



The ICT sector and productivity in Europe: the challenge ahead

Global Communications Consortia
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Topics

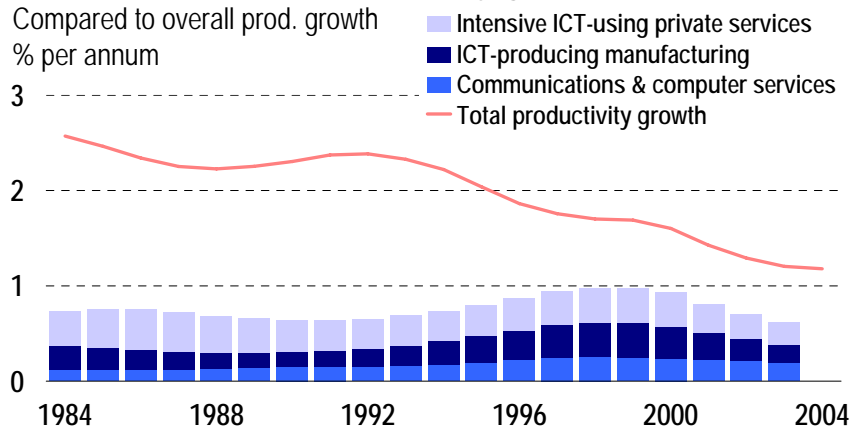
- Evidence and policy in relation to “ICT”
 - ICT use and productivity growth
 - Importance of economic flexibility
 - i2010 First Annual Review

- Evidence and policy in relation to communications regulation
 - Experience
 - Communications Framework Review

