



# **European Innovation Scoreboard 2018**

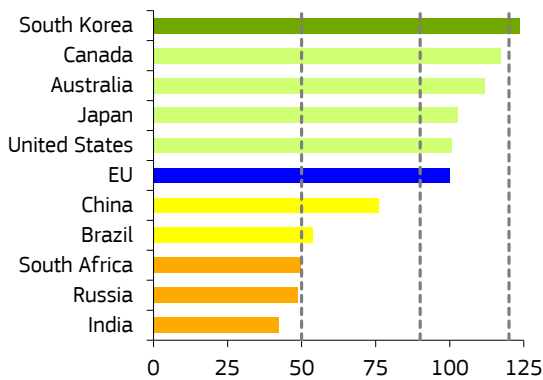
**Executive summary  
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## Executive summary

The annual European Innovation Scoreboard (EIS) provides a comparative assessment of the research and innovation performance of the EU Member States and selected third countries, and the relative strengths and weaknesses of their research and innovation systems. It helps countries assess areas in which they need to concentrate their efforts in order to boost their innovation performance.

This year's EIS reveals that the EU's innovation performance continues to increase and that progress has accelerated in recent years. Further improvement is expected for the near future, but progress remains uneven within the EU.

Figure 1: Global performance



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

At the global level, the EU continues to improve its position vis-à-vis the United States, Japan, and Canada. Relative to South Korea, the EU has been falling behind, but a gradual catch-up process is expected over the coming years. China is catching up at three times the EU's innovation performance growth rate. The EU's performance lead over Brazil, India, Russia, and South Africa remains considerable.

*Bars show countries' performance in 2017 relative to that of the EU in 2017. The dashed lines show the threshold values of the performance groups in 2017.*

### Innovation performance has increased for the EU but not for all Member States

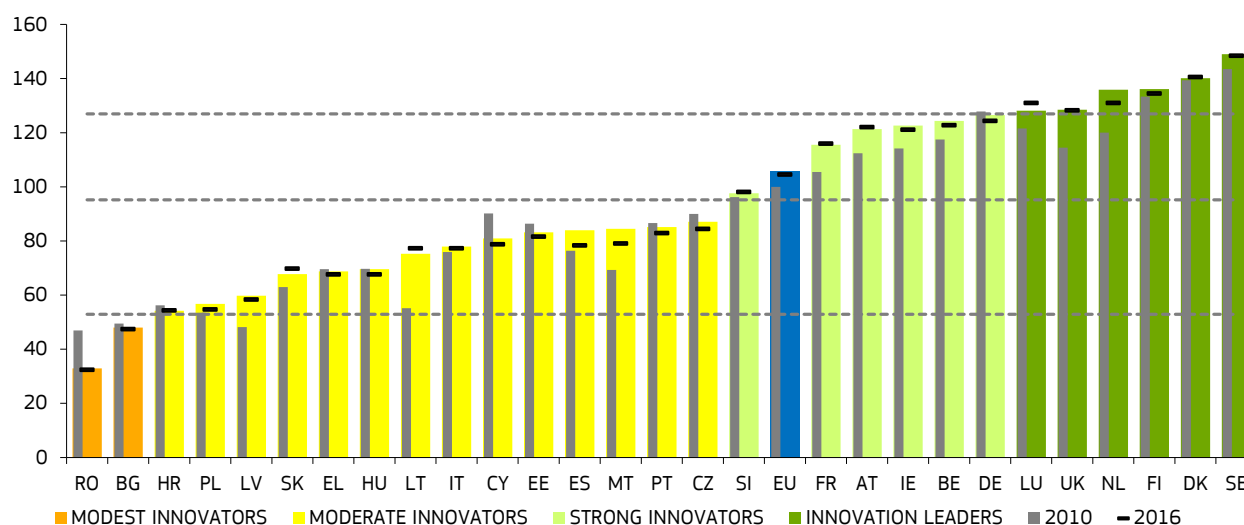
On average, the innovation performance of the EU has increased by 5.8 percentage points since 2010. However, there has been no convergence between EU countries performing at lower levels and those performing at higher levels. Since 2010, innovation performance increased in 18 EU countries and decreased in 10. Performance has increased most in Lithuania, Malta, the Netherlands, and the United Kingdom, and decreased most in Cyprus and Romania.

### 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 2**). Denmark, Finland, Luxembourg, the Netherlands, Sweden, and the United Kingdom are *Innovation Leaders* with innovation performance well above the EU average. Austria, Belgium, France, Germany, Ireland, and Slovenia are *Strong Innovators* with performance above or close to 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 the EU average. These countries are *Moderate Innovators*. Bulgaria and Romania are *Modest Innovators* with performance well below the EU average.

In this year's edition, Luxembourg (previously a Strong Innovator) joins the group of Innovation Leaders, while Germany (in previous editions classified as an Innovation Leader) drops to the group of Strong Innovators. However, overall performance differences between some Innovation Leaders and the top Strong Innovators are small.

Figure 2: Performance of EU Member States' innovation systems



Coloured columns show Member States' performance in 2017, using the most recent data for 27 indicators, relative to that of the EU in 2010. The horizontal hyphens show performance in 2016, 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 2017, comparing Member States' performance in 2017 relative to that of the EU in 2017.

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

The 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 impacts*.

Since 2010, progress has been strongest in the *Innovation-friendly environment* (notably broadband penetration), *Human resources* (notably doctorate graduates), and *Attractive research systems* (notably international co-publications). It is also encouraging that *Firm investments* and venture capital investments have increased significantly. By contrast, public R&D expenditures as a share of GDP remain below their 2010 level.

The share of SMEs introducing innovations has decreased over the past decade, but preliminary data from the Community Innovation Survey suggest a positive trend reversal more recently. Along with further increases in broadband penetration and venture capital investments, business innovation activities are expected to drive an accelerated growth in EU innovation performance in the coming years.

### Methodological continuity and refinement

For the 2017 edition of the European Innovation Scoreboard, the main measurement framework was significantly modified. For this year's edition, no changes have been made to the main measurement framework. However, due to data revisions for some indicators, the results for earlier years in this report are not comparable to those reported in the 2017 edition of the EIS. Following a need for additional contextual analyses to better understand performance differences on the innovation indicators used in the main measurement framework, a set of contextual indicators was introduced to the country profiles in the 2017 edition. For this year's report, this list has been modified based on additional analyses and interactions with different stakeholders.

As regards country coverage, this year's report includes for the first time available data for additional Western Balkan countries, which cannot yet be included in the extended European benchmarking (Albania, Bosnia and Herzegovina, Kosovo, and Montenegro).