



Policy Brief

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Cultivating a market for innovation in Europe

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Background

Innovation and technological progress have become defining features of our time. The unparalleled development of new products, services and processes is felt in virtually every part of our daily lives, and has significantly raised our standards of living.

Innovation can also play a vital role in driving sustainable growth and employment. Policy-makers across the world recognise its importance and it has been high on the list of EU priorities since the launch of the Lisbon Strategy in 2000, and even more so since it was revised in 2005. But despite some progress, significant challenges remain – with a policy shift from supply-side to demand-driven innovation a top priority.

The picture in Europe is very diverse, across both sectors and countries. While there are some world leaders and eager reformers, there are also some worrying under-performers. Spending on research and development as a proportion of national wealth, which is used to measure progress at European level, has stagnated since the mid-Nineties.

Only 1.84% of the EU-27's GDP was spent on R&D in 2005, and expenditure remains at a lower level than, for example, in the United States, Japan or South Korea.

While innovation is, of course, about far more than R&D spending – Gilbert Fayl defines it as “introducing and efficiently using current and/or new solutions in a timely manner to improve the performance of an organisation, process or commercial offering (product or service)” – it is clear that if the Union wants to be at the cutting edge of global innovation, it needs to do more. This includes raising productivity; increasing investment in R&D, skills and human capital; extending the application of ICT; and, most importantly, using innovation to boost economic growth.

Innovation and the market

For innovation to have an impact on growth, it must reach the market as a profitable process, product or service. It should therefore not be judged simply in terms of

technological progress measured, for example, by the number of patents. Most innovations do not reach the market, as market mechanisms select only those which are technically and commercially viable, and not all innovation will increase competitiveness and growth.

Innovations which *do* reach the market place impact on the economy in different ways. New technologies such as ICT can transform other activities, as happened with the emergence of Internet shopping or e-government. Innovation can also increase the quality of services (for example, making it possible to deliver goods faster); increase efficiency and effectiveness (for example, delivering more effective health care at a lower cost); and, ultimately, change the relationship between customers and providers by making the consumer ‘king’.

The nature of innovation is also changing, and increasingly impacts on all sectors of the economy. However, at EU level and within Member States, the focus has mostly been on the role of science

and technology and, commonly, on manufacturing. While there is some recognition of innovation as a key element of the knowledge economy, more focus is needed on its importance in services. Here, investment is much more difficult to measure, as companies

often invest in intangibles such as brand name or simply introduce slightly different ways of delivering services.

Nor should the potential for using existing technologies in new ways be ignored. Much private-sector

innovation consists of putting things together in new ways. The resulting products and services are brought to the market quickly, but discarded equally quickly if unsuccessful. The focus of this type of innovation is clearly on meeting customer demand in a quick and interactive way.

State of play

Under-investment in research has been identified as Europe's main weakness in the innovation field and, consequently, much of the EU's policy focus has been on the supply side. The 2002 Barcelona European Council set the target of raising overall research investment in the EU from 1.9% of GDP to around 3% by 2010, with two-thirds coming from the private sector and one-third from the public sector. This goal is unlikely to be achieved and, with the exception of individual countries such as Finland and Sweden, investment in R&D has stagnated. While achieving the 3% target would not of itself equal competitiveness, progress towards it highlights where Europe stands in its commitment to innovation.

In 2005, a group of experts led by former Finnish Prime Minister Esko Aho published a report on *Creating an innovative Europe*. This raised concerns that greater R&D spending alone was not enough to achieve greater competitiveness, and emphasised the need to create innovation-friendly markets. To strengthen the EU's research capacity and promote an innovation-friendly business environment, the report proposed a "Pact for Research and Innovation", designed to provide new strategic direction for the drive to achieve greater mobility of knowledge and a fully integrated European market. However, there has been relatively little progress in implementing these recommendations.

EU innovation policy is constrained by the fact that the European

Commission does not consider it a cross-cutting issue. The rhetoric highlights innovation as a key priority, but the reality is different. So far, EU policy has predominantly focused on funding technological and scientific research. While the Framework Programmes (FPs) have fostered intra-EU cooperation in this area, the wider objective of enhancing competitiveness through innovation remains elusive. Questions have been raised over how useful the FPs are for the private sector given the administrative processes required, which are often too slow and complex to keep pace with private-sector innovation.

