

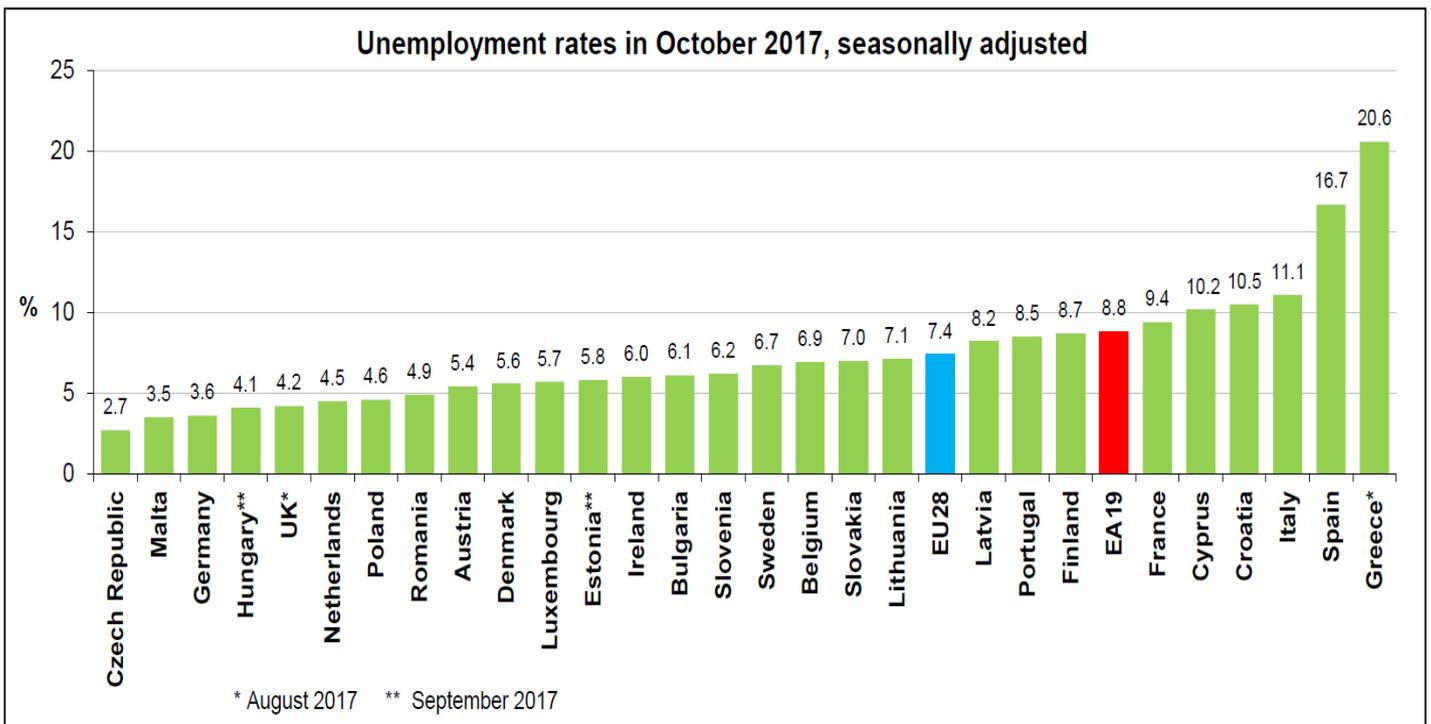
NEWSLETTER on STI Data and Indicators

DG RTD, A4, Analysis and monitoring of national research policies

1. Eurostat data on unemployment

On 30 November 2017, **Eurostat** published the October 2017 *unemployment data*. According to Eurostat, the EU28 unemployment rate was 7.4% in October 2017, the lowest rate recorded in the **EU28** since November 2008, down from 7.5% in September 2017 and from 8.3% in October 2016. Among the Member States, the lowest unemployment rates in October 2017 were recorded in the Czech Republic (2.7%), Malta (3.5%) and Germany (3.6%). The highest unemployment rates were observed in Greece (20.6% in August 2017) and Spain (16.7%). Compared with a year ago, the unemployment rate decreased in all Member States, except Finland where it remained stable. The largest decreases were registered in Cyprus and Greece.

