

ABSTRACT:

There is an urgent need to improve Europe's innovation capacities, experts at this EIN session on innovation agreed. The solutions must be very broad – as broad as the concept of innovation itself: they go beyond funding, to include market conditions, cultural attitudes, networking and other 'soft factors.' Horizon 2020 is a necessary step, but more is needed. The EU must work to build scale of markets and opportunities across the Continent. And above all, greater political awareness – at the top level – is needed.

INTRODUCTION:

What is an effective way for Europe to respond to its current economic crisis? Through innovation, the Chair said. This discussion of innovation policy – launch meeting for this EIN topic – comes against the backdrop of economic difficulty and budget austerity. Yet the debate must consider how Europe's research and innovation capacity will adjust to a rapidly globalised market; how to ensure that investment in research translates into innovation and job growth; and how innovation can be used to overcome low levels of growth in some member states – in short, to promote convergence within the EU. A panel of three experts highlighted different aspects of the difficulties of innovation in Europe. A debate followed.

EXPERT VIEWS:

- Peter Droell, Head of Innovation Policy Development, DG Research and Innovation
- Staffan Jerneck, Director, Centre for European Policy Studies
- Ramon A. Wyss, Vice President International Affairs, KTH – Royal Institute of Technology

First, what is innovation? It isn't, Droell said, invention alone. It's not technology alone. It can be – often is – disruptive. It is, as pundit John Kao puts it, the capacity to design the future we aspire to. Europe's ability to innovate needs to be considered in a global context. The EU today has 7% of world population, 24% of R&D spending, 29% of GDP and 32% of scientific publications. But as the developing world rises, the importance of Europe will shrink – to, for instance, 17% of GDP by 2050. What's worse, there are already growing signs of weakness. Latest Commission data show a decline in the intensity of R&D spending in the economy and a growing divergence among the EU-27 in key measures of innovation. This reverses the slowly improving picture of the past decade. Can innovation fix this problem? Certainly, the Horizon 2020 proposal aims to help by mustering a broad range of instruments: measures to support market demand for innovation, the process of innovation from testing to demo, the range of innovation types from design to social, support for SMEs, financial leverage and support through the European Institute of Innovation and Technology. Action is needed, as the EU's Innovation Union objectives are now at a crossroads.

Jerneck highlighted the importance of innovation to the EU's Europe 2020 objective of smart, sustainable and inclusive growth. In fact, he said, we are a long way from earlier EU ambitions of becoming the most competitive economy in the world; now, as demographic challenges rise, and China moves to overtake the EU in R&D, we must work hard merely to avoid falling backwards in the world. We will require major investment: business R&D spending, for instance, would have to rise 80% to help Europe keep up. And Europe's focus should be on investment in intangibles: software, data, R&D, marketing, training and organisational capital. Above all, however, investment in education is needed. Too few European universities figure in the top global rankings. Education is a prerequisite for innovation – and it is also necessary for many of our social goals, such as enhanced opportunities for women in the workforce. New ideas and approaches are needed, including such new funding avenues for universities as private donation and tax exemptions.

Wyss detailed the case study of Stockholm: A famous centre for research, but not yet as successful as it should be at connecting that research to globally important innovation. The region has four famous research universities, a good track record in generating patents and spin-out companies, a well-organised regional innovation support system. Yet, , it has difficulty achieving lift-off for its innovators. Case in point: Spotify, the now-famous music-streaming site. It was co-founded by a KTH student in 2006 – and its growth for the next five years was very slow and difficult. It was only upon its US launch in 2011 that the company suddenly took off, and now has a valuation of more than \$3 billion. Why, Wyss asked, was it not possible for Spotify to grow faster within Europe? More broadly, why – despite its world-class research – is the Stockholm region not able to create more jobs than it does from its local innovators? If Sweden cannot solve the innovation gap, that is exemplary of the broader European problem. Europe lacks the scale and focus that a Spotify needs to grow.

THE DEBATE:

- Pilar del Castillo, MEP (EPP) – Member of ITRE
- Christian Ehler, MEP (EPP) –Member of ITRE
- Malcolm Harbour, MEP (ECR) – Chair of IMCO

A vibrant ICT sector is vitally important for development and growth in Europe, argued del Castillo. There are European success stories in ICT; and a lot of money has been invested in the sector, privately and publicly. But now, she said, we enter a new phase of technological and economic development for which ICT will provide the key enabling infrastructure. For this, EU policy needs a comprehensive view of the value chain in ICT, from base components to software and services. We also need support for specific steps in the innovation process, including pilots and demonstrations to validate a new technology idea. And we need flexibility in our ICT programmes and policies: In so fast-changing a sector, the EU needs a mechanism to reallocate resources rapidly from one idea to another. For Europe's future, success in this domain is indispensable.

