European Commission

# NEWSLETTER on STI Data and Indicators

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

1. WIPO's Intellectual Property Indicators 2015

The World Intellectual Property Organisation (WIPO) in December published the 2015 edition of its annual *'World Intellectual Property Indicators'*.

The data show the ongoing rise of China. The Chinese SIPO became in 2011 the leading patent office worldwide and the number of filings at SIPO (from Chinese nationals and foreigners) has been zooming further ahead since. Patent filings at the USPTO have also increased strongly in recent years, while filings at the Japaese patent office declined and EPO filings showed only moderate growth. China is now also the leading country worldwide in the filing of trademarks and industrial designs.

Trend in patent applications for the top five offices
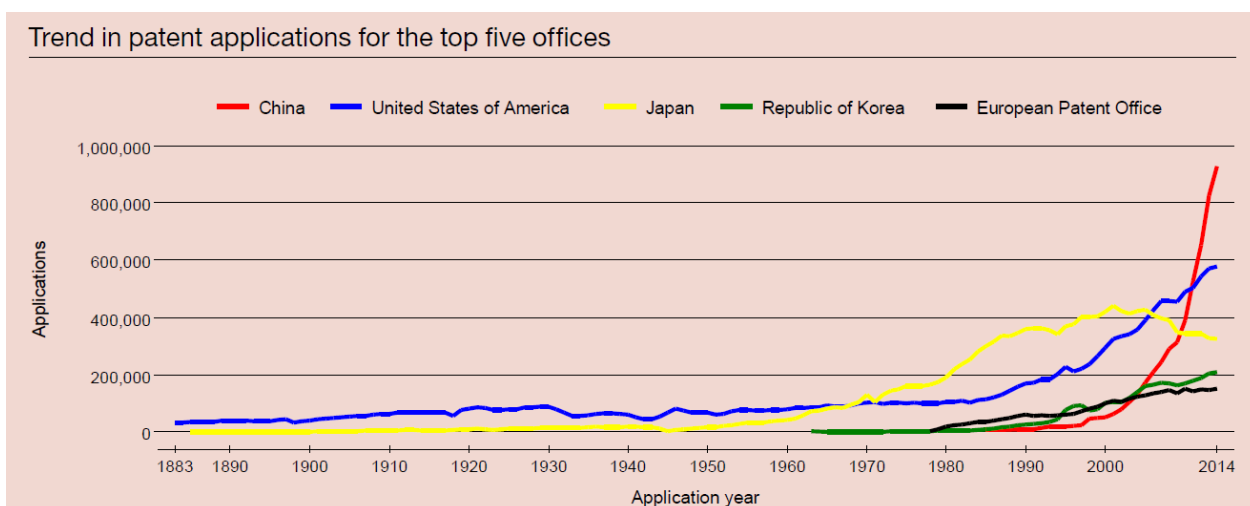
More info: http://ec.europa.eu/economy_finance/eu/forecasts/2015_autumn_forecast_en.htm

2. The BDI/ZEW/Fraunhofer Innovation Indicator

In December the German organisations BDI and acatech released the 2015 results of their *Innovation Indicator*, which is prepared annually by Fraunhofer and ZEW.
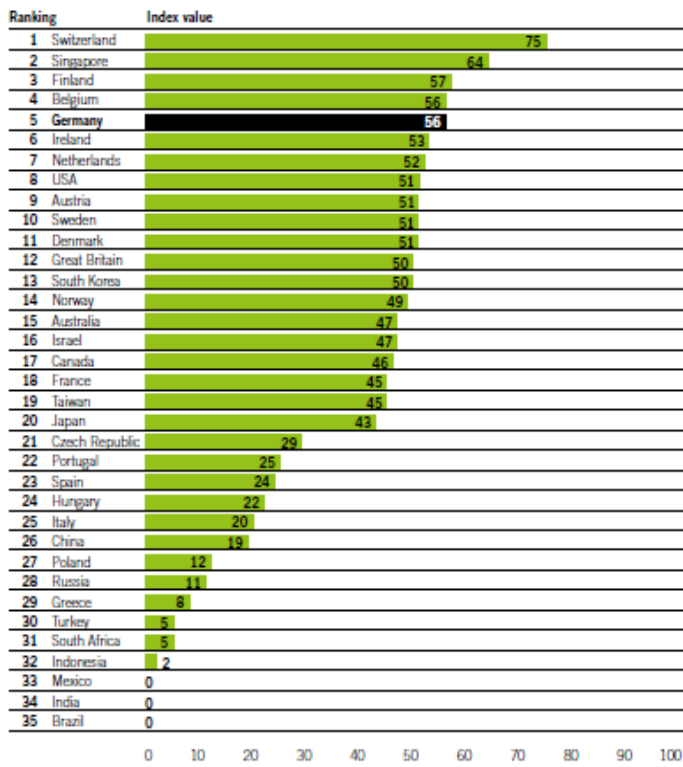
This composite indicator is based on 38 individual indicators (indicators by field: education: 9, society: 4, state: 1, enterprises: 16, public research: 8).

