Key figures on enlargement countries

2017 edition

STATISTICAL BOOKS

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Key figures on enlargement countries

2017 edition

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Key figures on enlargement countries — 2017 edition

The 2017 edition of *Key figures on enlargement countries* presents updated series of key statistical data for five candidate countries and two potential candidates, as well as data for the EU-28. The candidate countries, at the time of writing were Montenegro, the former Yugoslav Republic of Macedonia, Albania, Serbia and Turkey, while the potential candidates were Bosnia and Herzegovina and Kosovo (this designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence).

The tables, figures and associated commentary and methodological notes concern key social, economic and environmental themes for which data are collected annually from the enlargement countries through a series of harmonised questionnaires or as part of Eurostat's regular collection of data on demography, national accounts, energy and international trade. Most tables and figures in the publication are followed by data codes, which link directly to the associated tables within Eurostat's free dissemination database (Eurobase): those codes beginning cpc contain data just for the enlargement countries; the other codes generally contain data for the EU-28 aggregate (as well as, in most cases, data for the individual EU Member States and EFTA countries) and in some cases for some or all of the enlargement countries.

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Montenegro

Statistical Office of Montenegro

http://www.monstat.org/eng/

The former Yugoslav Republic of Macedonia

State Statistical Office

http://www.stat.gov.mk/Default_en.aspx

Albania

Institute of Statistics

http://www.instat.gov.al/en/home.aspx

Serbia

Statistical Office of the Republic of Serbia

http://webrzs.stat.gov.rs/WebSite/

Turkey

Turkish Statistical Institute

http://www.turkstat.gov.tr/

Bosnia and Herzegovina

Agency for Statistics of Bosnia and Herzegovina

http://www.bhas.ba/index.php?lang=en

Kosovo

Kosovo Agency of Statistics

http://ask.rks-gov.net/en/

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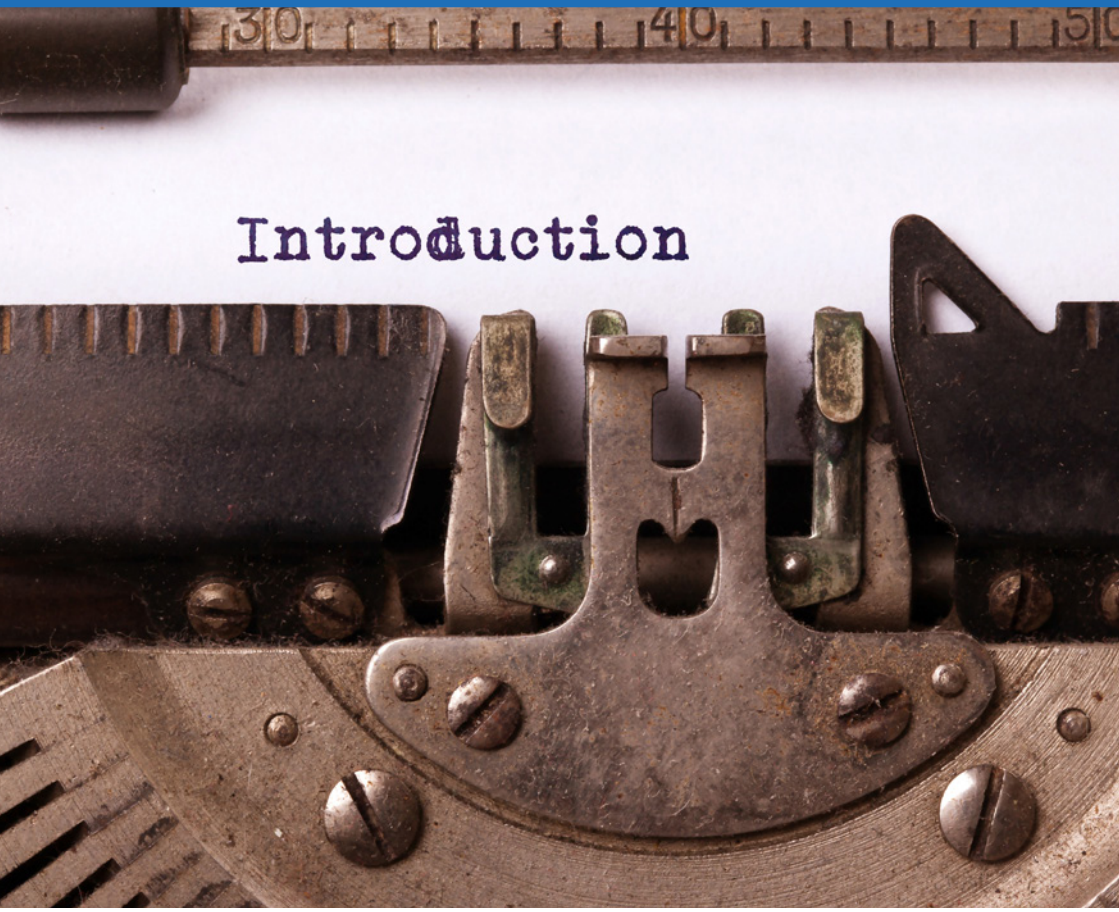


Policy background

The European Union's (EU's) enlargement policy concerns the EU's relations with those countries which aspire to become EU Member States. There are strict conditions for membership of the EU, whereby new members are only admitted when they have clearly demonstrated they are capable of assuming all of the obligations that are linked to membership. Indeed, there are 35 different policy chapters, which together define all of the standards and rules (the so-called '*acquis*') that are associated with EU membership. Some of the most important policies relate to the rule of law, freedom of expression and media, civil society, regional cooperation and economic governance.

The Instrument for Pre-accession Assistance (IPA) is the means by which the EU supports reforms in the enlargement countries. IPA funds may be seen as an investment in the future of both the enlargement countries and the EU itself. They help the beneficiaries make political and economic reforms, which should provide their citizens with better opportunities. These funds also help the EU towards some of its own objectives, for example concerning a sustainable economic recovery, energy supply, transport, the environment and climate change. The current IPA framework for pre-accession assistance covers the period from 2014–2020 and has a dedicated budget of EUR 11.7 billion.

For more information about the conditions for membership of the EU, see: http://ec.europa.eu/enlargement/policy/conditions-membership/index_en.htm

For more information on the EU's enlargement strategy, see: http://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/key_documents/2016/20161109_strategy_paper_en.pdf

For more information about the current status of enlargement countries, see: http://ec.europa.eu/enlargement/countries/check-current-status/index_en.htm

For more information on the EU's enlargement package — strategy and reports are available at: http://ec.europa.eu/enlargement/countries/package/index_en.htm

Statistical cooperation

Among the EU Member States, statistics are coordinated by Eurostat, the statistical office of the EU, through the European statistical system (ESS). The ESS is based on the harmonisation of statistical concepts, methodologies, definitions and methods which enable the collection of reliable, robust and comparable statistics among EU Member States, EFTA and enlargement countries.

Eurostat shares its expertise with non-member countries within the framework of international statistical cooperation activities — supporting, upgrading and enhancing the statistical systems of these non-member countries. The beneficiaries of this support include:

- EU enlargement countries (candidate countries and potential candidates);
- European Neighbourhood Policy (ENP) countries
  - in the ENP-East area;
  - and in the ENP-South area;
- African, Caribbean and Pacific (ACP) countries;
- Asian countries;
- Latin American countries.

For more information, see: http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistical_cooperation_-_introduction

STATISTICAL COOPERATION WITH THE ENLARGEMENT COUNTRIES

Reliable and comparable statistics are a precondition for a successful accession process. The EU *acquis* in the field of statistics requires the existence of a statistical infrastructure based on principles such as professional independence, objectivity, impartiality, commitment to quality, reliability, transparency, confidentiality of individual data and equal access to official statistical data for all users. The EU *acquis* also covers methodology, classifications and procedures for data collection. Little transposition into national legislation is needed as the majority of the EU *acquis* in statistics takes the form of regulations which are directly applicable in EU Member States.

Official statistics play a triple role in the enlargement process:

- the EU *acquis* (Chapter 18) defines the harmonisation of statistics with EU standards and rules which have to be achieved in the pre-accession period;
- they serve other EU policy areas by providing data for monitoring changes and assessing the impact of policies chosen;
- they provide statistical indicators for monitoring the implementation of the IPA programmes.

Eurostat monitors the compliance of national statistical systems with the EU *acquis* in the field of statistics. Eurostat also provides technical assistance and support to national statistical authorities and other producers of official statistics. Some instruments — statistical training courses, traineeships, study visits, management training, and participation in meetings within the ESS — aim to reinforce human skills in enlargement countries. In addition, Eurostat conducts peer reviews of the statistical systems in the enlargement countries.

While basic principles and institutional frameworks for producing statistics are already in place, the enlargement countries are expected to increase the volume and quality of their data progressively and to transmit these data to Eurostat in the context of the EU's enlargement process. The final objective of the EU in relation to official statistics is to obtain harmonised, high-quality data that conforms to both European and international standards. Eurostat collects data on an annual basis and this exercise also provides an opportunity to offer methodological recommendations to enlargement countries. Eurostat plays a key role in improving transparency for the enlargement countries by publishing data, both in publications such as this one and through its free dissemination database (Eurobase).

For more information, see: http://ec.europa.eu/eurostat/statistics-explained/index.php/Enlargement_policy_and_statistical_cooperation

Reading guide

PUBLICATION STRUCTURE

The main body of Key figures on enlargement countries — 2017 edition contains tables, figures, commentary and explanations structured into 12 chapters covering statistics on a variety of topics: population; living conditions; education and training; the labour market; economy and finance; international trade in goods; agriculture, forestry and fishing; business; science, technology and digital society; transport; energy; and the environment.

SPATIAL COVERAGE

The EU-28 aggregates that are presented in this publication for the purpose of comparison have been processed and calculated by Eurostat on the basis of information provided by the national statistical authorities of the 28 EU Member States.

Unless otherwise indicated, these data cover the 28 Member States (as of October 2016) throughout the period considered in each table and figure, regardless of whether there were 15, 25, 27 or 28 members of the EU in the reference year concerned. In other words, the data have been calculated backwards with a stable geographical coverage.

Table 1 provides an overview of a number of key indicators for the EU-28 and each enlargement country: the number of inhabitants, the size of each economy (as measured by GDP) and the average standard of living (as measured by GDP per capita).

Table 1: Key indicators, 2015

	Population	Gross domestic product	
		Total (EUR billion)	Per capita (EUR)
EU-28	*508 451*	14 693.0	28 800
Montenegro	622	3.6	5 800
The former Yugoslav Republic of Macedonia	2 069	*9.1*	*4 400*
Albania	2 892	*10.3*	3 600
Serbia	7 114	33.5	4 700
Turkey (1)	77 696	645.4	8 300
Bosnia and Herzegovina (1)(2)	3 819	14.6	3 800
Kosovo (3)	1 772	5.6	3 100

(1) Gross domestic product: based on ESA 1995.
(2) Mid-year population.
(3) Gross domestic product: 2014.

Source: Eurostat (online data codes: demo_pjan, cpc_psdemo, nama_10_gdp, nama_10_pc and nama_gdp_c)

TIMELINESS

The data presented in this publication were collected from the enlargement countries during the summer/autumn of 2016. The data for the EU-28 were extracted from Eurobase in October 2016. As Eurobase is updated regularly, some data in this publication may have already been revised. The accompanying text was drafted in October 2016.

DATA SOURCES

The data for the enlargement countries are supplied by and under the responsibility of the national statistical authorities. The publication of these data does not constitute the expression of an opinion by the European Commission on the legal status of a country or territory or on the delimitation of its borders.

Data for enlargement countries are collected for a wide range of indicators each year through a questionnaire that is sent by Eurostat to the enlargement countries. A network of contacts in each enlargement country has been established for updating these questionnaires, generally within the national statistical offices, but potentially including representatives of other national authorities producing official statistics (for example, central banks, finance and other government ministries). The vast majority of the statistics on enlargement countries that are included in this publication are freely available through the following link: http://ec.europa.eu/eurostat/web/enlargement-countries/data/database.

In several areas the regular collection by Eurostat of data has been expanded beyond EU Member States and EFTA countries to also include enlargement countries. Consequently, in 2016 it was decided to stop collecting demography statistics, national accounts statistics and energy statistics through the aforementioned questionnaires and instead to use data from these regular subject-specific data transmissions

to Eurostat, as was already the case for statistics on international trade in goods. As such, the data presented in this publication for these four subject areas — demography, national accounts, energy and international trade in goods — are generally sourced from the same data tables as those providing information on the EU-28 aggregate. These statistics are also freely available on-line through the following links: http://ec.europa.eu/eurostat/web/population-demography-migration-projections/population-data/database, http://ec.europa.eu/eurostat/web/national-accounts/data/database and http://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database.

The European system of national and regional accounts (ESA) provides the methodology for national accounts in the EU: note that statistics for Turkey and Bosnia and Herzegovina were compiled under ESA-95, while those for the EU-28 aggregate and for all other enlargement countries were compiled under ESA 2010.

EUROSTAT DATA CODE

Data codes have been inserted after most tables and figures to help readers access the most recent data on the Eurostat website: the data codes link directly to the associated tables within Eurobase. Those codes beginning cpc contain data just for the enlargement countries; the other codes generally contain the data for the EU-28 aggregate (as well as, in most cases, data for individual EU Member States and EFTA countries) and in some cases for some or all of the enlargement countries).

In the PDF version of this publication, data codes under the tables and figures are presented as internet hyperlinks. The data on Eurostat's website are frequently updated and may therefore differ from those presented in this publication and often contain more detailed data.

Exchange rates

For some indicators, monetary values were provided by the enlargement countries in national currency terms. In these cases, Eurostat converted the series using exchange rates (annual averages for the reference year in question) so that data for all indicators are denominated in the same currency.

While the conversion to a common currency unit facilitates comparisons of data between countries, it is important to understand that changes in exchange rates are partially responsible for movements identified when looking at the development of a time series for an indicator that is denominated in euro. Table 2 provides information on the annual average exchange rates between the euro and the enlargement currencies for the period 2005–2015. Note that Montenegro and Kosovo both employ the euro as their de facto domestic currency.

Table 2: Euro exchange rates, annual averages, 2005–2015
(1 euro = … national currency)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Montenegro (1)	1	1	1	1	1	1	1	1	1	1	1
The former Yugoslav Republic of Macedonia	61.30	61.19	61.18	61.27	61.27	61.52	61.53	61.53	61.58	61.62	61.61
Albania	124.2	123.1	123.6	122.8	132.1	137.8	140.3	139.0	140.3	140.0	139.7
Serbia	83.0	84.1	80.0	81.4	94.0	103.0	102.0	113.1	113.1	117.3	120.7
Turkey	1.670	1.800	1.778	1.896	2.151	1.989	2.322	2.314	2.534	2.906	3.026
Bosnia and Herzegovina	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956
Kosovo (1)	1	1	1	1	1	1	1	1	1	1	1

(1) The euro is used as a *de facto* domestic currency.

Source: Eurostat (online data code: cpc_ecexint)

Symbols and abbreviations

Statistical data are often accompanied by additional information, for example concerning the quality or status of the data. In figures, all additional information is provided by way of footnotes. The following symbols are used in tables:

Value in *italics*	provisional data, estimates or forecasts (in other words, data that are likely to change)
:	shown where data are not available, confidential or unreliable
–	shown where an indicator is not relevant

MEASUREMENT UNITS OR SCALARS

%	percentage
billion	1 000 million
EUR	euro
head	unit of measure for counting the number of (farm) animals
kg	kilogram
kgoe	kilogram of oil equivalent
km	kilometre
km^2	square kilometre
tonne (t)	1 000 kg
toe	tonne of oil equivalent

OTHER ABBREVIATIONS

ACP	African, Caribbean and Pacific (countries)
CAP	common agricultural policy
CO_2	carbon dioxide
EDP	excessive deficit procedure
EEA	European Environment Agency
EFTA	European Free Trade Association
ENP	European neighbourhood policy
ESA	European system of accounts
ESS	European statistical system
EU	European Union
EU-15	European Union of 15 Member States
EU-25	European Union of 25 Member States
EU-27	European Union of 27 Member States
EU-28	European Union of 28 Member States
FDI	foreign direct investment
GDP	gross domestic product
GERD	gross domestic expenditure on R & D
ICJ	International Court of Justice
ILO	International Labour Organisation
IMF	International Monetary Fund
ISCED	international standard classification of education
NACE	statistical classification of economic activities in the European Community
NPISHs	non-profit institutions serving households
OECD	Organisation for Economic Co-operation and Development
PC	personal computer
PDF	portable document format
PPS	purchasing power standards
R & D	research and development
Rev.	revision
SGP	stability and growth pact
SITC	standard international trade classification
UNFCCC	United Nations Framework Convention on Climate Change
UNSCR	United Nations Security Council resolution

1 Population

Population size

Eurostat collects data from EU Member States and other countries participating in its demography data collection in relation to the population as of 1 January each year (or, in some cases, on 31 December of the previous year). The recommended definition is the 'usual resident population' and represents the number of inhabitants of a given area.

Statistics on population change and the structure of population are increasingly used to support policymaking and provide an opportunity to monitor demographic behaviour within an economic, social and cultural context.

The combined population of the enlargement countries was estimated to be almost 96 million inhabitants in 2015 (see Table 1.1), which was equivalent to slightly less than one fifth (18.9 %) of the EU-28 total (508 million persons). Turkey was by far the largest enlargement country, with a population of 78 million inhabitants in 2015, just lower than the population of Germany (81 million in 2015), but higher than in any other EU Member State. By contrast, Montenegro was the smallest enlargement country in population terms, with a population of 622 thousand inhabitants, somewhat smaller than the population of Cyprus (847 thousand) but larger than those of Luxembourg (563 thousand) or Malta (429 thousand).

The development of the number of inhabitants within the enlargement countries followed a varied pattern during the period 2005–2015. The population of Turkey increased at a relatively rapid pace, growing by 14.2 % overall during the period under consideration, while the number of inhabitants in Montenegro and the former Yugoslav Republic of Macedonia grew at a modest pace, increasing by 1.4 % and 1.7 % respectively; this was slower than the corresponding rate of change in the EU-28, where the population grew overall by 2.8 %. There was a small contraction (−0.6 %) in the level of population in Bosnia and Herzegovina between 2005 and 2015, while the number of inhabitants contracted by 4–5 % in Albania and Serbia. The largest decline in population levels was recorded in Kosovo, where the number of inhabitants fell by 13.2 %; note there was a break in series in 2011, with uninterrupted annual growth before this break and then again between 2011 and 2013.

Population density provides information on the average number of inhabitants per square

Table 1.1: Population as of 1 January, 2005–2015
(thousands)

	2005	2007	2009	2011	2013	2015
EU-28 (1)	494 598	498 301	502 090	502 965	505 167	*508 451*
Montenegro (2)	613	615	617	620	621	622
The former Yugoslav Republic of Macedonia	2 035	2 042	2 049	2 057	2 062	2 069
Albania	*3 020*	*2 982*	*2 936*	*2 907*	*2 898*	*2 892*
Serbia (3)	7 456	7 398	7 335	*7 254*	*7 184*	7 114
Turkey (4)	*68 010*	*69 730*	71 517	73 723	75 627	77 696
Bosnia and Herzegovina (5)	*3 843*	*3 843*	*3 843*	*3 840*	*3 832*	*3 819*
Kosovo (3)	2 041	2 127	2 181	1 799	*1 821*	*1 772*

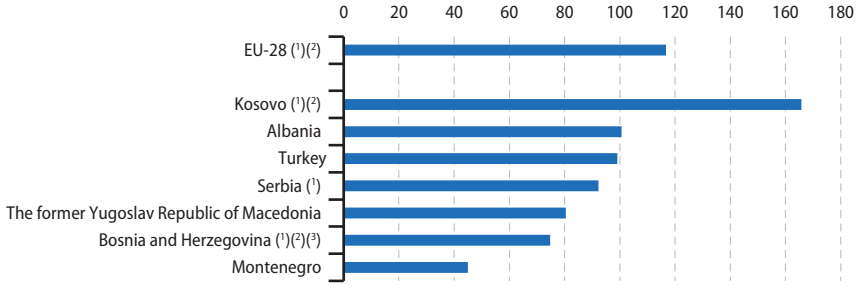
(1) 2010, 2011, 2012, 2014 and 2015: break in series.
(2) 2010: break in series.
(3) 2011: break in series.
(4) 2008: break in series.
(5) Mid-year population.

Source: Eurostat (online data codes: demo_pjan and cpc_psdemo)

kilometre (km^2). Among the enlargement countries, the highest ratio was recorded in Kosovo, 165.8 inhabitants per km^2 (2014 data). Kosovo was the only enlargement country with a population density ratio that was higher than the EU-28 average, which stood at 116.7 inhabitants per km^2 in 2014 (see Figure 1.1). By contrast, the lowest population density among the enlargement countries was recorded in Montenegro (which also had the lowest number of inhabitants), with a ratio of 45.0 inhabitants per km^2 in 2015.

There were more women than men living in the EU-28 in 2015 (see Figure 1.2): the difference between the sexes was relatively small, as the female population accounted for 51.2 % of the total population in 2015. Among the enlargement countries, the share of women peaked at 51.3 % of the total population in Serbia, while Bosnia and Herzegovina (2014 data) and Montenegro also reported that women accounted for the majority of their population. In the four remaining enlargement countries, the male population was slightly larger than the

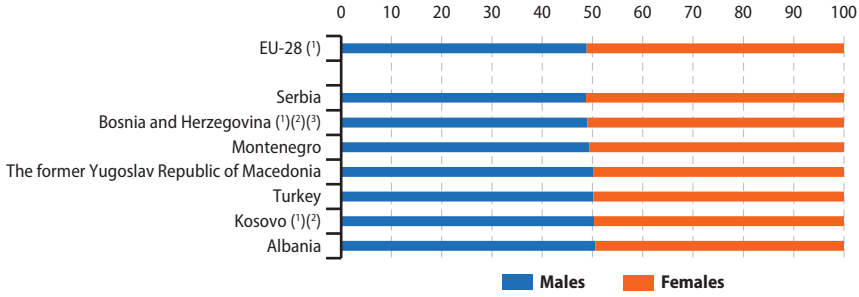
Figure 1.1: Population density, 2015
(inhabitants/km^2)



(1) 2014.
(2) Estimate.
(3) Mid-year population.

Source: Eurostat (online data codes: tps00003 and demo_r_d3dens) and Eurostat enlargement data collection

Figure 1.2: Population by sex, 2015
(% of total population)



(1) Estimate.
(2) 2014.
(3) Mid-year population.

Source: Eurostat (online data codes: demo_pjan and cpc_psdemo)

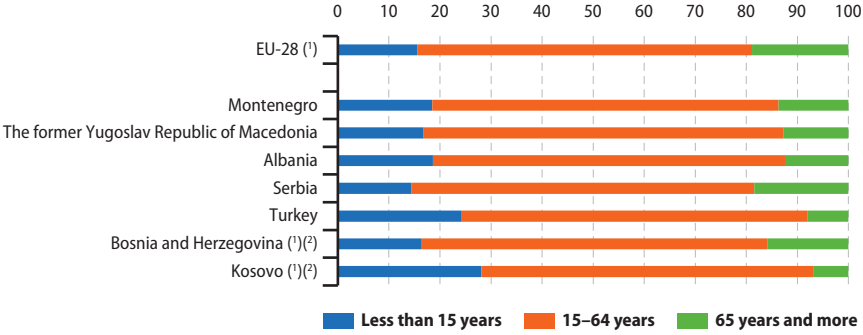
female population, recording its highest share in Albania (50.5 % of the total population in 2015).

Population age structure

The EU-28 population is ageing as consistently low birth rates and higher life expectancy transform the shape of its age pyramid. As a result, the proportion of young people (aged less than 15 years) and the proportion of working age people (aged 15–64) is shrinking, while the relative share of those aged 65 or more is expanding.

In 2015, the working-age population accounted for almost two thirds (65.5 %) of the total population of the EU-28 and a similar share in each of the enlargement countries (see Figure 1.3): the lowest share was 65.1 % in Kosovo (2014 data) and the highest share was 70.5 % in the former Yugoslav Republic of Macedonia. By contrast, the relative importance of those age groups who are often referred to as dependents varied considerably. For example, in the EU-28, Bosnia and Herzegovina (2014 data), and the former Yugoslav Republic of Macedonia those aged less than 15 years accounted for 15–17 % of the total population in 2015, while in Serbia the share was lower, at 14.4 %. The share of younger persons was closer to one fifth of the total population in Montenegro and Albania, rising to close to one quarter of the total in Turkey and peaking at 28.1 % in Kosovo (2014 data). Conversely, less than one tenth of the population in Kosovo (2014 data) and Turkey was aged 65

Figure 1.3: Population by age class, 2015
(% of total population)



(1) Estimates.
(2) 2014.

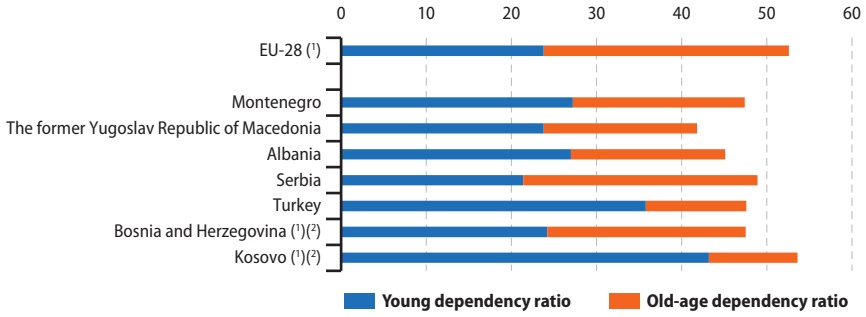
Source: Eurostat (online data codes: demo_pjangroup and cpc_psdemo)

or more, while this share averaged 18.9 % in the EU-28 and peaked among the remaining enlargement countries at 18.5 % in Serbia.

Age dependency ratios compare the size of the age groups that are generally economically inactive— children and older people — with the size of the working-age population. In 2015, the total dependency ratio (the sum of children and older people compared with the number of working age people) was 52.6 % in the EU-28; in other words, there were slightly less than two people of working age to maintain the upbringing and social expenditure required by each economically dependent person. Total dependency ratios in the enlargement countries ranged from a high of 53.6 % in Kosovo (2014 data) down to 41.8 % in the former Yugoslav Republic of Macedonia. Kosovo was the only enlargement country to record a total dependency ratio that was above the average for the EU-28 and was also the only enlargement country to record a ratio that was above 50.0 %.

There are considerable differences in age structures between enlargement countries which impact upon the analysis of total dependency ratios. For example, in Kosovo there is a relatively young population structure, whereas in Serbia the population structure is more akin to that of the EU-28, with a considerably lower share of young people and a considerably higher share of older persons. In 2015, the old-age dependency ratio ranged across the enlargement countries from 27.5 % in Serbia to 11.8 % in Turkey and 10.4 % in Kosovo (2014 data). None of the enlargement countries recorded an old-age dependency ratio that was as high as the EU-28 average, which stood at 28.8 % (see Figure 1.4). By contrast, young dependency ratios ranged from a high of 43.2 % in Kosovo (2014 data) down to 21.4 % in Serbia, with Serbia and the former Yugoslav Republic of Macedonia the only enlargement countries to record young dependency ratios that were lower or equal to the EU-28 average of 23.8 %. These differences in age structures may result in pressures on various public services, for example, national educational systems in those countries with a relatively high proportion of young persons and care (including healthcare) and

Figure 1.4: Young and old-age dependency ratios, 2015
(% of population aged 15–64)



(1) Estimates.
(2) 2014.

Source: Eurostat (online data codes: demo_pjanind and cpc_psdemo)

pension systems in those countries characterised as having relatively high proportions of older persons.

Birth and death rates

The crude birth rate (or crude death rate) is the ratio of the number of births (deaths) during the year to the average population in that year; the value is expressed per 1 000 inhabitants. If the crude birth rate exceeds the crude death rate then there is natural population growth.

The crude birth rate in Kosovo peaked at 17.4 per 1 000 inhabitants in 2015, which was roughly 75 % higher than in the EU-28. Turkey (16.9 births per 1 000 inhabitants) also recorded a relatively high crude birth rate, while Montenegro, Albania and the former Yugoslav Republic of Macedonia each recorded rates that were slightly above the EU-28 average. Crude birth rates in Serbia and Bosnia and Herzegovina (2014 data) were below the EU-28 average, particularly so in the latter, where an average of 7.6 births were recorded for each 1 000 inhabitants.

Serbia recorded the highest crude death rate among the enlargement countries, at 14.6 per 1 000 inhabitants in 2015; this appears not to have been an exceptional value as it was in keeping with the rates registered in 2005 (14.3 per 1 000 inhabitants) and 2010 (14.2 per 1 000 inhabitants). Serbia was the only enlargement country to record a crude death rate that was higher than the EU-28 average. By contrast,

Table 1.2: Crude birth and death rates, 2005, 2010 and 2015
(per 1 000 inhabitants)

	Crude birth rates			Crude death rates		
	2005	2010	2015	2005	2010	2015
EU-28 (1)	10.4	10.7	*10.0*	9.8	9.7	*10.3*
Montenegro (2)	12.0	12.0	11.9	9.5	9.1	10.2
The former Yugoslav Republic of Macedonia	11.0	11.8	*11.1*	9.0	9.3	*9.9*
Albania (3)	12.6	11.4	*11.5*	5.4	5.1	*7.8*
Serbia (4)	9.7	9.4	9.3	14.3	14.2	14.6
Turkey	18.2	17.2	16.9	5.9	5.4	5.2
Bosnia and Herzegovina (5)	9.0	*8.7*	*7.6*	9.0	9.1	*9.1*
Kosovo (4)(6)	18.0	15.7	*17.4*	3.5	3.2	*5.0*

(1) 2010 and 2015: break in series.
(2) 2010: break in series.
(3) 2008 instead of 2010.
(4) 2015: break in series.
(5) 2014 instead of 2015.
(6) 2009 instead of 2010.

Source: Eurostat (online data code: demo_gind)

the lowest crude death rates — about half the EU-28 average — were recorded in Turkey (5.2 per 1 000 inhabitants) and Kosovo (5.0 per 1 000 inhabitants).

Fertility rates

Fertility is the ability to conceive (become pregnant) and give birth to children. The total fertility rates is defined as the mean number of children who would be born to a woman during her lifetime, if she were to spend her childbearing years conforming to the age-specific fertility rates that have been measured in a given year.

Turkey and Kosovo were the only enlargement countries to record fertility rates around the replacement rate (developed world countries are thought to need a fertility rate of around 2.1 children per woman in order to maintain

Table 1.3: Total fertility rate, 2004–2014
(average number of children per woman)

	2004	2006	2008	2010	2012	2014
EU-28 (1)	1.50	1.54	1.61	1.62	1.59	*1.58*
Montenegro	:	1.73	1.89	1.70	1.72	1.75
The former Yugoslav Republic of Macedonia	1.52	1.46	1.47	1.56	1.51	1.52
Albania	1.79	1.38	:	:	:	*1.78*
Serbia (2)	1.57	1.43	1.40	1.40	1.45	1.46
Turkey	:	:	2.10	2.04	2.09	2.17
Bosnia and Herzegovina (3)	1.20	1.20	1.30	1.30	1.30	:
Kosovo (3)	:	:	:	:	1.90	2.20

(1) 2010, 2012 and 2014: break in series.
(2) 2012: break in series.
(3) Rounded data.

Source: Eurostat (online data codes: demo_find and cpc_psdemo)

their population levels). In 2014, the total fertility rate in Kosovo was 2.2, while in Turkey it stood at 2.17 (see Table 1.3). While the fertility rate in Kosovo rose quite rapidly between 2012 and 2014 (climbing by an average of 0.3 children per woman), the fertility rate in Turkey remained relatively stable, fluctuating between 2.03 and 2.17 children per woman throughout the period 2007–2014.

Aside from Kosovo and Turkey, fertility rates in Montenegro and Albania were also above the average for the EU-28 in 2014 (which stood at 1.58 children per woman), reaching 1.75 and 1.78 respectively. By contrast, the lowest fertility rates among the enlargement countries were observed in Bosnia and Herzegovina (1.3 children per woman; 2012 data), Serbia (1.46) and the former Yugoslav Republic of Macedonia (1.52).

Life expectancy at birth

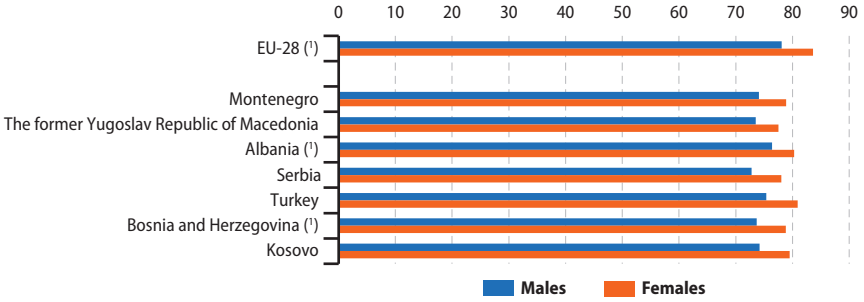
Life expectancy at birth is the average number of years that a person can expect to live, if subjected throughout the rest of his/her life to current mortality conditions. Life expectancy at birth rose rapidly during the last century due to a number of factors, including: reductions in infant mortality; rising living standards; improved lifestyles; better education; advances in healthcare and medicine.

Life expectancy at birth for women was consistently higher than for men in 2014, both within the EU-28 and across all of the enlargement countries for which data are available (see Figure 1.5). This gender gap peaked at 5.5 years in the EU-28 and Turkey, while life expectancy at birth for women was between 3.9 years and 5.3 years more than it was for men across the remaining enlargement countries.

In 2014, life expectancy for men in the enlargement countries ranged from a low of 72.8 years in Serbia to 76.4 years in Albania (compared with 78.1 years in the EU-28). For women, life expectancy across the enlargement countries was slightly more homogeneous, ranging from a low of 77.5 years in the former Yugoslav Republic of Macedonia to 80.9 years in Turkey (compared with 83.6 years in the EU-28).

