Evidence-based innovation policy?
Merits, limits and challenges of policy analysis

Presentation to the
ESF / STOA conference on "Science of Innovation"

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Structure

1. Evidence and Learning in policy making: General Propositions

2. Examples of learning and its challenges

   2.1 Evidence on innovation policy – on-going Compendium Work

   2.2 Demand based innovation policy: the challenges for evidence production

3. Evidence and Learning in policy making - Conclusions

Policy Learning – General propositions

- **Need for evidence and need to learn**

  - **Efficiency**: Re-invented wheels, avoidable learning costs

  - **Effectiveness**: max. desired effects, min. undesired ones

  - **Legitimacy** and accountability

Policy Learning – General propositions

Types and dimensions of learning

- **Evidence** based – Evaluation/systematic analysis:
    - own policy vs. policy elsewhere
    - Ex post, interim, ex ante
    - legitimate: „expertise/quality, non(?)-political, Zeitgeist

- **Concept based: discourse on cause – effect**

- **Norm** based: Discourse on desireability...

- **Experience** based (mixing the above...):
  OMC, High Level Expert Groups

2. Examples of learning and its challenges

2.1 Evidence on Innovation Policy

On-going Compendium Work

http://www.innovation-policy.net/

Funded by NESTA

Performed by

Manchester Institute of Innovation Research
MBS; University of Manchester

Capturing evidence on innovation policy:
The Innovation Policy Compendium (MIoIR – NESTA)

1. **Analysis** and **summary** of lessons learned
   - **effectiveness** of **innovation policy interventions**
   - the **conditions** that influence their effectiveness
   - Organised in „**topics**" (approx 20) around **objectives, not countries**
   - **Coverage**: OECD (mainly English speaking), UK
   - **Data basis**: academic and grey

2. Web-based: A **compendium** and **repository** (intelligence tool)

3. **Engagement and wide dissemination**
   - UK (in-built, NESTA, BIS; TSB...), OECD (in-built), EU
   - Four seminars for four bundles of topics, running until Autumn 2012
   - Final international conference

Steering committee: National/international policy and acedmics

Taxonomy and individual topic reports (plan)

Policy Objectives and Sub-objectives		
Improving RDI investment and capabilities of firms and systems **Supply**	increasing financial investment in RDI	
	increasing non-financial capability	skills in firms
		access to expertise
	increasing systemic capabilities, exploiting complementarities	

Taxonomy and individual topic reports (plan)

Policy Objectives and Sub-objectives			Topic / Report	
Improving RDI investment and capabilities of firms and systems **Supply**	**increasing financial investment in RDI**		Direct Measures (grants, including investment grants, loans, etc.)	
			In-direct (tax allowances, tax credits)	
			Access to capital	Guarantee schemes
				Venture Capital (various schemes)
			Entrepreneurship schemes	Financial measures to create firms (various combinations)
				Non financial measures to support firm creation (e.g. incubators, science parks)
	increasing non-financial capability	**skills in firms**	Training schemes to improve innovation capabilities in firms	
			Employing people	specific migration schemes
				policies to employ skilled labour
				inter-sectoral mobility schemes
		access to expertise	Schemes for R&D collaboration	
			Supporting transfer of codified knowledge	
			Support for innovation management / advisory service: Awareness and outreach; technical assistance and advice; brokerage and referral; voucher programs; mentoring and coaching	
	increasing systemic capabilities, exploiting complementarities		Clusters policies	
			Innovation networks (sectoral, technologies, geographically spread)	

Taxonomy and individual topic reports (plan)

Policy Objectives and Sub-objectives	
improving innovation climate and context - not directed at firm firms innovation activity directly **demand/ framework**	**Improving, increasing and enhancing the demand for innovation**
	Deliberate lead market and market transformation by enhancing supply of and diffusion of innovation
	Improving the framework conditions for innovation
	Targeted discourse

Taxonomy and individual topic reports (plan)

Policy Objectives and Sub-objectives		Topic / Report		
improving innovation climate and context - not directed at firm firms innovation activity directly **demand/ framework**	Improving, increasing and enhancing the demand for innovation	Public Procurement (including PCP)		
		Private awareness and readiness to buy innovation	Fiscal incentives demand	
			Awareness and information campaign (public), demonstration projects, (innovation prizes)	
	Deliberate lead market and market transformation by enhancing supply of and diffusion of innovation	Demand policy mixes explicitly geared at diffusion of innovation		
		Lead Market type initiatives		
	Improving the framework conditions for innovation	Standardisation		
		Impact of regulation on innovation		
	Targeted discourse	Technology assessment and anticipation of innovation pathways		
		Platforms	Technology Platforms	
			Innovation Platforms	

Capturing evidence on innovation policy:
The Innovation Policy Compendium (MIoIR – NESTA)

Challenges when learning form existing evidence:

- Multi-objectives instruments, multi-instruments objectives

- Interdependencies of instruments (intended, unintended)

- Context!

