

NEWSLETTER on STI Data and Indicators

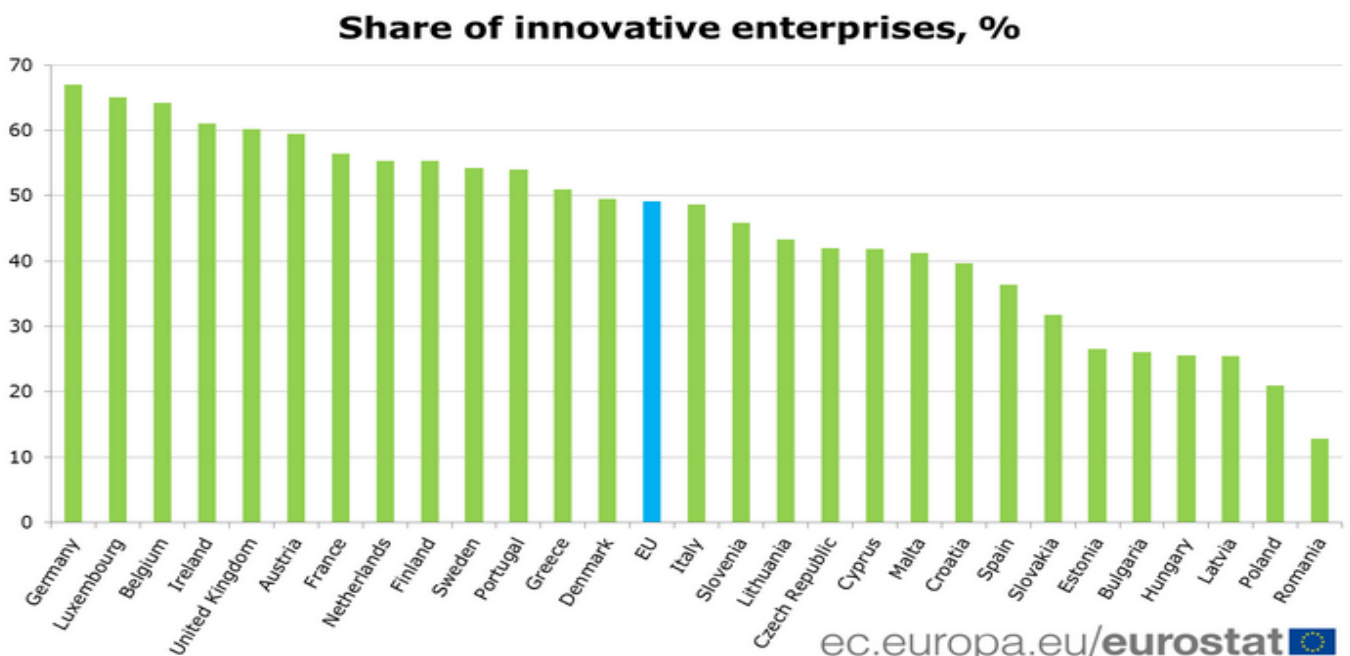
DG RTD, A4, Analysis and monitoring of national research policies

1. Results of the Community Innovation Survey (CIS) 2014

On 24 January 2017 **Eurostat** presented under its 'what's new' section key results of the *Community Innovation Survey* (CIS) 2014, carried out in 2015 with data released on 17 January 2017. According to the latest CIS, in the EU just under half (49.1%) of enterprises of 10 employees or more reported innovation activity during 2012-2014 (the survey has a three year reference window). The proportion of innovative enterprises in the EU remained relatively stable compared to 2010-2012, although it dropped compared

to the peak recorded in 2008-2010 (52.8%). This pattern was observed in the majority of Member States.

In CIS 2014 the highest proportions of enterprises with innovation activity were recorded in Germany (67.0% of enterprises), Luxembourg (65.1%) and Belgium (64.2%), ahead of Ireland (61.0%), the United Kingdom (60.2%) and Austria (59.5%), while less than 30% of enterprises had innovation activities in Romania (12.8%) and Poland (21.0%), followed by Latvia (25.5%), Hungary (25.6%), Bulgaria (26.1%) and Estonia (26.5%).



