	1.0	1.0	–
<b>FYR of Macedonia</b>	2.4	2.7	2.8	2.7	2.6	–
<b>Albania</b>	2.6	1.8	2.1	2.4	2.3	–
<b>Serbia</b>	19.6	13.7	15.6	14.9	13.3	–
<b>Turkey</b>	52.3	76.7	106.9	118.5	124.0	–
<b>Bosnia and Herzegovina</b>	5.0	3.2	4.7	5.0	7.8	–
<b>Kosovo <sup>(1)</sup></b>	–	1.5	2.5	2.3	2.1	–

(<sup>1</sup>) Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data codes: nrg\_100a)

## 12.3 Electricity production, consumption and market overview

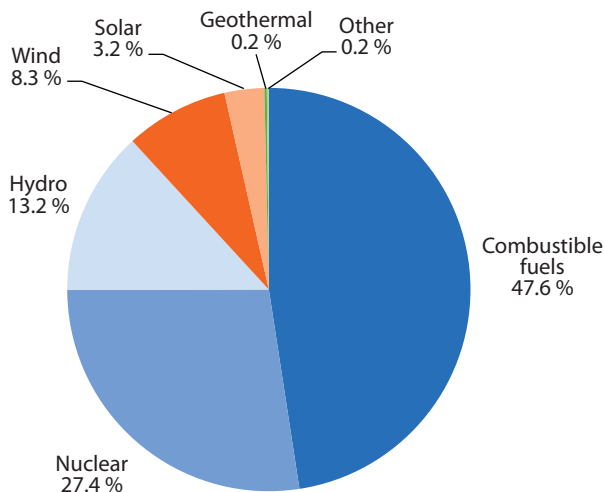
Total net electricity generation in the EU-28 was 3.03 million gigawatt hours (GWh) in 2014 — which was 2.4 % less than the year before. This was the fourth consecutive fall in output, following on from reductions of 2.2 %, 0.1 % and 0.6 % in 2011, 2012 and 2013. As such, the level of net electricity generation in 2014 was 5.7 % lower than its peak level of 2008 (3.22 million GWh).

More than one quarter (27.4 %) of the net electricity generated in the EU-28 in 2014 came from nuclear power plants, while almost double this share (47.6 %) came from power stations using combustible fuels (such as natural gas, coal and oil). Among the renewable energy sources, the highest share of net electricity generation in 2014 was from hydropower plants (13.2 %),

followed by wind turbines (8.3 %) and solar power (3.2 %).

The relative importance of renewable energy sources in relation to EU-28 net electricity generation grew between 2004 and 2014 from 13.5 % to 24.9 %, while there was a relatively large decrease in the importance of combustible fuels from 55.9 % to 47.6 % and also a reduction in the share of electricity generated from nuclear power plants from 30.6 % to 27.4 %. Among the renewable energy sources, the proportion of net electricity generated from solar and wind increased greatly: from 0.02 % in 2004 to 3.2 % in 2014 for solar power and from 1.9 % in 2004 to 8.3 % in 2014 for wind turbines.

**Figure 12.4: Net electricity generation, EU-28, 2014**  
(% of total, based on GWh)



Note: Figures do not sum to 100 % due to rounding.

Source: Eurostat (online data code: [nrg\\_105a](#))

