



Options for strategic regulatory reform in the communications sector

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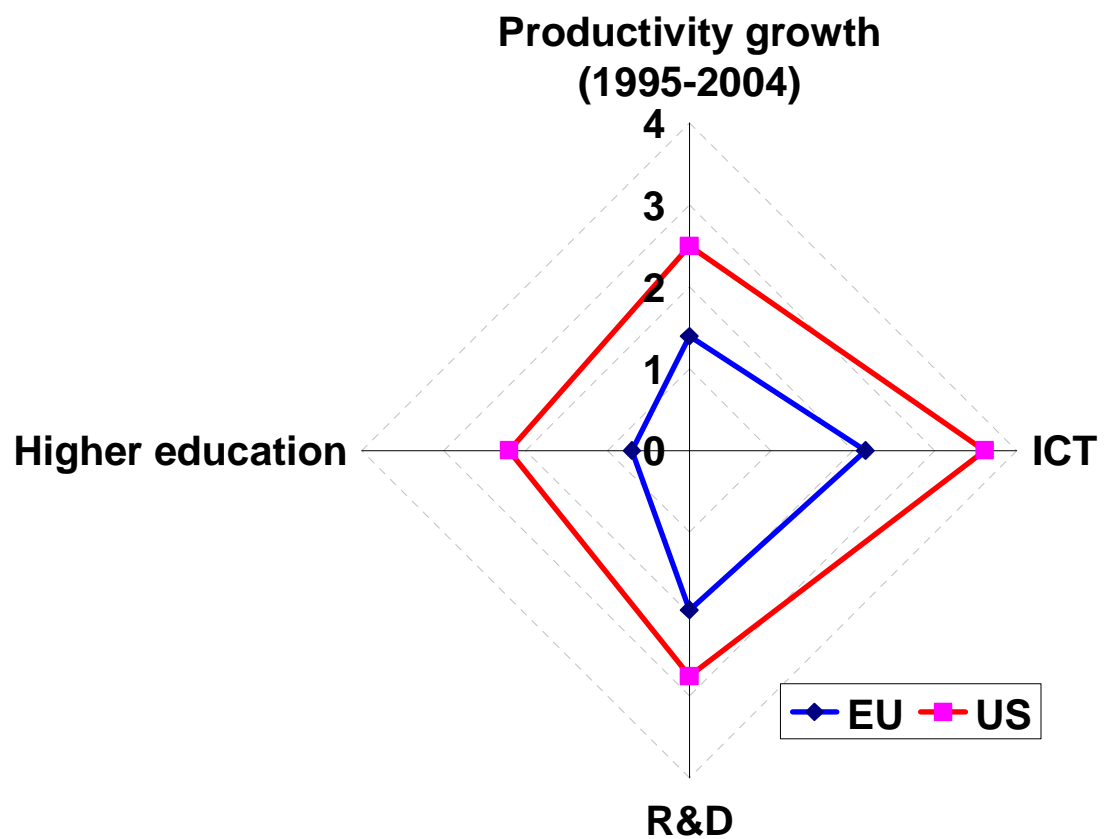


Outline

1. ICT sectors diverging contribution to national economic performance
2. Investment in communications – how is Europe really doing?
3. Transatlantic divergence in regulatory philosophy
4. Convergence finally becomes reality
5. Some technical issues – time for a paradigm shift?
6. Is the European Framework compatible with convergence?
7. Achieving change



