

How Europe Can Catch Up With the US: A Contrast of Two Contrary Broadband Models

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Executive summary

- The US and the EU share similar conditions that presumably would induce comparable broadband outcomes – yet US broadband performance today generally comes out better.
- Some in the US have advocated introducing today broadband regulation similar to the EU – while at the same time the top EU policymaker for broadband has called for a regulatory roll-back.
- This paper assesses the merits of introducing today a broadband unbundling policy in the US. Unbundling occurs when a telecommunications network allows competing companies to use its local access loop to supply broadband. This is sometimes done pursuant to government intervention.
- In the years before 2003, the FCC and US courts considered whether broadband unbundling was appropriate and concluded that it was not so – while narrowband (voice) unbundling was justified.
- On the contrary, in the late 1990s, European policymakers requested that each of the EU national former public telecoms monopolists open up its local access loop, so that new entrants could supply broadband and other telecom services. Broadband unbundling in Europe was introduced due to a variety of context-specific factors, such as the past public funding of State-run national monopolists, the industry fragmentation and the moderate presence of cable networks. Up until now, fixed broadband unbundling has been a cornerstone of EU telecoms regulatory policy.
- Thus the US and EU took two different broadband policy paths since the late Nineties: the former focused on infrastructure-based competition; the latter focused on service-based competition via broadband unbundling.
- The implementation of unbundling requires European regulators to make a challenging decision on access prices, balancing short-term consumer benefits (from low prices) and long-run benefits from investment and innovation. Over time, this balancing act becomes harder as stakeholders' positions become entrenched. The short-term often trumps the long-run interest – with EU fiber deployments suffering as a result.
- Several European fixed telecom incumbents have refrained from investing aggressively in next generation access networks due to regulation affecting the business case for fiber investments. In fact, in 2011 and 2012 more miles of fiber were installed in the US than Europe-wide. Thus, it is clearer today that the “stepping stone” (aka “ladder of investment”) unbundling approach does not suit the challenge of promoting investment in fiber-based infrastructure for NGA networks.
- Prolonged under-investment ultimately risks to impact network performance. When comparing broadband speeds in the US and EU it must be acknowledged that average indicators encompass considerable heterogeneity: if U.S. states could be considered as stand-alone countries, eight of them would feature within the broadband speed global top 10.

- Furthermore, unbundling has contributed to keep prices so low in the EU that a creeping investment malaise has resulted. A decade later, per capita investment in telecommunications networks in the US is more than 50% higher than in the EU (US\$ 197 to US\$ 129 in 2009).
- In turn, total ICT investments in the US were more than double than in the EU, which contributes to explain the productivity gap between the EU and the higher productivity US. Had the US followed the EU's slower pace in ICT investments since the late 1990s, US labour productivity growth would have been 25-30 % lower than it is today.
- Infrastructure competition is stronger today in the US than EU broadband markets. Unbundling, as any regulatory option, has benefits and drawbacks which are context-specific: the strong medicine applied in Europe a decade ago is not necessarily right for the US today.
- The US industrial structure of widespread inter-platform competition, the result of past regulatory choices, implies that the US is justified today in staying the course and maintain a lighter regulatory policy for fixed telecoms.

1. Same starting point, but different outcomes¹

The US and the EU share considerable similarities in terms of demographics, wealth, and other factors which could lead one to presume that their broadband market outcomes would be comparable.

Looking at the basics, both have a large population (314m to 504m, respectively) and high average incomes (nominal GDP per head of US\$ 50,000 to 35,000). These create a large demand for broadband services. At the same time, the US geography is larger and less densely populated than the EU, which makes it more costly for networks to reach the average US citizen.² For this reason we should expect less telecoms infrastructure deployment per household in the US than in the EU.

Looking at the outcomes, however, it turns out that the US generally comes out better in terms of broadband supply, quality and price as of 2013.³ We shall elaborate on the outcomes below.

2. Key arguments in the current debate

We observe two arguments in the current policy debate across the pond. In the US policy debate, scholars like Tim Wu, Yochai Benkler and Susan Crawford have contemplated a case for the US to introduce broadband regulation similar to the EU.⁴ These views, albeit coming from different angles, share a common philosophy that competition between telecoms networks is less beneficial to society than the action of government.

However, European Commission vice-president Neelie Kroes (top EU policymaker for broadband) has called for a broadband regulatory roll-back in Europe, aiming for the EU telecommunications markets to catch up to the US market outcomes.

3. Main regulatory difference: Broadband unbundling

In this paper we zoom in on one main difference in regulation of broadband when comparing the EU and the US, namely the question of broadband unbundling.

