

Patents & Innovation: What is the economic evidence?



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1. Cross-country evidence



- Stronger patent rights
<=> R&D, economic growth

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- **BUT**, which causes which?

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- Stronger patent rights
<=> R&D, economic growth
- **BUT**, which causes which?
 - Patent strength *lags* R&D
 - Patent rights do not aid low-R&D nations

2. Historical evidence



- Patents did NOT increase innovation
 - industry differences

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- Patents did NOT increase innovation
 - industry differences
- Strengthening patents did NOT increase domestic innovation
 - slight decrease
 - increased foreign patenting

3. Survey evidence



- Do patents protect profits from innovation?
 - Yes, in pharma, chemicals
 - NO in computers, electronics, most others

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- MORE IMPORTANT:
 - Lead time advantage
 - Complementary hardware & services

4. Econometric evidence



- What is the private value of patents?

4. Econometric evidence



- What is the private value of patents?
- ~15% of R&D
 - Patents *do* have value
 - But MOST R&D is protected other ways

Summary



- Patents DO aid innovation overall

Summary



- Patents DO aid innovation overall
- But *LIMITED*
 - certain industries
 - 85% other protection

Implication



- Patent policy affects patent value

Implication



- Patent policy affects patent value
- AND the other 85% of innovation
 - Balance!

Puzzle:



- Industries that do not value patents
 - computers, electronics, semiconductors
- nevertheless acquire many

Why?



- To block competitors
- As bargaining chip
- “Strategic” patenting not to protect innovation *per se*

Patent Policy => Patent Thickets



- More attractive patents => “arms race”
- Other protection
 - weaker or not an option
- Leads to...
 - litigation
 - Innovation “tax”

Litigation Explosion