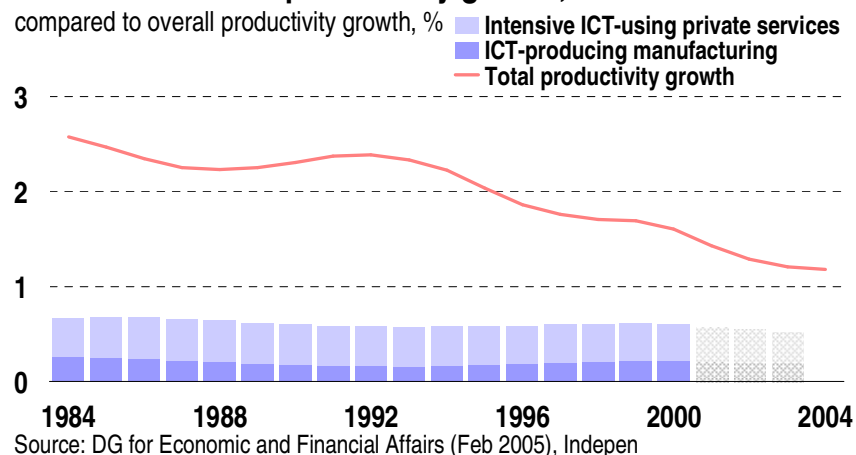
Higher productivity growth associated with greater knowledge investment in US



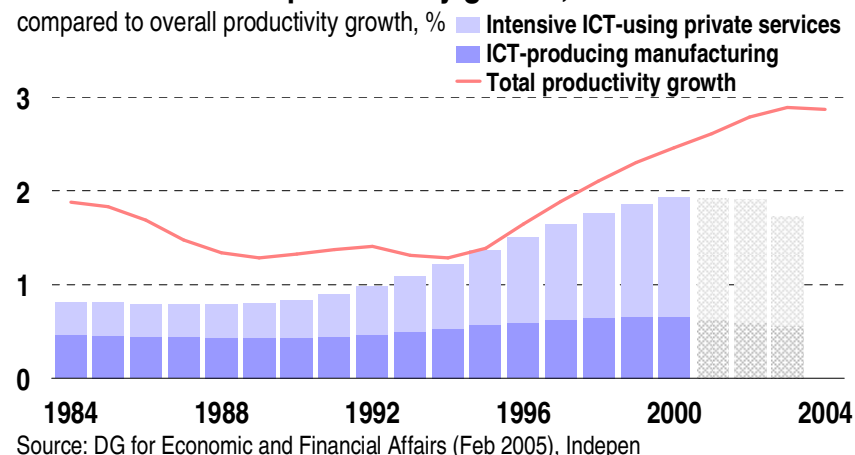


The only reason the contribution of ICT to productivity growth has risen in Europe is that overall productivity growth has fallen

ICT contribution to productivity growth, EU-15



ICT contribution to productivity growth, US



“The productivity growth problem in the EU compared to the US is mainly located in the ICT-using services sector and to a lesser extent in the ICT-producing manufacturing industries.”

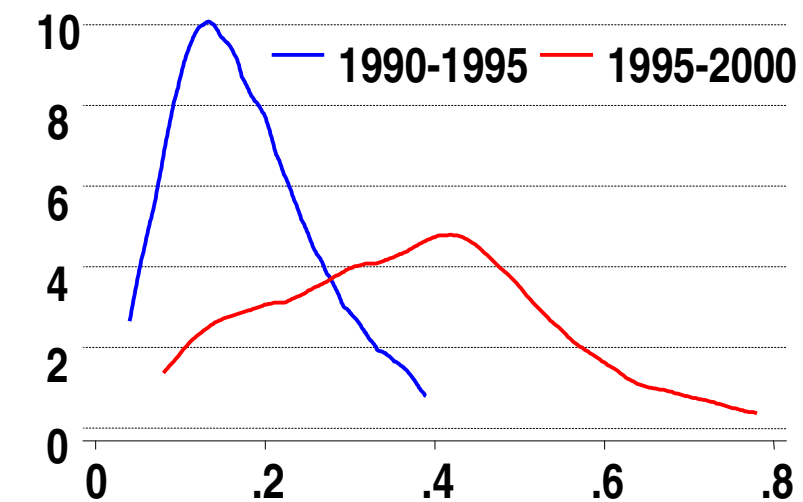
European Commission. July 2005. “Key Figures 2005 on Science, Technology and Innovation Towards a European Knowledge Area.”