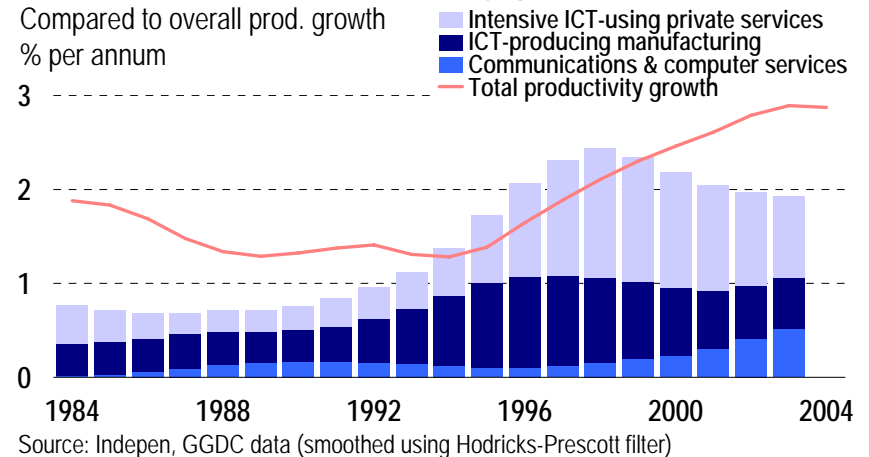


European productivity growth decline, US acceleration

ICT contribution to productivity growth, EU-15



ICT contribution to productivity growth, US



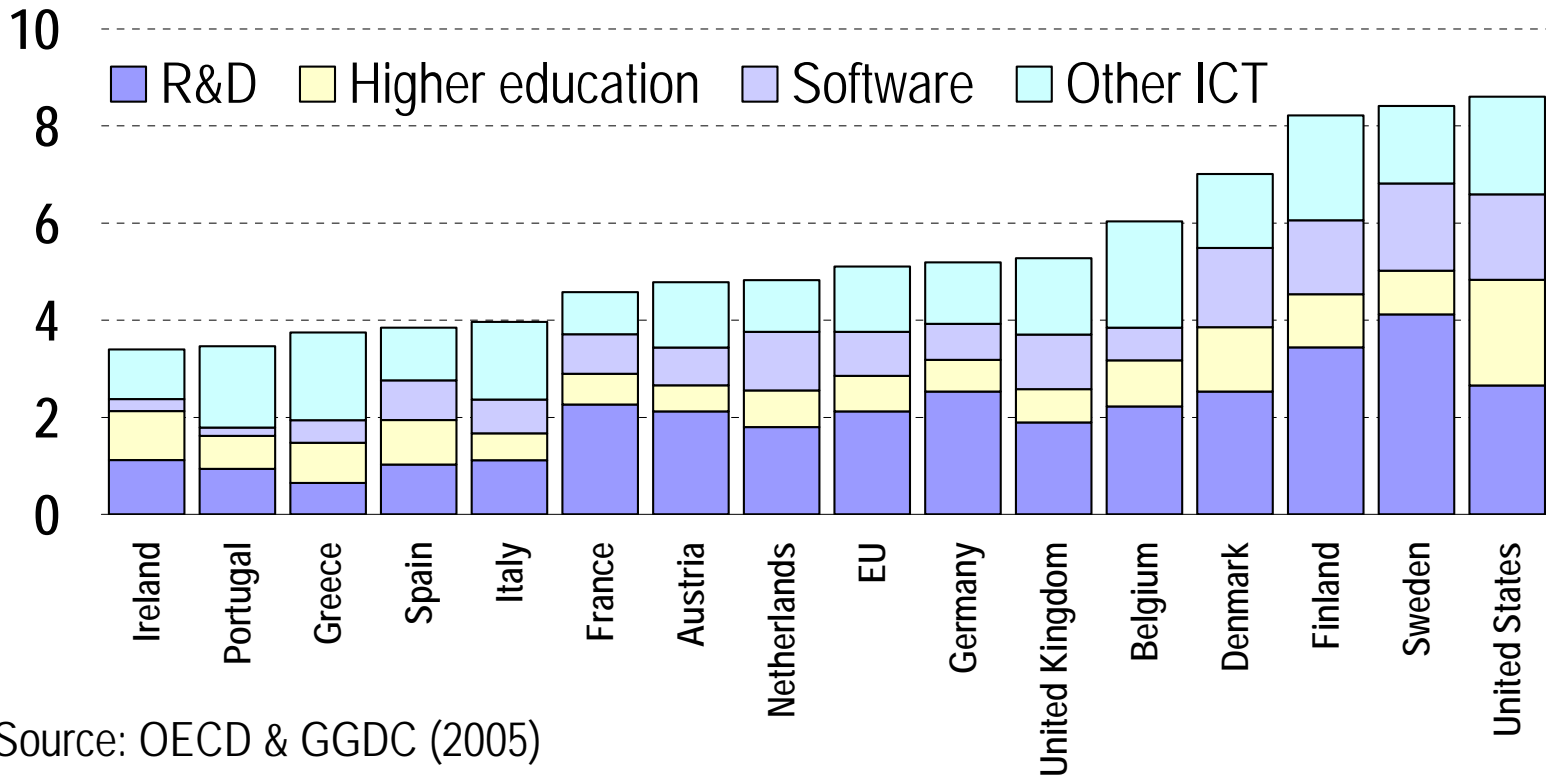
➔ Overall productivity growth falling

➔ Contribution of ICT to productivity growth in Europe is unchanged – why?

“Knowledge” investment high in US

Investment in knowledge

% GDP



Source: OECD & GGDC (2005)

➤ Large variation within Europe

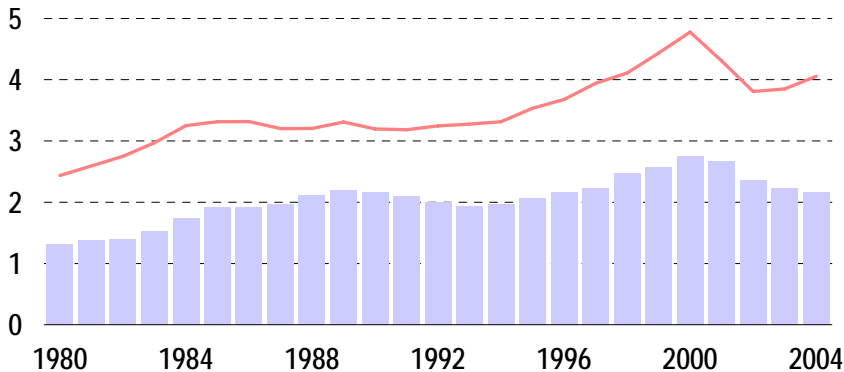
➤ Extreme difference between Ireland and US

ICT investment in EU15 as a whole persistently low

ICT investment

% GDP (current prices)