The overall result shows Switzerland as the top performer, followed by Singapore and Finland. Greece is the lowest performer among the17 EU countries covered.

Compared to 2010 Sweden, Norway, France, Hungary, India and Russia declined by two ranks or more, while Finland, Belgium, Denmark, Great Britain, Ireland, South Korea, Israel, Poland and Turkey are among the countries that improved their ranking.

In the sub-indicator science (which is based on 8 indicators related to publications, patents and researchers) Denmark comes out as the best international performer, followed by Singapore and Switzerland.

Research and Innovation

Overall result of the Innovation Indicator

Ranking		Index value
1	Switzerland	75
2	Singapore	64
3	Finland	57
4	Belgium	56
5	**Germany**	56
6	Ireland	53
7	Netherlands	52
8	USA	51
9	Austria	51
10	Sweden	51
11	Denmark	51
12	Great Britain	50
13	South Korea	50
14	Norway	49
15	Australia	47
16	Israel	47
17	Canada	46
18	France	45
19	Taiwan	45
20	Japan	43
21	Czech Republic	29
22	Portugal	25
23	Spain	24
24	Hungary	22
25	Italy	20
26	China	19
27	Poland	12
28	Russia	11
29	Greece	8
30	Turkey	5
31	South Africa	5
32	Indonesia	2
33	Mexico	0
34	India	0
35	Brazil	0

Result of the sub-indicator science

Ranking		Index value
1	Denmark	92
2	Singapore	92
3	Switzerland	88
4	Sweden	71
5	Finland	71
6	Netherlands	70
7	Belgium	68
8	Austria	63
9	**Germany**	63
10	Norway	62
11	Australia	60
12	France	56
13	Ireland	55
14	Great Britain	54
15	South Korea	52
16	Canada	52
17	USA	49
18	Israel	45
19	Portugal	40
20	Czech Republic	35
21	Taiwan	34
22	Japan	32
23	Spain	28
24	Hungary	24
25	Italy	19
26	Greece	16
27	South Africa	8
28	Indonesia	6
29	China	0
30	Turkey	0
31	Russia	0
32	Poland	0
33	Mexico	0
34	India	0
35	Brazil	0

More info: http://www.innovationsindikator.de/fileadmin/2015/PDF/Innovationsindikator_2015_Web_en.pdf

3. Transparency International's Corruption Perception Index

On 27 January Transparency International published the 2015 edition of the *Corruption Perception Index*, which assesses 167 countries world wide (see graph below) and is based on several sources, incl. the World Economic Forum and the World Justice project (those data often relate to 2014). Three EU countries come out as the least corrupt world wide (Denmark, Finland and Sweden).