There was an increase in life expectancy for both men and women in the EU-28 and in all of the enlargement countries between 2004 and 2014 (note the latest data available refer to the period between 2005 and 2014 for Montenegro and that time-series are not available for Turkey or Kosovo). Female life expectancy in the EU-28 rose, on average, by 2.1 years between 2004 and 2014, with higher increases recorded in Albania (3.1 years) and Serbia (2.5 years).

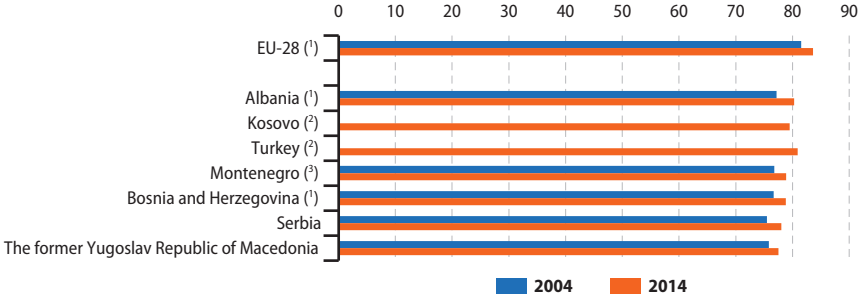
Figure 1.5: Life expectancy at birth, 2014
(years)



(1) Estimates.

Source: Eurostat (online data codes: demo_mlexpec and cpc_psdemo)

Figure 1.6: Life expectancy at birth, females, 2004 and 2014
(years)



(1) Estimates.
(2) 2004: not available.
(3) 2005 instead of 2004.

Source: Eurostat (online data codes: demo_mlexpec and cpc_psdemo)

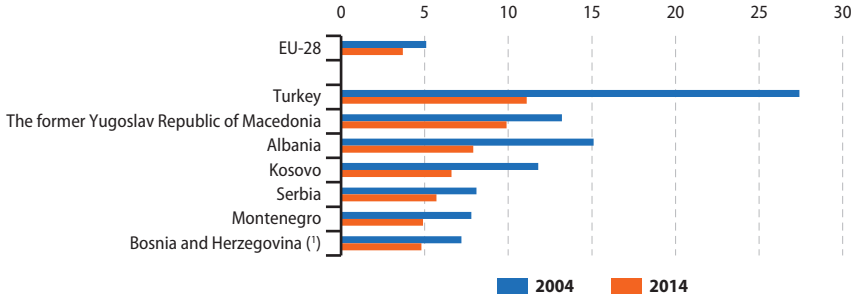
Infant mortality rates

The infant mortality rate is defined as the ratio of the number of deaths of children under one year of age to the number of live births in the reference year; the value is expressed per 1 000 live births.

Most women in the developed world give birth in hospital, where a range of technologies are available to help monitor and assist with childbirth and there has been a relatively rapid decline in infant mortality rates. This pattern was most apparent among the enlargement countries in Turkey, Albania and Kosovo (see Figure 1.7). Nevertheless, infant mortality rates in Albania, the former Yugoslav Republic of Macedonia and Turkey remained between two and three times as high as in the EU-28.

Between 2004 and 2014, the infant mortality rate in Turkey was more than halved, falling by

Figure 1.7: Infant mortality rate, 2004 and 2014
(per 1 000 live births)



(1) 2014: provisional.

Source: Eurostat (online data codes: demo_minfind and cpc_psdemo)

16.3 deaths per 1 000 live births (or almost 60 %). Infant mortality rates fell by between 25 % and 50 % in the remaining enlargement countries, with the next largest declines recorded in Albania and Kosovo. For comparison, the infant mortality rate in the EU-28 fell by 27 % overall during the period under consideration.

The infant mortality rate in the EU-28 was 3.7 deaths per 1 000 live births in 2014. Each of the enlargement countries recorded a higher rate, with these ranging from 4.8 deaths per 1 000 live births in Bosnia and Herzegovina (2014 data) to 9.9 deaths per 1 000 live births in the former Yugoslav Republic of Macedonia and 11.1 deaths per 1 000 live births in Turkey.

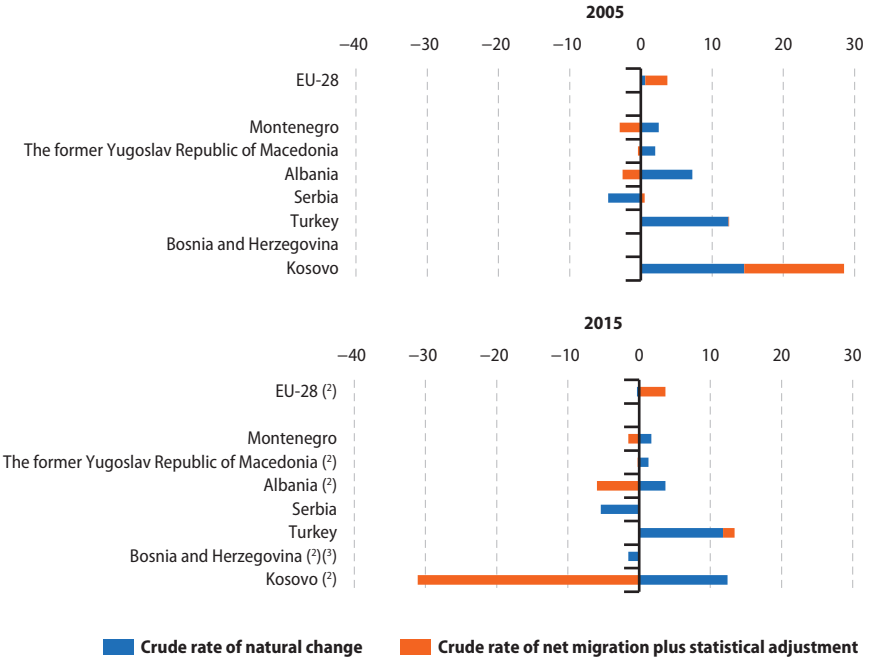
Population change

Total population change may be decomposed into two primary components: the crude rate of population change and the crude rate of net migration. As noted above, the former may be calculated by subtracting the crude death rate from the crude birth rate with a positive result implying that the natural rate of population change is increasing. In recent years, the EU-28 crude birth rate was generally slightly higher than the crude death rate, resulting in a modest level of natural population increase. However, in 2015 the EU-28 crude birth rate was 0.3 per 1 000 inhabitants lower than its crude death rate; as such, the natural rate of population change was a decrease. Among the enlargement countries, differences between these two rates tended to be wider (see Figure 1.8); this was particularly the case in Kosovo and Turkey, where crude birth rates were considerably higher than crude death rates, with the natural rate of population change reaching 12.4 per 1 000 inhabitants in Kosovo and 11.8 per 1 000 inhabitants in Turkey. By contrast, crude death rates in Bosnia and Herzegovina (2014 data) and Serbia exceeded crude birth rates (as in the EU-28), and as a result the natural rate of population change fell by 1.5 per 1 000 inhabitants in Bosnia and Herzegovina and by 5.4 per 1 000 inhabitants in Serbia.

The other component of population change is net migration. In the face of relatively low crude birth rates, natural decreases in population numbers, and a gradually ageing society with an increasing share of elderly persons, some countries have maintained their (working-age) populations through migratory flows. In 2015, the EU-28's crude rate of net migration was 3.7 per 1 000 inhabitants, higher than it had been in 2005 (when it was 0.6 per 1 000 inhabitants).

The pattern in the enlargement countries was less clear, with most recording negative rates as higher numbers of people left their territories (compared with the numbers arriving). In 2015, the crude rate of net migration was positive in Turkey (1.6 per 1 000 inhabitants), while there was no change in population as a result of migratory flows in Bosnia and Herzegovina (2014 data) or Serbia. All four of the remaining enlargement countries reported a negative rate of net migration, with a relatively high proportion of the migrants leaving Albania (net migration of −5.9 per 1 000 inhabitants) and, in particular, Kosovo (−31.1 per 1 000 inhabitants).

Figure 1.8: Population change, 2005 and 2015 (1)
(per 1 000 inhabitants)



(1) EU-28, Montenegro, Serbia and Kosovo: break in series.
(2) Provisional and/or estimates.
(3) 2014 instead of 2015.

Source: Eurostat (online data code: demo_gind)

2 Living conditions

Income distribution

The income quintile share ratio, also known as the S80/S20 ratio, is a measure of the inequality of income distribution. It is calculated as the ratio of total income received by the 20 % of the population with the highest income (the top quintile) to that received by the 20 % of the population with the lowest income (the bottom quintile); incomes are equivalised to take account of the varying composition of households.

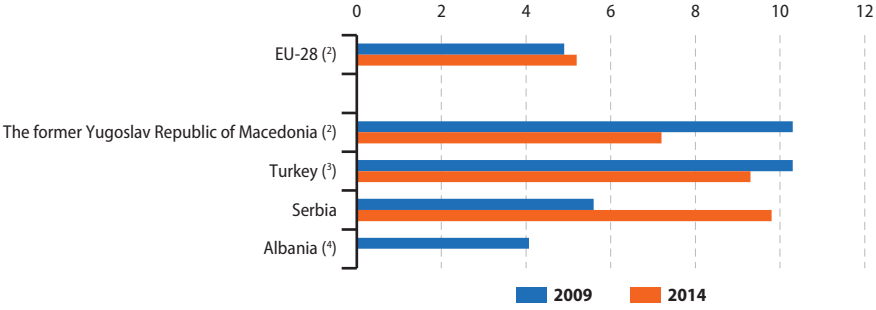
Figure 2.1 shows that the income of the top population quintile in the EU-28 was 5.2 times the size of the income of the bottom population quintile in 2014. All three candidate countries for which recent data are available reported a higher degree of income inequality than that observed in the EU-28: the ratio stood at 7.2 in the former Yugoslav Republic of Macedonia, and reached 9.3 in Turkey (2012 data) and 9.8 in Serbia.

Between the two years shown in Figure 2.1, the income quintile share ratio rose slightly in the EU-28 from 4.9 to 5.2 (2010–2014). There was a far more rapid increase in income inequality in Serbia, where this ratio rose from 5.6 to 9.8 (2009–2014). By contrast, the distribution of income in Turkey became more equitable, as the quintile share ratio fell from 10.3 to 9.3 (2009–2012), while this pattern was even more apparent in the former Yugoslav Republic of Macedonia, as its ratio fell from 10.3 to 7.2 (2010–2014). Data are only available for 2009 for Albania, where the level of income inequality was somewhat lower than in the EU-28, as the income quintile share ratio stood at 4.1.

The Gini coefficient is an alternative measure of income inequality. It shows the extent to which all incomes within the population differ from the average income: the closer the coefficient is to 100 the less equal are the incomes, while the closer it is to 0 the more equal are the incomes.

In the EU-28, the Gini coefficient in 2014 was 30.9 (see Figure 2.2). As already observed for the income quintile share ratio, Gini coefficients for the former Yugoslav Republic of Macedonia (35.2; 2014 data), Serbia (38.2; 2015 data) and Turkey (42.8; 2012 data) were also higher than the ratio observed for the EU-28. Data are also available for Montenegro which reported a Gini coefficient (26.2; 2013 data) that was lower than that in the EU-28.

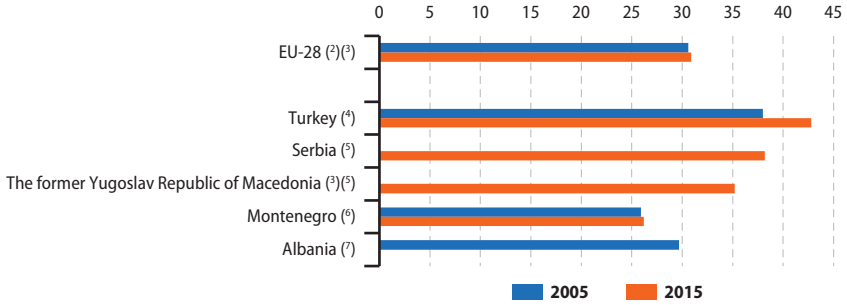
Figure 2.1: Inequality of income distribution (income quintile share ratio), 2009 and 2014 (1)
(ratio)



(1) Montenegro, Bosnia and Herzegovina and Kosovo: not available.
(2) 2010 instead of 2009.
(3) 2012 instead of 2014.
(4) 2008 instead of 2009. 2014: not available. Calculated on the basis of consumption per capita.

Source: Eurostat (online data codes: ilc_di11 and cpc_psilc)

Figure 2.2: Gini coefficient, 2005 and 2015 (1)
(ratio)



(1) Bosnia and Herzegovina and Kosovo: not available.
(2) 2005: EU-27; estimate.
(3) 2014 instead of 2015.
(4) 2012 instead of 2015.
(5) 2005: not available
(6) Calculation based on consumption. 2013 instead of 2015.
(7) 2015: not available.

Source: Eurostat (online data code: ilc_di12) and enlargement data collection

Montenegro and the EU (EU-27 for 2005 and EU-28 for 2014) reported little change in the Gini coefficients between the two years shown in Figure 2.2, whereas the Gini coefficient increased in Turkey from 38.0 to 42.8.

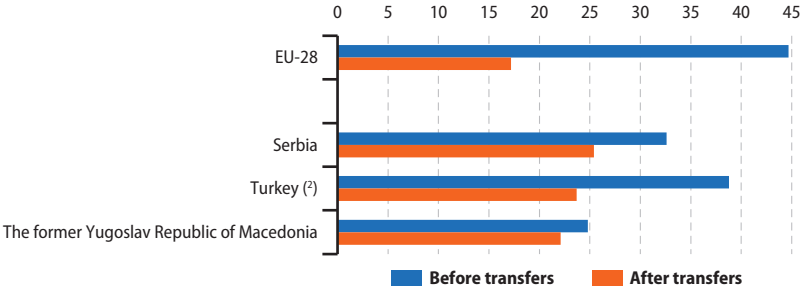
Poverty

The total net income of each household is calculated by adding together the income received by all the members of the household from all sources. For each person, the equivalised total net income is calculated as the household's total net income divided by the equivalised household size, the latter generally based on the modified OECD scale: a weight of 1.0 for the first adult, 0.5 for other persons aged 14 or over who are living in the household and 0.3 for each child aged less than 14.

Poverty thresholds are set at 60 % of national median equivalised disposable income (after social transfers). These thresholds are set independently for each country: as such, the indicator reflects low income in comparison with other residents of the same country, which does not necessarily imply a low standard of living. The at-risk-of-poverty rate is the proportion of the population with an equivalised disposable income below the at-risk-of-poverty threshold; it can be calculated either before or after social transfers, reflecting the share of the population that is moved above the threshold as a result of receiving social transfers.

In the EU-28, close to half (44.7 %) of the population were at risk of poverty before social transfers in 2014, with this share dropping to less than one fifth (17.2 %) of the population once the impact of social transfers was taken into account. At-risk-of-poverty rates are available for three candidate countries, all of which reported rates before transfers below that of the EU-28 and rates after transfers above that of the EU-28 — see Figure 2.3. The proportion of the population that was at risk of poverty (after social transfers) in 2014 was highest in Serbia, at 25.4 %; somewhat lower rates were recorded in Turkey (23.7 %; 2012 data) and the former Yugoslav Republic of Macedonia (22.1 %).

Figure 2.3: Proportion of the population at risk of poverty, 2014 (1)
(%)



(1) Montenegro, Albania, Bosnia and Herzegovina and Kosovo: not available.
(2) 2012.

Source: Eurostat (online data codes: ilc_li02, ilc_li09 and cpc_psilc)

Table 2.1: Poverty main indicators, 2014

	At-risk-of-poverty threshold (monthly income)		Proportion of the population at risk of poverty before transfers (%)		Proportion of the population at risk of poverty after transfers (%)	
	(national currency)	(euro)	Male	Female	Male	Female
EU-28	–	–	42.6	46.6	16.7	17.7
Montenegro	:	:	:	:	:	:
The former Yugoslav Republic of Macedonia (1)	5 308	86	25.2	24.4	22.3	21.9
Albania	:	:	:	:	:	:
Serbia (2)	13 680	121	33.2	32.0	26.0	24.8
Turkey (3)	501	198	37.3	40.3	23.3	24.2
Bosnia and Herzegovina (1)	416	213	:	:	:	:
Kosovo	:	:	:	:	:	:

(1) At-risk-of-poverty threshold: 2011.
(2) At-risk-of-poverty threshold: 2012.
(3) At-risk-of-poverty threshold: 2013. Proportion of the population at risk of poverty: 2012.

Source: Eurostat (online data codes: ilc_li02, ilc_li09, ilc_li01, cpc_psilc and cpc_ecexint)

Poverty thresholds can be expressed in relation to monthly incomes, in either national currency or euro terms. The level of income required to avoid the risk of poverty ranged — among those enlargement countries for which data are available (see Table 2.1) — from the equivalent of EUR 86 in the former Yugoslav Republic of Macedonia (2011 data) to EUR 198 in Turkey (2013 data) and EUR 213 in Bosnia and Herzegovina (2011 data).

Jobless households

Indicators on jobless households are normally compiled from a labour force survey and identify households where no one was in employment (for pay or profit for at least one hour) during the survey reference week. The two indicators presented in Table 2.2 concern different sub-populations, namely people aged 0–17 and those of working age, in this case defined as persons aged 18–59.

Table 2.2: Proportion of persons who are living in households where no-one is working, 2005, 2010 and 2015
(%)

	2005		2010		2015	
	Persons aged 0–17	Persons aged 18–59	Persons aged 0–17	Persons aged 18–59	Persons aged 0–17	Persons aged 18–59
EU-28	*10.0*	*10.3*	10.7	10.5	10.7	10.6
Montenegro	:	:	:	:	:	:
The former Yugoslav Republic of Macedonia	30.8	25.0	24.6	19.2	19.4	15.7
Albania	:	:	:	:	:	:
Serbia	9.8	12.5	:	:	:	:
Turkey (1)	15.4	15.6	14.3	15.5	9.9	11.4
Bosnia and Herzegovina	:	:	:	:	:	:
Kosovo	:	:	:	:	:	:

(1) 2006 instead of 2005.

Source: Eurostat (online data codes: lfsi_jhh_a and cpc_psilc)

In 2015, there was little difference between the values observed for these sub-populations in the EU-28, with both indicating that just over one in ten of the population lived in a jobless household. In Turkey, the proportions for both age groups were broadly similar to those in the EU-28, with somewhat higher rates for people of working age and lower rates for those aged 0–17. In the former Yugoslav Republic of Macedonia, the proportion of persons living in a household where no-one was working was considerably higher than in the EU-28, with close to one in five people aged 0–17 living in jobless households as were nearly one in six people of working age.

Social protection and health expenditure

Social protection systems are generally well-developed in the EU: they are designed to protect people (to some degree) against the risks and needs associated with unemployment, parental responsibilities, sickness/health care and invalidity/disability, old-age, housing, the loss of a spouse or parent, and other forms of social exclusion. Social protection expenditure comprises social protection benefits, administration costs and other expenditure: the data shown in Table 2.3 only concern the benefits, which consist of transfers, in cash or in kind, by social protection schemes to households and individuals to relieve them of the burden of a defined set of risks or needs.

In 2012, EU-28 expenditure on social protection benefits was equivalent to more than one quarter (27.5 %) of gross domestic product (GDP). This level was higher than in any of the enlargement countries for which data are available: in Serbia the ratio was 22.8 % (2013 data), while in Turkey (14.0 %; 2014 data) it was about half the level recorded in the EU-28 and in Kosovo (7.0 %; 2014 data) it was around one quarter of the EU-28 level. Between 2004 and 2012, the ratio of expenditure on social protection benefits to GDP increased in the EU from 25.3 % (data for the EU-25) to 27.5 % (data for the EU-28). The two candidate countries for which data are available for both reference years shown in Table 2.3 also reported increases in their relative share of social protection benefits, with an increase of 3.4 percentage points in Turkey (2004–2014), while the pace of change was more rapid in Serbia, as the ratio climbed by 7.8 percentage points between 2004 and 2013.

Table 2.3: Expenditure on social protection benefits, pensions and health, relative to gross domestic product, 2004 and 2014
(% of GDP)

	Social protection expenditure				Total expenditure on health	
	Social protection benefits		of which, pensions			
	2004	2014	2004	2014	2004	2014
EU-28 (1)	25.3	*27.5*	11.4	*12.6*	:	:
Montenegro (2)	:	:	:	:	2.5	:
The former Yugoslav Republic of Macedonia	:	:	:	:	:	:
Albania (3)	10.2	:	:	:	2.6	2.8
Serbia (4)	15.0	22.8	:	12.8	6.3	:
Turkey	10.6	14.0	6.2	8.4	5.4	5.4
Bosnia and Herzegovina	:	:	:	:	:	:
Kosovo	:	7.0	:	:	:	2.0

(1) 2004: EU-25. 2012 instead of 2014.
(2) 2006 instead of 2004.
(3) Health: only public sector expenditure; 2012 instead of 2014.
(4) Social protection: 2013 instead of 2014.

Source: Eurostat (online data codes: spr_exp_sum and cpc_psilc) and enlargement data collection

One factor which may explain (part of) the increase in expenditure on social protection benefits is an increase in the relative importance of pensions, which may be linked (at least in part) to ageing populations. Expenditure on pensions accounted for just under half (46 %) of the total expenditure on social protection benefits in the EU-28 in 2012; in contrast, the share was nearer to three fifths in Serbia (in 2013) and Turkey (in 2014). Between 2004 and 2012, the ratio of expenditure on pensions to GDP rose from 11.4 % (data for the EU-25) to 12.6 % (data for the EU-28), an increase of 1.2 percentage points. This ratio rose at a faster pace in Turkey — the only enlargement country for which a comparison is available — as expenditure on pensions rose from 6.2 % of GDP to 8.4 % of GDP between 2004 and 2014.

Total expenditure on health concerns total current expenditure and investment on health, regardless of the source of funds; note that not all health expenditure falls within social protection expenditure. The level of health expenditure relative to GDP ranged greatly between the three enlargement countries for which recent data are available (see Table 2.3), from 2.0 % of GDP in Kosovo (2014 data) and 2.8 % in Albania (2012 data covering only the public sector) to 5.4 % in Turkey (2014 data).

3 Education and training

Number of pupils and students

While the absolute number of pupils and students is closely linked to the size and structure of populations, there are a range of other factors that influence how long pupils remain in the education system, such as the length of compulsory schooling, opportunities in the labour market, and the availability and cost of tertiary education.

In 2012, there were 109 million pupils and students in the EU-28 across all levels of education. In the enlargement countries, there were approximately 28 million pupils and students enrolled in 2015 (see Table 3.1 for the latest period available for each country); this was equivalent to just over one quarter of the total number of pupils and students in the EU-28. Turkey registered, by far, the highest number of pupils and students, some 24 million in 2015, while the smallest number was recorded in Montenegro, at 134 thousand.

Within the EU-28, some 18.6 % of the overall number of pupils and students in 2012 were attending tertiary education establishments (as covered by ISCED 1997 levels 5 and 6). Across the enlargement countries the share of tertiary students was generally close to the EU-28 average, as all but two countries lay within the range of 17.4 % (the former Yugoslav Republic of Macedonia) to 21.4 % (Albania) in 2015; Kosovo (24.1 %) and Turkey (27.6 %) were the only countries to record higher shares.

Early leavers from education and training

In 2015, the proportion of early leavers from education and training (the share of persons aged 18–24 who attained no more than a lower secondary education and were not involved in further education or training) stood at 12.4 % in the EU-28 among men and 9.5 % among women (see Figure 3.1). The Europe 2020 strategy has set a benchmark target, whereby the share of early leavers from education and training in the EU-28 should be less than 10 % by 2020.

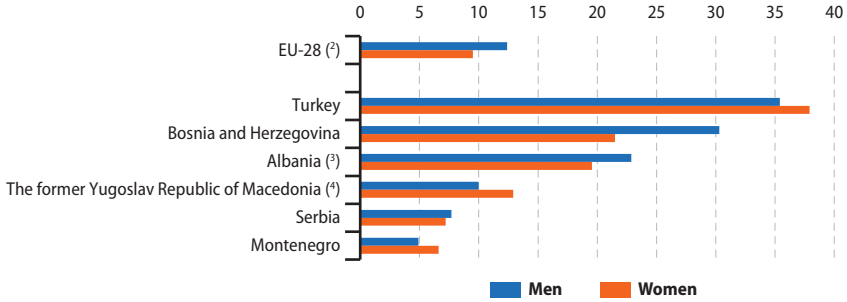
Table 3.1: Number of pupils and students by education level, 2015 ([1])
(thousand)

	Pre-primary education (ISCED 0)	Primary education or first stage of basic education (ISCED 1)	Lower secondary or second stage of basic education (ISCED 2)	Upper secondary education (ISCED 3)	Post-secondary non-tertiary education (ISCED 4)	First stage of tertiary education (ISCED 5)	Second stage of tertiary education (ISCED 6)
EU-28 ([2])	15 655.8	28 137.0	21 576.3	21 702.8	1 488.7	19 528.6	717.3
Montenegro ([3])	12.9	37.9	30.4	28.2	:	24.6	0.0
The former Yugoslav Republic of Macedonia	24.0	108.8	84.9	84.0	0.2	63.3	0.3
Albania	82.5	188.4	175.0	140.0	2.0	156.6	3.9
Serbia ([4])	199.8	268.9	282.7	254.0	1.6	232.5	8.6
Turkey	1 209.1	5 360.7	5 211.5	5 807.6	0.0	6 603.1	86.1
Bosnia and Herzegovina ([5])	*22.9*	*161.5*	*129.8*	*133.3*	:	*94.5*	*3.7*
Kosovo	27.5	137.8	126.5	87.5	:	103.5	17.0

([1]) ISCED 1997.
([2]) 2012.
([3]) ISCED 5: includes master's students.
([4]) Tertiary education: 2014.
([5]) ISCED 0–3: data refer to the beginning of the school year.
ISCED 6: master's of science, specialists and doctors of science.

Source: Eurostat (online data codes: educ_ilev and cpc_pseduc)

Figure 3.1: Early leavers from education and training among those aged 18–24 years, 2015 (1)
(% of male/female 18–24 year olds)



(1) ISCED 1997. The percentage of the population aged 18–24 having attained at most a lower secondary education (ISCED level 2) and not being involved in further education or training. Ranked on the average of all early leavers from education and training. Kosovo: not available.

(2) ISCED 2011.
(3) Estimates.
(4) Provisional.

Source: Eurostat (online data codes: edat_lfse_14 and cpc_pseduc)

When compared with the EU-28, there were lower proportions of early leavers from education and training in Serbia and in Montenegro, while the proportions recorded in the former Yugoslav Republic of Macedonia were of a similar magnitude to those in the EU, although with higher shares for women than for men. By contrast, Albania, Bosnia and Herzegovina and Turkey recorded much higher proportions of early leavers from education and training than in the EU-28, peaking in Turkey at 35.4 % for men and 37.9 % for women.

In Bosnia and Herzegovina the proportion of men who were early leavers from education and training was considerably higher than the corresponding share for women, with a gender gap of 8.8 percentage points. In Albania and Serbia, the proportion of early leavers was somewhat higher for men than for women, as it was in the EU-28. Elsewhere among the enlargement countries the share of early leavers was higher among women than among men, with this gender gap reaching 2.9 percentage points in the former Yugoslav Republic of Macedonia.

Youth education attainment

An alternative measure for analysing the outcomes of education systems is the youth education attainment level. This indicator is defined as the proportion of 20–24 year olds who have achieved at least an upper secondary level of education attainment (as defined by ISCED level 3).

In 2015, the share of the EU-28 population with at least an upper secondary level of education stood at 82.7 %, with a higher rate for women (85.0 %) than for men (80.4 %). The overall youth education attainment level in the EU-28 rose by 5.1 percentage points between 2005 and 2015. Compared with the EU, there were four enlargement countries which reported a higher proportion of persons aged 20–24 having attained at least an upper secondary level of education (see Table 3.2). This was particularly the case in Bosnia and Herzegovina (93.8 %), Montenegro (93.4 %) and Serbia (91.4 %), as well as in the former Yugoslav Republic of Macedonia (86.4 %; 2013 data). A considerably lower level of youth educational attainment was recorded in Turkey (53.5 %).

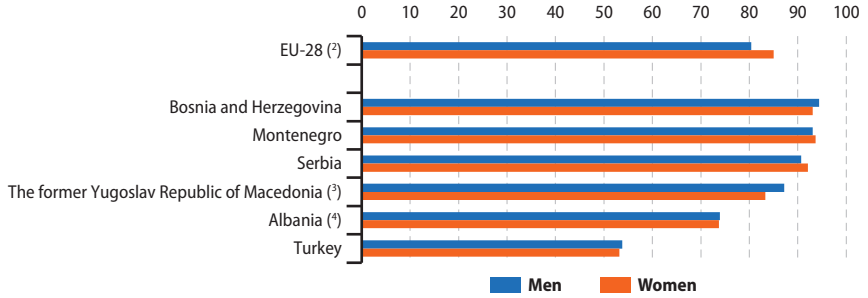
Table 3.2: Upper secondary educational attainment among those aged 20–24 years, 2005, 2010 and 2015 (1)
(% of 20–24 year olds)

	Total			Men			Women		
	2005	2010	2015	2005	2010	2015	2005	2010	2015
EU-28 (2)	77.6	79.3	82.7	75.0	76.6	80.4	80.3	82.1	85.0
Montenegro	:	:	93.4	:	:	93.1	:	:	93.7
The former Yugoslav Republic of Macedonia (3)	75.8	82.8	86.4	78.9	86.0	87.2	72.5	79.5	83.3
Albania (4)	43.1	73.8	:	44.0	73.9	:	42.4	73.7	:
Serbia	89.0	89.9	91.4	89.5	88.5	90.7	88.5	91.3	92.1
Turkey	45.5	51.0	53.5	52.7	57.1	53.8	39.7	45.9	53.2
Bosnia and Herzegovina (5)	83.6	92.0	93.8	84.1	91.5	94.4	83.0	92.5	93.1
Kosovo	:	:	:	:	:	:	:	:	:

(1) ISCED 1997. The percentage of the population aged 20–24 having attained an upper secondary or tertiary level of education (ISCED levels 3, 4, 5 or 6).
(2) 2015: break in series (based on ISCED 2011).
(3) 2006 instead of 2005. Total: 2013 instead of 2015. Male and female: 2014 instead of 2015.
(4) 2012 instead of 2010.
(5) 2006 instead of 2005.

Source: Eurostat (online data codes: edat_lfse_9903 and cpc_siinr)

Figure 3.2: Upper secondary educational attainment among those aged 20–24 years, 2015 (1)
(% of 20–24 year olds)



(1) ISCED 1997. The percentage of the population aged 20–24 having attained having attained an upper secondary or tertiary level of education (ISCED levels 3, 4, 5 or 6). Kosovo: not available.
(2) ISCED 2011.
(3) 2014.
(4) 2012.

Source: Eurostat (online data codes: edat_lfse_9903 and cpc_siinr)

Although a time series is only available for some of the enlargement countries it can be noted that the proportion of students attaining at least an upper secondary level of education rose in all of them between 2005 and 2015, most notably in the former Yugoslav Republic of Macedonia (2006–2013) and Bosnia and Herzegovina (2006–2015), while the (percentage points) increase for Turkey between 2005 and 2015 was also higher than that recorded in the EU-28.

Within the EU-28 the gender gap in youth education attainment showed that levels for women in 2015 were 4.6 percentage points higher than those for men. Serbia also reported higher shares for women, while in Montenegro and Turkey the proportions for men and women were

almost equal. Bosnia and Herzegovina recorded a higher youth educational attainment for men (compared with women), as did the former Yugoslav Republic of Macedonia where the gap reached 3.9 percentage points (2014 data).

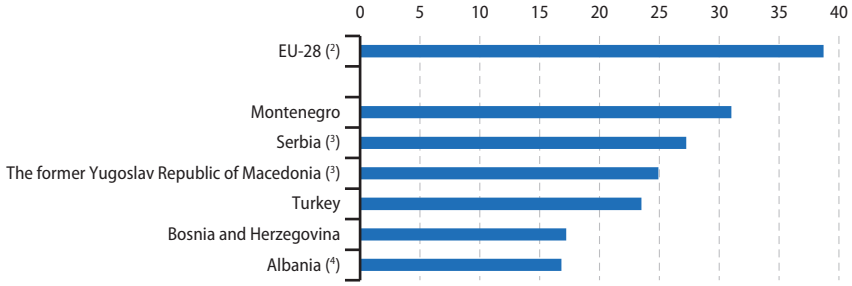
Tertiary education

The Europe 2020 strategy has set a benchmark target that the share of 30–34 year olds in the EU-28 with tertiary educational attainment should reach at least 40 % by 2020; Figure 3.3 shows the ratio in the EU-28 stood at 38.7 % in 2015. All of the enlargement countries for which data are available (no data for Kosovo) reported lower proportions of this sub-population having completed a tertiary level of education, ranging from less than one fifth in Albania (2012 data) and Bosnia and Herzegovina, to more than a quarter in Serbia (2014 data) and close to one third in Montenegro (31.0 % in 2015).

There has been considerable focus on differences between subjects that are studied by men and women at university. Figure 3.4 shows that across the EU-28 population aged 20–29 in 2012, the proportion of men with a science or technology degree (22.9 per 1 000 male inhabitants) was approximately twice as high as the corresponding ratio for women (11.2 per 1 000 female inhabitants). In all of the enlargement countries for which data are available (no data for Albania, Bosnia and Herzegovina or Kosovo), the proportion of men having graduated from a science or technology discipline was lower than in the EU-28, peaking in Serbia at 17.3 graduates per 1 000 male inhabitants aged 20–29 in 2014. By contrast, Serbia stood out as its proportion of women having graduated from a science or technology discipline — 12.1 per 1 000 female inhabitants in 2014 — was higher than the EU-28 average (11.2 per 1 000 female inhabitants); each of the remaining enlargement countries recorded ratios for female tertiary graduates in science and technology that were below the EU-28 average.