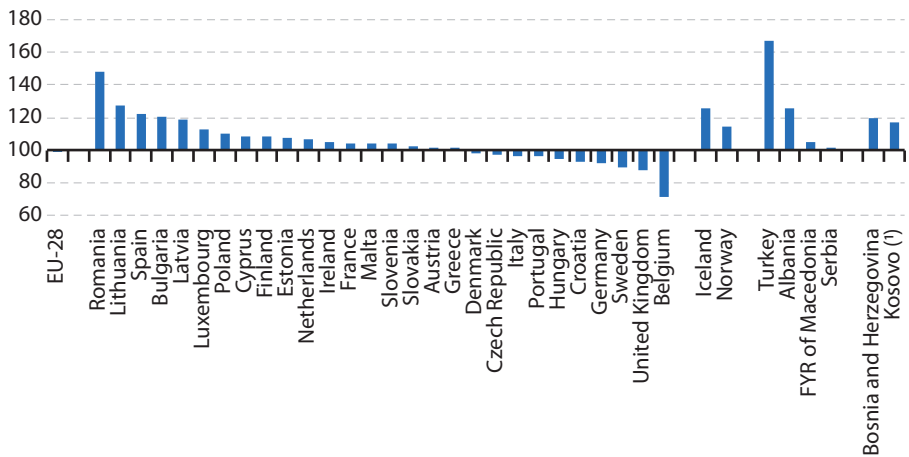


During the 10-year period from 2004 to 2014, the consumption of electricity by households fell in the EU-28 by 1.3 %. These figures on overall household electricity consumption are likely to be influenced, in part, by the average number of persons living in each household and by the

total number of households — both of which are linked to demographic events. Other influences include the extent of ownership of electrical household appliances and consumer goods as well as the use of energy saving devices.

**Figure 12.5: Electricity consumption by households, 2014**

(2004 = 100)



(\*) Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data code: [tsdpc310](#))



## 12.4 Renewable energy

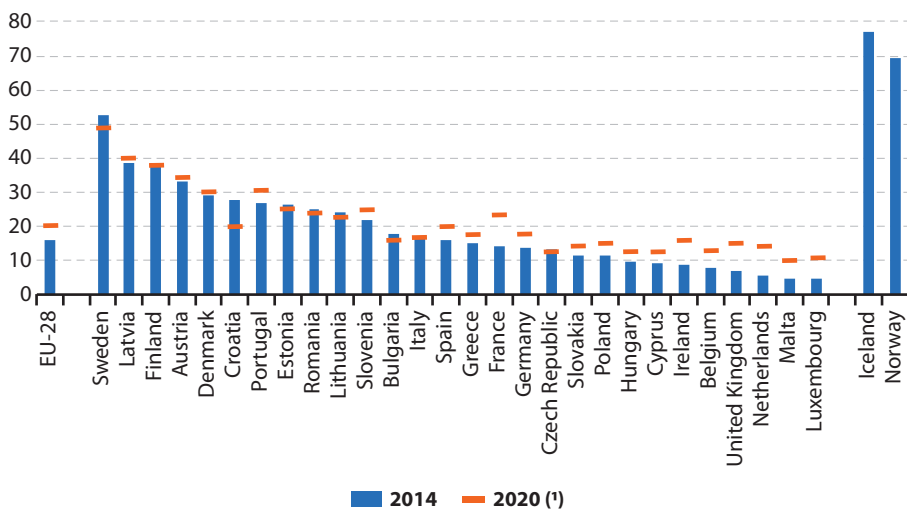
The primary production of renewable energy within the EU-28 in 2014 was 196 million tonnes of oil equivalent (toe) — a 25.4% share of total primary energy production from all sources. The quantity of renewable energy produced within the EU-28 increased overall by 73.1 % between 2004 and 2014, equivalent to an average increase of 5.6 % per year.

Renewable energy sources accounted for a 12.5 % share of the EU-28's gross inland energy consumption in 2014. The EU seeks to have a 20% share of its gross final energy consumption from renewable sources by 2020. The share stood at 16.0 % in the EU-28 in 2014.

Among the EU Member States, the highest share of renewables in gross final energy consumption in 2014 was recorded in Sweden (52.6%), while Latvia, Finland and Austria each reported that more than 30.0 % of their final energy consumption was derived from renewables.

The latest information available for 2014 shows that electricity generated from renewable energy sources contributed more than one quarter (27.5 %) of the EU-28's gross electricity consumption.

**Figure 12.6: Share of renewables in gross final energy consumption, 2014 and 2020 (%)**



(<sup>1</sup>) Legally binding targets for 2020. Iceland and Norway: not applicable.

