Introduction

- Call for regulatory action in Internet governance stem largely from concerns of “bottlenecks” in the system

- Market power being abused to control innovation in complementary markets (for example (NN))

- Concerns heightened as we arguably will abandon much (if not all) Title II with digital migration
Counter arguments focus on antitrust solutions to these issues rather than regulation.

For example, argue NN is counter to efficient vertical integration and product differentiation

Concerns of high potential of Type I errors of ex ante regulation
The Duopoly Bottleneck
FCC Jurisdiction

1. Title I + Ancillary
   - *Verizon* (2014) – finding § 706 jurisdiction for some Internet governance; Title II “like” regulation available also but only if FCC classifies provider accordingly

2. Title II
   - Full Title II
   - Title II + Forbearance

3. Opportunistic Jurisdiction
   - Merger Agr’ts
   - Spectrum License Agr’ts

Introduction

- Origins

FCC Jurisdiction Issues

Broadband Access
   - How does wireless fit?
   - Past regulatory experience

Empirical Analysis of Past Reg.

Implications
FTC Jurisdiction

1. FCC uses Title I
   - Trinko? Some FTC limits.

2. FCC uses Title II
   - Common Carrier Exemption
     FTC excluded
Regulatory & Antitrust Boundaries

Key:

- Blue is the area of greatest regulatory (i.e. FCC), jurisdictional strength
- Grey is the area of shared regulatory and antitrust jurisdiction
- White is the area of sole antitrust jurisdiction; no regulatory jurisdiction
Why this area of the ecosystem? Why not include wireless?

- (1) Identification of consumer harm: Is there market power abuse or anticompetitive vertical restrictions?

- (2) Identification of the costs / benefits: Type I versus Type II errors
The Duopoly Bottleneck
The Duopoly & Wireless?
Bottleneck

Applications “The Edge”

End User

DSL
Cable
Separate Market

Applications “The Edge”

DSL

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End User

Separate Market
Empirical Analysis of Past Regulation

If Title II is the answer, is there empirical evidence that Title II regulation will lead to superior results?

Examples:
What is the effect of regulating “fair and reasonable” prices?

What is the effect of regulating interconnection (wholesale prices)?

What is the effect of entry?
# Regulatory Framework

## Pre-1993

<table>
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<tr>
<td>No Price Regulation</td>
<td>Retail and Wholesale Price Regulation</td>
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<tr>
<td>2 Entrants Licensed per MSA</td>
<td>Final Entry Approval</td>
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<tr>
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<td>Terms and Conditions</td>
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## Post-1993

<table>
<thead>
<tr>
<th>Federal</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS licensed – up to 7 licenses per MSA</td>
<td>No rate regulation</td>
</tr>
<tr>
<td></td>
<td>Some terms and conditions</td>
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</table>
### Log of Price Regression Model with Regulatory Differentiation

<table>
<thead>
<tr>
<th>Regulatory Variables</th>
<th>Full Reduced-Form Model</th>
<th>Full Model with Regulatory Differentiation/ Wholesale</th>
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<tbody>
<tr>
<td></td>
<td>Estimated Coefficient</td>
<td>Standard Error</td>
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<td>RegLow</td>
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<td>RegHighW</td>
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</tbody>
</table>

* Significant at 99% confidence level  
** Significant at 95% confidence level  
*** Significant at the 87% confidence level  
N = 440.
Possible Policy Implications from Title II Experience

1. “High,” levels of regulation may not lower prices
   • Links to both consumer welfare analysis and FCC jurisdiction
   • P decreases, Broadband Adoption increases --FCC §706 jurisdiction based in increasing deployment

2. Market entry has positive consumer welfare effects.

3. Consider use of ex post antitrust enforcement or antitrust “style” regulation to control anticompetitive vertical restraints.

4. Possible negative international regulation reaction to a US Title II regime
   • what is considered *fair and reasonable* in US may not be in other countries (foreign telcos v. US applications)

5. Strict structuralist view of market limited; may lead to Type I systemic errors when used to justify ex ante regulation
The Duopoly & Wireless? Bottleneck

Applications "The Edge"

End User
“multi-level” bottlenecks?