

A PATENT SYSTEM FOR ENCOURAGING INNOVATION

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MESSAGE

The economy has changed; innovation systems have changed:

The patent system shall change accordingly.

Structure of the presentation

1. Innovation and patents
2. The new innovation system: knowledge networks and markets
3. A renovated patent system

THE TRADITIONAL INNOVATION AND PATENT SYSTEM

- An inventor needs market exclusivity to set a mark up on its sale price, which will pay for R&D and risk.
- Advantage of the system: it encourages innovation;
- Drawback: it creates market power, hence higher prices and lower quantities
= dynamic vs. static efficiency.
- ... and it could restrict induced (next generation) inventions?

THE PATENT SYSTEM AT THE CROSSROADS

- The “patent bubble”: a world-wide proliferation of patents of dubious quality (the number of patent applications has doubled between the early 1990s and 2000s in Europe and the US); explosion of backlog in patent offices.

- Public debate: Is the patent system:
 - ⇒ Hampering competition?
 - ⇒ Favouring rent seeking, litigation?
 - ⇒ Raising barriers to access to new knowledge?

THE NEW INNOVATION SYSTEM

The basic assumptions of the previous innovation model don't hold anymore:

- the inventor is not lonely and isolated but highly open and connected;
- s/he is not necessarily an established business but often an emerging business or a university;
- s/he does not target the national market only, but the global market, while using knowledge from all around the world.

INNOVATION IS OPENING

Innovation is more complex, based on a broader variety of sources, needs to be developed more rapidly =>

Businesses increasingly use knowledge provided by other parties and are themselves suppliers of knowledge to other businesses:

- Joint ventures, alliances
- Spinning in/out
- Public/private partnerships
- Licensing in/out
- IP-based collaborative mechanisms (e.g. pools)
- Patent aggregators, funds etc.

NEW ACTORS OF INNOVATION

Increasing role of start-ups, R&D centred companies and universities, notably for radical inventions (e.g. in ICT and biotech): they are essentially producers of knowledge, which is then implemented and manufactured by other entities.

- They need capital while having no other asset than knowledge to show to investors.
- They need to sell directly their inventions (instead of products embodying the invention).