■ EU15 — US

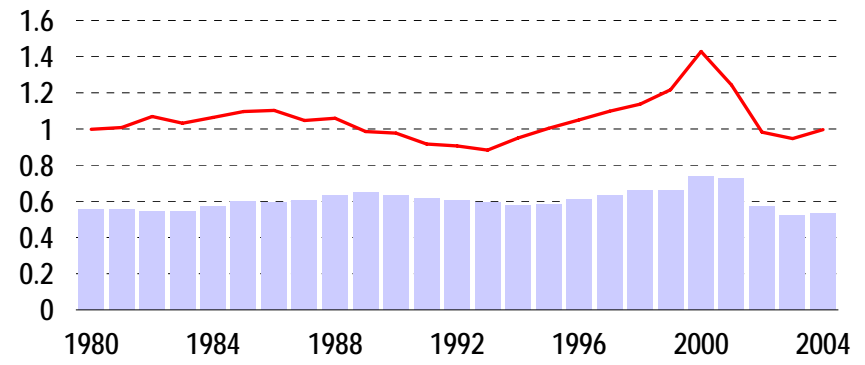


Source: Indepen, GGDC 'Total economy growth' database (June 2005)

Communications investment

% GDP (current prices)

■ EU15 — US



Source: Indepen, GGDC 'Total economy growth' database (June 2005)

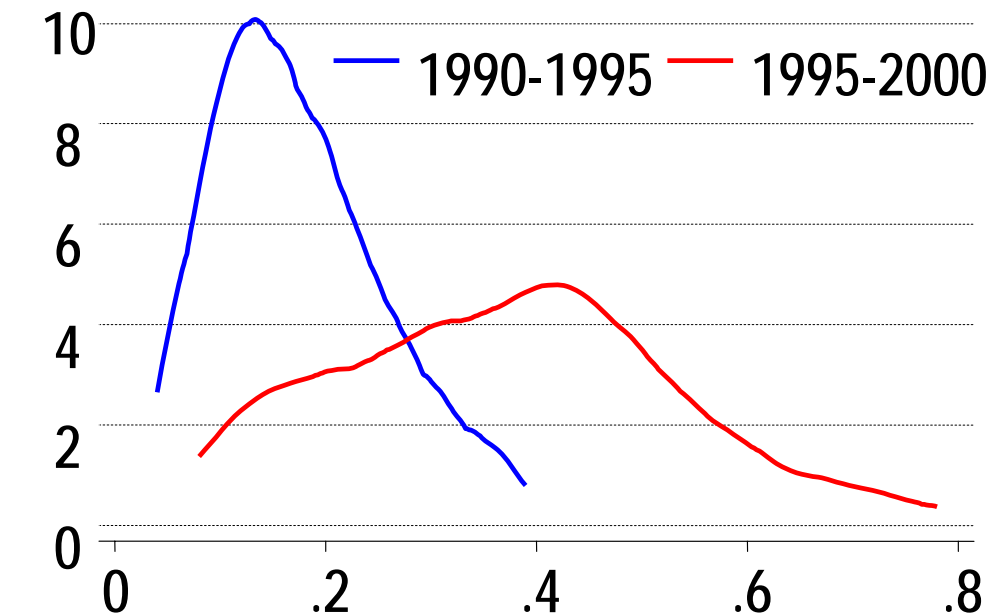
⇒ Profitability of ICT investment must be low in Europe – why?



Global growth divergence, not convergence, associated with ICT across 50 countries