18.2 million men and women were unemployed in the EU28 in October 2017, of which 3.7 million young persons (under 25). The unemployment rate for females (7.6%) was slightly higher than the rate for males (7.2%). In October 2017, the youth unemployment rate was 16.5% in the EU28, down from 18.2% in October 2016. The lowest rates were observed in Germany (6.6%) and the Czech Republic (7.2%), while Greece (40.2% in August 2017), Spain (38.2%) and Italy (34.7%) had the highest rates. Since the majority of young people under 25 are still in education or training the share of unemployed among all young people is, however, much lower.



More info: <http://ec.europa.eu/eurostat/documents/2995521/8491608/3-30112017-BP-EN.pdf/5206b358-348f-416b-877e-70a75d58f1ef>

2. Eurostat data on R&D expenditure

On 15 November 2017, **Eurostat** released its data on R&D expenditure on the publicly accessible database Eurobase. On 1 December 2017 a press release showing key data followed. For most countries (except EE, LV, HU, RO, SK, FI) 2016 results are still provisional.

The data show a stagnation of R&D intensity, reaching 2.03% of GDP, as in 2015. However, compared to 2006 R&D intensity increased by 0.27 percentage points.

Sweden is still the EU country with the highest R&D intensity (3.25%), Austria now comes second (3.09%), followed by Germany (2.94%) and Denmark (2.87%), Finland, from 2008-2012 the EU country with the highest R&D intensity, now only ranks 5th. Latvia (0.44%), Romania (0.48%) and Cyprus (0.5%) have the lowest R&D intensity in the EU. Outside Europe (results for 2015) South Korea (4.23%) and Japan (3.29%) show a high R&D intensity, whilst China has overtaken the EU.

Research and development expenditure, 2006 and 2016

	R&D intensity (R&D expenditure as % of GDP)		R&D expenditure (in millions of euro)	
	2006	2016	2006	2016
EU	1.76	2.03	216 330	302 220
Belgium	1.81	2.49	5 927	10 518
Bulgaria	0.45	0.78	121	375
Czech Republic	1.23	1.68	1 527	2 963
Denmark	2.40	2.87	5 420	7 967
Germany	2.46	2.94	58 779	92 419
Estonia	1.12	1.28	151	270
Ireland	1.20	1.18	2 217	3 243
Greece	0.56	0.99	1 223	1 733
Spain	1.17	1.19	11 815	13 307
France*	2.05	2.22	37 904	48 643
Croatia	0.74	0.84	298	388
Italy	1.09	1.29	16 831	21 611
Cyprus	0.38	0.50	62	91
Latvia	0.65	0.44	112	110
Lithuania	0.79	0.74	191	286
Luxembourg	1.67	1.24	564	659
Hungary	0.98	1.21	900	1 372
Malta	0.58	0.61	31	61
Netherlands	1.76	2.03	10 175	14 281
Austria	2.36	3.09	6 319	10 906
Poland	0.55	0.97	1 513	4 112
Portugal	0.95	1.27	1 587	2 348
Romania	0.45	0.48	444	818
Slovenia	1.53	2.00	484	809
Slovakia	0.48	0.79	217	641
Finland	3.34	2.75	5 761	5 926
Sweden	3.50	3.25	11 722	15 141
United Kingdom	1.59	1.69	34 037	40 451
Iceland	2.92	2.08	398	381
Norway	1.46	2.04	4 008	6 838
Montenegro*	:	0.38	:	14
FYR of Macedonia*	:	0.44	:	40
Serbia	:	0.89	:	308
Turkey*	0.56	0.88	2 432	6 814
China*	1.37	2.07	30 002	203 202
Japan*	3.28	3.29	118 295	129 819
Russia*	1.01	1.10	8 466	13 437
South Korea*	2.83	4.23	22 815	52 493
United States*	2.55	2.79	281 402	453 261

: Data not available

* 2015 data instead of 2016

2016 data are preliminary for all countries, except Estonia, Latvia, Hungary, Romania, Slovakia, Finland, Iceland and Serbia.

The source dataset can be found [here](#).

