INPACT Priority III, IV, V
Regulatory framework: Innovation principle

Notes from Working Group Meeting
12 April 2017, European Parliament, Brussels
Hosted by **Prof. Jerzy Buzek** (EPP, PL)
Cora van Nieuwenhuizen MEP (ALDE, NL)
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MEP Stewards: Prof. Jerzy Buzek (EPP, PL), Cora van Nieuwenhuizen MEP (ALDE, NL)

Participants see annex

Short summary

Opening Remarks by Prof. Jerzy Buzek:
Mr. Buzek explained that a favourable regulatory framework and the application of the Innovation Principle are important drivers of competitiveness and innovation and that regulation should stimulate innovation. In this context he underlined that publicly funded research is preparing a fertile ground for innovation and the need to maximise impact and return on investment. He emphasized the necessity to take into account the risk of private investment in research and innovation for which a stable and predictable regulatory environment is indispensable.

Opening Remarks by Cora van Nieuwenhuizen:
Ms van Nieuwenhuizen observed that people are afraid of change and want to keep the status quo. There is still poor adoption of new (IT) technologies also due to lack of skills. She is advocating for approaches such as innovation corridor and regulatory sandbox (a 'safe space' where businesses can test innovative products, services, business models and delivery mechanisms - applied by the UK Regulator for fintech innovations). She furthermore stated:

- Fintech report drafted by Ms van Nieuwenhuizen – there is currently a natural reflex of protectionism against new technologies (AI, the blockchain) and the fear of job displacement. But many people dont take into account the positive impact of technologies.
- We need a light legislative framework, because EU's ability to attract and mobilise private investment requires a sound, light and flexible as possible regulatory framework for research and innovation.

Robbert Fisher, JIIP Director General / K4I President

Robbert Fisher summarized the findings of a short study into the application of the impact assessment (IA) of innovation in the 'Better regulation package'. Sixteen recent IA's (see annex) have been screened on this specific criterion:

- Research clearly demonstrates that policies (not limited to R&I policies) have a major impact on innovation and the way innovating companies can be boosted or hampered.

- Even though the assessment of innovation impact of regulations is required and a common practice, it is not yet systematic. Impact assessments of policy interventions explicitly aimed at encouraging innovation may be missing.
- Little justifications of IA conclusions: The mechanisms and functions influenced by new regulations with an effect on innovation are not fleshed out. Therefore, innovation impact assessments provide hardly any information that may assist in policymaking.
- Focus on technology-push factors: Impact assessments do not systematically consider demand-pull effects of regulations on innovation. They focus on factors that may influence investment decisions. However, an innovation that is not adopted remains only a good idea.
- Discussing underlying assumptions: Impact assessments of regulations on intellectual property rely on the simplistic and discussed assumption that there is a monotonic positive effect between the degree of stringency of appropriability regimes and firms' R&D expenditures.

In summary innovation is part of the impact assessment procedure (applying to all new regulations and policies) but the implementation leaves much space for improvement.

The discussion that followed focused on the how impact on innovation can be measured.

Paul Leonard, BASF/European Risk Forum on the Innovation Principle:

- Whenever legislation is under consideration, the impact on innovation should be taken into account & addressed in the policy & legislative process
- Letter signed by 22 CEOs from different sectors sent to Commission President
- The ground for innovation in Europe is not fertile to give birth to the tremendous scientific knowledge and infrastructure that we have in Europe.
- According to research documents done by the EC, the Innovation principle is entirely compatible with the Treaty. The principle has been advocated by Commissioner Moedas who sees it as a way of branding European innovation.
- The innovation principle doesn't contradict the precautionary principle but complements it

Overall discussion

Key issues covered in the overall discussion:

- a change of mind-set is needed to foster a more favourable innovation environment, this change is needed at all levels of governance and across different stakeholder's
- the importance of eco systems, at regional and city level as a bottom up driver for innovation
- the tendency to look back and guide new policy on 'fears' from event in the past (such as the financial crisis)
- new innovation policies and instruments need to be designed to match current and future needs, these policies need to be driven by the outcomes and should preferably be technology neutral (examples innovation deals, digital innovation hubs etc).