ICT contribution to growth

Density, % of countries



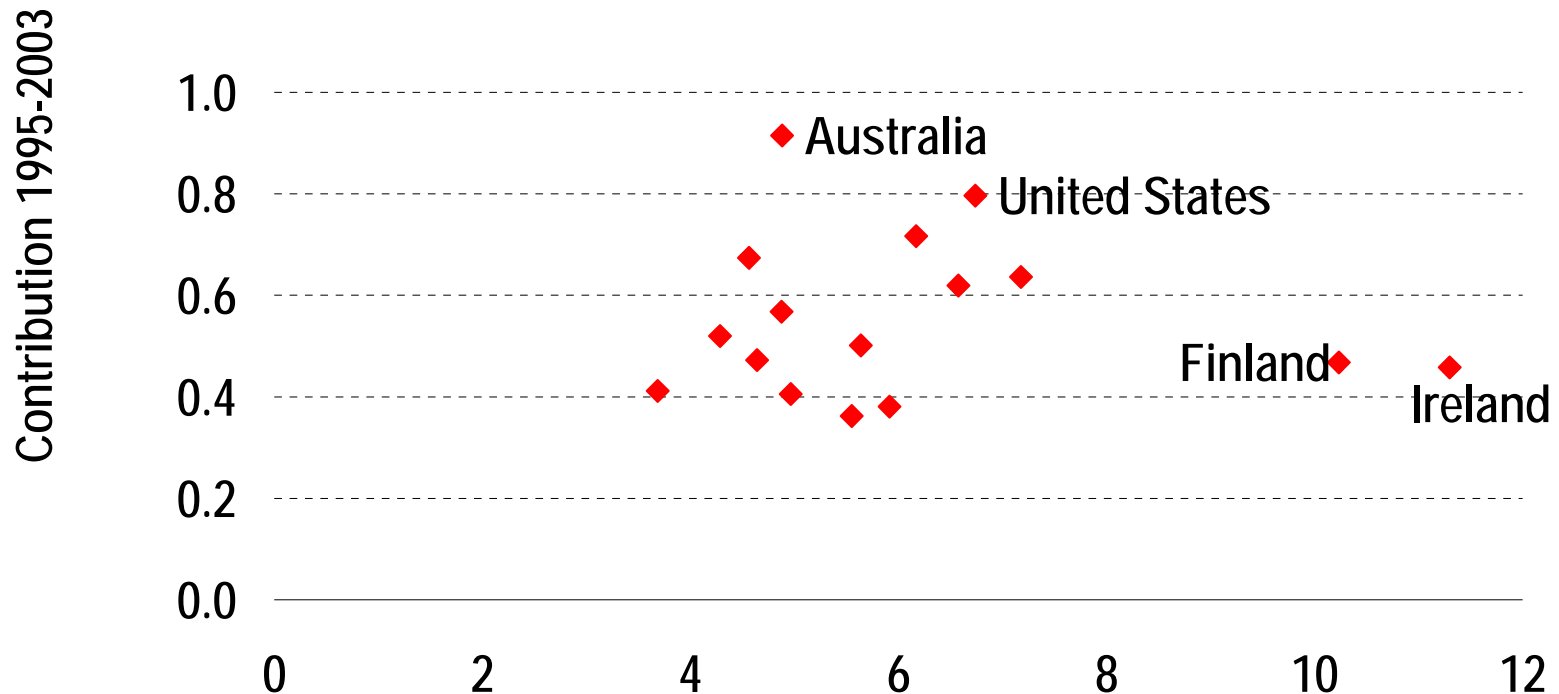
Source: Khuong Vu (October 2005)

⇒ Might have expected convergence in growth – what is going on?



ICT production and use not necessarily related

ICT capital contribution to growth vs ICT share, %



Source: GGDC and OECD ICT value added share of GDP (2002)

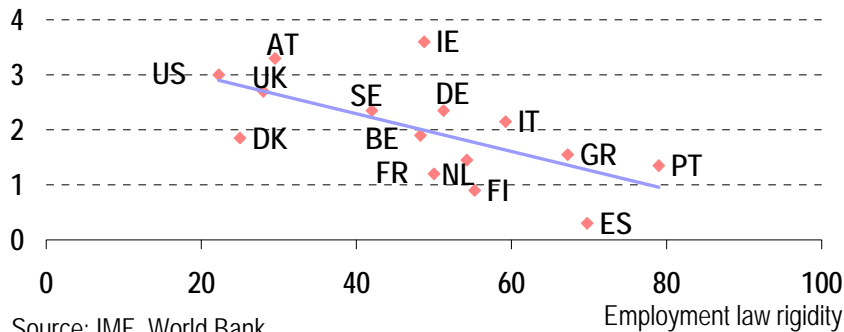
⇒ Due to global economies of scale in ICT production only a few countries can have a large ICT sector

