

Chapter 2

Political Background to PCP Adoption— An Institutional Approach

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2.1 Introduction

Before the 1980s, Europe's R&D policy took place at national level and was focused on supporting 'national champions' (also called 'flagship companies'). In the face of rising international competition in technological sectors in the 1980s and 1990s, increased coordination at EU level was set in motion.¹

Since 2000, EU policy-makers searched for improved policy instruments to catalyze the development of innovative solutions to serious threats to EU's advancement (e.g. increasing competitive pressure from emerging economies, climate change, shortage of natural resources, ageing etc.). In this context, they re-discovered demand-side policy instruments. Particularly public procurement was brought to the fore. In 2005, the Commission decided to exploit the potential of public procurement as source of investment in desirable R&D projects.² This eventually led to the adoption of the PCP Communication in 2007.

¹ Gulbrandsen 1999, 230.

² Commission 2005, 8.

This chapter describes the policy processes that preceded the adoption of the PCP and the policy actions that were subsequently undertaken, in order to boost its implementation in practice. The Chapter focuses on the political support and the relevant policy measures adopted in this context by the different EU institutions which have a say in the innovation policy arena. Section 2.2 describes the political support offered by the European Council (which gives the political impetus and support for certain action to stimulate innovation). Section 2.3 describes the actions undertaken by the European Commission (which translates the European Council's guidance into concrete activities) to design and subsequently encourage the deployment of PCP. Section 2.4 outlines the endorsement provided by the European Parliament (which has a say as co-legislator, in case legislation needs to be adopted). Section 2.5 outlines concluding remarks.

2.2 European Council's Guidance

In 2000, the European Council³ adopted the 'Lisbon Strategy', the EU coordinated innovation policy framework. The 'Lisbon Strategy' provided the necessary political impetus for renewing EU's objectives in the face of challenges brought by economic globalization (e.g. increased competition from developing countries, climate change, ageing, scarcity of natural resources etc.). The European Council set the ambitious goal for Europe to become the most competitive and dynamic economy in the world within a decade.

To reach this goal, Europe needed to increase research and technology intensive production and to improve the innovative capabilities of European businesses. This could be achieved by ensuring (i) coordination of research efforts at EU level and (ii) uptake of the resulting innovations; (iii) diversion of public expenditure towards R&D, innovation and information technologies.⁴

In Lisbon, the European Council concurrently decided to introduce the concept of 'open method of coordination' (OMC). OMC is a decentralized approach by which the European Council defines annual political goals related to the Lisbon areas (employment, innovation, economic reform and social cohesion). The European Commission defines specific actions that are needed to achieve these goals, with related timetables. However, the implementation of these actions is left to the Member States.

Yet, the European Commission monitors the implementation by each Member State against quantitative and qualitative indicators and benchmarks. It draws up annual reports on the progress made in each area. For the comparative assessment of the research and innovation performance of the 27 Member States and

³ The European Council is the organ which gives the political impetus to the Union's economic, social and environmental action. It is formed of the heads of the Member States.

⁴ Expert Group 2006.

the relative strengths and weaknesses of their research and innovation systems, the Commission uses the innovation indicators of the Innovation Union Scoreboard. These outcomes of these assessments are subsequently used as justification for policy choices.

The OMC approach leaves the European Commission with no direct enforcement mechanisms, yet it allows for evidence-based arguments to persuade and leverage peer pressure.

Since 2000, the European Council re-endorsed and fine-tuned the Lisbon Strategy on innovation during each of its annual meetings. Different measures meant to create favourable conditions for businesses to invest in R&D and innovation were proposed. Hereafter, I will highlight European Council's most important decisions for spurring investments in R&D and innovation and for using procurement as a policy instrument to this end.

In 2001 in Göteborg, the European Council underlined the need to consider the environmental effects of all policies (including innovation policy). Setting policy objectives for sustainable development, next to the economic and social objectives, would unleash much needed technological innovation, particularly in sectors such as energy and transport.⁵

An important step was taken during the 2002 European Council in Barcelona, when it was agreed that investment in R&D and innovation in the Union should increase to 3 % of the GDP by 2010, of which two-thirds should come from the private sector.⁶ The Council underlined the need to ensure '*better access to risk capital*', networking and improved technology diffusion as part of an integrated strategy. The Council laid a particular emphasis on priority areas in frontier technologies such as biotechnology and energy, considered instrumental for closing the gap between the EU and its major competitors.⁷

During its 2003 Spring meeting, the European Council⁸ stressed the need to improve access to public finance in order to incentivize businesses to increase their R&D investments. It also recognized the important role defence R&D procurement had in promoting leading-edge technologies⁹ and re-stated that environmental innovations must be treated as a priority in EU's public research and innovation strategy.¹⁰

In 2004, the European Council remarked that the EU had not booked sufficient progress towards reaching the 3 % investment target, but reiterated its political commitment therefore. Among others, it called upon Member States to use targeted public R&D investments in order to catalyze greater private investments in R&D.¹¹

⁵ Council 2001, paras 19–21.