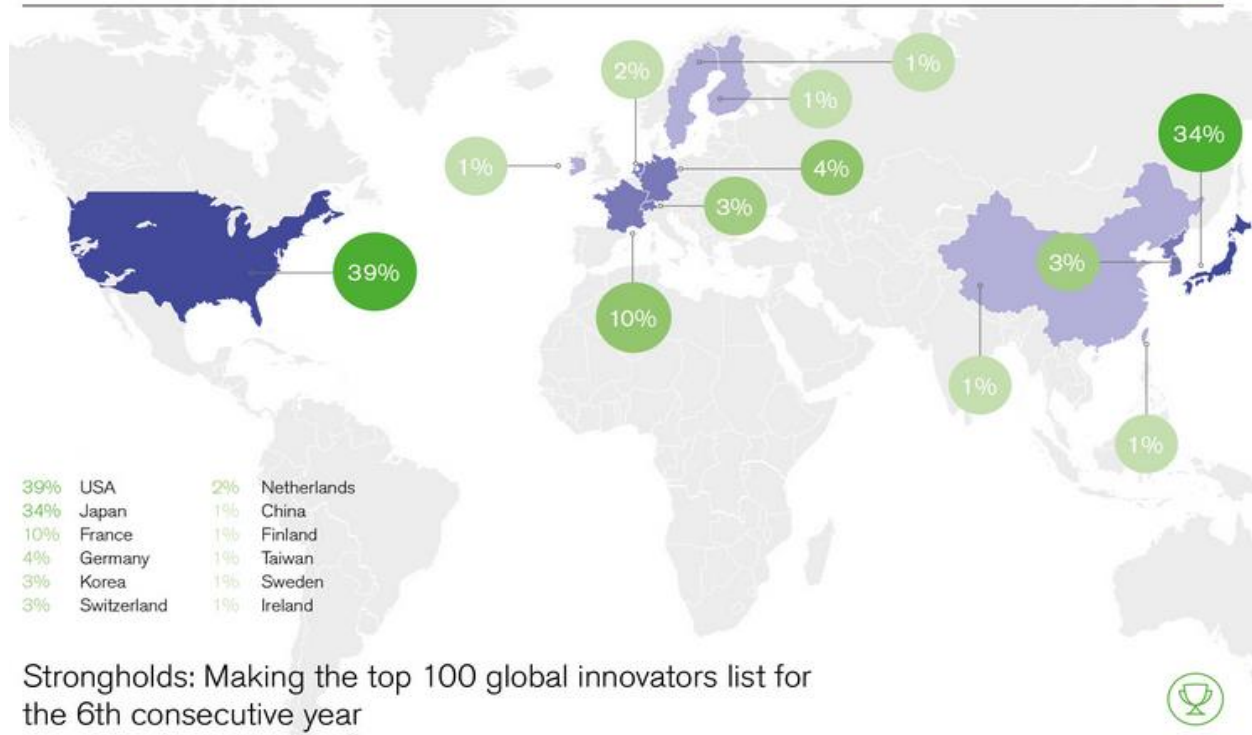
More info: <http://ec.europa.eu/eurostat/documents/2995521/7771961/2-13122016-AP-EN.pdf/66d95b9e-9ff8-45b3-b1ef-f99f0d6603e7>

2. Clarivate Analytics' list of top innovators

On 10 January 2017 **Clarivate Analytics** (formerly the Intellectual Property & Science business of Thomson Reuters) published the 2016 edition of its annual *Top 100 Global Innovators*. This report lists the most innovative companies and institutions based on patents using measures such as volume, success, globalization (whether a patent is protected in all four main patent offices) influence (how often an organisation's patent has been cited in the last five years). The US (39) and Japan (34) have the highest number of institutions/organisations on this list, the EU has 19,

South Korea 3 (LG, LSIS, Samsung), China 1 (Huawei). In the EU, France is the leading country with 10 companies/organisations (Alstom, Arkema, CEA, CNRS, IFP; Safran, Saint-Gobain, Thales, Total, Valeo), followed by Germany with 4 (BASF, Bayer, Fraunhofer, Merck) and the Netherlands with 2 (NXP, Philips). Ireland (Medtronic), Sweden (Ericsson) and Finland (Nokia) each have one company on the list. The other EU countries, including the UK and Italy do not have a single company or institution on this list.