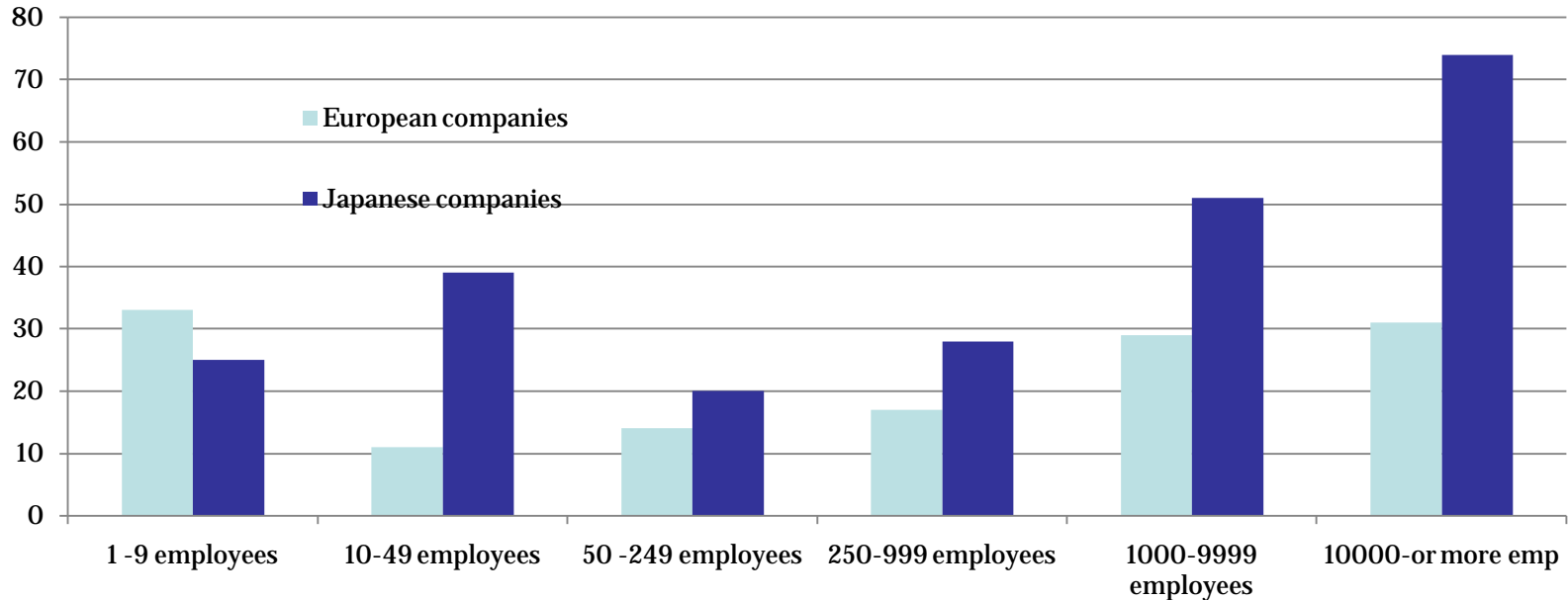
INNOVATION IS GLOBAL

As markets are getting global, as knowledge circulates via the Internet, as emerging countries (China, India) are expanding, innovation is now organised at a global level:

- Global value chains
- Mobility of researchers
- Internet-based communities

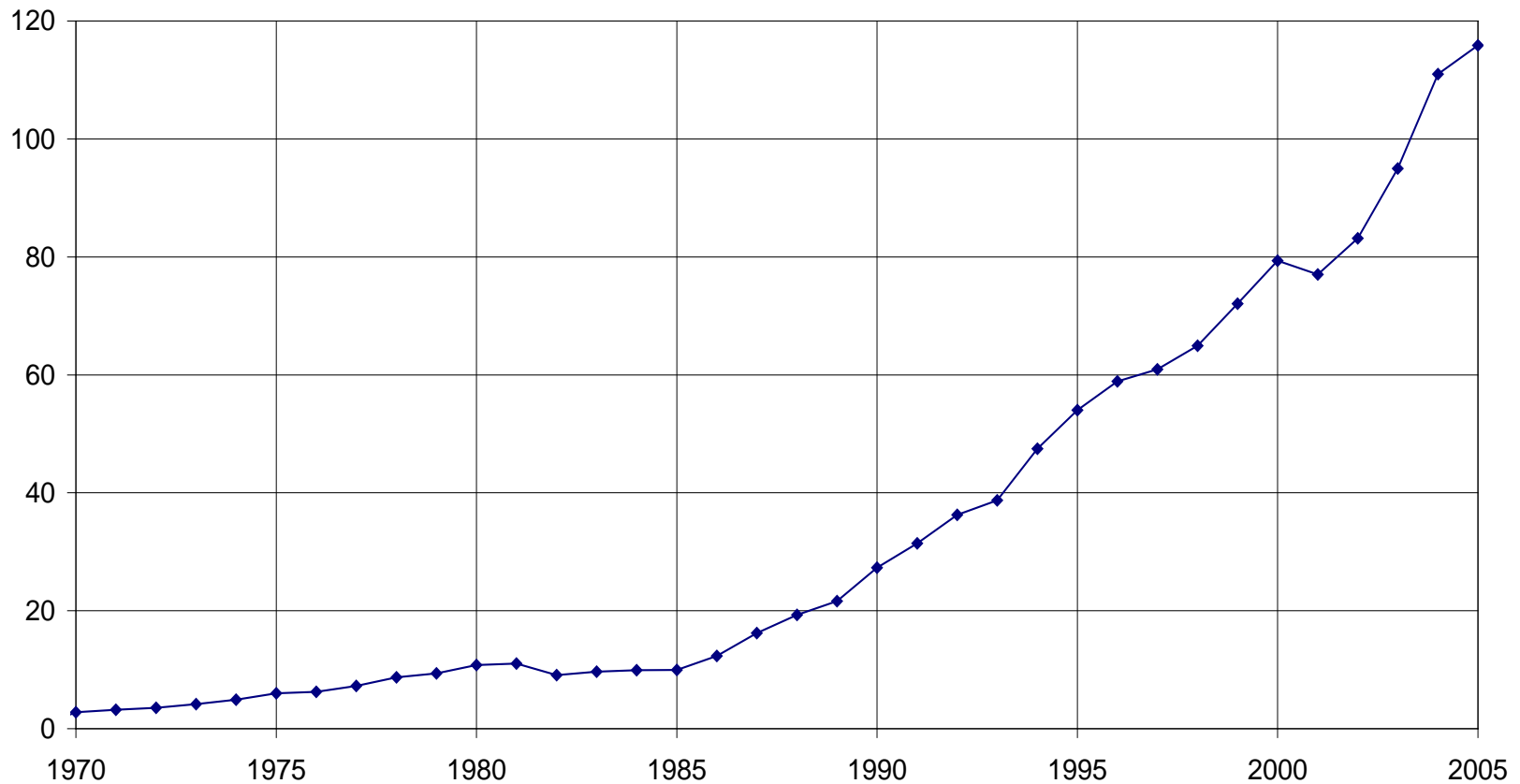
LICENSING TO NON AFFILIATED COMPANIES

Licensing of patents to non-affiliated companies
 (% companies declaring licensing of patents in total responding companies)



