



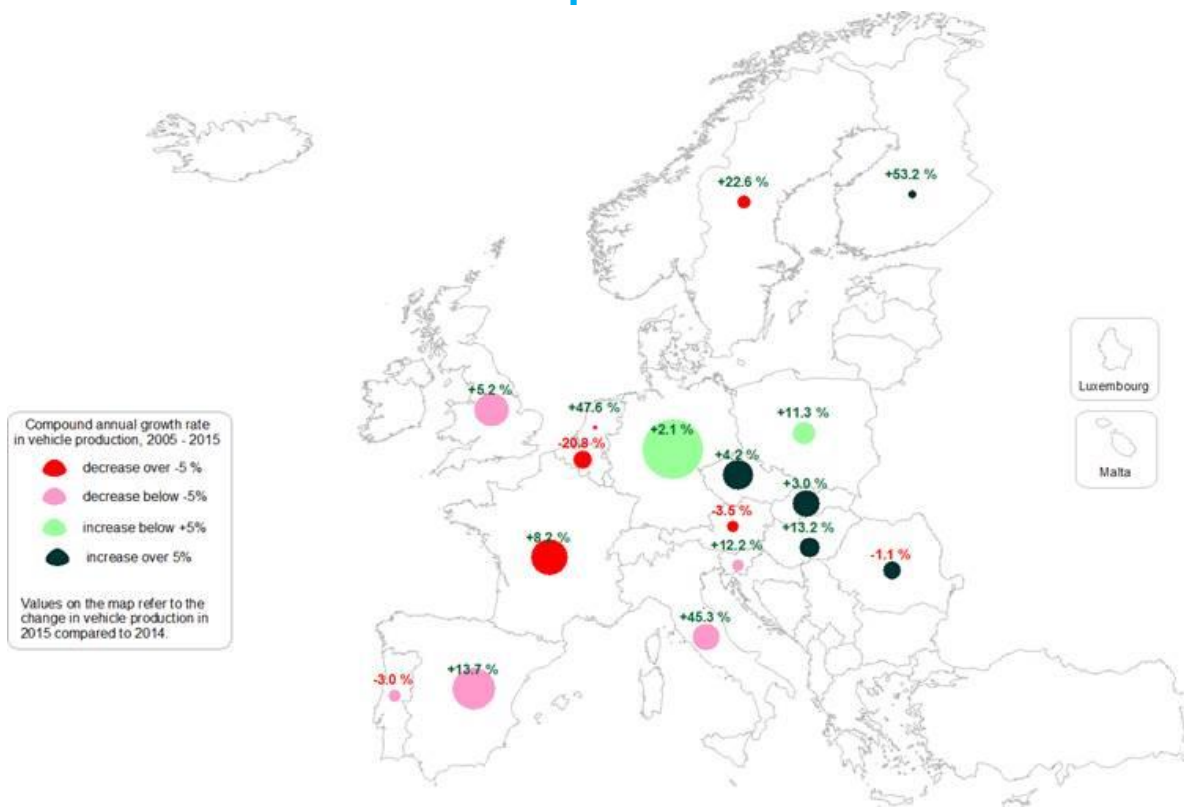
European  
Commission

Issue March 2016

# NEWSLETTER on STI Data and Indicators

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

## 1. OICA statistics on motor vehicle production in 2015



Source: DG Research and Innovation - Unit for the Analysis and Monitoring of National Research Policies  
Data: Organisation Internationale des Constructeurs d'Automobiles (OICA)  
Note: Size of the bubbles correspond to the number of vehicle sold in 2015.

**OICA** (the **International Association of Motor Vehicle Manufacturers**) published in March 2016 its motor vehicle production data (cars and commercial vehicles) for 2015. In 2015 motor vehicles production increased in the EU by 6.1% to reach 18.2 million, while the world total increased by only 1.0% (to reach 90.7 million). While China was the largest producer of motor vehicles in 2015 (24.5 million, +3.3%), the EU came second, followed by the US (12.1 m, +3.8%) and Japan (9.3 m, -5.1%). Data for the last decade reveal a shift of production in the EU from southern and western Europe (an exception being Germany) to central and eastern

Europe, with the strongest growth in Slovakia, the Czech Republic and Romania (see map above, the colours of the circles show the long term growth). After a long decline in vehicle production output strongly increased in Italy in 2015 (+45.3%). Other western and southern European countries, where the long term decline stopped, include Sweden (+22.6%), Spain (+13.7%), France and the UK, while vehicle production in Belgium (-20.8%), Portugal and Austria continued to shrink. Hungary (+13.2%), Poland (+11.3%), the Czech Republic and Slovakia were continuing their growth path in 2015, while production in Romania slightly declined (-1.1%).

