

Broadband regulatory challenges: The case of Hungary

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The paper

Challenges in the regulation of broadband in Hungary

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Motivation I.

There are a lot of new developments at least on some broadband markets which are posing challenges to the suitable regulatory approach

- NGA deployments
- cable broadband
- mobile broadband
- bundled offers
- differences in the (factual and potential) level of facility-based competition in different geographical areas
- Some are approached well by the European regulatory framework and the actual practice, some less, and some none
- What are these challenges and how we can handle them?

Motivation II.

- Some of these challenges are striking on the Hungarian broadband market
 - **strong presence of cable broadband** - it has become the dominant technology by 2010
 - **vigorous inter-platform facility based competition**
 - at least 2 wireline facility-based broadband providers cover $\frac{3}{4}$ of the population
 - fast growth of the mobile broadband
- These are imminent in spite of the crisis and economic slowdown

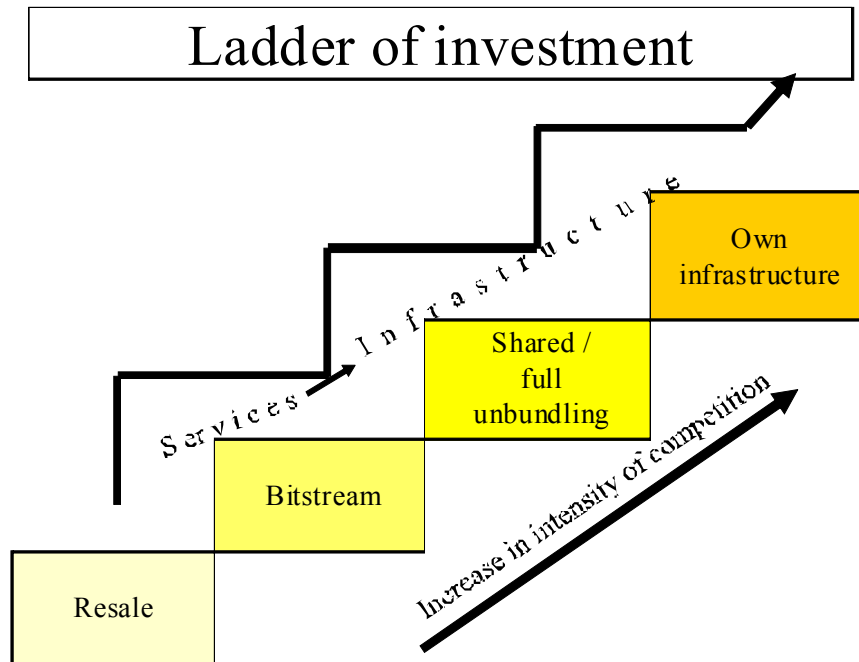
we are looking for answers to this regulatory dilemmas

- can we expect facility-based competition without help of regulation/regulator?
- how much competition and how many competitors are enough for a competition being considered effective?
- what help may come from the revised regulatory framework (and NGA recommendation)?
- how to provide the benefits of competition for those who are living in areas where the economics does not support facility-based competition
 - is this an argument against deregulation (partial or total) and gives an escape road to service based competition maintained by access regulation?

EU approach to broadband regulation

- main propositions (explicit or implicit):
 - the dominant infrastructure is the former PSTN network
 - competitors mostly want to use the same access technology what the incumbent telco uses
 - cable is a fringe
 - mobile is still rather a complement now and in the foreseeable future
 - in order to avoid wasteful duplication of the local infrastructure, access to the local loop is a necessary regulatory remedy to support the development of broadband competition
 1. intra-platform service competition
 2. intra-platform facility-based competition

Presumed entrant behaviour



Source: ERG (05) 23 Broadband market competition report

Regulatory propositions:

- physical form of investment is a replication of the incumbent telco infrastructure, however in the form of up to date technology
- regulated access to the incumbent telco infrastructure and services is needed,

and if there are good and fine tuned regulatory incentives entrant goes up the ladder

- by starting with resale and bitstream
- and answering further to the tuned and harmonized regulatory incentives commits itself gradually by investing more and more into its own infrastructure

Ladder of investment (LoI)

requires:

- tight regulatory approach
- consequential regulatory policy (problem of credible regulatory commitment)
- engineering minded technology specific regulation
- sophisticated fine tuning of the relative prices of the different access services

...but there were no other options in countries without existing (or with weak) alternative wireline infrastructure

- highly relevant in countries together add up to ~70% of EU population (especially DE, FR, UK, IT, ES, EL)

...but Lol is not relevant everytime everywhere

may be much less relevant

- **where** there is a considerable presence of cable networks, and the dominant way of watching television is cable
- **when** new technology developments make the situation more complicated
 - FTTx especially FTTB and FTTH
 - Docsis 2.0, then especially Docsis 3.0
 - mobile broadband

Empirical tests of the success and benefits of regulated access based competition

What are the benefits from regulated access based competition?

Empirical results show...

...that the picture is at least mixed

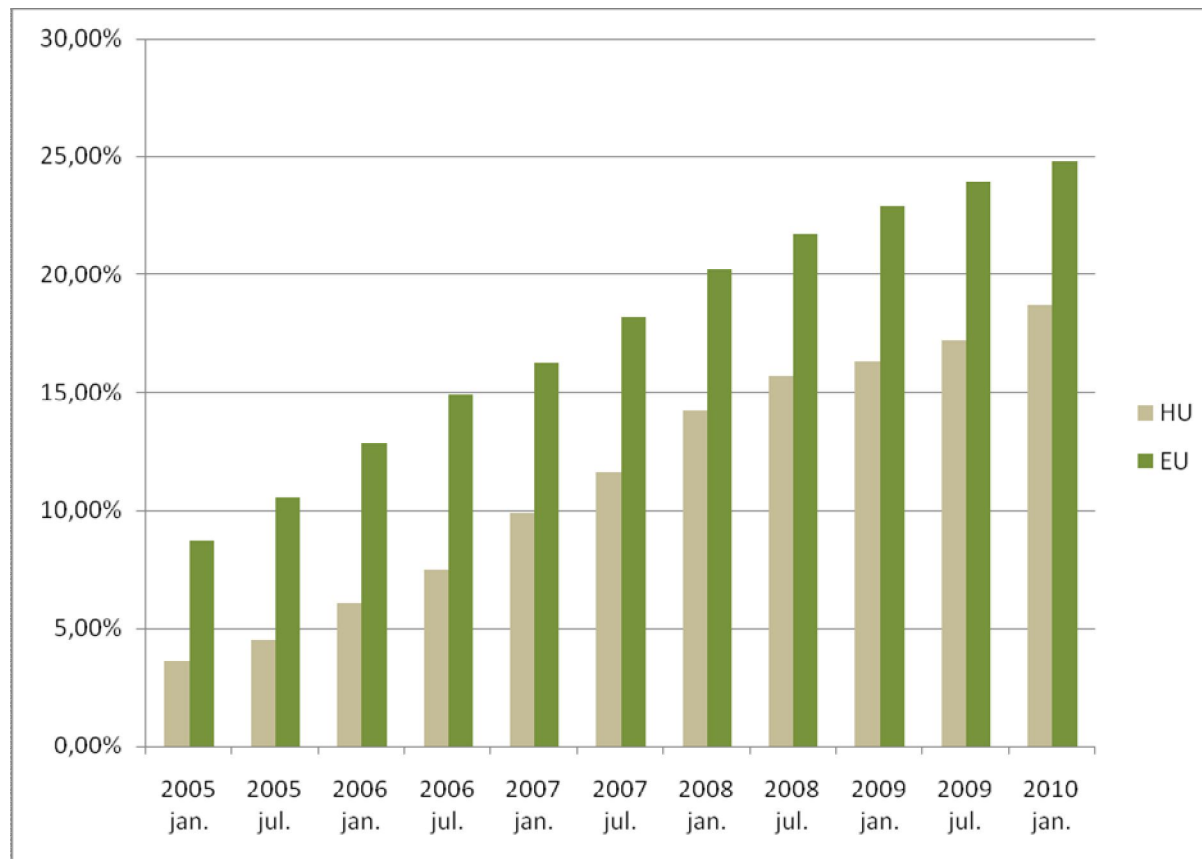
Denni, Gruber (2005); Distaso, Lupi, Manenti (2006);
Höffler, F. (2007); Bouckaert, Van Dijk, Verboven (2008);
Friederiszick, Grajek, Roller (2008)

Relevance of the case

Why the case of Hungary can be of interest?

