How to Increase Competition in Mobile Telecommunications Markets

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Issues to be Addressed

- Mobile Number Portability
- Interconnection
- Mobile Termination
- Other Issues
  - MVNOs,
  - International Roaming,
  - Spectrum Allocation
  - Price Discrimination

Mobile Number Portability

- Markets with Switching Costs:
  - Consumers are locked-in – firms are reluctant to lower prices for captured customers – price competition appears to be *less* intense
  - Switching costs may facilitate collusion, as lowering prices becomes less attractive for firms
  - Customers are valuable for firms – competition for new customers becomes *more* intense
  - AND: With MNP entrants have to offer less attractive price packages

  - Hence: While overall price effect not necessarily clear, idea that MNP may foster competition
  - BUT: MNP is mandatory under EU Universal Service Directive

Benefits of MNP

Type	Applies tor	Benefit	Example
1A	Users who switch operator whether or not there is MNP	Avoided Cost of Number Change *less* cost of porting	Informing users, Printing business cards, etc.
1B	Users who only switch operators when there is MNP	Benefits of moving to a new operator *less* cost of porting and loss or profits to operators	Benefits from lower prices, better service, etc.
2	All users	Potentially more intense competition	Lower prices
3	Callers	Avoided costs of updating records, finding changed numbers	Costs of calling directory services, etc.

Costs of MNP

- Costs:
  - Set-up Costs
  - Porting Costs (per number)
  - Additional Conveyance Costs
- Further Potential Cost:
  - Loss of Tariff Transparency
- Further Potential Benefit:
  - Increased Investment in Number Value

- NOTE: Empirical Studies (ex ante) show that benefits are likely to exceed costs

Charging for MNP

- High Charges Increase Switching Costs (Again)
- BUT: Not Charging is inefficient, as MNP is not a public good
  - While type-2-benefit is a public benefit, type-1-benefit is a private benefit
- Note: MNP tends to have decreasing average costs due to high set-up costs
  - Idea: Set charges at Incremental Cost (LRIC)
  - BUT: MNP-Technology not given
  - AND: May be considered ex post hold-up with negative impact for future investment

Experience in Western Europe

- Actual porting behaviour varies dramatically
  - Germany vs. Finland
  - In most countries around 2-5% of customer base ports per annum
- Donor network usually allowed to charge for MNP
- But: Charges mostly laid on receiving operator (not directly on customers)
- Small operators tend to win, large ones to loose (but not always)
- If price competition is already intense, *additional* competitive benefit from MNP relatively low (switching costs may be overestimated)

Mobile Interconnection

- Network interconnection is essential for competition, especially for new entrants
- Duty to provide interconnection
- Risk of collusion via interconnection fees?
  - Laffont/Tirole (1998a): Collusion via high interconnection fees;
  - Problem: Model is not robust for:
    - price differentiation on-net/off-net calls
    - asymmetric networks.