The lowest EU performers in this index in 2015 were Greece, ranked 58 (11 ranks better than in 2014), Romania (58, 11 ranks better), Italy (61, 8 ranks better) and Bulgaria (69, no change; it should be noted that a statistically not significant change in the score can still cause a change in the ranking).
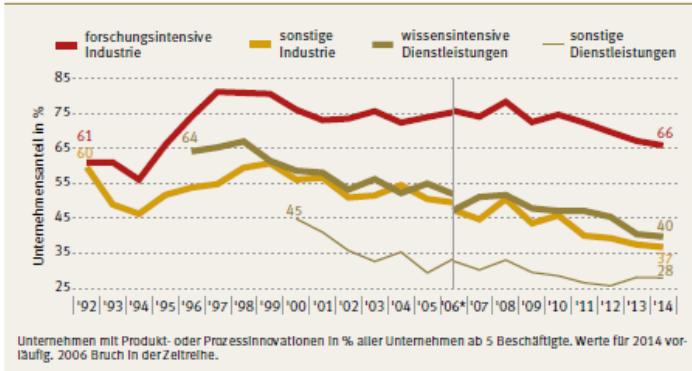

More info: http://www.transparency.org/cpi2015
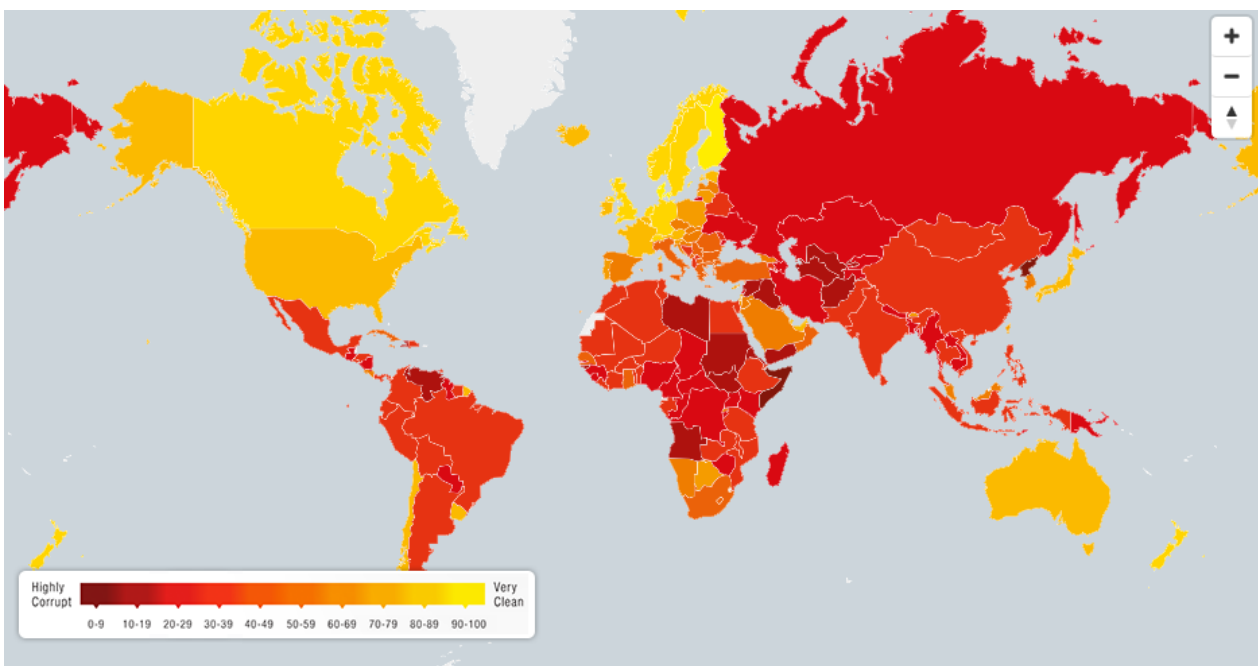
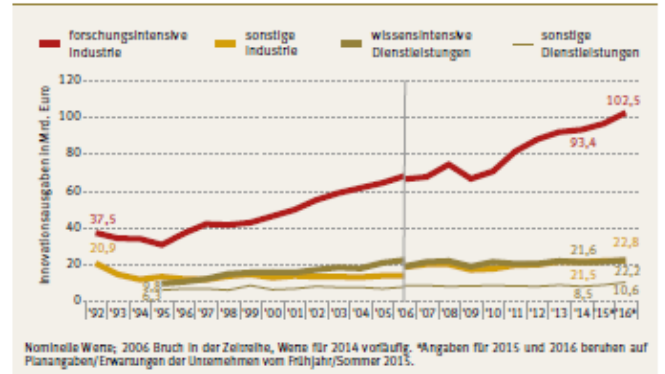# 4. Results from the 2015 German Innovation Survey