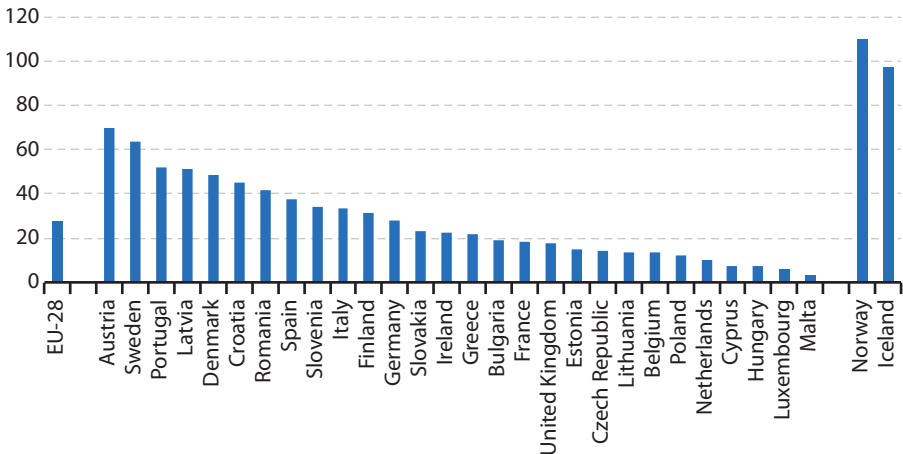
Source: Eurostat (online data code: [t2020\\_31](#))



The growth in electricity generated from renewable energy sources during the period 2004 to 2014 largely reflects an expansion in three renewable energy sources, namely, wind turbines, solar power and solid biofuels. Although hydropower remained the single largest source for renewable electricity generation in the EU-28 in 2014 (43.9% of the total), the amount of electricity generated in this

way in 2014 was relatively similar to that recorded a decade earlier, rising by just 12.1% overall. By contrast, the quantity of electricity generated from solid biofuels (including renewable waste) and from wind turbines in 2014 was 1.8 times and 3.3 times as high as in 2004. Over this 10-year period, the contribution of solar power to all electricity generated from renewable energy sources rose from 0.1% to 10.0%.

**Figure 12.7: Proportion of electricity generated from renewable sources, 2014**  
(% of gross electricity consumption)



Source: Eurostat (online data code: [tsdcc330](#))

## 12.5 Energy prices

The price of energy depends on a range of different supply and demand conditions, including the geopolitical situation, import diversification, network costs, environmental protection costs, severe weather conditions, and levels of excise and taxation; note that prices presented in this chapter generally include taxes, levies and value added tax (VAT) for household consumers but exclude (deductible) VAT for industrial/business users.

The average price of electricity for household consumers in the EU-28 (the prices for each EU Member State are weighted according to their consumption by the household sector) was EUR 0.211 per kWh in the second half of 2015. The price of electricity for household consumers in Denmark (EUR 0.304 per kWh) was 3.2 times as high as in Bulgaria (EUR 0.096 per kWh).

Between the second half of 2014 and the second half of 2015 the average increase for the whole of the EU-28 was 2.4%, although there were 12 Member States where the price of electricity fell.

EU-28 electricity prices for industrial consumers during the second half of 2015 averaged EUR 0.119 per kWh. The price of electricity for this category of consumers was highest in Italy, the United Kingdom and Germany, while relatively low prices were recorded for Finland and Sweden (which had the lowest price level). The price of electricity for a medium-sized industrial

consumer in the EU-28 fell by 1.3% between the second half of 2014 and the second half of 2015.

In the second half of 2015, the price of natural gas to a medium-sized household within the EU-28 was EUR 0.071 per kWh. Natural gas prices were highest in Sweden (EUR 0.117 per kWh) and Portugal (EUR 0.098 per kWh). Between the second half of 2014 and the second half of 2015, natural gas prices for households fell by 1.7% in the EU-28.

Across the EU-28, the price of natural gas for a medium-sized industrial consumer averaged EUR 0.034 per kWh in the second half of 2015. Natural gas prices during the second half of 2015 were highest in Finland and Sweden (both EUR 0.042 per kWh). Between the second half of 2014 and the second half of 2015, natural gas prices for industrial users decreased in all but one of the 26 EU Member States for which data are available (Cyprus and Malta, not applicable).

The average price of Euro-super 95 in the EU was EUR 1.30 per litre at the end of 2015, its lowest level since the end of 2009. The average price of automotive diesel was EUR 1.13 per litre (which was also its lowest level since the end of 2009). Across the EU-28 as a whole, the price paid at-the-pump by consumers for Euro-super 95 was 3.0 times as high as the price without taxes and duties. The inclusion of taxes and duties in the final price of Euro-super 95 resulted in the price being more than doubled in each of the EU Member States.