- 27 % of Japanese companies (holding patents) license patents to non-affiliated firms (20% of European companies).
- U-shaped relationship between size and % of licensing companies
- Source: OECD survey on licensing, 2008 (Japan = Tokyo University, Pr. Motohashi, with support of JPO)

Worldwide (cross-border) royalty and license receipts (Billion USD; source: World Bank)



CONSEQUENCE: THE EMERGENCE OF KNOWLEDGE NETWORKS AND MARKETS

- Opening of innovation, R&D based entities, globalisation
 - ⇒ emergence of global knowledge networks and markets, i.e. inventions come out of collectives, whose variegated parties cooperate and compete with each other globally.

- What policies can best support the balanced and fair development of KNM? What new requirements does this impose on the patent system?

WHY ENCOURAGE GLOBAL KNOWLEDGE NETWORKS AND MARKETS?

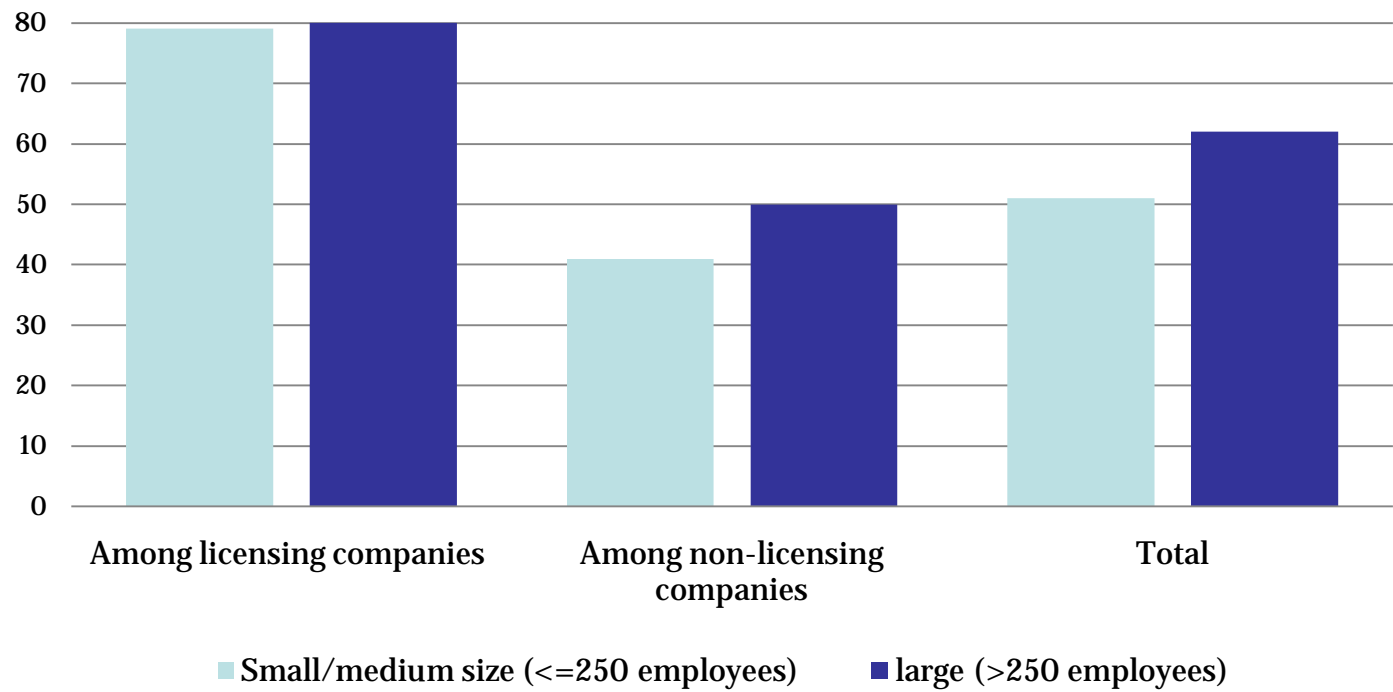
- **KNM have many potentially positive effects:**
 - increase the diffusion of technology,
 - reduce duplicative inventions,
 - boost downstream competition (by reducing barriers to entry related to R&D),
 - facilitate the creation of new R&D-based actors, thereby improving the allocation of resources in the economy (specialisation).
- **Potential negative effects: can reduce competition, consumers' welfare, and hamper innovation. .**

