

3. Incentives for innovation

3.6 Enforcement, licensing and competition policy

Some slides adopted from Suzanne Scotchmer

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Lanjouw and Schankerman study

- The overall rate of litigation is about 19 filed suits per 1000 filed patents.
- Corporate owners of patents are less likely to be involved in patent suits than individual owners.
- 95% of filed patent suits are settled before trial
- Firms with the largest portfolios of patents also have the most highly cited (interpreted as most valuable) patents, but nevertheless, the lowest litigation rates.
- Broader patents (those with more PTO/technology classifications) are litigated less than narrower patents

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Some Terms:

- Injunction (stop doing it)
- Liable (you are guilty as charged)
- Damages (what you have to pay)
- Treble Damages (patents, willful infringement)
- Criminal penalties (go to jail)
- Plaintiff (the one being infringed)
- Defendant (the one infringing)

What is the cost of litigation? (Hall et al NAS study 2004)

- Can be \$0.5m per claim (many patents have many claims).

What can we make of litigation statistics? About one percent of patents get litigated. How do we interpret that number -- is it high? Low? Does it mean that there is a lot of infringement going on?

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The way it works:

- A (plaintiff) files for infringement
- B (defendant) counterclaims patent invalidity (obvious → no sufficient inventive step)
- Copyright: fair use (as in the Seinfeld case)
- Like UC/EOLAS vs. Microsoft

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The problem of enforcement changes - our perspective on licensing

- When we investigated patenting, we assumed that firms would not infringe.
- If potential licensees have the option to infringe and suffer the consequences, that changes the “threat points” for making license agreements.
- Does this help or hurt the patent holder? (Careful!)

Licensing and reasonable royalty:

injunctions probably help

But... injunctions lead to ex ante licensing. (No sunk costs?)

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Patent Settlements: What are the dangers?

- License agreements can be collusive. Firms may use IP as an excuse to license even when there would not be infringement.
- What if the accused device would ultimately not be held infringing? (Selden patent)
- What if the patentholder's patent would have been judged invalid?
 - for stand-alone products
 - or follow-on products

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How should monetary damages be established?

- Two objectives: (are they ever in conflict?)
 - Deterrence
 - Compensation
- What if Rowling had been judged an infringer.
 - What should damages be? Should she go to jail?
 - Does either rule deter infringement? Is this fair to the previous author?
- Two main theories of damages:
 - Lost profit (make the infringed party whole)
 - Unjust enrichment (take away the illegal gains)

(19th century rule)

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Product Innovations: how does the innovator's profit depend on the damage rule?

- Is there deterrence with unjust enrichment?
- Is there deterrence with lost profits?
- What if the court calculates lost profits using “lost sales”?
- What if the court calculates lost profits using “price erosion?”
- What does the court have to know in order to evaluate lost profit?

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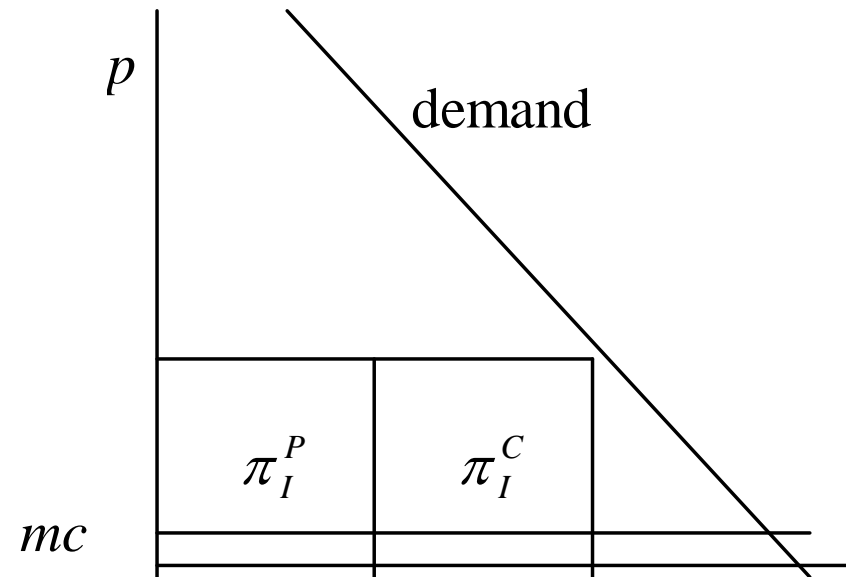
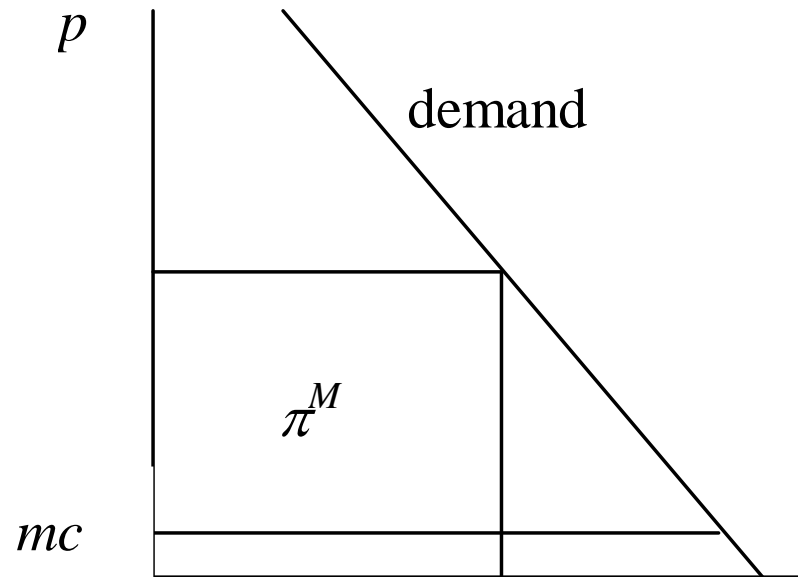
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Product Innovations: how does the innovator's profit depend on the damage rule?