⁶ Council 2002, paras 47–48.

⁷ Council 2002, paras 12, 29.

⁸ Council 2003, 14.

⁹ Council 2003, 4.

¹⁰ Council 2003, 25.

¹¹ Council 2004, 2.

In 2005, faced with a negative mid-term evaluation of the Lisbon Strategy targets,¹² the European Council explicitly added public procurement to the array of innovation policy instruments.¹³ This addition was prompted by the French, German and UK governments' request to upscale the use of public procurement in support of innovation.¹⁴ Investments in eco-technologies in the energy and transport sectors were considered particularly suitable to be stimulated through public procurement.¹⁵

In the following years, the European Council continued to back the commitments made in Lisbon specified areas of European strategic interest: ICT, eco-innovations, and the energy sector (energy efficiency, sustainable energies and low emission technologies),¹⁶ eco-innovations to combat climate change (sustainable safe low carbon technologies, renewable energies, energy and resource efficient technologies).¹⁷

In 2008, in the face of the unraveling economic crisis, the Spring European Council reinforced its support for a coordinated innovation policy deployment. The Council concluded that innovation was more than ever needed to deal with growing long-term challenges, in the context of restricted financial resources.¹⁸ The Council underscored the need to support innovative SMEs by creating a EU-wide market for venture capital and by enabling their participation in public procurement.¹⁹

Based on the 2007 Innovation Union Scoreboard, which concluded that EU performs significantly weaker than competing economies in areas such as availability of early stage venture capital and public R&D expenditure,²⁰ the European Council strengthened its commitment to invest more, but also more effectively, in research, such as to achieve the 3 % R&D investment target. Public procurement was again mentioned as one of the instruments capable to contribute to deployment of desired innovations.²¹

In 2010, the European Council endorsed the new Europe 2020 Strategy and reconfirmed its political commitment to the Lisbon 3 % target,²² while in 2011 it

¹² Commission 2005b.

¹³ Council 2005, paras 13, 19.

¹⁴ French, German, UK Governments 2004.

¹⁵ Ibid., 6.

¹⁶ Council 2006a, paras 22, 34.

¹⁷ Council 2007, 11–2.

¹⁸ Council 2008.

¹⁹ Ibid., paras 7, 11.

²⁰ The EU-US gap in public R&D expenditure was reportedly increasing and the GDP share of early-stage venture capital in the US was still more than 50 % higher as compared to the EU. See European Innovation Scoreboard 2007, p. 17; Pro Inno Europe 2007.

²¹ Council 2008.

²² Council 2010, 11.

invited the Commission to explore the feasibility of a Small Business Innovation Research Scheme, with the purpose of lifting remaining obstacles to the cross-border operation of venture capital.²³

The European Council of March 2012 acknowledged for the first time the need to put demand-led innovation at the core of Europe's R&D policy and expressly mentioned the need to make more efficient use of pre-commercial procurement.²⁴ A year later, in its October 2013 meeting, the Council highlighted the need to support commercialization of valuable research projects and suggested to this end a *'better-coordinated use of tools such as grants, pre-commercial public procurement and venture capital, and an integrated approach from research and innovation to market deployment.'*²⁵ In the defense sector, the Council invited Member States to focus on dual-use technologies (e.g. key enabling technologies and energy efficiency technologies) and to ensure uptake through pooled procurement.²⁶ Increased participation of SMEs in the defense supply chain was singled out as a significant source of innovation, and the Commission was requested to facilitate SMEs access to defense and security markets.²⁷

In the followings years, pressing issues such as the Greek economic crisis, migration and security against terrorism and most recently Great Britain's decision to exit the EU captured policy-makers' attention, and innovation received less emphasis. However, the Council mentioned in 2015 again the importance of innovation in addressing energy and climate-related challenges and singled out renewables, electricity storage and carbon capture and storage, energy efficiency in the housing sector and sustainable transport²⁸ as well as digital technologies.²⁹

In conclusion, the European Council provided since 2000 broad guidance on the policy action needed to improve EU's innovative capabilities and transform Europe into the most competitive and dynamic economy in the world. It underlined the need for an integrated and coordinated approach between EU's and Member States' actions in support of research and innovation. Among the various conditions needed to leverage private investments in research and innovation, the European Council mentioned the need to increase not only the amount but also the efficiency of public R&D investments. In this context, it explicitly pointed at the need for public authorities to purchase those innovations which present social benefits.

Following the lead of competing economies such as the US, the European Council proposed to increase public R&D and innovation investments up to 1 % of the GDP. The European Commission was asked to guide Member States and

²³ Council 2011, 8.

²⁴ Council 2012, para 18.

²⁵ Council 2013a, para 16.

²⁶ Council 2013b, 8.

²⁷ Council 2013b, 9.

²⁸ Council 2015a.

