

# Public procurement policy for technology and innovation

Veiko Lember & Tarmo Kalvet

Manchester 2011

# Background & research question

- Public procurement equals to 10-20% of GDP in developed countries (19,4% in EU as of 2009)
- What role for technology & innovation?
  - Changes in public services delivery (technology as independent variable)
  - Creative destruction (**technology as dependent variable**)
  - Arguably important role in some countries (Korea, USA), but others willing to catch-up (China, EU)
- Procurement is a specific and unique how to organize and manage public intervention into economy
- ***Theoretically a sound idea, but could we expect the policy to work?***
  - ***To what extent can innovation become part of public procurement policies?***

# Why PPfI policy?

- Fixing systemic failures of innovation systems
  - Funding industrial R&D while supplying public services
  - Stimulating local demand
  - Quality shift of public services
  - Solving grand challenges

# What policy?

- ‘No policy’ policy aka innovation by accident
- Policy ‘for all seasons’ aka everyone innovates
- Technology development programs a la internet
- Horizontal programs a la SBIR

*Most of the ideas around at the moment were very much alive and tested already in 1960s-1970s (see Rothwell & Zegveld 1981).*

The Europe2020 Flagship Initiative "[Innovation Union](#)“:

*"From 2011, Member States and regions should set aside **dedicated budgets** for pre-commercial procurements and public procurements of innovative products and services. This should create procurement markets across the EU starting from at least €10 billion a year for innovations that improve the efficiency and quality of public services, while addressing the major societal challenges. The aim should be to achieve innovative procurement markets equivalent to those in the US. The Commission will provide guidance and set up a (financial) support mechanism to help contracting authorities to implement these procurements in a non-discriminatory and open manner, to pool demand, to draw up common specifications, and to promote SME access."*

**ETIP ca 1972:**

*"Within the confines of existing legislation ETIP recommended among others: introduction of performance specifications, and lifecycle costing; technology utilization as a pre-award qualification factor; **a government-wide policy**; competitive negotiated procurement approaches and subsidization of purchases made by other bodies, in other words directing the lines of innovation, for example, in building and urban transportation (Rothwell and Zegveld 1981, p. 100, emphasis added).*

# Challenges

- Overall shift from industrial to innovation policy
  - focus of policy interventions to change firm-level capabilities vs much wider set of capabilities
  - policy space changed (WTO, EU etc)
  - from trust to adversarial relationships
- Limited capacities of governments and markets to exploit the opportunities arising from public procurement
  - Technology awareness, coordination, lock-ins, culture etc
  - Conflict between technological frontier, the actual market situation and demand sophistication
  - No clients for the developed products and services in the local markets

# The case of Estonia

- Descriptive analysis of EE PP statistics 2007-2010 and involvement of R&D companies
- Interviews with companies as well as public procurers (continuing)
- Survey (not yet started)
  
- Estonia as a “no policy” policy case
  - No strategic views on PPfl (or procurement as such)
  - PPfl has decreased over the past years in terms of R&D company involvement



# Well-known shortcomings also found in Estonia

- Limited use of innovation-friendly methods
  - no cost-plus contracts; heavy use of open auctions (“price wars”), adversarial relationships instead of partnerships, complete risk transfer etc)
- Public sector competence limited
  - missing analytical skills (pre-tender), market consultation formal, misuse of competitive dialogue, rigid deadlines
- Overall culture not supporting
  - legal aspects dominate over technology, marketization of PP products not supported (incl. IPR)
- Existing demand not demanding enough
  - Technologically sophisticated projects are rare, little R&D cooperation between companies, small and short-term projects,

# But also:

- Innovation **spillovers** modest (even in IT)
- Specific **budgets** allocated for PPfI may not necessarily lead to expected outcomes (e.g. EU Structural Funds and EE IT sector)
- Technology procurement dependent on the availability of **EU funds**
- **Institutional legacy** of PA can act as barrier (e.g. central horizontal IT technology units have limited autonomy)
- Unique local technological **infrastructure** can act as barrier for further marketization (e.g. X-road in Estonia)
- R&D companies ready to take on technologically demanding projects when in sync with **technological frontier**
- **Smallness** good for testing new ideas
- **Tension** between supply-side measures and demand-side policy (e.g. EAS grants for new products vs open-source ICT policy in EE)

- **Preliminary conclusions: the current PPfI policy has not brought along major innovation effects on companies' level in EE**
- **So, if “no policy” policy has limited effects on innovation then which policy to choose?**
  - Is policy “for all seasons” a viable alternative?