In January ZEW (Mannheim) published the results of the 2015 round of the annual German Innovation Survey (which is the survey that provides the German data for the Eurostat Community Innovation Survey, CIS). According to the 2015 survey (which has the general reference year 2014, but includes also outlook questions relating to 2015 and 2016) the share of companies with innovation activities in 2014 slightly declined compared to the year before (from 37.1% to 36.8%), but was about 10 percentage points lower than in 2008, where it reached 47%. While the share of research intensive manufacturing industry and knowledge intensive service enterprises with innovations declined, the share of enterpises with innovation activities in other service sectors was more stable. On the other hand German companies expect to expand expenditure for innovation (which includes expenditure on R&D) in 2015 by 2.6% (to reach 149.5 bn Euro) and by a strong 5.7% in 2016.

Innovatorenquote 1992 bis 2014

Innovationsausgaben 1992 bis 2016

More info:http://www.zew.de/de/presse/pressearchiv/zew-innovationserhebung-deutsche-wirtschaft-haelt-hohes-niveau-bei-innovationsausgaben-deutliche-aufstockung-in-2016-vorgesehen/

5. Bloomberg Innovation Index

On 19 January Bloomberg published its annual *Innovation Index*, ranking 50 economies, based on 6 indicator groups. In the 2016 edition South Korea comes out number one, followed by Germany and Sweden. Bulgaria and Malta came out lowest among the 26 EU countries assessed. While containing interesting observations, some of the indicators used to construct the index, such as the high-tech density, do not correct for the size of an economy. There is furthermore a focus on activities related to manufacturing. The index hence does not do justice to small service oriented economies (hence the low score of Malta and Luxembourg).

Bloomberg Innovation Index

Rank/Economy	Total score	R&D intensity	Manufac-turing value-added	Produc-tivity	High-tech density	Tertiary efficiency	Researcher concen-tration	Patent activity
1 South Korea	91.31	2	1	39	2	1	6	2
2 Germany	85.54	8	3	32	5	17	14	3
3 Sweden	85.21	5	16	16	9	16	5	8
4 Japan	85.07	3	13	29	5	34	9	1
5 Switzerland	84.96	7	8	3	10	25	13	5
6 Singapore	84.54	17	5	5	13	2	7	24
7 Finland	83.80	4	18	26	23	4	3	7
8 United States	82.84	10	26	8	1	37	21	4
9 Denmark	81.40	6	22	13	21	18	2	10
10 France	80.39	15	39	15	4	12	18	11
11 Israel	79.81	1	35	35	7	29	1	20
12 Russia	78.85	31	27	18	8	3	27	15
13 Austria	78.45	9	11	14	30	7	11	13
14 Norway	77.07	21	43	1	12	24	8	19
15 Ireland	76.67	24	7	12	25	6	24	22
16 Belgium	76.19	13	23	10	21	31	22	17
17 United Kingdom	74.92	22	44	30	11	9	20	14
18 Netherlands	74.90	18	28	24	15	41	16	9
19 Canada	73.44	23	40	19	17	22	12	26
20 Australia	73.42	14	47	2	16	21	15	32
21 China	72.12	16	15	40	3	50	46	6

More info: http://www.bloomberg.com/graphics/2015-innovative-countries/

6. ITIF report on the contribution to global innovation

On 21 January the Information Technology and Innovation Foundation (ITIF), a Washington based global technology policy think tank, published a report assessing 56 countries on the extent to which their economic and trade policies contribute to or detract from global innovation.

The 14 contribution indicators cover issues such as corporate tax rates, R&D tax credit generosity, human capital (expenditure on education, science graduates, ranking of universities), R&D expenditure and citations.

The 13 detraction indicators cover issues like trade barriers, IP protection and software piracy. Countries are furthermore categorized into 8 types: Adam Smithian, Advanced Asian Tiger, European Union (EU) Continentalist, EU Up and Comer, Innovation Follower, Innovation Mercantilist, Schumpeterian and Traditional Mercantilist.