- Right analyes available?

- Garbage in - garbage out
  Inno-Appraisal study: 39% of programme-evaluations below quality threshold
  http://www.proinno-europe.eu/appraisals/ipar

- Implicit or explicit country bias

2. Examples of learning and its challenges
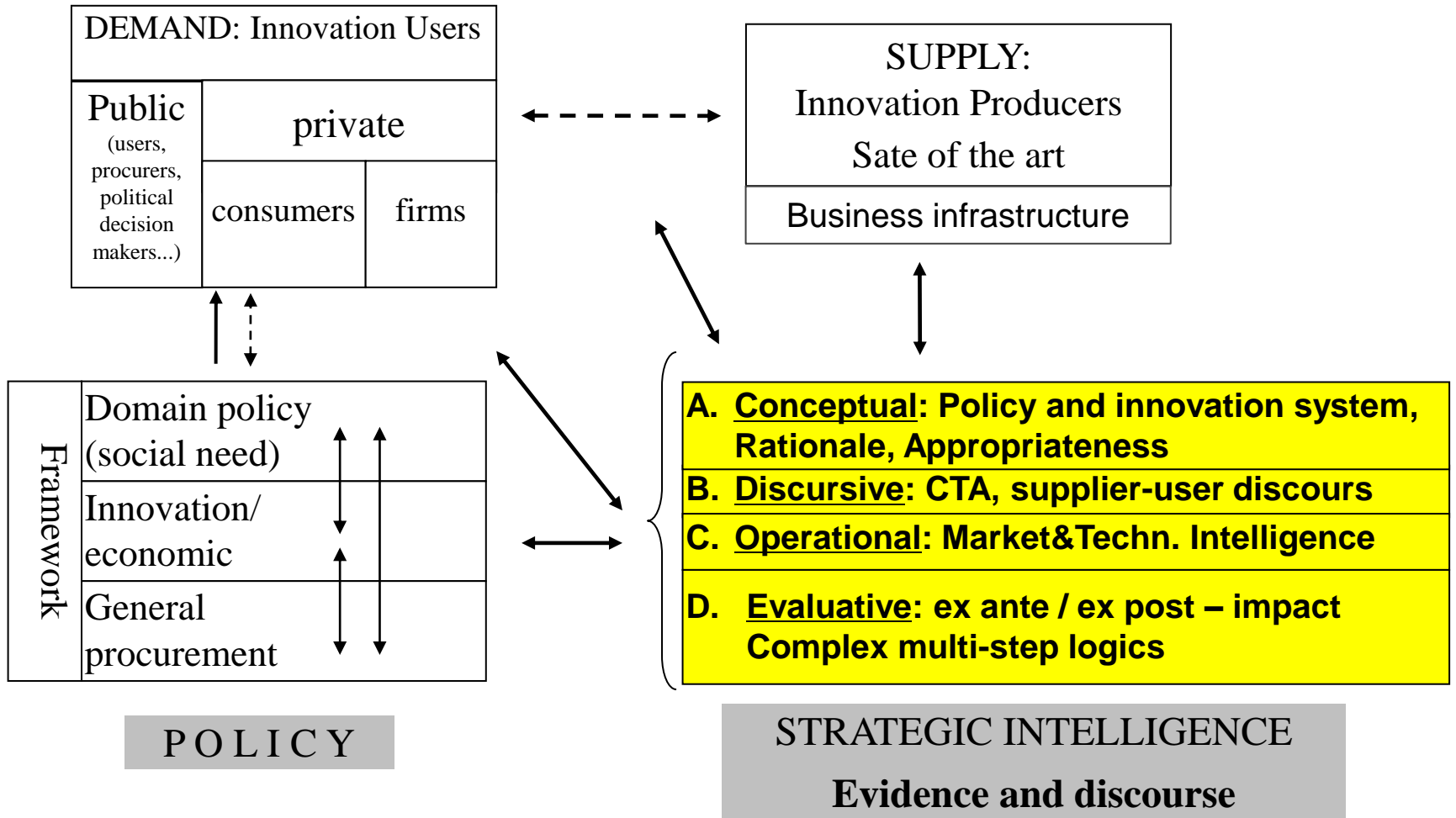
2.2 Demand based innovation policy.

The challenges for evidence production and policy making

Demand Side Policy Trend

- "Policies supporting the demand for and uptake of innovation"
- Demand policy back:

Type of demand-side policy tool	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IS	IT	IR	LT	LV	LU	LI	MT	NO	NL	PL	PT	RO	SE	SK	SI	UK
Fostering public procurement of innovation	■	■		■			■	■		■	■	■			■	■						■	■	■		■		■			■
Pre-commercial public procurement						■		■		■	■				■							■	■								■
Regulation as a tool for innovation policy							■	■			■	■																			■
Tax incentives to foster innovation demand							■																								
Awareness raising campaigns, labels	■	■		■			■	■		■	■																	■		■	
Lead market type of initiatives		■					■	■			■												■	■			■		■		
User-driven innovation							■	■		■	■				■								■	■		■					■

Source: Izsak, K. and Edler J. (2011) Trends and Challenges in Demand-Side Innovation Policies in Europe: Thematic Report 2011 under Specific Contract for the Integration of INNO Policy TrendChart with ERAWATCH (2011-2012)

- Lopsided to Public Procurement, PCP, PPI, EU: LMI; Hoirzon 2020
- Strong trend: same bottlenecks and opportunities everywhere?
- **Challenges** of **evidence production** and **impact expectations**

Evidence production challenges for demand side policies in general

INNOVATION PRACTISE

DEMAND: Innovation Users

Public (users, procurers, political decision makers...)	private	
	consumers	firms

SUPPLY:
Innovation Producers
Sate of the art

Business infrastructure

Framework

| Domain policy (social need) |
| Innovation/ economic |
| General procurement |

A. <u>Conceptual</u>: Policy and innovation system, Rationale, Appropriateness

B. <u>Discursive</u>: CTA, supplier-user discours

C. <u>Operational</u>: Market&Techn. Intelligence

D. <u>Evaluative</u>: ex ante / ex post – impact Complex multi-step logics

POLICY

STRATEGIC INTELLIGENCE

Evidence and discourse

Evidence on impact: ex post and ex ante challenges
Example: Lead Market Initiative of the EU

- **Lead Market**:
  - create better demand and demand conditions for innovative products
  - Export potential, one step ahead
- Combination of **different instruments** (public procurement, standards, other legislation and complementary actions).
- **Six target markets**: eHealth, recycling, renewable energy, sustainable construction, protective textiles and bio-based products.
- defined around '**broad market segments**'
- All linked to wider **societal needs** (sustainability, efficient and effective health care etc.)
- Commission sees a **strong economic potential**

See: Edler, J., Georghiou, L., Blind, K., Uyarra, E. "Evaluating the demand side: new challenges for evaluation." Research Evaluation 21, no. 1 (In-press)

Evidence on impact: ex post and ex ante challenges
Example: Lead Market Initiative of the EU

