

Proper Identification and Demarcation of Relevant Markets Under Continuous Process of Digital Convergence

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Seminar **Economic Dynamics in Newly Liberalized Telecommunications Markets in CEE Countries and Baltic States**

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- 1. Market Dynamics and Market Interdependence
- 2. Digital Convergence
- 3. Identification and Demarcation of Relevant Market
- 4. Policy Conclusions for a World with Convergence

1. Market Dynamics and Interdependence

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- **Network operation:** Telecommunication markets are shaped by incumbents and often powerful foreign investors
- **Dynamics of service provision:** strong competition and many innovative services – with the internet being the most dynamic field: so far with little regulation; likely to change with internet TV/radio

Key Elements in Telecommunications

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- (1) Natural Monopoly
- (2) Network Effects = specific for telecomms!!
- (3) Vertical Integration (1) and (2) not present in all layers/segments of incumbent operator!!!
- (4) Bundling tendencies – leader is the incumbent
- If competition is possible and sustainable allow competition; no regulation (ex ante) necessary!!
Regulation is not without cost!!!

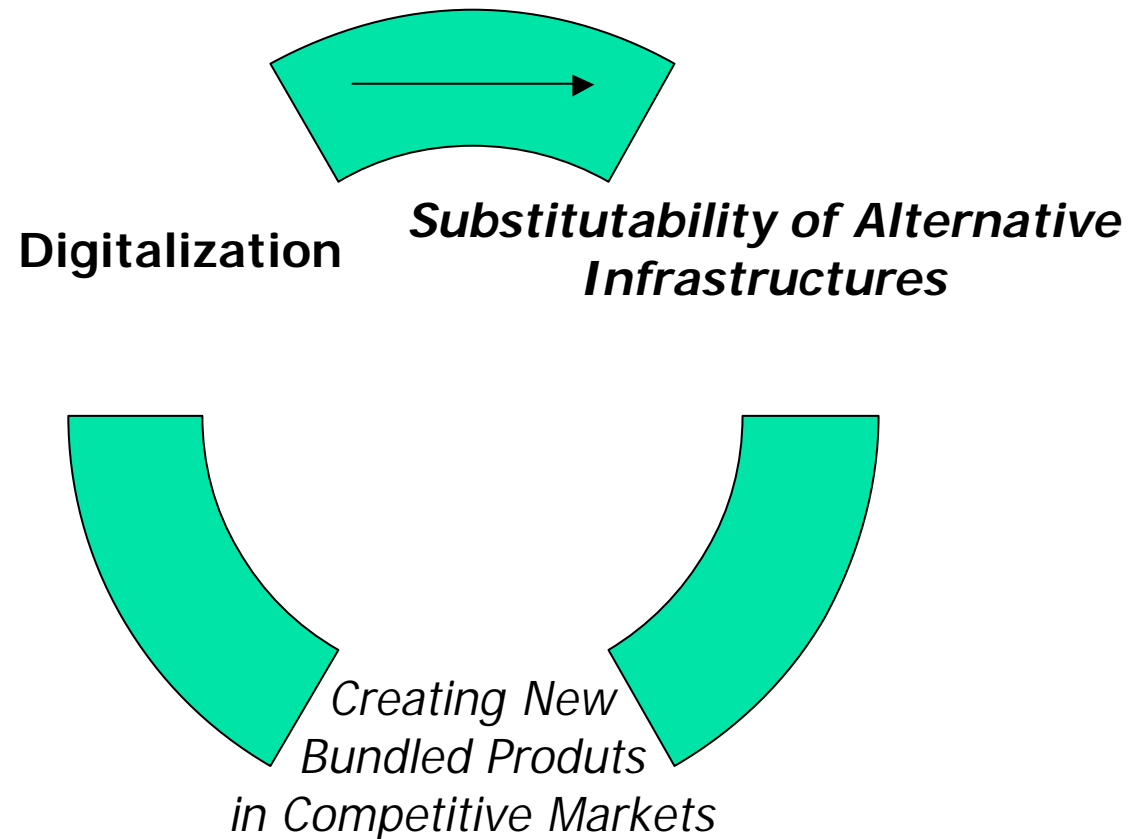
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2. Digital Convergence

- Convergence is a rather recent phenomenon
 - Digitalization as driver
 - Blurs market demarcations
 - Creates complex problem of determining market power