Figure 3.3: Proportion of 30–34 year olds having completed tertiary or equivalent education, 2015 (1)

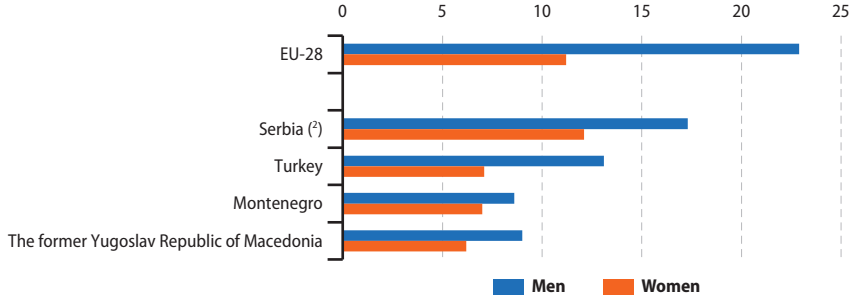
(%)



(1) ISCED 1997. Kosovo: not available.
(2) ISCED 2011.
(3) 2014.
(4) 2012.

Source: Eurostat (online data codes: tsdsc480 and cpc_pseduc)

Figure 3.4: Tertiary graduates in science and technology among those aged 20–29 years, 2012 (1)
(per 1 000 male/female inhabitants aged 20–29)



(1) ISCED 1997. Albania, Bosnia and Herzegovina and Kosovo: not available.
(2) 2014 instead of 2012.

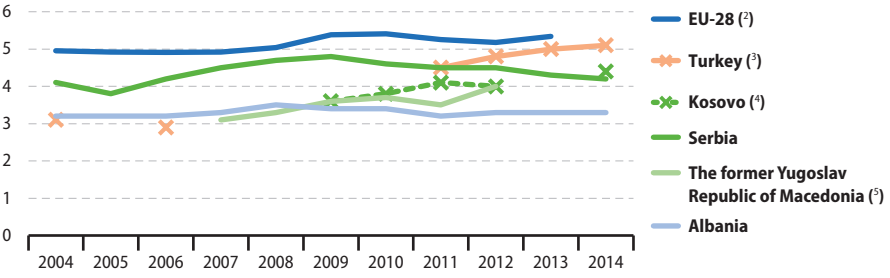
Source: Eurostat (online data codes: educ_itertc and cpc_scienc)

Expenditure on education

In 2013, EU-28 public expenditure on education was equivalent to 5.3 % of GDP (see Figure 3.5). This was almost the highest ratio recorded for this indicator during the period 2004–2013, as a peak of 5.4 % was registered in 2009 and 2010 (reflecting, at least in part, the relatively low levels of GDP in both of these years which may be linked to the global financial and economic crisis).

Public expenditure on education as a share of GDP was lower in each of the enlargement countries for which data are available (no information for Montenegro or for Bosnia and Herzegovina). In 2014, the highest ratio was recorded in Turkey, at 5.1 %, while ratios within the range of 4.0 %–4.5 % were registered in Kosovo, Serbia and the former Yugoslav Republic of Macedonia (2012 data). Albania had the lowest ratio of public expenditure on education to GDP, at 3.3 % in 2014.

Figure 3.5: Public expenditure on education as a share of GDP, 2004–2014 (1)
(%)



(1) ISCED 1997. Montenegro and Bosnia and Herzegovina: not available.
(2) Estimates. 2012: break in series due to change to ISCED 2011. 2014: not available.
(3) 2005 and 2007–2010: not available. 2011: break in series.
(4) 2004–2008 and 2013: not available.
(5) 2004–2006 and 2013–2014: not available. 2012: provisional.

Source: Eurostat (online data codes: educ_figdp and duc_uoe_fine06) and Eurostat enlargement data collection

4 Labour market

Activity rates

The activity rate is defined, for any given age group, as the proportion of active persons in relation to the total population of the same age. The economically active population, often referred to as the labour force, comprises employed and unemployed persons, but not the economically inactive, for example, children, students and pensioners, as well as people caring for family members; some of these may be of working-age. The labour force includes people who were not at work but had a job or business from which they were temporarily absent, for example, because of illness, holidays, industrial disputes, education or training.

The EU-28 activity rate for persons aged 20–64 years old was 77.1 % in 2015 (see Table 4.1), in other words just over three quarters of people aged 20–64 were in employment or unemployed (and looking for work), with the remainder considered to be economically inactive.

Activity rates in the enlargement countries were generally much lower than in the EU-28, although this was largely due to relatively low activity rates for women (see below for more details relating to gender gaps). In 2015, the overall activity rate among the enlargement countries for persons aged 20–64 ranged from a high of 71.3 % in Albania down to 42.8 % in Kosovo.

A comparison between 2005 and 2015 shows that the activity rate in the EU-28 rose by 2.8 percentage points. There was much faster growth in Turkey, where the activity rate rose by 7.0 percentage points (over the same period), while the rate of change was slightly less than the EU-28 average in Bosnia and Herzegovina (up 2.1 percentage points; 2007–2015) and the former Yugoslav Republic of Macedonia (up 1.7 percentage points; also 2007–2015). By contrast, activity rates in Albania (2007–2015) and Serbia fell during the last decade; note that there is a break in series for Serbia.

In 2015, the activity rate for men in the EU-28 was considerably higher, at 83.4 %, than the rate for women, which was 12.5 percentage points lower, at 70.9 % (see Figure 4.1). Female activity rates in each of the enlargement countries were much lower than in the EU-28. The latest data available for 2015 reveal that activity rates for women in the enlargement countries peaked at 62.1 % in Montenegro, while Albania, Serbia and the former Yugoslav Republic of Macedonia also reported that more than half of all women aged 20–64 were either in work or available for work. At the other end of the range, the activity rate for women was less than half in Bosnia and Herzegovina (46.3 %), just over one third in Turkey (37.3 %) and just over one fifth in Kosovo (20.4 %).

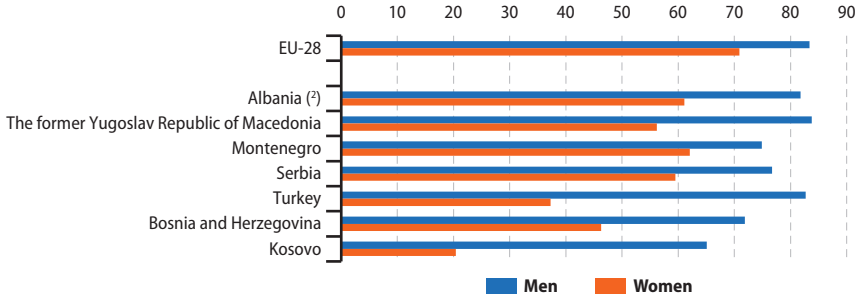
Table 4.1: Activity rates (persons aged 20–64), 2005–2015
(% of total population)

	2005	2007	2009	2011	2013	2015
EU-28	74.3	74.9	75.4	75.6	76.5	77.1
Montenegro	:	:	:	:	65.1	68.5
The former Yugoslav Republic of Macedonia	:	68.5	70.1	70.1	70.4	70.2
Albania	:	*72.2*	*69.6*	*75.6*	*67.6*	*71.3*
Serbia (1)	70.1	67.9	65.4	64.1	66.1	68.1
Turkey	52.9	52.7	54.5	57.2	58.4	59.9
Bosnia and Herzegovina	:	57.1	57.7	58.3	58.7	59.2
Kosovo	:	:	:	:	46.4	42.8

(1) 2015: break in series.

Source: Eurostat (online data codes: lfsa_argan and cpc_pslm)

Figure 4.1: Activity rates (persons aged 20–64) by sex, 2015 ([1])
(% of total population)



([1]) Ranked on the total activity rate (male and female).
([2]) Estimates.

Source: Eurostat (online data codes: lfsa_argan and cpc_pslm)

By contrast, activity rates for men in some of the enlargement countries were at similar levels to that recorded in the EU-28. In the former Yugoslav Republic of Macedonia the activity rate for men was 83.8 % in 2015, some 0.4 percentage points above the EU-28 average, while in Turkey the activity rate for men was 82.7 %, just 0.7 percentage points lower than the EU-28 average. Among the enlargement countries, activity rates for men were lowest in Bosnia and Herzegovina and Kosovo, at 71.9 % and 65.1 % respectively.

These gender inequalities may reflect, among other factors, patriarchal family structures, the degree of female empowerment, religious beliefs, other cultural factors, lower pay for women, and difficulties in relation to both access to jobs and career development for women. A comparison between activity rates for men and women in 2015 across the enlargement countries shows that the widest gender gaps were recorded in Turkey and Kosovo, where activity rates for women were 45.4 and 44.7 percentage points lower than the corresponding rates for men. Two of the enlargement countries reported gender gaps of less than 20 percentage points: Serbia (17.2 points) and Montenegro (12.8 points).

Employment rates

The EU's labour force survey defines persons in employment as those aged 15 and over, who, during the reference week, performed some work, even for just one hour per week, for pay, profit or family gain.

Employment statistics are frequently reported as employment rates to discount the changing size of countries' populations over time and to facilitate comparisons between countries of different sizes. The employment rate is defined, for any given age group, as the percentage of employed persons in relation to the total population of that same age group. These rates are typically published for the working age population, which is generally considered to be those aged between 15 and 64 years, or those aged between 20 and 64 years (the latter ratio takes account of the generally increasing proportion of young people who remain in education beyond the period of compulsory education).

One of the headline targets for the Europe 2020 strategy is to raise the EU-28 employment rate for people aged 20–64 years old to 75 % by 2020. In 2015, the EU-28's employment rate

Table 4.2: Employment rates (persons aged 20–64), 2005–2015
(% of labour force)

	2005	2007	2009	2011	2013	2015
EU-28	67.9	69.8	69.0	68.6	68.4	70.1
Montenegro	:	:	:	:	52.6	56.7
The former Yugoslav Republic of Macedonia	:	45.0	47.9	48.4	50.3	51.9
Albania	:	*62.7*	*60.4*	*64.9*	*56.7*	*59.3*
Serbia (1)	55.4	55.7	54.7	49.3	51.3	56.0
Turkey	48.1	48.2	47.8	52.2	53.4	53.9
Bosnia and Herzegovina	:	40.9	44.2	42.5	42.8	43.2
Kosovo	:	:	:	:	33.0	29.1

(1) 2015: break in series.

Source: Eurostat (online data codes: lfsi_emp_a and cpc_pslm)

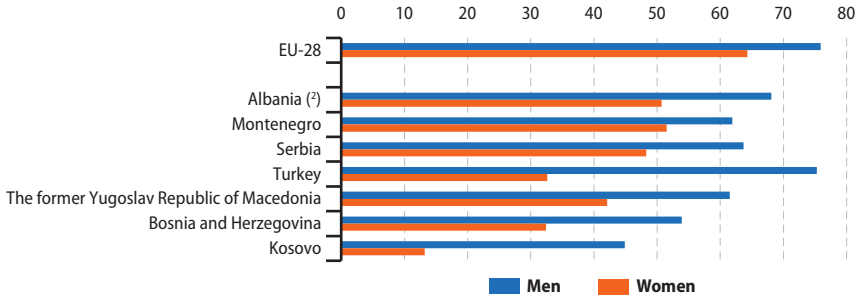
was 70.1 % (see Table 4.2), some 4.9 percentage points below this headline target; note that EU Member States set their own national targets in the light of this overall headline figure for the EU. Employment rates for those aged 20–64 ranged among the enlargement countries from a high of 59.3 % in Albania down to 29.1 % in Kosovo; as such the employment rate in each enlargement country was at least 10.0 percentage points lower than the EU-28 average.

The EU-28's employment rate was 2.2 percentage points higher in 2015 than in 2005. Subject to data availability (no time series for Montenegro or Kosovo), employment rates in the former Yugoslav Republic of Macedonia and Turkey changed more between these years than in the EU, up by 6.9 percentage points (2007–2015) and 5.8 percentage points (2005–2015) respectively. The employment rate in Bosnia and Herzegovina was 2.2 percentage points higher in 2015 than in 2007, a gain that was similar in magnitude to that recorded in the EU-28. By contrast, the employment rate in Serbia was 0.6 percentage points higher in 2015 than in 2005; note, there is a break in series. Albania was the only enlargement country to record a fall in its employment rate, the rate in 2015 being 3.4 percentage points lower than in 2007; despite this, Albania continued to record the highest employment rate among the enlargement countries in 2015.

In 2015, the EU-28 employment rate (75.9 %) for men aged 20–64 was some 11.6 percentage points higher than the equivalent rate for women (64.3 %). Turkey was the only enlargement country to report an employment rate for men (75.3 %) that was at a similar level to that observed for the EU-28 (see Figure 4.2). Indeed, the male employment rate for Turkey was considerably higher than any of the rates recorded in the remaining enlargement countries, as the next highest rate was 68.1 % in Albania. Kosovo was the only enlargement country to record a male employment rate that was below 50 %.

By contrast, employment rates for women were below 50 % in all but two of the enlargement countries. In 2015, the highest female employment rates for those aged 20–64 were recorded in Montenegro (51.5 %) and Albania (50.7 %), while rates between 40 % and 50 % were registered in Serbia and the former Yugoslav Republic of Macedonia. Employment rates for women in Turkey and in Bosnia and Herzegovina were just below one third of the labour force (32.6 % and 32.4 % respectively), while the lowest rate was recorded in Kosovo (13.2 %).

Figure 4.2: Employment rates (persons aged 20–64) by sex, 2015 ([1])
(% of labour force)



([1]) Ranked on the total employment rate (male and female).
([2]) Estimates.

Source: Eurostat (online data codes: lfsi_emp_a and cpc_pslm)

Analysis of employment by economic activity

Services employed just over 7 out of every 10 persons aged 15 or more within the EU-28's workforce in 2015 (see Figure 4.3). Industry had the second largest workforce, with 17.3 % of the workforce, while the shares of total employment in construction (6.8 %) and agriculture, forestry and fishing (4.5 %) were much lower.

The distribution of employment between the different economic activities shows that the relative weight of services in the enlargement countries was generally lower than in the EU-28. Montenegro was the only exception, as nearly three quarters (74.8 %) of those employed were working in services in 2015; this figure may be explained, at least in part, by a considerable increase in tourism and real estate developments in recent years. Services accounted for more than half of the workforce in the remaining enlargement countries, except for Albania, where their share of those in employment was 40.2 %.

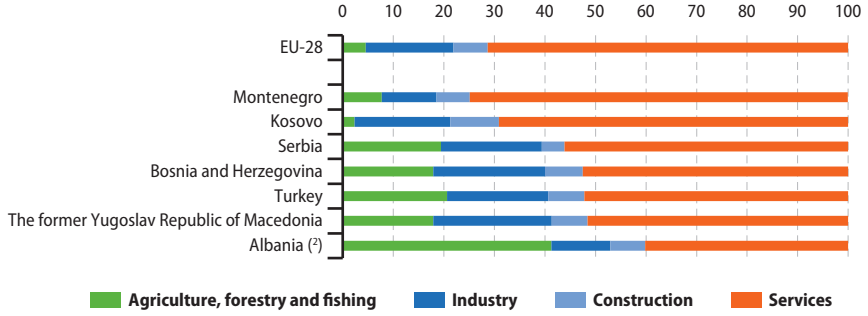
By contrast, the relative share of employment in agriculture, forestry and fishing was often considerably higher in the enlargement countries than in the EU-28. This was particularly true in Albania, as more than two fifths (41.3 %) of the workforce was employed in these activities in 2015. Agriculture, forestry and fishing accounted for around one fifth of the total workforce in Turkey, Serbia, the former Yugoslav Republic of Macedonia, as well as Bosnia and Herzegovina. By contrast, the proportion of those employed within agriculture, forestry and fishing was at a level that was closer to that seen in the EU-28 in Montenegro (7.7 %) and fell below the EU-28 average in Kosovo (2.3 %).

Across the enlargement countries, the share of those employed by industry was generally slightly higher than the share recorded for the EU-28, other than in the service-dominated economy of Montenegro and the agriculture-dominated economy of Albania, where lower shares were recorded.

Table 4.3 provides information on the development of employment shares by economic activity between 2010 and 2015. The share of services in the total employment of the EU-28 rose by 1.9 percentage points during this five-year period, while the relative shares of industry (−0.3 points), agriculture, forestry and fishing (−0.7 points) and construction (−0.9 points) each fell.

In several of the enlargement countries, the shift in employment towards the services sector was at a more rapid pace than in the EU-28; this was particularly the case in Albania (2011–2015), Serbia, Turkey, and Bosnia and Herzegovina (2012–2015). While there was a small reduction in the share of total employment accounted for by the services sector in Montenegro (2011–2015), its share remained higher than in the EU-28 in 2015.

Figure 4.3: Analysis of employment (persons aged 15 or more) by economic activity (NACE Rev. 2), 2015 (1)
(% of total employment)



(1) Ranked on the share of services.
(2) Estimates.

Source: Eurostat (online data codes: lfsa_egan2 and cpc_pslm)

Table 4.3: Analysis of employment (persons aged 15 or more) by economic activity (NACE Rev. 2), 2010 and 2015
(% of total employment)

	Agriculture, forestry and fishing		Industry		Construction		Services	
	2010	2015	2010	2015	2010	2015	2010	2015
EU-28	5.2	4.5	17.6	17.3	7.7	6.8	69.5	71.3
Montenegro (1)	5.6	7.7	13.0	10.8	6.0	6.6	75.5	74.8
The former Yugoslav Republic of Macedonia (1)	18.8	17.9	23.8	23.5	6.2	7.1	51.2	51.6
Albania (1)	*45.4*	*41.3*	*10.6*	*11.6*	*8.2*	*6.9*	*35.7*	*40.2*
Serbia (2)	22.2	19.4	21.0	19.9	5.0	4.5	51.8	56.2
Turkey (3)	25.2	20.6	19.9	20.0	6.3	7.2	48.6	52.2
Bosnia and Herzegovina (4)	20.6	17.9	21.5	22.1	8.9	7.5	49.0	52.5
Kosovo (4)	4.7	2.3	19.4	18.9	9.7	9.6	66.3	69.1

(1) 2011 instead of 2010.
(2) 2010: includes NACE Rev. 2 Group 98.1 (undifferentiated goods-producing activities of private households for own use).
(3) Break in series.
(4) 2012 instead of 2010.

Source: Eurostat (online data codes: lfsa_egana, lfsa_egan2 and cpc_pslm)

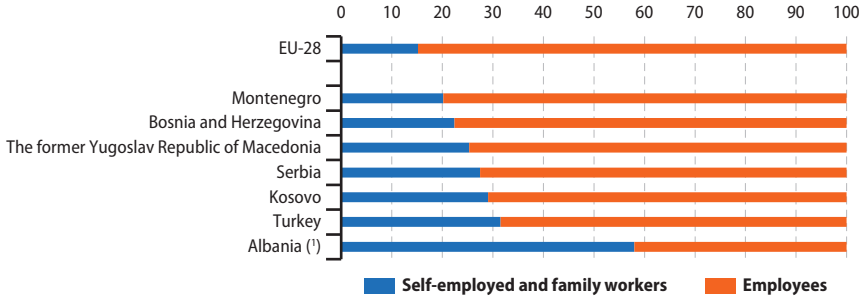
The share of agriculture, forestry and fishing in total employment fell between 2010 and 2015 in all but one of the enlargement countries, the exception being Montenegro. Aside from Montenegro, the shift in employment away from agriculture, forestry and fishing was greater than for any of the other economic activities shown in Table 4.3. The largest contractions were recorded in Albania (2011–2015) and in Turkey, where the share of these activities fell by 4.1 and 4.6 percentage points respectively.

Analysis of employment by working status

Just over one out of every seven people in employment in the EU-28 in 2015 were self-employed or a family worker (see Figure 4.4); the vast majority (84.8 %) of the workforce were employees. The relative share of the self-employed and family workers in total employment in the EU-28 was relatively stable, tending to fall gradually during periods of economic growth and rise marginally during periods of more testing economic conditions (for example, at the height of the global financial and economic crisis in 2009 and 2010).

The structure of employment by working status was quite different in most of the enlargement countries. Indeed, the self-employed and family workers accounted for more than half (58.0 %) of those working in Albania in 2015, while this share was close to one third of the total in Turkey (31.5 %), and above one quarter of the total in Kosovo (29.1 %), Serbia (27.5 %) and the former Yugoslav Republic of Macedonia (25.3 %). These comparatively high proportions reflect, to some degree, the relative weight of agricultural activities in each of the enlargement countries, with work spread across numerous small scale, family-run farms or farming co-operatives. By contrast, the structure of employment by working status in Montenegro more closely resembled that of the EU-28, as the share of self-employed and family workers in total employment was 20.2 % in 2015, although in contrast to the situation in the EU-28, this share rose in 2014 and 2015.

Figure 4.4: Analysis of employment (persons aged 15–64) by working status, 2015
(% of total employment)



(1) Estimates.

Source: Eurostat (online data codes: lfsa_egaps and cpc_pslm)

Unemployment rates

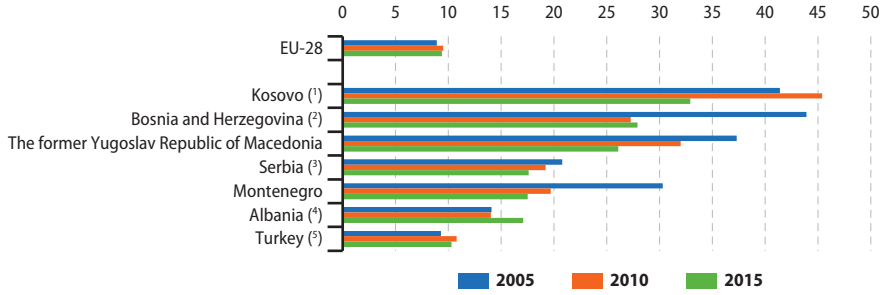
Unemployment statistics are based on a definition provided by the International Labour Organisation (ILO) which has three criteria: being without work, actively seeking work, and being available for work. An unemployed person is defined by Eurostat, as:

- someone aged 15–74 years;
- without work during the reference week;
- available to start work within the next two weeks (or has already found a job to start within the next three months);
- actively having sought employment at some time during the last four weeks.

The unemployment rate is defined, for any given age group, as the proportion of people who are unemployed as a share of the total labour force for that same age group. In 2015, the EU-28 unemployment rate (for persons aged 15–74) was 9.4 % (see Figure 4.5). The highest unemployment rate in the enlargement countries was recorded in Kosovo, where just under one third (32.9 %) of the labour force were without work in 2015; relatively high unemployment rates were also recorded in Bosnia and Herzegovina (27.9 %) and in the former Yugoslav Republic of Macedonia (26.1 %). Unemployment rates in the remaining enlargement countries were above the EU-28 average and within the range of 17–18 %, with the exception of Turkey, where the latest unemployment rate (10.3 %) was much closer, if somewhat higher, than in the EU-28.

While the largest contractions in economic activity as a result of the global financial and economic crisis were recorded in 2009, it was not uncommon to see unemployment rates continuing to increase in 2010 and beyond. Indeed, the EU-28 annual unemployment rate rose from a low of 7.0 % in 2008 to reach 10.8 % in 2013 (see Table 4.4). However, in 2014 and 2015 there were reductions of 0.6 and 0.8 percentage points in the unemployment rate of the EU-28. By contrast, the situation in the enlargement countries was more varied. At the onset of the crisis (between 2008 and 2009) unemployment rates increased in all enlargement countries except for Kosovo and the former Yugoslav Republic of Macedonia; in fact, the former Yugoslav Republic of Macedonia recorded a fall in the unemployment rate every year between 2005 and 2015. In Montenegro, the unemployment rate stabilised between 2010 and 2012 and

Figure 4.5: Unemployment rates (persons aged 15–74), 2005, 2010 and 2015
(% of labour force)



(1) 2009 instead of 2010.
(2) 2010: break in series (2005 data not based on ILO methodology).
(3) 2015: break in series.
(4) 2010: break in series (administrative data for 2005). Estimates.
(5) Based on 4 weeks criterion and using only active jobs search methods.

Source: Eurostat (online data codes: lfsa_urgan and cpc_pslm)

Table 4.4: Unemployment rates (persons aged 15–74), 2005–2015
(% of labour force)

	2005	2007	2009	2011	2013	2015
EU-28	8.9	7.1	8.9	9.6	10.8	9.4
Montenegro	30.3	19.3	19.1	19.7	19.5	17.5
The former Yugoslav Republic of Macedonia	37.3	34.9	32.2	31.4	29.0	26.1
Albania (1)	14.1	*13.5*	*13.8*	*14.0*	*15.9*	*17.1*
Serbia (2)	20.8	18.1	16.1	22.9	22.1	17.6
Turkey (3)	9.3	8.9	12.7	8.8	8.8	10.3
Bosnia and Herzegovina (4)	43.9	29.1	24.1	27.6	27.6	27.9
Kosovo	41.4	43.6	45.4	:	30.0	32.9

(1) 2007: break in series (prior to this date the source was administrative data).
(2) 2015: break in series.
(3) Based on 4 weeks criterion and using only active jobs search methods.
(4) 2007: break in series (prior to this date not based on ILO methodology).

Source: Eurostat (online data codes: lfsa_urgan and cpc_pslm)

subsequently fell, while in Serbia it peaked in 2012 and then fell; note, there is a break in series for 2015. In Bosnia and Herzegovina a similar development was observed, with a peak in the unemployment rate in 2012, followed by a decline, but in 2015 the rate increased again. In Albania and Turkey the developments were more complex: in Turkey, after rising in 2009, the unemployment rate fell to a low in 2012 before increasing again through to 2015; in Albania, the increase in 2009 was followed by a small rise and stability in 2010 and 2011 and then by an irregular sequence of decreasing and increasing unemployment rates, which resulted in a higher overall unemployment rate in 2015.

Historically, women in the EU have been more affected by unemployment than men. However, unemployment rates for the two sexes started to converge with the onset of the global financial and economic crisis and by 2009 the male unemployment rate was slightly higher than the female rate; this pattern was repeated in 2010. From a low of 6.6 % in 2008, the EU-28 male unemployment rate rose in successive years to peak at 10.8 % in 2013, interrupted only by a modest reduction of 0.1 percentage points in 2011. The female unemployment rate rose for five successive years from a low of 7.5 % in 2008 to peak at 10.9 % in 2013. From the end of 2013, both male and the female unemployment rates began to decline; by 2015, they stood at 9.3 % and 9.5 % respectively.

Among the enlargement countries, male unemployment rates were consistently lower than female rates in 2010 (see Table 4.5). In Montenegro and the former Yugoslav Republic of Macedonia this gender gap was reversed over the next few years, and female unemployment rates were lower than male rates in 2015. In Albania, the male unemployment rate was 3.3 percentage points lower than the female unemployment rate in 2010, but by 2015 the gender gap had disappeared as the same unemployment rates were recorded for both sexes. In Kosovo, the male unemployment rate rose by 3.7 percentage points between 2012 and 2015, while the female rate fell by a similar margin (−3.4 percentage points). Nevertheless, the female unemployment rate in Kosovo remained 4.8 percentage points higher than the male rate in 2015. In the three remaining enlargement countries — Serbia, Turkey, Bosnia and Herzegovina — male unemployment rates were lower than female rates in 2010 and the gap widened between 2010 and 2015, with the difference in unemployment rates between the sexes peaking in 2015 at 5.0 percentage points in Bosnia and Herzegovina.

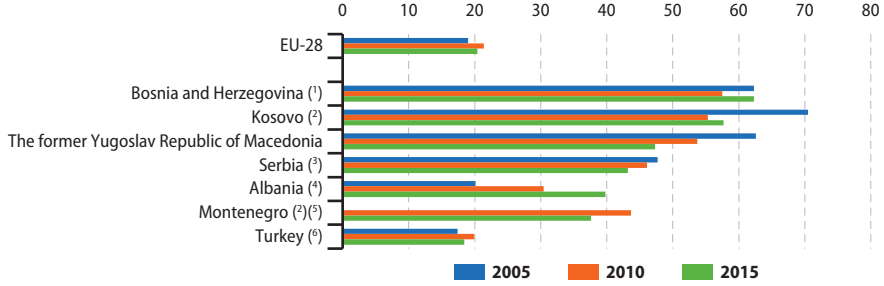
Table 4.5: Unemployment rates (persons aged 15–74) by sex, 2010–2015
(% of labour force)

	Men						Women					
	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
EU-28	9.6	9.5	10.4	10.8	10.1	9.3	9.5	9.7	10.5	10.9	10.3	9.5
Montenegro	18.9	19.5	19.3	20.1	17.8	17.7	20.7	20.0	20.3	18.8	18.2	17.3
The former Yugoslav Republic of Macedonia	31.9	31.8	31.5	29.0	27.7	26.7	32.2	30.8	30.3	29.0	28.6	25.1
Albania	*12.6*	*13.6*	*14.6*	*17.8*	*19.2*	*17.1*	*15.9*	*14.4*	*11.7*	*13.5*	*15.2*	*17.1*
Serbia (1)	18.4	22.3	23.2	20.9	18.3	16.8	20.2	23.7	24.9	23.7	20.3	18.7
Turkey (2)	10.5	8.3	7.7	8.0	9.1	9.3	11.6	10.1	9.4	10.6	11.9	12.6
Bosnia and Herzegovina	25.6	26.1	26.5	26.7	25.3	25.9	29.9	30.0	30.8	29.1	31.2	30.9
Kosovo	:	:	28.1	26.9	33.1	31.8	:	:	40.0	38.8	41.6	36.6

(1) 2014: break in series.
(2) Based on 4 weeks criterion and using only active jobs search methods.

Source: Eurostat (online data codes: lfsa_urgan and cpc_pslm)

Figure 4.6: Youth unemployment rates (persons aged 15–24), 2005, 2010 and 2015
(% of labour force)



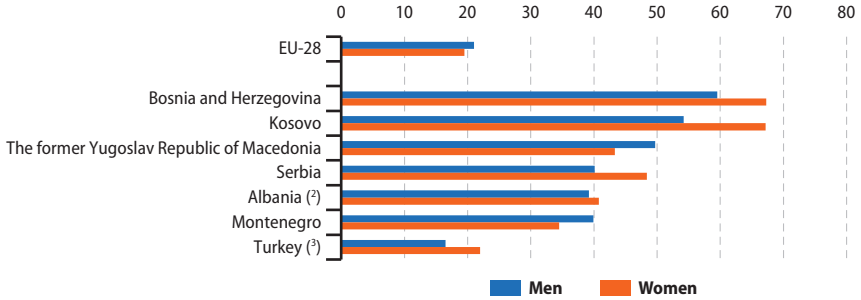
(1) 2006 instead of 2005.
(2) 2012 instead of 2010.
(3) 2015: break in series.
(4) Estimates. 2007 instead of 2005. 2010: break in series (administrative data for 2005).
(5) 2005: not available.
(6) Based on 4 weeks criterion and using only active jobs search methods.

Source: Eurostat (online data codes: lfsa_urgan and cpc_pslm)

Youth unemployment concerns those aged 15–24 years: around one fifth (20.4 %) of this sub-population in the EU-28 was without work in 2015, compared with 21.4 % in 2010 (as unemployment had increased during the financial and economic crisis) and 19.0 % in 2005. The youth unemployment rate in the EU-28 was more than twice as high as the overall unemployment rate for those aged 15–74, with a difference of 11.0 percentage points between these two rates in 2015.

Turkey was the only enlargement country to record a youth unemployment rate (18.4 %) that was lower than the EU-28 average in 2015 (see Figure 4.6). In the remaining enlargement countries, more than one third of those aged less than 25 years old in the labour force were without work in Montenegro (37.6 %) and Albania (39.8 %), a share that rose to more than two fifths in Serbia (43.2 %) and the former Yugoslav Republic of Macedonia (47.3 %), exceeded half of all young persons in the labour force in Kosovo (57.7 %), and was above three fifths in Bosnia and Herzegovina (62.3 %).

Figure 4.7: Youth unemployment rates (persons aged 15–24) by sex, 2015 (1)
(% of labour force)



(1) Ranked on the total youth unemployment rate (men and women).
(2) Estimates.
(3) Based on 4 weeks criterion and using only active jobs search methods.

Source: Eurostat (online data codes: lfsa_urgan and cpc_pslm)

As for the EU-28, youth unemployment rates in the enlargement countries tended to be about twice (1.8 times to 2.5 times) as high as overall unemployment rates in 2015. The difference between youth and overall unemployment rates peaked at 34.4 percentage points in Bosnia and Herzegovina, while all but one of the remaining enlargement countries recorded a gap of 20–25 percentage points. The difference between youth and overall unemployment rates in Turkey was considerably lower, at 8.1 percentage points.

In 2015, youth unemployment rates for women in the EU-28 were 1.5 percentage points lower than those for young men (see Figure 4.7). There were two enlargement countries — the former Yugoslav Republic of Macedonia and Montenegro — where youth unemployment rates for women were also lower. However, Bosnia and Herzegovina, Serbia and Kosovo recorded the biggest gender gaps for youth unemployment rates. In all three of these countries, youth unemployment rates for young men were considerably lower than those for young women, with the gap rising to 13.0 percentage points in Kosovo.

The long-term unemployment rate concerns those persons who are out of work and have been actively seeking employment for at least a year. In the EU-28 the long-term unemployment rate was 4.5 % in 2015 (see Table 4.6).

Turkey was the only enlargement country to record a lower long-term unemployment rate than that recorded for the EU-28. Its latest rate for 2015 was 2.2 %, which was approximately half the rate in the EU-28. Long-term unemployment rates in the remaining enlargement countries ranged from 11.3 % in Albania and Serbia to 23.8 % in Kosovo, which were between 2.5 times and 5.3 times as high as in the EU-28.