Divergence in economic performance related to ICT is global

ICT contribution to growth

Density, % of countries



Source: Khuong Vu (October 2005)



Productive and profitable ICT-use requires “creative destruction”

- “The opportunity cost of security and preservation of the status quo... has risen greatly in recent times.”

Nobel Prize winner James Heckman, 2002

- [ICT] “provides a striking example of the need for policy makers to promote entrepreneurship and a healthy process of ‘creative destruction’

DG Ecofin. February 2005. “The Lisbon strategy and the EU’s structural productivity problem.”

- “Europe would benefit from a competition and labor market policy that does not only emphasize competition among incumbent firms, but also stresses the importance of entry, exit and mobility.”

Aghion and Howitt. August 2005. “Appropriate growth policy: a unifying framework.”



2. Investment in communications – how is Europe really doing?



European Commission upbeat about communications investment

- “After dipping significantly in 1999-2001, investment levels are recovering, with capital expenditure for the [communications] sector as a whole conservatively estimated to exceed EUR45bn in the EU in 2005, an increase of approximately 6% compare to 2004 and the third annual increase running.”

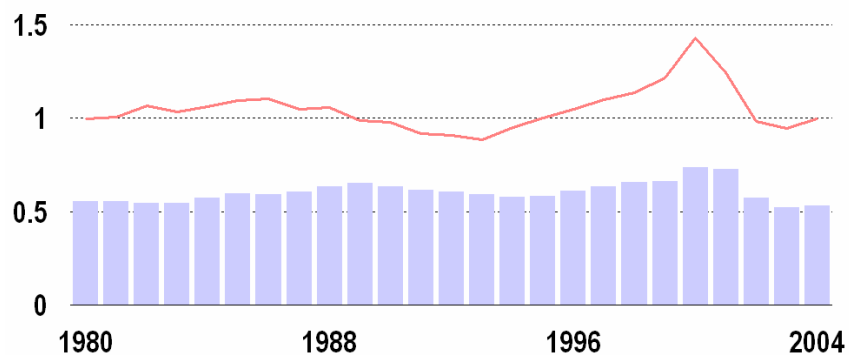
11th EU implementation report. February 2006.



Communications investment gap with US for EU15 and UK

Communications investment

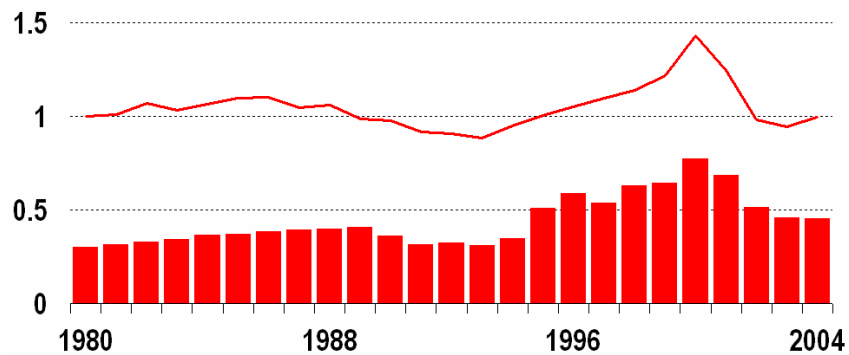
% GDP (current prices) ■ EU15 — US



Source: Groningen Growth and Development Centre

Communications investment

% GDP (current prices) ■ UK — US



Source: Indepen, Groningen Growth and Development Centre



Investor sentiment negative regarding communications investment

- “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]."


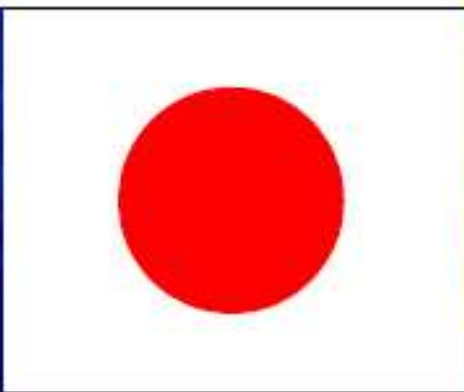

Credit Suisse First Boston. July 2005.



