Empirical Evidence on the Effect of Broadband Regulation

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LESSONS FROM THE TELECOM WARS
Broadband Deregulation & Network Neutrality
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Amazon.com

• Neutral?
• Or priority conscious?
• **Amazon.com Sales Rank:** #1,864,863 in Books (See [Top Sellers in Books](#))
Net Neutrality: Market Evidence

• Assessing the horribles
  – Business models developed via unregulated transactions
  – Unregulated transactions now a threat to those business models

• Diagnosis
  – Are exclusive ISP deals anti-consumer?

• Cures
  – Collateral damage?
  – Antitrust insufficient?
3 Quick VoIP Calls

• VoIP QoS Regulation
  – mandate power, 5 9s ➔ kill VoIP
  – E911?

• Digital Phone service
  – dedicated cable LAN bandwidth
  – pro-competitive in voice market

• Clearwire
  – blocks Vonage
  – pro-competitive in broadband, voice
Gains from Trade

• Market transactions discover efficient business forms
• Internet: not “open” end to end
• Internet: negotiated by contract end to end
  – “end to end” not an architecture
    • design principle…. case by case
    • an engineering principle
  – the economics: exclusive ownership
    • negotiated cooperative agreements
    • tons of exclusivity
Exclusivity

- Essential ownership regime
- Empowers quest for innovation
- Service providers seek gains by claiming advantageous turf not available to rivals
- “Openness” a policy aimed at reducing some other firms’ degrees of freedom
Evidence

• Natural experiment
• U.S. regulation of broadband networks
• “open access” rules
  – “walled garden” prophylactic
  – innovation choked by vertical integration
The Broadband Race

• Cable broadband a “closed platform”
  – Vertical integration (cableco + ISP)
  – No mandatory third party access
  – Regime upheld in Brand X case (June 2005)

• DSL (recently) an “open platform”
  – ILEC must allow colocation for data switch
  – ILEC must rent local loop at regulated price
  – Dereg in Feb. 2003 – end of ‘line sharing’
Feb. 20, 2003: Partial DSL Dereg

- FCC ends “line sharing”
- dCLECs pay full cost of local loop
- “High-Speed Service May Cost More”
  --NY Times headline (Feb. 21, 2003)
Aug. 5, 2005:
Full DSL Dereg

"I hope next year the commission will put its money where its mouth is to see if the assumptions yield the results. And if it doesn't, I hope it will admit that and take appropriate action. I'll be keeping tabs."

-- Commissioner Michael Copps
NN as Re-regulation

- The New Republic:
  - net neutrality is needed because "last August, George W. Bush's Federal Communications Commission (FCC) exempted telcos that provide Internet connections from [open-access] restrictions, dealing a blow to both entrepreneurship and political discourse."

  “Open Net,” The Editors (June 19, 2006)
The Broadband Test: Two Regimes

DSL and Cable Modem Subs, 1Q1999 - 1Q2003

Source: Legg Mason
The Broadband Test: Two Regimes

DSL and Cable Modem Subs, 1Q1999 - 1Q2006

Number of Subscribers (in millions)

Source: Legg Mason
Cable’s Lead Evaporates

Ratio of Cable Modem to DSL Subs, 1Q1999 - 1Q2006

Source: Legg Mason
Cable Modem Lead Evaporates

Ratio of Cable Modem to DSL Subs, 1Q1999 - 1Q2006

Source: Legg Mason
New Subs per Quarter

Quarterly DSL and Cable Modem Subscriber Additions, 2Q1999 - 1Q2006

Source: Legg Mason
DSL Takes Lead Post Dereg

Quarterly DSL and Cable Modem Subscriber Additions, 2Q1999 - 1Q2006

Source: Legg Mason
"Keeping Tabs"

Quarterly DSL and Cable Modem Subscriber Additions, 2Q1999 - 1Q2006

Source: Legg Mason
Summary

• Network sharing mandates not associated with broadband innovation
• Marketplace evidence on the effect of regulation
Useful Exclusivity

• Yahoo! 1999
• Yahoo! 2006
• Google’s big breaks
  – revenue extraction from advertisers
  – selected by Yahoo! as search engine
• Amazon as Sprint Wireless Web partner
Wireless Web

• DoCoMo Model
• Early success in wireless web
• “At the heart of all this is a paradox: i-mode depends on outside providers for everything from handsets to content, yet it’s managed so carefully that nothing is left to chance.” (Wired, 9.01)
  – “walled garden”
  – blocks JPEG
• DoCoMo provides platform for content
  – provides billing
  – charges content providers 9% of revenue
Business Models

• Innovation good
• Artificial limits bad
Optimizing Spectrum Use

• Wireless carriers not agnostic wrt devices
  – Lengthy carrier approval process
• Even with wireless broadband, MB limits
  – see DirecPC’s customer agreement
  – EV DO, HSPDA limits
• The limits extend the network, increase functionality, create value
NN Regulation

• Constrains market transactions
• Shackles existing business forms
  – Illegalizes the Clearwire bundle or the DoCoMo garden
• Fails to promote competition
  – As has deregulation of “open access”
  – As would more liberal policies wrt to broadband
    • More spectrum availability (exclusive rights)
    • Video franchise reform
THANK YOU.