More info: <http://ec.europa.eu/eurostat/documents/2995521/8493770/9-01122017-AP-EN.pdf/94cc03d5-693b-4c1d-b5ca-8d32703591e7>

3. European Economic Forecast Autumn 2017 (DG ECFIN)

On 9 November 2017, the **Commission (DG ECFIN)** published the **Autumn 2017 economic forecast**.

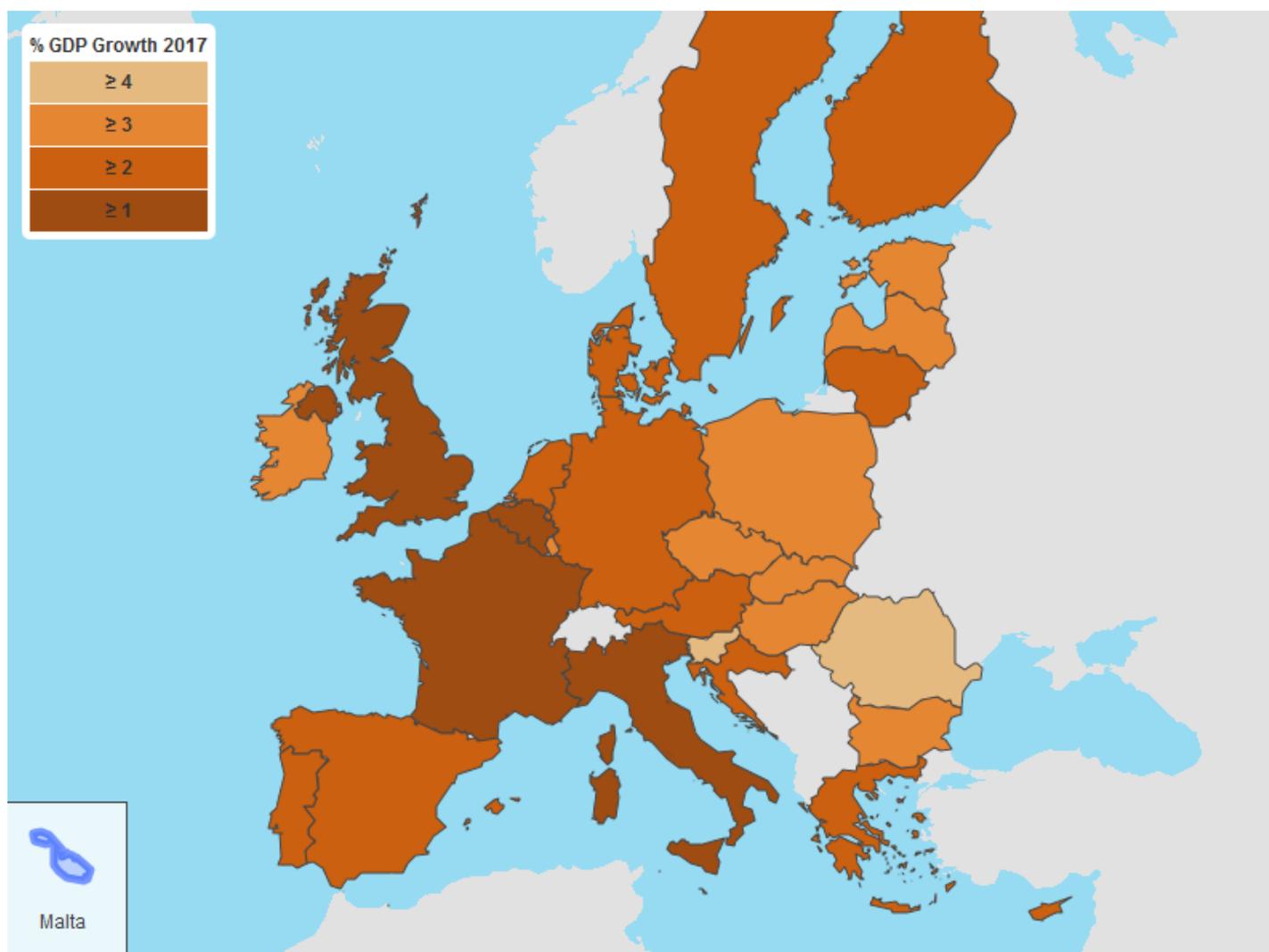
According to the forecast the *euro area* economy is this year on track to grow at its fastest pace in a decade, with real GDP growth forecast at 2.2%. This is substantially higher than expected in spring (1.7%). The EU economy as a whole is also set to beat expectations with robust growth of 2.3% this year (up from 1.9% in spring). Growth is expected to continue in both the euro area and in the EU, in the latter at 2.1% in 2018 and at 1.9% in 2019.