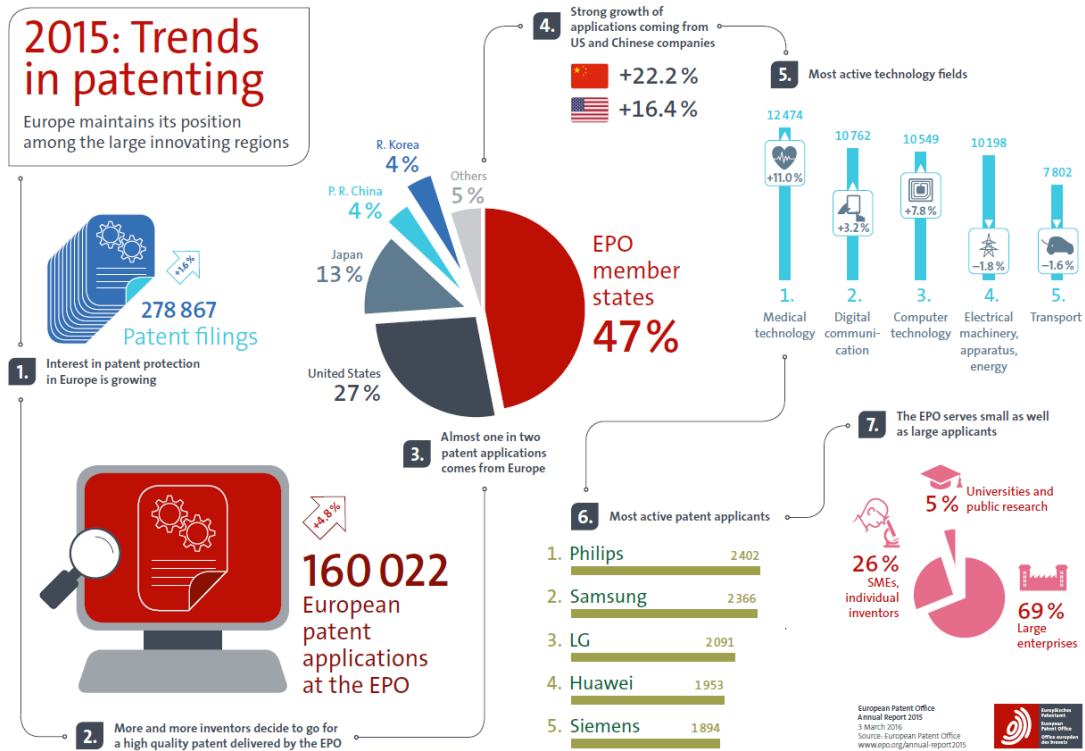
**More info:** <http://www.oica.net/category/production-statistics/>

Research and  
Innovation

## 2. Data on EPO patent applications 2015

On 3 March 2016 the **European Patent Office (EPO)** held a media event on 2015 patent trends. The release revealed that the number of EPO patent applications increased in 2015 by 4.8% compared to 2014 to reach 160 022 (the number of patent filings increased at the same time by

1.6% to 278 867). 47% of these patent applications came from EPO member states, 27% from the US, 13% from Japan, 4% from South Korea and 4% from China (see EPO infographic below).



While there is a balance with the Japanese JPO, EPO states file a much higher number of applications at the KIPO/Korea, at the SIPO/China or at the USPTO (USA) than those countries file at the EPO.

Top 10 countries for European patent applications (2015): 1. USA 42 692 (+16.4%), 2. Germany 24 820 (-3.2%), 3. Japan 21 426 (-3.1%), 4. France 10 781 (+1.6%), 5. Netherlands 7 100 (+3.3%), 6. Switzerland 7 088 (+2.6%), 7. South Korea 6 411 (+4.0%), 8. China 5 721 (+22.2%), 9. UK 5 037 (+5.7%), 10. Italy 3 979 (+9.0%)

Growth rates (2015): China and the US were among the countries with the highest growth in EPO patents. In the EU there was a convergence in applications. Countries, which traditionally had high figures per inhabitant showed a declining trend in applications: Denmark -2.7%, Germany -3.7%, Finland -8.3%. Lower volume countries showed good growth rates in 2015: Czech Republic +27.5%, Portugal +21.2%, Poland +17.8%.

