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FACING THE CHALLENGES IN THE EUROPEAN UNION

Re-thinking EU Education and Research for Smart and Inclusive Growth (EuInteg)

UNIVERSITY OF WARSAW

SZKOŁA GŁÓWNA HANDLOWA W WARSZAWIE

UNIWERSYTET GDAŃSKI

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HIGH ROAD OR THORNY TRAIL? RE-DESIGNING EUROPEAN UNION INNOVATION POLICY FOR A TURBULENT WORLD

Abstract

Innovation policy is the key tool to stimulate economic growth and strengthen competitiveness and employment opportunities. Moreover, it is considered the key tool to make the European Dream come true: a realm of freedom, welfare, security and mobility. A quantum leap is needed to enrich the presently rudimentary rather than comprehensive approach of the EU innovation policy in order to create an innovation-conducive environment.

We deploy the idea of innovation ecosystems, i.e. a set of interrelated ideas, institutions, instruments, policies, regulations and factors that determine the level, direction, outcome, productivity and degree of competitiveness from innovations. A realm characterized by clear, simple, efficient, smart, low-complexity, competition-based and socially accepted features will be best suited and conducive to prompt and promote innovation.

R&D does not automatically lead to innovation in markets; intervening and flanking factors, such as legal provisions, administrative support, entrepreneurial skills, risk propensity and public opinion, etc. – defining an environment supportive to innovation – need to be addressed and tackled simultaneously. Concomitantly, the removal of bottlenecks and obstacles to innovation are the tall order of the day. A European Decade of Innovation should be the new overarching vision for the EU, a benchmark for its actions.

Keywords: innovation policy, innovation principle, innovation ecosystem, European Decade of Innovation, strategic agility, governance innovation, barriers to innovation, R&D policy, culture of innovation, silo thinking, institutional arrangements, institutional reform, collaborative governance, Horizon 2020

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Introduction

There seems to be general agreement in politics, business and academia alike that the economic future of the EU is tied directly to its capacity to innovate its economy and society.

Why then is Europe far from reaching its 3% target of research investments? Why has it yet to make innovation work in all its policies? Why is there still confusion between R&D and the whole innovation chain to the market? And why does the latest Innovation Scoreboard show wide variations in innovation performance?

A whole set of largely unrelated individual initiatives does not make up an innovation system. Indeed, the EU and its Member States have developed policies, programs and projects to make innovation in Europe thrive. They have managed to develop an encompassing program such as Horizon 2020. However, so far the outcome is far from optimal. Stakeholders in science, business and society alike remain skeptical and critical, to say the least.

The traditional model of innovation uses scientific research as the basis of innovation, and suggests that change is linear: from research via invention to innovation, to diffusion and marketing. However, this model has been acknowledged as incomplete and misleading. Rather, innovation is a result of the interaction among an "ecology" of actors. It is the "right" interaction between the actors that is needed in order to turn an idea into a solution or a process, product or service on the market or in society.

The ecology model (Jackson 2011) provides a much richer picture of how innovation works, and how it can be stimulated and fostered. It focuses on connectedness, the dynamics and the context in which a complex interaction of actors and agents, factors, sectors and countries determining or hampering innovation is embedded. Innovation and value creation require permanent strategic agility (Doz, Kosonen 2008), scanning the global context, scouting for opportunities, and attention to continuities or discontinuities in societies and economies. Indeed, innovation is a complex process, combining curiosity, creativity, rigorous scientific method and a well-designed and smoothly working innovation ecosystem.

We have stipulated and promoted the idea of innovation ecosystems (HLG I and II 2013/2014), i.e. a set of ideas, institutions, instruments, policies, regulations and factors that determine the level, direction, outcome, productivity and degree of competitiveness from innovations. A realm characterized by clear, efficient, smart, competition-based and socially accepted features will be best suited and conducive to prompt and promote innovation. Factors such as legal provisions, administrative

structures, entrepreneurial skills, risk propensity and public opinion, etc. define an environment that is more or less conducive to innovation.