# “No policy” policy

- For:
  - Easiest to implement (innovation as by-product)
  - Goes along with neo-classical treatments
  - Transparent & short-term VfM
  - Underdeveloped markets able to respond
- Against:
  - Undervalues historical lessons
  - Less likely to lead structural changes
  - Squeezes out innovation

# PPfl as technology development

- For:
  - Effective historical record (Internet, semi-conductor industry etc)
  - Possible to concentrate on selected technologies/markets
  - Demand can be oriented towards R&D companies
  - Demand can be associated with employment policies
- Against:
  - Assumes high level public sector competence
  - Assumes developed markets/technological capacity
  - Tech lock-ins possible

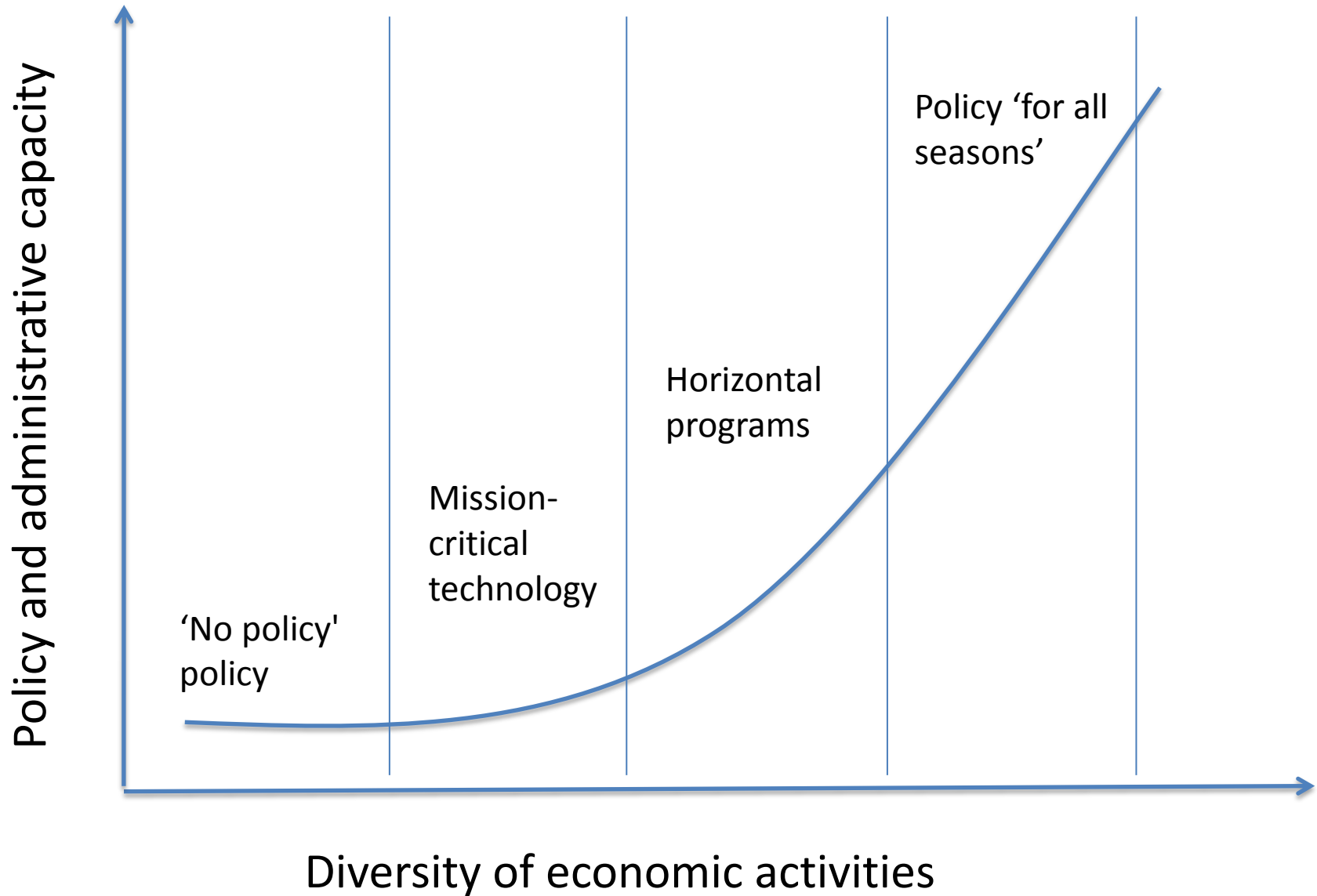
# PPfl horizontal programs

- For:
  - Most effective in terms of R&D and radical innovation
  - More focused as opposed to e.g. general research grants
  - Falls outside international public procurement regulations (up to prototypes), i.e. policy space supportive
- Against:
  - Assumes very high level public sector competence
  - Assumes highly-developed markets/technological capacity
  - Demand is idiosyncratic

# PPfl as policy “for all seasons”

- For:
  - Tackles all aspects of PPfl
- Against:
  - Assumes high policy as well as administrative capacity on all levels of public sector
  - Assumes highly-developed markets/technological capacity

# PPfl possibility frontier





*This research was supported by  
European Social Fund*



European Union  
European Social Fund



Investing in your future