Long-term unemployment rates in the EU-28 were identical among men and women in 2015 (see Figure 4.8). Turkey was the only enlargement country to record rates for either men or women that were below the EU-28 averages, at 1.6 % for men and 3.4 % for women. Long-term unemployment rates for men in the remaining enlargement countries were considerably higher than in the EU-28, ranging from just over one tenth (10.6 %) of the male labour force in Serbia to more than one fifth in the former Yugoslav Republic of Macedonia (20.1 %), Bosnia and Herzegovina (21.2 %) and Kosovo (22.6 %). Rates for women were generally at a similar (although slightly higher) level than those for men, ranging from just over one tenth (11.3 %) of the female labour force in Albania to around

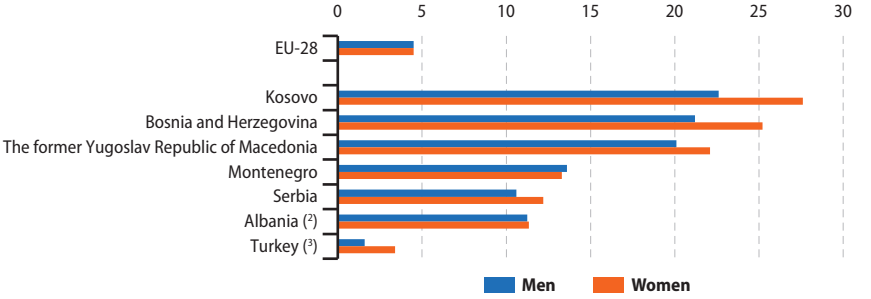
Table 4.6: Long-term unemployment rates (persons aged 15–74), 2005–2015
(% of labour force)

	2005	2007	2009	2011	2013	2015
EU-28	4.0	3.0	3.0	4.1	5.1	4.5
Montenegro	:	14.2	15.6	15.7	16.0	13.6
The former Yugoslav Republic of Macedonia	32.3	29.7	26.3	25.9	23.9	21.3
Albania	:	*9.4*	*9.1*	*10.2*	*11.5*	*11.3*
Serbia (1)	16.5	14.6	10.5	16.9	16.8	11.3
Turkey (2)	3.5	2.6	3.2	2.3	2.1	2.2
Bosnia and Herzegovina	:	25.1	20.1	22.3	22.9	22.8
Kosovo	14.4	16.2	16.8	:	20.7	23.8

(1) 2015: break in series.
(2) Based on 4 weeks criterion and using only active jobs search methods.

Source: Eurostat (online data codes: une_ltu_a and cpc_pslm)

Figure 4.8: Long-term unemployment rates (persons aged 15–24) by sex, 2015 (1)
(% of labour force)



(1) Ranked on the total long-term unemployment rate (male and female).
(2) Estimates.
(3) Based on 4 weeks criterion and using only active jobs search methods.

Source: Eurostat (online data codes: une_ltu_a and cpc_pslm)

one quarter in Bosnia and Herzegovina (25.2 %) and Kosovo (27.6 %). The gender gap in long-term unemployment rates was widest in those enlargement countries with the highest rates: the rate for women was some 5.0 percentage points above that recorded for men in Kosovo and there was a gap of 4.0 percentage points in Bosnia and Herzegovina. Montenegro was the only enlargement country to record a lower long-term unemployment rate for women (13.3 %) than for men (13.6 %).

5 Economy and finance

National accounts provide an internationally agreed standard for compiling measures of economic activity. These accounts record how economic activity is distributed among businesses, consumers, government and foreign countries, detailing key items such as production, consumption, savings and investment. Economic and financial statistics have become one of the cornerstones of global, regional and national governance.

Gross domestic product (GDP)

Gross domestic product (GDP) is the most commonly used economic indicator and the central measure of national accounts, which summarises the economic position of a country (or region). GDP provides information on the total market value of all goods and services produced during a given period and can be calculated in three different ways: based on output, expenditure or income.

GDP at current prices in the EU-28 stood at EUR 14 693 billion in 2015. The economic output of the enlargement countries was considerably lower, as together they generated an estimated EUR 722 billion of GDP in 2015 (2014 data for Kosovo), equivalent to about one twentieth of the EU-28's GDP (see Table 5.1).

The Turkish economy was by far the largest among the enlargement countries, as its GDP rose to EUR 645 billion in 2015, which was almost nine tenths of the total output across all of the enlargement countries. While the EU-28 economy was more than 20 times as large as the Turkish economy, GDP in Turkey was almost 20 times as high as in Serbia (EUR 34 billion in 2015), which — using this measure — was the second largest economy among the enlargement countries. The level of GDP in the remaining enlargement countries ranged from EUR 14.6 billion in Bosnia and Herzegovina down to EUR 3.6 billion in Montenegro.

GDP per capita (GDP divided by the number of inhabitants) is often used as a measure of overall living standards or the competitiveness of an economy; it removes the influence of the absolute size of populations, making comparisons between different countries easier. The data presented in Table 5.2 are presented in euro terms. While this also facilitates comparisons between countries, it is important to remember that changes in exchange rates are partially responsible for some of the developments that may be identified.

GDP per capita in current price euro terms stood at EUR 28 800 in the EU-28 in 2015. As such, GDP

Table 5.1: Gross domestic product (GDP), 2005–2015
(billion EUR)

	2005	2007	2009	2011	2013	2015
EU-28	11 590.3	12 983.2	12 295.3	13 189.2	13 560.8	14 693.0
Montenegro	:	:	:	3.3	3.4	3.6
The former Yugoslav Republic of Macedonia	5.0	6.1	6.8	7.5	8.1	*9.1*
Albania	6.5	7.8	8.7	9.3	9.6	*10.3*
Serbia	21.1	29.5	30.7	33.4	34.3	33.5
Turkey (1)	386.9	472.0	440.4	555.1	618.6	645.4
Bosnia and Herzegovina (1)(2)	10.3	11.5	12.7	13.4	13.7	14.6
Kosovo (3)	:	:	4.1	4.8	5.3	5.6

(1) Based on ESA 1995.
(2) 2006 instead of 2005.
(3) 2014 instead of 2015.

Source: Eurostat (online data codes: nama_10_gdp and nama_gdp_c)

per capita in the EU-28 was 3.5 times as high as in Turkey, the lowest ratio recorded among the enlargement countries. At the other end of the range, GDP per capita in the EU-28 was 8.0 times as high as in Albania and peaked at 9.3 times as high in Kosovo (2014 data).

GDP per capita rose in the EU-28 from EUR 23 400 to EUR 28 800 between 2005 and 2015, equivalent to an overall increase of 23 %. Among the enlargement countries, Turkey recorded the highest GDP per capita in both 2005 and 2015. By this measure, GDP per inhabitant rose overall by 48 % in Turkey over the period 2005–2015 to reach EUR 8 300. A comparison between 2005 and 2015 shows that GDP per capita in euro terms rose particularly quickly in Serbia, Albania and the former Yugoslav Republic of Macedonia, rising overall by between 68 % and 76 %. Note that these figures are in current price terms and that they do not therefore take account of any price increases (inflation) during the period under consideration.

In 2015, GDP per capita (expressed in purchasing power standards (PPS) and therefore adjusted to take account of price level differences between countries) averaged 28 800 PPS across the EU-28

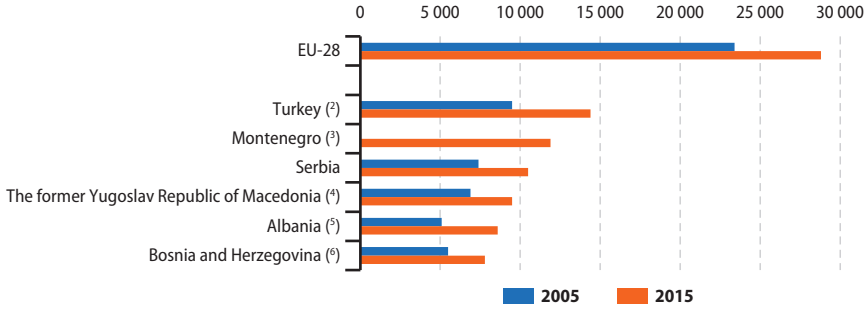
Table 5.2: Gross domestic product (GDP) per capita, 2005–2015
(EUR)

	2005	2007	2009	2011	2013	2015
EU-28	23 400	26 000	24 500	26 100	26 700	28 800
Montenegro	:	:	:	5 300	5 400	5 800
The former Yugoslav Republic of Macedonia	*2 500*	*3 000*	*3 300*	*3 700*	*3 900*	*4 400*
Albania	2 100	2 600	3 000	3 200	3 300	*3 600*
Serbia	2 800	4 000	4 200	4 600	4 800	4 700
Turkey (1)	5 600	6 700	6 100	7 500	8 200	8 300
Bosnia and Herzegovina (1)(2)	2 700	3 000	3 300	3 500	3 600	3 800
Kosovo (3)	:	:	1 900	2 700	2 900	3 100

(1) Based on ESA 1995.
(2) 2006 instead of 2005.
(3) 2014 instead of 2015.

Source: Eurostat (online data codes: nama_10_pc, nama_gdp_c, cpc_ecnagdp and cpc_psdemo)

Figure 5.1: GDP per capita, 2005 and 2015 (1)
(PPS)



(1) Kosovo: not available.
(2) Based on ESA 1995. 2014 instead of 2015. Break in series.
(3) 2005: not available.
(4) 2013 instead of 2015. 2013: estimate.
(5) 2015: provisional.
(6) Based on ESA 1995. 2005: estimate.

Source: Eurostat (online data codes: nama_10_pc, nama_gdp_c and cpc_ecnagdp)

(see Figure 5.1). A purchasing power standard (PPS) is an artificial currency unit; theoretically, after taking account of price level differences between countries, one PPS should buy the same amount of goods and services in each country.

GDP per capita in PPS terms was twice as high in the EU-28 as the level recorded in Turkey, which posted the highest ratio among the enlargement countries, at 14 400 PPS (2014 data). There was a relatively low degree of variation across the remaining enlargement countries, as GDP per capita lay within the range of 7 800 PPS to 11 900 PPS (note there are no data available for Kosovo).

Price levels tend to be higher in the EU-28 than they are in the enlargement countries. In 2005 and based on information in PPS terms, GDP per capita in the EU-28 was between 2.5 times as high as Turkey and 4.6 times as high as Albania. By 2015 these differences had narrowed, as GDP per capita in the EU-28 ranged between 2.0 times as high as Turkey and 3.7 times as high as Bosnia and Herzegovina. A comparison between 2005 and 2015 reveals that these ratios (in relation to the EU-28) narrowed for each of the enlargement countries.

The calculation of the real annual growth rate of GDP is intended to allow comparisons of the dynamics of economic development both over time and between economies of different sizes, regardless of price developments.

The global financial and economic crisis gathered pace during the second half of 2008. It affected the EU-28 and most of the enlargement countries (see Table 5.3). GDP decreased (in real terms) by 4.4 % in the EU-28 in 2009, with a rebound in activity in 2010 and 2011. Despite a mixed picture, the effects of the crisis were still being felt in several of the EU Member States in 2012 and 2013 and this was apparent as there was a small fall (−0.5 %) in EU-28 GDP in 2012, followed by a modest increase (0.2 %) in 2013. There were signs of an upturn in economic activity in 2014, as real GDP growth was 1.5 %, with this accelerating to 2.2 % in 2015.

The impact of the crisis on the enlargement countries varied depending on each country's economic structure and the nature of its financial and international trade relations with the rest of the world. Those countries most integrated into the global economy tended to be most affected: for example, there was a relatively large contraction in economic activity in Turkey in 2009 (down 4.8 % when adjusted for price changes). On the other hand, in some of the smaller economies that are less exposed to the global economy — for example, Albania or Kosovo — real GDP growth continued to follow a positive development in 2009.

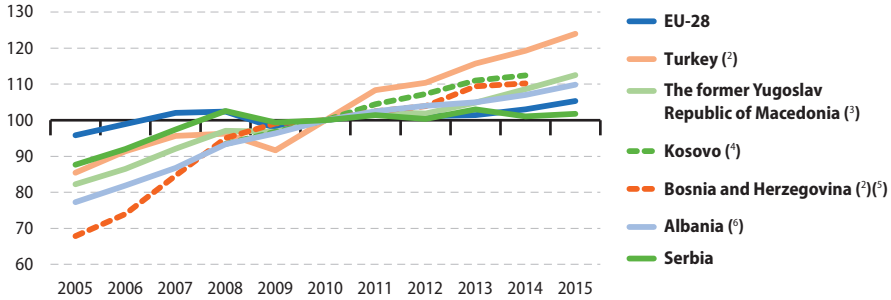
Table 5.3: Real change in GDP, 2005–2015
(% change compared with previous year)

	2005	2007	2009	2011	2013	2015
EU-28	2.1	3.0	−4.4	1.7	0.2	2.2
Montenegro	:	:	:	:	3.5	3.4
The former Yugoslav Republic of Macedonia	4.7	6.5	−0.4	2.3	2.9	*3.7*
Albania	5.5	6.0	3.4	2.5	1.0	*2.8*
Serbia	5.5	5.9	−3.1	1.4	2.6	0.8
Turkey (1)	8.4	4.7	−4.8	8.4	4.8	4.0
Bosnia and Herzegovina (1)(2)	3.9	6.0	−2.7	1.0	2.5	1.1
Kosovo (2)	:	:	3.6	4.4	3.4	1.2

(1) Based on ESA 1995.
(2) 2014 instead of 2015.

Source: Eurostat (online data codes: nama_10_gdp, nama_gdp_k and cpc_ecnagdp)

Figure 5.2: Development of real GDP, 2005–2015 ([1])
(2010 = 100)



([1]) Note that the y-axis does not start at 0. Montenegro: not available.
([2]) Based on ESA 1995.
([3]) 2014: provisional. 2015: estimate.
([4]) 2005–2007 and 2015: not available.
([5]) 2015: not available.
([6]) 2014 and 2015: provisional.

Source: Eurostat (online data codes: nama_10_gdp, nama_gdp_k and cpc_ecnagdp)

In 2010, there was economic growth in all six of the seven enlargement countries for which data are available (no data for Montenegro), and the increase in economic output more than made up for the downturn in 2009 in the former Yugoslav Republic of Macedonia and in Turkey. This was particularly true for the latter, as the Turkish economy grew by 9.2 % in 2010 and this pattern of renewed growth continued in 2011 with a further real increase of 8.4 % (the highest growth rates among the enlargement countries for 2010 and 2011). In keeping with the positive developments in the EU-28 for 2010 and 2011, there was real GDP growth in each of the enlargement countries during both of these years. The slight fall in economic output in the EU-28 in 2012 (–0.5 %) was also apparent in four of the enlargement countries (Montenegro, the former Yugoslav Republic of Macedonia, Serbia, and Bosnia and Herzegovina), while real GDP growth rates recorded for the remaining three enlargement countries were consistently lower than they had been in 2011. In 2013, there was a return to real GDP growth in all of the enlargement countries and this pattern continued in 2014, with the exception of Serbia, where GDP fell by 1.8 %. Data for 2015 are available for five of the enlargement countries, all of which recorded real GDP growth, ranging from 0.8 % in Serbia to 4.0 % in Turkey.

Looking at developments for real GDP between 2005 and 2015, there was an overall expansion of 9.9 % in the economic output of the EU-28. Real GDP growth rates in the enlargement countries were much higher, from an overall increase of 16.1 % in Serbia up to 45.1 % in Turkey, with Bosnia and Herzegovina (62.6 %, 2005–2014) above this range.

Expenditure components of GDP

Within the expenditure approach for national accounts statistics, only governments and households plus non-profit institutions serving households (NPISH) have final consumption; businesses/corporations are considered to have intermediate consumption. Private consumption expenditure of households is defined as expenditure on goods and services for the direct satisfaction of individual needs, whereas government consumption expenditure includes goods and services produced by government, as well as purchases of goods and services by government, that are supplied to households as

social transfers in kind. Gross capital formation is the sum of gross fixed capital formation, the change in inventories (stocks) and the net acquisition of valuables. The external trade balance is the difference between exports and imports of goods and services; it can be positive (a surplus) or negative (a deficit).

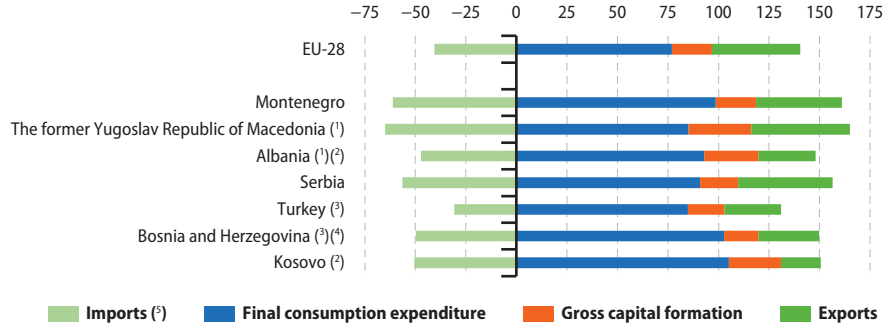
Figure 5.3 provides an analysis of the GDP components from the expenditure side. Final consumption expenditure contributed 76.9 % of the EU-28's GDP in 2015, while the share of gross capital formation was 19.8 % and there was a trade surplus in goods and services that contributed 3.3 % of GDP (as exports were valued at 43.8 % of GDP, while imports accounted for 40.5 %).

Across each of the enlargement countries, the relative share of final consumption expenditure was higher than in the EU-28, largely as a result of higher private consumption by households, while the consumption of general government was usually lower. In 2015, final consumption expenditure in the enlargement countries contributed between 84.8 % of GDP in Turkey and more than 100 % in Bosnia and Herzegovina (2013 data) and in Kosovo (2014 data). Several of the enlargement countries tended to invest a similar share of their GDP than in the EU-28, although the former Yugoslav Republic of Macedonia, Albania (2014 data) and Kosovo (2014 data) reported notably higher contributions to their GDP from gross capital formation. Each of the enlargement countries had a negative trade balance: whereas the EU-28's trade surplus was equivalent to 3.3 % of GDP in 2015, among the enlargement countries, trade deficits ranged from 2.9 % of GDP in Turkey to 31.0 % of GDP in Kosovo (2014 data).

The change between 2005 and 2015 in the composition of expenditure components of GDP is shown in Table 5.4. Within the EU-28, the share of final consumption expenditure fell by 0.8 percentage points, while that of gross capital formation was reduced by 1.8 percentage points. By contrast, the EU-28's trade balance contributed an increasing share of GDP, up by 2.6 percentage points, as the trade surplus rose from 0.7 % to 3.3 %.

There were much larger changes in the composition of GDP within the enlargement countries, which may at least in part be explained by their relatively small size. The

Figure 5.3: Expenditure components of GDP, 2015
(% relative to GDP)



(1) Provisional.
(2) 2014.
(3) Based on ESA 1995.
(4) 2013.
(5) Shown as a negative value.

Source: Eurostat (online data codes: nama_10_pc, nama_gdp_c and cpc_ecnagdp)

Table 5.4: Expenditure components of GDP, 2005 and 2015
(% relative to GDP)

	Final consumption expenditure		Gross capital formation		Trade balance	
	2005	2015	2005	2015	2005	2015
EU-28	77.7	76.9	21.6	19.8	0.7	3.3
Montenegro	:	98.6	:	20.0	:	−18.6
The former Yugoslav Republic of Macedonia	96.4	*85.1*	19.8	*31.1*	−16.2	*−16.2*
Albania (1)	88.0	*93.0*	37.9	*26.8*	−24.9	*−19.0*
Serbia	95.2	90.9	24.8	18.9	−20.0	−9.7
Turkey (2)	83.5	84.8	20.0	18.1	−3.5	−2.9
Bosnia and Herzegovina (2)(3)	112.4	102.8	26.3	17.0	−38.7	−19.8
Kosovo (1)	:	105.2	:	25.8	:	−31.0

(1) 2014 instead of 2015.
(2) Based on ESA 1995.
(3) 2013 instead of 2015.

Source: Eurostat (online data codes: nama_10_pc, nama_gdp_c and cpc_ecnagdp)

former Yugoslav Republic of Macedonia was the only country — among the five for which a time series is available — to report that its share of investment in GDP rose between 2005 and 2015, rising 11.3 percentage points to 31.1 %. In the four remaining enlargement countries there was a decline in the share of gross capital formation, the largest being registered in Albania, −11.1 percentage points between 2005 and 2014. Trade deficits as a share of GDP narrowed in all but one of the enlargement countries between 2005 and 2015; the exception was the former Yugoslav Republic of Macedonia, where there was no change in the contribution of the trade balance to GDP. Bosnia and Herzegovina recorded the fastest reduction in the size of its trade deficit, as it fell from −38.7 % of GDP to −19.8 % between 2005 and 2013. There was a mixed pattern to the development of final consumption expenditure in the enlargement countries: between 2005 and 2015 there was an increase in its relative shares of GDP in Albania (2005–2014) and in Turkey, while three other enlargement countries registered a decline in their respective shares of final consumption expenditure in GDP, the largest of which was in the former Yugoslav Republic of Macedonia (down 11.3 percentage points between 2005 and 2015).

Gross value added by economic activity

Gross value added is defined as the value of all newly generated goods and services less the value of all goods and services consumed in their creation. In 2015, services accounted for almost three quarters (73.9 %) of total gross value added in the EU-28 (see Figure 5.4). This share was higher than in any of the enlargement countries, where the relative weight of services ranged from 52.5 % (Albania) to 72.7 % (Montenegro).

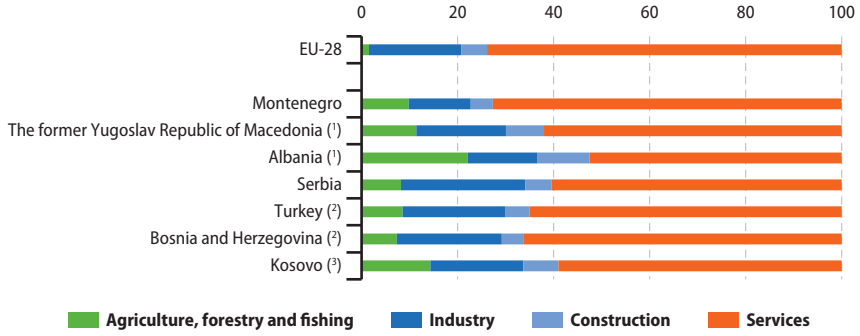
Figure 5.4 also shows that agriculture, forestry and fishing accounted for a considerably higher share of economic output in the enlargement countries than it did in the EU-28. In 2015, agriculture, forestry and fishing contributed 1.5 % of the EU-28's total value added, while its share among the enlargement countries ranged from 7.3 % in Bosnia and Herzegovina to 14.3 % in Kosovo (2014 data) and 22.1 % in Albania.

Aside from Serbia, where industry accounted for just over one quarter (25.9 %) of total value added in 2015, most of the enlargement

countries reported that industry's share of value added was close to the EU-28 average of 19.2 %. There were two main exceptions where the share of industry was relatively low: Albania (14.6 %) and Montenegro (12.9 %).

In each of the enlargement countries, the construction sector was the smallest of the four economic activities that are shown in Figure 5.4. In 2015, the relative weight of construction in total value added was below the EU-28 average of 5.4 % in Montenegro and in Bosnia and Herzegovina (both 4.6 %), as well as in Turkey (5.0 %). The share of construction was above the EU-28 average in the remaining enlargement countries; this was particularly clear in Albania, where the construction sector accounted for more than one tenth (10.8 %) of total value added.

Figure 5.4: Analysis of gross value added by economic activity (NACE Rev. 2), 2015
(% of total gross value added)



(1) Provisional.
(2) Based on ESA 1995.
(3) 2014 instead of 2015.

Source: Eurostat (online data codes: nama_10_a10 and nama_nace10_c)

Table 5.5: Analysis of gross value added by economic activity (NACE Rev. 2), 2005 and 2015
(% of total gross value added)

	Agriculture, forestry and fishing		Industry and construction		Services	
	2005	2015	2005	2015	2005	2015
EU-28	1.7	1.5	26.2	24.6	72.1	73.9
Montenegro	:	9.8	:	17.5	:	72.7
The former Yugoslav Republic of Macedonia	11.3	*11.4*	23.8	*26.6*	64.9	*62.0*
Albania	21.5	*22.1*	28.6	*25.4*	49.9	*52.5*
Serbia	12.0	8.2	29.3	31.4	58.7	60.4
Turkey (1)	10.6	8.5	28.0	26.5	61.4	65.0
Bosnia and Herzegovina (1)(2)	9.9	7.3	25.6	26.5	64.5	66.2
Kosovo (3)	:	14.3	:	26.7	:	59.0

(1) Based on ESA 1995.
(2) 2006 instead of 2005.
(3) 2014 instead of 2015.

Source: Eurostat (online data codes: nama_10_a10 and nama_nace10_c)

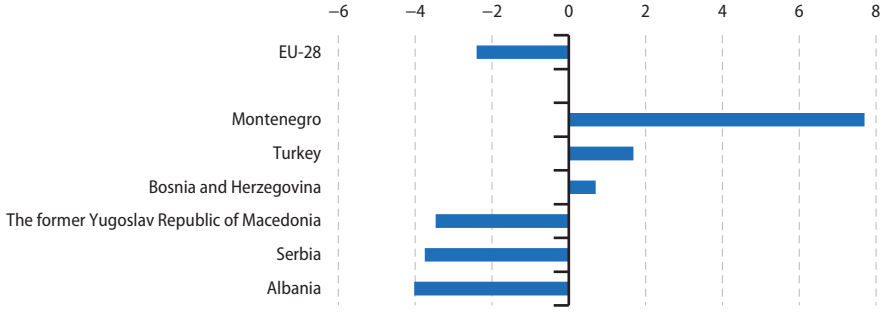
The relative importance of services to the enlargement economies rose between 2005 and 2015 in four of the five enlargement countries for which data are available, the exception being the former Yugoslav Republic of Macedonia (see Table 5.5). The biggest increase in percentage point terms was recorded in Turkey, where the relative weight of services in total value added rose by 3.6 percentage points. The relative share of agriculture, forestry and fishing in total value added fell at quite a rapid pace in Turkey, Bosnia and Herzegovina (2006–2015) and Serbia, while the share of industry and construction fell quickly in Albania.

General government deficit/surplus

The global financial and economic crisis resulted in serious challenges being posed to many European governments. The main concerns were linked to the ability of national administrations to be able to service their debt repayments, take the necessary action to ensure that their public spending was brought under control, while at the same time trying to promote economic growth. Within the EU, multilateral economic surveillance was introduced through the stability and growth pact (SGP) which provides for the coordination of fiscal policies. Under the Maastricht criteria of the 1990s and subquently the terms of the SGP, Member States pledged that their government deficit would not exceed 3 % of GDP, while their debt would not exceed 60 % of GDP. EU Member States are required to provide the European Commission with their general government deficit and general government debt statistics before 1 April and 1 October of each year. From October 2014 onwards, candidate countries (but not potential candidates) were also asked to report EDP-related data to Eurostat with the same frequency.

The general government deficit/surplus refers to net borrowing/net lending over the course of a single year by central, state and local government as well as social security funds. In 2015, the average general government deficit across the EU-28 stood at −2.4 % of GDP. There were three enlargement countries (no information for Kosovo) that had public deficits that were more pronounced than the average recorded for the EU-28, the largest being −4.0 % of GDP in Albania (see Figure 5.5). By contrast, three other enlargement countries reported a general government surplus in 2015, the highest of these, relative to GDP, was recorded in Montenegro (7.7 %).

Figure 5.5: General government deficit/surplus relative to GDP, 2015 (1)
(% of GDP)



(1) The government deficit data of the candidate countries and potential candidates are published on an 'as is' basis and without any assurance as regards their quality and adherence to ESA rules. Kosovo: not available.

Source: Eurostat (online data codes: gov_10dd_edpt1 and cpc_ecgov)

The global financial and economic crisis triggered a sharp downturn in public finances across Europe and some countries continue to struggle to reduce their deficits. The average general government deficit of the EU-28 was −6.7 % of GDP at the height of the crisis in 2009, but thereafter the deficit narrowed during six consecutive years.

Prior to the crisis, in 2007, three of the enlargement countries — Albania, Serbia and Turkey — ran a government deficit, while the other three for which data are available (no information for Kosovo) posted surpluses of between 0.6 % of GDP in the former Yugoslav Republic of Macedonia and 6.3 % of GDP in Montenegro (see Table 5.6). This situation changed abruptly in 2008 with the onset of the financial and economic crisis, as all of the enlargement countries recorded deficits, a pattern which continued in 2009, as public deficits relative to GDP widened. Between 2009 and 2012, each of the enlargement countries continued to record a government deficit, although in 2013 and 2014, the situation changed slightly as Turkey reported surpluses. In 2015, Turkey again reported a government surplus, as did Bosnia and Herzegovina, and Montenegro.

Table 5.6: General government deficit/surplus relative to GDP, 2005–2015 (1)
(% of GDP)

	2005	2007	2009	2011	2013	2015
EU-28	−2.5	−0.9	−6.7	−4.5	−3.3	−2.4
Montenegro (2)	−2.0	6.3	−5.4	−5.2	−2.3	7.7
The former Yugoslav Republic of Macedonia	0.2	0.6	−2.6	−2.5	−3.9	−3.5
Albania	−3.5	−3.5	−7.1	−3.5	−5.0	−4.0
Serbia	1.1	−1.9	−4.4	−4.8	−5.5	−3.8
Turkey	−1.2	−1.5	−6.5	−0.8	0.2	1.7
Bosnia and Herzegovina	2.3	1.1	−4.3	−1.2	−2.2	0.7
Kosovo	–	–	:	:	:	:

(1) The government deficit data of the candidate countries and potential candidates are published on an 'as is' basis and without any assurance as regards their quality and adherence to ESA rules.
(2) 2005: low reliability.

Source: Eurostat (online data codes: gov_10dd_edpt1 and cpc_ecgov)

General government debt

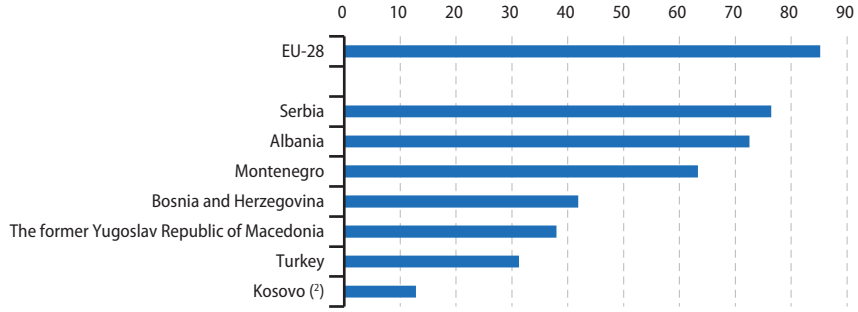
General government debt is the gross debt outstanding at the end of the year of the general government sector measured at nominal (face) value; in other words, it is the accumulated total debt (over the years). In 2015, the government debt-to-GDP ratio for the EU-28 was 85.2 %. This indicator was consistently lower — sometimes considerably so — across the enlargement countries: Kosovo had the lowest debt-to-GDP ratio (12.9 %); Turkey, the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina had ratios ranging from just over 30 % to just over 40 %; debt ratios were over 50 % in the other enlargement countries, peaking at 76.4 % in Serbia.

General government debt across the EU-28 stood at 57.8 % in 2007 and rose each year to a peak of 86.8 % in 2014, before falling to 85.2 % in 2015 (see Table 5.7). In 2007, prior to the onset of the financial and economic crisis, the ratio of general government debt-to-GDP in the enlargement countries ranged from 18.1 % in Bosnia and Herzegovina to 53.4 % in Albania; note that Kosovo reported no debt prior to 2009. Following the onset of the crisis in 2008, government debt relative to GDP increased in

three of the enlargement countries and in 2009 this pattern spread as the ratio increased in each of the enlargement countries.

A comparison between the levels of government debt in 2005 and 2015 reveals that the share of debt to GDP was 23.4 percentage points higher in 2015 in the EU-28; a similar pattern was recorded in Montenegro (+24.7 points) and in Serbia (+27.7 points). By contrast, similar levels of debt (as a share of GDP) were recorded in 2005 and 2015 in the former Yugoslav Republic of Macedonia, while the debt-to-GDP ratio in Turkey was cut from 55.2 % to 31.3 %.

Figure 5.6: General government consolidated gross debt relative to GDP, 2015 (1)
(% of GDP)



(1) The government debt data of the candidate countries and potential candidates are published on an 'as is' basis and without any assurance as regards their quality and adherence to ESA rules.
(2) The value of GDP is obtained from the Medium Term Expenditure Framework.

Source: Eurostat (online data codes: gov_10dd_edpt1 and cpc_ecgov)

Table 5.7: General government consolidated gross debt relative to GDP, 2005–2015 (1)
(% of GDP)

	2005	2007	2009	2011	2013	2015
EU-28	61.8	57.8	73.0	81.0	85.5	85.2
Montenegro	38.6	27.5	38.2	46.0	58.0	63.3
The former Yugoslav Republic of Macedonia	36.7	23.5	23.6	27.7	34.0	38.0
Albania	57.4	53.4	59.7	59.4	70.4	72.5
Serbia	48.7	30.1	32.1	47.0	61.1	76.4
Turkey	55.2	41.3	45.7	37.0	31.1	31.3
Bosnia and Herzegovina	24.9	18.1	25.2	32.8	37.7	41.9
Kosovo (2)	–	–	*5.9*	*5.3*	*9.0*	12.9

(1) The government debt data of the candidate countries and potential candidates are published on an 'as is' basis and without any assurance as regards their quality and adherence to ESA rules.
(2) 2009–2015: the value of GDP is obtained from the Medium Term Expenditure Framework (various years).

Source: Eurostat (online data codes: gov_10dd_edpt1 and cpc_ecgov)

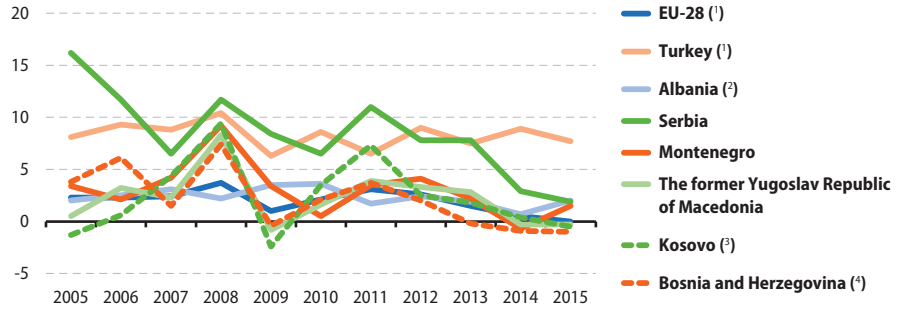
Consumer prices

The all-items harmonised index of consumer prices remained at relatively low levels across the EU during the period 2005–2015. The rate of annual price increases peaked at 3.7 % in 2008, although the effects of the global financial and economic crisis caused a rapid slowdown in price increases in 2009 when a relative low of 1.0 % was recorded. Thereafter, prices in the EU-28 rose by 2.1 % in 2010 and by 3.1 % in 2011, before the pace of price increases slowed and eventually came to a halt in 2015, when there was no overall change in consumer prices (see Figure 5.7).

