IPR and Growth in the LR

Discussion: Lerner and Boldrin-Levine

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Outline

- Brief summary of evidence
- Boldrin-Levine model
- Two kinds of diminishing returns
- Does this model explain Lerner?
Evidence

- Survey evidence – not important in most industries
- Contemporary returns to patenting (Bessen-Meurer, HJT, lots of others) – small, controlling for R&D
- Cross country panels (Qian, Park-Ginarte, Kanwar-Evenson) – lack of instruments, simultaneity
- Natural historical experiments – Lerner, Moser
Given diminishing returns to R&D, monopolists invest less because they want to be further up the demand curve.

Therefore, patents (which increase monopoly power) may reduce innovation or leave it unchanged.

However, firms will favor having patents, for the usual profit-maximizing reasons.

Consistent with the stylized facts
Patents that increase monopoly power may reduce innovation or leave it unchanged.

Question 1 - Is this true in general equilibrium?
  - What about induced entry?

Question 2 - What about the evidence?
  - natural experiments (Lerner, Moser) - yes
  - marginal returns estimates (HJT, Bessen-Meurer) – no, cannot use this result
Empirical firm-level analysis

Assumptions:

- Firm faces a menu of potential R&D projects and a cost of R&D capital
- Chooses most profitable first, then next, etc.
- Ignore uncertainty for simplicity

Result:

- Marginal revenue from R&D = marginal cost of capital
- [Marginal patent value (above R&D) = marginal cost of obtaining a patent]
Firm's R&D choice

Predicted equilibrium: more R&D, more patents, *same rate of return*, but larger rents
Conclusion

- HJT and Bessen-Meurer estimate marginal value of an additional patent, which appears to be small, but that is consistent with MR=MC.
- Lerner and Moser look at regime shifts, which are expected to produce more innovative activity and find none.
  - Consistent with Boldrin-Levine model.
Lerner – missing references