Rather than comparing the impacts in the past, we will explore the merits of introducing fixed broadband unbundling in the US today, given the current market outcomes. We will use the European experience of doing so in order to inform the US debate.

¹ This paper was completed with support from Broadband for America.

² The US is more than twice the area of the EU and has a density of 34 inhabitants per km² against the EU with a density of 116 inhabitants per km².

³ This emerges from the latest detailed review of a series of broadband performance indicators in the US and across comparator countries (both in fixed and wireless), such as the analysis provided in: ITIF, *The Whole Picture: Where America's Broadband Networks Really Stand*, February 2013; and GSMA, *Mobile wireless performance in the EU & the US*, 2013.

⁴ Tim Wu, *The Master Switch: The Rise and Fall of Information Empires*, 1st ed. (New York: Alfred A. Knopf, 2010); Yochai Benkler et al., *Next Generation Connectivity: A Review of Broadband Internet Transitions and Policy from Around the World* (Cambridge, MA: Berkman Center, 2010); Susan P. Crawford, *Captive Audience: The Telecom Industry and Monopoly Power in the New Gilded Age*, (New Haven, CT: Yale University Press, 2013)

4. US and Europe: two different paths

The regulatory starting point 10-15 years ago was quite similar, but on the issue of broadband unbundling, the EU and the US took very different paths.

Around the year 1999, fixed telecoms regulation in the US and EU showed also a broad degree of similarity:

- Incumbent copper networks had been or were being opened up via narrowband unbundling, to allow regulated access for voice competitors;
- Some debate and early steps towards the regulation of the emerging fixed broadband services (including broadband unbundling).

However, since 1999, the US and EU policy choices in this area took two diverging paths:

- EU → service-based competition via broadband unbundling
 - The European Commission's unbundling recommendation (2000);
 - The EU e-communications regulatory framework (2002); and
 - The European Commission's recommendations on relevant markets for ex-ante regulation (2003; 2007).
- US → infrastructure-based competition:
 - Successive legal challenges to broadband unbundling (Supreme Court 1999, DC Circuit Court 2002 and 2004)
 - FCC policy decisions to pursue not service but infrastructure-based competition in broadband (Triennial Review Order, 2003 and Triennial Remand Order, 2005)

Thus, in the EU a consensus developed which supported unbundling as the best tool for service-based competition in telecom services – equally for voice and broadband.

Around the same time, in the US, the legal framework and policy decisions coalesced to place fixed broadband unbundling outside the scope of regulation. Infrastructure-based competition was seen as more appropriate for broadband services, while unbundling remained confined to enable service-based competition for fixed voice only (so-called “narrowband unbundling”). These divergent paths created a natural experiment on fixed broadband unbundling that we now wish to address.

As we compare the EU and US telecommunications markets for the benefit of regulatory decision making, we acknowledge that context plays a key role. Regulatory choices across the pond naturally depend on structural differences of each of the two economic areas.

5. Key structural characteristics in EU and US telecoms markets

The potential benefits of unbundling depend on country-specific aspects. Notwithstanding the macro similarities in population and income, the US and EU telecommunications markets are structurally different, as summarised in the table below.

Table 1 Key market characteristics in the telecoms landscape: EU vs. US

Factor	EU	US
Market size	27 distinct national markets, total population: 504m	One nation, total population: 314m
Wireless players	Different operators in each countries (some groups operate in multiple countries but no pan-EU network)	Large scale operators, operating US-wide, together with several smaller but still relatively significant players.
Fixed copper-based players	Former public-owned national monopolists, each within the national boundaries. Some cross-ownership yet no multi-country network	Former Baby Bells (historically private capital), now mainly consolidated, with some large scale players spanning a large share of the US
Cable players	Cable broadband coverage is 42%-55% of the population (Data Point, 2011; Solon, 2012)	Cable broadband coverage of 96% of the population (2008)
Spectrum licensing	Decentralised: authority at the member State level	FCC mandate
Next generation access fiber deployments	Deployments not material in many countries. As of 2009, only 2 out of 27 EU countries (Denmark, Finland, thus with small population) have greater fiber coverage than the US	18% of homes reached today by fiber-to-the home (FTTH). In 2009 this was 13%
Diffusion of wireless LTE	LTE connections are <2% of total wireless subscriptions	LTE coverage is 86% of the population (as of Q4 2012). LTE connections are 19% of total wireless subscriptions