- it is somewhat an „extreme“ in the sense that it is very different from the EU „mainstream“
- some particularities may augment these differences and their consequences and makes them more striking
- and thereby may provide lessons to the others who differ in their own ways

Broadband development in the EU and Hungary 2005-2010



nearly constant lag behind the EU average penetration

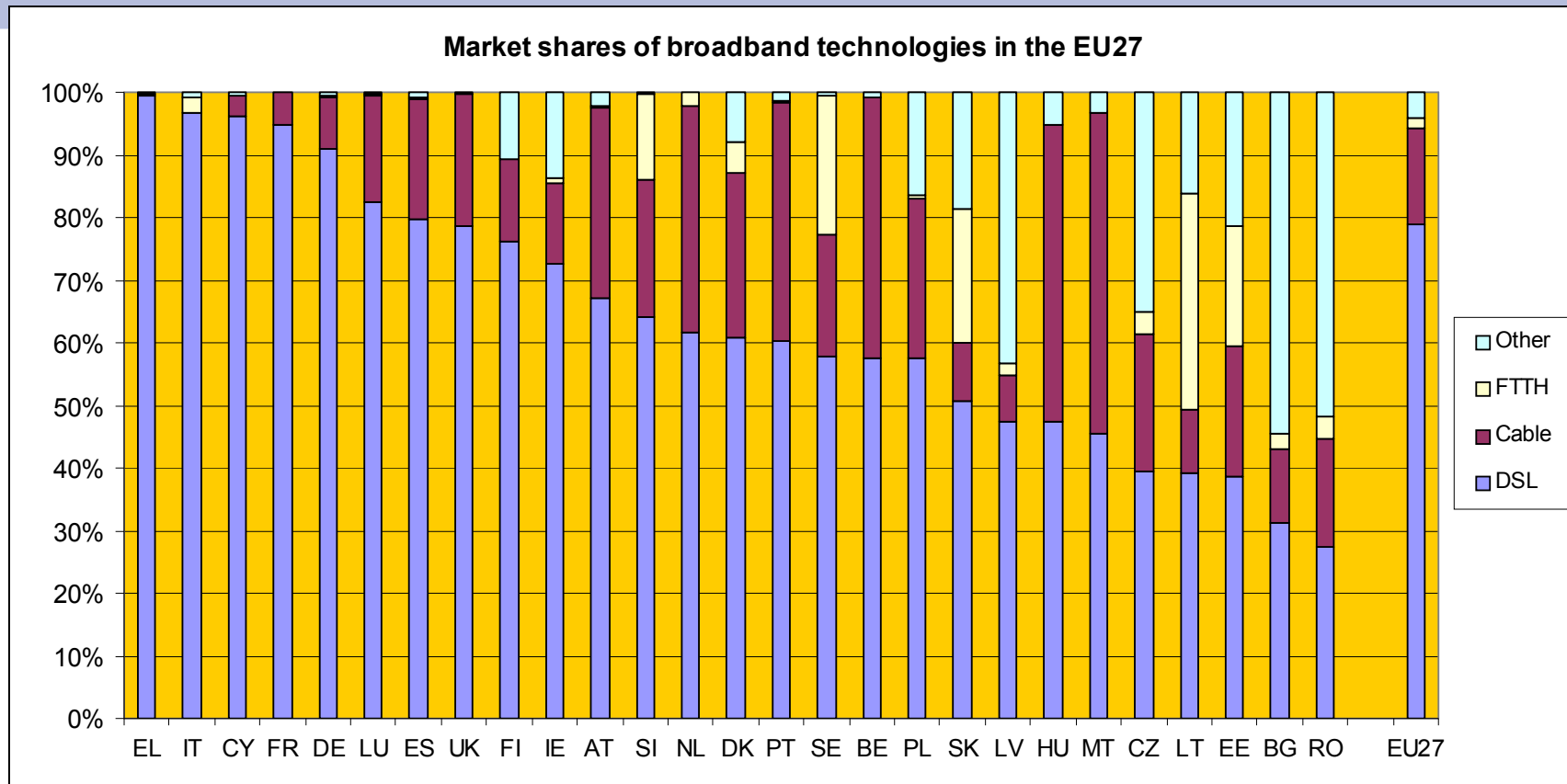
decreasing relative lag to the EU average

