An exemple of academic (empirical) work: qualifying the relationships between standardization and innovation

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Presentation prepared for the WSC Academic Week 2010

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

The economics of standardization from the 90s to 2010

- Academic research in the 90s:
  - Emphasized the role of standardization in supporting coordination of firms to manage the process of technological change
  - Approached standardization as an integral aspect of this process, which involves intrinsic uncertainty
  - Called for a more thorough integration of standardization issues in discussion of technology policy
- Academic research in 2010 is more challenged by the need to develop economics of standardization ***as a strong empirically disciplined science***

Economics of standardization as an empirically disciplined science

- One special feature of empirical studies on standardization is that they call for large amounts of data, much of it rather unconventional for economists.
  - If we truly want to grasp the phenomena of standardization, we have no choice but to seek data that have a direct bearing on such phenomena
- This is not obvious!
- The study of standardization requires that we gather and learn the facts of technology themselves
  - Data based on remote proxies can provide us only with a blurred image of the phenomena, accompanied by a highly disturbing feeling of uncertainty about having mastered the hard facts

- *A restless challenge: enlarging the scope of empirical material that economists will come to regard as legitimate, and perhaps even routine, in applied research*
- An example

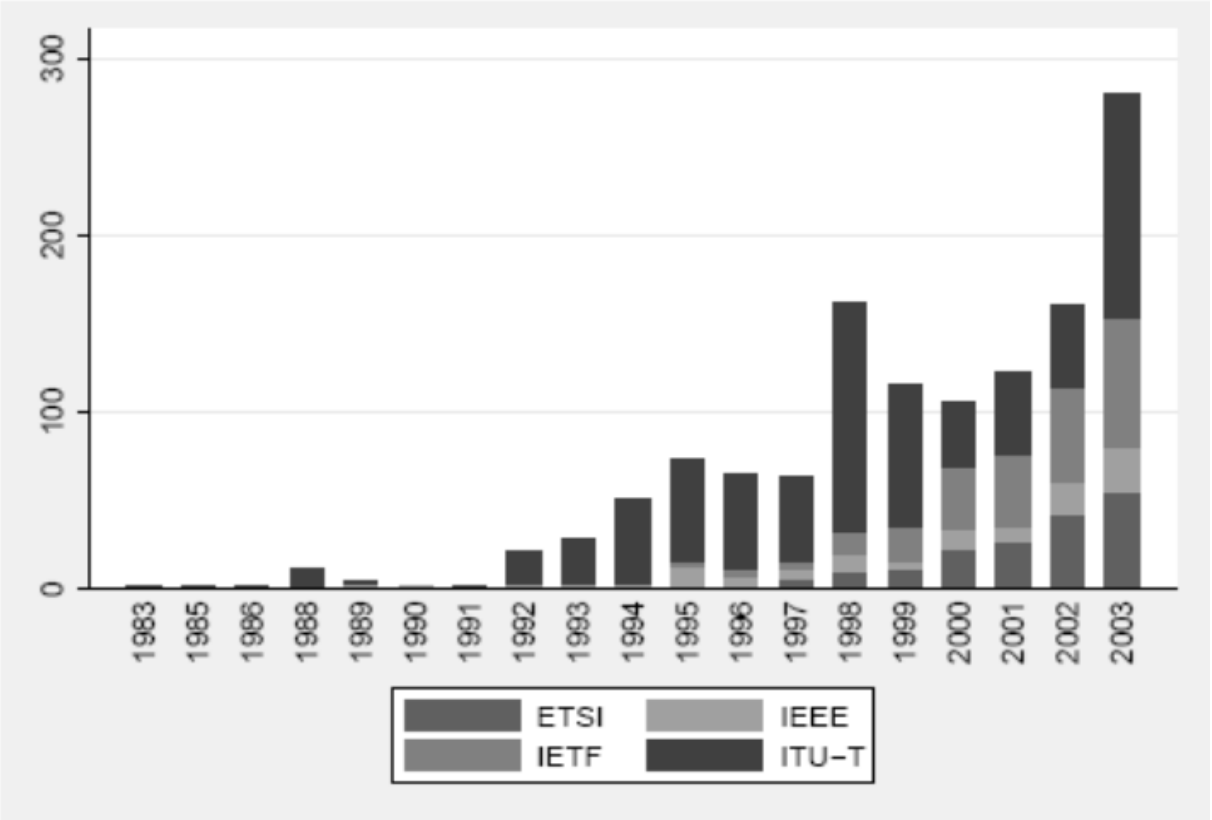
The economics of standard setting organizations

