



Overcoming the Innovation Divide in Europe: perspectives and possibilities

Background and focus questions for panel debate

Innovation is at the heart of the “Europe 2020” strategy and its flagship initiative Innovation Union, aimed to solve one of the largest challenges facing the European economy - the “European paradox”, which refers to difficulties that European economies have had in transforming scientific excellence and knowledge into commercial success and global competitiveness.

This phenomenon is attributable to a variety of factors and it varies considerably across European countries and regions as also shown by the 2014 Innovation Union Scoreboard¹. The so-called innovation leaders have successfully created knowledge-intensive “hubs” - partnerships between university, industry and the public sector, innovation ecosystems that manage constantly transform research into technological innovations and new business opportunities. Others, the so-called innovation followers and moderate innovators, are often struggling with limited socio-economic benefits from increased R&D investments. This applies typically to the periphery regions and new Member States, which often lack the absorptive capacity and critical mass of R&D-intensive industry².

There is already evidence that the “Silicon Valley model” has negative side effects (e.g. disproportionately high personnel costs and cost of living etc.) that absorb a large share of investments and therefore deter production and involvement of other actors in the innovation chain³. When designing new instruments and policies for its own technology and innovation hubs, the European Union should utilize the lessons learned elsewhere, striking a balance between the dual goals of competitive economies and territorial cohesion. All regions, but especially those recipients of ESIF, should focus investments into education and training, and increasing the innovation capacity of domestic firms⁴.

Which policy reforms and funding instruments should Member States implement to increase their innovative capacity and social returns from R&D investments?

Overall there is political pressure to increase the effectiveness of public R&D spending e.g. to increase the socio-economic returns of research and innovation activities. The public sector as a funder of R&D faces the challenge to become a “smart procurer” of challenge-driven research and innovation services that would enable evidence-based policies and support university-industry cooperation for knowledge and technology transfer⁵. Smaller Member States and regions could also benefit from building critical mass through sectorial long-term university-industry-public sector partnerships covering the whole research and innovation cycle in key growth areas as well as through increased regional cooperation^{6,7}. Industry should be more involved in the planning and constant implementation of research activities, thus providing continuous feedback and input for new studies and cooperation.

¹ European Commission (EC), Innovation Union Scoreboard [2014](#), and Regional Innovation Scoreboard [2014](#)

² Andrés Rodríguez-Pose “Reconciling innovation, growth and cohesion in the periphery of the EU” (*draft*) EC Research, Innovation and Science Experts (RISE) Advisory Board, 2014

³ Sten Tamkivi “[Foreign Founders Should Look Beyond Silicon Valley](#)” TechCrunch Magazine, 2015

⁴ The European Research and Innovation Area Board (ERIAB) ERA Stress Test “[Placing excellence at the centre of research and innovation policy](#)”, 2014

⁵ European Commission communication “[Research and innovation as sources of renewed growth](#)”, 2014

⁶ R. Veugelers “[Undercutting the Future? European research spending in times of fiscal consolidation](#)”, Bruegel 2014

⁷ OECD “[Innovation-driven growth in regions: the role of Smart Specialisation](#)” 2015



The recent fiscal consolidation has led some Member States to decrease their public R&D spending, while others have re-committed on investments into R&D, creating an innovation investment divide between the northern and southern Member States⁸. Access to markets and risk capital, size of markets and the research excellence base vary significantly between EU's core and peripheral regions. In addition to those trends and factors, the efficiency of public-private interfaces also depends on the quality of research, which implies the need for improving both the knowledge transfer and knowledge production (including education) stages of the innovation process⁹.

Research has shown that high impact (e.g. excellent) researchers are more likely to engage in knowledge transformation and industry cooperation, and that firms which cooperate with excellent researchers generate more innovation and better market performance. Member States should thus focus on policies targeting weak links in the innovation chain, including the knowledge production stage, with the assessment of research and higher education institutes' capacity to generate market-relevant knowledge and workforce central to Europe's ability to remain competitive^{5,9}.