Hungary compared

	GDP per capita (PPP)	DSL coverage	DSL rural coverage	DSL penetration	DSL rural penetration	Cable modem coverage	Cable modem rural coverage	Cable modem penetration	Cable modem rural penetration
HU	16100	94,0%	87,0%	8,0%	7,1%	74,0%	60,0%	6,7%	3,7%
EU27		92,7%	76,6%	18,0%	12,3%	43,6%	13,8%	3,4%	0,8%
HU rank in EU27	22	14	11	21	19	6	1	6	4

Source: Eurostat, IDATE (2009) - data from 2008

Hungary compared



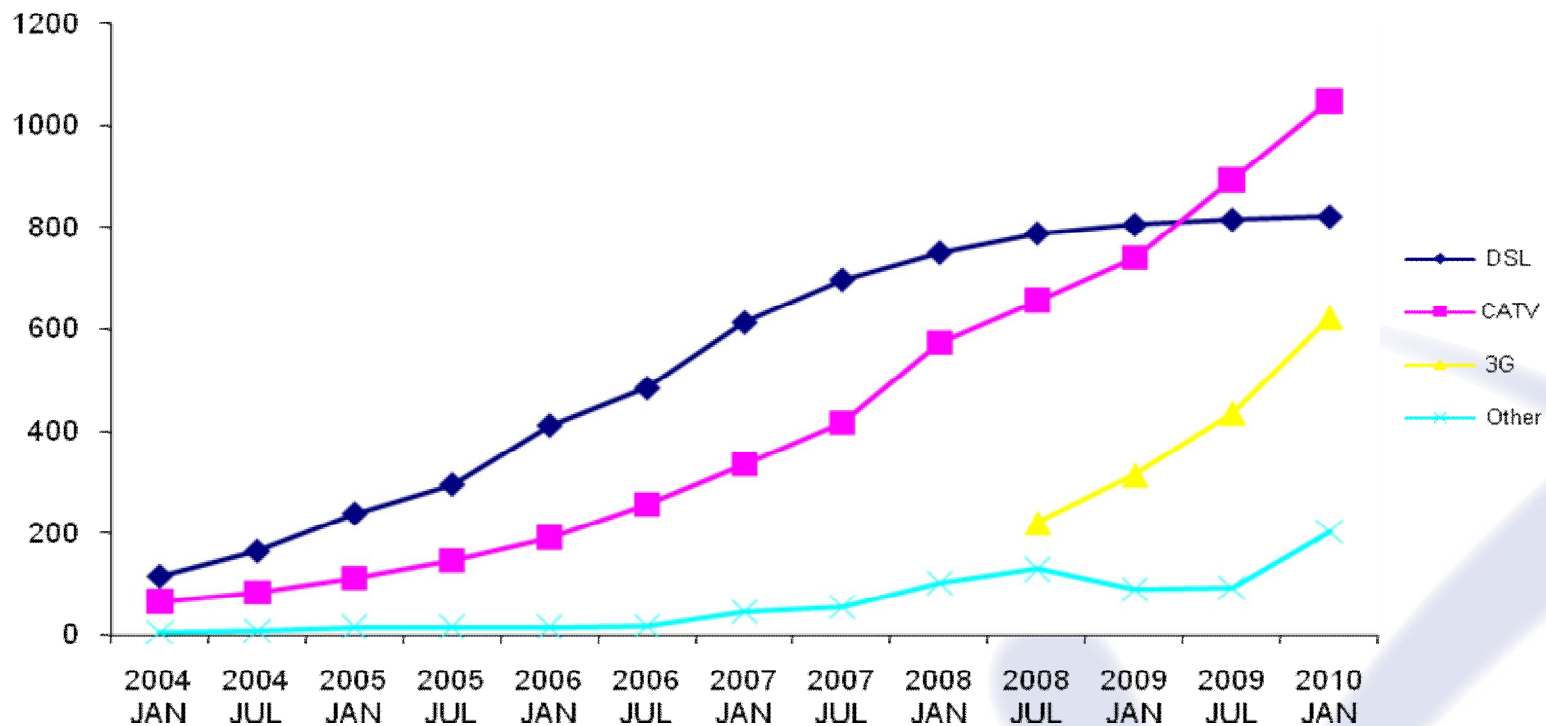
Source: Cocom 2009 July

HU: cable share of broadband is 47% (2009)