Patent applications per million inhabitants: leading European country was Switzerland (873), followed by the Netherlands (419), Sweden (392), Finland (365), Denmark (346), Germany (307).

Leading companies: In 2015 Philips replaced Samsung as the company with the highest number of EPO patent applications. Three other European companies are in the top 10: Siemens, Robert Bosch and BASF (all based in Germany). There are three US companies (United Technologies, Qualcomm and General Electric), two Korean companies (Samsung, LG) and one Chinese company (Huawei) in the top 10, but no Japanese companies (which, however, appear in the Top 20).

Most active technology fields were medical technology, digital communication and computer technology.

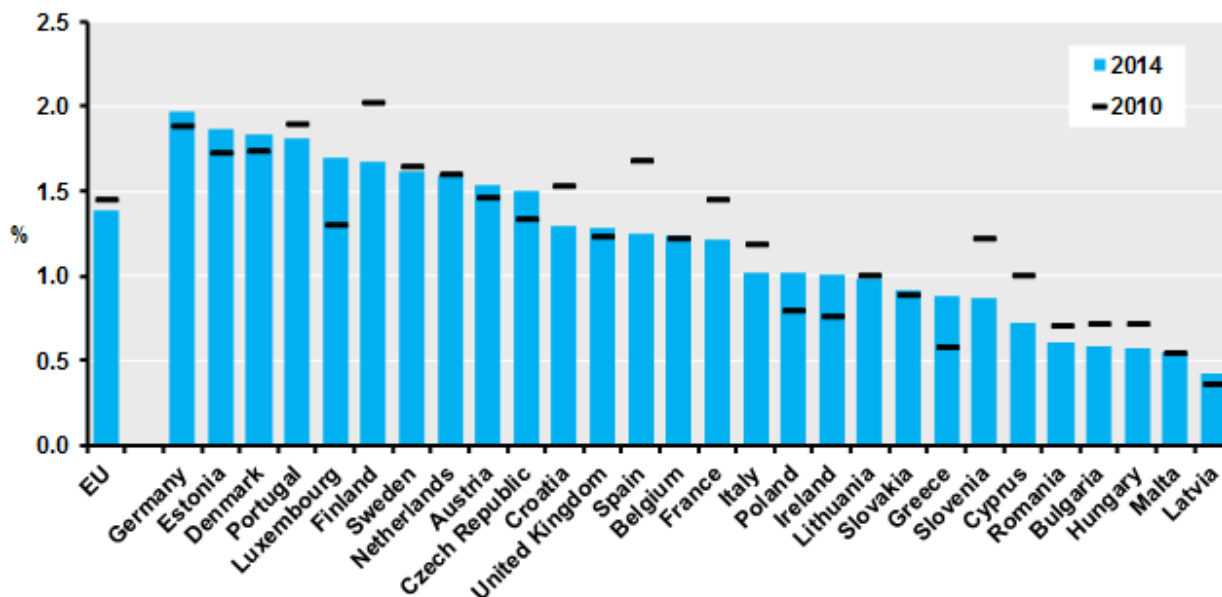
**More info:** <http://www.epo.org/about-us/annual-reports-statistics/annual-report/2015.html>

### 3. Eurostat update of 2014 GBAORD data

On Friday 4 March **Eurostat** released an update of data on government appropriations and outlays on R&D (GBAORD). The data show a decline of GBAORD as a % GDP from 1.45% in 2010 to 1.41% in 2013 and 1.39% in 2014. Countries with a decline of 0.05 percentage points or more between 2014 and 2015 include Bulgaria, Germany, Estonia, Malta, Portugal and Finland, countries with an increase in 2014. of 0.05 pp or more include

Belgium, Greece, Poland and Slovenia. In the 2010-2014 comparison the decline was sharpest in Finland, Spain, Croatia, France, Slovenia and Cyprus, while the increase was strongest in Luxembourg, Poland, Ireland and Greece. In Germany, Estonia and Denmark GBAORD has the highest share of government expenditure, in Hungary, Malta and Latvia the lowest.