Innovation Hot Spots



Map from Clarivate (N.B. it contains mistakes: Canadian lakes shown in the West of the US, several Canadian provinces attributed to the US, Iraq not shown as a country, Caspian Sea not shown as a lake; instead of Sudan, Congo is split).

More info: <http://news.clarivate.com/2017-01-10-Clarivate-Analytics-Names-2016-Top-100-Global-Innovators>

3. THE list of universities working most with innovative firms

On 11 January 2017 **Times Higher Education** (THE) published a list of the top universities that work most with innovative firms (those listed by Clarivate Analytics, see above). Eindhoven University of Technology came out on top, with the highest number of web of science documents, followed by Harvard University. As regards normalised citation impact, Harvard ranks first. The Top 25 include three more Dutch institutions (Delft University of Technology, rank 9, Utrecht University, rank 20 and the University of Amsterdam, rank 21) and one each from Belgium (KU Leuven, rank 12), France (University Paris-Saclay, rank 16) and the UK (Cambridge, rank 22). The top ranked Asian institution (USTC, rank 4) is based in China.

More info: <https://www.timeshighereducation.com/news/top-universities-working-most-innovative-firms#>

Rank	University	Country	Web of Science documents	Category normalised citation impact
1	Eindhoven University of Technology	Netherlands	1,316	1.55
2	Harvard University	US	1,064	3.71
3	University of Washington	US	872	2.26
4	University of Science and Technology of China	Mainland China	812	1.2
5	University of Minnesota	US	790	1.71
6	Massachusetts Institute of Technology (MIT)	US	718	2.55
7	University of California, San Diego	US	703	2.5
8	Stanford University	US	683	3.17
9	Delft University of Technology	Netherlands	671	2.21
10	University of Michigan	US	649	2.06

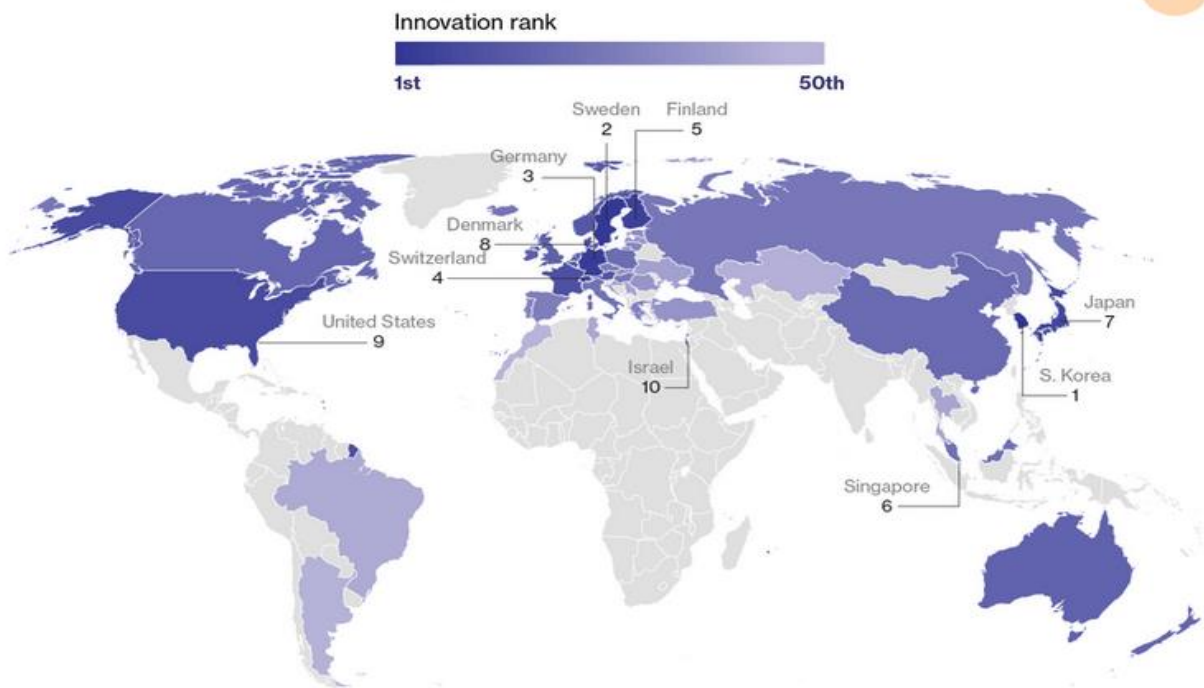
4. Bloomberg's 'Most Innovative Economies'

