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**Discussion of “Foreclosing Competition through  
Access Charges and Price Discrimination”  
by Angel L. Lopez and Patrick Rey**

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# Summary

- Can incumbent network operators use access charges to foreclose new entrants?
- Foreclosure is profitable only when it keeps the entrant entirely out of the market

# Setup

- An incumbent and an entrant...
  - Compete in subscription and usage fees
  - Termination-based price discrimination (network effects)
- Switching cost if choosing entrant
- Incumbent sets the (reciprocal) access charge
- Bargaining:
  - What if they had to negotiate over the access charge?
- Timing:
  - Incumbent commits to access charge (longer-term decision?)
  - Is it credible? Profitable to renegotiate ex-post

# Results

- Equilibrium market shares:
  - (i) Shared market (if small termination charge and switching costs)
  - (ii) Incumbent and/or entrant corners the market
    - If multiple: consumer inertia (choose incumbent) or activism (choose entrant)
- Incumbent can keep entrant out of the market by...
  - Setting large access charge mark-up:
    - If consumer inertia, even without real switching costs (here virtual ones!)
    - More limited if consumer activism, need high enough switching costs
  - Setting large access charge subsidy
- Multiple equilibria selection:
  - Consumer inertia or activism might depend on parameters
  - Would it be possible to find unique equilibrium by introducing asymmetric information (as in the global games setup)?

# Policy recommendations

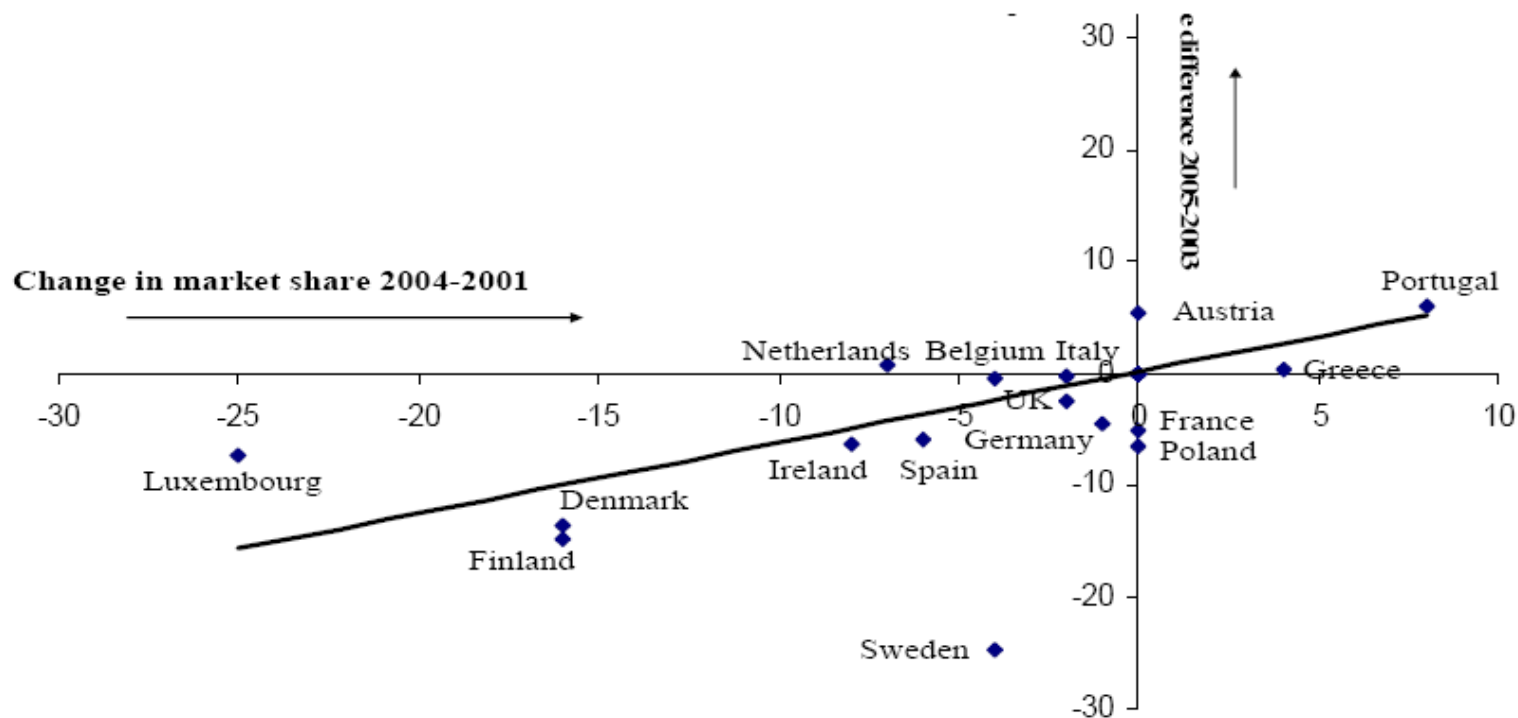
- Foreclosure is...
  - Not profitable without termination-based price discrimination
  - Not feasible in the receiver pays regime
- Policy recommendation:
  - Set bounds on access mark-ups
  - Reduce real switching costs may not be enough
- What about...
  - Asymmetric access pricing regulation?
  - (consumer) welfare? Wouldn't higher charges be good for consumers (for non-monopoly markets)?

# Extensions: extent of entry

- Could your model be extended to explain...
  - the *extent* of entry?
  - the striking differences in Europe, especially with respect to Mobile Virtual Network Operators (UK, Scandinavia vs. Spain, Italy...)?
  - Impact of interconnection tariffs on entry (or vice-versa)?
    - €0.117 on average in countries with significant entry (Denmark, UK, Austria, Germany, Estonia, Latvia, Luxembourg, Finland, Sweden)
    - €0.165 in those without it (Belgium, Greece, Italy, Ireland, France, Italy and Portugal) --- (2004)
  - Impact of entry on usage prices

# Impact of entry on usage prices

**Figure 3 Change in market share of leading network operators (2001-2004) and price levels (2004-2005) of medium usage basket of mobile services**



Source: (Dunnewijk, Hultén, 2006)

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# More on extensions

Puzzling that both prefer access subsidies post-entry

- What if...
  - Consumers also derive utility from receiving calls (Hoernig '07)
  - Or termination costs were different

... and non-reciprocal access prices?

- Can access charges be used to predate rivals?