3. Transatlantic divergence in regulatory philosophy

Regulatory divergence

Regulatory dilemma: low prices (static efficiency) and/or innovation (dynamic efficiency)

Static efficiency focus on:	Static & dynamic efficiency	Dynamic efficiency focus on:
<ol style="list-style-type: none"> 1. Current service prices 2. Competition 3. Reducing excess profits 		<ol style="list-style-type: none"> 1. Future service volumes 2. Modernisation 3. Creating investment incentives
		

Source: HSBC

- “Competition is driving fixed and mobile players to invest in new technologies to reduce costs and position themselves in a converged environment.”

11th EU implementation report. February 2006.

- “This [DSL deregulation] decision allows broadband platforms to invest in their networks without having to provide their rivals with access at unfair discounts.”

Kevin Martin, Chairman of FCC. 3 April. Financial Times.



US moves towards forbearance

- Section 706(a) of the US 1996 Act to "*encourage the deployment on a reasonable and timely basis of advanced telecommunications capability.*"
- "...an emerging market, like the one for broadband Internet access, is more appropriately analyzed in view of larger trends in the marketplace, rather than exclusively through the snapshot data that may quickly and predictably be rendered obsolete as this market continues to evolve." FCC, September 2005
- FCC decision to extend forbearance for FTTH (August 2003) to FTTC in October 2004
- Separately the FCC decided on 22 October 2004 to forbear from enforcing weaker non-discrimination requirements of section 271 for FTTH and FTTC
- "In implementing the statutory unbundling requirements for mass market local loops, we engage in a balancing test...we consider the goal of swift ubiquitous broadband to be so important that we consider the statutory goals outlined in section 706 and how they relate to broadband as additional factors. We also consider the comparative weight of the costs versus benefits of unbundling and the effect of intermodal competition."
- **Decisions based on cost-benefit judgement**



4. Convergence finally becomes reality



Market changes, convergence and growth of “network independent” services

Google Talk	August 2005	Google announces combined instant messaging/internet phone system
Microsoft & Telio	August 2005	Microsoft acquires Telio in order to provide VOIP services
eBay & Skype	Sept 2005	eBay acquires Skype to offer VOIP services in a \$2.6 billion deal
Microsoft & Yahoo	October 2005	Microsoft MSN and Yahoo plan to link instant messaging platforms
TIM & Mediaset	October 2005	Telecom Italia Mobile (TIM) and local media firm Mediaset announce agreement to launch digital terrestrial TV on mobile phones in 2006
BSkyB & Easynet	October 2005	Satellite TV provider BSkyB acquires internet service provider Easynet
3 Italy & Canale 7	November 2005	3 Italy announced its acquisition of Canale 7, an Italian TV channel, to deploy a DVB-H network for mobile broadcasting

- Entry from global ISPs to leverage their worldwide customer base
- Traditional telecoms players acquiring or partnering with media players
- Fixed-mobile convergence => reduced number of competitors