On 17 January **Bloomberg** published the 2017 edition of its *Innovation Index* showing the fifty most innovative economies. The Bloomberg Innovation index is based on 7 groups of indicators (R&D intensity, Manufacturing value added, Productivity, High-Tech density, Tertiary efficiency, Researcher concentration and Patent activity). Not all sub-components are normalised, so there is a slight bias towards larger economies and in addition the index favours countries with a strong manufacturing sector versus service economies.

The top ranked country in the Bloomberg index is South Korea, followed by Sweden and Germany. South Korea is also the top performer in the European Innovation Scoreboard (EIS). The top 4 EU countries in the Bloomberg index are also the top 4 EU countries in the EIS. The lowest performing EU country in the Bloomberg Index is Cyprus, which is however ranked much higher in the EIS, showing the size and manufacturing bias of the Bloomberg index. The Bloomberg index covers all EU countries except Bulgaria and Slovenia.

Fifty Most Innovative Economies

South Korea, Sweden and Germany top the list; Israel moved into top 10 for the first time



SOURCE(S): Bloomberg, International Labour Organization, International Monetary Fund, World Bank, Organization for Economic Co-operation and Development, World Intellectual Property Organization, United Nations Educational, Scientific, and Cultural Organization

Bloomberg

More info: <https://www.bloomberg.com/news/articles/2017-01-17/sweden-gains-south-korea-reigns-as-world-s-most-innovative-economies>

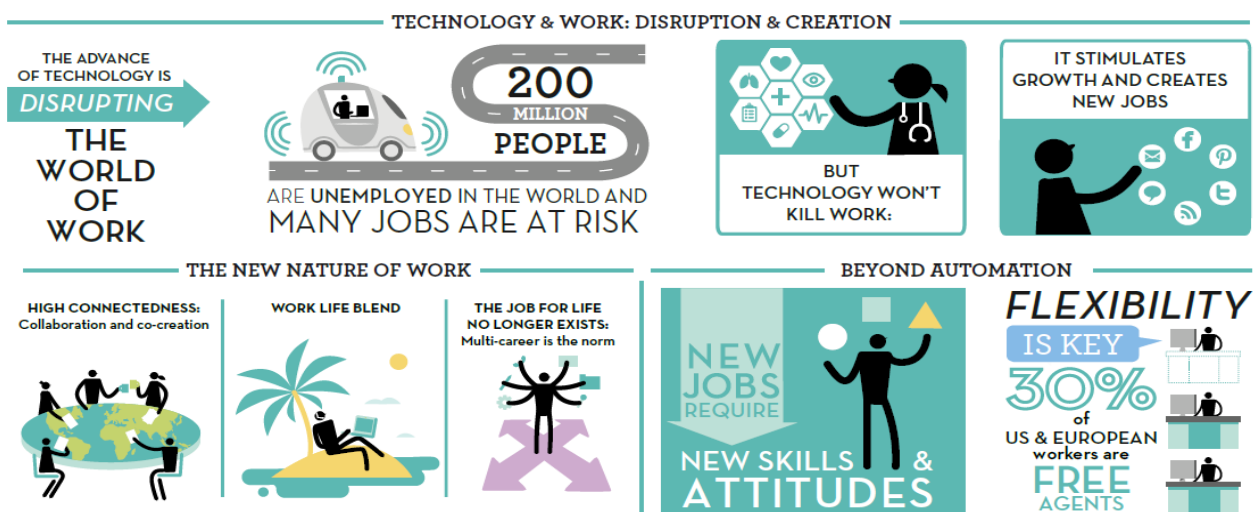
5. INSEAD 2017 Global Talent Competitiveness Index