²⁹ Council 2015b, para 12.

monitor the amount and impact of their investments. The aim was to deploy public R&D investments in such a way as to leverage increased private R&D and innovation investments up to an additional 2 % of GDP. The Innovation Union Scoreboard was initially designated to comparatively assess the achievement of these targets by the EU Member States. Recently, the Commission has developed the Innovation Output Indicator, a complementary tool to the Innovation Union Scoreboard, aiming to measure the innovation performance of a country in terms of output.³⁰ These assessment tools do not distinguish between the impact of various types of policies, but look at their concurrent effect. Another recently adopted instrument, the Research and Innovation Observatory assesses each member state research and innovation policy and provides specific recommendations for improvement.³¹

PCP was not mentioned as a distinct policy instrument before 2012. However, the guidance offered before 2012 left sufficient leeway for the European Commission to promote and finance PCP. The express reference to PCP in 2012 seems to indicate increased political support for its deployment as distinct innovation policy instrument.

2.3 European Commission's Actions

2.3.1 *Actions to Promote Public Procurement as Innovation Policy Instrument*

Since 2000, the European Commission gave concrete form to the political guidance offered by the European Council. In 2002, it started to pay attention to the potential of public procurement as an important instrument to stimulate private actors to invest in R&D and innovation. The Commission underlined in a number of communications the importance of public procurement as funding source particularly for some industries (such as transport, communications and defence) as well as the need to overcome fragmentation of EU procurement markets in areas where scale is necessary to incentivize innovators to invest in high-risk R&D.³² In 2003, the Commission included public demand in its Research Investment Action Plan, as an instrument to raise R&D expenditure to the 3 % Barcelona target.³³

Besides explicitly identifying public procurement as a suitable policy instrument to leverage private R&D investments, the Commission introduced new possibilities to procure innovative products into the 2004 Procurement Directives, by creating an equal footing for formal standards and functional specifications, and

³⁰ Commission 2013.

³¹ See <https://rio.jrc.ec.europa.eu/en>.

³² Commission 2002, 14.

³³ Commission 2003.

by introducing the competitive dialogue.³⁴ Subsequently, the European Commission provided clarity regarding the possibilities to procure innovative solutions in compliance with the legal framework.³⁵

The Commission concluded that public procurement may incentivize private investment in R&D, based on a number of funded studies (outlined below). The commissioned studies underlined the importance of customers 'needs and risk-taking attitudes in influencing private firms' decisions to invest in R&D and innovation, and warned that the lack of focus on public technology procurement constituted a missed opportunity towards achieving the 3 % target.

Experts advised the European Commission, among others, to set targets for Member States regarding public procurement of R&D and to stimulate the establishment of analogues to the US SBIR.³⁶ The same conclusions were validated by yearly EU surveys among private actors. These surveys repeatedly reported that businesses who had the opportunity to offer innovations in publicly tendered contracts, were the most likely to increase their innovation budgets. At the same time, public procurement tenders reportedly did not offer sufficient opportunities to bid innovative solutions, while in the few cases where they did, large companies had a higher chance to win the award.³⁷

Some of the most representative studies contracted by the Commission on this topic were the Kok Report which pointed out the possibility to use public procurement to offer lead markets to innovative products³⁸ and the Wilkinson Report which re-confirmed the need for demand-side innovation policy.³⁹ But the Aho Group Report, which was commissioned by the EU leaders in the aftermath of their Spring Summit in 2006⁴⁰ provided the most important input for the EU broad-based innovation strategy formulated by the European Commission in the same year.⁴¹ The Aho Group underlined that the demand-side was concomitantly the most promising and the most under-represented approach in the EU innovation policy. The Group argued for 4 priority actions: creating innovation friendly markets, strengthening R&D resources, increasing structural mobility and fostering a culture that celebrates innovation. The EU Council endorsed the conclusions of the Aho Group and the possibility of using public procurement to stimulate demand for innovation was reiterated at the Ministerial Meeting organized during the Finnish Presidency in 2006.⁴²

³⁴ Arts 23 and 29 Directive 2004/18/EC.

³⁵ Wilkinson et al. 2005.

³⁶ Gheorghiou et al. 2003, Business Decisions Limited 2003.

³⁷ Gallup Organization 2009, 59.

³⁸ Kok et al. 2004.

³⁹ Wilkinson et al. 2005.

⁴⁰ Aho et al. 2006.

⁴¹ The 2006 innovation strategy is the predecessor to the current EU innovation policy (Innovation Union Flagship).

⁴² Edler and Georghiou 2007, 958.