- An important catalyst for coordination in many industries
- From large industry associations to small consortia
- The increasing tension between open standards and intellectual property protection
- SSO's policies for dealing with patents

An empirical strategy

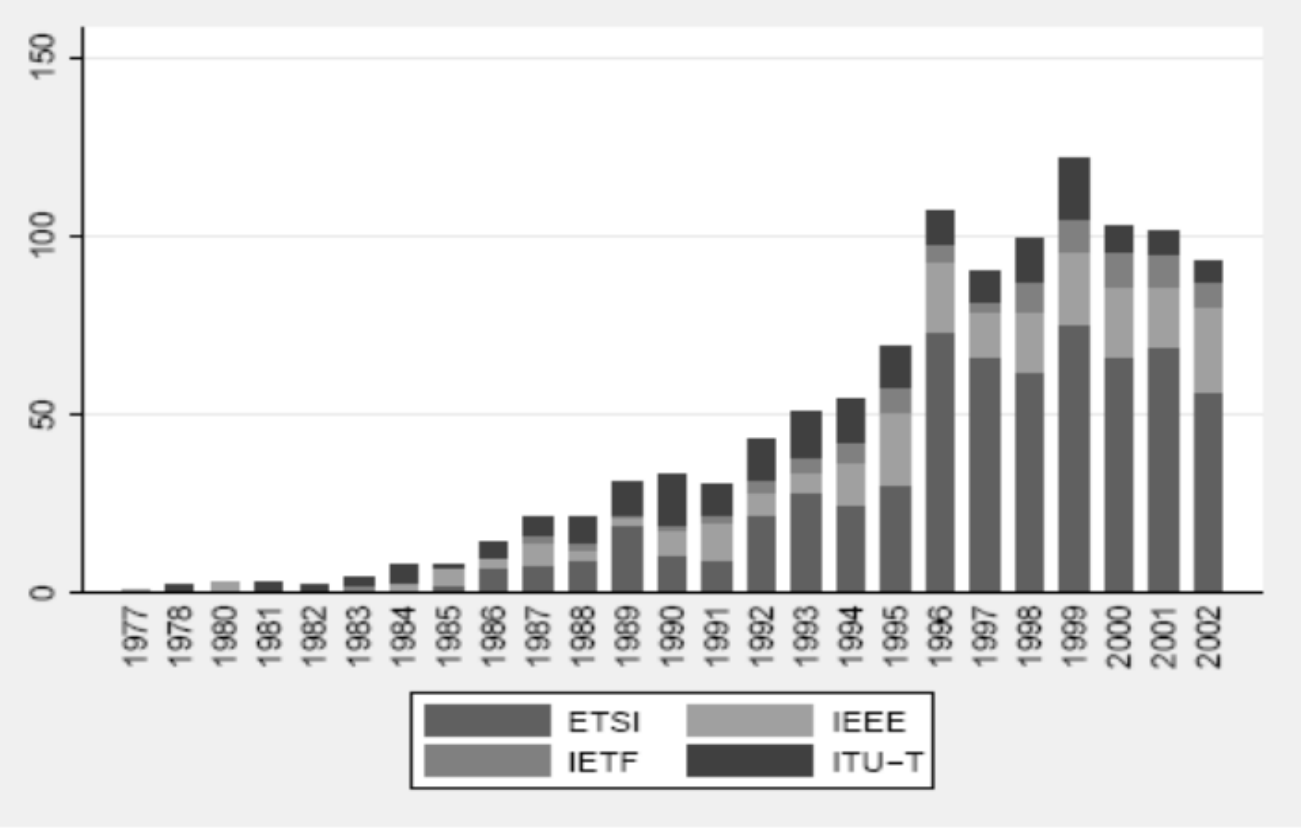
- IP disclosure : the announcement by a given firm on a given date that it potentially owns one or more pieces of IP related to a standard initiative
- Publicly available records of ETSI, IEEE, IETF & ITU = list of patents associated with standard setting
- The number of citations these patents receive = proxy of the technological and economic significance of these patents
- Do SSOs identify important technologies? Do SSOs actually influence on the future importance of these technologies?