EU-level support for research needs a more strategic focus. It currently suffers from too much duplication and too many bottlenecks because EU, national and regional funding is largely uncoordinated.

The European Research Area (ERA) aims to overcome this by creating a genuine 'internal market' for research which includes more dialogue between stakeholders: industry, scientist and civil society. However, progress has been slow since its launch in 2000, with responsibility essentially remaining at Member-State level and little common policy formation or real coordination.

An April 2007 Commission Green Paper entitled "European Research Area – New Perspectives" attempts to reinvigorate the ERA with a series of proposals for widening and deepening it. It suggests that the key question is how to

encourage national governments to bridge and combine national and European interests, and highlights the interconnectivity of the 'innovation triangle' – education, scientific and technological research, and the business environment. It proposes improving the 'free movement' of the research community across Member States, increasing industry involvement, and creating the right framework conditions and a functioning internal market for knowledge.

The *alma mater* of innovation

Free movement of researchers is currently curtailed by legal and practical barriers in individual Member States, hindering mobility and knowledge transfer across institutions, sectors and countries, and preventing Europe from building effectively on its strong tradition of high-quality universities and research. In addition, university culture, encouraged by the way Higher Education is funded, means there is an emphasis on academic research rather than commercial application: innovative ideas do not transfer easily from academia into commerce.

Since the EU's 2005 Hampton Court Summit, the Commission has attempted to encourage university reform, aiming to promote autonomy, open up universities to the business community and enhance cross-disciplinary research.

There is also an ongoing drive to create a pan-European higher

education institution – the European Institute of Technology – aimed in part at unlocking the EU’s potential for innovation and bridging the gap between the research community and companies. However, this is a costly and bureaucratic project which has so far failed to attract the desired level of private-sector funding.

The EU’s Structural Funds can also contribute to innovation policy. In 2007-2013, these will be explicitly aimed at helping to achieve the Lisbon goals, and are often used by Member States and regions to boost investment in innovation. However, this is only one objective and it is difficult to ensure that companies receiving funds focus on

enhancing competitiveness rather than simply complying with EU eligibility requirements. To be truly effective and encourage much wider investment in innovation at national and regional levels, Structural Funds must also be used to leverage changes in behaviour in the private and public sector.

There are, however, positive signs that certain key policy-makers in the Commission and beyond favour a new approach, recognising that the obstacles stifling the ‘process’ of innovating in Europe – from the initial idea through to commercial application – are a key issue.

A more integrated approach to innovation policy is planned

for 2007-2013 within the Competitiveness and Innovation Programme (CIP). With a focus on energy and the environment, this aims to link up innovation, competitiveness, productivity and entrepreneurship in European companies, especially small- and medium-sized enterprises, and includes support for eco-innovation and energy sustainability.

Yet, while there are some positive signs overall – and a recognition that certain policies will only have an impact in the long term – the EU currently lacks the drive to use its innovation policies to push forward its competitiveness agenda.

Prospects

If Europe wants to be a serious global competitor, it needs to create a truly open internal market where R&D, knowledge, finance and services can move freely in an open and undistorted environment, and where competition is the main mechanism for selecting successful innovations. EU policy must encourage innovation within the private sector and stimulate a change in culture and attitudes towards risk-taking, entrepreneurship and competition.

The EU is certainly not starting from scratch, but there is a need to rethink the overall architecture for innovation in Europe. The benefit of public investment in knowledge and research through FPs should not be underestimated, but there is a more urgent need to persuade national, regional and local governments to remove existing barriers in order to reap all the benefits of a well-functioning internal market.

Concretely, what should the Union do? There are ten key areas where action is required, outlined below. Recommendations 1-2 are

Europe-wide, long-term challenges for all stakeholders involved in the process, particularly the education sector. Recommendations 3-6 focus on areas where the Commission and Member States should work together to create the right framework at EU level. The last four are steps which can be taken by the Commission, and where short- and medium-term progress is possible.

1. *Investing in a new culture of innovation and fostering long-term changes in attitudes towards business and risk.* Europe needs people with the desire and ability to turn innovation into commercial reality. Education must support more risk-taking attitudes. New skills are called for, with all those in higher education – including science and technology students – equipped with the tools needed in today’s globalised markets, including appropriate language skills and an understanding of the key principles of economics and commerce.