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Product Innovations: how does the innovator's profit depend on the damage rule?

- Is there deterrence with unjust enrichment?

Deterred if profit from infringement is less than prospective damages that infringer must pay; unjust enrichment does deter, infringer is indifferent

- Is there deterrence with lost profits?

Infringement deterred since $\Pi^M - \Pi^P > \Pi^C$

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Product Innovations: how does the innovator's profit depend on the damage rule?

- What if the court calculates lost profits using “lost sales”?

Not much difference since cost are not affected (unless there are returns to scale)

- What if the court calculates lost profits using “price erosion?”

Very hard since counterfactual hard to observe

- What does the court have to know in order to evaluate lost profit?

Change in prices and demand (and cost)

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Litigation with licensing

- Complicates things a lot: what would have been the licensing fee/royalty without infringement?
- Definition of lost royalty is circular: damages should satisfy $\text{damages} = \text{licensing fee}$ ($d=L$); minimum licensor would charge is also d
- Profitability of licensed innovation is intermediate; the possibility of low rewards possibly discourages innovation
- increasing the price will be difficult once it is established; consequence: prevailing price somewhat arbitrary

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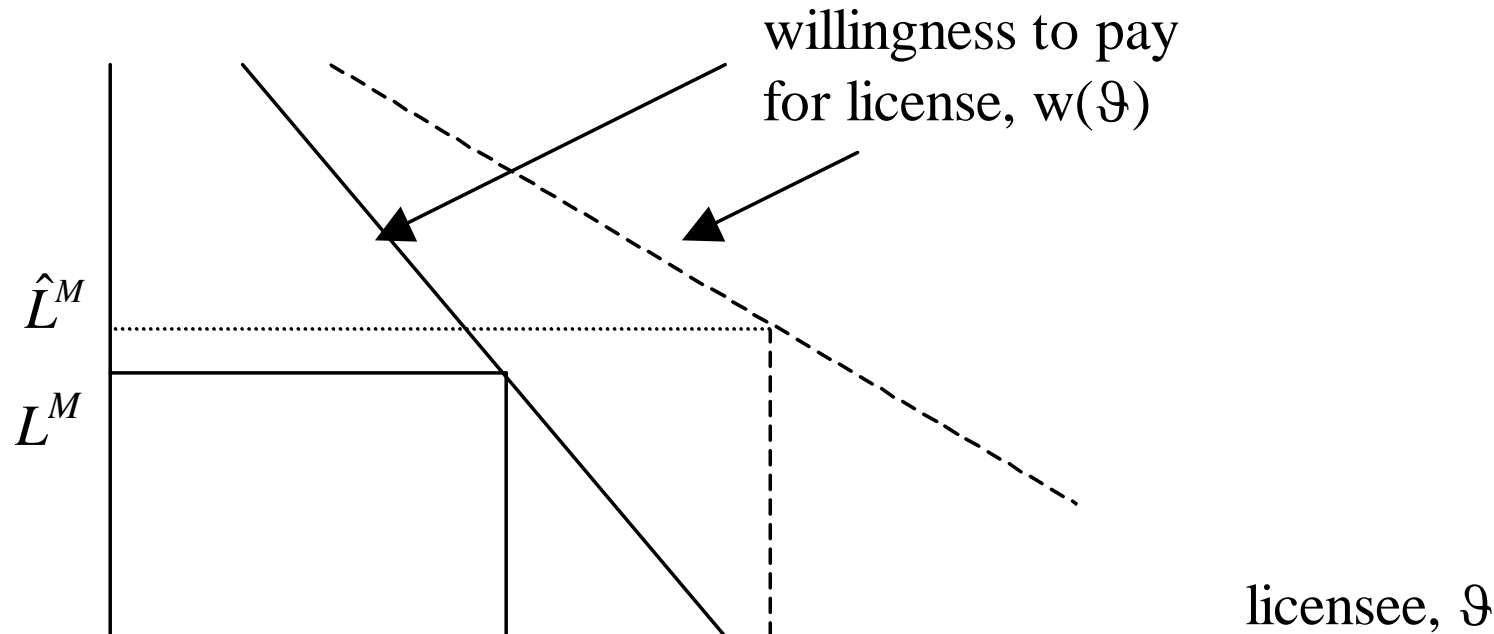
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The “lost royalty” rule may lead to an indeterminacy in royalties.