On 16 January 2017, **INSEAD** released the 4th edition of its *Global Talent Competitiveness Index*, which ranks countries and cities. The Index is based on 6 pillars and over 60 indicators. The top performing country in the 2017 index is Switzerland, followed by Singapore, the UK, the US and Sweden. Other top 10 EU countries are Luxembourg, Denmark and Finland. Top ranked cities are Copenhagen, Zurich and Helsinki. The report shows that top ranked countries maximise talent capabilities through educational systems that match market needs by developing technical skills, ability to learn and collaborative skills; employment policies that combine flexibility and social protection; connected stakeholders and high levels of technical competence.

Global Talent Competitiveness Index 2017 Rankings: Top Ten

1	Switzerland	6	Australia
2	Singapore	7	Luxembourg
3	United Kingdom	8	Denmark
4	United States	9	Finland
5	Sweden	10	Norway

The Global Talent Competitiveness Index 2017 (GTCI) Talent and Technology



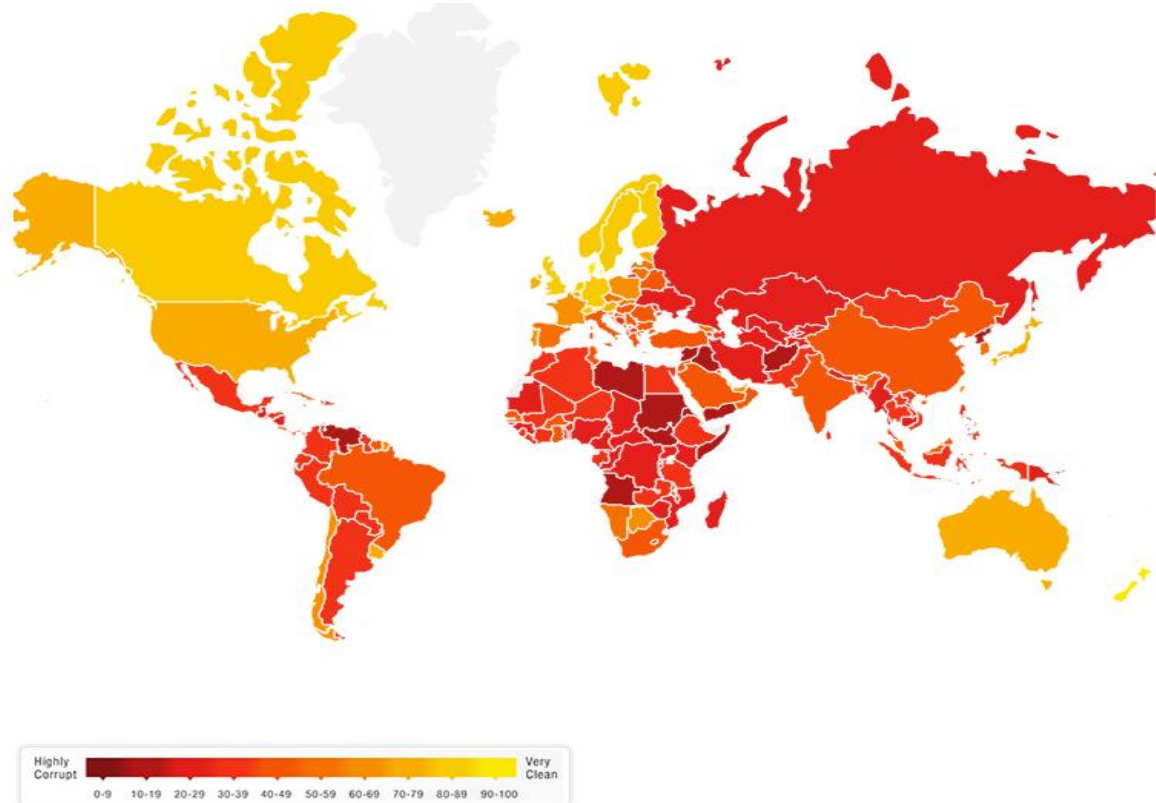
Graph: INSEAD, More info: http://www.gtci2017.com/documents/GTCI_2017_web_r3.pdf