- the data economy is a driver for innovation and competition, but also brings a host of regulatory and societal challenges
- some practical examples were discussed such as the ‘CO2 case’ by CEFIC, where a process for renewable energy is not considered to be defined as renewable because a substance is turned into a new chemical.
- Better collaboration between the FP’s and the European Research Infrastructures (CERN, EMBL etc) is needed to better utilize facilities and the major investments made..

Background and introduction

“I am committed to getting the conditions right for innovation in Europe. Clearly one of the most important of these conditions is the regulatory framework. This is why the Commission has already innovation within its new Better Regulation framework and has emphasised the importance of innovation friendly regulation in its Single Market strategy.” (Commissioner Moedas in his foreword: A BETTER FRAMEWORK FOR INNOVATION Permanent Representation of the Netherlands, 26 January 2016).
The May Competitiveness Council adopted conclusions on the creation of a research and innovation-friendly environment.
In its conclusions, the Council acknowledges that Europe's ability to attract and mobilise private investments requires a sound regulatory framework conducive to research and innovation. It invites the Commission, in cooperation with member states, to further develop and implement a pilot on Innovation Deals (s. annex).
It also stressed the application of the innovation principle, whereby policy and regulatory measures are evaluated in terms of their impact on research and innovation.

The establishment of framework conditions for research and innovation is a part of the development of the Better Regulation Agenda and of the EU’s efforts for more jobs, growth and investment.

In December 2015, the Commission issued a working document titled "Better regulations for innovation-driven investment at EU level" (15392/15).

The document acknowledges that there is no simple relation between innovation and the regulatory environment due to the large number of systemic factors affecting innovation. It thus highlights the need to evaluate the impact of existing or proposed legislation on innovation.

The document also identifies a number of barriers to innovation in existing legislation applicable to specific sectors at EU level.

Annex – Attendees list

Title	First Name	Last Name	Organisation
Mrs	Esther	Agyeman-Budu	Cefic
Prof	Jerzy	Buzek	European Parliament
Mr	Tibor	Fillinger	The South Moravian Region
Mr	Robbert	Fisher	JIIP/K4I
Mr	Nicolas	Furio	UNIFE
Ms	Cosmina	Gantner	Knowledge4Innovation
Mr	Donal	Kennedy	EPPA SA
Mr	Tomasz	Kosmider	TECHNOLOGY PARTNERS FOUNDATION
Ms	Eliska	Kozakova	The South Moravian Region
Mr	Paul	Leonard	BASF
Mr	Manuel	Lianos	LNE Group
Mr	Markku	Markkula	CoR
Prof	Edward	Mitchell	European Synchrotron Radiation Facility
Ms	Maialen	Perez Fernandez de Retana	Delegation of the Basque Country to the EU
Ms	Ursula	Tober	Photonics21
Mrs	Catherine	Trinkle	BASF
Mr	Frans	van Bork	Den Haag
Mr	Andre	van der Meer	Den Haag
Ms	Cora	van Nieuwenhuizen	European Parliament
Mr	Witte	Wijsmuller	European Parliament

Annex

Innovation Impact Assessment:
An assessment of practices

This draft document investigates how innovation impact is considered in European Commission's impact assessment (IA) exercises. Section 1 provides overall conclusions, Section 2 is about the frequency of innovation impact assessment in our sample and the amount of information provided in these impact assessments. Section 3 explains our methodology.

1. Key conclusions:

- ➔ **Widespread innovation impact assessment but not systematic**: Even though the assessment of innovation impact of regulations is a common practice, it is not yet systematic. It may be missing in impact assessments of policy interventions explicitly aimed at encouraging innovation
- ➔ **Little justifications of IA conclusions:** The mechanisms and functions influenced by new regulations with an effect on innovation are not fleshed out. Therefore, innovation impact assessments provide hardly information that may assist in policymaking**.**
- ➔ **Focus on technology-push factors:** Impact assessments do not systematically consider demand-pull effects of regulations on innovation. They focus on factors that may influence investment decisions. However, an innovation which is not adopted remains only a good idea
- ➔ **Discussing underlying assumptions:** Impact assessments of regulations on intellectual property rely on the simplistic and discussed assumption that there is a monotonic positive effect between the degree of tightness of appropriability regimes and firms' R&D expenditures.

The next section takes a slightly deeper look into the 4 conclusions.

