Exclusion and Sources of Technological Competition in Mobile Networks

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Setting the Problem

- Exclusion: refusing proper access to complements or distribution channels.
- Always harmful? Economics and Antitrust say no
- Key question is: does the process of competition remain strong despite exclusion?

How to Assess the Health of Competition in the Market

Substantial non transitory power in a given market

- Supply side considerations
- Demand side considerations
- Durability of exclusionary power

Effect of Technology on the Competitive Conditions in a Market

- Supply side: multiplies the sources of competition and facilitates competitive interactions
- Demand side: simplifies and nurtures the ability of consumers to reach substitutes and gain access to alternative routes to the desired products and services
- Durability: reduces the persistence of market power

Supply Side 1

Multiplication of Sources of Competition

- Technological proximity and vertical entry. Think of Google expanding into mobile OS and phones
- Expansion of natural technical boundaries. Think of Palm's features' expansion and contraction
- Flexible locus of functionality. Think of thin clients, thin OS' and alternative mobile services platforms

Supply Side 2

Competitive Pressure and Dissuasive Effects from Existing Players

- Shifts of power due to technological proximity. Think of IBM/Wintel, Samsung/Google, Apple/AT&T
- Networks are the result of a continuous tussle. Think of the openness condition in the C Block of the 700 MHz spectrum

Demand Side 1

- Multihoming: ability of subscribers to join multiple systems (networks and platforms) at the same time
  - not a perfect alternative to competition and does not guarantee that every combination of inputs and platforms will be possible
  - However, it is becoming prevalent:
    - 56% of U.S. digital media consumers multihome
    - more than 50 million subscribers globally will receive premium programming from more than one source
    - Android and Windows Mobile, which partner with multiple device manufacturers capture more than 50% of the market

Demand Side 2

Interconnection and Compatibility

- Basic rule: networks of comparable size have a voluntary incentive to interconnect
- Even when they don't the decision not to interconnect depends on:
  - Strategy of smaller networks
  - Expectations of consumers
  - Switching costs
  - Not sure that these are all present at all times

Durability of Power 1

- High-tech industries, such as mobile telecommunications exhibit more intense rates of progress:
  - Reinforcing impact of network effects
  - Hypercompetition: lower barriers to entry, more frequent technological change, ease of switching on the side of consumers, the dominant role of intellectual property and high rates of patenting and cross-licensing

Durability of Power 2

- Is hypercompetition real? Thomas and Wiggins & Ruefli found that sustained superior economic performance attenuates faster over time. Castrogiovanni found no support for the hypothesis of dynamism. Vaaler & McNamara, found statistically significant correlation for very high performing technical industries
- Life-cycle theory: Yes, at least for the early stages of an industry's development?