The EU unemployment rate is forecast to decline from 7.8% in 2017 to 7.3% in 2018 and 7.0 % in 2019. Inflation is forecast to dip from 1.7% in 2017 to 1.6%

in 2018 but accelerate to 1.7% in 2019. The budget balance is forecast to improve from -1.2% in 2017 to -1.1% in 2018 and -0.9% in 2019.

Romania is forecast to have the highest GDP growth (5.7%) in 2017, followed by Malta (5.6%) and Slovenia (4.7%). The slowest growth in 2017 is expected for Italy (1.5%) and the UK (1.5%).

Malta (4.9%) and Romania are forecast to have the highest growth (4.4%) in 2018, followed by Slovenia (4.0%) and Poland (3.8%). Romania and Malta (both 4.1%) will be the fastest growing EU economies in 2019. According to the forecast Italy and the UK (both 1.3%) will be the EU countries with the slowest growth in 2018 and 2019 (UK 1.1%, Italy 1.0%).



More info: https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/autumn-2017-economic-forecast_en

On 16 November 2017 the **Annual Growth Survey** 2017 was published:

More info: https://ec.europa.eu/info/sites/info/files/2017-european-semester-annual-growth-survey_en_0.pdf

4. Commission's Education and Training Monitor 2017

On 9 November 2017 the **Commission (DG EAC)** published the 2017 edition of the annual **Education and Training Monitor**.

The Monitor assesses progress towards the four Common Objectives set in 2009 (Making lifelong learning and mobility a reality, Improving the quality and efficiency of education and training, Promoting equity, social cohesion and active citizenship, Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training) via 6 targets.

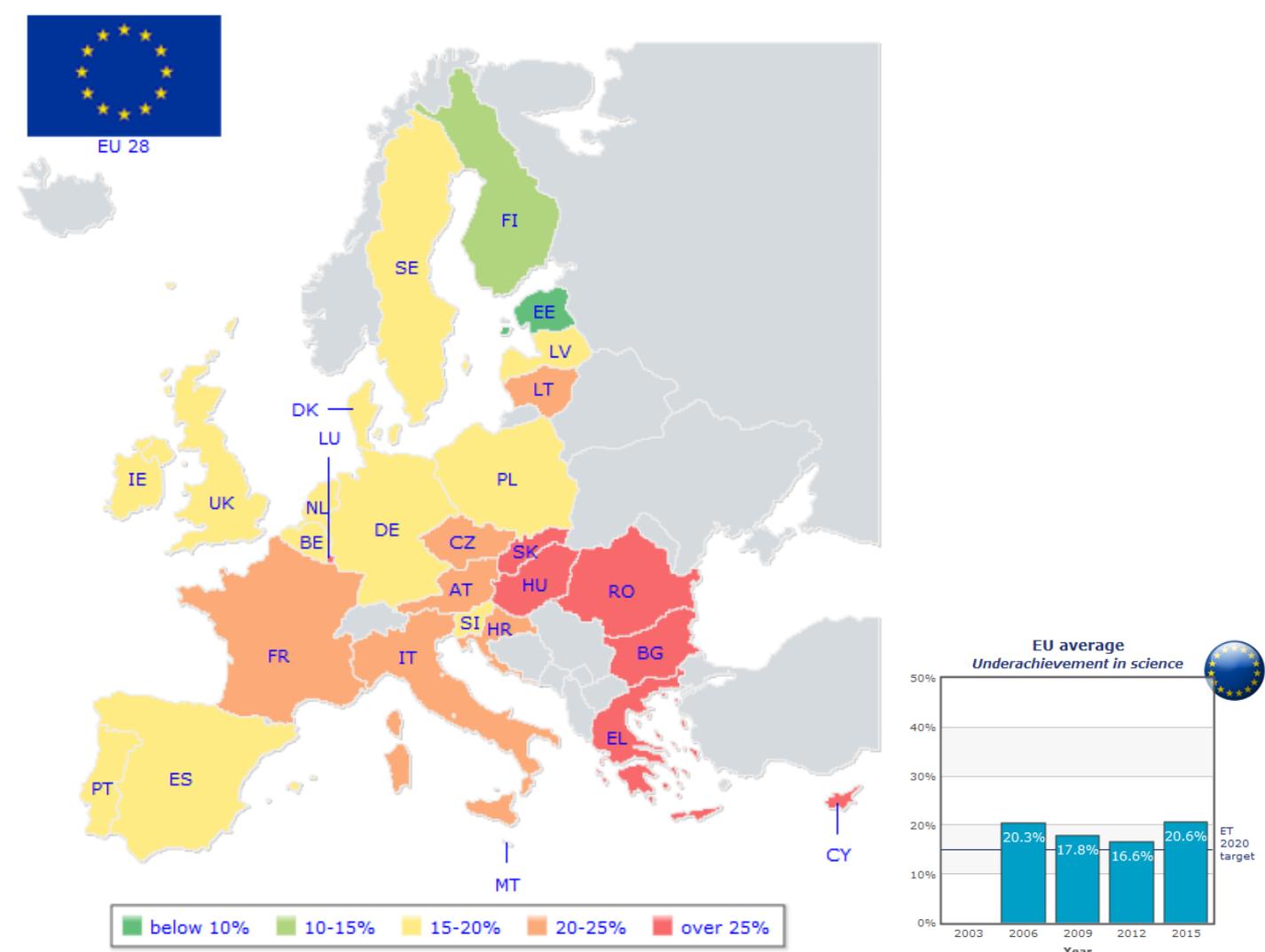
As regards *early leavers from education and training* the share of 10.6% reached in 2016 is already close to the 10% EU target for 2020.