**Table 12.2: Electricity and gas prices, second half of year, 2014 and 2015**  
(EUR per kWh)

	Electricity prices				Gas prices			
	Households <sup>(1)</sup>		Industry <sup>(2)</sup>		Households <sup>(3)</sup>		Industry <sup>(4)</sup>	
	2014	2015	2014	2015	2014	2015	2014	2015
<b>EU-28</b>	0.206	0.211	0.120	0.119	0.072	0.071	0.037	0.034
<b>EA <sup>(5)</sup></b>	0.218	0.221	0.129	0.125	0.079	0.076	0.038	0.035
<b>Belgium</b>	0.204	0.235	0.109	0.108	0.065	0.062	0.029	0.029
<b>Bulgaria</b>	0.090	0.096	0.076	0.078	0.048	0.039	0.034	0.027
<b>Czech Republic</b>	0.127	0.129	0.082	0.078	0.056	0.058	0.030	0.029
<b>Denmark</b>	0.304	0.304	0.097	0.091	0.088	0.076	0.037	0.034
<b>Germany</b>	0.297	0.295	0.152	0.149	0.068	0.068	0.040	0.038
<b>Estonia</b>	0.133	0.129	0.093	0.096	0.049	0.038	0.037	0.027
<b>Ireland</b>	0.254	0.245	0.136	0.136	0.075	0.072	0.042	0.037
<b>Greece</b>	0.179	0.177	0.130	0.115	0.080	0.075	0.047	0.036
<b>Spain</b>	0.237	0.237	0.117	0.113	0.096	0.093	0.037	0.032
<b>France</b>	0.162	0.168	0.093	0.095	0.076	0.073	0.038	0.037
<b>Croatia</b>	0.132	0.131	0.092	0.093	0.048	0.046	0.040	0.035
<b>Italy</b>	0.234	0.243	0.174	0.160	0.095	0.091	0.035	0.032
<b>Cyprus</b>	0.236	0.184	0.190	0.141	–	–	–	–
<b>Latvia</b>	0.130	0.165	0.118	0.118	0.049	0.049	0.036	0.029
<b>Lithuania</b>	0.132	0.124	0.117	0.100	0.050	0.044	0.037	0.022
<b>Luxembourg</b>	0.174	0.177	0.099	0.089	0.051	0.048	0.039	0.037
<b>Hungary</b>	0.115	0.115	0.090	0.087	0.035	0.035	0.039	0.034
<b>Malta</b>	0.125	0.127	0.178	0.137	–	–	–	–
<b>Netherlands</b>	0.173	0.183	0.089	0.084	0.082	0.077	0.033	0.032
<b>Austria</b>	0.199	0.198	0.106	0.105	0.073	0.071	0.040	0.038
<b>Poland</b>	0.141	0.142	0.083	0.086	0.050	0.050	0.036	0.034
<b>Portugal</b>	0.223	0.229	0.119	0.115	0.104	0.098	0.044	0.038
<b>Romania</b>	0.125	0.132	0.081	0.080	0.032	0.034	0.031	0.029
<b>Slovenia</b>	0.163	0.163	0.085	0.087	0.063	0.061	0.044	0.038
<b>Slovakia</b>	0.152	0.152	0.117	0.112	0.052	0.050	0.038	0.035
<b>Finland</b>	0.154	0.153	0.072	0.071	:	:	0.047	0.042
<b>Sweden</b>	0.187	0.187	0.067	0.059	0.114	0.117	0.044	0.042
<b>United Kingdom</b>	0.201	0.218	0.134	0.152	0.065	0.067	0.035	0.035
<b>Iceland</b>	0.116	0.127	:	:	–	–	–	–
<b>Liechtenstein</b>	0.155	0.180	0.140	0.161	0.086	0.093	0.056	0.060
<b>Norway</b>	0.166	0.143	0.081	0.069	:	:	:	:
<b>Montenegro</b>	0.099	0.099	0.075	0.076	–	–	–	–
<b>FYR of Macedonia</b>	0.082	0.084	0.078	0.081	:	:	0.042	0.027
<b>Albania</b>	0.116	0.082	:	:	–	–	–	–
<b>Serbia</b>	0.060	0.065	0.067	0.068	0.045	0.040	0.038	0.036
<b>Turkey</b>	0.131	0.122	0.081	0.070	0.037	0.035	0.027	0.025
<b>Bosnia and Herzegovina</b>	0.081	0.083	0.062	0.061	0.051	0.051	0.053	0.053
<b>Kosovo <sup>(6)</sup></b>	0.059	0.061	0.079	0.081	–	–	–	–
<b>Moldova</b>	:	0.088	:	0.077	:	0.032	:	0.027

(1) Annual consumption: 2 500 kWh < consumption < 5 000 kWh.