1. The Innovation Principle and the Unfolding of the Innovation Ecosystem as a Means for "Reclaiming the European Dream"

Europe is not lacking in capacity; rather it is confronted with problems of leadership, coherence of vision and purpose, of creating cumulative effects and critical mass, and of a rather inflexible culture of policymaking and regulatory application (Gretschmann 2014). It suffers from organisational fragmentation, persistence of multiple barriers to innovation in markets, and the absence of an encompassing systemic approach. Worse still, some innovation that has been developed in the EU is appropriated elsewhere due to a lack of favorable framework conditions.

Innovation in its broadest and most modern sense has to be tackled as a horizontal issue, taking full advantage of the intellectual capital of Europe and by better supporting the exploitation of synergy at both European and national levels, as well as between policies related to human, structural, social and relational capital. Europe's challenge in capitalizing on its innovation potential is twofold. Firstly, underinvestment in R&D and innovation, particularly by the private sector, combined with a weak ability to turn R&D results into innovations commercialized by European companies. Reversing this trend will require much better framework conditions for innovation (e.g. access to finance, better regulation, faster setting of interoperable standardisation, more affordable and robust IPR protection, and more strategic use of public procurement). Secondly, there is too much fragmentation and overlap, with weak links between EU and national/regional research and innovation programs. At the time of important fiscal constraints, the need to ensure value for money and enhance the quality of public expenditure should be a major driver to improve the coordination of R&D efforts.

In the face of budgetary scarcity and the rise of powerful global competitors, the EU needs to build on the only resource it has in abundance: innovation potential. If we succeed in unfolding this potential, 10 to 20 years from now we may look back on the present as the dawn of a Smart Innovation Era: a time when rapid and continuous innovation changed almost everything about the way we live, how we produce, consume, communicate, interact and participate in our polities. Putting all our efforts into unfolding and inspiring innovation, making it the overarching principle of EU

policymaking will be the recipe for reclaiming the European Dream of becoming a stable, successful and sustainable model for the world.

2. Innovation Policy Revisited

The key objectives must be to embed innovation policies and activities into a flexible, dynamic, stimulating and enabling environment, and the creation, promotion and development of an ecosystem of innovation. Innovation is meant to create an "added value" for society by enhancing the quality of the lives of its citizens and the competitiveness of its enterprises, through intelligent interaction between a variety of stakeholders, such as companies, local, regional and national authorities, international systems, e.g. the EU and its institutions and centres of knowledge creation, such as universities and research organisations. The enhancement and advancement, the fostering and maintenance of an innovation ecosystem requires the "Five Cs": Communication, Cooperation, Competition, Competence and Complexity. These elements can only be activated and developed effectively if there is guidance, leadership and stakeholder engagement that go beyond traditional and established practice. And we do need to understand how activities in one part of the innovation ecosystem affect other parts and vice versa, how we best engage and incentivise stakeholders and how we design fair and robust, efficient and democratic structures of governance to get the ecosystems rolling.

Against the latter aspect, the problem that modern European societies suffer from risk aversion, innovation scepticism and reform fatigue has to be tackled. Their innovation policies are either of an Icarus type, i.e. too high-flying and often falling down hard, or of the Sisyphus kind, i.e. rolling something uphill again and again but unable to hold it. This may be linked to the fact that every innovation carries both the desired and unintended collateral effects. Therefore, both corporations and governments share a common concern for healing and for outbalancing the potential, mostly the temporary, undesired social effects. Therefore, innovation ecosystems require regular, open dialogue and alignment of processes between the interests of various stakeholders (Kakabadse 2012), as well as ways and means to communicate risks and rewards, costs and benefits of inventions and innovations to the general public.