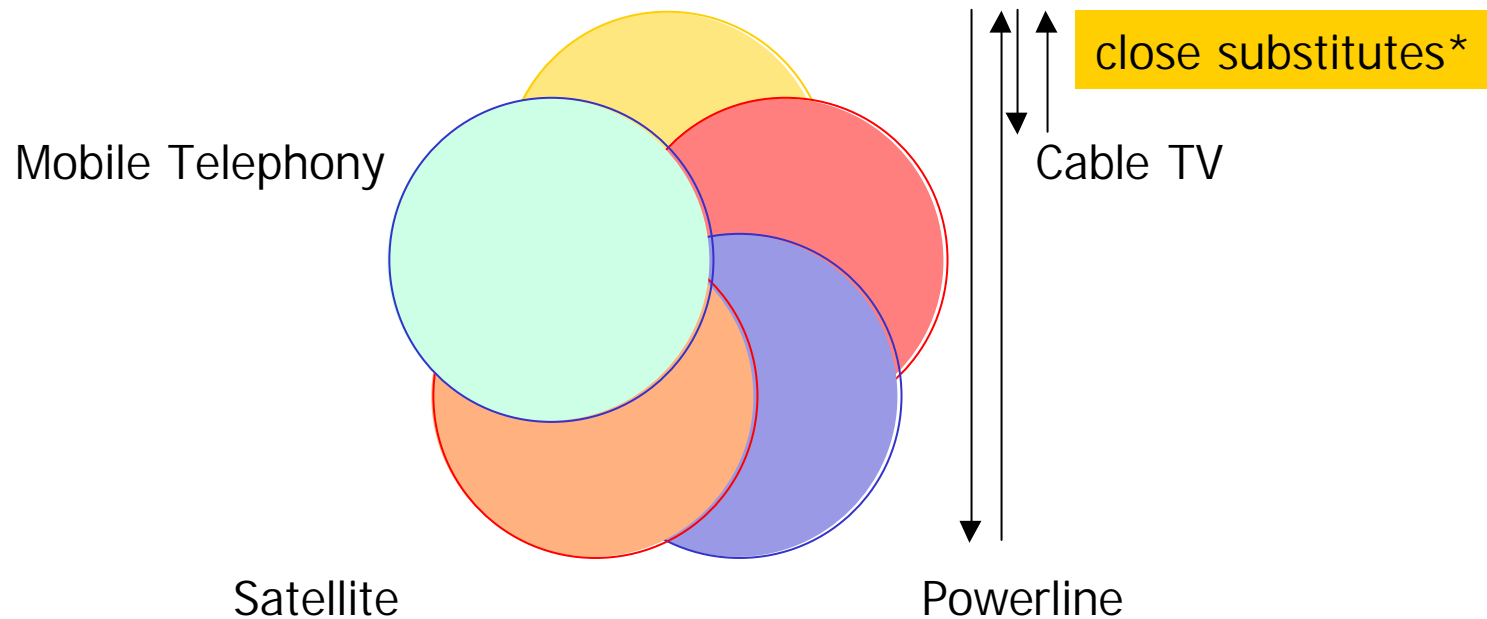


Convergence



Different Markets, But There is Convergence! (Digitalization!)

Fixed Line Telephony: a) Narrow-band; b) DSL



* Sudden fall of DSL price can kill powerline

Convergence as a Gradual Process

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- Convergence of platforms reinforces substitutability to some extent
- Convergence of markets can remain restricted: e.g. call from country A to B is not a substitute for a call from A to C or D...
- Convergence and globalization of telecommunications markets could come quickly through VOIP!

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3. Identification and Demarcation of Relevant Markets

- Relevant market can be defined with respect to the product (i) concerned – related markets defined through substitutability on the demand side: cross price elasticity E_{qj, p_i}
 - Cross price elasticity indicates how strong the relative quantitative increase of demand for good j is if price of good i increase by 1%; e.g. mobile vs. fixed: how strong will demand for mobile access increase if access to fixed line increases by 1%. The higher the cross price elasticity the higher the degree of substitutability!!

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Infrastructure Side

- To which extent is the incumbent (in fixed line telephony) also operator of cable TV and mobile operator
- Cable TV network should be taken away from incumbent operator (see the desaster in Germany where cable TV network has not been developed as much as in the Netherlands, UK etc.): More competition on the infrastructure level implies more competition in provision of services (more substitutes)

