

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

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Background considerations

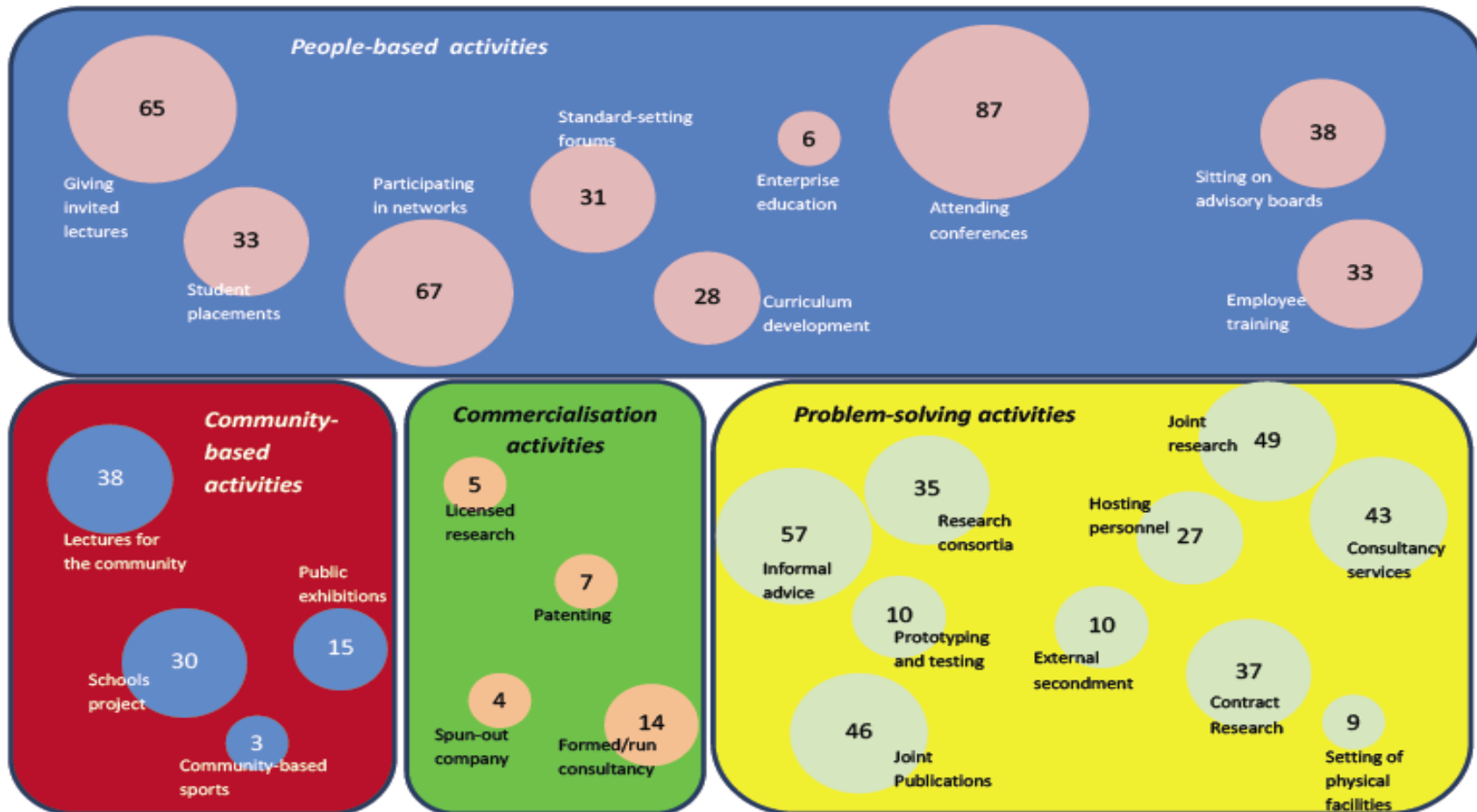
- A question dating back from the emergence of science policies (see OECD reports from the 1960s & the first round of country evaluations – end of the 1960s and 1970s)
- Evolving focus & policy accumulation
 - Access to relevant codified knowledge
 - Valorisation (of what is there on academics' bookshelves)
 - 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



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