

Institution: University of Manchester
Unit of Assessment: 19 (Business and Management Studies)
Title of case study: Demand-side Innovation Policy and Public Procurement of Innovation
<p>1. Summary of the impact</p> <p>The impact of the research has been to make a substantial contribution to changing the direction of innovation policy at a high level and in some matters of detail in the UK, at EU level and in other OECD countries. This has been done by developing theoretical and empirical underpinnings for demand-side innovation policies, notably in the use of large-scale public procurement budgets to drive innovation. The team's work is heavily cited and quoted in high level policy documents and has led to the design and application of several new types of policy instrument.</p>
<p>2. Underpinning research</p> <p>The impact is based on research that took place in Manchester from 2002 to date, with results first appearing in official reports in 2005 and the first paper appearing in the leading international STI journal in 2007. The key researchers were Professor Luke Georghiou (1993-date); Professor Jakob Edler (2007-date); Dr Elvira Uyarra (Research Associate, 2004-2008, Research Fellow, 2007-2012, Senior Lecturer from 2013); Dr John Rigby (Research Fellow 2004-2008, Senior Research Fellow 2008-date); Dr Andrew James (Research Fellow, 1993-2004, Senior Lecturer, 2004-date); Dr Kieron Flanagan (Research Associate, 1998-2004, Lecturer, 2004-date).</p> <p>The aim of the research was to understand the dynamics of how demand side incentives, implicit in government actions, incentivise innovative behaviour in firms. The research also identified and helped realise the potential for the use of the large public procurement budgets into widespread use as an incentive for innovation. Over the period the research has been produced in an interactive relationship with policy and practice. Key findings and products of the research included:</p> <ul style="list-style-type: none"> • Identification of overall policy deficit in promotion of innovation on the demand-side; • The first large scale body of systematic case-study evidence; • Execution of the first large-scale survey of government suppliers (800 responses) specifically exploring innovation issues; • Development of a policy taxonomy distinguishing supply and demand side instruments; • Design of a theory-based evaluation approach for demand-side policies; • Development of a rationale which links demand-side approaches to market and system failures; • First systematic exploration of innovation procurement in a local/regional government context; • Identification of key barriers to the effective use of this instrument including risk aversion, adverse incentive structures at different levels, failures in governance processes connecting commissioners and procurers, and inability to change habits and learn; • Identification of success factors including early communication of needs, the "intelligent customer" and "intelligent supplier", the importance of functional specifications and how to formulate them. <p>Prior to the team's work there had been a long term interest in demand side policy in Manchester and elsewhere but all case work had been done before the introduction of new European Procurement Directives in 2004 which substantially changed the landscape and ground rules for this activity.</p> <p>Key milestones in the research included:</p> <ul style="list-style-type: none"> 2005 First analysis of how to proceed in the light of new directives, using the taxonomy introduced by Georghiou/Edler expert group 2006 Europe-wide set of case studies [1]; 2006 Linking demand-side issues to lead market concept, societal and economic challenges [2]; 2007 Setting out the landscape for the topic and describing rationales [3]; 2009 Results of 2-year NESTA Fellowship on local procurement [4]

Impact case study (REF3b)

- 2010 – 2011 Scientific coordination of FP7 ERA-PRISM project which studied potential for innovation procurement in the seven smallest EU states
- 2011 First evaluation framework for demand-side innovation policies [5], subsequently applied by DG Enterprise
- 2010 – 2012 UNDERPINN ESRC grant supporting large-scale survey and in depth UK government/NHS case studies
- 2010 – 2011 Feasibility study DG Enterprise on future EU support to public procurement

3. References to the research

1. Edler, J., Papadakou, M., Ruhland, S., Hafner, S., Rigby, J., Georghiou, L., Hommen, L., Edquist, C., Rolfstam; M., Tsipouri, L. (2005). Innovation and Public Procurement. Review of Issues at Stake. Karlsruhe : Fraunhofer ISI. – 24 Google Scholar citations – Copy available on request
2. Aho, E., Cornu, J., Georghiou, L. and Subira, A. (2006) Creating an Innovative Europe. Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit – Official report – 124 Google Scholar citations – Copy available on request
3. Edler, J., Georghiou, L. (2007), Public procurement and innovation - resurrecting the demand side, Research Policy 36 (7), pp. 949-963 – 269 Google Scholar citations
DOI: 10.1016/j.respol.2007.03.003
4. Wilkinson R, Georghiou L Cave J et al (including Edler), (2005) Public Procurement for Research and Innovation, EUR 21793 EN, European Commission – Copy available on request
5. Edler J, Georghiou L, Uyarra E and Blind K (2012), Evaluating the demand side: New challenges for evaluation, Research Evaluation 21 (1), 33-47 – 11 Google Scholar Citations
DOI: 10.1093/reseval/rvr002