2. Conclusions elaborated

2.1. Widespread innovation impact assessment but not systematic

A primary observation is that almost all selected IA reports considered somehow the innovation impact of investigated regulations. This impact is sometimes reported under the 'economic impact' heading. In such circumstance, the 'innovation and competitiveness impact' section, if any, focuses exclusively on competitiveness.
In 4 out of the 15 selected IA reports, innovation impact was not considered. This lack is inconsistent with the explicit objective of investigated regulations. For instance, the EU Governmental Satellite Communications (GOVSATCOM) initiative aims to ensure that satellite communication solutions 'provide an appropriate level of European non-dependence in terms of technologies, assets, operations and services.' The achievement of this objective 'requires a competitive and ***innovative*** European space sector to ensue renewal of system in the mid-2020's'. However, no innovation impact was reported.

The impact assessment of the European Commission's Communication on Modernising and Simplifying the Common Agricultural Policy does not consider innovation impact either. However, the agricultural sector is increasingly knowledge-intensive benefitting from the development of biotechnologies and of new and more sophisticated equipment. Moreover, the Communication explicitly aims to "foster a smart agriculture by enhancing competitiveness and ***innovation*** while ensuring sustainability and providing ecosystem services".

➔ **Even though the assessment of innovation impact of regulations is a common practice, it is not yet systematic. It may be missing in impact assessments of policy interventions explicitly aimed at encouraging innovation.**

2.2. Little justifications of IA conclusions

Innovation is a complex phenomenon involving interactions between various actors and organisations, and institutions (including regulations) influencing these interactions. The technological innovation system approach identifies functions that need to be effectively performed for innovation to happen (in a sustained manner). However, in some IA reports, the justification of the innovation impact is very brief and does not flesh out the reported positive or negative effects of regulations on innovation.
For instance, the impact assessment of the European free flow of data initiative within the Digital Single Market is barely informative: 'by addressing the barriers to the development of the data economy, the initiative will provide the conditions that are necessary to deploy innovative data-oriented activities'.

➔ **The mechanisms and functions influenced by new regulations with an effect on innovation are not fleshed out. Therefore, innovation impact assessments provide hardly information that may assist in policymaking.**

2.3. Focus on technology-push factors

Innovation impact is seemingly measured differently across our selected IA reports. We observed a dominant technology-push perspective, whereby innovation impact is measured as variations in R&D and innovation investments. Reduction in administrative costs and more predictable compliance of new technologies and products with regulations can stimulate innovation (e.g., impact assessment of Strengthening of the EU cooperation on health technology assessment). Such approach overlooks the role of demand-pull factors, even though they are key in innovation processes. In their *Oslo* Manual,[1] the European Commission and the OECD agreed on defining innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations" (2005, p. 46). In consequence, a comprehensive innovation impact assessment should consider the impact of investigated regulation on demand conditions.

[1] OECD/Eurostat (2005), *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, Third Edition*, OECD Publishing: Paris.

For instance, possible amendments of Annexes to REACH (Registration, Evaluation, Authorisation and restriction of CHemicals) for registration of nanomaterials aim to "ensure adequate demonstration of [their] safe use in registration dossiers". This revision in nanomaterials regulation may improve users' trust and accelerate the uptake of products including nanomaterials. In sum, this new regulation may have an impact on innovation by influencing demand factors. However, its impact assessment neglects this dimension and states the following: "regarding innovation, extra requirements could add compliance cost to companies that otherwise could have been spent on research and development; however, research and innovation can be fuelled by legislative requirements and the acquired knowledge".
We do not state that impact assessment always overlooks demand-pull effects of new regulations. Indeed, achieving more and better mutual recognition for the single market for goods is assessed to be an appropriate means for tackling problems that affect the introduction of innovative products in new markets. Similarly, new regulations are reported to stimulate the development of innovations complying with new regulations. Minimum quality requirements for reused water in the EU is even assessed to be more effective in encouraging the design of new and more cost-efficient techniques than technology-oriented approaches. Furthermore, some selected impact assessments consider how new regulations may improve general innovation-enabling factors. For instance, the European Interoperability Strategy (EIS) and European Interoperability Framework (EIF) revision is considered as "a booster of competitiveness and innovation in the sense that it promotes principles such as openness, cooperation, reusability and standardisation". We advocate the replication of these good practices in future impact assessment exercises. Technology-push must be considered, but always along with other factors.