Consumer price increases in the enlargement countries over the period 2005–2015 were generally higher than those recorded across the EU-28; this could, at least in part, be attributed to the deregulation of prices which formed part of the liberalisation process undertaken in several enlargement economies. Following a relative peak in 2008, in most of the enlargement countries prices fell or rose at a relatively slow pace in 2009, before accelerating somewhat in 2010 and 2011 and then returning to more modest increases or price falls in 2013–2015.

The latest information available for each of the enlargement countries shows that consumer price increases in 2015 remained in single-digits. Turkey (7.7 %) continued to record price increases that were higher than those for the other enlargement countries. Elsewhere, price increases peaked at 2.0 % in Albania and 1.9 % in Serbia; for Serbia this was the lowest increase in the period shown in Figure 5.7 and was in contrast to the relatively high price increases that were recorded up to 2013. Modest price reductions were recorded in the former Yugoslav Republic of Macedonia, Kosovo and Bosnia and Herzegovina in 2015.

Figure 5.7: Annual change in consumer prices, 2005–2015
(%)



(1) Based on harmonised index of consumer prices.
(2) 2005–2009: variation in consumer prices between December of one year compared with December of the previous year.
(3) 2015: based on harmonised index of consumer prices.
(4) 2005: based on retail price index. 2013: estimate.

Source: Eurostat (online data codes: prc_hicp_aind and cpc_ecprice)

Current account

The balance of payments is a record of an economy's international transactions with the rest of the world. The current account balance is made up of four parts, concerning trade in goods and services, as well as different types of income and transfers. A positive balance indicates net lending to the rest of the world, while a negative balance indicates net borrowing from the rest of the world.

In 2015, the EU-28 recorded a positive balance for both goods and services, whereas all of the enlargement countries reported a negative balance for goods and a positive balance for services. The size of the current account deficit for goods was relatively large in most of the enlargement countries, reaching −37.0 % of GDP in Kosovo (2014 data) and −40.4 % of GDP in Montenegro. By contrast, Montenegro recorded the highest current account surplus for services (21.8 % of GDP), largely as a result of receipts from its tourism sector.

The EU-28 reported a small negative balance for primary and for secondary income, relative to its GDP (−0.3 % and −0.5 % respectively). By contrast, there was a positive balance for current transfers in each of the enlargement countries; these include, for example, worker's remittances, donations, development aid and tax payments.

Table 5.8: Current account balance by component, 2015 (1)
(% of GDP)

	Goods	Services	Primary income	Secondary income/ current transfers
EU-28	0.9	1.0	−0.3	−0.5
Montenegro	−40.4	21.8	2.6	2.7
The former Yugoslav Republic of Macedonia	−20.1	3.8	−2.5	17.4
Albania	−22.4	5.1	−1.0	7.5
Serbia	−11.9	2.2	−5.0	10.0
Turkey	−6.7	3.4	−1.3	0.2
Bosnia and Herzegovina	−26.0	7.3	0.5	12.5
Kosovo (2)	−37.0	6.0	2.0	21.1

(1) Based on the 6th edition of the IMF's balance of payments manual, except for data for Montenegro and Turkey which are based on the 5th edition.
(2) 2014.

Source: Eurostat (online data codes: bop_eu6_q, bop_c6_q, nama_10_gdp, nama_gdp_c, cpc_ecbop and cpc_ecnagdp)

Foreign direct investment

Flows of foreign direct investment (FDI) result from investors building up or reducing their assets abroad by investing in or disinvesting from foreign companies. Such flows are notoriously erratic, with big changes from one year to the next as investment decisions are often lumpy.

Outward investment from the EU-28 (into non-member countries) stood at EUR 96 billion in 2015, while inward investment from non-member countries was valued at EUR 119 billion; note that there is a break in series with a new methodology having been implemented. The EU has traditionally been a net outward investor of foreign direct investment: however, in 2015 the EU was a net recipient of FDI, to the value of EUR 22.9 billion (see Table 5.9).

Each of the enlargement countries also recorded a higher level of FDI inflows than outflows; this was the case in both 2005 and 2015. Together the enlargement countries had a combined level of inward FDI valued at EUR 19.6 billion in 2015. Turkey was by far the largest beneficiary, accounting for more than three quarters (77.7 %) of this inward FDI among the enlargement countries. The level of outward FDI from the enlargement countries was considerably lower. Indeed, some of the enlargement countries recorded negative flows of outward FDI, in other words, disinvestment, which occurs when previous investments are withdrawn from foreign enterprises (perhaps to consolidate operations in domestic markets). In absolute terms, the only substantial outward flow of FDI from an enlargement country was in relation to FDI from Turkey, which was valued at EUR 4.6 billion in 2015.

In an increasingly globalised world it is unsurprising to find that there was a considerable increase in the value of FDI flows over the most recent 10-year period for which data are available. There was rapid growth in the value of inward FDI in the majority of the enlargement countries, the exception being Bosnia and Herzegovina where the level of inward FDI was approximately the same in 2015 as it had been in 2005. By contrast, inward FDI in the former Yugoslav Republic of Macedonia, Kosovo and Albania was two to four times as high in 2015 as it had been in 2005.

Table 5.9: Foreign direct investment (FDI) flows, 2005 and 2015
(million EUR)

	Inward FDI		Outward FDI		Net inward	
	2005	2015	2005	2015	2005	2015
EU (1)	129 714	118 944	239 880	96 071	−110 166	22 872
Montenegro (2)	403	630	4	11	399	619
The former Yugoslav Republic of Macedonia (3)	77	157	2	−14	75	171
Albania (2)	213	890	3	72	209	818
Serbia (2)	1 268	2 114	18	310	1 250	1 804
Turkey	8 063	15 233	855	4 591	7 208	10 642
Bosnia and Herzegovina (2)	282	264	0	43	282	221
Kosovo (3)	108	324	0	37	108	287

(1) 2005: EU-27 and extra EU-27 flows. 2014 instead of 2015: EU-28 and extra EU-28 flows; based on the 6th edition of the IMF's balance of payments manual.
(2) 2015: based on the 6th edition of the IMF's balance of payments manual.
(3) Based on the 6th edition of the IMF's balance of payments manual.

Source: Eurostat (online data codes: bop_fdi_main, bop_fdi6_flow and cpc_ecbop)

6 International trade in goods

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.

Trade relations between the EU and the enlargement countries are designed to remove or reduce customs tariffs in bilateral trade and for this purpose specific stabilisation and association agreements have been reached with six enlargement countries; the former Yugoslav Republic of Macedonia (2004), Albania (2006), Montenegro (2010), Serbia (2013), Bosnia and Herzegovina (2015) and Kosovo (2016). The EU's trade relationship with Turkey is somewhat different as Turkey has, since the end of 1995, been a member of the customs union, which eliminates all customs duties for bilateral trade and establishes joint customs tariffs as regards foreign imports.

Trade flows

In 2015, the total value of the goods exported from the EU-28 to the rest of the world (non-member countries) was 71 % higher than its level in 2005 (see Table 6.1). There was an even faster development to international trade flows for most of the enlargement countries over the same period, as some countries made reforms to develop market-based economic systems, while others continued to see trading patterns re-established following the end of the Balkans conflicts. The value of exports from Turkey, Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia more than doubled, while those from Serbia more than trebled; exports of goods from Kosovo were more than six times as high in 2015 than 10 years earlier, while in Albania they were almost 11 times as high. By contrast, the value of exports from Montenegro fell by more than a quarter between 2005 and 2015.

In 2015, exports of goods from the EU-28 were valued at EUR 1 791 billion, while the combined value of exports from the seven enlargement countries was EUR 152 billion, equivalent to 8.5 % of the EU-28 total. Exports from Turkey in 2015 were valued at EUR 130 billion. As such, Turkey accounted for more than four fifths (85.2 %) of the total value of exports from the enlargement countries. Serbia had the second highest share (7.5 %), while the third highest share was recorded in Bosnia and Herzegovina (3.0 %).

The total value of EU-28 imports of goods rose at a somewhat slower pace when compared with the pace of growth for exports. There was an overall increase of 46 % in the value of EU-28 imports between 2005 and 2015. All of the enlargement countries except for Bosnia and Herzegovina recorded a faster expansion of imports than in the EU, with imports at least doubling in Kosovo, the former Yugoslav Republic of Macedonia and Turkey.

In 2015, imports of goods into the EU-28 were valued at EUR 1 726 billion, while the combined value of imports into the seven enlargement countries was EUR 223 billion, equivalent to 12.9 % of the EU-28 total. Turkey imported goods that were valued at EUR 187 billion in 2015, which equated to 83.6 % of the total value of imports from the seven enlargement countries. Serbia had the second highest share (6.5 %), while the third highest share was recorded in Bosnia and Herzegovina (3.6 %).

The trade balance is the difference between the monetary value of exports and imports. A positive trade balance is known as a trade surplus and a negative trade balance is known as a trade deficit. The EU-28 recorded a trade deficit for goods in 2005 that was valued at EUR 134 billion. However, as exports grew at a faster pace than imports, the EU's trade balance turned positive in 2012 and this pattern continued

Table 6.1: International trade in goods, 2005 and 2015
(million EUR)

	Inward FDI		Outward FDI		Net inward	
	2005	2015	2005	2015	2005	2015
EU (1)	129 714	118 944	239 880	96 071	–110 166	22 872
Montenegro (2)	403	630	4	11	399	619
The former Yugoslav Republic of Macedonia (3)	77	157	2	–14	75	171
Albania (2)	213	890	3	72	209	818
Serbia (2)	1 268	2 114	18	310	1 250	1 804
Turkey	8 063	15 233	855	4 591	7 208	10 642
Bosnia and Herzegovina (2)	282	264	0	43	282	221
Kosovo (3)	108	324	0	37	108	287

(1) Extra-EU-28 trade (trade with non-member countries).

Source: Eurostat (online data codes: ext_lt_intertrd and ext_lt_intercc)

during the period 2013–2015, with the EU-28 trade surplus growing to reach EUR 64 billion.

None of the enlargement countries registered a trade surplus for goods in either 2005 or 2015. Together these seven countries recorded a trade deficit of EUR 48 billion in 2005, which had grown to EUR 71 billion by 2015. Between 2005 and 2015, the size of the Turkish trade deficit widened from EUR 35 billion to EUR 57 billion. This pattern of a deteriorating trade balance was repeated in most of the enlargement countries, as Serbia and Bosnia and Herzegovina were the only exceptions to report that their trade deficit was narrower in 2015 than in 2005. The trade deficit in Montenegro was three times as high in 2015 as it had been in 2005, while the deficit in Kosovo doubled over this 10-year period.

One indicator that may be used to analyse the relative importance of international trade in goods is the value of exports and/or imports expressed relative to the gross domestic product (GDP) — see Figure 6.1. Note that the export and import values used in this calculation are based on national accounts data, rather than statistics for the international trade of goods, and these may differ for methodological reasons.

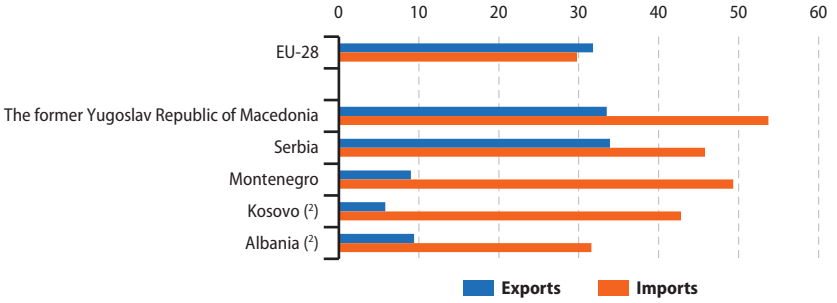
EU-28 exports of goods in 2015 corresponded to 31.8 % of GDP, while imports were equivalent to 29.8 % of GDP; note that these data include trade between EU Member States. The ratio of exports of goods relative to GDP was slightly above the EU-28 average in Serbia (33.9 %) and the former Yugoslav Republic of Macedonia (33.5 %), but considerably lower in Albania (2014 data), Montenegro, and Kosovo (2014 data), where the value of exports was less than 10 % of GDP.

Subject to data availability (no information available for Turkey or for Bosnia and Herzegovina), all of the enlargement countries were more open to imports than the EU-28; this was particularly the case for some of the smaller economies. The value of imports of goods into the enlargement countries ranged from 31.6 % of GDP in Albania (2014 data) up to 53.7 % of GDP in the former Yugoslav Republic of Macedonia in 2015.

Figure 6.2 shows the structural nature of the trade balance's contribution to GDP during the period 2005–2015, with the impact of trade in goods as a fraction of GDP relatively stable in the EU-28 and most of the enlargement countries. In 2015, the EU-28's trade surplus in goods was equivalent to 2.0 % of GDP, while the deficit for trade in goods among the enlargement countries ranged from 6.4 % of GDP in Turkey to 40.3 % of GDP in Montenegro. Between 2005

and 2015 (and subject to data availability), there was generally little change in the trade balance for goods relative to GDP; the main exception was Serbia, where the trade deficit as a share of GDP narrowed from −19.5 % in 2005 to −11.9 % by 2015.

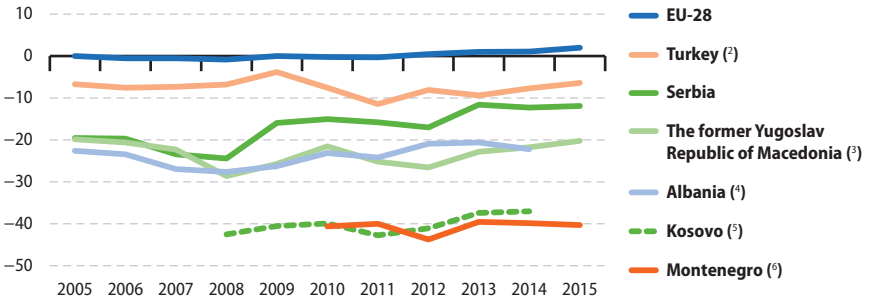
Figure 6.1: International trade in goods, 2015 (1)
(% of GDP)



(1) Ranked on the combined shares of exports and imports. Turkey and Bosnia and Herzegovina: not available.
(2) 2014.

Source: Eurostat (online data code: nama_10_gdp)

Figure 6.2: Trade balance for goods, 2005–2015 (1)
(% of GDP)



(1) Bosnia and Herzegovina: not available.
(2) Based on ESA 1995.
(3) 2015: provisional.
(4) 2014: provisional; 2015: not available.
(5) 2005–2007 and 2015: not available.
(6) 2005–2009: not available.

Source: Eurostat (online data codes: nama_10_gdp and nama_gdp_c)

Structure of trade analysed by broad product groups

Several classifications are used for collecting and analysing international trade statistics, including the standard international trade classification (SITC). The SITC includes 10 headings at its highest level, some of which have been aggregated further for the purposes of this publication.

An analysis of exports by selected product groups (based on the SITC) is shown in Table 6.2. Machinery and vehicles accounted for the highest proportion of goods exported from the EU-28 in 2015, with a 42.0 % share of the total. This was considerably higher than the shares recorded for other manufactured goods (22.5 %; SITC Sections 6 and 8) and chemicals (17.6 %), while each of the remaining goods categories accounted for less than 10 % of total EU-28 exports.

Other manufactured goods accounted for the highest share of total exports in each of the enlargement countries in 2015. These goods accounted for more than half of all the goods exported from Albania, Kosovo and Bosnia and Herzegovina, a share that fell to slightly more than two fifths of the total in Turkey, and to just above one third of the total in the former Yugoslav Republic of Macedonia, Montenegro and Serbia. The share of other manufactured goods in total exports was therefore consistently higher among the enlargement countries than their corresponding share of total EU-28 exports (22.5 %).

The former Yugoslav Republic of Macedonia was the only enlargement country to report that chemicals accounted for more than one tenth of its total exports in 2015, their share rising to 22.8 % (which was therefore above the corresponding share recorded in the EU-28; 17.6 %). Albania recorded a relatively high share (18.1 %) of its total exports in 2015 for mineral fuels, lubricants and related goods. Albania and Bosnia and Herzegovina were the only enlargement countries to report that the share of their total exports from food, drinks and tobacco was lower than 10 %, but each of their shares remained just above the average recorded for the EU-28 (6.3 %); note the EU-28 figure excludes intra-EU trade, which may be relatively important, especially for perishables.

Table 6.2: Exports by broad group of goods, 2015
(% of total exports)

	Food, drinks and tobacco	Raw materials	Mineral fuels, lubricants and related goods	Chemicals	Machinery and vehicles	Other manufactured goods	Other
EU-28 (1)	6.3	2.4	4.8	17.6	42.0	22.5	4.4
Montenegro	16.7	20.2	14.8	4.1	9.5	34.7	0.0
The former Yugoslav Republic of Macedonia	11.1	5.3	1.2	22.8	24.7	35.0	0.0
Albania	6.9	9.1	18.1	1.2	4.5	60.0	0.2
Serbia	19.5	4.8	2.8	8.6	28.6	34.3	1.5
Turkey	10.8	3.2	3.0	5.8	27.3	43.4	6.6
Bosnia and Herzegovina	7.2	12.2	7.0	7.1	14.6	50.3	1.6
Kosovo	12.3	17.2	6.5	4.0	4.3	54.2	1.5

(1) Extra-EU-28 trade (trade with non-member countries).

Source: Eurostat (online data codes: ext_lt_intertrd and ext_lt_intercc)

Machinery and vehicles (31.0 %), other manufactured products (26.1 %) and mineral fuels, lubricants and related goods (19.0 %) accounted for the highest shares of goods imported into the EU-28 in 2015; the next most common group of imported goods was chemicals (10.7 %). As for exports, the category of other manufactured goods generally accounted for the highest share of total imports among the enlargement countries (see Table 6.3), these products generally accounting for one quarter to one third of all imports in 2015.

There were two exceptions: in Turkey the share of other manufactured goods was relatively low (23.4 %), while the share of imports of machinery and vehicles (31.6 %) was much higher; in the former Yugoslav Republic of Macedonia, other manufactured goods accounted for a particularly high share of total imports (42.2 %).

Table 6.4 shows the trade balance for selected product groups in 2015. In the EU-28, the highest trade surplus was recorded for machinery and vehicles (EUR 218 billion), while a surplus was

Table 6.3: Imports by broad group of goods, 2015
(% of total imports)

	Food, drinks and tobacco	Raw materials	Mineral fuels, lubricants and related goods	Chemicals	Machinery and vehicles	Other manufac-tured goods	Other
EU-28 (1)	6.3	4.2	19.0	10.7	31.0	26.1	2.7
Montenegro	24.3	3.2	10.8	10.5	22.1	29.0	0.0
The former Yugoslav Republic of Macedonia	10.6	4.2	10.9	11.9	20.2	42.2	0.1
Albania	16.3	3.6	10.1	11.8	21.0	36.7	0.5
Serbia	9.0	5.0	13.3	17.2	25.8	29.7	0.1
Turkey	3.5	6.9	6.9	13.9	31.6	23.4	13.7
Bosnia and Herzegovina	16.6	3.8	13.5	13.1	20.5	32.4	0.1
Kosovo	22.7	3.4	12.8	11.9	17.7	31.4	0.2

(1) Extra-EU-28 trade (trade with non-member countries).

Source: Eurostat (online data codes: ext_lt_intertrd and ext_lt_intercc)

Table 6.4: Trade balance by broad group of goods, 2015
(EUR million)

	Food, drinks and tobacco	Raw materials	Mineral fuels, lubricants and related goods	Chemicals	Machinery and vehicles	Other manufac-tured goods	Other
EU-28 (1)	5 180	−28 809	−243 166	129 889	218 044	−47 641	30 671
Montenegro	−394	5	−152	−181	−378	−425	0
The former Yugoslav Republic of Macedonia	−160	−27	−580	235	−166	−1 023	−5
Albania	−513	16	−78	−438	−738	−387	−16
Serbia	938	−173	−1 596	−1 508	−450	−360	165
Turkey	7 508	−8 843	−9 071	−18 442	−23 614	12 570	−17 089
Bosnia and Herzegovina	−1 009	250	−773	−739	−991	−315	67
Kosovo	−557	−34	−316	−300	−453	−651	1

(1) Extra-EU-28 trade (trade with non-member countries).

Source: Eurostat (online data codes: ext_lt_intertrd and ext_lt_intercc)

also reported for chemicals (EUR 130 billion), other goods (EUR 31 billion) and food, drinks and tobacco (EUR 5 billion). By contrast, deficits were recorded for raw materials (EUR 29 billion), other manufactured goods (EUR 48 billion) and mineral fuels, lubricants and related goods (EUR 243 billion).

Among the enlargement countries it was commonplace to find that only one of the product groups had a trade surplus in 2015. This was the case for raw materials in Montenegro and in Albania, for chemicals in the former Yugoslav Republic of Macedonia, and for other goods in Kosovo. There were two product groups in Serbia and Turkey which recorded trade surpluses, in each case one of these two groups was food, drink and tobacco products.

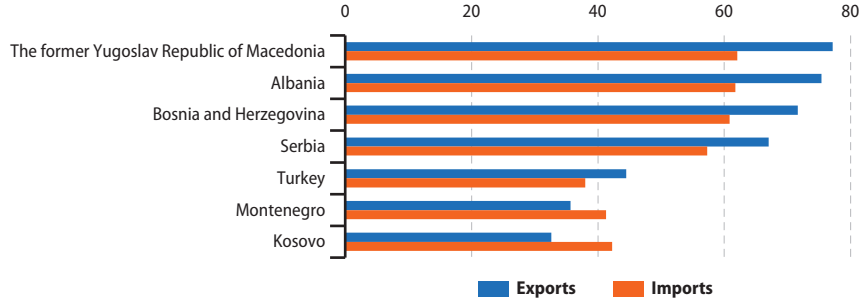
Trade between the enlargement countries and the EU-28

Due to its close geographic proximity, it is not surprising to find that the EU is one of the main trading partners of the enlargement countries. Figure 6.3 shows the relative importance of the EU-28 as a trading partner in 2015, with approximately three quarters of all exports leaving Albania and the former Yugoslav Republic of Macedonia destined for the EU-28, with Bosnia and Herzegovina recording a slightly smaller share (71.6 %). Just over two thirds of all exports from Serbia were destined for the EU-28, as were more than two fifths of exports from Turkey. The two remaining enlargement countries — Montenegro and Kosovo — reported that the EU-28 accounted for nearer to one third of their total exports.

In 2015, around three fifths of all imports made by the former Yugoslav Republic of Macedonia, Albania, Bosnia and Herzegovina, and Serbia originated from the EU-28. These four countries had the highest propensity for importing goods from the EU-28, while nearer to two fifths of all imports into Kosovo, Montenegro and Turkey originated in the EU-28.

Table 6.5 provides information on international trade flows of goods between the EU-28 and the enlargement countries for the years 2005 and 2015. The total value of exports from the enlargement countries to the EU-28 was EUR 73 billion in 2015, while goods imported from the EU-28 into the enlargement countries were valued at EUR 92 billion. Exports from the enlargement countries to the EU-28 rose by 90.3 % overall between 2005 and 2015, while imports from the EU-28 increased by 70.6 %; note these figures exclude Bosnia and Herzegovina, for which only a partial set of data exists.

Figure 6.3: International trade in goods with the EU-28, 2015 (1)
(% share of total exports and imports)



(1) Ranked on the share of exports destined for the EU-28.

Source: Eurostat (online data code: ext_lt_intercc)

Turkey accounted for more than three quarters of the goods exported to (78.7 %) and imported from (77.1 %) the EU-28, and also had, by far, the largest trade deficit for goods with the EU-28, at EUR 13.3 billion in 2015. The next largest trade deficits for goods — within the range of EUR 1.0–1.6 billion — were recorded for Kosovo, Albania and Bosnia and Herzegovina.

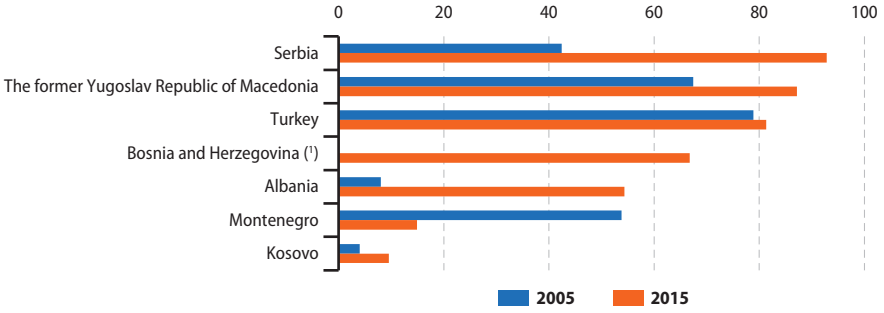
An alternative measure for analysing the development of trading patterns between the EU-28 and the enlargement countries is shown in Figure 6.4. The cover ratio is calculated by dividing the value of exports destined for the EU-28 by the value of imports originating from the EU-28; a ratio of 100 % is recorded when exports and imports are balanced (in other words, they have identical values). In 2015, the cover ratio for trade in goods between the enlargement countries and the EU-28 was consistently below 100 %, underlining that each of these countries ran a trade deficit with the EU-28. Montenegro and Kosovo recorded the lowest cover ratios among the enlargement countries for trade in goods with the EU-28 in 2015, at 14.9 % and 9.5 % respectively; in other words, the value of goods imported into Kosovo and originating in the EU-28 was approximately 10 times as high as the value of exports leaving Kosovo and destined for the EU-28. The highest cover ratio was recorded in Serbia, at 92.8 %, while ratios above 50 % were recorded in the other enlargement countries.

Table 6.5: Trade in goods with the EU-28, 2005 and 2015
(million EUR)

	Exports to the EU-28		Imports from the EU-28		Trade balance with the EU-28	
	2005	2015	2005	2015	2005	2015
Montenegro	253	113	470	760	−218	−647
The former Yugoslav Republic of Macedonia	1 001	3 126	1 484	3 586	−483	−460
Albania	120	1 303	1 495	2 398	−1 007	−1 094
Serbia	2 036	7 672	4 800	8 266	−2 764	−594
Turkey	33 341	57 637	42 266	70 893	−8 925	−13 255
Bosnia and Herzegovina	:	3 291	:	4 930	:	−1 639
Kosovo	19	106	478	1 113	−459	−1 007

Source: Eurostat (online data code: ext_lt_intercc)

Figure 6.4: Cover ratio for trade in goods with the EU-28, 2005 and 2015
(%)



(1) 2005: not available.

Source: Eurostat (online data code: ext_lt_intercc)

7 Agriculture, forestry and fishing

Agriculture was one of the first sectors of the economy (following coal and steel) to receive the attention of EU policymakers, and statistics on agriculture were initially designed to monitor the main objectives of the common agricultural policy (CAP). While the CAP remains one of the EU's most important policies there have been wide ranging reforms, which has led to a range of new objectives designed to correct imbalances and overproduction. In December 2013, the latest reform of the CAP was formally adopted by the European Parliament and the Council. The main elements of the CAP post-2013 concern: a fairer distribution of direct payments (with targeted support and convergence goals); strengthening the position of farmers within the food production chain (such as through: the promotion of professional and inter-professional organisations; changes to the organisation of the sugar and wine sectors; revisions to public intervention and private storage aid; and new crisis management tools); and continued support for rural development, safeguarding the environment and biodiversity.

Gross value added and employment

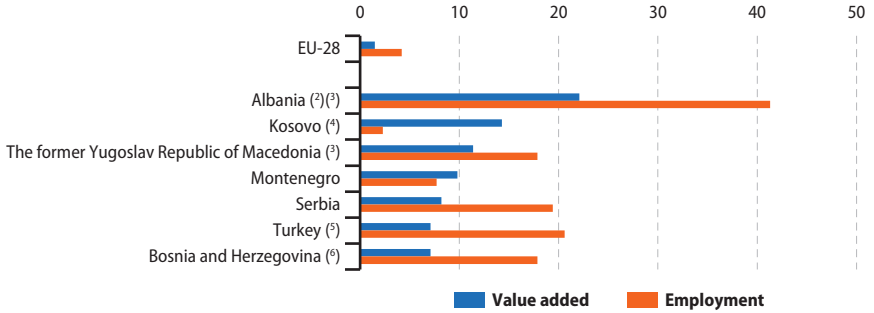
The share of agriculture, forestry and fishing (as defined by NACE Rev. 2 Section A) in total gross value added was considerably higher in the enlargement countries than it was in the EU-28. In 2015, the relative weight of agriculture, forestry and fishing was 1.5 % of total value added in the EU-28 (see Figure 7.1), while among enlargement countries, the lowest shares were recorded for Turkey and for Bosnia and Herzegovina (2014 data), at 7.1 %. Agriculture, forestry and fishing contributed close to one tenth of total value added in Montenegro and the former Yugoslav Republic of Macedonia, with this share rising to 14.3 % in Kosovo (2014 data) and peaking at 22.1 % in Albania.

Between 2005 and 2015 the relative contribution of agriculture, forestry and fishing to value added in the EU-28 fell from 1.7 % to 1.5 %. Serbia, Bosnia and Herzegovina (2005–2014) and Turkey (2005–2014) also recorded a decline in their respective shares of value added from these activities, with the largest fall −3.8 percentage points — in Serbia. By contrast, the former Yugoslav Republic of Macedonia recorded a very slight increase in the share of agriculture, forestry and fishing in total value added, while in Albania the share of these activities increased by 0.6 percentage points.

There was a somewhat different picture when analysing the share of agriculture, forestry and fishing in total employment. For example, employment within agriculture, forestry and fishing in the EU-28 accounted for 4.2 % of the total number of persons employed in 2015, some 2.8 times the contribution of these activities to total value added. These differences indicate that agriculture, forestry and fishing are relatively labour-intensive activities with a low level of labour productivity. Between 2005 and 2015, the contribution of agriculture, forestry and fishing to the total number of persons employed fell by 0.4 percentage points (in keeping with longer-term falls).

Among the enlargement countries, Kosovo (2.3 %) recorded the lowest employment share for agriculture, forestry and fishing, while Montenegro (7.7 %) was the only other enlargement country to report a share that was below a threshold of 10.0 %. By contrast, close to one fifth of the workforce was employed in agriculture, forestry and fishing activities in 2015 in most of the other enlargement countries, although in Albania this share rose as high as 41.3 %.

Figure 7.1: Share of agriculture, forestry and fishing (NACE Rev. 2), 2015 ([1])
(%)



([1]) Ranked on value added.
([2]) Employment: estimates.
([3]) Value added: provisional.
([4]) Value added: 2014.
([5]) Employment: 2012; includes NACE Rev. 2 Group 98.1 (undifferentiated goods-producing activities of private households for own use). Value added: 2014; shares calculated as a percentage of value added plus taxes and subsidies minus financial intermediation services indirectly measured (FISIM); based on ESA 1995.
([6]) Value added: 2014; based on ESA 1995.

Source: Eurostat (online data codes: nama_10_a10, cpc_ecnabrk, lfsa_egana, lfsa_egan2 and cpc_pslm)

Land use

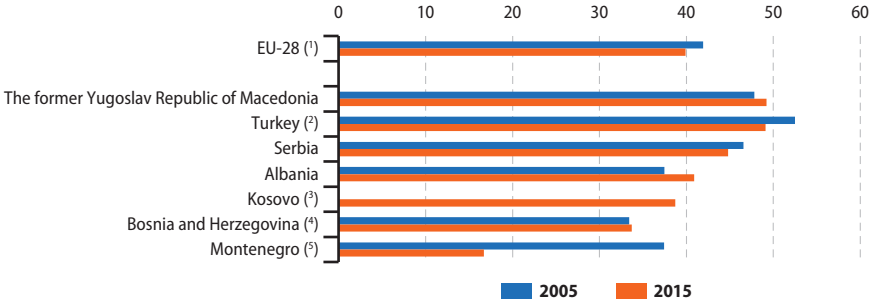
The utilised agricultural area refers to the land area that is actually used for agricultural purposes. This land used for farming includes arable land, permanent grassland, permanent crops (such as orchards, olive trees and vineyards) and other agricultural land such as kitchen gardens; it does not include forests and wooded areas.

The area within each country that is used for farming varies according to climate, terrain and soil type, while the level of economic development and population density may also play a role in determining land use. Within the EU-28, roughly equal proportions of the total area (land area and the area covered by water bodies) are used for farming and for forestry, with the remainder being built-up areas (villages, towns and cities), infrastructure (roads or railways), scrub or waste land.

In 2015, the utilised agricultural area of the EU-28 was 179 million hectares. The combined utilised agricultural area of the seven enlargement countries was around 47 million hectares, which was equivalent to just over one quarter of the EU-28 total. Among the enlargement countries, Turkey had by far the largest utilised agricultural area, some 39 million hectares.

The utilised agricultural area in the EU-28 accounted for 39.9 % of its total area in 2014. Figure 7.2 shows that among the enlargement countries, the share of the utilised agricultural area in 2015 was quite close to the EU-28 average in Kosovo and Albania, while agriculture accounted for a higher share of the total area in Serbia (44.8 %), rising to close to half of the total area in Turkey (49.1 %) and the former Yugoslav Republic of Macedonia (49.2 %). By contrast, the utilised agricultural area accounted for a somewhat lower share of the total area in Bosnia and Herzegovina (33.7 %), while the share in Montenegro was considerably lower (16.7 %).

Figure 7.2: Utilised agricultural area, 2005 and 2015
(% of total area)



(1) 2004 instead of 2005. 2014 instead of 2015. 2014: estimate.
(2) 2015: provisional.
(3) 2005: not available. 2015: provisional.
(4) 2015: break in series.
(5) 2005: provisional. 2015: break in series.

Source: Eurostat (online data codes: apro_acs_a, demo_r_d3area and cpc_agmain)

The share of total area used for agricultural purposes in the EU-28 fell between 2004 and 2014 by 2.0 percentage points from 41.9 %. Between the years shown in Figure 7.2, there were also reductions in the relative share of the utilised agricultural area in Serbia, Turkey and Montenegro; note there is a break in series for the latter. By contrast, the extent of the utilised agricultural areas of Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Albania increased over the period under consideration.

