Implications of AI Patentability for Innovation Policy

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Dr Daria Kim

Patent policy dilemmas

- How to design/attune a patent regime that would be conducive to AI innovation?

  → What role do patents play in AI innovation?

! Dual effects of patents on innovation

  →How to strike a balance of interests – a balance between the social welfare costs and benefits of patents?
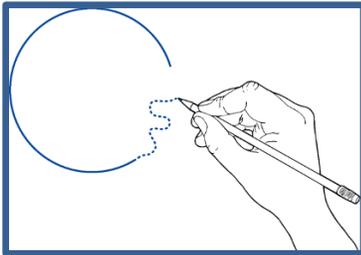
'AI patents'

- AI technology vs. AI-aided inventions

- Patents for 'AI technology'

  - Diverse, modular subject matter

  - Use-case-specific applications vs. general-purpose tools/methods

  - GenAI models

! Different cost-benefit implications of exclusivity

Beware of generalisations

Locating patentability within patent policy 'levers'

Boundaries of patentability	Boundaries of patent rights
Obligations of WTO members to confer patents: • Novel;ty, non-obviousness, and industrial applications • Available for any invention in all fields of technology • Available for domestic and foreign applicants	Prevent unauthorized third parties from "making, using, offering for sale, selling, or importing" a patented product or the product directly obtained from the patented process.
Patentability related flexibilities	**Exceptions and limitations to patent rights**
Exclusion from the patentable subject matter: ○ inventions the exploitation of which is against *ordre public* or morality; ○ diagnostic, therapeutic, and surgical methods for the treatment of humans and animals; ○ plant and animal varieties; ○ plants and animals other than microorganisms; ○ essentially biological processes for the production of plants and animals; ○ discovery, abstract ideas, natural phenomena and laws of nature"	• Exceptions to rights conferred ○ Compulsory licensing ○ Government use (crown use) ○ Bolar exception ○ Experimental use • Exhaustion of patent rights

• Flexibilities for least developed country Members
    • Transition period
    • Technology transfer to the least developed countries	

Cheng 2022

Understanding the role of patents in AI innovation

Number of AI patents granted worldwide, 2010–23
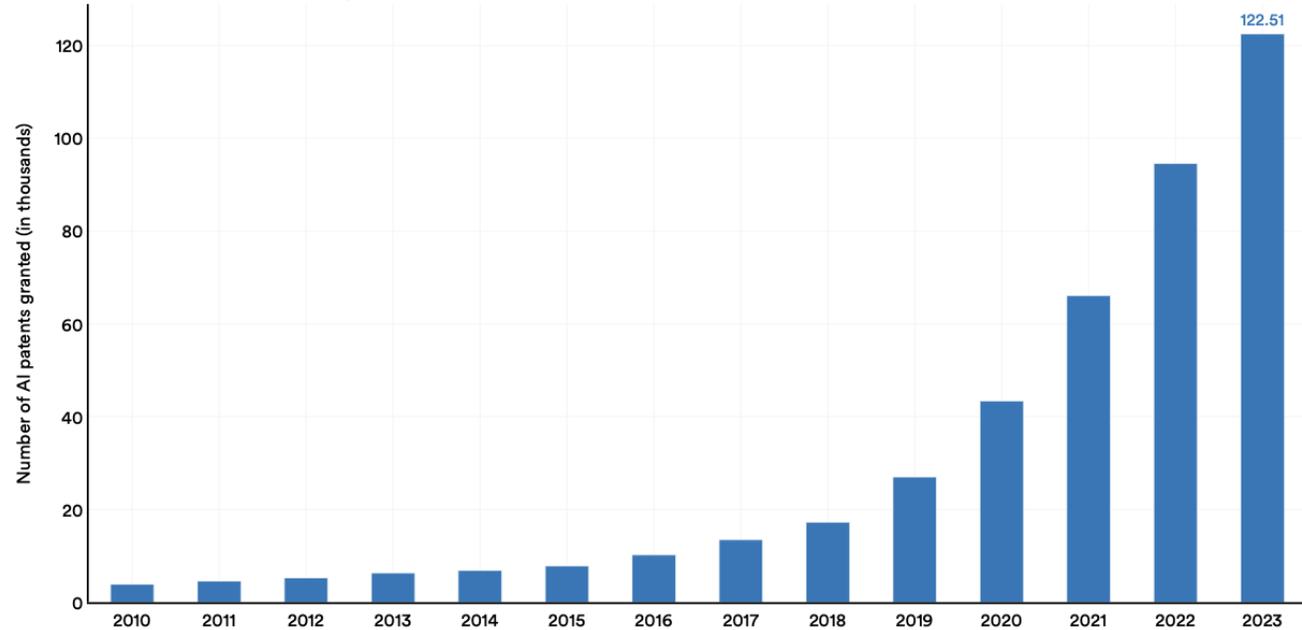Source: AI Index, 2025 | Chart: 2025 AI Index report

Figure 1.2.1

'Great Data, Nice Tale, but What's the Message?' (Kur/Harhoff 2014)

Correlation ≠ causation
→ Limited relevance of the patent statistics in understanding the incentive function of patents

Understanding the role of patents in AI innovation

- **The incentive function of patents?**
  - No classical spillover problem
  - A greater role of factual control & trade secrets in protecting competitive advantage?
  - Limited litigation of 'AI patents'
  - Broader economic & technological drivers explain AI advancements?
- **The market-opening & innovation diffusion function of patents?**
  - Limited data on patent licensing
  - MaaS (model-as-a-service) – a widespread business model
  - 'Open licensing' of AI models
- **The disclosure function of patents?**
  - The value relative to research publications?

Reflections / Takeaways

- AI patentability can be instrumentalised for policy purposes.
    → Yet, the (empirical) knowledge base to support policy decision-making remains limited.
    → Maximising patent protection ≠ maximising innovation
- Reasonable to assume: A combination of technological and economic drivers beyond patents is behind recent AI advancements.
    → Towards a broader outlook on AI innovation policy
- Avoiding extremes when interpreting patentability provisions (or legislating on related matters)
    → Access issues
    - AI = enabling technology
    - Excluded subject matter = multi-purpose 'building blocks' of innovation

Q&A

daria.kim@ip.mpg.de