➔ **Impact assessments do not systematically consider demand-pull effects of regulations on innovation. They focus on factors that may influence investment decisions. However, an innovation which is not adopted remains only a good idea.**

2.4. Discussing underlying assumptions

The conclusions of some impact assessments rely on assumptions that are not fully in line with the economic literature on innovation. In neo-classical theories, market failures justify policy intervention. One of their main causes is non-appropriability of information. It calls for the establishment and enforcement of an intellectual property rights systems. The impact assessment of modernising the enforcement of intellectual property rights can draw on this theory to infer that "an efficient and effectively enforced IPR infrastructure stimulates investment in innovation and creativity".
However, evolutionary economics discusses the link between tight appropriability regimes and innovation. In the short term, such a regime may induce more R&D spending as firms can appropriate more easily the outcomes of their R&D activities. However, a tight IPR regime may inhibit the exploration of alternative technologies and reduce the distribution of knowledge and competencies in the long run.[2] We contend

[2] Malerba, F. (2009), "Increase learning, break knowledge lock-ins and foster dynamic complementarities: evolutionary and system perspectives on technology policy in industrial dynamics" in Foray, D. (Eds), *The New Economics of Technology Policy*, Edward Elgar: Cheltenham.

that impact assessment of regulations on intellectual property should consider this trade-off between tight appropriability regime and distribution of knowledge, and not exclusively refer to assumptions that are discussed among scholars.

➔ **Impact assessments of regulations on intellectual property rely on the simplistic and discussed assumption that there is a monotonic positive effect between the degree of tightness of appropriability regimes and firms' R&D expenditures.**

JIIP 7 April 2017
Julien Chicot
Jacqueline Allan
Robbert Fisher

3. Annex our methodology

The exploration does not pretend to be an exhaustive or comprehensive review, but a scan of likely innovation relevant policies. The goal of the exploration is to get an initial view of how innovation impact is dealt with in the IA's. We explored IA reports from January, 1st 2016 onward, and investigated how innovation impact is conceived where appropriate.

We chose IA reports relative to regulations that are most likely to have an impact on innovation. These regulations relate to knowledge intensive technologies, products and industries (including modernisation of industries assumedly less technology-intensive), to intellectual property rights, and to the conditions for ensuring a European single market. In total, we collected 15 IA reports (Table 1).

Table 1. Selected impact assessment reports over 2016-17

No	TITLE	Type	Innovation IA
1	Possible amendments to annexes to REACH for registration of nanomaterials	Regulations on knowledge-intensive technologies, products or sectors	✓
2	European Interoperability Strategy (EIS) and European Interoperability Framework (EIF) revision	Regulations for a single market	✓
3	Minimum quality requirements for reused water in the EU	Regulations on knowledge-intensive technologies, products or sectors	✓
4	Achieving more and better mutual recognition for the single market for goods	Regulations for a single market	✓
5	Internal market for goods – Enforcement and compliance	Regulations for a single market	✓
6	Modernising the enforcement of intellectual property rights	Regulations on intellectual and industrial property rights	✓
7	Single Digital Gateway	Regulations for a single market	✓
8	Monitoring heavy duty vehicles' (HDV) fuel consumption and CO2 emissions with a view to improving purchaser information	Regulations on knowledge-intensive technologies, products or sectors	✓
9	Revision of regulation no. 443/2009 and regulation no. 510/2011 regulating CO2 emissions from light duty vehicles	Regulations on knowledge-intensive technologies, products or sectors	
10	Revision of Directive 2009/33/EC on Clean and Energy-Efficient Road Transport Vehicles – Clean Vehicles Directive (CVD)	Regulations on knowledge-intensive technologies, products or sectors	

11	Strengthening of the EU cooperation on health technology assessment	Regulations on knowledge-intensive technologies, products or sectors	✓
12	European free flow of data initiative within the Digital Single Market	Regulations for a single market	✓
13	Government Satellite Communications	Regulations on knowledge-intensive technologies, products or sectors	
14	Communication on modernising and simplifying the Common Agricultural policy	Regulations on knowledge-intensive technologies, products or sectors	
15	Optimising the internal market's industrial property legal framework relating to supplementary protection certificates (SPC) and patent research exemptions for sectors whose products are subject to regulated market authorisations	Regulations on intellectual and industrial property rights	✓