6. Transparency International Corruption Perception Index 2016

On 25 January 2017 **Transparency International** released the 2016 edition of its *Corruption Perception Index*. The Index is based on 13 statistical sources, such as the World Bank and the World Economic Forum, which in many cases relate to expert opinions.

In 2016, Denmark (-1 scorepoint compared to 2015) and New Zealand (+2) were the best performers world wide

with scores of 90 out of 100. The other EU countries in the top 10 include Finland (-1), Sweden (-1), the Netherlands (-4), as well as Germany, Luxembourg and the UK, all of which achieved the same scores as in the 2015 index. Bulgaria was the lowest scoring EU country in 2016 (score 41, no change, rank 75), followed by Greece (-2) and Italy (+3).



Map: Transparency International

More info: http://www.transparency.org/news/feature/corruption_perceptions_index_2016

6. Miscellaneous results from national data sources and studies

a) Sweden: Population reaches 10 million

On 20 January 2017 **Statistics Sweden (SCB)** announced that on that day the country probably reached a population of 10 million people. In 2010 it was expected that Sweden would reach the 10 million mark in 2021. But strong net migration (combined with a surplus of births) led to stronger population growth than anticipated. Sweden is one of the countries with the longest population records, dating back to 1749, when Sweden had a population of 1.8 million.

Sweden now has a population of 10 million



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The date 20 January is historic in Swedish population statistics: it is the day when Sweden's population is expected to reach 10 million people listed in the population register.

More info: <http://www.scb.se/en/About-us/News-and-press-releases/Container-for-news-and-press-releases/Sweden-now-has-a-population-of-10-million/>

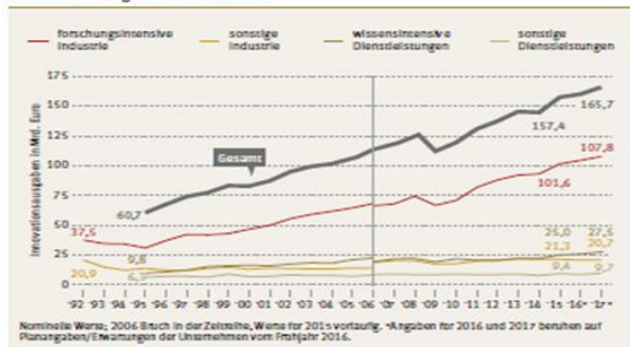
b) German Innovation Survey: more innovation spending, but fewer innovators

On 13 January 2017 **ZEW** (Mannheim) published the results of the 2016 round of its annual Innovation Survey (the German issue of the Community Innovation Survey, CIS, but including enterprises with 5-9 persons employed, hence results differ from CIS data published by Eurostat). The data show, as in the years before, some kind of "German innovation paradox". While

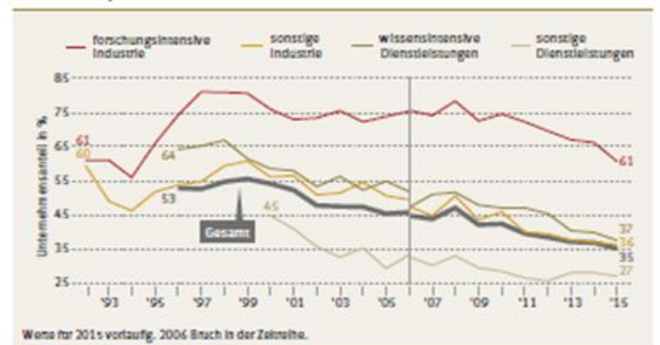
spending on innovation is increasing considerably from year to year (strong growth since the mid 1990s), the share of companies with innovations is falling (decreasing since the mid 1990s, the decline has recently even accelerated).