Problem with Bundling

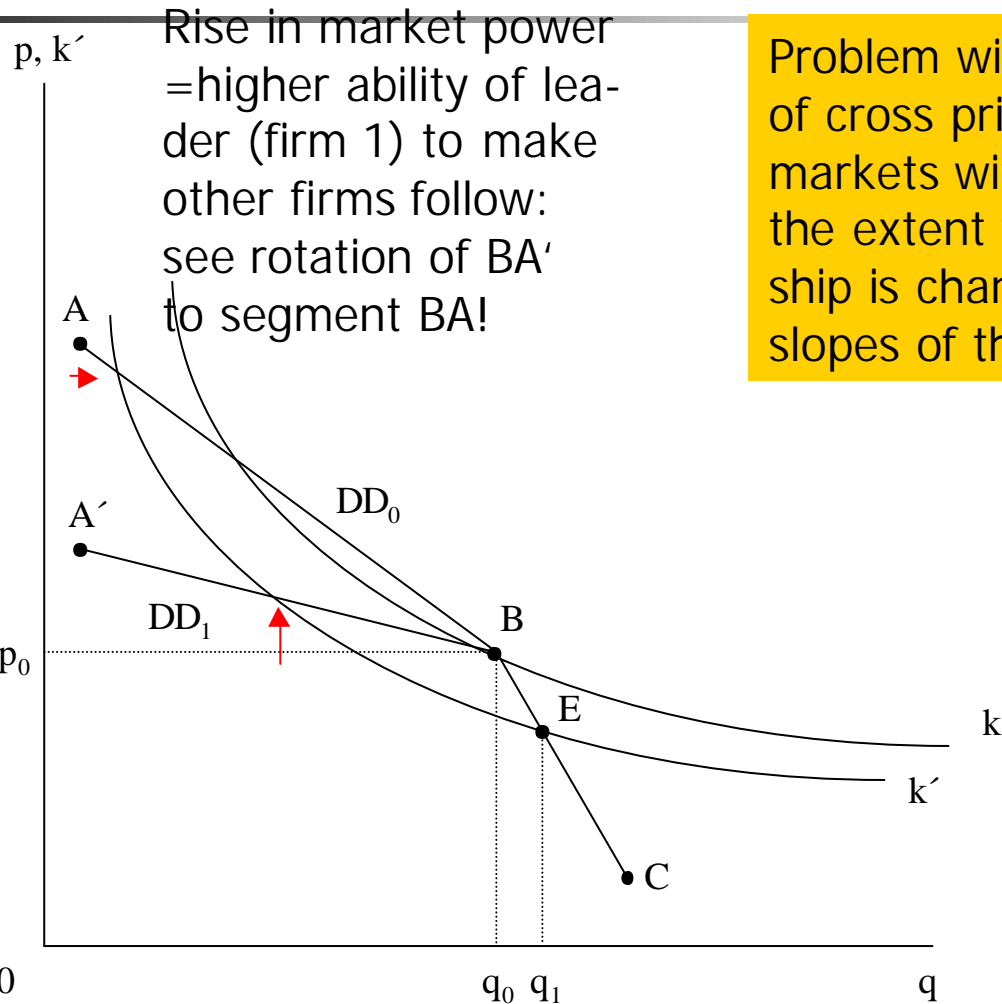
- **A) Normal bundling in competitive markets**
=reflecting technological opportunities and desired service package by certain consumer groups is standard element of competition; could result in lower price elasticity of the product bundle and hence higher mark-up
- **B) „Unnormal bundling“** launched by dominant incumbent is a serious problem: Markets should be defined in line with international comparable markets in which such bundling is not present; or hypothetical normal bundling as a point of reference...

Key Problems with Digital Services

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- Elasticity analysis is necessary: time series required
- The demand for services can be analyzed empirically (econometric work required):
 - Determine own price elasticity
 - Determine cross-price elasticity T

Modified Hitch-Sweezy Approach in Oligopoly (WELFENS, 2004a)



Problem with analysis of elasticity and of cross price elasticities (of two markets with oligopolistic structure) to the extent that the degree of leadership is changing over time = changing slopes of the demand curve

EU Approach: Retail Level (1-7) vs. Wholesale Level (8-18)

- EU has defined 18 markets (in connection with Universal Service Directive and Framework Directive):
- (1/2): (1) Access to public telephone network at a fixed location (AFL) for residential customers and (2) nonresidential customers
- (3/4): (3) Publicly available telephone local/national services AFL for residential customers; and (4) international services AFL residential customers
- (5/6): Publicly available local/national telephone services AFL for non-residential customers; (6) international services for non-residential customers
- (7) Leased lines (minimum 2Mb/sec.)