The same is true for *tertiary attainment of 30-34 year olds*, the result for 2016 (39.1%) is already close to the 40% 2020 target. At a participation rate of 94.8% *early childhood education* is also already close to the target

(95% in 2020). As regards the employment rate of recent graduates (target 82%) performance declined in the years after the recession but is now improving (2016 78.2%). As regards adult participation in lifelong learning (target: at least 15%) performance is still clearly below the target (2016 10.8%) and progress is slow. The Nordic countries are leading in adult participation in learning.

There has been also less progress on the 15% target on underachievement in reading (2015 EU result: 19.7% of 15 year olds), maths (2015: 22.2%) and science (2015: 20.6%). The graph below shows that the best performers as regards the share of underachievers in science are Estonia, Finland and Slovenia, while the lowest performers are Cyprus, Romania and Bulgaria. On an EU level performance (as measured by the 3-yearly OECD PISA study) improved between 2006 and 2012 but has deteriorated since.

Underachievement in Science 2015



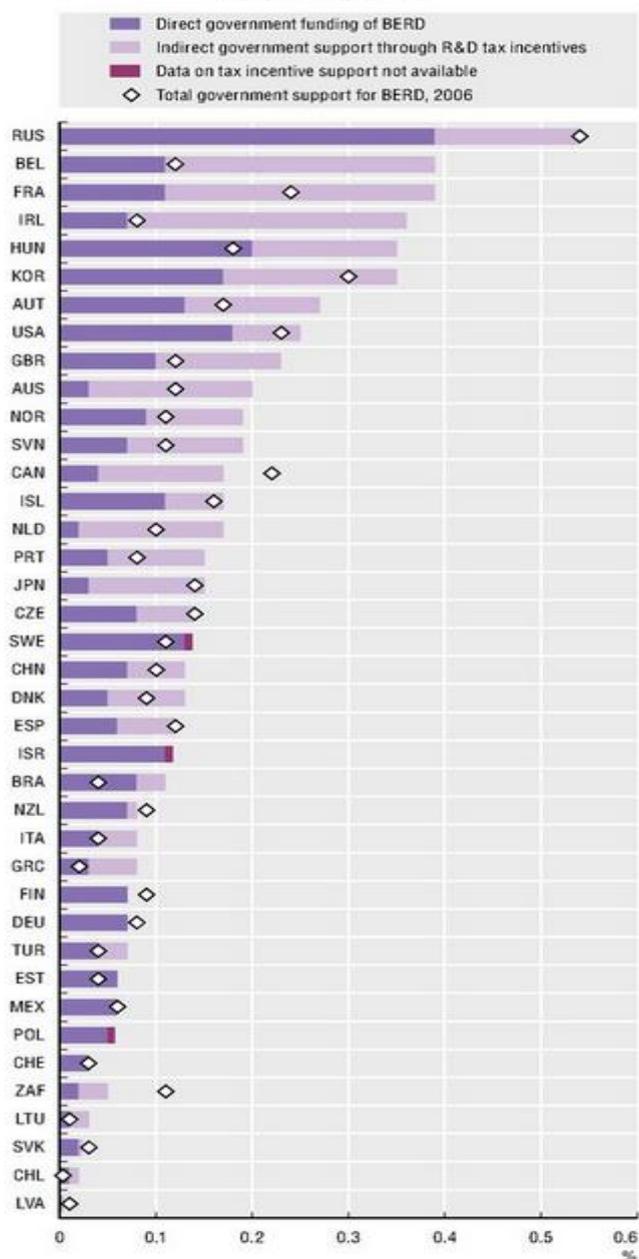
More information: https://ec.europa.eu/education/policy/strategic-framework/et-monitor_en

