

Session 3: Technology transfer: the role for patents

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What economists of innovation tell to tech transfer professionals ?

- **Misleading use of key-indicator for tech transfer by policy makers: the case of University invented patent vs University-owned patent**
 - **Impact on TTO business model:**
 - running after patent filing number
 - Confusion between performance indicator & management indicator
 - **Impact on public policies: professor privilege, university autonomy, ...**
- **Increase of absolute number of patent but the increase of patent sharing in total domestic patent remain to be demonstrate**
 - Positive effect of TTO to be still demonstrate;
- **Organizational determinants:**
 - Concentration of academic patenting among few university / country
 - » A distinction should be made between top rank university and the others
 - » **Technical vs General University, Pharma vs IT ...**
- **Macro- & geo- determinants**
 - » R&D intensity of the local economy & local share of public R&D
 - » Urbanization, creative class and spatial amenities
 - » Does it makes more sens to organize TTO activities at the regional level ?

What economists of innovation tell to tech transfer professionals ?

- **Relationship between sponsor research contract & patent ownership:**
 - Ownership pattern depending of the type of companies (SMEs or large firms)
 - Does open innovation public financial incentives towards SMEs explain the difference with large firms regarding academic ownership ?
 - Example: research tax credit in France
- **The special case of university spin-off patent ownership:**
 - Does the academic inventors are bypassing the administration, got more financial incentives or there is a true equity bargaining by the university against patent ownership
 - Linked between university equity in spin-off, VC attractiveness and start-up dynamic in a given country
 - » Example: biotechs in UK vs continental Europe
- **Domestic vs foreign firms academic patent ownership:**
 - To which extend private-public relationship is internationalized ? (at least at the EU level)
 - Is it a US phenomena linked to pharma sector, the grace period and USPTO direct filling for example ?



What economists of innovation tell to tech transfer professionals ?

- **Increase of academic patent activity did not coincide with decrease in their value**
- **1/3 of university-owned patent get licensed, and university seems to be more efficient than PROs:**
 - Does governance/TTO proximity matters ?
- **Relationship between firms core technologies and firm patenting strategy**
 - TTO should negotiate differently patent ownership in sponsor research contract
- **Positive association between scientific impact and academic patenting**
 - TTO should educate every scientist regarding IP or focus their effort on top scientists only ?

What could TTO can tell to the economists of innovation ?

- **Are there any European paradox ?**
 - Why academic patent ownership is so important ?
 - Does the US patent licensing model is the gold standard for everyone, everywhere, anytime ?
 - Sponsored research contracts and patent ownership negotiation are the main route for tech transfer
 - Example: Carnot Institute in France, Fraunhofer Institute in Germany, ...
- **Does firms (co-)ownership of academic variations between country rely on the economic tissue, industrial policies and the type of firms ?**
 - Example: global companies in every sector present in France (Sanofi, L'Oreal, Total, Renault, ...) and economic nationalism policies (Colbert)
- **Measuring only EPO patent filling, you miss IP management strategy issues**
- **Patent ownership and licensing strategy are linked to TTO financial constraints**
 - **Could we suggest a metric to assess the TTO patent management?**
 - **Example: TTO office nbr / researcher number or grant funding for a given university**

Conclusions

- **Filing the gap between knowledge, professionals & decision makers**
- **A need for the benefit of social welfare**
- **That should overcome the frustration of economic metrics & proxy available**
 - Don't forget that TTO people have almost no economic background, few have business school-type training and most of them are basic scientist with IP competencies
→ Economy of innovation summerschool for TTO or jointed meeting session ???
- **If economy of science and innovation is sustained in the same time that government implements public policies**
 - €3.6 billion have been devoted for the next 10 years by the french government in 2011 for the valorization or research (€1 billion to support TTO); how much have been dedicated to sustain economy of innovation



Thank you for your attention

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