THE OBSTACLES MET BY GLOBAL KNOWLEDGE MARKETS AND NETWORKS

- **Trust:** need reliable titles to be traded, with reliable partners.
- **Information:** identifying the needed inventions, the partners etc. is costly.
- **Complexity:** contracts underlying knowledge transactions are complex.
- **International heterogeneity** of legal and economic frameworks, whereas many transactions are across borders.

THE DEVELOPMENT OF KNOWLEDGE MARKETS IS HAMPERED

Percentage of Japanese patenting companies which would like to license out more of their patents than they actually do (Source: OECD - Tokyo U. Survey, 2008)



NEW CONTEXT, NEW USES OF PATENTS

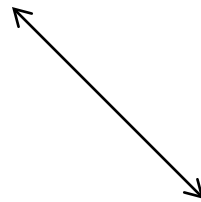
- Sharing inventions, bilaterally or multilaterally
- Be compatible with open innovation practices (open source etc.)
- Ensuring economic security in open innovation frameworks
- Ensuring economic security in global value chains
- Commercialising inventions
- Raising capital (as guarantee or collateral)

=> the patent system needs to focus on quality, speed, international coordination, and become more inclusive

ADAPTING THE PATENT SYSTEM (1): QUALITY

- Raising trust, securing transactions, raising capital: all new uses of patents requires high quality patents.
- Not hampering derived inventions, not harming competition: high quality patents.
- Need to stop the vicious circle which has been plaguing the patent system world-wide for years:

More patents



Lower quality

ADAPTING THE PATENT SYSTEM (2): QUALITY (2)

- Facilitate the refusal of bad applications
- Deter low quality applications
- Identify prior art in emerging fields

How to foster quality? Examples of policies:

- Higher refusal rate at EPO (« raising the bar » policy), USPTO (KSR decision by the Supreme Court) over the past months.
- « Peer to peer » examination process (USPTO).

ADAPTING THE PATENT SYSTEM (3): ACCELERATING PROSECUTION WORLD- WIDE

Slow search/examination processes, notably at international level; hampers competition (threat to competitors with unvalidated applications), licensing, and enforcement (require validated titles)=> need accelerating, notably by better coordination of national offices (e.g. sharing procedural information):

- **International harmonisation of patent laws and procedures**
- **Patent Prosecution Highway (JPO initiative)**
- **Expanded PCT (WIPO)**

ADAPTING THE PATENT SYSTEM (4): A SYSTEM MORE CAPABLE OF FAST LEARNING

Technical and economic conditions are changing all the time: emergence of new technical fields, of new types of players, of new uses of patents etc. The patent system needs to adapt in real time => patent law should be flexible and open enough; patent courts and offices should keep informed of new developments and take decisions accordingly.

ADAPTING THE PATENT SYSTEM (5): A MORE INCLUSIVE SYSTEM

The balance between the protecting (exclusive) and the diffusing (inclusive) role of patents is to be reviewed in certain fields,

- Where innovation is more collective
- Where standards are prominent.

=> instruments = patent law (subject matter, scope, inventive step, research exemption etc.)
+ collaborative mechanisms.

POLICIES TO PROMOTE KNOWLEDGE MARKETS AND NETWORKS

- Provide information (e.g. INPIT in Japan)
- Address the international dimension (e.g. harmonise regulations which impact licensing; taxation etc.)
- Favour transparency (e.g. standardised, reliable valuation tools)
- Competition policy.

CURRENT RELATED OECD WORK AND PROJECTS

- **Open innovation**
- **Knowledge markets**
- **Collaborative mechanisms in biotech**
- **Competition, innovation and patents**
- **Valuation of intellectual assets**
- **Patent statistics**
- **Inventive/patenting firms**
- **Innovation Strategy**

MORE INFORMATION:

[OECD web page on IPR](#)

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THANK YOU