Rank	Country	Type	Final Score	Contributions Score	Detractions Score
1	Finland	Schumpeterian	15.6	14.1	13.9
2	Sweden	Schumpeterian	14.2	13.9	11.1
3	United Kingdom	Schumpeterian	13.7	13.7	10.4
4	Singapore	Advanced Asian Tiger	12.3	15.0	5.9
5	Netherlands	Schumpeterian	12.1	9.6	12.4
6	Denmark	Schumpeterian	11.6	13.5	6.2
7	Belgium	EU Continentalist	11.4	9.4	11.3
8	Ireland	EU Continentalist	10.9	8.7	11.2
9	Austria	EU Continentalist	10.5	9.2	9.7
10	United States	Adam Smithian	10.5	8.5	10.4
11	France	EU Continentalist	10.2	10.2	7.8
12	Germany	EU Continentalist	9.4	7.0	10.3
13	Norway	EU Continentalist	9.4	7.8	9.2
14	Japan	Advanced Asian Tiger	9.2	11.3	4.3
15	Taiwan	Advanced Asian Tiger	9.2	12.3	3.1
16	Slovenia	EU Up and Comer	9.0	9.2	6.5
17	Portugal	EU Continentalist	8.8	7.5	8.4
18	Estonia	EU Up and Comer	7.3	4.3	9.5
19	Iceland	EU Continentalist	7.1	9.0	3.0
20	Switzerland	EU Continentalist	6.8	8.8	2.5
21	Korea	Advanced Asian Tiger	5.9	14.7	-6.9
22	Australia	Adam Smithian	5.9	4.7	6.0
23	Israel	Advanced Asian Tiger	5.1	8.2	-0.2
24	Spain	EU Continentalist	5.0	3.1	6.3
25	Canada	Adam Smithian	5.0	8.3	-0.5
26	Czech Republic	EU Up and Comer	4.5	2.1	6.5
27	Hungary	EU Up and Comer	4.4	2.9	5.3
28	New Zealand	Adam Smithian	2.9	-1.4	7.9
29	Hong Kong	Advanced Asian Tiger	1.4	-1.8	5.4

More information: https://itif.org/publications/2016/01/20/contributors-and-detractors-ranking-countries%E2%80%99-impact-global-innovation

Calendar of data releases and indicator based publications
Update of: 28/1/2016 (grey= already published)

2016	Eurostat data updates	Commission indicator based reports	Data and indicator based reports other organisations
January			Transparency International Corruption Perception Index Bloomberg Innovation Index
February	Tertiary attainment (2015, prov.) High growth enterprises data (provisional, 2014) IPR (patent 2013), Community Trademarks (2014), RCD (2013)	Winter forecast (ECFIN) Science, Research and Innovation Performance of the EU (RTD), 2-yearly	European Patent Office , EPO annual results (2015)
March	R&D intensity (2014 update) GBAORD final (2014)	Europe 2020 publication (ESTAT)	Times Higher Ed. World Reputations Ranking OICA world motor vehicle production data
April	Education headline indicators (LFS)	Skills forecast (Cedefop)	OECD R&D expenditure data
May	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
June	Education spending Employment high-tech (2015) HRST education inflows (2014)	Innovation Union Scoreboard (GROW/RTD) Digital Economy and Society Index DESI (CNECT)	
July	IPR (Patents, 2013), Community Trademarks (2015), RC Designs (2015)		UNESCO UIS STI stats release
August			Academic Ranking of World Universities (Shanghai)
September	GBAORD (2015 preliminary) Final high growth enterprise data (2014) Economic data on high-tech (2015)		WIPO/Cornell/INSEAD Global Innovation Index WEF Global Competitiveness Index
October			OECD STI Outlook (2-yearly) World Bank Doing Business
November	R&D intensity (2015 preliminary, 2014 final) Knowledge-intensive activities (2015) Employment high-tech (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
December	ICT household data (2016) ICT enterprise data (2016) IPR Statistics (patents 2014), CTM (2015), RCD (2015)	SheFigures (3-yearly (RTD) Joint Employment Report (EMPL)	WIPO World Intellectual Property Indicators BDI acatech (German) Innovation Indicator

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