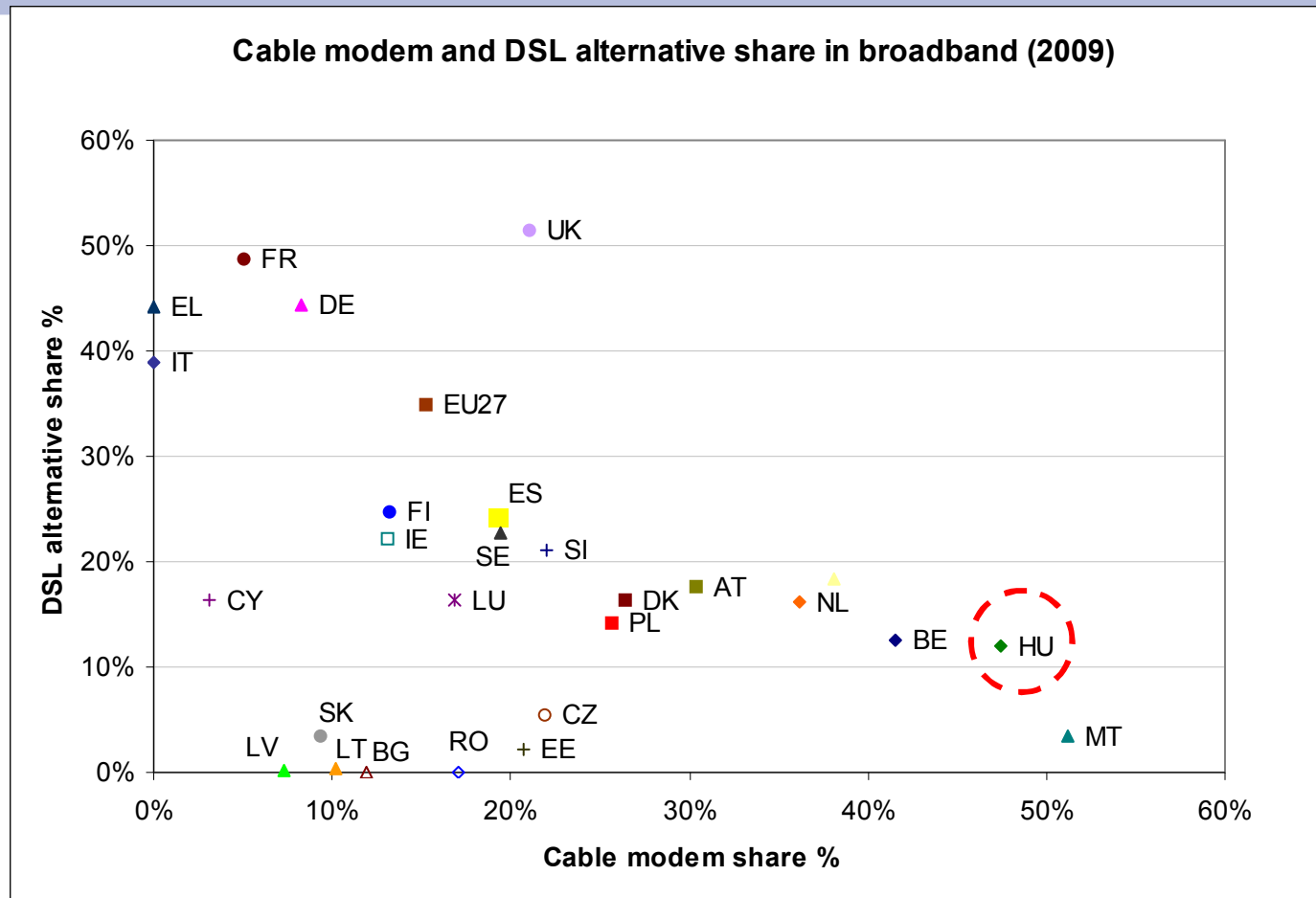
2nd in EU (after Malta), 3rd in OECD (after US and Canada)

