



European Innovation Scoreboard 2017

**Executive summary
EN version**

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European Innovation Scoreboard 2017: a revised measurement framework

This year's edition constitutes a major conceptual advancement of the report. Following developments in policy priorities, economic theory and data availability, the previous measurement framework was in need of adjustment. Its revision for the present edition aims at better aligning the EIS innovation dimensions with evolving policy priorities, improving the quality and timeliness of the indicators, better capturing new and emerging phenomena as digitisation and entrepreneurship, and providing a toolbox with contextual data, which can be used to analyse structural differences between Member States. The revision has benefited from interactions with renowned experts in the field and representatives of EU Member States.

The new measurement framework is composed of ten dimensions, including a new dimension on the innovation-friendly environment. Last year's dimension on economic effects has been split in two separate dimensions measuring the impact of innovation on employment and sales. By deleting three indicators and including five new indicators, the number of indicators has increased from 25 last year to 27 this year. In addition, definitions have been revised for six indicators. Another change is that comparisons between countries and over time are made relative to the performance of the EU in 2010, thereby providing an improved monitoring of performance changes over time.

The EU is catching up with the United States, while it is losing ground vis-à-vis South Korea and Japan

At the global level, the EU is less innovative than Australia, Canada, Japan, South Korea, and the United States. Performance differences with Canada and the United States have become smaller compared to 2010, but those with Japan and South Korea have increased. Japan has improved its performance more than three times as much as the EU, and South Korea has improved its performance more than four times as much as the EU. The EU maintains a performance lead over China, but this lead is decreasing rapidly with China having improved more than seven times faster than the EU. The EU's performance lead over Brazil, India, Russia, and South Africa is considerable.

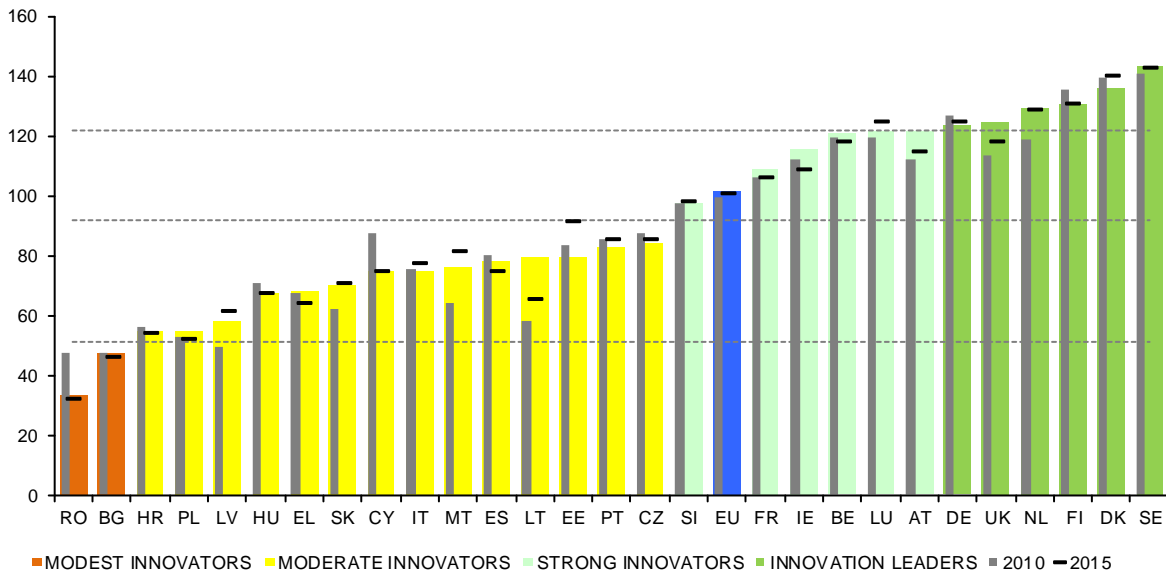
Performance of innovation systems is measured by average performance on 27 indicators

The new EIS measurement framework distinguishes between four main types of indicators and ten innovation dimensions, capturing in total 27 different indicators. **Framework conditions** capture the main drivers of innovation performance external to the firm and cover three innovation dimensions: *Human resources*, *Attractive research systems*, as well as *Innovation-friendly environment*. **Investments** capture public and private investment in research and innovation and cover two dimensions: *Finance and support* and *Firm investments*. **Innovation activities** capture the innovation efforts at the level of the firm, grouped in three innovation dimensions: *Innovators*, *Linkages*, and *Intellectual assets*. **Impacts** cover the effects of firms' innovation activities in two innovation dimensions: *Employment impacts* and *Sales effects*.

Member States are classified into four performance groups based on their average performance scores

Based on their average performance scores as calculated by a composite indicator, the Summary Innovation Index, Member States fall into four different performance groups (**Figure 1**). Denmark, Finland, Germany, the Netherlands, Sweden, and the United Kingdom are *Innovation Leaders* with innovation performance well above that of the EU average. Austria, Belgium, France, Ireland, Luxembourg, and Slovenia are *Strong Innovators* with performance above or close to that of the EU average. The performance of Croatia, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, and Spain is below that of the EU average. These countries are *Moderate Innovators*. Bulgaria and Romania are *Modest Innovators* with performance well below that of the EU average.

Figure 1: Performance of EU Member States' innovation systems



Coloured columns show Member States' performance in 2016, using the most recent data for 27 indicators, relative to that of the EU in 2010. The horizontal hyphens show performance in 2015, using the next most recent data for 27 indicators, relative to that of the EU in 2010. Grey columns show Member States' performance in 2010 relative to that of the EU in 2010. For all years the same measurement methodology has been used. The dashed lines show the threshold values between the performance groups in 2016, comparing Member States' performance in 2016 relative to that of the EU in 2016.

Performance has increased for the EU but not for all Member States

Compared to 2010, the innovation performance of the EU has increased by 2 percentage points. At the level of individual Member States, results differ with an increase in performance in 15 countries and a decrease in performance in 13 countries. Performance has increased most in Lithuania, Malta, the Netherlands, and the United Kingdom, and decreased most in Cyprus and Romania.

Switzerland remains the most innovative country in Europe

Comparing the EU Member States to other European and neighbouring countries, Switzerland remains the most innovative European country. Iceland, Israel and Norway are Strong Innovators performing above the EU average, Serbia and Turkey are Moderate Innovators, and the Former Yugoslav Republic of Macedonia and Ukraine are Modest Innovators.

In two years' time, EU innovation performance is expected to increase by 2 percentage points

Last year's report introduced, for the first time, a forward-looking analysis of EU innovation performance, discussing more recent developments, trends, and expected changes. This exercise is repeated this year using the revised measurement framework. The analysis explores EU trend performance on 19 indicators, for which a robust calculation of expected short-term changes proved possible. Increasing performance is expected for 12 of these indicators, and decreasing performance for six indicators. Overall, the innovation performance of the EU, relative to its performance in 2010, is expected to increase from 102% this year to 104% in two years' time.

This analysis also includes a trend comparison of the EU with its main competitors. At the global level, the trends observed in recent years can be expected to continue, with the EU catching up with the United States in two years' time, while the EU's performance gap towards Japan and South Korea would increase and its lead over China decrease further.