Source: Copenhagen Economics, OECD broadband portal, ITIF (2013), GSMA Wireless Intelligence, Point Topic (2011), Broadband Coverage in Europe 2011, http://ec.europa.eu/information_society/newsroom/cf/document.cfm?doc_id=1102; Solon (2012), Cable in Europe: Delivering the Future Today, http://www.cable-europe.eu/media-kit/solon-report-broadband-on-demand-cables-2020-vision/091008_solon_cable-in-europe-final/

Given the above structural difference, there are certain benefits that fixed telecoms regulation has delivered to Europe that would not be relevant to the US:

- The EU telecoms infrastructure is highly fragmented so unbundling rules provided benefits by promoting a single EU market – not applicable in the US
- Wireless LTE provides a much more limited competitive constraint to fixed in Europe today than in the US (where LTE has widespread availability and is used by 10x higher share of consumers than in Europe)– thus fixed broadband regulation is much less relevant today in the US than EU
- The key competing platform to copper networks, i.e. cable, is widespread in the US; however in Europe, while a growing force for broadband, cable presents lower coverage levels than the US

6. Outcomes: focus on investments

No single indicator is sufficient to describe correctly broadband operators' performance across countries, and relying on a single indicator will be misleading, as established eloquently in a recent ITIF report.⁵ A review of broadband prices for different bandwidth products shows that prices in the US are such that entry-level products are available at more affordable prices in the US than in European countries – while the converse holds for moderate and high-speed services.⁶ Moreover, a certain degree of heterogeneity in

⁵ ITIF, The Whole Picture: Where America's Broadband Networks Really Stand, February 2013

⁶ ITIF (2013), Fig. 24 at p.47 and Fig. 27-29 at pp. 50-52. ITIF (2013), p. 53 identifies that US broadband providers employ a progressive pricing policy which recovers a greater share of the network costs from the users of higher bandwidths products. This is indeed a common feature of pricing also for business connectivity, where leased lines throughout the world are commonly priced in a very similar way.

geographic and economic indicators exists within the US and EU territories, which affects broadband investment patterns and outcomes. This heterogeneity affects indicators such as average connection speeds. If U.S. states could be considered as stand-alone countries, eight of them would feature within the global top 10 as to average connection speeds.⁷

Notwithstanding the relevance of other indicators, from a long-term impact perspective we consider it important to assess performance in terms of investments. A decade after US and EU broadband policies took two diverging paths, investment levels are very different. In fact, the latest available OECD estimates show that investment in telecommunications networks in the US per capita is more than 50% higher than in Europe (US\$ 197 to US\$ 129).⁸ A similar, even larger gap can be seen if we compare the US investment performance with that of four key European countries, as shown in the table below.

Table 2 Telecommunications network investment per capita

	US	Europe	4 largest EU countries (DE, FR, IT, UK)
Telecommunications networks investments, US\$ bn	62	65	34
Population, m	314	504	268
Investment per head, US\$	197	129	119

Source: Copenhagen Economics elaboration, based on OECD Communications Outlook 2011

Even when accounting for differences in the number of total access paths (i.e. number of fixed and wireless lines serviced in a country), investment outcomes are significantly better in the US than EU. In fact, annual telecommunication investment per access path stood at US\$129 in the US against US\$78 in the EU.⁹

Outcomes in the telecommunications industry have relevance for the whole economy. Economic performance is shaped by its productivity, which in turn is influenced by many factors, including ICT.¹⁰ Many economists consider ICT investment as a key factor driving productivity and that it explains a large share of the difference in performance between the US and EU economy.¹¹

More broadly, total ICT investments in the US were more than double that of Europe. Given the impact of ICT investments on a country's productivity, we can consider what could have happened to the US productivity had the US followed the EU's slower pace in

⁷ Akamai, "The State of the Internet, 4th Quarter 2012 Report," Vol. 5, No. 4 (issued on April 2013)

⁸ Source: Copenhagen Economics elaboration, based on OECD Communications Outlook 2011 (latest available, based on 2009 data), p. 107. Available at: http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/oecd-communications-outlook-2011_comms_outlook-2011-en