(2) Annual consumption: 500 MWh < consumption < 2 000 MWh; excluding VAT

(3) Annual consumption: 20 GJ < consumption < 200 GJ.

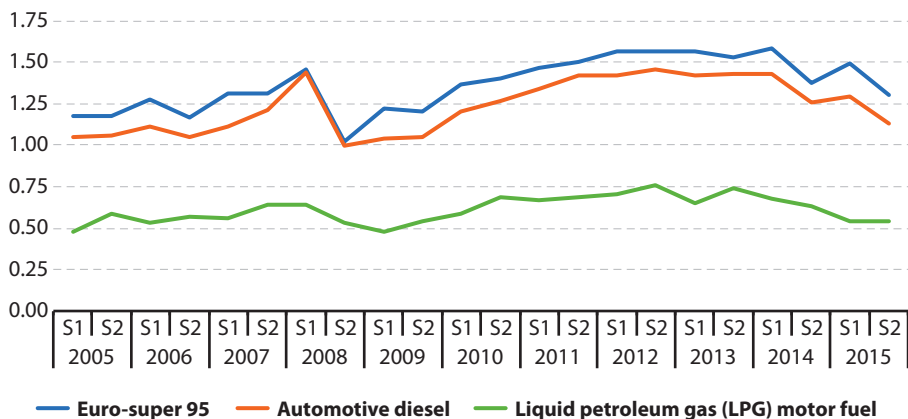
(4) Annual consumption: 10 000 GJ < consumption < 100 000 GJ; excluding VAT.

(5) 2013: EA-17. 2014: EA-18. 2015: EA-19.

(6) Under United Nations Security Council Resolution 1244/99.

Source: Eurostat (online data codes: [nrg\\_pc\\_204](#), [nrg\\_pc\\_205](#), [nrg\\_pc\\_202](#) and [nrg\\_pc\\_203](#))

**Figure 12.8:** Consumer prices of petroleum products, EU, 2005–15  
(EUR per litre)



Note: Weighted average. Inclusive of taxes and duties. Reference periods refer to the end of each half year.

Source: Oil bulletin, Directorate-General for Energy, European Commission

# 13

## Transport



## Introduction

In March 2011, the European Commission adopted a White paper titled 'Roadmap to a single European transport area — towards a competitive and resource efficient transport system' (COM(2011) 144 final). This strategy contains 40 specific initiatives to build a competitive transport system that aims to increase mobility, remove major barriers, and stimulate growth and employment.

In October 2012, the European Commission proposed a second set of actions to further develop the single market within the EU: the Single Market Act II, titled 'Together for new growth' (COM(2012) 573 final). This focused on the role of networks as the backbone of the EU economy and promoted, among others, the benefits that may be derived from

single transport, energy and digital markets, highlighting measures most likely to foster growth and employment by helping people, goods, services and capital to move more easily throughout the EU.

Eurostat's statistics describe the most important features of transport, not only in terms of the quantities of freight and numbers of passengers that are moved each year, or the number of vehicles and infrastructure that are used, but also the contribution of transport services to the economy as a whole. Data collection is supported by several legal acts obliging the EU Member States to report statistical data, as well as voluntary agreements to supply additional data.

## 13.1 Passenger transport

Passenger cars accounted for 83.2 % of inland passenger transport in the EU-28 in 2013, with motor coaches, buses and trolley buses (9.2 %) and trains (7.6 %) both accounting for less than a tenth of all traffic (as measured by the number of inland passenger-kilometres (pkm) travelled by each mode).

Based on the latest data available (generally for 2014), there were 381 billion pkm travelled on national railway networks of the EU-28. This figure was considerably higher than the 22 billion pkm travelled on international journeys (the comparison is based on the same availability for the EU Member States).