Different forms of competition

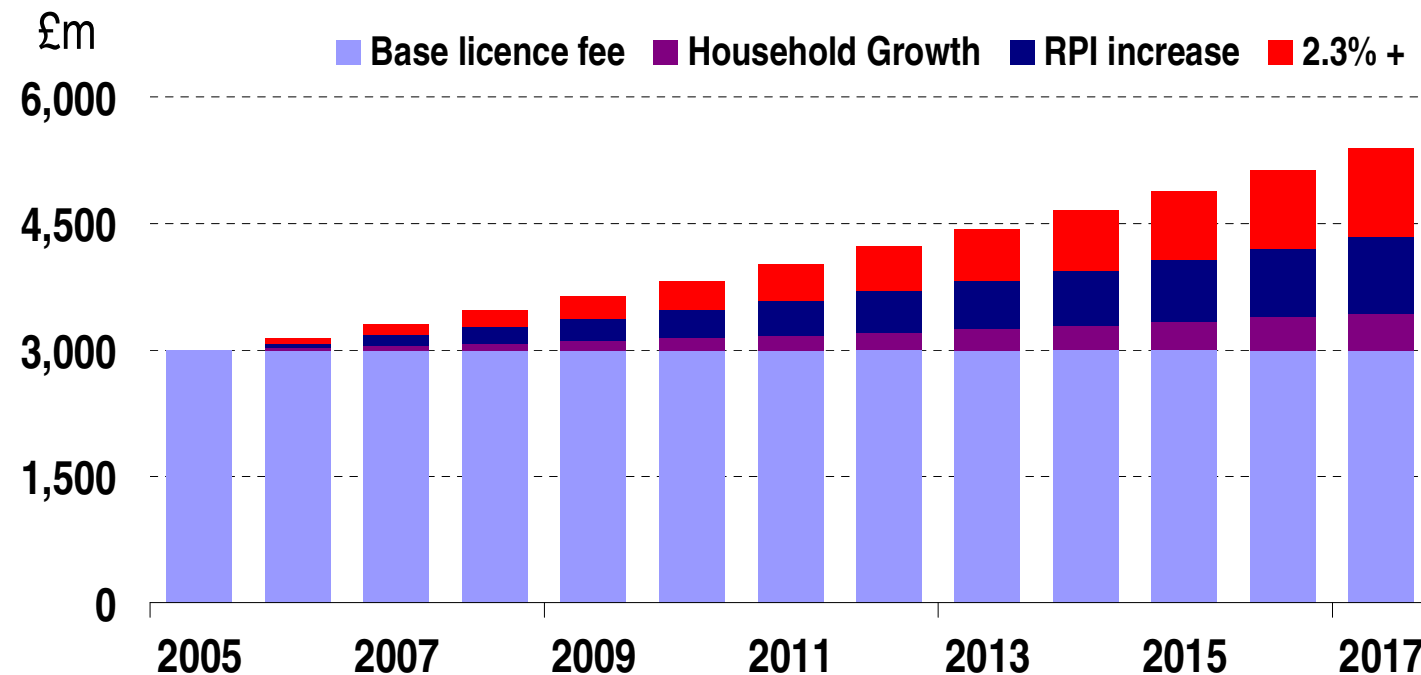
- Legacy regulation has distorted the development of competition in telecoms by promoting duplication of leading operators' service offerings.
 1. A fragmented market structure with limited investment and innovation by arbitrage-based competitors is the outcome.
 2. New forms of applications-based competition are now emerging based on broadband access and IP transport, including VOIP and video communications services
 3. Access infrastructure-based competition has increased with the move to IP platforms which can carry any service, and the development of new wireless access technologies.



The BBC has ambitions in terms of budget and new media activity

BBC Licence fee revenue projection

Component contributions



Source: BBC and Indepen calculations



5. Some technical issues – time for a paradigm shift?



Incentives to discriminate – time for reappraisal?

- Widespread view that vertically integrated telco's will have an incentive to discriminate against rivals services
- View based on models calibrated for PSTN network world
- Now have proliferation of services based on broadband and new emerging cost structures in NGN world
- Complex picture in software/IT world – need a more nuanced view for telecoms
 - Challenge for regulators – when and how should they stand back?
 - Challenge for operators – what is optimal business strategy?



Insights from Intel

- Intel (with 85% of computer processor market) believes that, because it cannot match the variety of competencies of potential entrants, sustaining a credible commitment not to engage in an “*ex-post squeeze*” of entrants is critical to its success.

