

An Empirical Look at Software Patents

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Discussion

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Findings

- General characteristics of software patents
 - *most from manufacturing firms*
- Explanation for rise in software patenting?
 - “productivity hypothesis”
 - “regulatory hypothesis” → “*very substantial role*”
 - o R&D, patents: complements (“incentive hyp.”) or
 - o R&D, patents: substitutes → *confirmed for 1990s*

“We can reject naïve arguments that more patents, relaxed standards, or lower patenting costs lead to more R&D.”

Model: Market

Profits = monop. markup * appropriability $A(n)$ * output

n: number of patents

larger n implies ..

.. denser portfolio (assumption)

.. broader portfolio (alternative interpretation)

→ *implications?*

Model: Optimal number of patents

Paper:

- appropriability $A(n)$, cost $c * n$
- optimization over n
- then: $n = n_{sw} + n_{other}$, $C = C_{average}$

Alternative:

- appropriability $A(n_{sw}, n_{other})$, cost $c_{sw} * n_{sw} + c_{other} * n_{other}$
- optimization over n_{sw} and n_{other}

→ $f_i(\text{share of sw patents}) = G * \ln(\text{profit}_i) + H$

sign of G , H depending on relative cost and effectiveness of sw patents vs. other patents

Additional explanation

“Fashion” of applying for software patents

- Texas Instruments
- Gates: “We now care for software patents”

→ *Interviews?*