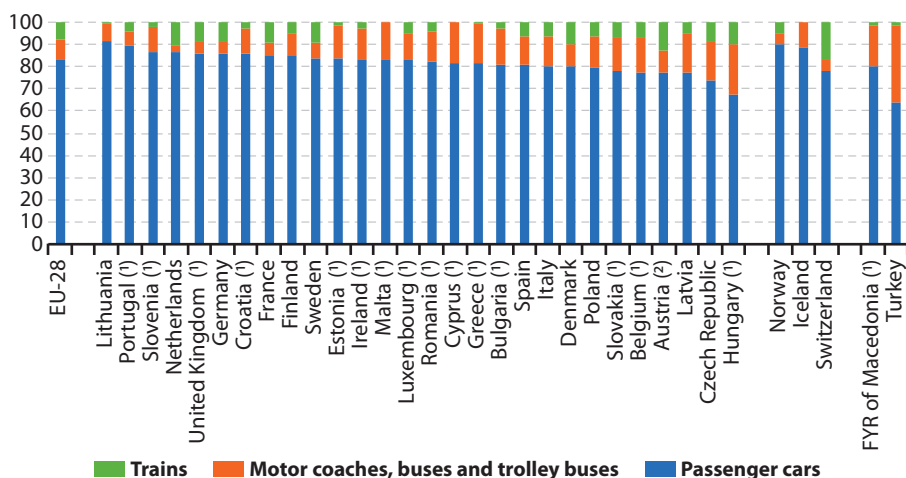
Some 880 million passengers were carried by air in 2014 in the EU-28. London Heathrow was the busiest airport in the EU-28 in terms of passenger numbers in 2014 (73 million), followed — at some distance — by Paris' Charles de Gaulle

airport (64 million), Frankfurt airport (59 million) and Amsterdam's Schiphol airport (55 million). The overwhelming majority (at least 89 %) of passengers through the four largest airports in the EU were on international flights.

Ports in the EU-28 handled 400 million maritime passengers in 2013. Greek and Italian ports each handled roughly twice as many maritime passengers in 2014 as in any other EU Member State, their 75 million and 72 million passengers accounting for just less than one fifth of the EU-28 total. Denmark (41 million passengers) had the next highest number of maritime passengers, followed by Germany, Sweden, the United Kingdom, France (2013 data), Croatia and Spain, which each handled between 31 million and 23 million passengers in 2014.



**Figure 13.1: Modal split of inland passenger transport, 2013**  
(% of total inland passenger-km)



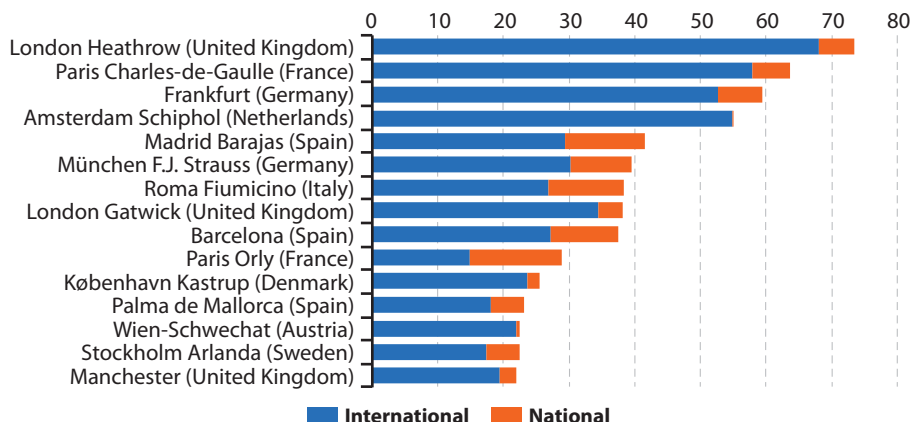
Note: Excluding powered two-wheelers. Cyprus, Malta and Iceland: railways not applicable.

(1) Includes estimates or provisional data.

(2) The railway in Liechtenstein is owned and operated by the Austrian ÖBB and included in their statistics.