- Intel seeks to achieve such commitment in three ways:
 1. It uses an internal organisation structure (separate divisions and profit and loss operations) and a widely publicised rhetorical device to distinguish the tasks of expanding demand for microprocessors and growing profitable businesses in complementary markets.
 2. It subsidises entry for all potential entrants, predominantly via widespread dissemination of intellectual property.
 3. It attempts to commit to these subsidies through the creation of a separate organisational unit (The Intel Architecture Lab) which is structured as a cost centre and rewarded for its success in promoting the health of the ecosystem as a whole.

Gawer and Henderson. December 2005. “Platform owner entry and innovation in complementary markets: evidence from Intel.” National Bureau of Economic Research Working Paper 11852.



The “net neutrality” debate

- The FCC set out its general position in a policy statement in September 2005: *“...consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.”*
- US Senate considered evidence on whether priority is required to support new applications such as video on demand, and if so whether price discrimination is an efficient revenue model; or whether higher bandwidth is all that is required to allow new applications to work well without priority.
- US Senate Committee on Commerce, Science and Transport. 7 February 2006. “Net Neutrality”, Full Committee Hearing.
- Energy and Commerce Committee of the United States Congress defeats Democratic party proposals to impose strict controls on charges levied by telecommunications operators for priority access to the internet. 26 April 2006

=> Should we allow discrimination based on service quality, but not otherwise?

=> Is VDSL supporting video on demand incompatible with 3rd party access to deliver equivalent services for technical, service quality or intellectual property rights reasons?



We should take uncertainty and dynamics seriously

"Primum non nocere" or "first do no harm"
Latin translation of the Hippocratic oath

	(i) Regulate or forbear?	(ii) Modify remedy if decide to regulate?
Threat of entry	Threat may ensure good market outcomes even with large market shares e.g. innovation in PC processor market where Intel have >80% market share	Prices must take account of threat or expectation of entry to provide for cost recovery in expectation
Value of waiting	Value of option of waiting should be assessed alongside expected benefits of intervention now	Flexibility of short-term access lease should be reflected in the price for access to ensure neutrality with build (invest) decision and long-term lease decision
Innovation risk	Consider forbearance (wait and see) equivalent to a patent to ensure adequate reward for innovation risk	Innovation risk should be reflected in a higher access price if decide against wait and see
Asymmetry	Consider forbearance(wait and see) when costs of unintended consequences are asymmetric	The expected costs of unintended consequences should be reflected in the access price if decide against forbearance

Revised view of what “competitive markets” should look like



Utilise commitment & triggers to reduce time inconsistency

- "The freedom and extent of human commerce depend entirely on a fidelity with regard to promises."
David Hume, 1739
- Commitment can change behaviour in desirable ways (Bank of England commitment to inflation target etc)
- If regulator could credibly commit to withdrawing regulation whenever and wherever replication occurred then entry/investment would be conditioned by prospect of no regulation
 - Way to escape regulatory Catch-22 whereby regulation itself perpetuates regulation?
- Commitment, beyond commitment to review, requires some precision in advance over measures and thresholds
 - Focus on measuring relevant dimensions of market (say VoIP) ahead of time so that future reviews less likely to be prejudiced by a lack of relevant data