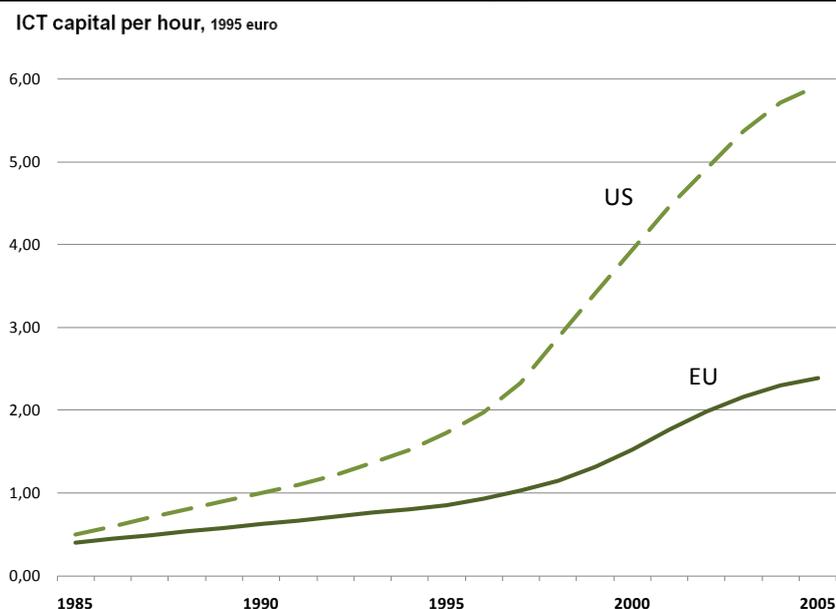
⁹ GSMA, Mobile wireless performance in the EU & the US, 2013, Figure 10, p. 18, based on the OECD Communications Outlook 2011.

¹⁰ Information and Communication Technologies are the converged set of technologies including telecommunications and computing. ICT are considered a general purpose technology and thus vital for industrial development; see Lipsey, et al. (2005). Economic Transformations: General Purpose Technologies and Long Term Economic Growth. Oxford University Press

¹¹ Seminal work in this area is for instance: Jorgenson, D.W. (2001) "Information Technology and the U.S. Economy," American Economic Review, vol. 91, no.1, pp. 1-32; Van Ark et al. (2003), The contribution of ICT-producing and ICT-using industries to productivity growth: A comparison of Canada, Europe and the United States, International Productivity Monitor.

ICT investments since the late 1990s. In that case US labour productivity growth would have been 25-30% lower than it actually was.

Figure 1 The US-EU ICT investment gap



Source: Sørensen (2007)

The variations in the size of the US-EU ICT-driven productivity gap depend on several ICT investments, however broadband investment play a central role.

Given the impact that broadband policy decisions can have on future investments, decisions on issues such as broadband unbundling can thus matter significantly on how a country's productivity is expected to develop. The European decision to adopt broadband unbundling may be a factor contributing over time to lower investment and in turn lower productivity in Europe compared to the US. There are many channels via which telecommunications investment spurs economic progress, due to the general purpose nature of these technologies, which can affect positively even seemingly unrelated industries, in both the manufacturing and services sector. Moreover, an important impact of telecommunications investment in the US (but not so much in Europe) can be seen by looking to more closely related industries in the internet economy and tech sector, where US players have grown much faster than European ones and in turn provided a beneficial source of investment.

7. Broadband unbundling in Europe

We consider that broadband unbundling has been a useful step to take in Europe post-1999 to complement the process of liberalization of telecommunications markets across each EU member State. The specific European industrial and political context is key to understanding why this has been the case.

A key reason why a service-based and not an infrastructure-based competition model was chosen is that large parts of the EU had limited cable infrastructure.¹² Moreover, mobile data services were considered, at the time, as significantly distinct from fixed data.¹³ Consequently, the scope for infrastructure based competition was limited at the time.

In each EU country, entrants have relied on regulated access (usually both narrowband and broadband unbundling) to gain a share of the retail market. In doing so, they have forced prices down and increased the performance across several service dimensions – compared to the not so distant days of national monopoly service). This has provided a useful discipline for former national monopolists, some of which remain still controlled by national governments.

Furthermore, the EU-level regulation of fixed telecoms has also been a tool to reassert EU power against member States' influence. At the same time, both in telecommunications and across other network industries, the European Commission's antitrust branch (DG Competition) has pursued several abuse of dominance cases (e.g. margin squeeze; exclusionary discriminatory practices) hitting former national monopolies.¹⁴

Ensuring that entrants from anywhere in the EU have access to the former national monopolists' networks (generally deployed relying on taxpayer money) is an EU policy priority not just for fixed telecommunications but also for other network industries such as energy, where national public monopolies also used to be in place.

8. The economics of unbundling

In the US broadband policy debate, broadband unbundling is characterized as a straightforward tool to provide more competition, greater choice and lower prices. But unbundling is also associated with a number of other regulatory and antitrust concerns.