Growth in IP disclosures at four SSOs



Source: Rysman & Simcoe, 2005

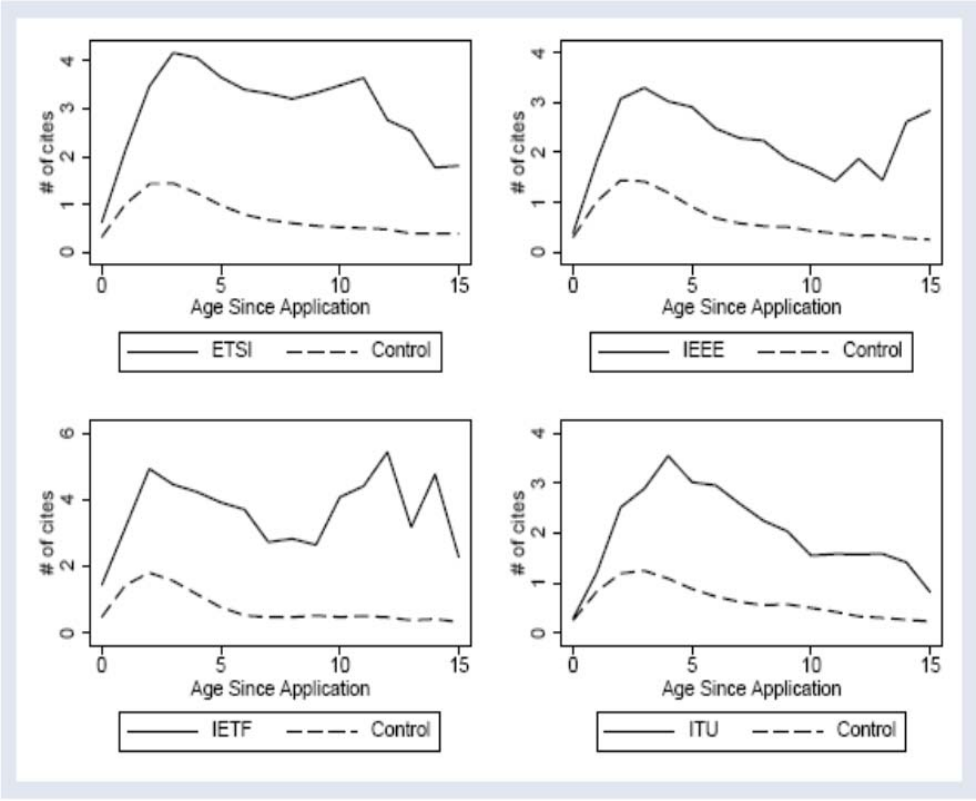
Grant dates of SSO Patents



Source: Rysman & Simcoe, 2005

Question 1

- Are SSOs successful in identifying important technologies?
- SSO patents are cited more frequently than controls
- Long citation life