6. Is the European Framework compatible with convergence?



EU Communications Framework crowds out competition law

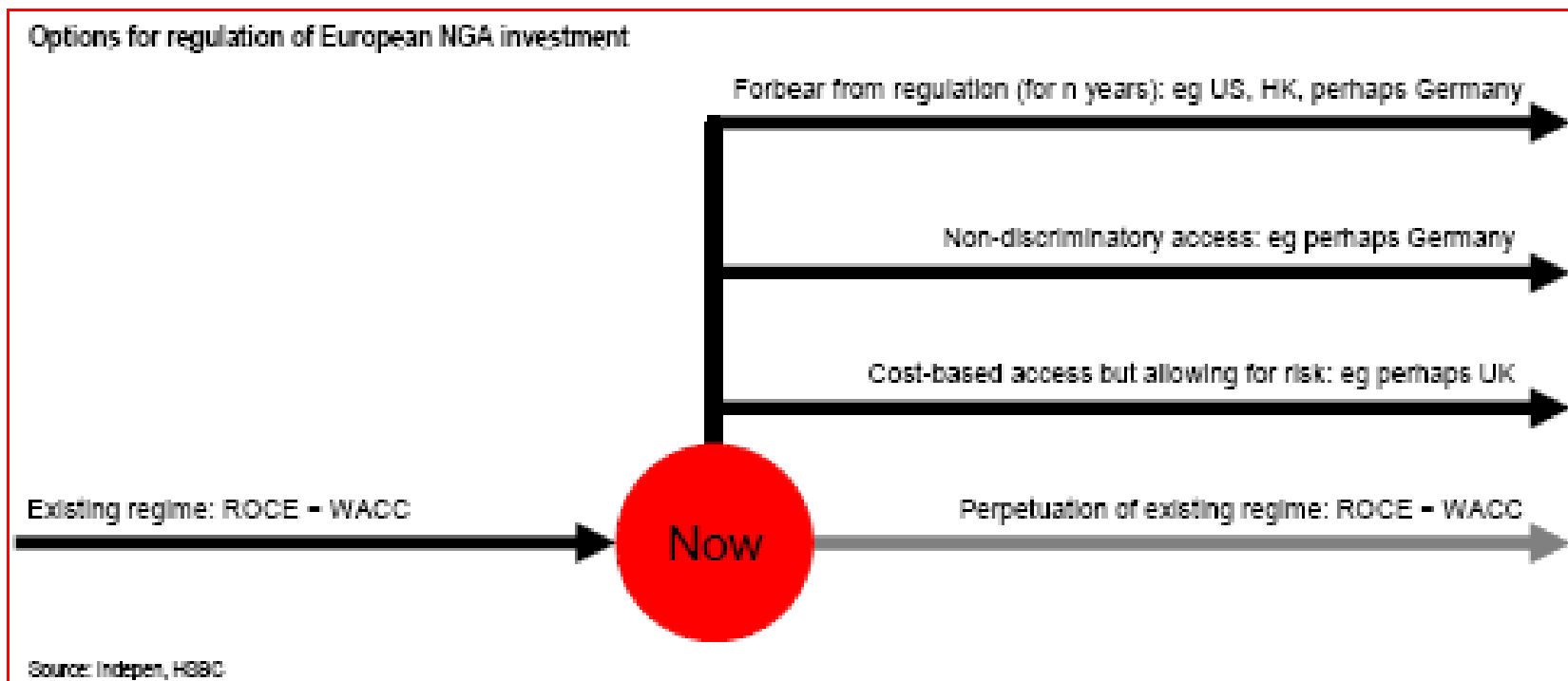
- "Antitrust and regulation have starkly contrasting traditions on mandated access. As the internet, computer software, and telecommunications ("New Economy") industries converge, affected firms will increasingly seek clear and consistent legal rules."

Joseph Farrell & Philip J. Weiser. Fall 2003. "Modularity, vertical integration, and open access policies: towards a convergence of antitrust and regulation in the internet age." *Harvard Journal of Law & Technology*, Volume 17

- EU Framework focuses on narrowly defined markets
 - Significant market power (SMP) => apply one or more remedies
- Competition Law more flexible
 - SMP and abuse => remedy if worthwhile
- EU Framework crowds out application of general competition law by setting low threshold or burden of proof for intervention
- Will this promote convergence towards *ex ante* remedies as market converges?