**Total GBAORD as a % of total general government expenditure, 2010 and 2014**



Source: DG Research and Innovation - Unit for the Analysis and Monitoring of National Research Policies  
Data: Eurostat

**More info:** <http://ec.europa.eu/eurostat/web/science-technology-innovation/data/database>

### 4. Reuters ranking on top 25 most innovative public research institutions

On 8 March **Reuters** published a list of the top 25 most innovative public research institutions. The ranking is based on 10 patent and citation related indicators. The French Alternatives Energies and Atomic Energy Commission ranks first, Fraunhofer (Germany) second. Other EU research institutions in the top 25 are the French CRNS (ranked 5th), the Institute of Health and Medical

Research (10), the Helmholtz Association (DE, 11), The Max Planck Society (DE, 15), The Pasteur Institute (FR, 17) and the Spanish National Research Council (21). In total 8 EU institutions are on the list, 6 from USA, 4 from Japan and one each from Korea, Singapore, Russia, Canada, Australia, China and Taiwan.

TOP 25 INSTITUTIONS   2015 RANKINGS		
1	Alternative Energies and Atomic Energy Commission	FRANCE Score: 206
2	Fraunhofer Society	GERMANY Score: 202
3	Japan Science & Technology Agency	JAPAN Score: 201
4	U.S. Department of Health & Human Services	USA Score: 193
5	National Center for Scientific Research	FRANCE Score: 189
6	Korea Institute of Science & Technology	SOUTH KOREA Score: 183
7	National Institute of Advanced Industrial Science & Technology	JAPAN Score: 182

**More info:** <http://www.reuters.com/article/us-innovation-rankings-idUSKCN0WA2A>

## 5. The 2016 Startup Nation Scoreboard

The **European Digital Forum** released in March the 2016 Startup Nation Scoreboard (prepared by David Osimo and the Startup Manifesto Policy Tracker Crowdsourcing Community).

In 2013 nine European entrepreneurs – founders and cofounders of eight fast-growing, globally active Internet startups – wrote the Startup Manifesto, a 14-page roadmap containing 22 action points, drafted to spur discussion on improving the startup ecosystem and digital-era performance in the European Union's 28 member states (see: <http://www.startupmanifesto.eu>). The Scoreboard monitors the adoption of recommendations of the manifesto by member states.

The tables below show the overall ranking of EU Member States and the ranking for two important sub-criteria.

The Netherlands shows the highest rate of adoption of the Manifesto recommendations (85%), followed by Italy and the UK. Lithuania, Latvia and Croatia show the lowest rates.

As regards the institutional framework, which assesses to which extent countries have built deliberate, proactive framework policies dedicated to SMEs in general and startups in particular, the Netherlands also comes out on top, followed by the UK and Belgium. Bulgaria and Lithuania have the lowest adoption rate.

As regards measures aimed at facilitating access to finance for young and small companies Belgium shows according to the Scoreboard the highest adoption rate, followed by France and Ireland, while Greece, Slovakia and Croatia have the lowest adoption rate.

**Table 1.** Adoption of Manifesto Recommendations

Rank	Country	Adoption rate
1	Netherlands	85%
2	Italy	82%
3	United Kingdom	77%
4	Ireland	72%
5	Portugal	71%
	Belgium	71%
7	Germany	70%
8	France	69%
9	Austria	68%
	Poland	68%
	Romania	68%
12	Spain	63%
	<b>EU Average</b>	<b>60%</b>
13	Estonia	60%
14	Greece	57%
	Malta	57%
16	Finland	56%
	Sweden	56%
18	Slovakia	55%
19	Czech Republic	54%
20	Cyprus	53%
	Denmark	53%
22	Slovenia	52%
23	Luxembourg	48%
24	Hungary	46%
25	Bulgaria	45%
26	Lithuania	44%
	Latvia	44%
28	Croatia	32%

Source: European Digital Forum Crowdsourcing Network

**Table 2.** Institutional Framework

Rank	Country	Adoption rate
1	Netherlands	100%
2	United Kingdom	88%
	Belgium	88%
	Romania	88%
5	Italy	75%
	Portugal	75%
	Austria	75%
	Cyprus	75%
9	Ireland	63%
	Poland	63%
	Spain	63%
	Estonia	63%
	Greece	63%
	Malta	63%
	Luxembourg	63%
	<b>EU Average</b>	<b>59%</b>
16	Germany	50%
	France	50%
	Sweden	50%
	Slovakia	50%
	Czech Republic	50%
	Denmark	50%
	Slovenia	50%
	Croatia	50%
24	Finland	38%
	Hungary	38%
	Latvia	38%
27	Bulgaria	25%
	Lithuania	25%