3. Essential Elements of Innovation Policy Redesign

To unleash innovation requires a mindset of decisionmakers which is the opposite of bureaucratic standards and thinking, the traditional standards which are usually meant to ascertain stability. Consequently, it must be part of the culture of innovation to accept experimentation and managed risk in order to allow innovation to succeed. Correctly assessing the change and driving it intentionally and purposefully is a difficult and most taxing task both in business and for the government. Unfortunately, there seems to be a generic and pertinent propensity to extrapolate from present trends and renew past experiences despite changed contexts. Recourse to and holding on to "received practice" and the status quo is a widespread attitude in public institutions, an attitude which instills inertia into the system and which needs to be broken.

To be sure, original ideas don't just come out of nothing. It's a combination of all the inspiration and impressions that the brain collects and then builds into new things. What is required are brain teasers, brain hubs and brain connectors. All three depend on the right, stimulating environment – the inspiring innovation ecosystem. We do need a new approach to innovation policy for good reasons: since the 1990s, as a consequence of a variety of developments, the EU policymaking and implementation have become heavily focused on following proper procedure, restricting the initiative, creativity and responsibility of otherwise highly competent officials, which in turn has led to excessive bureaucratization of problem solving. As a result, the quality and quantity of outcomes has been declining to the detriment of Europe's innovation and competitiveness.

What is badly needed is mutual understanding, convergent interpretations of reality, collaboration between research, business, governments and the EU Commission, instead of silo thinking by each of them and mutual distrust. Just how difficult a challenge it is to understand the choices and decisions inventors, creators, innovative entrepreneurs and business leaders have to take is shown in Christensen (2011), a must-read for policymakers!

This often requires a radical overhaul of human resource policies. In order to think about what might possibly exist and to escape the entanglement in the snares of what *de facto* exists, it is essential to develop new cognitive maps, outlining many possible avenues and alternatives. At the core of any innovation ecosystem to tackle the above problems is what experts call "bold associational thinking." Associational thinking (CereCore 2015) is the way we process information through integrating patterns, seeing contextual relationships, and connecting seemingly unrelated elements. What characterizes this type of thinking is the rapid, fluid, cross-disciplinary ability to select

and apply the appropriate thinking combination to solve any problem. However, when associational thinkers are micromanaged, involved in minutiae that have little relevance, and are in an environment with many meetings and little evidence of meaningful input or work, their effectiveness is drastically reduced. Associational thinkers need blocks of uninterrupted time to think and freedom to work in their own way. Moreover, research and centuries of experience have shown that there is a positive correlation between a society's degree of tolerance for the independent, unorthodox, creative and entrepreneurial-minded and its social benefit and economic success.

4. Recent Findings in a Nutshell

Despite some degree of variation, cross-country studies found that the top performing countries in innovation were also those with the strongest performance in competitiveness and employment, indicating a strong correlation between innovation and competitiveness. They also happen to top the people's happiness indexes. Shifting emphasis from the above "bird's eye view" to a more "frog-eye" vantage point, recent research into the innovation process has shown that:

- ideas can come from the unexpected or from a structured analysis of problems;
- linking existing knowledge or capability in a new way can be a starting point;
- individuals often play a more important part than whole teams;
- technical problems are often very difficult to solve and there may be a long time between an idea and its implementation;
- market pull and technology push are equally valid trigger points;
- external sources of help may be required both in technical problem solving and in marketing;
- competition as an innovation driver can come from many directions, including suppliers and customers;
- risks can be high, both in technology and markets, but should not be considered prohibitive;
- some innovations attack existing markets, others open up completely new ones;
- an active and activating role of the State is indispensable.

All of these different elements and triggers should be inspired and promoted by a redesigned EU innovation policy in its own right. However, this is easier said than done, given the institutional rigidities, strict arrangements, and rules and regulations (such as financial control or competition policy) in the EU institutions and elsewhere.