Europe faces choices





Three key changes to regulation are required

- The withdrawal of *ex ante* regulation of all consumer services to enable the full potential of new forms of innovation and competition in the development of applications to be realised
- A narrow focus for *ex ante* regulation on established infrastructure bottlenecks with competition law and voluntary solutions applying to replicable facilities and services
- Clarity over the treatment of “emerging markets” to support investment in next generation core and access networks and the emergence of voluntary access arrangements
- => introduce flexibility to speed up deployment of new services and access networks and reduce regulatory hurdles to true convergence



7. Achieving change

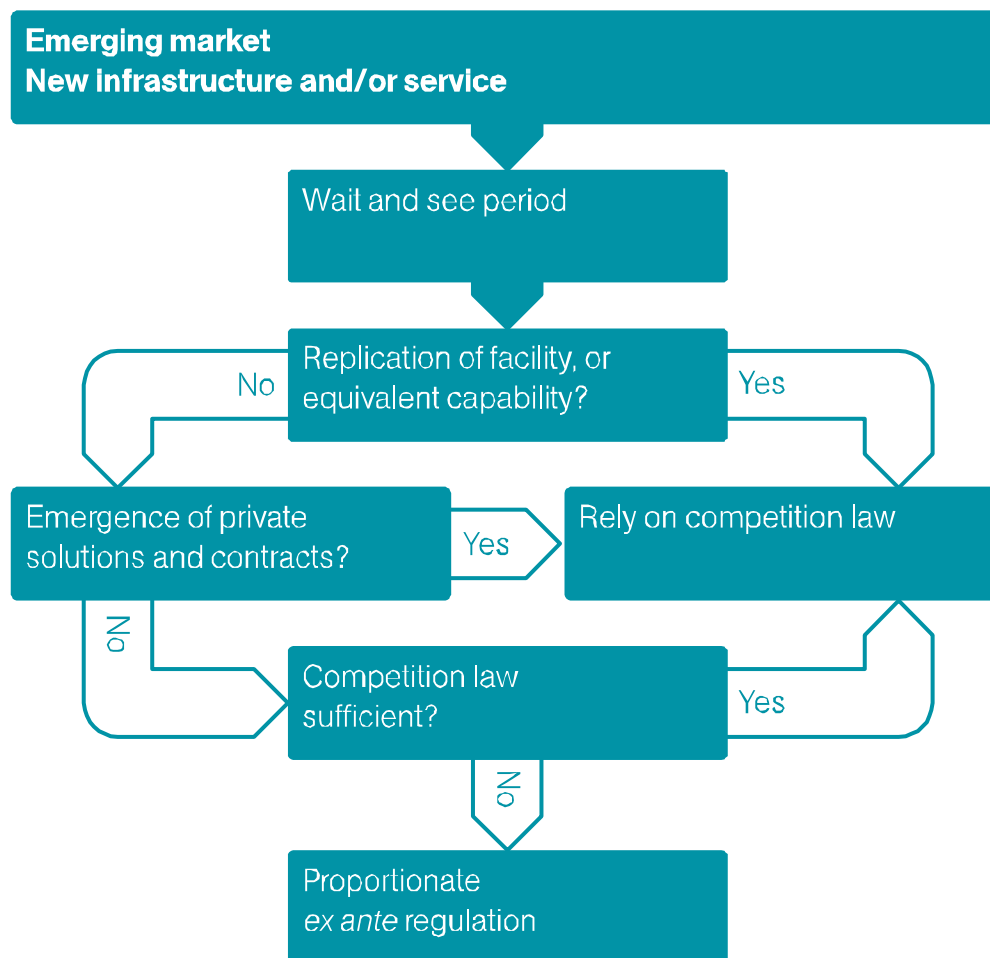


Shifting the debate

- Clear problem identification – more dialogue with investor community?
- Benchmark EU market outcomes and regulation against outcomes and practices internationally to change incentives on EC
- Higher quality empirical analysis – too many examples of single variable “explanatory” relationships promoted by incumbents and entrants alike
- Develop better measures of outcomes more aligned with economic welfare to change incentives on regulators
 - e.g. focus more on quantity and less on price?
- Seek changes to procedures that will shift the burden of proof
- Would more harmonisation reduce the opportunity to learn from experience within Europe?



Changing the burden of proof for emerging markets





Changing the burden of proof for established markets