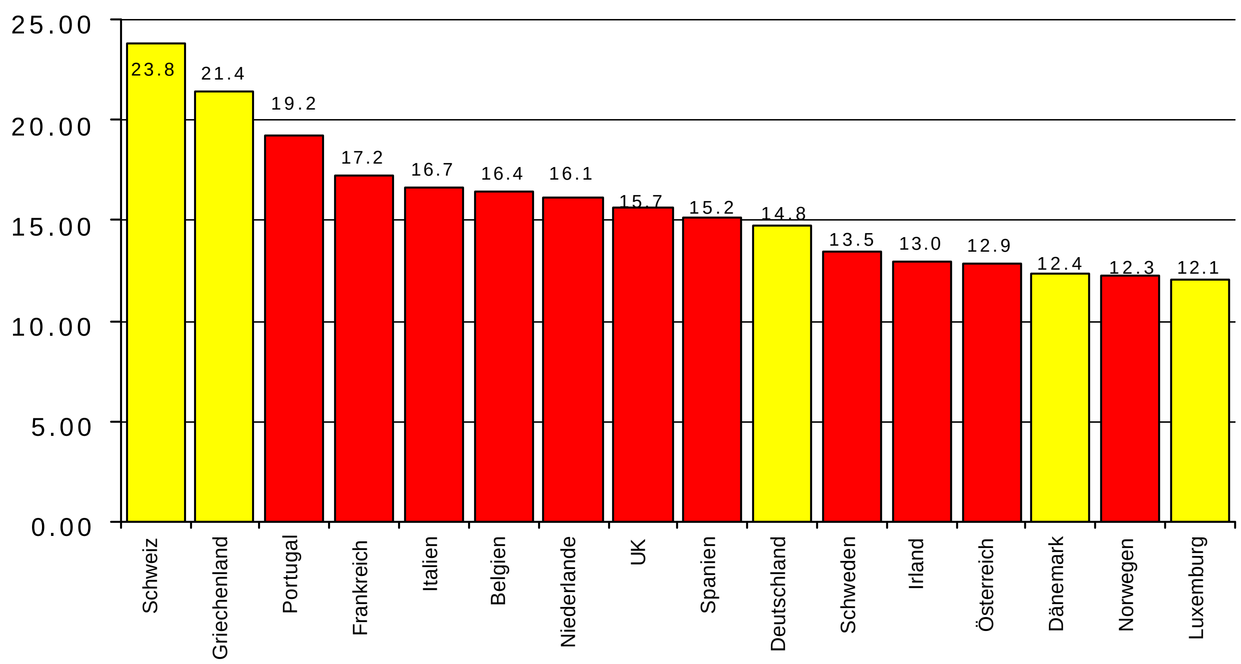
Mobile Interconnection Cont‘d

- Collusion via interconnection fees?
  - Gans/King (2001): collusion via „Bill and Keep“, as competition for new subscribers becomes less aggressive;
- General agreement appears to be that mobile-to-mobile interconnection does not need price regulation

Mobile (Voice) Termination

- Market No. 16 according to EU guidelines:
  - Termination in operator-specific networks, i.e. each mobile network constitutes its own network
- Hence: Each operator has a monopoly (and significant market power or dominance);
- Assumption: With CPP customers do not take into account termination charges when subscribing to a particular network.
- Hence: Potential market failure due to externality problem;
- Fairness Issue: Fixed-network customers „subsidize“ mobile customers.

Empirical Evidence



Regulating Mobile Termination Fees?

- Price regulation does not lead to more competition;
- And Remember: There are good reasons, why termination fees *should* exceed marginal costs;
- Wright (1999): Before the market is saturated, a mark-up is beneficial in order to subsidise handsets (according to Wright 200% to 400 % mark-up optimal).
- And: Even with saturation new handset features (MMS, MP3, etc.) are valued by customers.
- Also Remember: Substitution Possibilities (SMS, email, etc.)
- „Waterbed Effect“

Other Remedies

- Asymmetric Price Regulation?
  - Problems: Lack of price transparency may lead to negative pricing externalities and inefficiently high prices;
  - For details: Dewenter & Haucap (2004)
- Introducing RPP/MPP:
  - Consumers may switch off phones;
  - Penetration may suffer (evidence from US, OECD, but not uncontested);
  - Administrative and set-up costs of system change.

Other Issues: MVNOs

- What is their value added?
  - May lead to further market growth via new ditribution channels/marketing;
  - May exert pricing pressures if wholesale prices are capacity-based;
- BUT: If introduced by regulatory means, they may also reduce incentives for facility-based entry, especially for smaller operators.
- Still: Collusive behaviour to exclude third parties can be a problem.

Other Issues: Int‘l Roaming

- Market 17 according to EU guidelines;
- Problem: Customer Ignorance
  - High charges do not decrease *national* welfare (increase in national producer surplus, decrease in *foreign* consumer surplus);
  - Market definition: EU - single networks as individual markets (UK) – problematic market definition;
  - Case for ex ante regulation relatively weak

Other Issues: Spectrum

- Key Issue: Not revenues, but licensing many firms;
- Bids in auctions depend on expected final market structure (highest bid would be for monopoly rights);
- Competition can be increased by facilitating spectrum trading;
- To safeguard competition: Spectrum caps

Other Issues: Price Discrimination

- Differences between on-net and off-net calls benefit large operators (usually first movers);
- May constitute barrier to entry;
- BUT: Banning price discrimination may lead to price increases and create additional problems regarding termination fees

Thank you

Additional Information/papers/material:

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