The EU broad-based innovation strategy adopted by the European Commission in September 2006, proposed to improve access to finance in support of innovation, to create an innovation friendly regulatory environment and to create demand for innovation as well as to reinforce the activities of institutions relevant for innovation, including the links between research institutions and industry.⁴³ Amongst the instruments to achieve these goals, public procurement was mentioned. By purchasing innovation, the public sector may stimulate the dissemination of innovations onto the private market through the power of example, while at the same time improving the quality and productivity of the public services. The Commission considered that, in order to achieve a significant impact, the focus should lie on the purchase of innovative products that have the potential to improve public service and for which the public sector is an important customer (such as ICT). Moreover, the need to stimulate all forms of innovation (technological, organizational and innovation in services) was underscored.⁴⁴

In 2006, the Commission also contracted a broad study to assess the practical uptake of innovation in public procurement in EU countries. On the basis of this study, the Commission drafted in the spring of 2007 the Handbook on Public Procurement for Innovation, to provide legal certainty on the possibilities offered by the procurement directives to procure innovative products.⁴⁵

By 2006, the Commission had mainly focused on the procurement of commercially available innovative products and not on the procurement of R&D services. Its measures had mainly focused on guidance and improvement of the legislative framework. In 2006, the Commission added pre-commercial procurement to its agenda and started to explore its potential. The concrete steps are described in the next Sect. 2.3.2.

In 2007, the Commission adopted a more hands-on approach and brought policy-makers from different Member States together in the Lead Market Initiative ('LMI'), with the purpose of deploying demand-side measures (e.g. public procurement, standardization and regulation) in a coordinated manner. LMI would be deployed in several sectors (eHealth, protective textiles, sustainable construction, recycling, bio-based products and renewable energies) which were already supported by means of supply-side measures. In addition, LMI envisaged support for Member States in the development of innovation-oriented procurement policies.⁴⁶

Following the adoption of demand-side instruments by several Member States in their innovation policies, the Commission contracted in 2011 a study to investigate the trends and challenges in demand-side innovation policies in Europe. The study concluded that there was a tendency in the EU Member State to focus on public procurement and pre-commercial procurement in their innovation policies, but that it was *'still too early to say whether demand-side type of activities meet*

⁴³ Council 2006b, 2.

⁴⁴ Commission 2006, 11.

⁴⁵ Commission 2007c.

⁴⁶ Commission 2007a.

the expectations'.⁴⁷ The study signalled the importance of 'intelligent learning' as compared to 'policy copying' as well as the importance of experimentation with demand-side policies, before assessing their positive effects.

Another study commissioned in 2011, warned that Europe needs to significantly improve the *quality* of R&D and innovation expenditure in order to close the innovation gap with its major competitors (South Korea, Japan and the US). The study argued that a successful innovation policy requires supranational coordination and governance.⁴⁸ Among other solutions, the Report pleads for '*the use of pre-commercial and early-commercialization procurement*' and for extended competences of the European Commission, beyond sharing practices and granting funds.⁴⁹

The new Public Procurement Directives represent the most recent legislative initiative of the Commission to simplify the deployment of innovation procurement (including pre-commercial procurement, procurement of innovative solutions and innovation partnerships).⁵⁰ The most important changes supposed to encourage the innovation supportive practices are: the simplification of the grounds for application of the competitive dialogue procedure and the competitive procedure with negotiation; and the legal guidance on the applicable rules in case of cross-border procurements. The new directives also introduce the procedure of Innovation Partnerships, which is meant to stimulate contracting authorities to engage in procurements of R&D. For a critical analysis of the legislative choices concerning this instrument and its relation to PCP, see Chap. 7.

2.3.2 Actions to Promote PCP Within the EU Innovation Policy

Until 2006, the European Commission had mainly focused on the use of commercial public procurement to encourage private actors to invest more in R&D. The procurement of innovative products (whether new to the market or to the public purchaser) was expected to give private actors the trust that follow-up innovations would find a market in the public sector. This would potentially nudge them towards assuming more risks and investing more in R&D.

The European Commission decided though to add a new dimension to the use of public procurement as innovation policy instrument. Already in a Communication of 2005 the Commission announced its intention '*to raise awareness of the benefits of re-orienting public procurement towards stimulating*

⁴⁷ Technopolis 2011.

⁴⁸ Ernst & Young and CEP 2011, 14.

⁴⁹ Ernst & Young and CEP 2011, 17.

⁵⁰ Directive 2014/24/EU and Directive 2014/25/EU.

research'.⁵¹ In 2006, the European Commission put together a group of experts to investigate the need to stimulate R&D activities in the ICT sector through demand-side policies.⁵²

The ICT sector was singled out as a dynamic and innovative sector that is responsive to public demand, that is of common European interest and that can generate spill-over effects and enable innovative capabilities into other sectors of the economy.⁵³ It was also considered that increasing R&D investments (both public and private) to levels comparable to those of competing economies such as the US, could leverage the competitive advantages Europe held in certain ICT markets.⁵⁴ Although the scope of PCP was later broadened beyond its initial focus, ICT continues to be suitable focus area. On the one side, the ICT sector holds the potential to provide revolutionary solutions for the sustainable economy of the future⁵⁵ and on the other side, needs public steering towards environmentally friendly choices.⁵⁶ In the context of the economic slowdown after 2008, innovative ICT solutions were also seen as a source of potential efficiency gains and spending cuts in the public sector.⁵⁷

The expert group reported that PCP is a suitable instrument to pull innovative solutions from the R&D phase into the commercialization phase in the ICT sector as well as elsewhere.⁵⁸ The conclusion reached by the experts motivated the Commission to support the implementation of PCP as innovation policy instrument.⁵⁹

The PCP Expert Group mentioned several reasons why use of public procurement of R&D was considered necessary.