Wholesale Level (Access Directive as Related Field)

- (8) Call origination on the public telephone network at a fixed location
- (9) Call termination on the public telephone network at a fixed location
- (10) Transit services
- (11) Wholesale unbundled access (included shared access)
- (12) Wholesale bundled access
- (13) Wholesale terminating segments of leased lines
- (14) Wholesale trunk segments of leased lines
- (15) Access and call origination on public mobile telephone network
- (16) Voice call termination on individual mobile networks
- (17) Wholesale national market for international roaming on public mobile networks
- (18) Broadcasting transmission services, to deliver content to end users

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Open issues

- What happens in the case of an expansion of VOIP?
 - Internet-telephony does not meet the definition of public telephony – hence no regulation would apply
 - Internet-telephony would require global framework regulation (difficult consensus between US approach – case based law – and EU approach and...)

4. Policy Conclusions for a World with **Convergence**

- (1) Market identification will become more complex as competition leads to more differentiated digital products and services
- (2) Market demarcation is more fluid as bundled products and services are becoming more common
 - Net result of (1) und (2) still unclear

Analytical Approach to Market Indentification/Demarcation

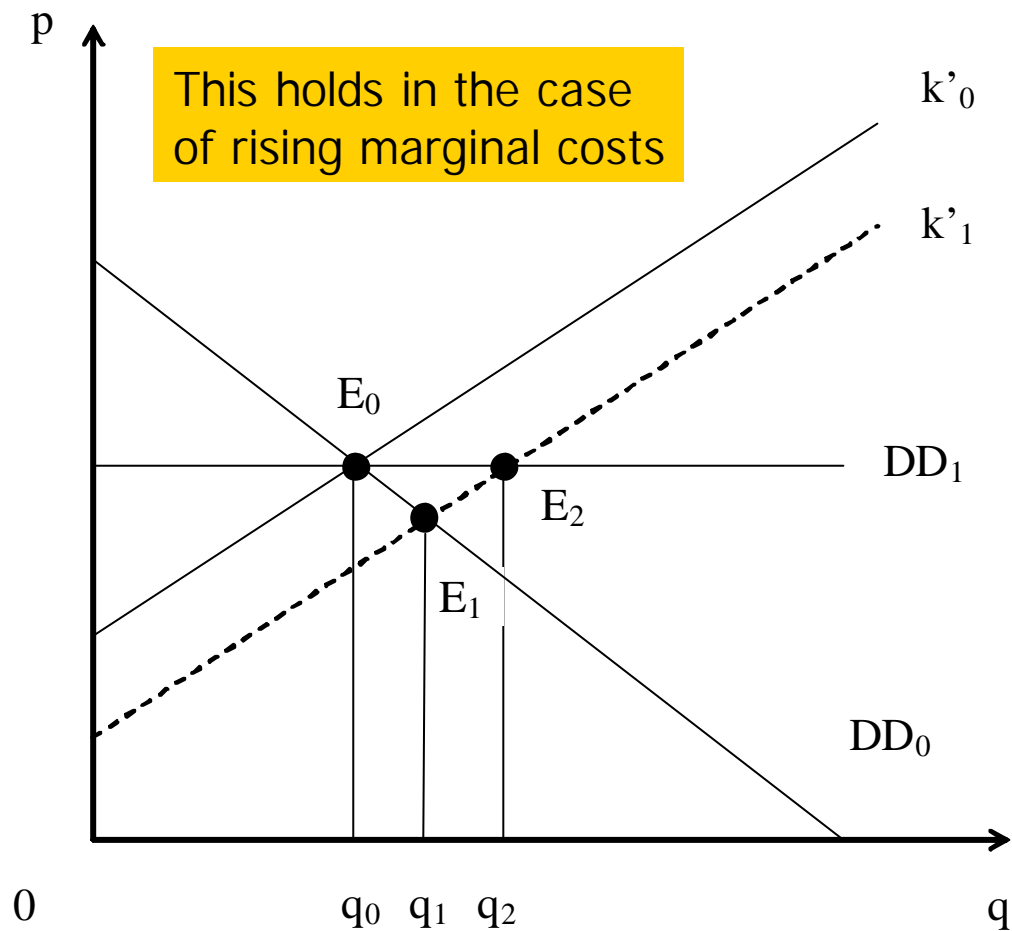
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- Empirical analysis is needed: estimating demand elasticities and cross-price elasticities
- Start with systematic data collection, otherwise empirical analysis is impossible

Convergence of Communication Platforms= Integrated Regulator?

- It would be useful to establish an integrated regulatory institution for telecommunications and broadcasting/TV (see UK);
 - Pro: Could lead to consistent pro-competitive regulation stimulating expansion of the digital economy
 - Con: Could lead to strong politization of regulation since broadcasting/TV traditionally is politically very sensitive

Appendix: Downward Shift of Supply Curve: The More Elastic the Demand Curve is, the Lower dp and the Higher the Rise of q



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Many thanks for your kind attention



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