Agricultural production

For the purpose of this publication, cereals include wheat (common wheat and spelt and durum wheat), rye, maslin, barley, oats, mixed grain other than maslin, grain maize, sorghum, triticale, and other cereal crops such as buckwheat, millet, canary seed, as well as rice. The statistics presented in Table 7.1 on crop production relate to harvested production, of which, that for cereals in the EU-28 stood at 318.0 million tonnes in 2015. The combined harvest of cereals across the seven enlargement countries was around 50 million tonnes, equivalent to 15.7 % of the total output of the EU-28. By far the highest level of cereals production among the enlargement countries was recorded in Turkey (38.6 million tonnes), followed by Serbia (8.4 million tonnes); Bosnia and Herzegovina was the only other enlargement country to register a level of output that was above one million tonnes.

While the harvested production of cereals in the enlargement countries was equivalent to about one sixth of the EU-28's output, their sugar beet production was slightly higher in relative terms, equivalent to 17.9 % of the EU-28 total; sugar beet production in the EU-28 was 101.8 million tonnes in 2015, while the seven enlargement countries had a cumulated total of 18.2 million tonnes. A closer analysis reveals that the production of sugar beet in the enlargement countries was concentrated exclusively in Serbia (2.2 million tonnes; 12.0 % of output in the enlargement countries) and Turkey (16.0 million tonnes; 88.0 %).

Information on the production of oilseeds in the EU-28 is limited; the latest annual figure relates to 2012, when the level of harvested production reached 23.2 million tonnes. Fresher data exists for the enlargement countries, their combined level of output stood at 4.4 million tonnes in 2015, which was equivalent to almost one fifth (19.0 %) of the level recorded in the EU-28 for 2012. The level of harvested production in Turkey accounted for more than three quarters (78.3 % in 2015) of the total output of oilseeds in the enlargement countries, while more than one fifth (21.0 %) of the total was attributed to Serbia.

The harvested production of potatoes in the EU-28 stood at 52.7 million tonnes in 2015. In the enlargement countries there was a lower propensity to harvest this crop, as the combined level of output across the seven enlargement countries stood at 6.3 million tonnes, equivalent to 10.2 % of the EU-28 total. Turkey (4.8 million tonnes; 75.7 % of output in the enlargement countries) was the largest producer of potatoes among the enlargement countries.

Across the seven enlargement countries, the combined level of output of fruit was 21.1 million tonnes in 2015, while that for vegetables was 33.0 million tonnes. Turkey accounted for a very high share of the harvest, equivalent to 89.5 % of the total output of vegetables in the enlargement countries, and to 90.6 % of the total output of fruit.

Crop production levels can fluctuate substantially from year to year as a result of climatic/weather conditions and variations in demand. The production of cereals was higher in 2015 than it had been in 2005 in four of the seven enlargement countries, as was the case for the EU-28. By contrast, sugar beet production in the EU-28 was considerably lower in 2015 than it had been in 2005, falling overall by 26 %. There were also reductions in sugar beet production in the former Yugoslav Republic of Macedonia (where output ceased) and Serbia (−34 % over the period under consideration), while Turkey registered a modest expansion, as harvested output rose by 6 %.

Table 7.1: Crop production, 2015
(thousand tonnes)

	Cereals (including rice)	Sugar beet	Oilseeds	Potatoes	Fruit	Vegetables
EU-28 (1)	*318 029*	101 815	23 161	52 721	:	:
Montenegro (2)	7	0	0	35	*30*	51
The former Yugoslav Republic of Macedonia	489	0	13	190	217	845
Albania	696	0	4	245	245	1 030
Serbia	8 429	2 183	925	639	1 142	1 108
Turkey	38 637	16 023	3 442	4 763	19 100	29 552
Bosnia and Herzegovina	1 138	0	13	351	314	290
Kosovo	444	0	1	70	72	146

(1) Oilseeds: 2012.
(2) Fruit: 2012.

Source: Eurostat (online data codes: apro_acs_a and cpc_agmain)

In 2015, the livestock population in the EU-28 was composed of 148.7 million pigs, an estimated 99.0 million sheep and goats, and 89.2 million cattle. Cultural/religious particularities in the enlargement countries may explain many of the differences observed in their structure of livestock rearing and meat production (see Tables 7.2 and 7.3). For example, Turkey is a largely Muslim country and as such many of its citizens abstain from eating pork; the same is true in some of the Balkan countries, for example, in parts of Kosovo, Bosnia and Herzegovina and Albania.

The livestock population of pigs in the EU-28 was approximately 1.7 times as high as the population of cattle in 2015. By contrast, there were 3.8 times as many cattle as pigs in the enlargement countries. Sheep and goats were, by far, the most common type of livestock in the enlargement countries, with 11.5 times as many sheep and goats as pigs in 2015, and 3.0 times as many sheep and goats as cattle.

An alternative way of analysing these figures is to look at the relative share of livestock populations in the enlargement countries compared with the EU-28. The number of sheep and goats in the seven enlargement countries was equivalent to almost half of the total being reared in the EU-28 (note precise recent data are not available for the EU aggregate). Turkey alone reported 41.9 million sheep and goats in 2015 and the combined total for all seven of the enlargement countries was 49.1 million.

The combined livestock population of cattle in the enlargement countries equated to 18.5 % of the EU-28 total in 2015. As noted above, many of the enlargement countries had very few pigs in their livestock populations. Indeed, the total number of pigs in the seven enlargement countries was 4.2 million in 2015, which equated to just 2.9 % of the total number recorded in the EU-28.

Table 7.2: Livestock population, 2015 (1)
(thousand heads)

	Cattle	Dairy cows	Pigs	Sheep and goats
EU-28 (2)	*89 152*	23 595	*148 724*	*99 000*
Montenegro	*93*	*63*	*25*	*224*
The former Yugoslav Republic of Macedonia	253	124	195	822
Albania	504	357	171	2 850
Serbia	916	430	3 284	1 992
Turkey (3)	13 994	5 536	2	41 924
Bosnia and Herzegovina	*455*	*217*	*564*	*1 093*
Kosovo	259	136	41	218

(1) As of December.
(2) Sheep and goats: rounded estimates made for the purpose of this publication.
(3) Cattle: excluding buffaloes.

Source: Eurostat (online data codes: apro_mt_lscatl, apro_mt_lspig, apro_mt_lssheep, apro_mt_lsgoat and cpc_agmain)

Meat production is based on the activity of slaughterhouses regarding meat fit for human consumption. The livestock figures shown in Table 7.2 are, unsurprisingly, reflected in the meat production figures presented in Table 7.3, notably the relatively low level of pig meat production in some of the enlargement countries.

The quantity of pig meat produced in the EU-28 stood at 23.0 million tonnes in 2015, which was approximately three times as high as the level of meat production from cattle (7.6 million tonnes). Among the enlargement countries a higher ratio was observed for Serbia where the ratio of pig meat production to meat production from cattle was 3.6 : 1. Pig meat production was 2.9 times as high as that from cattle in the former Yugoslav Republic of Macedonia, which was a similar ratio to that recorded in the EU-28. By contrast, the level of pig meat production was lower than the level of meat production from cattle in Bosnia and Herzegovina, Montenegro and Albania, as well as in Turkey (where pig meat production was negligible).

Among the four types of meat production shown in Table 7.3, the biggest quantity of meat produced was from pigs in Serbia (58.6 % of the national total) and the former Yugoslav Republic of Macedonia (57.9 %), from cattle in Montenegro (52.9 %) and Albania (43.8 %), and from poultry meat in Turkey (63.1 %) as well as Bosnia and Herzegovina (54.2 %).

Table 7.3: Meat production, 2015
(thousand tonnes)

	Cattle	Pigs	Sheep and goats	Poultry
EU-28	7 590.3	22 957.8	:	:
Montenegro (1)	*7.3*	*3.7*	*2.1*	*0.7*
The former Yugoslav Republic of Macedonia	6.8	19.4	5.9	1.4
Albania	39.3	11.6	26.5	12.2
Serbia (1)	76.5	278.2	34.1	85.6
Turkey (2)	1 014.9	:	134.0	1 962.1
Bosnia and Herzegovina	*34.2*	*25.5*	*2.0*	*73.1*
Kosovo	:	:	:	:

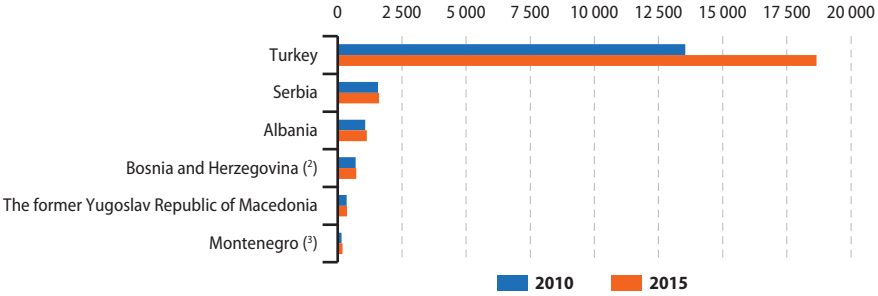
(1) Net quantity.
(2) Cattle: excluding buffaloes.

Source: Eurostat (online data codes: apro_mt_pann and cpc_agmain)

The level of milk production (which may include milk other than cows' milk) in the EU-28 was 164.9 million tonnes in 2014. The latest information for six of the enlargement countries (no data for Kosovo) suggests that their level of production in 2015 was equivalent to 13.7 % of that recorded in the EU-28. Turkey had by far the highest milk production (18.7 million tonnes) among the enlargement countries in 2015, while Serbia and Albania were the only other countries to report that they had a level of output that was above 1.0 million tonnes.

Between 2010 and 2015, the level of milk production among the six enlargement countries for which data are available grew from 17.4 million tonnes to 22.7 million tonnes; this was equivalent to an overall increase of 30.5 % during the five-year period under consideration. The most rapid expansion in milk production was registered in Turkey (up 37.7 %), while there was also rapid growth in Montenegro (up 27.6 %). The four remaining countries also recorded increases in their level of milk production, although the expansion in output was at a much slower pace, rising overall by 2.8 %–5.7 %.

Figure 7.3: Milk production, 2010 and 2015 (1)
(thousand tonnes)



(1) Kosovo: not available.
(2) 2015: estimate.
(3) Million litres. Net quantity. 2015: provisional.

Source: Eurostat (online data code: cpc_agmain)

8 Business

Short-term business statistics (STS) are specifically designed to show developments over time, and so may be used to calculate rates of change: the data presented here are annual indices that allow the most rapid assessment of the economic climate within industry, construction and services. The information presented relates to several business cycle indicators, including: the industrial production index, the industrial domestic output price index, the construction production index, and the volume of sales index for retail trade.

Industrial production index

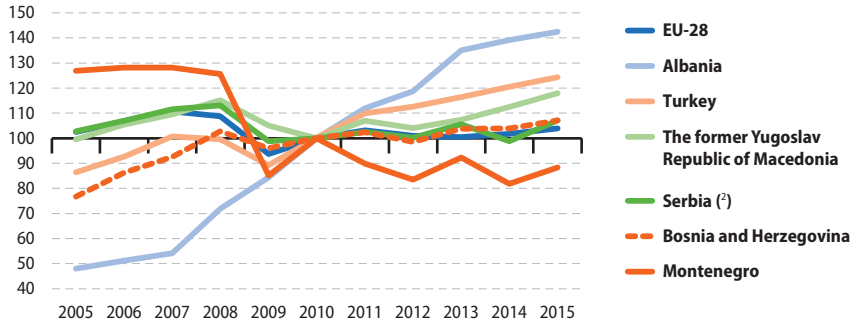
At the onset of the global financial and economic crisis, there was a sharp contraction in industrial activity in the EU-28. In 2009, the EU-28's industrial production index fell by 13.8 %, while a partial rebound in 2010 (+6.7 %) and 2011 (+3.2 %) was followed once again by a reduction in output of 2.1 % in 2012 and of 0.5 % in 2013, before growth returned in 2014 (1.2 %) and accelerated in 2015 (2.2 %) — see Figure 8.1.

By far the largest contraction in industrial activity in 2009 among the enlargement countries was recorded in Montenegro, where the production index fell by almost one third; this was the only enlargement country to record a downturn in activity that was of greater magnitude than that experienced in the EU-28. There were, however, considerable reductions in industrial activity in 2009 in all but one of the remaining enlargement countries, ranging from −12.6 % in Serbia to −6.5 % in Bosnia and Herzegovina. By contrast, Albania recorded a considerable expansion in its industrial output in 2009, as the production index rose by 17.5 %.

It is possible to evaluate the effects of the crisis by comparing pre-crisis levels of output in 2008 with the most recent data available, namely, industrial production indices for 2015. Montenegro was the enlargement country most affected by the crisis during this period, as its industrial production index remained 29.7 % lower in 2015 than it had been in 2008. Serbia also reported that its level of industrial output had failed to recover to its pre-crisis level, with industrial output remaining 5.3 % lower in 2015 than it had been in 2008. For comparison, industrial production in the EU-28 remained 4.4 % lower in 2015 than it had been in 2008.

By contrast, industrial output in 2015 was higher than its pre-crisis level in Albania, Turkey, Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia. Industrial output in the former Yugoslav Republic of Macedonia was

Figure 8.1: Calendar adjusted indices of production, industry (NACE Rev. 2), 2005–2015 ([1])
(2010 = 100)



([1]) Kosovo: not available. Note that the y-axis does not start at 0.
([2]) Gross index.

Source: Eurostat (online data codes: sts_inpr_a and cpc_insts)

2.5 % higher in 2015 than it had been in 2008, as output increased between 2012 and 2015, while in Bosnia and Herzegovina it was 4.2 % higher, with growth every year except one between 2010 and 2015. The initial impact of the crisis was quite pronounced in Turkey, as industrial output fell by just over 10 % in 2009. However, there was an immediate rebound in 2010 when growth of 12.4 % was recorded. Thereafter, single-digit growth rates were recorded such that by 2015 the industrial production index in Turkey was 24.8 % higher than it had been in 2008. As noted above, Albania was an exception to the general pattern of declining output in 2009. Indeed, its industrial production index appeared to be relatively immune to the crisis, with output rising in each and every year over the whole period shown in Table 1, albeit with more modest growth in the most recent years. Industrial output in Albania was approximately three times as high in 2015 as it had been in 2005 and was almost twice as high in 2015 as it had been at the onset of the crisis in 2008.

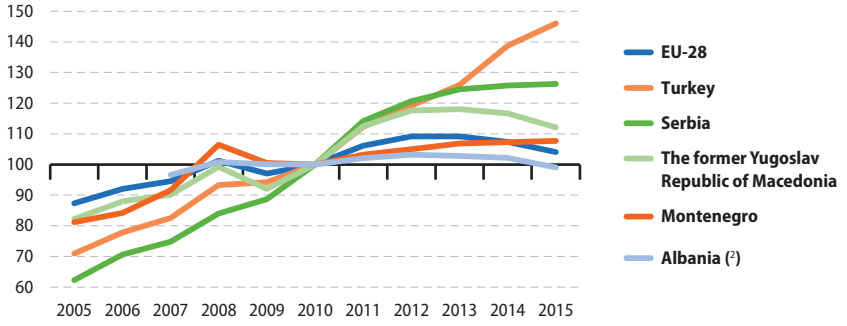
Domestic output price indices

The development of domestic output price indices for industry — also known as domestic producer price indices (PPIs) — reflects price changes in goods that are sold by manufacturers; they provide an early indicator of inflation. One of the key drivers in the development of output price indices is global demand for energy resources, in particular, crude oil. Indeed, in recent years the price of oil has fluctuated far more than the price of many other goods and this has had a direct impact on costs faced by manufacturers in a range of (downstream) industrial activities, with oil price fluctuations often being passed down the production line between interlinked activities.

There was a peak in the price of crude oil in 2008, which coincided with the highest year-on-year increase in EU-28 output prices over the period 2005–2015. In a similar vein, a fall in global demand following the onset of the financial and economic crisis, coupled with falling oil prices, led to EU-28 output prices falling by 4.2 % in 2009. In 2010, EU-28 industrial output price levels returned to growth (3.1 %) and accelerated in 2011 (6.1 %). Thereafter, price increases slowed, and in 2013 there was no overall change in prices, followed by price falls in 2014 and 2015 (see Figure 8.2).

An analysis of developments for domestic industrial output prices in the enlargement countries between 2009 and 2015 shows that

Figure 8.2: Gross domestic output price indices, industry (NACE Rev. 2), 2005–2015 (1)
(2010 = 100)



(1) Bosnia and Herzegovina and Kosovo: not available. Note that the y-axis does not start at 0.
(2) 2005 and 2005: not available.

Source: Eurostat (online data codes: sts_inppd_a and cpc_insts)

prices in Albania fell by 1.1 %. The development of industrial output prices in Montenegro was identical to in the EU-28, with prices rising overall by 7.2 %. By contrast, prices rose at a faster pace (than in the EU) in the former Yugoslav Republic of Macedonia (up overall by 21.9 %), and at an even faster pace in Serbia and Turkey, where overall price increases of 42.3 % and 55.0 % were observed between 2009 and 2015.

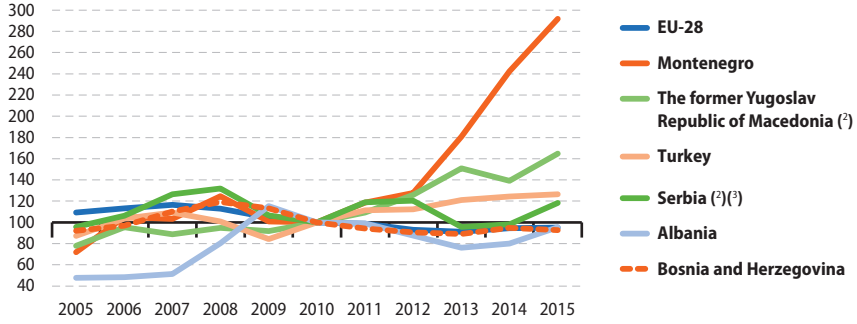
Construction production index

The effects of the financial and economic crisis on construction were, if anything, even greater than on the industrial economy. Indeed, the production index for construction in the EU-28 fell each and every year during the period 2008–2013, returning to annual growth only in 2014. From its pre-crisis high in 2007 through to 2013, the EU-28 index of production for construction fell overall by more than one fifth (21.9 %).

Some of the enlargement countries had a similar development, with considerably lower levels of construction output in Bosnia and Herzegovina, Albania and Serbia when comparing the most recent data available with that recorded prior to the crisis. The situation in Serbia was particular as construction output appeared to be recovering between 2010 and 2012 before a second large fall in 2013.

The index of production for construction in Turkey grew in successive years during the period 2010–2015 and more than recovered its losses experienced at the height of the crisis (see Figure 8.3). However, the most rapid expansions in construction output in recent years were registered in Montenegro and the former Yugoslav Republic of Macedonia in part driven by an expanding tourism sector in the former and by government initiatives to promote home ownership in the latter: year-on-year increases in output were recorded throughout the period 2011–2015 in Montenegro and all years from 2010 to 2015 in the former Yugoslav Republic of Macedonia, except for a contraction in output in 2014.

Figure 8.3: Calendar adjusted indices of production, construction (NACE Rev. 2), 2005–2015 (1)
(2010 = 100)



(1) Kosovo: not available. Note that the y-axis does not start at 0.
(2) Gross index.
(3) 2015: provisional.

Source: Eurostat (online data codes: sts_copr_a and cpc_insts)

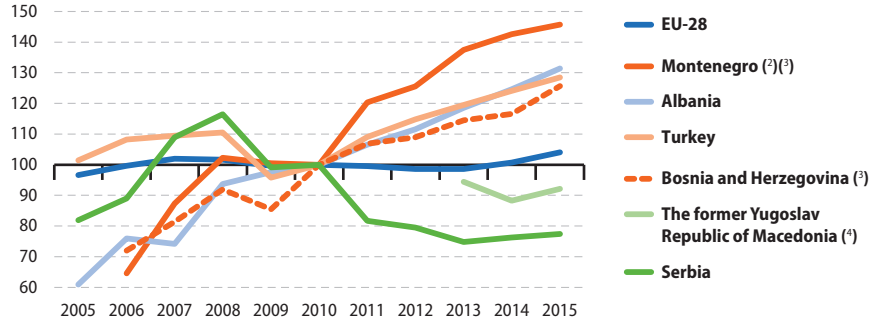
Volume of sales index for retail trade

Retail trade indices have particular importance because of the role of retail trade as an interface between producers and final customers, allowing retail sales turnover and volume of sales indices to be used as short-term indicators for final domestic demand by households. The volume of sales index is a measure of turnover in the retail trade sector, adjusted to remove price changes (inflation).

Figure 8.4 provides data for the period 2005–2015 and shows that after modest growth up to 2007, the volume of sales index in the EU-28 declined by a relatively small margin during most of the years through to 2013, falling overall by 3.2 % during the period 2007–2013. In 2014, the volume of sales grew by 2.1 %, and this development was reinforced in 2015, with an increase of 3.3 %.

Among the enlargement countries, there were generally much greater fluctuations than the developments seen for the EU-28. For example, the former Yugoslav Republic of Macedonia and Serbia were characterised by relatively low volume of sales index, when comparing indices for 2010 and 2015, there were overall falls of 7.9 % and 22.6 % respectively. By contrast, the volume of sales indices for the remaining enlargement countries were characterised by uninterrupted growth between 2010 and 2015. This pattern was particularly apparent in Montenegro, where the volume of sales index for retail trade grew by an annual average of 7.8 % between 2010 and 2015; corresponding rates for Bosnia and Herzegovina, Turkey and Albania averaged 4.7 %–5.6 % per annum.

Figure 8.4: Calendar adjusted volume of sales, retail trade (NACE Rev. 2), 2005–2015 (1)
(2010 = 100)



(1) Kosovo: not available. Note that the y-axis does not start at 0.
(2) Gross index.
(3) 2005: not available.
(4) 2005–2012: not available.

Source: Eurostat (online data codes: sts_trtu_a and cpc_insts)

Tourism

Tourism has the potential to contribute towards employment and economic growth, as well as to development in rural, peripheral or less-developed areas. In 2014, there were 13.7 million bed places available in EU-28 hotels and similar establishments, as defined by NACE Rev. 2 Group 55.1. The number of bed places grew in the EU-28 in each and every year over the period 2010–2014. Note that the figures shown do not reflect occupancy rates and instead refer to the supply of available bed places.

A comparison between 2010 and 2015 is available for six of the seven enlargement countries (no data for Kosovo), as shown in Table 8.1. In 2015, the combined number of bed places available in hotels and similar establishments in these six countries was 995 thousand, equivalent to 7.3 % of the total number of bed places in the EU-28 in 2014. Turkey reported by far the highest number of bed places among the enlargement countries, some 850 thousand in 2015, or more than four fifths (85 %) of the total across the enlargement countries.

Between 2010 and 2015, the number of bed places available in the six enlargement countries rose overall by 226 thousand beds, or 29.3 %. In absolute terms, Turkey recorded the largest increase in its bed capacity during the period 2010–2015, with an additional 221 thousand beds in hotels and similar establishments, an overall increase of 35 %. In relative terms, there was a higher growth rate in the former Yugoslav Republic of Macedonia, where the number of beds rose by 40 %. For comparison, the number of bed places in the EU-28 increased by 8 % over the period 2010–2014.

Table 8.1: Tourism key indicators, 2010 and 2015
(thousands)

	Bed places (in hotels and similar collective tourist establishments)		Arrivals (of non-residents staying in hotels and similar collective tourist establishments)		Outbound trips (made by residents going abroad for all holidays and business; 1 night or more)	
	2010	2015	2010	2015	2010	2015
EU-28 (1)	12 627	*13 661*	*227 297*	*272 539*	:	*279 658*
Montenegro (2)	34	32	500	636	12	:
The former Yugoslav Republic of Macedonia (3)	13	18	259	483	:	:
Albania	12	15	74	257	:	:
Serbia	56	52	640	1 127	:	:
Turkey (4)	629	850	17 415	23 138	6 557	8 751
Bosnia and Herzegovina (5)	25	27	364	678	:	:
Kosovo	:	:	34	79	930	1 549

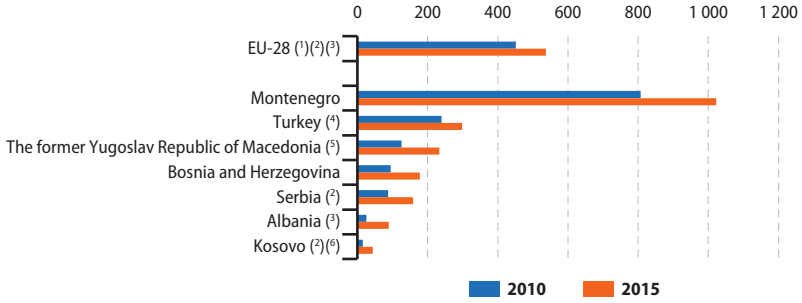
(1) 2014 instead of 2015.
(2) Outbound trips: low reliability.
(3) Arrivals: all types of accommodation establishments excluding private tourism accommodation.
(4) Bed-places and arrivals: in licenced accommodation establishments.
(5) Bed places: as of 31 December.

Source: Eurostat (online data codes: tour_cap_nat, tour_occ_arnat, tour_dem_tttot and cpc_intour)

Figure 8.5 provides an alternative analysis, based on the number of non-resident tourist arrivals per 1 000 inhabitants; it may be used as a measure of tourism intensity. The indicator provides a more nuanced guide to the economic significance of tourism pressures and may be used to analyse the sustainability of tourism. In 2014, there were 538 non-resident arrivals in EU-28 hotels and similar collective tourist establishments per 1 000 inhabitants; this latest figure was 19.0 % higher than in 2010.

The highest degree of tourism intensity, using this measure, was recorded in Montenegro, where there were slightly more non-resident arrivals than inhabitants in 2015. Tourism intensity in each of the enlargement countries rose at a faster pace than in the EU-28 between 2010 and 2015. The fastest expansions were recorded in the relatively undeveloped markets of Kosovo and Albania, where non-resident arrivals remained below 100 per 1 000 inhabitants.

Figure 8.5: Arrivals of non-residents in hotels and similar collective tourist establishments, 2010 and 2015
(per 1 000 inhabitants)



(1) 2014 instead of 2015.
(2) Break in series.
(3) Estimates.
(4) Licenced accommodation establishments.
(5) All types of accommodation establishments excluding private tourism accommodation.
(6) 2010: estimate.

Source: Eurostat (online data codes: tour_occ_arnat, demo_gind, cpc_intour and cpc_psdemo)

9 Science, technology and digital society

Information and communication technologies (ICTs) affect people's everyday lives in many ways, both at work and in the home, for example, through communications with friends and colleagues or buying and ordering goods online. The development and expansion of the digital society is regarded as critical to improve the EU's competitiveness, while EU policymakers also seek to regulate specific areas, such as e-commerce or the protection of an individual's privacy when using such technologies.

Mobile phone subscriptions

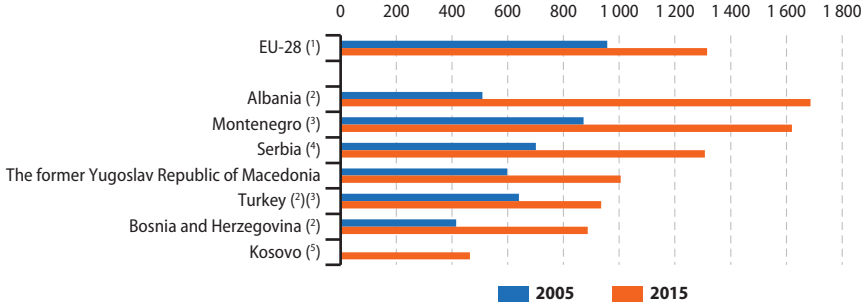
In the EU-28 there were, on average, 1 316 mobile phone subscriptions per 1 000 inhabitants in 2013; in other words, there was an average of 1.3 mobile subscriptions per person (see Figure 9.1). Since the late 1980s/early 1990s the number of subscriptions has increased rapidly as mobile phones have become commonplace. Figure 9.1 shows that subscriptions per inhabitant continued to increase even though there was an apparent market saturation, with an overall rise in EU-28 mobile subscriptions of more than one third (37.6 %) between 2005 and 2013.

There was also a rapid take-up of mobile telephony services in the enlargement countries. Indeed, during the period 2005–2015, the rate of growth of mobile subscriptions was faster in each of the enlargement countries than in the EU-28. In 2015, the number of mobile phone subscriptions was often higher than the number of inhabitants, indicating that some people had more than one mobile subscription: this could result from some subscriptions remaining active even when they were no longer in use, or may be linked to some people having subscriptions for work and private use, or could be linked to some people owning several connected devices.

Among the enlargement countries, Albania recorded the highest ratio of mobile phone subscriptions to population size in 2015, an average of 1 687 subscriptions per 1 000 inhabitants. Montenegro was the only other enlargement country to record a ratio of mobile phone subscriptions per inhabitant that was above the EU-28 average, although the ratio in Serbia (2014 data) was only marginally below that of the EU-28. At the other end of the range, Kosovo recorded the lowest number of mobile subscriptions per 1 000 inhabitants, at 464.

Between 2005 and 2015 there was rapid growth in the ratio of mobile phone subscriptions per inhabitant in the enlargement countries. The

Figure 9.1: Mobile phone penetration, 2005 and 2015
(number of subscriptions per 1 000 inhabitants)



(1) 2013 instead of 2015.
(2) 2005: estimate.
(3) Break in series.
(4) 2014 instead of 2015.
(5) 2005: not available.

Source: Eurostat (online data codes: isoc_tc_ac1, isoc_tc_mcsupe, demo_pjan and cpc_inisoc)

fastest expansion was in Albania, where the number of subscriptions per inhabitant more than tripled, while the ratio more than doubled in Bosnia and Herzegovina.

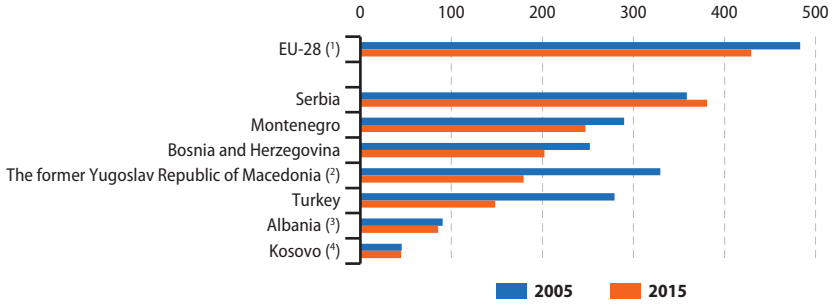
Fixed telephone lines

Figure 9.2 presents information in relation to the number of fixed telephone lines per 1 000 inhabitants. Fixed telephone lines are those which connect a customer's equipment (telephone handset or facsimile machine) to the public switched telephone network (PSTN). This indicator, together with that for mobile telephony, is one of the broadest and most common measures used to evaluate the development of telecommunications.

In the EU-28 there were, on average, 429 fixed telephone lines per 1 000 inhabitants in 2013. This figure was below the ratio recorded in 2005, when there had been, on average, 54 more fixed telephone lines per 1 000 inhabitants; it should be noted that there is a break in series.

As mobile technology became abundant, the number of fixed telephone lines fell in many countries. There was a reduction in the number of fixed telephone lines per 1 000 inhabitants in the majority of the enlargement countries between 2005 and 2015, although the number rose slightly in Serbia. In 2015, Serbia recorded the highest ratio of fixed telephone lines per 1 000 inhabitants among the enlargement countries, at 381. This was just over 10 % below the corresponding ratio for the EU-28 and considerably higher than in any of the other enlargement countries, as the next highest ratio was 247 fixed lines per 1 000 inhabitants in Montenegro. By contrast, there were two enlargement countries where there were less than 100 fixed telephone lines per 1 000 inhabitants, Albania (85; 2014 data) and Kosovo (45; 2013 data).

Figure 9.2: Fixed telephone line penetration, 2005 and 2015
(number of lines per 1 000 inhabitants)



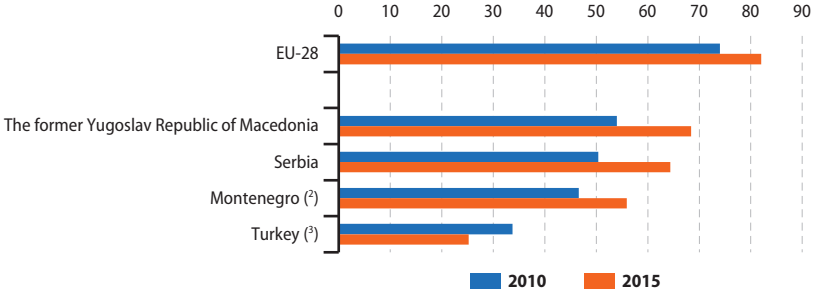
(1) Break in series. 2013 (estimate) instead of 2015.
(2) Break in series.
(3) 2014 instead of 2015.
(4) 2013 instead of 2015.

Source: Eurostat (online data codes: isoc_tc_ftteli, cpc_inisoc and cpc_psdemo)

Access to a personal computer

As of 2015, 82 % of households in the EU-28 had access to a personal computer (PC); this marked an increase of 8 percentage points when compared with 2010 (see Figure 9.3). The proportion of households with access to a PC in the four enlargement countries for which data are available (no information for Albania, Bosnia and Herzegovina or Kosovo) was consistently lower than in the EU-28. Just over two thirds (68 %) of all households in the former Yugoslav Republic of Macedonia had access to a PC in 2015, while the corresponding ratio in Serbia was slightly lower (64 %). In Montenegro, this ratio was also above half (56 %) of all households in 2015, while only a quarter (25 %) of all households in Turkey had access to a PC; note that the figure for Turkey covers only desktop PCs and that this particular market has been relatively stagnant in recent years as an increasing share of people have chosen to buy more portable formats, such as laptops, netbooks or tablets.

Figure 9.3: Proportion of households having access to a personal computer, 2010 and 2015 (1)
(%)



(1) Albania, Bosnia and Herzegovina and Kosovo: not available.
(2) 2011 (estimate excluding portable computers, laptops and palmtops) instead of 2010.
(3) Data only cover desktops.

