


The Research Use of Patented Inventions

Dominique Guellec

Economic Analysis and Statistics Division
Directorate for Science, Technology and Industry




More and more inventions coming out of scientific, basic research are being patented, whereas:

- Patents are rights to exclude...
- (downstream) research needs basic research as an input.

... Hence growing fears that research would be impeded by patents.

Fears reinforced by

- The « Anticommons » Nature article (Heller & Eisenberg 1998).
- US Court decision « Madey v. Duke » (2003) narrowing down the exemption for research use in the US.



At the request of Science Ministers of its member countries, the OECD organised a conference, with CSIC (Spanish Research Council) in May 2006 for examining evidence of the problem and discussing possible policy remedies.

Evidence?

- Some cases reported (e.g. vaccine against malaria)
- Surveys by Cohen et al. (2002 and 2005), by the AAAS (2005, 2006), by Nagaoka (Japan).

Surveys results

- 1% of US biomedical academic researchers reported delaying more than one month or modifying a project due to patents

- 8% reported delaying or modifying a project due to patents due to difficulties for accessing TANGIBLE inputs (material etc.)

=> More problems are due to scientific competition between research labs than to patents

Surveys results (2)

But:

- The frequency of problems has increased since 2002;
- Problems arise more frequently in the business sector (AAAS) than in academia;
- Many researchers prefer to ignore the fact that they are infringing patents, while patent owners prefer benign neglect...

Overall

- 1) Very few problems yet, and localised in US biotech;
- 2) But tend to increase;
- 3) The current situation is partly due to “ignorance” of the law.

Policy remedies (1)

Exemption for research use:

Protects research “on” subject matter, not research “with”.

Expanding it would threaten the emerging research tool industry:
But needs to be clarified in certain countries, and harmonised internationally.

Policy remedies (2)

Competition policy: Compulsory licensing could be imposed when no voluntary solution has been found, applying the “essential facility” doctrine (Japan). Merit: It is an ad-hoc response to isolated cases.

Licensing guidelines: As adopted by the OECD biotechnology group. Patent holders agree to offer their patents for licensing at fair (“RAND”) conditions. Advantage and drawback: It is voluntary.

Policy remedies (3)

Strengthening patent standards: Making sure that no patents are granted on pure scientific discoveries (need an industrial application or utility); that patents are granted only to new and non obvious inventions.

=> Could eliminate some of the most potentially threatening patents.

Conclusion

Expansion of the knowledge economy => increased production and commercialisation of knowledge; that might create tensions with the patent system as it is, but solutions can be found within the current system.