⇒ High levels of ICT value added are no guarantee of productive ICT use

ICT-use and labour market flexibility

Labour market rigidity is related to ICT-using productivity growth

ICT-using productivity growth 1995-2001, %



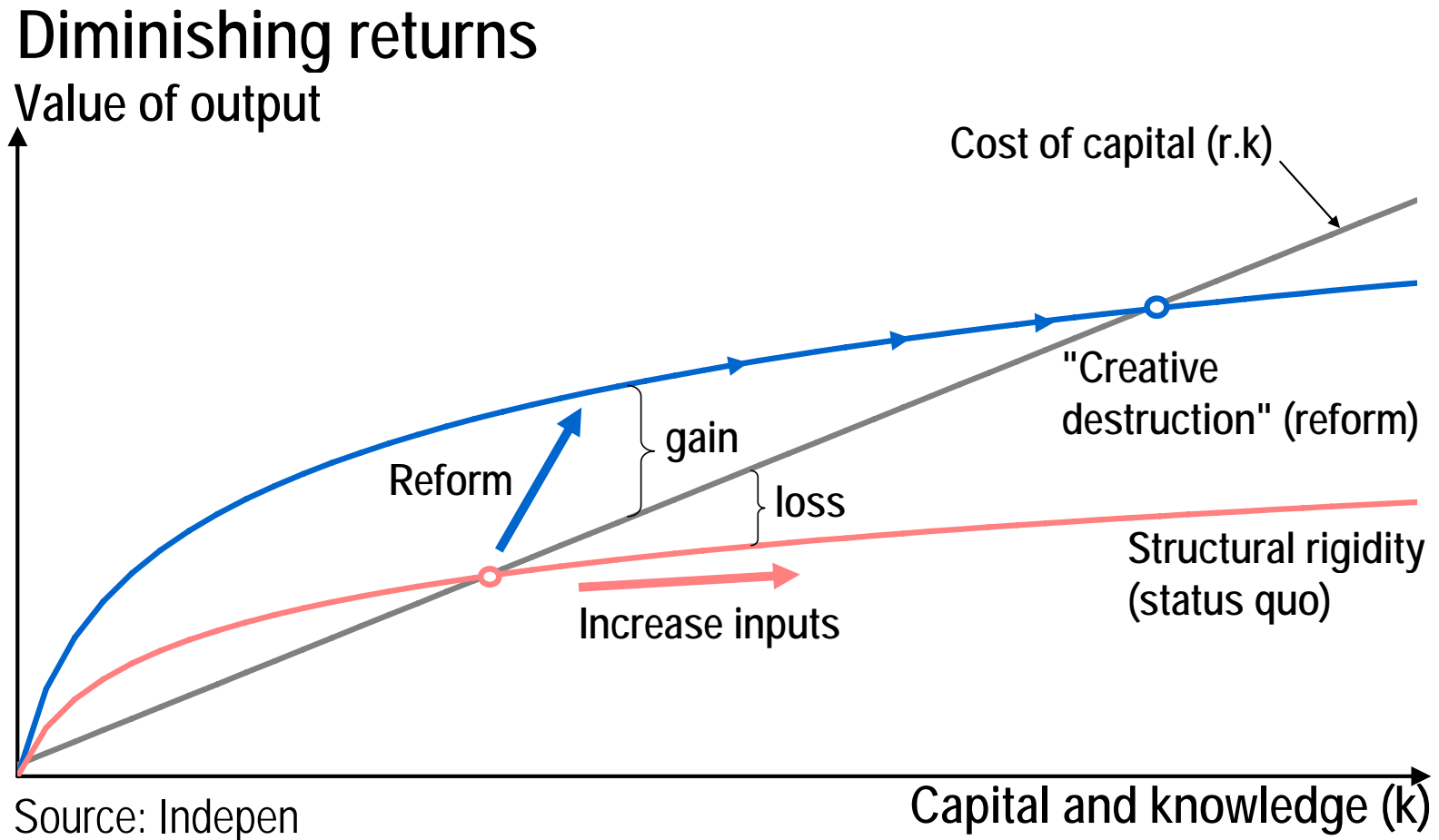
Source: IMF, World Bank

- "[ICT] provides a striking example of the need for policy makers to promote entrepreneurship and a healthy process of "creative destruction"
EC Directorate General for Economic and Financial Affairs, February 2005

➡ Market flexibility may now be more important than it was in 50 years to 1995



Focus on ICT inputs or environment for ICT use?



⇒ Gains from “pushing” up capital inputs limited by diminishing returns

⇒ Economic flexibility to allow “creative destruction” allows profitable investment and drives input and output growth



i2010 First Annual Report on the European Information Society

- Notes that *“Europe has invested less and later in ICT than the US. The US is also more efficient in the use of ICT and is quicker to reap the benefits of ICT investment.”*
 - Does not analyse why this is the case
 - Does not utilise work by DG Economic and Financial Affairs on the underlying problem - operating in ‘silos’ or is reform in the too hard basket?