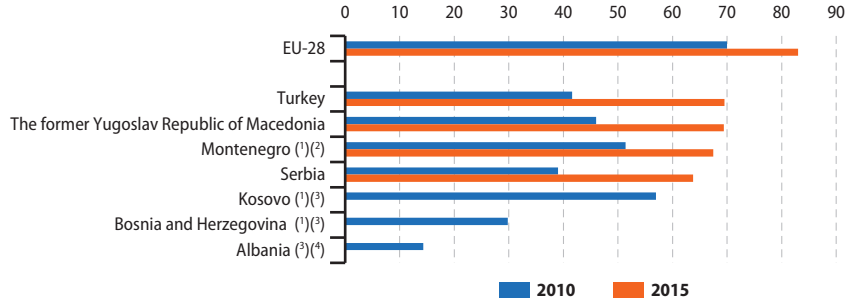
Source: Eurostat (online data code: isoc_ci_cm_h) and Eurostat enlargement data collection

Access to the internet

Internet access among households refers to those households where any member may use the internet at home, if so desired, even simply to send an e-mail. Digital subscriber lines (DSL) remain the main form of delivery for broadband technology in the EU, although alternatives, such as the use of cable, satellite, fibre optics and wireless local loops are becoming more widespread. The proportion of households in the EU-28 with access to the internet was 83 % in 2015, almost identical to the proportion of households with access to a PC (82 % in 2015). The proportion of households in the EU-28 having access to the internet rose by 13 percentage points between 2010 and 2015 (see Figure 9.4); as such it outstripped the growth in households having access to a PC.

As with household access to PCs, a lower proportion of households in the enlargement countries had access to the internet when compared with households in the EU-28. The highest proportion was recorded for Turkey (70 %), closely followed by the former Yugoslav Republic of Macedonia (69 %), Montenegro (68 %) and Serbia (64 %). For all four enlargement countries for which data are shown for both

Figure 9.4: Proportion of households having access to the internet, 2010 and 2015
(%)



(1) Albania: not available.
(2) 2011 instead of 2010.
(3) Estimates.
(4) 2015: not available.

Source: Eurostat (online data codes: isoc_ci_in_h and cpc_inisoc)

reference years in Figure 9.4, the increase in the proportion of households having access to the internet between 2010 and 2015 was higher than in the EU-28: the most rapid expansion was in Turkey, where there was a 28 percentage points increase.

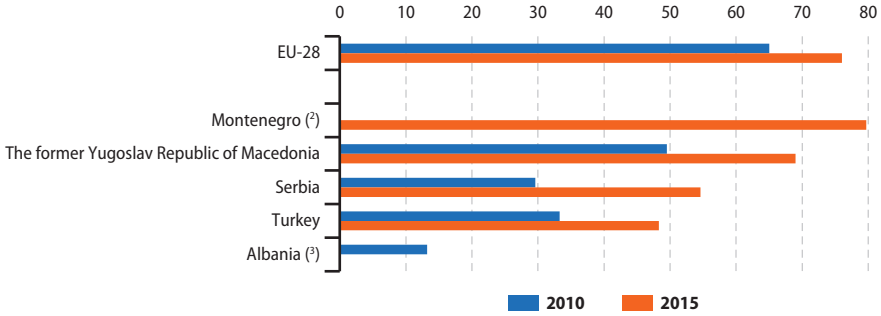
Figure 9.5 shows the proportion of individuals (aged 16–74) in the EU-28 who accessed the internet at least once a week stood at 76 % in 2015; this marked an increase of 11 percentage points when compared with the situation five years earlier in 2010.

Montenegro was the only enlargement country that reported a higher share of individuals (than in the EU-28) accessing the internet at least once a week. In 2015, four fifths (80 %) of its population was using the internet at least on a weekly basis, while the corresponding share in the former Yugoslav Republic of Macedonia was 69 %; closer to half the population in Serbia (55 %) and in Turkey (48 %) were accessing the internet at least once a week.

There is only a limited set of data for three enlargement countries to analyse the development of internet use among those aged 16–74 between 2010 and 2015. There was a relatively rapid increase during these five years in the proportion of people using the internet at least once a week, as their share rose by 15 percentage points in Turkey (four percentage points more than in the EU-28 average), by 19 points in the former Yugoslav Republic of Macedonia, and by 25 points in Serbia.

Widespread access to the internet (via broadband) is seen as essential for the development of advanced services on the internet, such as e-business, e-government or e-learning. There is a limited set of data available for enterprises having access to the internet; note that the data shown generally refer to enterprises with 10 or more persons employed and that several enlargement countries are characterised by having a relatively high number of micro enterprises with fewer than 10 persons employed. With this proviso, almost all (97 %) of the enterprises in the EU-28 had access to the internet in 2015, a share that rose to 99 % in Montenegro and 100 % in Serbia (see Figure 9.6). A slightly lower proportion of enterprises in the former Yugoslav Republic of Macedonia and Turkey had access to the internet, although their ratios remained in excess of 9 out of every 10 enterprises (both 93 %).

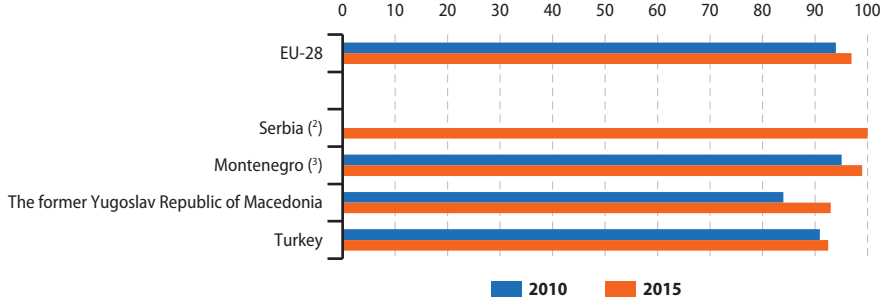
Figure 9.5: Individuals (aged 16–74) who access the internet at least once a week, 2010 and 2015 (1)
(%)



(1) Bosnia and Herzegovina and Kosovo: not available.
(2) 2010: not available.
(3) 2015: not available. 2012 instead of 2010.

Source: Eurostat (online data codes: isoc_ci_ifp_fu and cpc_inisoc)

Figure 9.6: Proportion of enterprises having access to the internet, 2010 and 2015 (1)
(%)



(1) Enterprises with 10 or more persons employed, excluding financial and insurance activities (NACE Rev. 2 Section K). Albania, Bosnia and Herzegovina and Kosovo: not available.
(2) 2010: not available.
(3) 2011 instead of 2010. Estimates.

Source: Eurostat (online data code: isoc_ci_in_en2)

Research and development expenditure

Eurostat data on research and development (R & D) provide a comprehensive picture covering indicators related to expenditure and personnel. R & D comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to develop new applications.

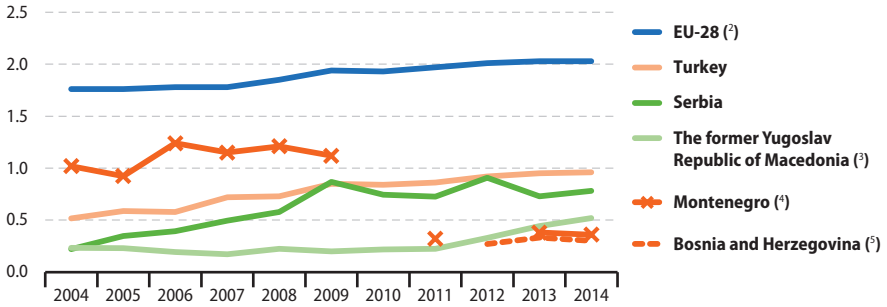
R & D is a driver of innovation, with the level of gross domestic expenditure on R & D (GERD) (which includes expenditure on R & D performed by business enterprises, higher education institutions, as well as government and private non-profit organisations) and the ratio of R & D intensity (R & D expenditure relative to GDP) being two of the key indicators used to monitor resources devoted to science and technology. The Europe 2020 strategy for smart, sustainable and inclusive growth was adopted in 2010. One of its five targets is to see an increase in the level of R & D intensity such that it averages 3.00 % of the EU's GDP by 2020.

In 2014, gross expenditure on R & D was valued at EUR 284 billion in the EU-28, which was 19.6 % higher than five years earlier (in current price terms). R & D intensity in the EU-28 was 2.03 % in 2014; as such, it lagged behind both Japan and the United States, primarily due to relatively low levels of business expenditure on R & D.

R & D expenditure in Turkey was valued at EUR 6.1 billion, which was equivalent to 2.1 % of the level for 2014 recorded in the EU-28. Turkish R & D expenditure was far higher than in any of the other enlargement countries, as the next highest level was EUR 301 million in Serbia, approximately one thousandth of the expenditure in the EU-28.

The relatively high level of R & D expenditure in Turkey (compared with the other enlargement countries) was not simply because of its larger size, as witnessed from an analysis of the level of R & D expenditure relative to the size of each economy. The R & D intensities among the enlargement countries ranged in 2014 from 0.96 % and 0.78 % in Turkey and Serbia to 0.30 % in Bosnia and Herzegovina.

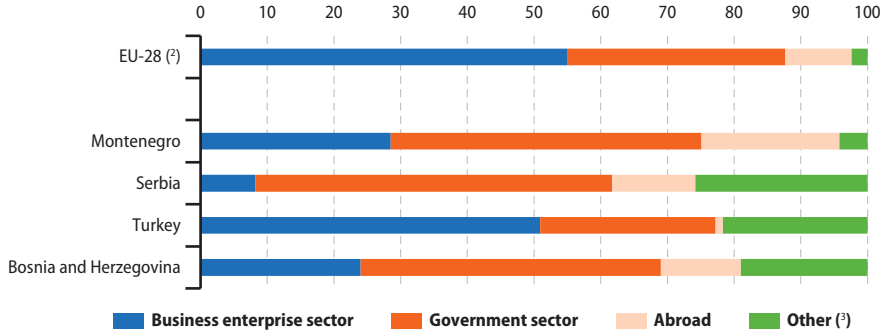
Figure 9.7: Research and development intensity, 2004–2014 (1)
(% of GDP)



(1) Albania and Kosovo: not available.
(2) 2014: provisional.
(3) 2013 and 2014: provisional.
(4) 2010 and 2012: not available.
(5) 2004–2011: not available.

Source: Eurostat (online data codes: rd_e_gerdtot and cpc_scienc)

Figure 9.8: Distribution of source of research and development funds, 2014 (1)
(%)



(1) The former Yugoslav Republic of Macedonia, Albania and Kosovo: not available.
(2) Higher education sector and private non-profit sector.
(3) 2013.

Source: Eurostat (online data codes: rd_e_gerdfund and cpc_scienc)

Despite their relatively low overall levels of R & D expenditure, several of the enlargement countries reported a fairly steady increase in such expenditure (relative to GDP) between 2004 and 2014, notably in Serbia, the former Yugoslav Republic of Macedonia and Turkey; by contrast, expenditure in Montenegro was lower in 2014 than it had been in 2004 (see Figure 9.7).

An analysis of R & D expenditure by source of funds for 2013 shows that more than half (55.0 %) of the total expenditure within the EU-28 was funded by business enterprises, while one third (32.7 %) was funded by government, and a further 9.9 % from abroad (foreign funds); the 'other' sources (2.4 %) include higher education and non-profit organisations.

In Turkey, the business enterprise sector was also the largest source of funding for R & D expenditure, again providing just over half the total (50.9 %) in 2014. By contrast, in Serbia, Montenegro, and Bosnia and Herzegovina, the government sector was the main source of R & D funding in 2014; in Serbia, it provided more than half (53.5 %) of all R & D finance. Compared with the EU-28, other sources provided a relatively large share of total R & D funding in many of the enlargement countries (see Figure 9.8).

Research and development personnel and researchers

R & D personnel consists of all individuals employed directly in the field of R & D, including persons providing direct services, such as managers, administrators, and clerical staff. The number of R & D personnel in the EU-28 increased in recent years: in 2014, there were 2.76 million persons (in full-time equivalents) employed as R & D personnel in the EU-28 (see Table 9.1), which marked an increase of 269 thousand (or 10.8 %) when compared with 2009. Among these were 1.76 million researchers, in other words, professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in related project management.

Turkey reported 115 thousand R & D personnel in 2014, among which 90 thousand were researchers, by far the highest number among the enlargement countries. Between 2009 and 2014 the number of R & D personnel in the former Yugoslav Republic of Macedonia increased overall by 71.3 % (note however that there is a break in series), while Turkey (57.0 %) and Serbia (7.4 %) reported smaller increases;

in Montenegro there was a relatively large fall (−60.3 %) in the number of R & D personnel, in line with its contraction in R & D expenditure.

Standardising these data to take account of the overall number of persons employed, R & D personnel accounted for 1.3 % of total employment in the EU-28 in 2014. Among the enlargement countries, Serbia had the highest share of R & D personnel in total employment, at 0.9 % in 2014, while the smallest share among those countries for which data are available was in the former Yugoslav Republic of Macedonia (0.3 %).

The share of R & D personnel in total employment rose from 1.1 % to 1.3 % in the EU-28 between 2009 and 2014. The relative weight of R & D personnel in total employment also increased in Serbia by 0.2 percentage points, while increases of 0.1 points were recorded for Turkey and for the former Yugoslav Republic of Macedonia. By contrast, in Montenegro there was a sharp reduction in the share of R & D personnel in total employment, as their relative share fell by 0.4 percentage points between 2009 and 2013.

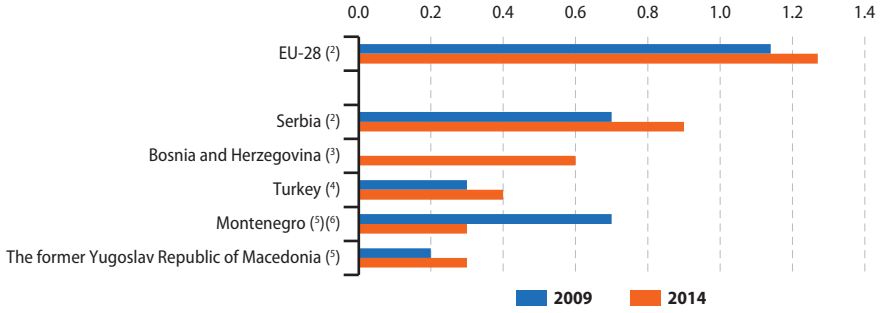
Table 9.1: Research and development personnel, 2009–2014
(thousands of full-time equivalents)

	2009	2010	2011	2012	2013	2014
EU-28	*2 488.5*	*2 541.9*	2 613.0	2 670.3	2 713.4	*2 757.4*
Montenegro	1.5	:	0.5	:	0.5	0.6
The former Yugoslav Republic of Macedonia (1)	1.1	1.4	1.1	1.7	1.6	2.0
Albania	:	:	:	:	:	:
Serbia	18.1	17.3	17.5	17.7	18.1	19.4
Turkey	73.5	81.8	92.8	105.1	*113.0*	*115.4*
Bosnia and Herzegovina	:	:	:	1.1	1.4	1.8
Kosovo	:	:	:	:	:	:

(1) 2010: break in series.

Source: Eurostat (online data codes: rd_p_persocc and cpc_scienc)

Figure 9.9: Research and development personnel as a share of all persons employed, 2009 and 2014 (1)
(%; based on full-time equivalent units)



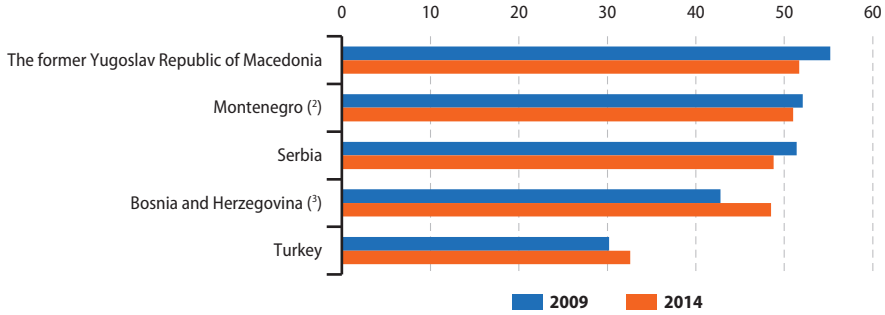
(1) Albania and Kosovo not available.
(2) Estimates.
(3) 2009: not available.
(4) 2014: estimate.
(5) 2009: estimate.
(6) 2013 instead of 2014.

Source: Eurostat (online data code: rd_p_perslf) and enlargement data collection

An analysis of R & D personnel by sex for 2014 shows that women accounted for 49 % of the workforce in Serbia and in Bosnia and Herzegovina (2012 data), while they represented a small majority of the total number of R & D personnel in Montenegro (51 %; 2013 data) and the former Yugoslav Republic of Macedonia (52 %). By contrast, women accounted for approximately one third (33 %) of all R & D personnel in Turkey.

Between 2009 and 2014 the share of women in total R & D personnel fell among those enlargement countries where women accounted for a majority of the workforce. This pattern was also observed for Serbia, where the share of women went from slightly above to slightly below parity over the five-year period under consideration. In Bosnia and Herzegovina (2009–2012) the share of women in R & D personnel rose at a relatively fast pace, increasing by 5.7 percentage points, while the share of women also rose in Turkey, by 2.4 points, albeit from a relatively low share in 2009.

Figure 9.10: Share of women in research and development personnel, 2009 and 2014 (1)
(%; based on full-time equivalent units)



(1) Albania and Kosovo not available.
(2) 2011 instead of 2009. 2013 instead of 2014.
(3) 2012 instead of 2014.

Source: Eurostat enlargement data collection

10 Transport

An efficient and well-functioning passenger and freight transport system is considered vital for a competitive economy. The EU's transport policy aims to foster clean, safe and efficient travel throughout Europe, underpinning the internal market for goods (transferring them between their place of production and consumption) and the right of citizens to travel freely throughout the EU (for both work and pleasure).

Transport networks

In 2013, the EU-28 motorway network was approximately 74 thousand kilometres (km) in length. Most of the enlargement countries are relatively small in terms of their total area and population numbers and so it is perhaps unsurprising to find that they generally had relatively small motorway networks, rarely more than a few hundred kilometres (see Table 10.1). Indeed, the combined length of motorways in the enlargement countries was equivalent to less than 5 % of the total length of the EU-28 motorway network. Among the enlargement country, Turkey's motorway network was by far the longest, at 2 159 km in 2015.

Between 2005 and 2015, the length of the Turkish motorway network rose, on average, by 2.6 % per annum. Serbia (6.5 % per annum) and Bosnia and Herzegovina (27.8 % per annum) both reported faster expansions in relative terms, while the former Yugoslav Republic of Macedonia reported a slower increase (1.8 % per annum); for comparison, the motorway network in the EU-28 grew, on average, by 2.1 % per annum between 2005 and 2013.

The EU-28 road network (other than motorways) was estimated to be around 4.8 million km in length in 2013. As for motorways, Turkey had the longest road network among the enlargement countries, at 237 thousand km in 2015 (note that there is a large break in series for the Turkish data shown in Table 10.1). Serbia had the second most extensive road network among the enlargement countries, some 45 thousand km in 2015.

There were 221 thousand km of railway lines in the EU-28 in 2014, practically unchanged when compared with 2005 (average growth of 0.3 % per annum). The combined length of railway lines in the seven enlargement countries was 16.6 thousand km, equivalent to 7.5 % of the

Table 10.1: Main indicators for transport networks, 2005 and 2015
(km)

	Motorways		Roads (excluding motorways)		Railway lines	
	2005	2015	2005	2015	2005	2015
EU-28 (1)	*63 140*	*74 341*	:	*4 778 000*	215 110	220 673
Montenegro	0	0	7 353	8 614	250	250
The former Yugoslav Republic of Macedonia	216	259	13 278	14 256	699	699
Albania	3	:	2 650	3 947	433	379
Serbia	370	693	38 600	44 995	3 809	3 766
Turkey (2)	1 667	2 159	347 571	236 617	8 697	10 131
Bosnia and Herzegovina (3)	11	128	16 600	:	1 030	1 027
Kosovo	0	80	1 660	2 012	:	333

(1) Railway lines: 2013 instead of 2015.
(2) Roads (excluding motorways): excluding urban municipality roads; 2015, also excluding rural roads in the cities of metropolitan municipalities. Railway lines: main lines only.
(3) Roads (excluding motorways): excluding local roads of the Federation of Bosnia and Herzegovina.

Source: Eurostat (online data code: cpc_transp) and the Directorate-General for Mobility and Transport (EU transport in figures, available at: http://ec.europa.eu/transport/media/publications/index_en.htm)

EU-28 network. The length of railway lines was unchanged in Montenegro and the former Yugoslav Republic of Macedonia between 2005 and 2015, while there were slight contractions in Bosnia and Herzegovina and Serbia, and a larger reduction (in relative terms) in the length of the Albanian rail network. The Turkish rail network grew at quite a rapid pace, with its length increasing by 1 434 km (note that the data for Turkey only cover main lines).

Table 10.2 provides alternative measures of the relative importance of transport networks, presenting the density of networks in relation to total area and numbers of inhabitants. Montenegro, Serbia (2014 data) and the former Yugoslav Republic of Macedonia recorded the highest density of roads among the enlargement countries, with more than 500 m of road per square kilometre (km^2) of total area in 2015. Using this measure, roads in Kosovo (2014 data) and Albania were spread more thinly across each territory, some 185 m and 137 m per km^2. For comparison, there was a much higher density of roads in the EU-28, estimated to be around 1.1 km per km^2 in 2013.

An alternative network density measure is one which uses the number of inhabitants as its denominator. On this basis, the road network in Montenegro was about twice as dense as in any other enlargement country, with an average of 13.8 km of road per 1 000 inhabitants in 2015; this was also higher than the average recorded in the EU-28 (9.5 km per 1 000 inhabitants in 2013). The road networks of Albania and Kosovo were again relatively sparse, using this measure, when compared with the remaining enlargement countries, with 1.4 km and 1.1 km of road per 1 000 inhabitants in 2015.

Across the EU-28, the density of railway lines was generally quite high in western and central Europe and lower in peripheral (especially sparsely populated) regions. In 2014, the rail network density of the EU-28 averaged 49.4 m per km^2 or 0.44 km per 1 000 inhabitants. Serbia had the highest rail network density among the enlargement countries, both in relation to its total area and number of inhabitants. While the former was comparable (at 48.6 m per km^2 in 2014) to the EU-28 average, Serbia's rail network density relative to population (0.53 km per 1 000 inhabitants in 2015) was clearly above the EU-28

Table 10.2: Density of transport networks, 2015

	Roads (excluding motorways)		Railway lines	
	(m per km^2)	(km per 1 000 inhabitants)	(m per km^2)	(km per 1 000 inhabitants)
EU-28 (1)	*1 070*	*9.5*	*49.4*	*0.44*
Montenegro	624	13.8	18.1	0.40
The former Yugoslav Republic of Macedonia	554	6.9	27.2	0.34
Albania	137	1.4	13.2	0.13
Serbia (2)	573	6.3	48.6	0.53
Turkey (3)	302	3.0	12.9	0.13
Bosnia and Herzegovina (4)	:	:	20.1	0.27
Kosovo (2)	185	1.1	30.6	0.19

(1) Railway lines: 2013 instead of 2015. Total area of the EU-28: data for Croatia covers only land area and excludes water bodies.
(2) Ratios per km^2: 2014 instead of 2015.
(3) Roads (excluding motorways): excluding urban municipality roads and rural roads in the cities of metropolitan municipalities. Railway lines: main lines only.
(4) Roads (excluding motorways): excluding local roads of the Federation of Bosnia and Herzegovina.

Source: Eurostat (online data codes: demo_r_d3area, demo_pjan, cpc_transp, cpc_agmain and cpc_psdemo) and the Directorate-General for Mobility and Transport (EU transport in figures, available at: http://ec.europa.eu/transport/media/publications/index_en.htm)

average; it was the only enlargement country to record a rail network density (by either measure) above that registered in the EU-28. At the other end of the range, Turkey and Albania reported the lowest ratios for their rail networks, regardless whether in relation to land area or population size; note again that the data for Turkey refer only to main lines.

Motorisation rate

The principal mode of passenger transport in the EU is the passenger car, providing both flexibility and mobility for personal journeys. In the EU-28, there were an estimated 491 passenger cars per 1 000 inhabitants in 2013. This marked an increase of 10 % in car ownership (or 43 additional cars per 1 000 inhabitants) when compared with 2005 (see Figure 10.1).

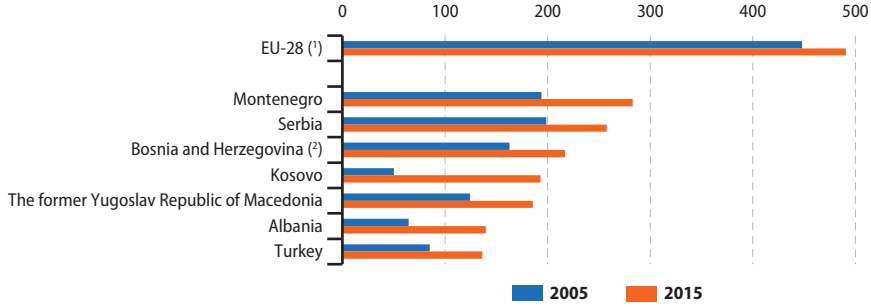
Motorisation rates for the enlargement countries were considerably lower than in the EU-28. There were, on average, 283 passenger cars per 1 000 inhabitants in Montenegro and 258 per 1 000 inhabitants in Serbia in 2015; these were the highest rates among the enlargement countries. By contrast, motorisation rates in Turkey and Albania were below 150 passenger cars per 1 000 inhabitants.

During the 10-year period shown in Figure 1 there was faster growth in the motorisation rate in all of the enlargement countries than in the EU-28. Although Albania and Turkey recorded the lowest motorisation rates in 2015, along with Kosovo they recorded the fastest expansion in car ownership between 2005 and 2015. The highest rate of change was recorded in Kosovo, where the motorisation rate nearly quadrupled between 2005 and 2015, while in Albania the rate was more than twice as high in 2015 as it had been in 2005.

Freight transport

The ability to move goods safely, quickly and cost-efficiently to markets is important for international trade, national distributive trades, and economic development. Within the EU-28, roads accounted for by far the highest share of inland freight transport: in 2015, some1 454 billion tonne-kilometres (tkm) of inland freight circulated using this mode of transport. Rail was the second most common mode for transporting inland freight (an estimated 407 billion tkm), while the relative importance of inland waterways was much lower (147 billion tkm). The EU-28 also transported (inward and

Figure 10.1: Motorisation rate, 2005 and 2015
(passenger cars per 1 000 inhabitants)



(1) 2013 instead of 2015.
(2) 2006 instead of 2005.

Source: Eurostat (online data codes: demo_pjan and cpc_transp) and the Directorate-General for Mobility and Transport (EU transport in figures, available at: http://ec.europa.eu/transport/media/publications/index_en.htm)

outward transport combined) 3.8 billion tonnes of sea freight in 2014 (see Table 10.3).

The relative importance of rail freight transport was much higher in Serbia and in Montenegro, with slightly more goods transported by rail than by road in Serbia in 2015. Serbia also had a relatively high share of inland freight transport on inland waterways (essentially on the Danube).

Turkey was the only enlargement country (subject to data availability) to record any notable movement of freight by sea, some 416 million tonnes in 2015. The former Yugoslav Republic of Macedonia, Serbia and Kosovo are all landlocked and therefore have no sea ports, while Bosnia and Herzegovina has only one coastal town and most of its freight destined for or coming from sea transport passes through Croatia.

The modal split of inland freight transport is based on transportation by road, rail and inland waterways, and therefore excludes air, maritime and pipeline transport. There was generally a high propensity to make use of roads for inland freight transport in both the EU and the majority of the enlargement countries (see Figure 10.2). While the share of road transport in total inland freight transport was 75.4 % across the EU-28 in 2014, there was an even greater reliance on using roads to transport freight in Montenegro, the former Yugoslav Republic of Macedonia and Turkey, where 100.0 %, 96.1 % and 95.8 % of inland freight was moved by road in 2015. As noted above, there was a relatively high use made of rail and inland waterways for freight transport in Serbia and as a consequence Serbia had the lowest share of road freight transport among the enlargement countries (42.0 %). Nevertheless, between 2005 and 2012 the road freight share in Serbia increased each and every year to reach 44.8 %, since when the share stabilised. In Montenegro, the road freight share had reached 51.0 % by 2012 after which it jumped to 100 % as the use of inland rail freight stopped (and all of the remaining railway freight transport was international or transit).

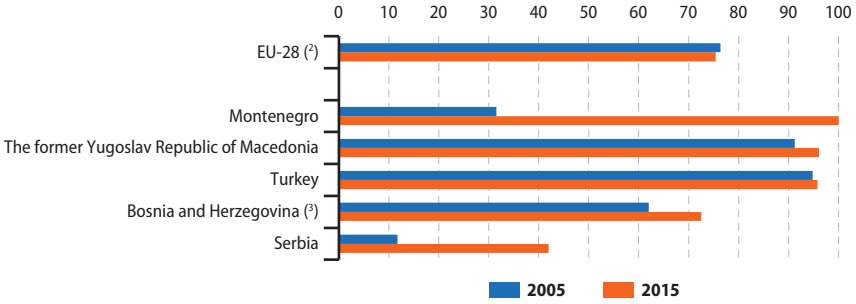
Table 10.3: Freight transport, 2015

	Inland freight transport (million tonne-km)			Sea freight transport (million tonnes loaded and unloaded)
	Road	Rail	Inland waterways	
EU-28 (1)	1 453 683	*407 000*	147 327	3 793
Montenegro	140	112	0	1
The former Yugoslav Republic of Macedonia	6 759	278	:	–
Albania	:	23	:	4
Serbia	2 973	3 248	859	–
Turkey	244 329	10 178	0	416
Bosnia and Herzegovina	3 405	1 267	:	:
Kosovo	:	23	:	–

(1) Sea freight: 2014. Rail: rounded estimate made for the purpose of this publication.

Source: Eurostat (online data codes: road_go_ta_tott, rail_go_typeall, mar_mg_aa_cwhd and cpc_transp)

Figure 10.2: Share of road freight transport in total inland freight transport, 2005 and 2015 (1)
(%, based on tonne-km)



(1) Albania and Kosovo: not available.
(2) 2014 instead of 2015.
(3) 2007 instead of 2005.

Source: Eurostat (online data codes: tran_hv_frmod and cpc_transp)

Passenger transport

Table 10.4 provides information on the breakdown of passenger transport. The majority of passengers in the enlargement countries travelled inland either by road or by rail. In Montenegro, the share of passengers travelling by road was 1.4 times as high as that recorded travelling by rail. In the former Yugoslav Republic of Macedonia, road passenger transport was seven times as popular as a mode of transport as rail, rising to nine times as popular in Serbia, almost 50 times as popular in Bosnia and Herzegovina, and peaking at 60 times as popular in Turkey.

There were just over 400 million sea passengers in the EU-28 in 2014. As noted above, it is not possible to travel by sea from several land-locked enlargement countries, and among the three enlargement countries for which data are available, there was a low number of passengers transported by sea; the highest count was in Turkey (2.2 million in 2015).

Table 10.4: Passenger transport, 2015

	Inland passenger transport (million passenger-km)		Sea passenger transport (million embarked and disembarked)		Air passenger transport (million carried)	
	Road	Rail			2005	2015
EU-28 (1)	:	*424 000*	402.0	918.3	215 110	220 673
Montenegro	110	81	0.1	1.6	250	250
The former Yugoslav Republic of Macedonia	1 248	178	–	1.6	699	699
Albania	:	7	1.2	2.0	433	379
Serbia	4 601	509	–	2.6	3 809	3 766
Turkey	290 734	4 828	2.2	181.0	8 697	10 131
Bosnia and Herzegovina	1 690	34	:	1.1	1 030	1 027
Kosovo	:	269	–	:	:	333

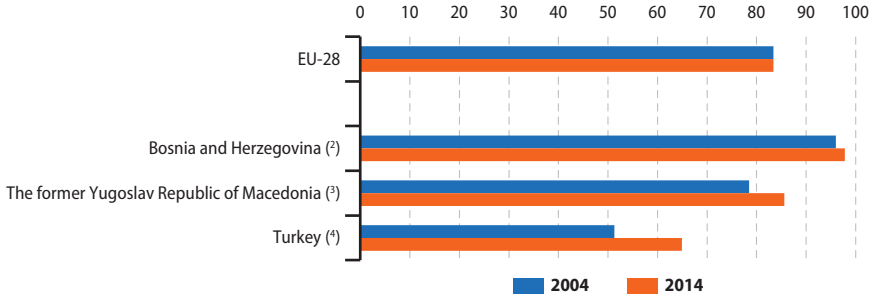
(1) Rail and sea: 2014. Rail: rounded estimate made for the purpose of this publication, excluding the Netherlands.

Source: Eurostat (online data codes: road_pa_mov, ttr00015, mar_mp_aa_cph, ttr00012 and cpc_transp) and Eurostat enlargement data collection

In 2015, there were 918 million air passengers transported in the EU-28 and 181 million in Turkey. The number of passengers carried by air transport did not reach 3.0 million in any of the remaining enlargement countries (no data for Kosovo).

Cars are the favoured means of passenger transport: they accounted for more than four fifths (83.4 %) of the total inland passenger kilometres in the EU-28 in 2014; this share was unchanged when compared with 2004 (see Figure 10.3). There is only a partial set of data available for the enlargement countries and this shows that the use of cars for inland passenger transport was less popular in Turkey (although increasing), at a similar level as in the EU-28 in the former Yugoslav Republic of Macedonia, and considerably more popular in Bosnia and Herzegovina (where cars accounted for 97.8 % of inland passenger transport in 2013).

Figure 10.3: Share of car transport in total inland passenger transport, 2004 and 2014 (1)
(%, based on passenger-km)



(1) Montenegro, Albania, Serbia and Kosovo: not available.
(2) 2013 instead of 2014.
(3) Estimates.
(4) 2003: estimate. Break in series.

Source: Eurostat (online data codes: tran_hv_psmod and cpc_transp)

11 Energy

The Energy Community was established as an international organisation in 2006 and currently includes, among others, the EU-28, Albania, Bosnia and Herzegovina, Kosovo, the former Yugoslav Republic of Macedonia, Montenegro and Serbia; Turkey has observer status. The aim of the energy community is to extend the internal market concerning energy to south-east Europe and beyond.

Basic data on energy quantities are in fuel specific units, such as liquid or solid fuels in thousand tonnes and electricity in kilowatt-hours; these units are converted to common energy units (such as tonnes of oil equivalent (toe)) to allow the addition or comparison of data for different energy sources.