Strong growth in cable and flattening DSL

Broadband Subscriptions 2004-2010



... and weak DSL alternatives



HU:

DSL alternative
share in total
BB: 12%

from which LLU
is 1.2%

the remaining is
bitstream

Historical facts behind the difference: cable development

- massive build out and popularity of cable since the beginning of the nineties
- state support for cable since the end of the nineties for bidirectional upgrade
- cable broadband has been and still is unregulated - as usual
- investment subsidies in the last decade for infrastructure build out in rural/underdeveloped areas - mostly went to cable
- cable industry is still fragmented, there are some medium and many small size companies
- cable network coverage is a patchwork, not (necessarily) connected territories

(In)effectiveness of LoI concerned regulation - Hungary

YEAR	MEASURE	MARKET IMPACT
2000	Mandatory wholesale ADSL offer	Significant
2002	Mandatory reference LLU offer	None
2004	Mandatory local bit stream access	None
2004	Decrease of full & shared ULL access prices based on updated costing methodology	Negligible
2005	Introduction of retail minus prices for wholesale broadband access	Significant
2008	Further decrease of full & shared ULL access prices including collocation services	Negligible

and then something surprising happened

Broadband development was characterized by inter-platform facility-based competition in urban and in many rural areas

The wireline inter-platform competition produced choice and price decrease, however not too hot

Service competition and LLU based competitors were a fringe

A new facility-based entrant (DIGI) arrived in 2006 and attacked dense urban areas in 2008,

- by deploying FTTB+Lan BB infrastructure
- offering cheap cable TV and broadband and triple play

As a consequence competition became hotter without any regulatory intervention

...and has driven intra-platform service and facility-based competitors more into a corner

...and the tepid market has been stirred up

- the broadband market has been stirred up and a war against each other started
- the patchwork structure of broadband provider's territories and the fact that many players' territories are overlapping each other, caused that a war against one became a war against each other
 - there are no price differences in the advertised prices (because of economics of advertising), though targeted offers for locals exists
 - the competitive effects are spilling over the borders of those territories where the new entrant came up

meanwhile the development of technology had not stopped and produced new regulatory challenges

- Docsis 3.0 has arrived
 - widespread implementation of this technology is possible even for smaller cable companies
- xDSL based broadband is challenged by (relatively cheap) Docsis 3.0 technology
 - cable has the advantage in the game
- VDSL is not a real option for telcos because of loop length and line quality consideration
 - catching up is only possible with investing in fibre networks
 - but FTTB/FTTH is expensive
 - and risky under the current regulatory approach

Where is the ladder?

Regulatory dilemmas

- can asymmetric regulation be reasonably maintained?
- what are the incentive effects of regulation on the NGA investments?
- is geographically differentiated approach a good solution?
 - paradox of partial deregulation
 - regulatory nightmare: you see many small cable companies as SMPs in small geographic markets

Is there market power if there are only two parallel vertically integrated broadband networks?

- competitive price level can be well above marginal cost in industries with high fixed costs, and this is not necessarily the sign of market power
 - See the papers of Hausman and Sidak (2003), Crandall (2005), Kahn(2005, 2006), Weisman (2005, 2006), Tardiff (2007), Tardiff and Weisman(2009), Hazlett-Weisman (2009) ...
- dynamic competition is driven by innovation rather than regulation
 - technology competition
 - rent is temporary and good (incentive) to recoup the investments and compensate (if it is possible to realize) for the risk taken by the parties

Pragmatic approach

1. the logic of the framework is not against deregulation
2. the concepts of geographic markets, and partial deregulation provides a methodological option to target these issues
3. however, as it may be inferred from the practice of the Commission concerning notifications non conformist approaches are not so eagerly welcome

Lessons from the case of Hungary

- **First:** Inter-platform facility-based broadband competition may develop without or in spite of regulation if there are strong cable networks.
- **Second:** The ladder of investment concept does not help so much if there is strong inter-platform competition.
- **Third:** One size does not fit all. There are countries different from mainstream, maybe on their own way. And clearly it is the case for several of the new EU member states.
- **Fourth:** Regulation needs to be targeted to the problems, and experimenting is more promising than give uniform but inadequate answers.