The linear perception of the innovative process that links greater R&D investment with greater innovation and economic growth is now being re-evaluated by both policy-makers and the academia, as it overlooks key structural factors linked to innovation⁹. Structural reforms are needed in the strategic planning and quality of the R&I instruments and bodies implementing the policies¹⁰. The European Commission has recently launched a Policy Support Facility (PSF) to help EU Member States reform their research and innovation policies¹¹, but the challenge remains for regions and Member States to foster excellent R&D and knowledge transfer in ways and areas that also support its knowledge-intensive business sectors.

Is Horizon 2020's shift towards industry-led and challenge-based research funding helping to decrease the Innovation Divide in Europe?

While stronger focus on innovation and close-to-market activities should increase the overall competitiveness of Europe and accelerate the commercialization of research outputs, it also leads to the question if Horizon 2020 instruments provide funding and cooperation opportunities that correspond to the innovation capabilities and business opportunities in both Europe's core and peripheral regions. Accessing all of Europe's markets, human resources and innovation potential remains crucial for both its global competitiveness and cohesion policy, with Horizon 2020 a key opportunity to serve those goals.

Horizon 2020 emphasizes private sector participation (especially SMEs) and supports cooperation in large, long-term public-private partnerships (KICs, cPPPs) with Europe's leading industry champions in priority growth sectors, while European Innovation Partnerships (EIPs) and European Technology Platforms (ETPs) act as supporting stakeholder coordination networks¹². Member States participation in those instruments remains uneven, for example the Knowledge and Information Communities (KICs) co-location Centers are located in only 11 countries. The expected size and number of stakeholders in the projected CLCs, level of industry commitments and access to markets often limit Europe-wide successful participation in KICs.

⁸ World Economic Forum "[The Europe 2020 Competitiveness Report](#)", 2014

⁹ Frédérique Sachwald "Europe's twin deficits: Excellence and innovation in new sectors" (draft), RISE 2015

¹⁰ European Commission "[Annual Growth Survey 2015](#)", 2014

¹¹ Press release "[Commission helps EU Member States reform their research and innovation systems](#)" 2015

¹² European Commission "[Horizon 2020 - The Framework Programme for Research and Innovation](#)" 2013



While the “Spreading Excellence and Widening Participation” Work Program in Horizon 2020 is aiming to support Member States that lag behind in research excellence, with a budget of around 1% total Horizon 2020 funding, it has limited impact on improving knowledge transfer and innovation capability.

The Member States lagging behind in innovation capability have various policy and investment tools at their disposal. The European Commission has promoted the alignment of European Structural and Investment Funds (ESIF) with Horizon 2020 instruments and calls¹³, and Structural Funds are increasingly used for supporting innovative SMEs, University-Industry cooperation in Technology competence centers and sectorial clusters¹⁴. Some countries have extended their participation on Venture Capital funds focusing on R&D-intensive SMEs¹⁵. In terms of strategic planning, more long-term and cross-sector cooperation schemes are implemented between the universities and private sector.

The first year of Horizon 2020 calls have yielded increased participation both from industry and academia, which can relate to less descriptive, challenge-based call topics, but also to recent cuts in some Member States’ national R&D-budgets. First analysis shows that Member States that have preserved or increased their national R&D-budget, have mostly above-average success rate and EU financial contribution per capita. Over 90% of successful grant coordinators were from EU15 Member States, with also over 90% of the EU contribution going to those countries¹⁶. Generally, the Horizon 2020 first year results show that while it has had a positive effect on supporting knowledge transfer and innovation capability, Member States with smaller and less R&D-intensive industry sectors have increasing challenges to access Horizon funding amid a more industry-led and challenge-based research agenda.

¹³ Commissioner for Research and Innovation, Mr. C. Moedas, [European Investment Bank conference](#), Berlin 2015

¹⁴ [Vanguard initiative](#), [Enterprise Estonia](#)

¹⁴ Enterprise Ireland [2015](#), TEKES [2015](#)

¹⁶ [CORDIS - EU research projects under Horizon 2020](#), EU Open Data Portal, 2015