2. *Continuing to encourage higher education reforms, building on good*

practice examples in some Member States, to develop interdependent relationships between universities and business. Companies should be involved in financing and directing research, while universities should accelerate the commercialisation of innovation and prepare students better for working life. The internal market for Higher Education should be encouraged, including greater competition between universities. University funding must be reformed to create incentives to engage with business, change university culture, and encourage interdisciplinary and applied research.

3. *Strengthening the internal market by removing barriers to innovation.* Setting standards, liberalising markets and engaging in open cooperation beyond national interests are important steps. The ‘GSM standard’ experience provides a glowing example of how to create a world leader. The forthcoming Single Market Review should focus on removing barriers to innovation – the regulatory framework must encourage

innovation and investment. Efforts to simplify the regulatory environment and adapt it to global competition as part of the Better Regulation initiative should be reinforced.

4. *Creating access to, and mobility of, knowledge – the ‘fifth freedom’ of the EU.* Knowledge is the economic and social currency of the future and needs to be freely available, especially if financed through public funding. Its use depends on its accessibility and the mobility of capital and human resources. The EU should act to facilitate the mobility of researchers in the Union, but must guard against the creation of a ‘Fortress Europe’ – it needs an international outlook and global mobility, and access should be encouraged.

5. *Creating optimal framework conditions for entrepreneurship and business innovation.* This includes providing easier access to skills, knowledge, finance, partners and suppliers; removing labour market, legal and administrative barriers; and providing a clear framework which protects intellectual property. Support for innovation in the private sector must be responsive and flexible, aimed at facilitating and enhancing existing activities, and funders must be willing to react fast, avoid unnecessary bureaucracy and take risks. Evaluating what works over time would provide a body of evidence to support future success.

6. *Fostering the emergence of lead or niche markets for innovative products and services where Europe has needs, assets, expertise and a competitive advantage, as recommended in the Aho Report.* Such markets should be clearly identified and the rationale for intervention spelt out: environmental protection, rail transport, facilitating labour mobility,

energy security, public health and mitigating population ageing are all areas where Europe has the potential to become a world leader.

7. *Developing a clear strategy for innovation which links overall strategy with all relevant policy initiatives and related benchmarks, including those in the Lisbon Scoreboard directly linked to policy initiatives.* The strategy should have commercial application at its core, focusing on all innovation, including in services and the public sector, and not just on technological progress. At EU level, there needs to be a policy shift from supply-side to demand-driven innovation. Failure to address this will negate possible positive effects of policy instruments such as public R&D spending.

8. *Considering how to give EU spending maximum leverage while recognising that EU funding can only be effective in small, targeted areas.* The Union’s mid-term Budget Review provides an opportunity to reassess how innovation can be supported across policy areas. It should focus on how EU funding can encourage behavioural change in the Member States and regions in areas such as regional policy and research and, in particular, should look at what changes can be introduced within the current financial framework. Funding needs to focus on promoting and rewarding success and long-term changes in behaviour, rather than redistributing scarce resources.

9. *Investing in links between the public sector, business, universities and civil society (for example through innovation clusters) and promoting examples of good practice.* Business can draw upon the pool of available talent in academia to develop innovations aligned to the needs of markets and society, and develop clever technology to meet users’ demands. The ‘living labs’ provide an

excellent example of new forms of local and regional networks linked into the EU-wide and global R&D and innovation networks.

10. *Focusing EU research funding to reward success.* Support is needed for innovative higher education projects, and to reward innovative and competitive universities. Exchanges between multi-disciplinary projects involving companies within and beyond the EU should be encouraged to ensure that European regions can learn from one another and help reduce the innovation gap. Funding for research should be less bureaucratic and more timely, and focus more on commercial application, to attract more business interest.

Innovation policy currently lacks the necessary political will and leadership to achieve significant progress, both at EU level and in most countries and regions. Innovation cannot be ‘invented’ in Brussels, but a common space with clearly-defined conditions where it can thrive is crucial. The strategic policy framework for this can only be created at the European level.

Member States, supported by the EU, need to ensure that the right conditions for innovation are in place. This is the key to unlocking the Union’s potential for sustainable high growth, competitive world-class companies, high-performing public services and an international reputation for innovation.

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