5. OECD STI Scoreboard 2017

On 22 November 2017 the **OECD** published the 2017 edition of the biennial **Science, Technology and Industry Scoreboard**. The publication is subtitled 'The Digital Transformation', showing the focus of the new edition. Among the many policy relevant indicators, a high share of them relating to IT, the two shown in the charts below complement the Eurostat data on R&D expenditure (shown under point 2).

The chart on direct government funding and tax support for business R&D shows for the reference year 2015 that as a % of GDP direct government funding of business R&D is relatively high in Russia, South Korea and the US.

Direct government funding and tax support for business R&D, 2015
As a percentage of GDP

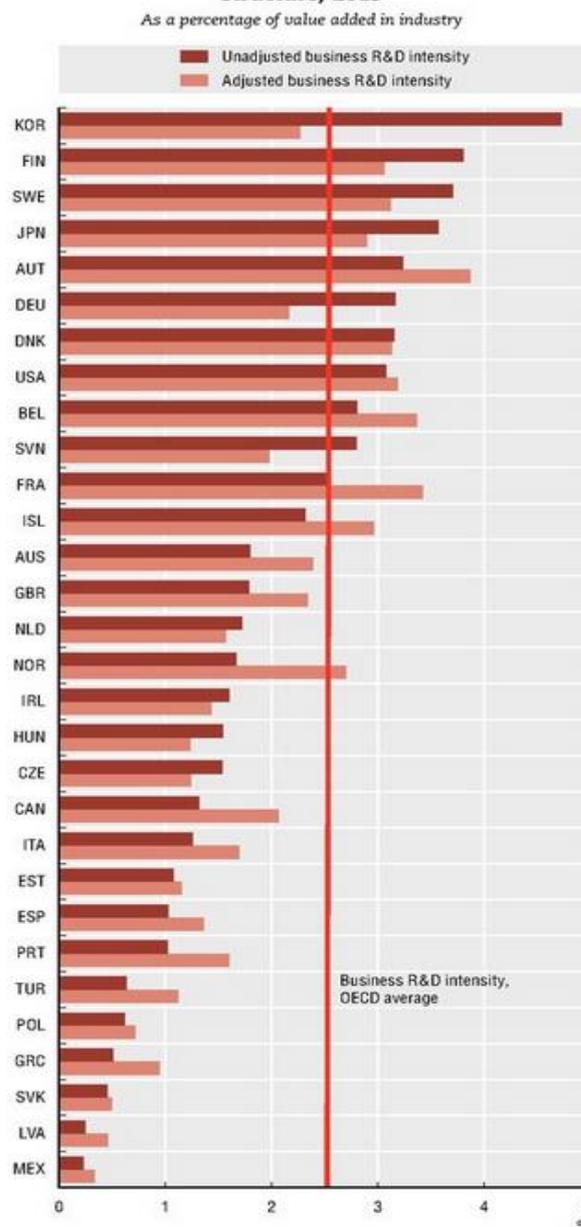


Source: OECD, R&D Tax Incentive Indicators, <http://oe.cd/rdtax>, July 2017. StatLink contains more data. See chapter notes.