- Recommends *“Urgency: the increasing recognition of the role of ICT in growth and jobs should be converted into action, through a strategic approach to the opportunities of digital convergence in National Reform Programmes that combines macro and micro policy levels.”*
 - Does not suggest how policy initiatives might address European deficit in ICT use (via economic flexibility to allow “creative destruction” in particular)

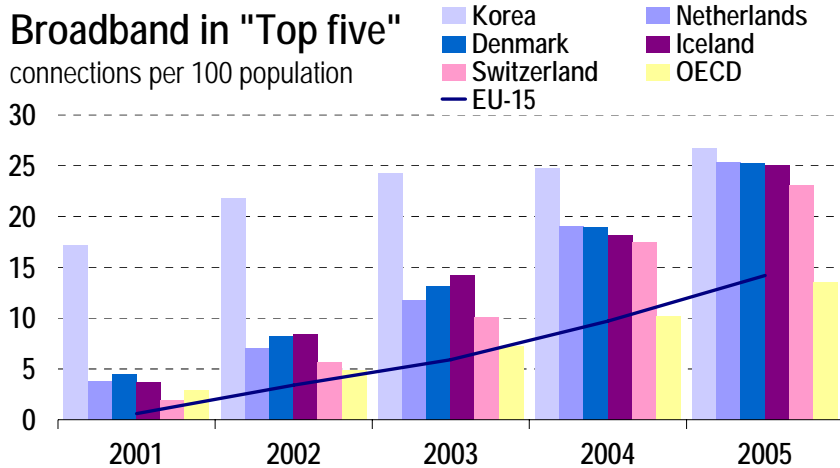
➔ DG Information Society and Media not prepared to discuss real challenges to more effective and productive use of ICT in Europe



How should we regulate communications?

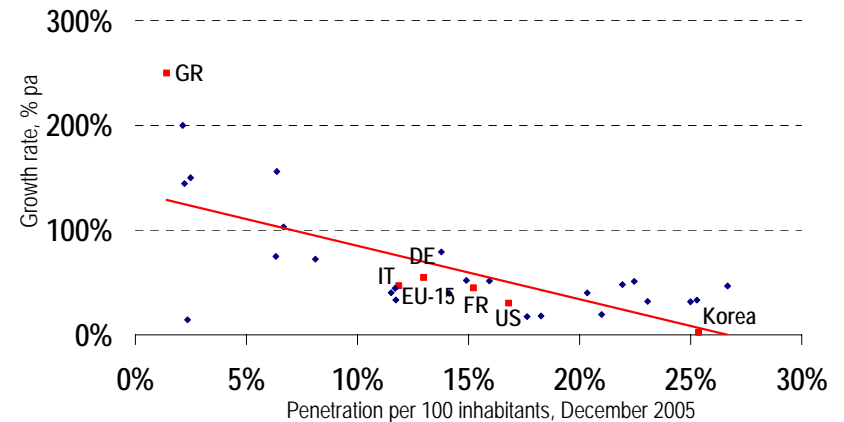
- Communications “applications” increasingly tradable with “IP”
- Communications network infrastructure mostly non-tradable
 - Need to get NGN access and core investment incentives right everywhere
- What is the right balance between *ex ante* regulation and *ex post* competition law in a converging environment?
- How do we achieve that balance?

Consumer broadband (and wireless data) growing in importance



Source: OECD (December 2005)

OECD broadband growth rate versus penetration



Source: OECD broadband statistics (December 2005)

- ➔ EU-15 growth marginally higher than OECD average
- ➔ High penetration associated with low growth across countries
- ➔ Will policy environment that may have promoted DSL support VDSL and fibre?



Evidence from investors - negative sentiment towards NGN access investment in Europe

- “[A]lthough we expect some fibre build, particularly...for VDSL in European countries with cable competition, we still see the regulatory backdrop as unsupportive of a sustained increase in capital intensity.”

Merrill Lynch, June 2006 (cited in Telecom Markets, 13 June 2006)

- “The dominance of free cash flow yield (FCFY) valuation measures in Europe is testament to the fear and suspicion with which the market regards investment in capex. The focus on FCFY has sent company management teams a clear message – spend as little as possible on network...”

HSBC Global Research, Telecoms and Media. April 2006. “Net Neutrality”

- "We...see little incentive from a regulatory perspective for incumbents in Europe to pursue FTTP [Fibre to the Premises]."

Credit Suisse First Boston. July 2005.



Communications Framework Review – inconsistent philosophy?