[3 and 5] are published in peer-reviewed journals. Additionally [3] has a high level of Google Scholar citations. [1] is a report of a study for the European Commission and is widely cited outside of the academic world. [2] and [4] are independent expert group reports submitted to the European Commission.

4. Details of the impact

Context

The impact of the research has been to make a substantial contribution to changing the direction of innovation policy at a high level and in some matters of detail in the UK, at EU level and in other OECD countries by developing theoretical policy rationales and developing an empirical evidence base that underpinned the design of demand-side innovation policies. Through an interactive process of conducting research and taking part in advisory activities the Manchester group has delivered its results to policymakers at ministerial and European Commissioner level (and in one instance to national leaders of all EU members).

Pathways to Impact

Transfer of the ideas has taken place through:

- Citation and acknowledgement in official documents of the research. Including the 2008 UK 'Innovation Nation' White paper (March 2008), Parliamentary reports (House of Lords S&T Committee [E] (May 2011) following invited testimony), BIS Growth Strategy [F], ministerial communication of the EU (European Council, 2006), and a 2011 OECD report on 'Demand-side innovation policies';
- Direct in person briefings to ministers including four UK business/science/industry ministers (Sainsbury, Pearson, Willetts, Cable), Secretary of State DCLG (John Denham) on local government innovation procurement, and to senior business representatives (eg EU High level Business Forum, Poland 2010);
- Authorship of several research-based public reports with wide dissemination to policymakers e.g. Aho Group report widely acknowledged to have put demand-side deficiency on agenda for European leaders – discussed at summits; Demanding Innovation – Lead Markets, Public Procurement and Innovation – NESTA Provocation 02, February 2007;

- Leading roles in UK and EU expert and advisory committees e.g. Glover Committee report to HM Treasury and BIS in which Georghiou had specific responsibility for innovation procurement and also chaired the academic sub-group.
- Presentation to EU Competitiveness Council July 17, 2008 (27 ministers)
- Regular contact and discussions with senior officials of Technology Strategy Board (including CEO), BIS Innovation policy team and BIS Economists
- Three presentations of team members in the Committee for Scientific and Technological Policy of the OECD in 2009 and 2010, the subsequent OECD strategy document (OECD 2011) on demand side policies is entirely structured after the team's conceptual framework.

Reach and Significance

Most significant innovation policy documents in the UK and European Commission cite or quote the work of the team. As the Deputy Director of Corporate Tax at HM Treasury [H] states: *“Manchester Business School has published path-breaking work on demand side policy and public procurement, and engaged intensively with policymakers in the UK and at EU level. This work has been influential in shaping policy under the last and current governments, as well as within the European Commission.”*

The design and evaluation of a new type of a novel innovation policy initiative – the European Lead Market Initiative – was explicitly based on our research. The strongest element of these impacts has been upon the use of public procurement to drive innovation. The potential of the policy is very high as procurement of goods and services accounts for 16-19% of GDP. There are no official estimates of the proportion of public procurement that is innovative, nor of changes in practice that could be attributed to policy measures influenced by the research. The full economic effects will take many years to be manifested but impact at this stage is principally measured in terms of changes in policy and practice.