Source: European Digital Forum Crowdsourcing Network

**Table 8.** Better Access to Capital, Lower Barriers to Success

Rank	Country	Adoption rate
1	Belgium	97%
2	France	88%
	Ireland	88%
4	Italy	87%
	United Kingdom	87%
6	Finland	86%
7	Germany	82%
8	Netherlands	80%
	Spain	80%
10	Portugal	78%
11	Lithuania	70%
12	Hungary	69%
	<b>EU Average</b>	<b>69%</b>
13	Denmark	68%
14	Austria	67%
15	Sweden	66%
	Luxembourg	66%
17	Cyprus	65%
	Romania	65%
19	Latvia	64%
20	Poland	63%
	Malta	63%
22	Estonia	59%
23	Bulgaria	56%
24	Slovenia	53%
25	Czech Republic	49%
	Greece	49%
27	Slovakia	44%
	Croatia	44%

Source: European Digital Forum Crowdsourcing Network

**More info:** [http://www.regione.fvg.it/rafv/export/sites/default/RAVFG/GEN/regione-a-bruxelles/allegati/150316\\_EDF\\_Startup\\_Nation\\_Scoreboard\\_2016.pdf](http://www.regione.fvg.it/rafv/export/sites/default/RAVFG/GEN/regione-a-bruxelles/allegati/150316_EDF_Startup_Nation_Scoreboard_2016.pdf)

## Calendar of data releases and indicator based publications

Update of: 15/3/2016 (grey= already published)

2016	Eurostat data updates	Commission indicator based reports	Data and indicator based reports other organisations
<b>January</b>			Transparency International Corruption Perception Index Bloomberg Innovation Index
<b>February</b>	Tertiary attainment (2015, prov.) High growth enterprises data (provisional, 2014) IPR (patent 2013, CTM 2014 and RCD 2014)	Winter forecast (ECFIN) DESI indicator (CNECT)	OECD R&D expenditure data
<b>March</b>	R&D intensity (2014 update) GBAORD final (2014)		European Patent Office , EPO annual results (2015) Reuters Most Innov. Institutions OICA world motor vehicle production data Times Higher Ed. Reputations Ranking
<b>April</b>	Education headline indicators (LFS)	Skills forecast (Cedefop) Europe 2020 publication (ESTAT)	
<b>May</b>	High tech trade (2015) Venture capital (2015) Education enrolment, graduates Knowledge-int. activities (2015) HRST stocks and job-mo (2015)	Spring Forecast (ECFIN)	IMD World Competitiveness Yearbook Invest Europe 2015 European Private Equity Report
<b>June</b>	Education spending Employment high-tech (2015) HRST education inflows (2014)	Innovation Union Scoreboard (GROW)	
<b>July</b>	IPR (Patents, 2013), Community Trademarks (2015), RC Designs (2015)		UNESCO UIS STI stats release
<b>August</b>			Academic Ranking of World Universities (Shanghai)
<b>September</b>	GBAORD (2015 preliminary) Final high growth enterprise data (2014) Economic data on high-tech (2015)	EU Employment and Social Situation Quarterly Review (EMPL) September edition	WIPO/Cornell/INSEAD Global Innovation Index WEF Global Competitiveness Index
<b>October</b>			OECD STI Scoreboard (2-yearly) World Bank Doing Business
<b>November</b>	R&D intensity (2015 preliminary, 2014 final) Knowledge-int. activities (2015) CIS 2014 Employment high-tech (2015) IPR Statistics (CTM 2015 and RCD 2015)	Autumn Forecast (ECFIN) Education Monitor (EAC) European Competitiveness report (GROW) Industrial R&D Investment Scoreboard (JRC) Annual Growth Survey (ECFIN)	Top500.org: Top 500 Supercomputer list OECD Education at a Glance
<b>December</b>	ICT household data (2016) ICT enterprise data (2016) HRST stocks (2015)	SheFigures (3-yearly (RTD) Joint Employment Report (EMPL)	WIPO World Intellectual Property Indicators BDI/Telekom (German) Innovation Indicator

Contact for more information: **Richard Deiss** (unit A4, Tel 64881), Cristina Moise (97934)