■ On radio spectrum policy – faith in markets

- “...we must move to a market-based approach to spectrum management...”
- “I believe that decisions about spectrum use should, where possible, be taken by those directly affected. My proposals for the Review 2006 will be focused on empowering market players and giving them the necessary legal certainty to exercise this role.”

■ On telecoms regulation – faith in regulation

- “I believe that the Commission should be able to ensure consistency of remedies proposed by national regulators...”
 - Motivated by a view that some NRAs should have applied stricter remedies
- Regulation of mobile roaming proposed by Commission
- “The most effective way to ensure a level playing field...would of course be to create an independent European telecom regulator...”
- “it is my firm belief that “regulatory holidays” are not a policy option for the Review 2006...”
- “The communication... for the first time considers the policy option of “structural separation”

Speech by Commissioner Reding, 27 June 2006

➡ **“Catch-22”**: will the Commission preclude the development of infrastructure competition that would allow regulatory withdrawal via excessive regulation?



Wall Street Journal Europe comment on Reding speech

- “Because it's [Deutsche Telekom's] building a new network and creating a new market, it argues it should be exempted from EU rules that would force it to share its new network with rivals at regulated prices.”
- “Ms. Reding questions whether, from the consumer's perspective, Telekom's planned service might not be "substitutable with already existing services or products." Well, if that's the case, then why is the Commission so alarmed about the creation of a new monopoly?”
- “Operators would naturally build their new networks only gradually, over existing lines. It would therefore be absurd for the EU to complain at each step of the way that this doesn't qualify yet as a new market.”
- “By trying to guarantee "fair" competition in a new market, the EU erects barriers and sows uncertainty that will prevent the emergence of this market in the first place.”

“Europe's Ma Bell Moment”, Wall Street Journal Europe, 28 June 2006

⇒ Would it be helpful to consider emerging facilities rather than emerging markets?



Canadian review recognises that circumstances have changed

- Nature of competition has changed and regulation should too
 - “...today’s telecommunications markets are very competitive, dynamic and complex. This undermines the effectiveness of economic regulation in many areas and introduces new costs...Consequently, **even where market forces operate imperfectly, one can no longer assume that regulation will automatically produce a better result.**

- “Stepping stones” (ladder of investment) approach has undermined achievement of facilities-based competition
 - **“There is no evidence in Canada that the CRTC’s “stepping-stone” strategy has provided an effective transition to greater reliance by entrants on their own facilities.”**

 - “Therefore, while the CRTC has identified facilities-based competition as an objective of its regulatory framework, it has adopted mandated wholesale access policies that, in the Panel’s view, seriously undermine, if not foreclose, the achievement of that objective.”



Summing up – some questions

- Why has Europe failed to make effective use of ICT?
- Why do policy proposals in relation to ICT tend to focus on the supply side rather than the demand side when evidence points to importance of latter and much of ICT is tradable?
- How do we escape the regulatory Catch-22 in telecoms regulation, and what is the appropriate balance between anticipatory rules and *ex post* competition law?
- Are the objectives of the European Communications Framework fit for purpose given their emphasis on means (competition, harmonisation and investment), rather than consumer and citizens interests?
- Is the “market based” approach to regulation and the promotion of “arbitrage based” competition fit for purpose when telecoms markets are tending towards infrastructure and separate, rapidly evolving, applications over IP?
- Do we need a much more granular examination of evidence to see what forms of regulation are effective (or not) in particular circumstances?



Background papers

- “A sound basis for evidence based policy? A critique of the ECTA regulatory scorecard and SPC Network papers on investment and broadband.” A report for ETNO by Indepen. June 2006.
http://www.indepen.co.uk/panda/docs/ecta_scorecard_june-2006.pdf
- “Net neutrality 2.0”. HSBC Telecoms, Media and Technology Global. 14 June 2006.
- “Telecommunications Policy Review Panel. Final Report”. Canada. March 2006.
http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/h_rx00054e.html
- “Innovation, competition and welfare-enhancing monopoly.” NBER Working Paper 12094. Darby and Zucker. March 2006.
<http://www.nber.org/papers/W12094>
- “Restoring European economic and social progress: unleashing the potential of ICT.” A report for the Brussels Round Table by Indepen. January 2006.
<http://www.indepen.co.uk/panda/docs/brt-main-report.pdf>
<http://www.indepen.co.uk/panda/docs/brt-appendices.pdf>