StatLink <http://dx.doi.org/10.1787/888933619410>

In the EU it is highest in Hungary and Sweden. Tax incentives for business R&D are relatively high in Belgium, France and Ireland, while Germany, Finland and Estonia do not have such incentives. A second indicator is business R&D intensity adjusted for industrial structure (weighted average of the R&D intensities of a country's industrial sectors). When adjusting for industrial structure Austria has the highest business R&D among EU countries, followed by France and Belgium. Business R&D intensity on the other hand is relatively low in Germany if adjusted for industrial structure. The same is true for South Korea.

Business R&D intensity adjusted for industrial structure, 2015
As a percentage of value added in industry



Source: OECD calculations based on the ANBERD Database, <http://oe.cd/anberd>, the National Accounts (SNA) Database, the Structural Analysis (STAN) Database, <http://oe.cd/stan>, Main Science and Technology Indicators Database, <http://oe.cd/msti>, and Research and Development Statistics Database, <http://oe.cd/rds>, June 2017. See chapter notes.

StatLink <http://dx.doi.org/10.1787/888933619524>

More info: <http://www.oecd.org/sti/scoreboard.htm>

6. Miscellaneous results from national data sources

UK: yet more unicorn companies

At the beginning of 2017 there were 7 unicorn companies (start-ups with a market valuation of at least 1 bn \$) in the UK. In April 2017 the beverage company *Brewdog* joined the list, in May the Augmented/Virtual reality company *Improbable*, and in September the on demand company *Deliveroo*. In October another UK unicorn was added to the list, the financial services company *OakNorth Bank*. The boom continued in November with two additions to the UK unicorn list: *BGL Group*, a Fintech

company and *Radius Payments Solutions* and Internet Software and Services company.

14 and hence more than half of the 26 EU unicorn companies are based in the UK (12 unicorns are based in other EU countries, of which DE 3, FR 2, SE 2, NL 2, LU 1, CZ 1, MT 1)

More info:

<https://www.cbinsights.com/research-unicorn-companies>

UK: net international migration declining

In November the UK Statistical office (ONS) published international migration statistics for the UK for the year ending in June 2017.

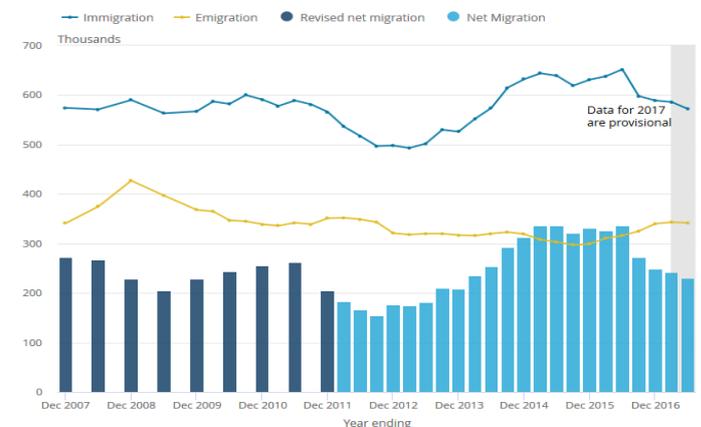
According to ONS, immigration amounted to 572,000, down 80,000, emigration to 342,000, up 26,000. The resulting net long-term international migration was +230,000 in the year ending (YE) June 2017, down 106,000 from YE June 2016.

The 80,000 decrease in immigration included falls for both EU citizens (down 54,000 to 230,000) and non-EU citizens (down 28,000 to 263,000); EU emigration increased by 28,000 to 123,000 in YE June 2017.

For 2016 final estimates are available. In 2016. The largest inflow of immigrants to the UK was from Romania (50,000), the largest outflow of British citizens emigrating was to Australia (25,000) and of non-British citizens to Poland (20,000).