Greater political awareness is needed, argued Ehler, of the importance of innovation. It was, he said, noteworthy that Council debate on the Multiannual Financial Framework has dwelled at length on long-standing problem sectors in a time of economic crisis – but hasn't seen innovation as the key to growth. The Commission has estimated that spending 3% of EU GDP on R&D by 2020 could create 3.7 million jobs and increase annual GDP by nearly €800 billion by 2025. Economic statistics show that R&D intensity is correlated with economic growth – though there are many complicating factors in the equation, as well. And there are any number of case studies one could point to. For instance, Germany has supported laser technologies since 1987 with more than €600 million. The payoff: Germany has 20% of the world market in laser material processing, 3,000 publications from 2007-2010 alone, more than 200 enterprises in the field, and annual employment growth in the sector of 3.5%. Another example: Canadian government investment in the University of Waterloo in the 1950s has by now produced a cluster of 450 technology companies (including Research in Motion), and output of C\$19.5 billion in 2010.

The difficulty, Ehler continued, is in conveying an understanding of this link between innovation and jobs to government leaders. Now, Europe must increase, not reduce, its efforts in R&D and innovation. For each billion euros that might be cut from Horizon 2020, there will be:

- 4,000 innovative SMEs not receiving funding
- 600 researchers and their teams not being funded
- 240 large projects with 2600 participants from industry and academia not funded
- 2500 Marie Curie fellows not funded
- €13 billion less value added by the business sector.

Money is important, Harbour argued – and he personally feels Europe would do better to spend money on innovation than on, for instance, agriculture. But the challenges of innovations go beyond grants and loans alone to support for the 'soft factors'. What's important for an entrepreneur or innovator is to be in the right kind of environment – the environment, for instance, of a university incubator where people share ideas, or with access to interns and other bright but affordable talent, or within easy reach of advisers and expertise to grow a company. These 'soft factors' – of the sort that the EIT is focusing on – are small-scale actions; but they, too, need attention in EU programmes.

Another necessary form of support for innovation, Harbour said, is innovative procurement. The Commission has proposed, and his committee has refined, a new approach to procurement of R&D and innovation by government that should provide a major boost: innovative partnerships for procurement, in which a government agency can work with a supplier of new technology to meet a defined public need – and in the process, stimulate more innovation from the private sector. To make this work, there needs to be support and encouragement for public procurers to be bold, and try this new approach.

Other participants raised several other points in debate:

- In the pharmaceutical sector, while governments officially support innovation in practise their procurement rules can discourage it. For instance, it was noted, there has not been a new medicine approved in Greece since 2010
- In the paper and pulp industry, innovation will be vital for its growth and prosperity – especially at a time when US competitors, benefiting from unusually low local gas prices, are in a position to undercut European paper suppliers.
- There must be another look at immigration policies to make it more attractive for non-EU engineers to move here.
- The various innovation centres of Europe must be encouraged to work together more – to become more of a network for innovation. The regions must be ‘federated’ in an intelligent manner.
- Efforts must be redoubled to establish EU Single Market norms for new technologies, to build the European-wide markets of scale that are needed.
- New funding mechanisms are needed – such as the ‘Big Loan’ adopted by the French government to fund more university research.

CONCLUSIONS:

Europe needs innovation for competitiveness, social cohesion – and recovery from the economic crisis. But its capacities for innovation, by several measures, are actually in decline. Latest Commission data show a drop in the intensity of R&D spending in the economy and a growing divergence among the EU-27 in key measures of innovation. This reverses the slowly improving picture of the past decade, and puts it even further from its earlier objective to become the most competitive economy in the world.

The solutions must be very broad – as broad as the concept of innovation itself:

- Horizon 2020 aims to help by mustering a broad range of instruments: measures to support market demand for innovation, the process of innovation from testing to demo, the range of innovation types from design to social, support for SMEs, financial leverage and support through the European Institute of Innovation and Technology. But more is needed.
- Europe’s focus should be on investment in intangibles: software, data, R&D, marketing, training and organisational capital.
- Europe must make better use of the Single Market to provide its innovative start-ups with the continent-wide market scale they need to grow.
- Europe must invest in a vibrant ICT sector, which provides enabling infrastructure for the rest of the economy. EU policy needs a comprehensive view of the value chain in ICT, from base components to software and services.
- Greater political awareness is needed of the importance of innovation. The Council has failed to see innovation as key to growth; yet the Commission has estimated that

spending 3% of EU GDP on R&D by 2020 could create 3.7 million jobs and increase annual GDP by nearly €800 billion by 2025.

- Europe must go beyond funding, and also support the ‘soft factors’ that support innovation – the networking, incubation and other facilities that provide entrepreneurs an environment for growth.
- The EU’s efforts to promote public procurement of innovation are moving forward, but public procurers still need encouragement to be bold and try this new approach.