Source: Eurostat (online data code: [tran\\_hv\\_psm0d](#))

**Figure 13.2: Top 15 airports, passengers carried (embarked and disembarked), EU-28, 2014**  
(million passengers)



Source: Eurostat (online data code: [avia\\_paa0a](#))



## 13.2 Freight transport

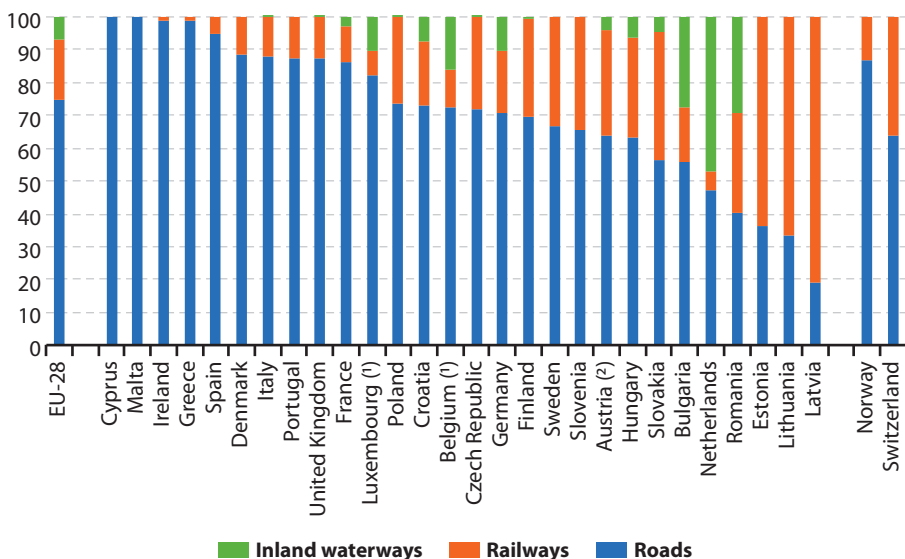
Total inland freight transport in the EU-28 was estimated to be over 2 200 billion tonne-kilometres (tkm) in 2013; some three quarters of this freight total was transported over roads.

The share of EU-28 inland freight that was transported by road (74.9%) was more than four times as high as the share transported by rail (18.2%), while the remainder (6.9%) of the freight transported in the EU-28 in 2013 was carried along inland waterways. Compared with the modal split in 2008, the share of inland freight

carried by roads was 0.6 percentage points lower in 2013, while the share transported by inland waterways had increased by the same amount, as the share transported by rail remained stable.

About 14.4 million tonnes of air freight (both national and international) was carried through airports within the EU-28 in 2014. The quantity of goods transported by air in the EU-28 was 27.1 % higher in 2014 than it had been five years earlier in 2009.

**Figure 13.3: Modal split of inland freight transport, 2013**  
(% of total inland tkm)



Note: Excluding pipelines. Cyprus and Malta: railways not applicable.

(1) Estimates.

(2) The railway in Liechtenstein is owned and operated by the Austrian ÖBB and included in their statistics.

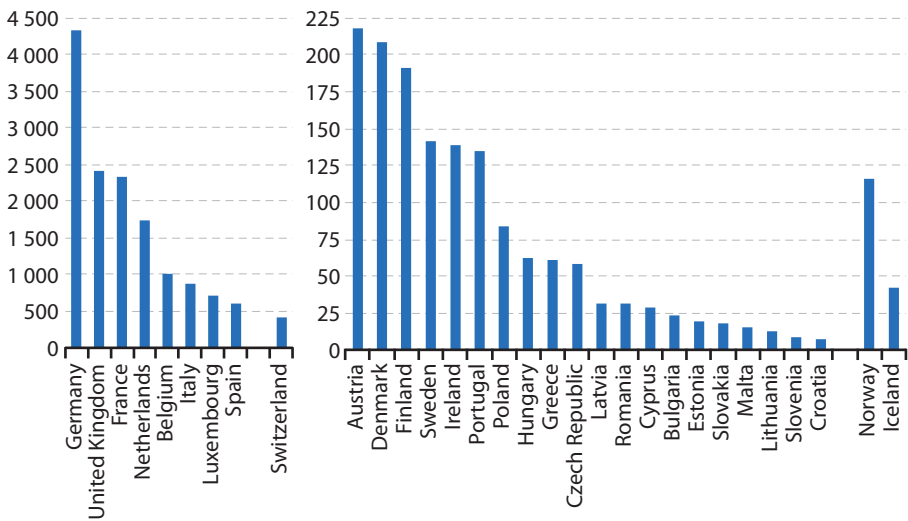
Source: Eurostat (online data codes: rail\_go\_typeall, iww\_go\_atygo, road\_go\_ta\_tott and road\_go\_ca\_c) and Eurostat calculations