In the following diagram, can the patentholder raise the license fee if demand shifts?



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Technical measures

- Example: Monsanto's "terminator" gene
- Technical protection limited in ability to protect content
- Economic consequences of technical measures:
 - wasted costs; measures-on-countermeasures war
 - if truly effective → undermine fair use
 - infinite duration
 - no disclosure

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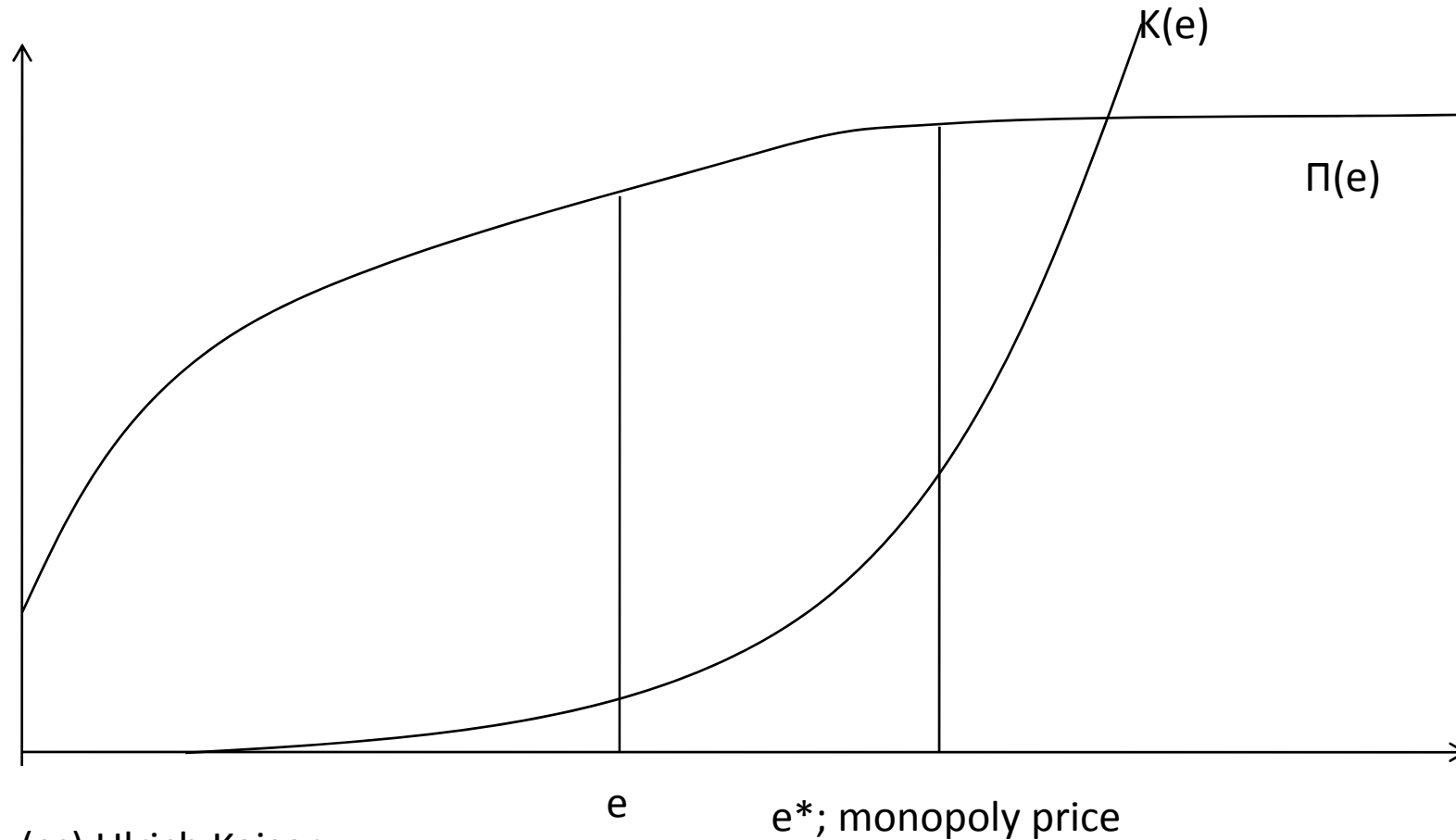
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