Policies for supporting interactions between ‘academic research’ and ‘society at large’

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OECD workshop on assessing the impacts of public research systems

Background considerations

• A question dating back from the emergence of science policies (see OECD reports from the 1960s & the first round of country evaluations – end of the 1960s and 1970s)

• Evolving focus & policy accumulation
  - Access to relevant codified knowledge
  - Valorisation (of what is there on academics’ bookshelves)
  - Collaborative research (mostly with large firms)
  - Intermediation (technology resource centres mostly for existing SME)
  - Technology Transfer (professionalisation and the dream of financial returns) focused on public research IP and the generalisation of TTOs
  - Firm creation (NTBF, start-ups, spin-offs...) & the fascination of GAFA: the variety of instruments developed (incubation, seed capital, science parks...)

• Result: an addition (e.g. the French ‘millefeuille’*, but on-going work shows near to similar complexity in other countries)

* OECD country review, 2014
Are not we missing central aspects?

• An old survey in the 1980s showed that 95% of ‘transfer’ successes observed in the aeronautics industry were linked to manpower circulation

• The very interesting survey & analysis by Hughes & Kitson (2012) highlighting the critical importance of 2 dimensions - people-based interactions (via conferences, lectures, networks, ...) - problem-based interactions (joint or contract research, consultancy and/or informal advice, external secondment...)

• Commercialisation activities come far behind with a very limited number of occurrences (in particular patenting & licencing, firm creation).
Dimensions of interaction

Source: Hughes & Kitson, 2012
Policy preoccupations: three classical questions

• How to cope with uptake of frontier knowledge? What form of IP? Is the ‘start-up’ ecology an answer per se or a new intermediation mechanism? What role & modalities for ‘translational’ research?

• How to interact with the existing environment, and in particular “surrounding” SME? What role of consultancy? And in particular what engagement in/with ‘intermediating bodies’

• How to get involved in public/collective issues – beyond publicly supported R&D projects/programmes? What else than expertise (individual & collective) & participation to public debates?
Policy preoccupations: growing questions

- What about the ‘core’ activity of universities: capability building.
  Question: how to insure adequate capabilities (& employability) in a “knowledge-based society’ (with a university every 50 KM)

- Social networks at the core of de facto circulation of knowledge (including tacit dimensions)
  Questions: what tools for nurturing a variety of spaces of exchange and trust? what forms of ‘joint’ research and what mechanisms to promote it?
The uptake of frontier science

• A key result from multiple surveys: non-exclusive licencing at the core of ‘blockbusters’
  What role for exclusive licencing? Start-up creation?
• Is GAFA a good model for start-up creation? Or should we see them more as new forms of knowledge circulators
  - B to R business models (start up tend then to remain small)
  - demonstration units (tend then to be bought by large existing firms; beware of Cooke’s ‘decapitation’)
• Incubators, public seed capital & science parks*: what do we know of ‘relative’ job creation? What do we know of ‘conditions’ for success (e.g. research intensive universities)
• More in depth knowledge needed about impacts of ‘translational research’ (check whether more than ‘relabeling’)

* Not to mix with ‘technopoles’ or industrial districts
Coping with existing economic environment

- A clear critical dimension: relevant manpower (see capability building)
- Often, associated to it, informal or formal consultancy activities
- Joint research or contract research seldom relevant (more for mid-sized & large firms than SME)
- The need for intermediation, new dedicated organisations and the multiplication of models around 2 directions: the ‘pure’ intermediation model, and the ‘service’ model (with test facilities, quality services and/or professional training)
  Issue: seldom a ‘sustainable’ BM, need for public co-funding
- Industrial districts, poles and clusters as framing activities around local key industries/activities
Engaging with public/collective issues

• Classical forms are linked with expertise.
  - Expertise for whom? How to deal with expertise to CSOs?
  - What configurations for ‘collective expertise’
  - What about researchers acting as whistle-blowers (e.g. in France the case of Mediator)

• Supporting innovation in public goods
  - Originally one anticipated classical role of ‘mission oriented’ government labs; today often seen as the search of ‘global solutions’ in PPP
  - ‘Research-based technology’ no longer the sole (or even privileged) model – e.g. ‘soft’ transport in cities, the rediscovery of Spanish baroque music or the creation of the Liners museum in a French city, St Nazaire
Capability building at the core of interactions

- Employability & the organisation of curricula
  - participation of professionals in teaching
  - internships & the role in ‘informal advice’ and ‘problem solving’
  - apprenticeship or ‘alternance’ mechanisms for students
  - problem/project based teaching
- Not only the realm of vocational schools, but a new requirement for university bachelors & more and more masters
- Implications on the conception of careers and the ‘valuation’ of university activities – ‘relevant placement’ as a key ‘impact’ indicator & throughput as a key ‘performance’ indicator
Fostering networking & trust

• The importance of a variety of spaces
  - cognitive – the role of learned societies in shaping the agenda around their domain, organising periodic encounters/conferences, developing events & tools for early career researchers... (cf. our own for policies for research & innovation, http://www.euspri-forum.eu)
  - professional – e.g. role of rapid prototyping associations in the emergence of 3D printing & its on-going developments
  - problem-based arenas or hybrid forum* to discuss problems & negotiate compromises for policy making

• Joint research:
  - is ‘collaborative’ research based upon top-down programmes (mostly by funding agencies) the only solution?
  - e.g. use of tax credits, development of bottom-up ‘procedural’ approaches

*see stream of work by Callon, Rip & Kuhlmann
Three final comments

• What more should we know about universities
  - relativise excellence obsession
  - reconsider performance measurements of university activities

• Where should we look for more ‘evaluative’ knowledge
  - clearly more is needed on the impacts of policy mixes for start-up firms
  - how to evaluate ‘multi-objective’ policy instruments (e.g. tax credits)

• Can all policymakers mobilise all instruments?
  - an open debate with three movements
  - more & more use of procedural approaches at national/federal level
  - growing delegations/’agencification’ for ‘targeted ‘issues’
  - substantive aspects more and more dealt with by ‘proximity’ public policies