⁵¹ Commission 2005c, 8.

⁵² PCP Expert Group 2006.

⁵³ ISTAG 2006, Aho et al. 2006.

⁵⁴ Commission 2009, 3. The Commission underlines the world leadership Europe holds in ICT application markets such as telemedicine and medical equipment, in automotive and aerospace electronics, and in embedded ICT. See also Joint Research Centre 2008.

⁵⁵ The ICT sector generates more than a fifth of all patents in Europe. See Joint Research Center 2008.

⁵⁶ In 2009, the ICT sector and ICT products were considered responsible for about 2 % of global GHG emissions and this harmful contribution was expected to grow quickly. See also OECD 2009.

⁵⁷ For example, by making significant savings in energy possible, in sectors such as transport, buildings and in manufacturing, ICT technologies are expected to help reduce 20 % of the CO₂ emissions in Europe by 2020. See Commission, 'A European Economic Recovery Plan' COM 2008 800 final. See also COM 2009, 116.

⁵⁸ PCP Expert Group 4.

⁵⁹ These reasons could also be valid for the deployment of PCP in other sectors.

1. Firstly, Europe's major competitor, the United States (US) succeeded more often to pull technological R&D into the commercialisation phase and to strengthen the competitive capabilities of its domestic suppliers on the global market,⁶⁰ by:
 - a. strategically using various R&D procurement procedures in well-defined areas in which they aspired to gain international competitiveness (e.g. design contests with considerable prizes, the SBIR competitions for high-tech solutions, value engineering, risk and IPR sharing in R&D procurement etc.) and
 - b. restricting R&D procurement to domestic suppliers. The US succeeded thus to offer a strong home market to their domestic suppliers.
2. Secondly, the US federal government spent 20 times more (49 Bn euro) compared to the EU (2.5 Bn dollar)⁶¹ on demand of R&D. This investment gap was most obvious in public procurement of R&D (and not in other financial instruments such as R&D subsidies, loans or fiscal measures).
3. Thirdly, due to the increasing opening of the Internal Market, the practice in the EU Member States to share the risks of R&D between state monopolies and private suppliers had disappeared and European companies were left without an important source of funding for risky R&D projects.⁶²
4. Fourthly, the private market in the EU had not stepped into fill the funding gap. In the case of projects focused on the public market, this was due to the limited upside commercialisation potential.⁶³ This situation was mainly observed in the case of products destined to meet intrinsic needs of the public organisation, but it was also present in cooperative procurement (when the innovative product addresses needs of both the public sector and the private customer) and in catalytic procurement (when the innovative product is destined to meet extrinsic needs to the procuring organization). Consequently, the experts concluded that the private market failed to fund risky R&D in general and R&D oriented towards solutions to public needs, in particular. Such market failures justified, according to the experts, government intervention.⁶⁴
5. Fifthly, the supply-side instruments such as subsidies, were considered insufficient to stimulate the creation of ICT solutions for the public sector. Unlike subsidies, procurement of R&D did not co-finance firms to carry out R&D in line with company plans, but directed R&D towards public needs.⁶⁵

⁶⁰ PCP Expert Group 9.

⁶¹ PCP Expert Group 10.

⁶² PCP Expert Group 5.

⁶³ According to the PCP Expert Group 24, before deciding to invest in R&D projects, companies calculate the value of the different investment options as a function of time of the upside commercialisation potential and the downside risk that the project will not be well received in the market. Products destined to the public market have a limited upside commercialisation potential due to the smaller size of the public market and to the risk aversion of public procurers.

⁶⁴ PCP Expert Group 24.

⁶⁵ PCP Expert Group 18.

The experts concluded that, in the context of increased global competition, the underutilization of pre-commercial procurement, as well as the fragmented national public policy objectives were Europe's most important weaknesses compared to its competitors.⁶⁶

The PCP Expert Group recommended a concerted European approach to the procurement of R&D which involved pooling together resources, demand and competencies and which encouraged GPA-wide competition, provided that the majority of the R&D is performed in the EU. According to the experts, this approach minimized organisational and financial risks for each participating contracting authority and ensured more efficient spending of public money. From an EU perspective, this approach would increase interoperability and coherence of implemented solutions.⁶⁷

The experts' conclusion that procurement of R&D in the EU was desirable was based on a comparison with the set of instruments in the US innovation policy. The experts did not question the effectiveness of government intervention in support of innovation. Moreover, no evaluation methodology of the impact of PCP was suggested⁶⁸ and no need was signalled to check on a case-by-case basis whether PCP is a suitable instrument and is capable of bringing more benefits than harm in the context of competitive markets. The policy recommendation to implement PCPs was in concert with the desire of both the policy-makers and the expert group to explore whether PCP could reproduce the success of the US SBIR and '*bring tangible benefits to society and economy*'.⁶⁹

The PCP Expert Group recommended priority areas for the deployment of PCP: healthcare, social inclusion, e-government, security and transportation. Within these areas, the PCP Expert Group provided examples of broad topics which were suitable for cross-border collaborative PCPs.⁷⁰

In the health area, the following specific topics are mentioned: electronic patient records supported by smart electronic health cards and e-prescriptions based on health information exchange networks.