This implies a stronger concentration in fewer companies (which show considerable spending growth).

Innovationsausgaben 1992 bis 2017



Innovatorenquote 1992 bis 2015



More info: http://ftp.zew.de/pub/zew-docs/mip/15/mip_2015.pdf

7. Quotation check

"Small and medium-sized enterprises (SMEs) represent 99% of all businesses in the EU"

This is an oft-quoted figure and can be found on websites of the Commission and the European Parliament.

The figure is largely correct and broadly true also for specific Member States and economic sectors.

However, more precisely, one should say that SMEs represent over 99% (in fact nearly 100% but this would sound strange) of businesses and that the SME total includes micro-enterprises (0-9 persons employed).

According to Eurostat Structural Business Statistics (SBS), in 2014 there were 23.4 million enterprises in the EU in the business economy (which excludes agriculture with its many self-employed persons/small businesses and public services). Only 44 000 (0.2%) were large enterprises (250 or more persons employed). SMEs hence represented 99.8 % of all enterprises. In 2014, in the EU there were 21.7 million micro-enterprises (0-9 persons employed), representing 93% of all enterprises (and nearly 93% of SMEs), 1.4 million small enterprises (10-49, 6% of total) and 220 000 medium sized enterprises (50-249, 1% of total). Many Eurostat business surveys relate to enterprises with 10 or more employed persons. In that universe SMEs represent 97% of companies. Results for SMEs in such surveys are therefore similar to those for all enterprises (including in the Community Innovation Survey).

In 2014 SMEs represented 67% (of which 30% micro-enterprises) of employment in the business economy (which stood at 136 million, while total employment in the EU amounted to 209 million), large companies 33% (or 1/3).

As regards value added in the business economy (which stood at 6580 billion euro) SMEs had a share of 57% in 2014 in the EU (of which micro-enterprises 20%), large companies a share of 43%. The value added per person employed was hence about 30% higher in large companies than in SMEs.

Calendar of data releases and indicator based publications

Update of: 30/1/2017 (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) IPR (patent 2013, CTM 2014 and RCD 2014)	Winter forecast (ECFIN) DESI indicator (CNECT)	OECD R&D expenditure data Excelacom Internet Minute
March	R&D intensity (2015 update) GBAORD final (2015)		European Patent Office , EPO annual results (2016) Reuters Most Innov. Institutions OICA world motor vehicle production data
April	Education headline indicators (LFS)		
May	High-tech trade (2016) Venture capital (2016) Education enrolment, graduates Knowledge-int. activities (2016)	Spring Forecast (ECFIN) Skills forecast (Cedefop)	Invest Europe European Private Equity Report Times Higher Ed. Reputations Ranking IMD World Competitiveness Yearbook
June	Education spending Employment high-tech (2016) HRST education inflows (2015)	Europe 2020 publication (ESTAT) Innovation Union Scoreboard (GROW/RTD)	
July	IPR (Patents, 2014), Community Trademarks (2016), RC Designs (2016)		UNESCO UIS STI stats release
August			Academic Ranking of World Universities (Shanghai) WIPO/Cornell/INSEAD Global Innovation Index
September	GBAORD (2016 preliminary) Final high growth ent. data (2015) Economic data on high-tech (2016)		WEF Global Competitiveness Index OECD Education at a Glance
October			World Bank Doing Business
November	R&D intensity (2016 preliminary, 2015 final) Knowledge-int. activities (2016) Employment high-tech (2016) IPR Statistics (CTM 2016 and RCD 2016)	Autumn Forecast (ECFIN) Education Monitor (EAC) Annual Growth Survey (ECFIN)	Top500.org: Top 500 Supercomputer list
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 OECD STI Scoreboard (2-yearly)

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