Revised Lisbon Agenda:
Innovation for growth, creation of jobs

LMI
objectives
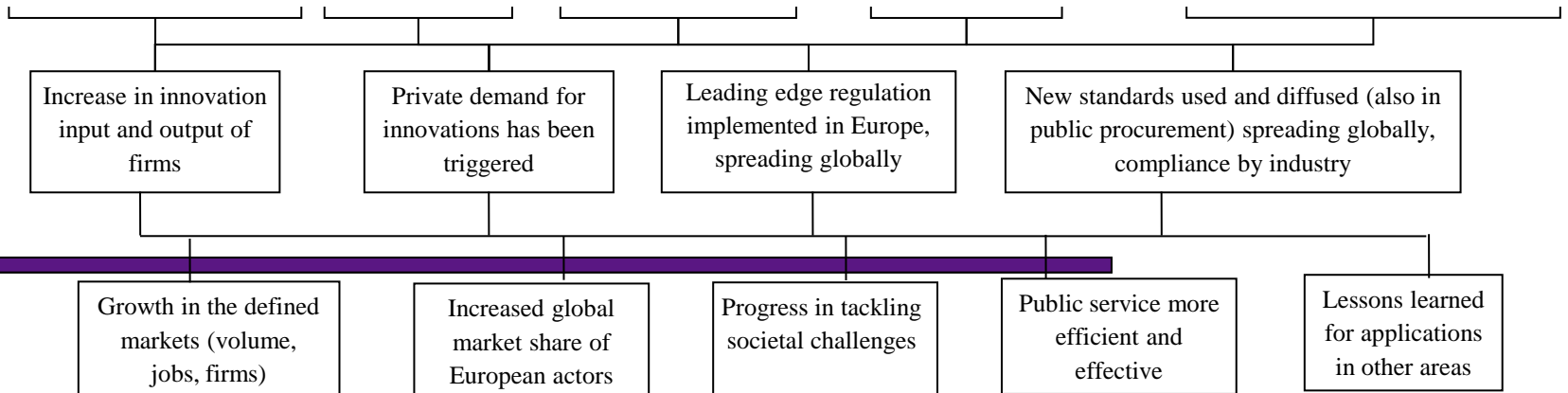
LMI activities

Immediate
effects

Intermediate
effects mid
term

Intermediate
effects long
term

| Increase in innovation input and output of firms | Private demand for innovations has been triggered | Leading edge regulation implemented in Europe, spreading globally | New standards used and diffused (also in public procurement) spreading globally, compliance by industry |

Ultimate
effects

| Growth in the defined markets (volume, jobs, firms) | Increased global market share of European actors | Progress in tackling societal challenges | Public service more efficient and effective | Lessons learned for applications in other areas |

Impact: multi-step, long term and problematic to measure

The University of Manchester
Manchester Business School

MANCHESTER 1824

Revised Lisbon Agenda:
Innovation for growth, creation of jobs

LMI objectives

Fostering markets with high economic value, to lead globally

Satisfying societal needs, fostering markets with high social value

LMI activities

Public procurement

Legis-lation

Standardistaion, labelling and certification

Complementary activities

Immediate effects

Networks of public procurers across Europe in place

Interaction of procurers in same areas

Regulatory discourse and coordination across different policy areas

Standardisation activities in the relevant areas started

Coordination / interaction within and between demand a. supply policies establ.

Vertical coordination EU – MS level established

Intermediate effects mid term

More Public demand for innovation. Barriers removed, across Europe

Bundling of demand across Europe

Enabling a. pionee-ring legislation defined and decided

New standards released

Measures in place to provide sufficient resources / skills in related STI areas a. demand side

Intermediate effects long term

Increase in innovation input and output of firms

Private demand for innovations has been triggered

Leading edge regulation implemented in Europe, spreading globally

New standards used and diffused (also in public procurement) spreading globally, compliance by industry

Ultimate effects

Growth in the defined markets (volume, jobs, firms)

Increased global market share of European actors

Progress in tackling societal challenges

Public service more efficient and effective

Lessons learned for applications in other areas

Policy Evidence and Learning - Conclusions

- **Learning from elsewhere - deficiencies**
  - Policy **copying** rather than learning
  - **Context specificities**
    - Economic system: role of certain instruments/institutions **must** differ
    - Policy interplay and mix (not posible to design/capture*)
    - Those who learn are part of their systems
  - Learning often on **level of instruments**, norms/goals forgotten
  - **Quick results**: Normative and hierarchic pressures to deliver
  - **Quality** of evidence: Methods, assumptions, interpretation, purpose

*Flanagan, Uyarra, Laranja "Reconceptualising the 'policy mix' for innovation" *Research Policy,* 40(5) June 2011: http://bit.ly/huPWsQ (£) / Open Access version: http://bit.ly/mgskiZ

Policy Evidence and Learning - Conclusions

- **Legitimation fallacies:** Popularity of myths, strong epistemic communities, trends (cheap learning), learning from the wrong ones

- **Evidence production for new policies**
  - **Demand Based Policy**: Broader understanding of „evidence"
  - Quantification bias
  - Limited understanding of economic impact (what about behaviour?)
  - Lack of logic model thinking and interim measurement

Thank you for your attention

Reminders:

COMPENDIUM on Innovation Policy Evidence
http://www.innovation-policy.net/

…forthcoming:

UNDERPINN CONFERENCE: Demand, Innovation and Policy
Manchester, March 22 and 23 2012
http://underpinn.portals.mbs.ac.uk

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