Additionally, the above analysis pinpoints the crucial role of institutional arrangements as driving or at least supporting forces to innovation. The two forces of technological innovation and institutional innovation are deeply intertwined, since new inventions, innovations and technologies frequently are the source of disequilibria which make it profitable or even indispensable to "innovate" institutional arrangements. It was the Nobel Prize Laureate, Douglass North, who defined institutions as "humanly devised constraints that structure political, economic and social interactions" and who described constraints as devised of formal rules (constitutions, laws, property rights) and informal restraints (sanctions, taboos, customs, traditions, code of conduct), which contribute to the perpetuation of order and to change, and to innovation within a market or society. Briefly stated, his works specify the process by which social, economic or political actors perceive that some new form of organisation (institutional arrangement) will yield a stream of innovations which makes it profitable to undergo the costs of innovating organisations and institutions (North 2005). These new arrangements are typically apt to realize potential economies of scale, reduce information costs, spread risk, and internalize externalities. This is the main reason why it is the entrepreneurial state in cooperation with the private sector and NOT the markets alone which make for innovation conducive environments (Mazzucato 2013).

5. Innovative Governance and Institutional Reforms for a Renewed Innovation Policy

If the Douglas North approach can withstand scrutiny, viz. that every innovative technology/process requires an adaptive and transformative government, new institutional arrangements and efficient institutional adaptability, governance innovation within the EU will be the tall order of the day.

As the ecosystem of innovations and government policies are becoming increasingly multilayered, multi-actor and hyper-complex, new modes of governance, citizen participation and transparency will be part of any innovation-promoting regime. Post-national European innovation regimes and policies are horizontally and vertically interwoven, multi-level arenas; while simultaneously there are also undiminished national "location competition" efforts, and, in addition, an increasing number of European regions entering the post-national innovation policy arena as self-confident actors, supported by political autonomy. There appears to be a necessity

of co-evolution of "political systems" and "innovation systems" as an emergent component of a new innovation ecosystem.

Governments' roles in innovation grow: governments will increasingly become involved. The EU of today, which has acquired and been assigned numerous competences in many areas, appears in urgent need of all-encompassing governance innovation. Between the traditional Community Method and the Open Method of Coordination, it requires new instruments for innovative *Collaborative Governance*. This pinpoints the crucial role of institutional arrangements as driving, or at least supporting, forces of innovation. The two forces of technological innovation and institutional innovation are deeply intertwined, since new inventions, innovations and technologies frequently are the sources of disequilibria which make it profitable or even indispensable to redesign institutional arrangements. The relationship between different administrative units within national governments, as much as between EU Commission departments, the different interfaces between politicians and civil servants in the Member States, and last but not least, the governance capacity problems in several Member States, need urgent addressing in order to facilitate the functioning of innovation ecosystems. Outstanding exposition and critical overview of the EU Innovation Policy on the way to *Horizon 2020* can be found in Granieri and Renda (2012). The authors argue that unless existing innovation policies are streamlined and a new strategy is designed, the future will be gloomy.

We have argued in HLG I and II (2013 and 2014) that recommendations may involve the following, interdependent elements for improvement: the regular use of European Council meetings for a comprehensive discussion of citizen-centered themes; measures to reduce the innovation divide in the Single Market and assistance in building national innovation ecosystems; measures to radically improve policy coherence and impact assessments, through the design and implementation of new models for impact assessments; the option to create an EU Commission Vice-President(s) without a portfolio, responsible for strategic collaboration, mentoring and coherence in Innovation Policy Management; the strengthening of the role of independent, outside-the-box advice; the regular discussion of innovation ecosystems' development in joint and inclusive Council meetings; a review of the "comitology" procedures and a rapid and significant reduction of regulatory rigidities and costs (HLG II 2014).

Conclusion

As the Single Market or the Common Currency once were, a European Decade of Innovation should be the new overarching vision for the EU; a benchmark for its actions. The European Decade of Innovation is meant to serve the European Common Good: the best living and working conditions for the peoples of Europe, the modernization and maintenance of its unique societal model. It requires overcoming the system failures in a quasi-supranational governance model, such as the EU, once designed for other purposes in the less complex economic and political world of more than 50 years ago.

It's high time for the EU innovation policy to sober up, focus on essentials and make a flying new start in order to enable us to take up the challenges facing us in a turbulent global environment

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