Figure 1: Long-Term International Migration

UK, 2007 to 2017 (year ending June 2017)



More

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration>

info:

Czech Republic: EU's leading toy exporter

In 2011 the Czech Republic overtook Germany as the EU's leading toy exporter (Germany is still the EU's leading toy producer). In 2016 The EU exports of toys to the rest of the world amounted to 1.5 bn €, of which 32% came from the Czech Republic and 22% from Germany. The Czech Republic is also leading in intra-EU exports of toys where it has a share of 22%, while Germany's share is 18% (of 8.2 bn € exports). The world's largest toy exporter is, however, China, 85% of toy imports of the EU (6.1 bn€ out of 7.2 bn €) are from China.

The Czech Toy Manufacturers Association estimates that there are currently some 230 traditional toy manufacturer's in the country, but the Ministry for Trade and Industry believes the figure to be much higher.

In 2015 the Danish toy company LEGO expanded its Czech production site at Kladno, increasing employment there by 800 to reach 2000.

The trade association *Toy Industries of Europe* estimates that the toy industry in the EU comprises 5000 companies, employs 220 000 people and represents 16.5 bn€ sales in the EU. According to a more narrow manufacturing related definition the toy industry in the EU employs about 50 000 people and has a production volume of about 6 bn Euro.

More info:

<https://news.expats.cz/weekly-czech-news/czech-toys-poised-for-worldwide-acclaim-in-2016/>

<http://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20171205-1?inheritRedirect=true&redirect=%2Feurostat%2F>

Cyprus: Video gaming company largest taxpayer

Wargaming is a video game company founded in 1998 by Viktor Kislyi in Minsk/Belarus. 'World of Tanks' is the company's most popular multi-player game. In 2011 a holding company with headquarters in Nicosia/Cyprus was founded. In the meantime more of the staff of 1400 has moved to Cyprus and Wargaming is now occupying

the tallest office building of Nicosia. Wargaming is currently also the largest taxpayer in Cyprus and one of the largest R&D investors outside the financial sector.

More info:

[https://en.wikipedia.org/wiki/Wargaming_\(company\)](https://en.wikipedia.org/wiki/Wargaming_(company))

Calendar of data releases and indicator based publications

Update of: 30/11/2017 (grey= already published)

2017	Eurostat data updates	Commission indicator based reports	Data and indicator based reports of other organisations
January			Transparency International Corruption Perception Index Bloomberg Innovation Index
February	Tertiary attainment (2016, prov.) High growth enterprises data (provisional, 2015)	Winter forecast (ECFIN)	OECD MSTI statistics (R&D expenditure)
March		DESI indicator (CNECT)	European Patent Office , annual results Reuters Most Innov. Institutions OICA world motor vehicle production data OECD R&D Statistics
April	Education headline indicators (LFS)		Internet Minute (Excelacom/Allaccess)
May	High-tech trade (2016) Venture capital (2016) Education enrolment, graduates Knowledge-int. activities (2016)	Spring Forecast (ECFIN) Skills forecast (Cedefop) Europe 2020 publication (ESTAT)	Invest Europe European Private Equity Report IMD World Competitiveness Yearbook
June	Education spending Employment high-tech (2016) HRST education inflows (2015)	European Innovation Scoreboard (GROW/RTD) Regional Innovation Scoreboard (GROW/RTD)	OECD MSTI publication Times Higher Ed. Reputations Ranking WIPO/Cornell/INSEAD Global Innovation Index
July	IPR (Patents, 2014), Community Trademarks (2016), RC Designs (2016)		UNESCO UIS STI stats release OECD Education at a Glance
August			Academic Ranking of World Universities (Shanghai)
September	Final high growth ent. data (2015) Economic data on high-tech (2016)		WEF Global Competitiveness Index
October	GBAORD (2016 preliminary)		World Bank Doing Business
November	R&D intensity (2016 preliminary, 2015 final) Knowledge-int. activities (2016) Employment high-tech (2016)	Autumn Forecast (ECFIN) Education Monitor (EAC) Annual Growth Survey (ECFIN)	Top500.org: Top 500 Supercomputer list OECD STI Scoreboard (2-yearly)
December	ICT household data (2016) ICT enterprise data (2016) HRST stocks (2016)	Industrial R&D Investment Scoreboard (JRC) Joint Employment Report (EMPL)	WIPO World Intellectual Property Indicators

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