

Competition and Innovation

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Exam Questions

1. What is relationship between competition & innovation?
2. Are anti-trust & IP policy compatible?
3. How to re-design IP?

Exam Questions

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 - *Yes!*
3. How to re-design IP?
 - *Make it harder to obtain for unoriginal innovation*

What is relationship between competition & innovation?

- Abundant **theory**
- Schumpeterian trade-off. Competition
 - **Good** for static efficiency/productivity. Standard reasons + principal-agent, etc.
 - **Bad** for dynamic efficiency/innovation. Less ex post rents so less ex ante incentive to invest in R&D
- Many counterarguments. Example:
 - Arrow replacement effects. Monopolist obtains a stream of rents, so less incentive to innovate & displace them than an entrant
 - Aghion et al (2005) combination of Schumpeter + Arrow = Inverted U

What is relationship between competition & innovation?

- **Evidence** harder
 - Measuring innovation
 - Measuring competition
 - Consumer demand elasticity
 - Barriers to Entry
 - Heterogeneity across industries

My take on empirical evidence

- Compelling evidence that on average tougher competition increases productivity
 - Both from incumbents & via reallocation
 - Good chunk via improving management practices (Van Reenen, 2011)
- More limited evidence that on average, competition also good for innovation (e.g. Blundell et al, 1999; Correa & Ornaghi, 2014)
- Example: Bloom, Draca & Van Reenen (ReStud, forthcoming)

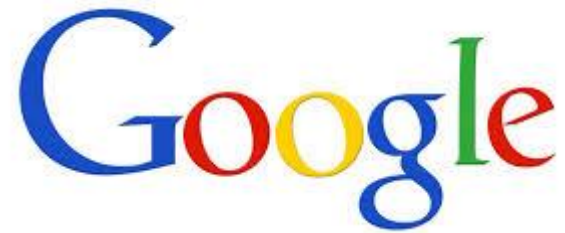
Trade Induced Technical Change

- Exploit major shift in competition facing EU: the rise of China due to pro-market reforms since 1990
- Particularly strong in textiles after China joined WTO in Dec 2001, due to staggered abolition of MFA quotas
 - Generates product-specific changes in competition
- Major shake-out in affected sectors. Job losses but also
 - Innovation Up (cite-weighted patents & R&D) as well as TFP, management & ICT diffusion
 - About 1/2 of aggregate increase in innovation was within incumbent firms
- Bloom, Romer, Terry & Van Reenen (2015) puts this in calibrated endogenous growth “Trapped Factor” model

Compatibility between IP Protection & Anti-Trust?

- Role for IP is to give some temporary monopoly rights to generate ex ante innovation incentives (and reveal information that can be “built upon”)
 - Reasonable: e.g. pharmaceuticals
 - But certainly can be abused: even a legitimate patent does not give right to do anything
- Note: trade-off is less stark if competition on average beneficial for innovation
- “Excessive anti-trust enforcement by punishes successful firms and so chills innovation?”
 - DG-COMP lobbied by rivals to pursue US firms

Compatibility between IP Protection & Anti-Trust?



Example: European Commission vs. Microsoft (2004)

- EC: Microsoft's used PC dominance to extend into other complementary markets like servers & media players
- Ex: "workgroup" servers need to inter-operate with PCs. By refusing to share connection information with Windows Microsoft degraded rival security, filing, etc.
- Microsoft said forcing it to reveal information would reduce innovation. But without interoperability
 - Rival server innovation reduced as can't compete
 - Microsoft innovation ambiguous: More value from PC, but less incentive to improve product quality
- **Bottom line:** *anti-trust judgement has to be case by case, but don't give dominant high tech firms carte blanche for dominant to abuse IP*

How to re-design IP protection?

- IP insufficient for innovation incentives. Important role for government subsidies & credits
 - Bloom, Schankerman & Van Reenen (2013, Emtca)
- Too easy to obtain low quality patents of dubious originality (especially in US).
 - Means decisions made through courts (favours large firms with “deep pockets”)
 - Better to investments more in patent office
- Multi-patent technologies (e.g. cell-phones), producers risk “hold up”, esp. by trolls
 - Legal framework to compensate rather than stop production
- Patents/copyright gives over-protection of industries with fast moving technologies (e.g. software)

Thanks!

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