UK effects include:

- Implementation of Glover Committee recommendations [B] on access to procurement for SMEs including move to exclusive use of electronic portal, electronic documentation for tenders, use of Innovation Procurement Plans (IPPs - one round implemented across all Government departments) and of outcome based specifications.
- Implementation of Innovation Nation [A] recommendations on intelligent customer and IPPs

International effects include:

- Design of EU Lead Market Initiative [D] based on Aho group report [2]. Subsequent evaluation using Edler conceptualisation (Edler 2010, working paper version 2009, cited 3 times) and team evaluation design (cited 6 times). Testimony from the Head of European Commission Innovation Policy Unit DG Enterprise [G] states: *“The Manchester Institute of Innovation Research has played nothing less than a key role in shaping the EU's demand side policies. The Aho report, with Professor Luke Georghiou as rapporteur, has brought the issue of rebalancing the EU's research and innovation policy mix in favour of demand side measures to the highest political level in the EU. It resulted directly in the EU's Lead Market Initiative.”*
- Implementation of new Pre-Commercial Procurement (PCP) models within the EU Horizon 2020, aiming to create procurement markets of €10 billion a year, plus PCP as requirement in Smart Specialisation within €100 billion Structural Funds. Further testimony from the Head of the Unit [G] states: *“The analysis of Edler shaped the concept of European Innovation Partnerships launched in the Innovation Union Strategy as well as procurement related commitments....This new policy is now sustained at European level.....Moreover pre-commercial procurement and innovation procurement are included as a requirement in Smart Specialisation within the Structural Funds.”*
- Contribution to German High Tech Strategy and Procurement Strategy of the Ministries for Research and Education as well as the Ministry of Economics;
- 3 small countries (Malta, Estonia and Iceland) enacted measures or strategies to use these policy instruments as direct result of ERAPRISM project which presented findings to Ministers in all cases.

Impact case study (REF3b)

- Following visit of high level Swedish delegation to Manchester for government enquiry to learn about the concept, new Swedish Law on Innovation Procurement enacted in February 2010.
- Contribution to OECD strategy and policy [C] as confirmed in a statement from the executive secretary of the OECD Working Party [I] on Innovation and Technology: “*The OECD report Demand-Side Innovation Policies is heavily influenced by their research. The basic typology and rationale for demand based measures has been largely shaped by the Manchester work – as testified in many explicit references..... The demand-side innovation policy work has also had influence beyond the immediate remit of innovation policy. For example, the OECD Green Growth Strategy which included work on green technology has also benefited from MBS research on linking supply and demand-side innovation policies in order to transition towards more sustainable growth models.*”

Local government effects included:

- Research findings of NESTA-funded study used extensively as evidence in report by DCLG on ‘Innovative Procurement’ which was rolled out to local authority officials, business and practitioner audiences.

5. Sources to corroborate the impact

All sources cross-referenced in section 4.

- DIUS: *Innovation Nation*. White Paper (2008) (DIUS 2008)
<http://webarchive.nationalarchives.gov.uk/tna+/http://www.dius.gov.uk/publications/scienceinnovation.pdf/>
- Glover A, Anderson R, Byles T, Georghiou, L., Gillies C, Ippolito J, Johnson M, Sargent W, Warrington J.; *Accelerating the SME economic engine: through transparent, simple and strategic procurement*, November 2008 (Glover report) HM Treasury
- OECD (2011): *Demand side innovation policy*. Paris
http://www.oecd-ilibrary.org/science-and-technology/demand-side-innovation-policies_9789264098886-en, [22 citations of MlOR work in this strategy paper, special mentioning in preface]
- European Commission 2009 COMMISSION STAFF WORKING DOCUMENT. *Lead Market Initiative for Europe. Mid-term progress report* Brussels, 9.9.2009. SEC (2009) 1198 final
http://ec.europa.eu/enterprise/policies/innovation/files/swd_lmi_midterm_progress.pdf
- House of Lords Science and Technology Committee, *Public procurement as a tool to stimulate innovation*, London : The Stationery Office Limited, May 2011 [our team quoted in report paras 22, 60, 83, 109, 110, 115, 127, 133 and in conclusions para 153], our publications also cited
- BIS Economic Paper 15: *Innovation and Research Strategy for Growth*, 4 MlOR citations on procurement, underpinning the BIS Growth Strategy which took up procurement as one key element.
- Testimony from Head of European Commission Innovation Policy Unit DG Enterprise, DG Research and Innovation and formerly Head of Cabinet of Commissioner Potocnik
- Testimony from Deputy Director of Corporate Tax, HM Treasury
- Testimony from the executive secretary of the OECD Working Party on Innovation and Technology