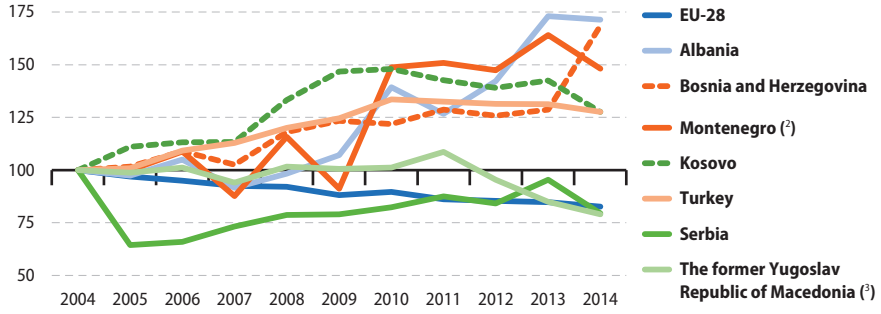
Primary production and net imports

Primary energy production takes place when energy sources are harnessed, for example, in crude oil or natural gas fields, in nuclear reactors, hydro-electric power plants or wind turbines. The level of primary energy production may fluctuate considerably from one year to the next as a result of changes in energy demand (reflecting economic fortunes), the development of energy prices (which is affected by the level of market supply and demand) and environmental conditions (particularly for some renewable sources).

In 2014, the EU-28's primary energy production amounted to 771 million toe, which was 17.3 % lower than in 2004 (see Figure 11.1). The general downward movement of EU-28 production was quite regular, except for 2009 when it fell considerably, in part due to the effects of the global financial and economic crisis. Lower levels of production in the EU-28 may, at least in part, be attributed to resources becoming exhausted and/or uneconomical.

Primary energy production in Turkey was 31.0 million toe in 2014, by far the largest value recorded amongst the enlargement countries, ahead of the 9.5 million toe of energy production in Serbia. In contrast to the situation in the EU-28, primary energy production increased between 2004 and 2014 in most enlargement countries, most notably in Albania (up 71.4 %) and Bosnia and Herzegovina (68.6 %) and to a lesser extent in Montenegro (48.1 %; 2005–2014), Kosovo and Turkey (both up 27.6 %). There were two enlargement countries where primary production of energy fell during the most recent

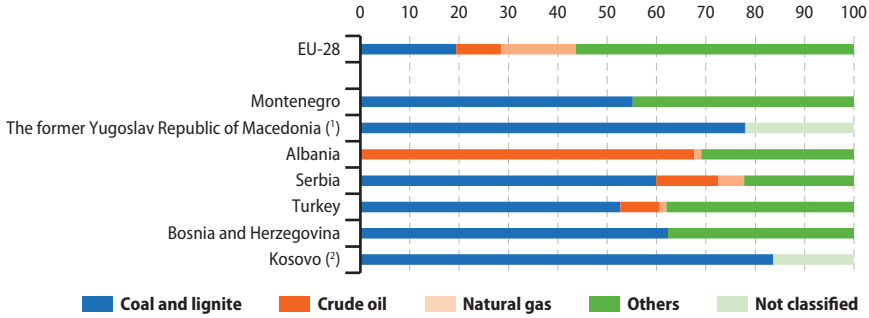
Figure 11.1: Primary energy production, 2004–2014 (1)
(2004 = 100)



(1) Note that the y-axis does not start at 0.
(2) 2004: not available. 2005 = 100.
(3) 2014: provisional.

Source: Eurostat (online data codes: nrg_100a and cpc_energy)

Figure 11.2: Primary production of energy by product, 2014
(%)



(1) Provisional.
(2) Only data for coal and lignite available.

Source: Eurostat (online data codes: nrg_100a and cpc_energy)

10-year period for which data are available: Serbia (−20.6 %) and the former Yugoslav Republic of Macedonia (−21.0 %).

Natural endowments of fossil fuels largely determine the structure of primary energy production. Energy production in the EU-28 is quite varied, reflecting the availability of different fossil fuel deposits and the potential for hydro power, as well as different policies in relation to the production of energy from nuclear fuels and renewables. In 2014, nuclear and renewable energy sources (under 'Others' in Figure 2) made up more than half (56.4 %) of the EU-28's energy production. By contrast, many of the enlargement countries have an energy mix that is dominated by just one source of energy. For example, more than four fifths (83.6 %) of Kosovo's energy production was from coal and lignite, while coal and lignite accounted for more than half of all primary production in all but one of the remaining enlargement countries; Albania was the exception, with crude oil its main source of primary energy production (67.7 %).

Net imports and gross inland energy consumption

EU-28 net imports of energy stood at 880.9 million toe in 2014; this was 13.1 % lower than in 2008, when a relative peak in net imports had been recorded (at the onset of the global financial and economic crisis). All of the enlargement countries were also net importers of energy in 2014 (see Table 1). Their combined net imports of energy were 105.4 million toe in 2014, equivalent to 12.0 % of the EU-28 total; the seven enlargement countries combined net imports of energy in 2008 had been equivalent to 8.7 % of the EU-28 total that year.

In 2014, Turkey had the highest quantity of net imports of energy among the enlargement countries, at 97.0 million toe. Turkish net imports of energy rose overall by 51.9 % between 2004 and 2014, a rate that was only surpassed in Bosnia and Herzegovina (where the rapid pace of growth was from a very low initial level). By contrast, the quantity of net imports of energy fell at a faster pace than in the EU-28 in three of the enlargement countries, as between 2004 and 2014 reductions of 39–43 % were recorded in Albania, Serbia and Montenegro (2006–2014).

Gross inland energy consumption is the energy that a country requires to meet its internal (national) demand. The main difference between levels of primary energy production and gross inland energy consumption is international trade: a shortfall of production needs to be met by net imports, while a production surplus is generally accompanied by net exports. As well as primary production and international trade, gross inland consumption takes into account changes in stocks and the supply of energy to bunkers (for international transport).

In 2014, the EU-28's gross inland energy consumption was 1.61 billion toe, having fallen from a peak of 1.84 billion toe in 2006. There was generally a downward path to the development of gross inland consumption in the EU-28 over the last decade, with a notable fall in 2009 and a rebound in 2010, both related to the global financial and economic crisis (see Figure 11.3). Based on a comparison between 2004 and 2014, gross inland energy consumption in the EU-28 was 12.0 % lower at the end of the period.

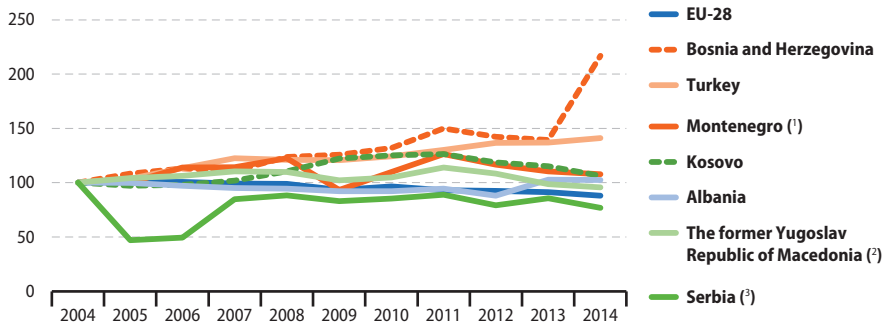
Table 11.1: Net imports of energy, 2004–2014
(million toe)

	2004	2006	2008	2010	2012	2014
EU-28	939.4	1 014.0	1 014.2	954.2	923.0	880.9
Montenegro	:	0.5	0.5	0.3	0.4	0.3
The former Yugoslav Republic of Macedonia	1.2	1.3	1.4	1.3	1.5	*1.4*
Albania	1.1	0.8	0.9	0.6	0.3	0.7
Serbia (1)	6.6	0.8	6.4	6.3	4.2	3.8
Turkey	63.9	73.8	78.3	79.4	91.8	97.0
Bosnia and Herzegovina	0.0	0.2	0.2	0.3	0.6	1.7
Kosovo	0.5	0.6	0.6	0.6	0.7	0.5

(1) 2008: break in series.

Source: Eurostat (online data codes: nrg_100a and cpc_energy)

Figure 11.3: Gross inland consumption of energy, 2004–2014 (1)
(2004 = 100)



(1) 2004: not available. 2005 = 100.
(2) 2014: provisional.
(3) 2005 and 2007: break in series.

Source: Eurostat (online data codes: nrg_100a and cpc_energy)

There were greater fluctuations in the development of gross inland energy consumption among the enlargement countries. Energy consumption in Serbia fell overall by 23.2 % between 2004 and 2014, the largest decrease among the enlargement countries and the only enlargement country to record a bigger reduction than that for the EU-28; it should however be noted that there are breaks in the time series. Although gross inland energy consumption in the former Yugoslav Republic of Macedonia was relatively volatile in recent years, the overall impact was a 4.4 % reduction when comparing 2004 and 2014. By contrast, gross inland consumption of energy rose in the other five enlargement countries, with single-digit overall increases in Albania, Kosovo and Montenegro (2005–2014), and far higher rates of change in Turkey (up 41.1 %) and Bosnia and Herzegovina (116.9 %).

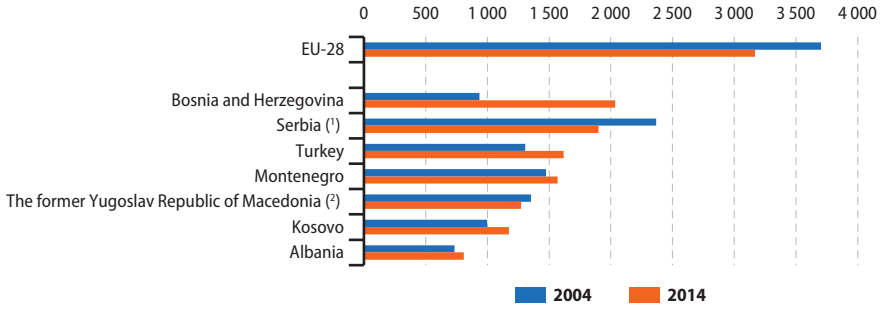
Figure 11.4 provides information on the development of energy consumption relative to population: it shows that gross inland consumption of energy in the EU-28 fell from 3 703 kilograms of oil equivalent (kgoe) per inhabitant in 2004 to 3 168 kgoe per inhabitant in 2014, a reduction of 14.5 %.

Bosnia and Herzegovina (2 035 kgoe per inhabitant) recorded the highest level of consumption per inhabitant in 2014 among the enlargement countries. At the other end of the range, the level of consumption in Albania (808 kgoe per inhabitant) was approximately one quarter of the average level recorded in the EU-28.

Energy dependency is calculated as the ratio of net imports (imports – exports) to gross inland consumption, expressed as a percentage; a negative ratio indicates that a country is a net exporter of energy products. The EU-28's energy dependency was 53.5 % in 2014. Turkey had the highest energy dependency ratio in 2014, as net imports accounted for 78.3 % of gross inland energy consumption. The former Yugoslav Republic of Macedonia was the only other enlargement country to report that net imports supplied more than half (52.6 %) of gross inland energy consumption; across the remaining enlargement countries this ratio was within the range of 20–30 %.

Between 2004 and 2014, the EU-28's energy dependency rose by 3.3 percentage points. There were also increases in the dependency ratios of Kosovo, Turkey, the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina. By contrast, Serbia, Montenegro (2005–2014) and Albania each reported a reduction in energy dependency over the period under consideration.

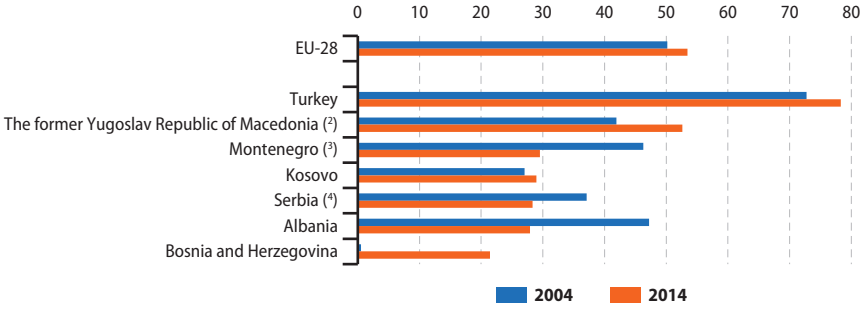
Figure 11.4: Gross inland consumption of energy, 2004 and 2014
(kgoe per inhabitant)



(1) Break in series.
(2) 2014: provisional.

Source: Eurostat (online data codes: nrg_100a, demo_pjan, cpc_energy and cpc_psdemo)

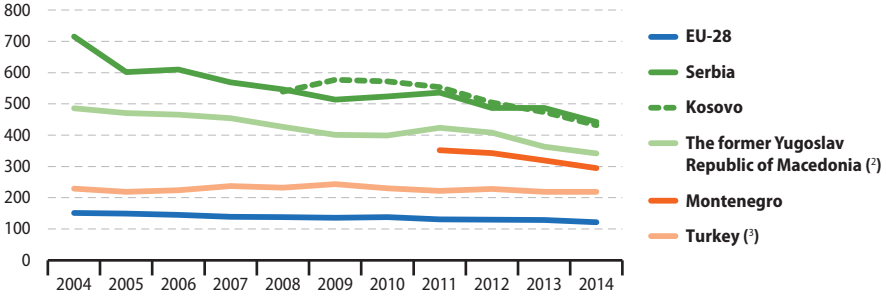
Figure 11.5: Energy dependency, 2004 and 2014 (1)
(%)



(1) For the EU-28: net imports/(gross inland consumption+bunkers)*100. For the enlargement countries: net imports/gross inland consumption*100.in other words without adjusting for bunkers.
(2) 2014: provisional.
(3) 2005 instead of 2004.
(4) Break in series.

Source: Eurostat (online data codes: nrg_100a and cpc_energy)

Figure 11.6: Energy intensity, 2004–2014 (1)
(kgoe per EUR 1 000 of GDP)



(1) Albania and Bosnia and Herzegovina: not available. Based on chain-linked GDP volume data with 2010 reference year.
(2) 2014: provisional.
(3) Based on GDP at 2005 constant prices.

Source: Eurostat (online data code: tsdec360) and Eurostat enlargement data collection

Energy intensity is measured as a ratio which relates the quantity of energy consumed to the level of economic output. The indicator is calculated as gross inland energy consumption (expressed in kgoe) divided by gross domestic product (GDP) in constant prices (or using chain-linked volume data) to remove the effects of inflation. As well as reflecting the efficiency of transforming energy sources (for example to electricity) or converting energy to heat, motion, light and other uses, this measure also depends on a range of factors, such as the economic structure of a country, the climate, the standard of living and transportation patterns/preferences, to name but a few.

In the EU-28, some 122 kgoe of energy were required to produce EUR 1 000 of GDP at 2010 prices (see Figure 11.6). In Turkey, 1.8 times as much energy was required (compared with the EU-28) to produce each unit of economic output (note that for Turkey the GDP data are based on 2005 prices), while in Montenegro this ratio rose to 2.4, in the former Yugoslav Republic of Macedonia to 2.8, and in Serbia and Kosovo to

3.6. The energy intensity of the EU-28 and all of the enlargement countries (for which data are available) was lower in 2014 than in 2004.

Final energy consumption

Final energy consumption is lower than gross inland energy consumption, as some energy is lost during the process of converting fossil fuels into electricity or crude oil into petroleum products, and some is used for non-energy purposes, such as feedstock for the petrochemical industry. Final energy consumption may be analysed by end use, with information on consumption within the industrial sector, the transport sector, households and a residual category of others (largely composed of services).

Industry accounted for approximately one quarter of the EU-28's final energy consumption in 2014 (see Table 11.2); its share rose from 24.0 % in 2009 to 25.9 % in 2014; note that the start of this five-year period (2009) was a low point in industrial activity as a result of the global financial and economic crisis. Several enlargement countries had higher shares of final energy consumption for industry, notably in Turkey where the share of industry reached a high of 32.5 %.

The share of final energy consumed by transport was 33.2 % in the EU-28 in 2014, which, with the exception of Albania (40.7 %), was higher than in the enlargement countries. The relative share of transport in final energy consumption rose between 2009 and 2014 in the EU-28 and three of the enlargement countries, the exceptions being Serbia (no change), Albania (a small fall) and Kosovo (a larger fall); no comparison available for Bosnia and Herzegovina.

The share of final energy consumption by households was just under one quarter (24.8 %) in the EU-28 in 2014, which was a smaller share than in all but one of the enlargement countries; the exception was Turkey, where households accounted for 22.3 % of final energy consumption. Among the enlargement countries, the share of final energy consumption by households peaked in Bosnia and Herzegovina (48.1 % in 2014), while shares of close to two fifths were recorded in Kosovo and Montenegro.

Table 11.2: Analysis of final energy consumption, 2009 and 2014
(%)

	Industry		Transport		Households		Others	
	2009	2014	2009	2014	2009	2014	2009	2014
EU-28	24.0	25.9	32.8	33.2	26.7	24.8	16.5	16.1
Montenegro	29.2	18.8	27.1	30.0	42.3	39.7	1.4	11.5
The former Yugoslav Republic of Macedonia	25.2	29.7	26.3	31.3	32.5	26.1	16.0	12.8
Albania	15.2	18.0	41.6	40.7	26.2	26.9	17.0	14.3
Serbia	25.5	26.4	27.0	27.0	36.0	35.2	11.4	11.5
Turkey	29.4	32.5	23.6	27.5	30.7	22.3	16.3	17.7
Bosnia and Herzegovina	:	20.8	:	22.2	:	48.1	:	8.9
Kosovo	20.4	20.8	30.2	24.3	38.4	41.5	11.0	13.4

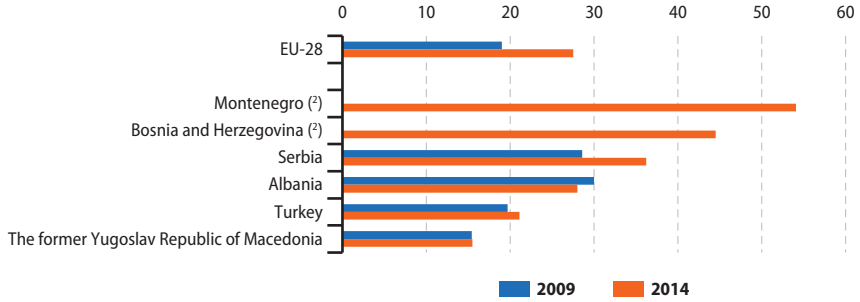
Source: Eurostat (online data code: nrg_100a)

Electricity generation

The use of renewable energy sources for electricity generation is seen as a key element of the EU's energy policy: it should help to reduce dependence on fuel from non-member countries; reduce emissions from carbon-based energy sources; and decouple energy costs from oil prices. The EU-28 came close to its target of a 21 % contribution from renewable energy sources to electricity production by 2010. Its share was 19.7 % and this subsequently rose above the target in 2011 and grew further still to attain 27.5 % by 2014. In the five years between 2009 and 2014 the share of electricity produced from renewable energy sources in the EU-28 increased by 8.5 percentage points (see Figure 11.7).

Hydro-power was often the major source of renewable energy for electricity generation in the enlargement countries, the output of which is dependent (to some degree) on the amount of rainfall (which may vary considerably from one year to the next). In four of the six enlargement countries for which data are available (no information for Kosovo), the propensity to generate electricity from renewable energy sources was above that recorded by the EU-28 in 2014. This was most notably the case in Montenegro, where renewable energy sources accounted for a 54.1 % share of the electricity produced, and in Bosnia and Herzegovina (44.5 %). There were however two enlargement countries where the share of electricity produced from renewable energy sources was lower than in the EU-28, namely, Turkey (21.1 %) and the former Yugoslav Republic of Macedonia (15.5 %).

Figure 11.7: Electricity produced from renewable energy sources, 2009 and 2014 (1)
(% of gross electricity consumption)



(1) Kosovo: not available.
(2) 2009: not available.

Source: Eurostat (online data codes: nrg_ind_335a and cpc_energy)

12 Environment

The Europe 2020 strategy for smart, sustainable and inclusive growth was adopted in 2010: one of its flagship initiatives concerns resource-efficient Europe, while there are three specific targets related to the environment and climate change to be achieved by 2020, namely:

- greenhouse gas emissions should fall to 20 % lower than in 1990;
- 20 % of the energy used in the EU should be from renewables; and
- there should be a 20 % increase in energy efficiency.

Eurostat, in close partnership with the European Environment Agency (EEA), provides environmental statistics, accounts and indicators supporting the development, implementation, monitoring and evaluation of the EU's environmental policies, strategies and initiatives. Data on greenhouse gas emissions, as reported under the United Nations framework convention on climate change (UNFCCC), are collected by the EEA. Eurostat organises and collects environmental statistics in relation to a broad range of data, for example, waste, water, material flows and environmental protection expenditure.

Greenhouse gas and carbon dioxide emissions

The Kyoto Protocol is an international agreement linked to the UNFCCC which was agreed in 1997 and has the objective of curbing global warming. With the exception of Kosovo, all of the enlargement countries ratified the Kyoto Protocol and it entered into force across the region during the period 2005–2009. Under the Kyoto Protocol a number of industrialised and transition economies — referred to as Annex I parties — committed to targets for the reduction of six greenhouse gases or groups of gases, namely: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). The EU is also an Annex I party and was composed of 15 Member States when it adopted the Kyoto Protocol. It agreed to reduce EU-15 greenhouse gas emissions by 8 % during the period 2008–2012 (compared with their 1990 levels). Among other environmental commitments, the EU-28 has subsequently committed to a 20 % reduction in greenhouse gas emissions by 2020. A new agreement on greenhouse gas emissions was reached in Paris in late 2015; this provides the basis for emissions mitigation and adaptation from 2020 onwards.

The indicator presented in Figure 12.1 shows the combined development of emissions for these six gases, based on carbon dioxide equivalents, which make it possible to compare their overall contributions to global warming. The index for total greenhouse gas emissions in the EU-28 was relatively stable up until 2006, although there were progressively large reductions in emissions in 2007, 2008 and 2009, in part related to the global financial and economic crisis and associated reductions in levels of industrial activity. In 2010, greenhouse gas emissions picked up again, reflecting a rebound in economic activity, but in the next four years the quantity of greenhouse gas emissions followed a downward trend; by 2014, the EU-28 index was 18.5 % lower than it had been in 2004.

Like the EU-28, Montenegro recorded an overall decline in its level of greenhouse gas emissions after 2004 (time series available up until 2013), with a particularly strong fall in 2009, reflecting a large contraction in industrial output that was observed in Montenegro during the financial and economic crisis.

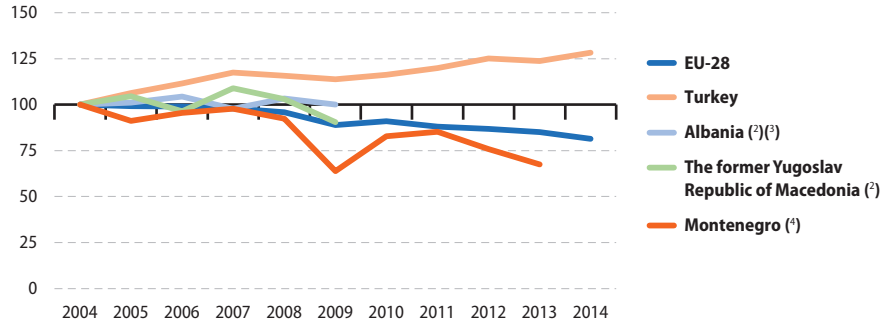
The time series for Turkey reveals that there was an increase in greenhouse gas emissions through to 2007, falls in 2008 and 2009 — therefore also during the crisis — before increases again up until 2012; there was a slight fall in the quantity of Turkish greenhouse gas emissions in 2013, although this was followed by an increase in 2014. A comparison between 2004 and 2014 exposes a level of greenhouse gas emissions in Turkey in 2014 that was 28.3 % higher than it had been a decade before.

There are shorter time series available for Albania and the former Yugoslav Republic of Macedonia, running until 2009. These both show a rather inconsistent development, with neither increases nor decreases dominating.

As noted above, carbon dioxide is one of the greenhouse gases: it has the lowest global warming potential of the six greenhouse gases. Nevertheless, emissions of carbon dioxide were far greater in the EU-28 than for any of the other greenhouse gases even when adjusted for global warming potential. As a consequence, the developments shown in Figure 12.2 for the EU-28 and Turkey reflect to a large extent those already seen in Figure 12.1.

In Montenegro, emissions of carbon dioxide were relatively stable from 2003 until 2007, after which their development became more volatile, with a sharp increase in 2008 followed by an even sharper decrease in 2009 coinciding with the crisis; subsequently there was a large rebound in 2010 as carbon dioxide emissions rose again, following which they fell at a relatively slow pace, and by 2013 they were below their level of a decade before.

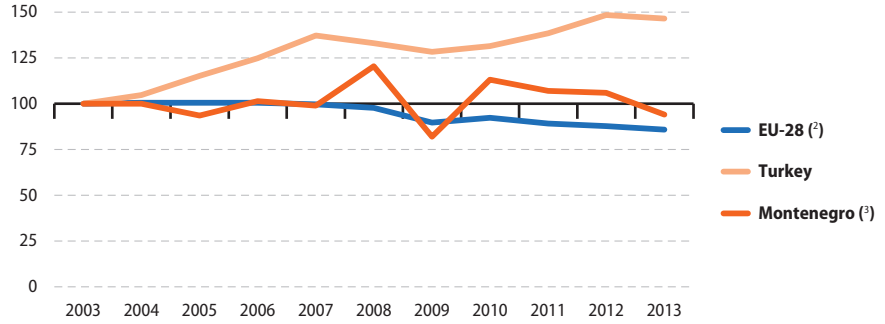
Figure 12.1: Development of total greenhouse gas emissions, 2004–2014 (1)
(2004 = 100; based on CO_2 equivalents)



(1) Serbia, Bosnia and Herzegovina and Kosovo: not available.
(2) 2010–2014: not available.
(3) 2005 and 2008: estimates.
(4) 2014: not available.

Source: Eurostat (online data codes: env_air_gge and cpc_enclimwa)

Figure 12.2: Development of carbon dioxide emissions, 2003–2013 (1)
(2003 = 100)



(1) The former Yugoslav Republic of Macedonia, Albania, Serbia, Bosnia and Herzegovina and Kosovo: not available.
(2) 2003–2008: index based on rates of change for EU-27. 2008–2013: index based on rates of change for EU-28; estimates.
(3) Excluding carbon sinks.

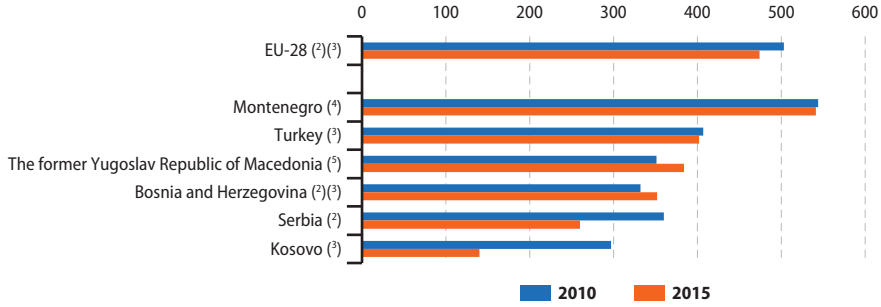
Source: Eurostat (online data codes: env_ac_ainah_r1 and env_ac_ainah_r2) and enlargement data collection

Municipal waste

The management and disposal of waste can have serious environmental implications, taking up space and potentially releasing pollution into the air, water or soil. Municipal waste is that which is collected by, or on behalf of, municipal authorities and disposed of through a waste management system. Municipal waste is mainly produced by households, though similar wastes from sources such as distributive trades, offices and public institutions are included; waste from agriculture and from industry is excluded. For areas not covered by a municipal waste collection scheme the reporting countries estimate the amount of waste generated. Municipal waste includes the following categories of waste: organic, paper and cardboard, textiles, plastics, glass, metals and other waste.

In 2014, the average amount of municipal waste generated per inhabitant in the EU-28 was 474 kilograms (kg), in other words, just less than half a tonne. This represented a fall of about 30 kg in the quantity of waste generated in the EU-28 since 2010, an overall reduction of 5.8 %. Among the enlargement countries, the average quantity of municipal waste that was generated ranged from 260 kg per inhabitant in Serbia to 402 kg per inhabitant in Turkey (2014 data), with Montenegro (541 kg per inhabitant) above this range (and also above the EU-28 average) and Kosovo (140 kg per inhabitant; 2014 data) below it (see Figure 12.3). The quantity of municipal waste generated per inhabitant increased by 6.0 % overall in Bosnia and Herzegovina (2010–2014) and by 9.4 % in the former Yugoslav Republic of Macedonia (2010–2013), while it fell elsewhere (no data available for Albania); the largest reductions were registered in Serbia and in Kosovo (2010–2014).

Figure 12.3: Quantity of municipal waste generated per person, 2010 and 2015
(kilograms per inhabitant)



(1) Albania: not available.
(2) Estimates.
(3) 2014 instead of 2015.
(4) 2011 instead of 2010.
(5) 2013 instead of 2015.

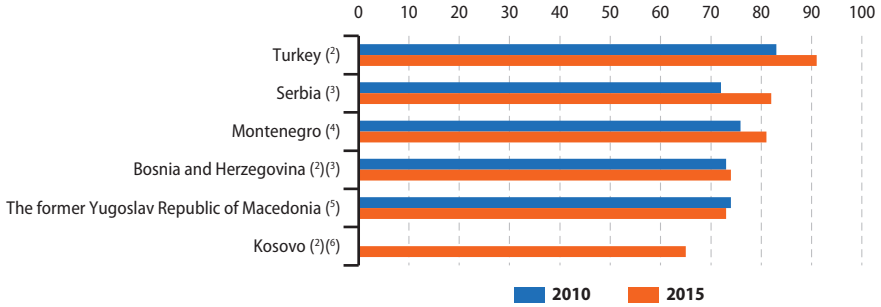
Source: Eurostat (online data code: env_wasmun) and enlargement data collection

Municipal waste can be treated in a number of ways, most notably by landfill, incineration (with or without energy recovery) and recovery (for example, material recycling and composting). The proportion of households from which household waste is regularly collected by or on behalf of municipal authorities was quite similar across the enlargement countries, ranging from 73 % in the former Yugoslav Republic of Macedonia (2013 data) to 82 % in Serbia (2015 data), with the proportion in Turkey (91 %; 2014 data) above this range and in Kosovo (65 %; 2014 data) below this range.

In the five enlargement countries for which data are available (no data for Albania, partial data for Kosovo), the proportion of households from which waste was regularly collected was stable or increased between 2010 and 2015 (see Figure 12.4). There was almost no change in the proportions recorded in Bosnia and Herzegovina (2010–2014) and in the former Yugoslav Republic of Macedonia (2010–2013), while the share of households rose in Montenegro (2011–2015) by 5 percentage points, in Turkey (2010–2014) by 8 percentage points, and in Serbia (2010–2015) by 10 percentage points.

Figure 12.4: Proportion of households served by municipal waste collection services, 2010 and 2015 (1)

(%)



(1) Albania: not available.
(2) 2014 instead of 2015.
(3) Estimates.
(4) 2011 instead of 2010.
(5) 2013 instead of 2015.
(6) 2010: not available.

Source: Eurostat enlargement data collection

Wastewater

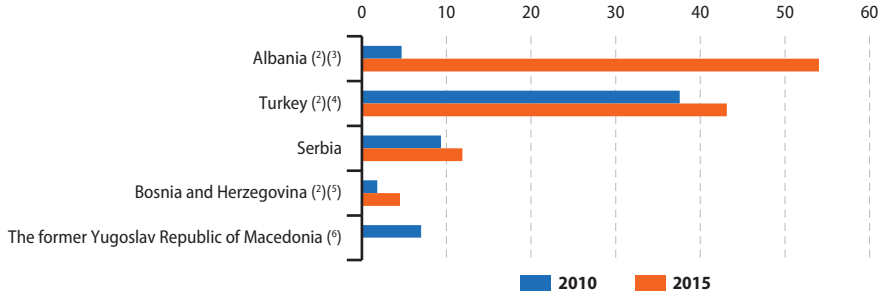
The enlargement countries are not immune to many of the environmental issues the world is facing, and issues such as the quality and scarcity of water or soil erosion are particularly important. Indeed, water is essential for life and an indispensable resource for the economy (especially within the agricultural sector).

Water is supplied by economic units engaged in the collection, purification and distribution of water, while water suppliers are often also responsible for collecting wastewater. The proportion of the population connected to wastewater treatment plants covers those connected to any kind of sewage treatment facility; it excludes those connected to wastewater systems that simply discharge wastewater (without any treatment) into the environment. Indeed, when wastewater is released untreated back onto the land, or into the sea or rivers, it can become a significant health risk.

In each of the five enlargement countries shown in Figure 12.5 the proportion of the population connected to urban wastewater treatment systems (with at least secondary treatment) was relatively low, only standing above one half (54 %) in Albania in 2014. However, the share of the population connected to urban wastewater treatment systems increased in the four enlargement countries for which a comparison is available between 2010 and 2015.

Figure 12.5: Proportion of population connected to urban wastewater treatment, 2010 and 2015 (1)

(%)



(1) Montenegro and Kosovo: not available.
(2) 2014 instead of 2015.
(3) Break in series. 2014: estimate.
(4) 2010: Share of the municipal population only.
(5) Estimates.
(6) 2009 instead of 2010. 2015: not available.

Source: Eurostat (online data code: env_ww_con) and enlargement data collection

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Key figures on enlargement countries

2017 EDITION

The 2017 edition of *Key figures on enlargement countries* presents updated series of key statistical data for five candidate countries and two potential candidates, as well as data for the EU-28. The candidate countries, at the time of writing were Montenegro, the former Yugoslav Republic of Macedonia, Albania, Serbia and Turkey, while the potential candidates were Bosnia and Herzegovina and Kosovo (this designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence).

The tables, figures and associated commentary and methodological notes concern key social, economic and environmental themes for which data are collected annually from the enlargement countries through a series of harmonised questionnaires or as part of Eurostat's regular collection of data on demography, national accounts, energy and international trade.

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