Airports in Germany dealt with 4.3 million tonnes of air freight in 2014, considerably more than in any other EU Member State; the United Kingdom and France had the second and third highest amounts of air freight, at 2.4 million and 2.3 million tonnes. Some of the smaller EU Member States are relatively specialised in air freight, notably all of the Benelux countries, and in particular, Luxembourg which ranked as the seventh largest air freight transporter among the EU Member States.

Maritime ports in the EU-28 handled 3.8 billion tonnes of seaborne goods in 2014, which marked a slight increase of 2.1 % when compared with 2013, but an increase of 9.5 % compared with the 2009 mid-crisis level. Sea ports in the Netherlands and the United Kingdom each handled more than 500 million tonnes of goods in 2014, while in Italy and Spain the level was in excess of 400 million tonnes. These four EU Member States collectively handled more than half (51.2 %) of the EU-28's seaborne freight.

**Figure 13.4: Air freight transport, 2014**  
(thousand tonnes)



Note: Note the different scales used in the two parts of the figure.

Source: Eurostat (online data code: trr00011)

# Annexes





# Abbreviations and acronyms

## Geographical abbreviations

EU-28	European Union of 28 Member States
EU-27	European Union of 27 Member States
EU	European Union
EA-19	Euro area of 19 Member States
EA-18	Euro area of 18 Member States
EA-17	Euro area of 17 Member States
EA	Euro area
EFTA	Iceland, Liechtenstein, Norway and Switzerland

In this publication like in the other Eurostat publications, the geographical descriptions and the use of the terms 'southern', 'northern', 'central', 'eastern' and 'western' Europe are not meant as political categorisations. The references in the text are made in relation to the geographical location of one group of Member States of the European Union in comparison to another group of Member States.

## Units of measurement

%	per cent
CHF	Swiss franc
EUR	euro
FTE	full-time equivalent(s)
GWh	gigawatt-hour
JPY	Japanese yen
kg	kilogram
kW	kilowatt
kWh	kilowatt hour
m <sup>3</sup>	cubic metre
pkm	passenger-kilometre
PPS	purchasing power standard
tkm	tonne-kilometre
toe	tonne of oil equivalent
USD	United States dollar



## Other abbreviations

BD4	Fourth edition of the OECD benchmark definition of foreign direct investment
BPM6	Sixth edition of the balance of payments and international investment position manual
CAP	common agricultural policy
CH <sub>4</sub>	methane
CO <sub>2</sub>	carbon dioxide
CPI	consumer price index
EAP	environment action programme
ECB	European Central Bank
EFTA	European free trade association
EMU	economic and monetary union
EPO	European Patent Office
ET	education and training
EU	European Union
Eurostat	statistical office of the European Union
FDI	foreign direct investment
GDP	gross domestic product
GERD	gross domestic expenditure on R & D
HICP	harmonised index of consumer prices
ICT	information and communication technology
ISCED	international standard classification of education
JAF	Joint Assessment Framework
LFS	labour force survey
N <sub>2</sub> O	nitrous oxide
NACE	statistical classification of economic activities within the European Community
n.e.c.	not elsewhere classified
NUTS	classification of territorial units for statistics (NUTS levels 1, 2 and 3 regions)
OECD	Organisation for Economic Co-operation and Development
PDF	portable document format
PEEI(s)	Principal European Economic Indicator(s)



R & D	research and development
Rev.	revision
SGP	stability and growth pact
SME	small and medium-sized enterprise
STS	short-term (business) statistics
TGM	tables, graphs and maps (software for viewing data)
UAA	utilised agricultural area
UNESCO	United Nations educational, scientific and cultural organisation
VAT	value added tax
WTO	World Trade Organisation

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