Within the area of social inclusion, the Study mentions the following topics: ambient assisted living for elderly, children, etc., design for all workplaces, total conversation communication technologies, multi-platform information society access for groups at risk of exclusion e.g. in remote or deprived areas.

In the area of e-government the following topics are considered to present suitable challenges for cross-border collaborative PCP procedures: digital identities,

⁶⁶ PCP Expert Group 11.

⁶⁷ PCP Expert Group 6.

⁶⁸ Only recently, there has been increased attention for more measurement methodologies of the impact of demand-side policies. These may provide solid proof on the impact of PCP in the EU and may offer suggestions for improvements in its implementation. See Edler et al. 2012, 21.

⁶⁹ Commission 2007b, 3.

⁷⁰ PCP Expert Group.

workflows for inter-administration business processes (distributed secure software tools) and interactive multi-channel multimedia government to consumer/business architectures.

In the security and transportation areas, PCP could be used to solve challenges within the following topics: border security, risk management systems e.g. for large scale bioterrorism attacks, attacks on utility resources etc., automatic inspection in electronic customs/taxation systems, traffic control systems for freight (for secure cargo tracking and managing freight movements), integration of traffic control systems over different transport modes, communication between car and road infrastructure, advanced driver assistance systems ADAS, automatic emergency call from vehicles.

The European Commission embraced the experts' recommendations in the PCP Communication and in the accompanying PCP Staff Working Document.⁷¹

In the following years, the Commission continued to formulate policy measures to encourage the use of PCP. In its 2009 ICT Strategy, it set the target to triple the use of pre-commercial procurement in ICT by 2020 and it pointed out that socially desirable technologies, such as environmental technologies, should be given priority.⁷²

In order to achieve the above mentioned target, the Commission started in 2009 to fund under different funding programmes (in RFEC, FP7 and CIP programmes)⁷³ the establishment of networks of public authorities. The Commission made more than € 1.2 million available. These networks were intended to raise awareness on the PCP instrument, to facilitate exchanges of experiences and to eventually facilitate cross-border collaborations for implementation of pre-commercial procurement procedures.

In 2010 it became clear that the goals and targets formulated within the framework of the Lisbon Strategy had not been reached. The data published by the European Commission in the Innovation Union Scoreboards between 2001 and 2010 confirmed that the gap between Europe on the one side, and the United States and Japan on the other side, has consistently been widening along several dimensions of innovation. At the same time, the BRIC economies (Brazil, Russia, India and China) were quickly catching up in terms of key indicators of innovation performance, such as education, patents and investment in R&D.⁷⁴ Moreover, despite the fact that Europe featured similar levels of public R&D spending on

⁷¹ Commission 2007b.

⁷² Commission 2009, 6, 11.

⁷³ RFEC is the Regions for Economic Change programme is a European Commission initiative for the 2007–2013 period aiming at funding good regional practices with a particular focus on innovation. FP7 (Framework Programme 7) is EU's programme aimed at funding research and covering the period 2007–2013. CIP (Competitiveness and Innovation Framework Programme) is EU's funding framework for innovation activities, with a focus on small and medium-sized enterprises (SMEs). CIP runs from 2007 to 2013 as well.

⁷⁴ UNU-MERIT 2011, 20 http://ec.europa.eu/research/innovation-union/pdf/iu-scoreboard-2010_en.pdf Accessed 26 March 2013.

GDP to the US, Japan and China, the difference was substantial in private spending. The effect was less innovation brought to the market.⁷⁵

In response to this negative evaluation, the Commission adopted the new innovation strategy for 2020 (Innovation Union Flagship).⁷⁶ The Innovation Union Flagship considers demand-side instruments such as standardisation, public procurement and regulation crucial. The fact that the current low level of investment in R&D in Europe (below 2 % of GDP) compared to the US (2.6 % of the GDP) and Japan (3.4 % of the GDP) is mainly due to lower levels of private investment, led the Commission to conclude that public R&D investment in Europe does not trigger the desired incentive effect. As a solution the Commission proposes to improve the impact and composition of public research spending. It also proposes to improve the broader conditions for private sector R&D in the EU.⁷⁷ The new Strategy maintains the focus on the great challenges Europe is facing in the fields of climate change, energy and resource efficiency, health and demographic change.