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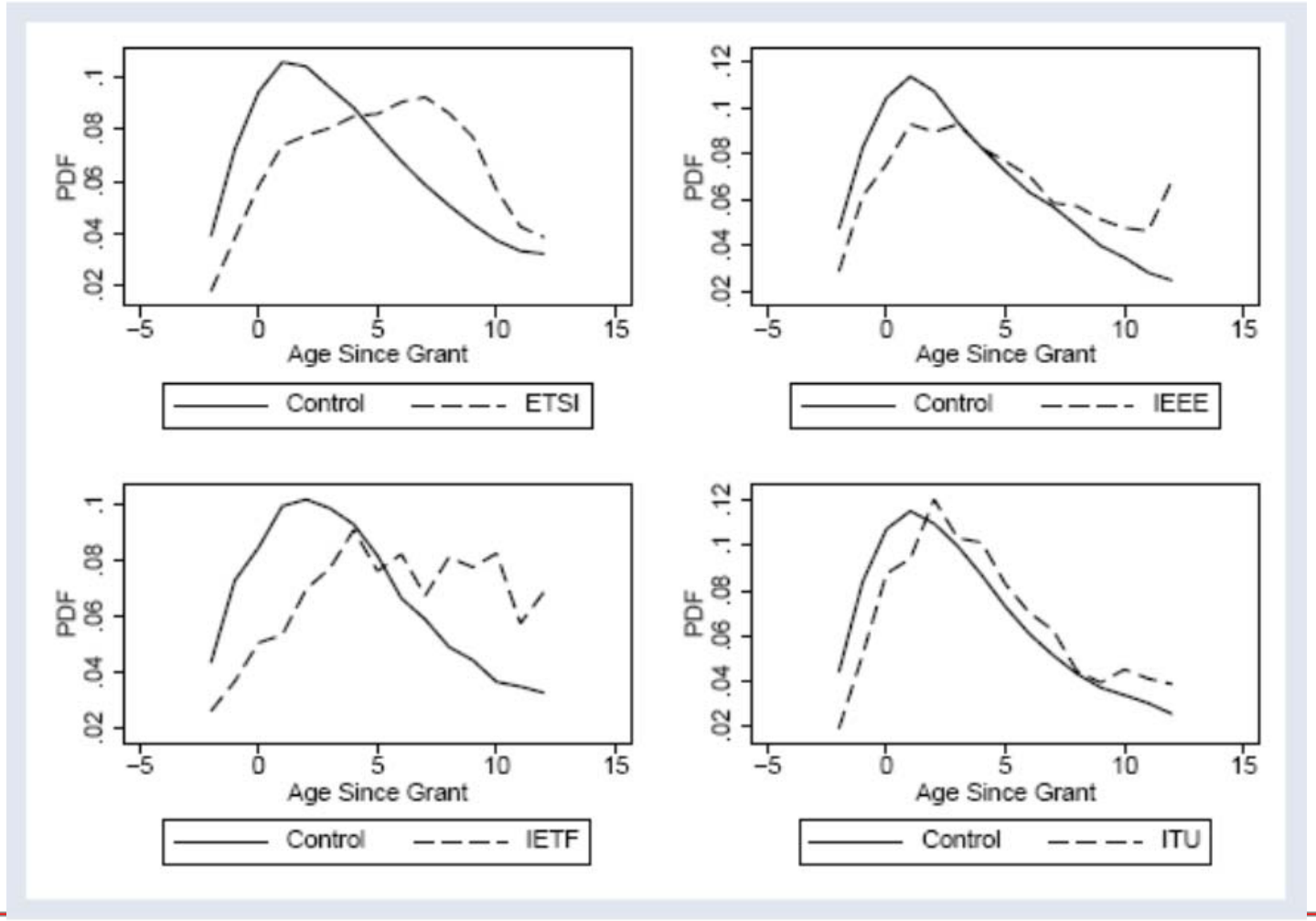
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Question 2

- Do SSOs select technologies that would have been important in any case or do SSOs actually influence on the importance of these technologies?
- Results suggest an economically significant disclosure effect: current SSOs decisions impact the path of future technological innovation

Conclusion

- The economics of standardization is now at the point where it has the potential to become a strong, empirically disciplined sicence, depending on whehter enough progress can be made on developing the underlying data and the indicators ensuing from them
- Ongoing challenge for applied economists in the area of standardization is to enlarge the scope of empirical material that economists will regard as legitimate, and perhaps even routine, in applied research
- This effort is necessary if the economics of standards is not to remain purely abstract, but is able to link theory to practices.