Within the new Strategy, PCP is considered a suitable means to create procurement markets for innovation of at least €10 billion a year across the EU. To achieve this, the Commission announces its intention to support Member States in setting aside dedicated budgets for PCPs and contracting authorities in deploying joint procurements.⁷⁸

The Strategy makes clear that PCP is suitable to catalyze innovations that improve the efficiency and quality of public services, while addressing the major societal challenges. Suitable areas for implementation are the six Lead market Initiative areas (e-Health, sustainable construction, protective textiles, bio-based products, recycling and renewable energies) or the areas for European Innovation Partnerships (energy security, transport, climate change and resource efficiency, health and ageing, environmentally-friendly production methods and land management).

The concept of European Innovation Partnerships (not to be confused with the 'Innovation Partnership' procedure) was for the first time introduced by the Innovation Union Flagship. These partnerships are a complex combination of supply- and demand-side instruments which should mobilise key actors at both national and EU levels to develop and bring on the market innovations with potential social benefits. From the scant and vague description of the European Innovation Partnership, it could be concluded that its aim is to coordinate and integrate the existing instruments and existing initiatives beyond the existing Joint Technology Instruments (JTIs). The Partnerships would therefore act across the whole research and innovation chain (from R&D efforts to demonstration and pilots, all the way to the market). PCP is one of the available instruments to be used within the Partnerships.⁷⁹

⁷⁵ Ibid.

⁷⁶ Commission 2010a.

⁷⁷ COM 2010b, 14.

⁷⁸ COM 2010a, commitment no. 17.

⁷⁹ Commission 2010a, 25.

Besides the “Innovation Union Flagship Initiative”,⁸⁰ other documents (‘flagships’) that form part of Europe’s overall development strategy, announce Commission measures in support of PCP (e.g. co-financing of cross-border collaborative PCPs, guidance to Member States in reserving procurement budgets for PCP competitions etc.).⁸¹

As already mentioned in the previous section, the European Council of February 2011⁸² endorsed the innovation strategy proposed by the Commission and invited the Commission to explore the feasibility of a Small Business Innovation Research Scheme. A subsequent study on the feasibility of a Small Business Innovation Research Scheme was performed in 2012.⁸³ Based on interviews with contracting authorities and policy-makers across Europe, the study argued that EU support is key in coordination of cross-border procurement projects, in spreading knowledge and in drafting procurement specifications, while assessing the bids should be left to the procurers. The procurement initiatives could both target broad common-EU policy objectives, as well as procurers’ concrete needs.

The study’s findings were not implemented in the form of a PCP program under EU coordination. Instead, (3) years later (in 2015), the Commission launched the SME Instrument, a grant scheme designed to support SMEs with high growth potential in commercialising their innovations. The SME Instrument is emulating the procedural steps of the US SBIR and whenever the competitions target public needs, the participating SMEs are encouraged to identify public customers. However, the SME instrument is run directly by the European Commission, without the direct participation of a public procurer.⁸⁴

More direct support to the deployment of PCP competitions has been offered since 2011 under various EU funding instruments. Consortia of contracting authorities from different Member States may receive up to 90 % of the procurement costs.⁸⁵ The Commission’s support for PCP is further discussed in Chap. 6.

More recently, the Commission has succeeded to introduce a reference to pre-commercial procurement in the 2014 Procurement Directives.⁸⁶ This enhances the visibility as well as the legitimacy of this procurement model. Other important legislative amendment intended to encourage innovation-oriented practices after the pre-commercial stage, are: the simplification of the grounds for application of the competitive dialogue procedure and the competitive procedure with negotiation

⁸⁰ Commission 2010a.

⁸¹ Commission 2010c, d. Key action 9 states that the Commission will try to leverage more private investment through the strategic use of pre-commercial procurement.

⁸² Council 2011.

⁸³ Rigby et al. 2012.

⁸⁴ Bertrand Wert 2015.

⁸⁵ See http://cordis.europa.eu/fp7/ict/pcp/calls_en.html.

⁸⁶ Recital (47) Directive 2014/24/EU and Recital (57) Directive 2014/25/EU.

and the legal guidance on the applicable rules in case of cross-border procurements. The 2014 Procurement Directives include another notable novelty: the Innovation Partnership procedure. Arguably, this new procurement model was not endorsed by the Commission, due to its potentially distortive effects on fair competition within the Internal market. For a critical analysis of the legislative choices regarding this instrument and its relation to PCP, see Chap. 7.

Concurrently, the Commission intensified efforts to mainstream pre-commercial procurement. In 2014, it endorsed a study quantifying the impacts of PCP in Europe. However, the study went to great pains to identify procurement practice that fits the PCP model and ended up outlining estimations of expected benefits.⁸⁷

In the same year, the Commission launched the *eaqip* initiative, its latest attempt to support those national policy-makers and individual procurers, who are contemplating the deployment of innovation procurement (in the form of pre-commercial procurement or procurement of innovative solutions). The *eaqip* initiative provides the practical tools to engage in innovation procurement: detailed guidance to national policy-makers on how to set-up innovation procurement policy; comprehensive guidance to procurers on how to implement PCP, starting from needs identification and ending with contract management; a network of experts and local lawyers to advise on concrete implementation aspects.⁸⁸

In conclusion, since 2005 the Commission has undertaken various measures to stimulate public procurers to act as demanding customers of highly innovative solutions. These ranged from drafting the PCP Commission, to funding networks of procurers as well as collaborative cross-border PCPs and ending with comprehensive operational guidance and free assistance in the implementation. Whether these efforts are indeed achieving their aim, is discussed in Chap. 7.

2.4 European Parliament's Support

The European Parliament has also engaged in the debate around PCP. In a resolution of 2007, it identified pre-commercial procurement as an '*untapped opportunity in Europe to use public needs as a driver for innovation*' and encouraged Member States to use PCP to develop innovative solutions for specific problems of public interest.⁸⁹

In a later report of 2009, the Parliament endorsed the PCP Communication and the Commission's efforts to fund exchanges of good PCP practices, but expressed concerns that this procurement model remained little understood by SMEs and largely underutilized by public authorities particularly at the regional and local

⁸⁷ Bedin et al. 2015.

⁸⁸ See: <https://ec.europa.eu/digital-agenda/en/news/training-promotion-and-local-implementation-assistance-pcp-and-ppi> Accessed 7 June 2016.

⁸⁹ European Parliament 2007.

levels.⁹⁰ The Parliament called on the European Commission to undertake additional measures (e.g. financial incentives, improved guidance and the set-up of a European pilot project), with the aim to encourage public procurers to engage in PCPs.⁹¹ The report underscored the need to identify and prioritize medium and long-term public challenges⁹² and to detect those technological areas that hold potential solutions and should be targeted by PCP.⁹³

In 2010, the European Parliament's Committee on Industry, Research and Energy on Innovation Union⁹⁴ reiterated its support for PCP and urged Member States to strategically use public procurement in order to develop innovative, sustainable and eco-efficient solutions to important public challenges. The Commission was invited to review the opportunities for PCP within the current legislative proposals, to financially incentivize regional and local public authorities to engage in PCPs and to draft best-practice guidelines and training programmes to develop the needed skills.⁹⁵

In another more recent resolution, the European Parliament expressed again its support for PCP and listed the important objectives PCP may potentially achieve: creating new markets for innovative and green technologies, improving the quality and effectiveness of public services and creating competitive advantages for small European businesses.⁹⁶

In conclusion, the Parliament has joined the group of EU institutions that support PCP. The Parliament simply reiterates support for the already undertaken initiatives. However, its political support offers the Commission the additional justification to stimulate the use of PCP.

2.5 Summing-Up Policy Support for PCP

The EU is trying to catalyze a technological revolution in order to cope with the numerous and stringent challenges of the not so far-away future. Increased R&D investments are identified as a necessary pre-condition. However, the EU has been less successful than the US in incentivizing private actors to scale up their own R&D investments, despite similar amounts of public R&D investments. The EU policy-makers concluded that US SBIR-type of measures held the

⁹⁰ European Parliament 2008, paras 6, 29.

⁹¹ European Parliament 2008, paras 33–36.

⁹² European Parliament 2008, para 21.

⁹³ The Parliament stressed the importance of the EU Technology Platforms and of continuous knowledge transfer between technologically innovative universities, institutes and contracting authorities for finding suitable technology areas for PCP. European Parliament 2008, p. 7.

⁹⁴ European Parliament 2010.

⁹⁵ European Parliament 2010, para 140.

⁹⁶ European Parliament 2011.

key to incentivizing private R&D investment. As a consequence, they decided to explore whether pre-commercial public procurement could be beneficial to the EU economy. Pre-commercial procurement has not found its way into legislation, but has been anchored in public policy. All main EU institutions (European Council, European Commission and the European Parliament) have expressed their support for PCP. PCP is viewed by the EU policy-makers as a suitable instrument (i) to increase both public and private investments in R&D, (ii) to steer private R&D efforts towards innovative solutions for important and complex public problems and (iii) to indirectly enhance the innovative capabilities of (small) European businesses.

The initial focus on the implementation of PCP procedures in the ICT sector was justified by the beneficial effects the ICT sector has on economic growth and social welfare and by the innovative and dynamic character of this sector in the EU, which makes it responsive to innovation policy measures.

Subsequently, the Commission broadened the scope of PCP into areas wherein the government plays an important role in funding R&D, such as transport and defence, or holds a responsibility to tackle stringent problems: e-Health, sustainable construction, protective textiles, bio-based products, recycling and renewable energies, energy security, transport, climate change and resource efficiency, health and ageing, environmentally-friendly production methods and land management.

The main EU institutions have expressed their expectations that PCP can contribute to the achievement of the EU innovation goals in the above mentioned sectors. The expectations from the performance of PCP are thus high. These policy expectations are based on research papers commissioned by the EU with a handful of experts. It is difficult to conclude whether these studies are objective or rather serve the purpose of confirming the political decisions which they underpin. In the next Chapter, I will investigate whether the policy expectations are realistic by comparing them against relevant economic theories and studies beyond those commissioned by the EU.

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