Unbundling in Europe has created national markets with one “wholesaler” providing access to its network to a number of “retailers” buying (unbundled) access to the network and selling telecoms services to end consumers – households and firms alike. This wholesale-retail relationship is on the one hand the essence of the policy intervention. On the other, the level of the wholesale price in place can be a source of concerns for regulators and antitrust authorities alike, due to its effect on competition and entry.

One of the core pre-requisites to make unbundling work is to regulate the access price to the network to ensure that all retailers can access it at a fair, transparent and non-discriminatory price. Furthermore, regulators need to ensure there is sufficient downward pressure on the sole wholesaler as to ensure against monopoly profits. For this reason, regulators have introduced price caps and thereby installed a tool for tightening the

¹² This can be seen still at present, from the cable mapping provided by the Cable Europe association; available at: <http://www.cable-europe.eu/industry-data/cable-penetration-ye-2011/>

¹³ This is reflected in the outcome of three-criteria-test sanctioning the inclusion of broadband markets as susceptible to ex-ante regulation, which was the conclusion of both the EC 2003 and 2007 Recommendations on relevant product markets.

¹⁴ For instance the EC cases against Deutsche Telekom and Telefonica. In the US, post-Trinko case, certain agency-regulated scenarios are excluded from the purview of the essential facilities doctrine and thus conducive to limited antitrust enforcement in deference to regulatory decisions. Compared to the EU, it appears also that there is a higher burden of proof to establish abuse of dominance cases in the US (e.g. for predatory pricing and specifically for margin squeeze).

screw every year in order to introduce an incentive for the wholesaler to continue efficiency improvements.¹⁵

The stepping stone hypothesis aka ladder of investment

The so-called stepping stone effect has not materialised in Europe. In fixed broadband markets, with a few exceptions in business districts and highly urban areas, entrants have mainly rolled-out investments only up to the incumbent's central office network nodes (aka local exchanges), while no significant competing fixed infrastructure has materialized.

At the same time, several European fixed telecom incumbents have refrained from investing aggressively in next generation access networks, since they had some expectation that any new assets would be made available on a regulated basis to their competitors – thus curtailing the business case for the investment in first place. This is particularly evident in the most recent years. In fact, in 2011 and 2012 more miles of fiber were installed in the US than Europe-wide.¹⁶ Regulation plays a role here. For instance, the French regulator ARCEP opened up in 2011 an investigative procedure on VDSL2 technology – a process based on a Committee involving both France Telecom and its competitors.¹⁷ Due to the requirement to coordinate with its competitors (to which it must sell unbundled access), France Telecom has ended up delaying the deployment of this technology to end 2013. Moreover, this advanced technology would deliver faster speeds if France Telecom deployed fiber to reach its outer network nodes; however, the company faces lower incentives to deploy this fiber since it can likely obtain only part of the returns from this investment, with its competitors reaping the rest via regulated unbundled access.¹⁸

With regulated access, key decisions are put in the hands of regulators instead of the market. The regulator's choice of access prices (or price caps) depends on its prediction of future investment incentives, which can be quite speculative. From the advent of broadband unbundling in Europe, the regulators making this pricing decision have been confronted with balancing two difficult objectives:

- The unbundled access price should reflect what the entrant's costs would be (for an entrant with a minimum scale)
- Providing a correct make-or-buy signal to a new entrant, so that it can over time build its own network if its business is successful

Since the advent of the 2002 EU e-communications framework, the regulatory objective to promote efficient investment has focused on efficient entry, i.e. on investment from new players (rather than existing). The broadly consensual approach amongst EU regula-

¹⁵ European regulators have selected LRAIC (Long Run Average Incremental Costs) as the primary approach to model the incumbent's fixed line copper, fiber and (where existing) cable assets.

¹⁶ CRU International Ltd, CRU Monitor: Optical Fibre and Fibre Optic Cable (London, September 2012),

¹⁷ ARCEP Press release of 26th April 2013, available at:

[http://www.arcep.fr/index.php?id=8571&tx_gsactualite_pi\[uid\]=1604&tx_gsactualite_pi\[annee\]=&tx_gsactualite_pi\[theme\]=&tx_gsactualite_pi\[motscle\]=&tx_gsactualite_pi\[backID\]=26&cHash=coe866549e9dcfb73be49dd8b44e53a3&L=1](http://www.arcep.fr/index.php?id=8571&tx_gsactualite_pi[uid]=1604&tx_gsactualite_pi[annee]=&tx_gsactualite_pi[theme]=&tx_gsactualite_pi[motscle]=&tx_gsactualite_pi[backID]=26&cHash=coe866549e9dcfb73be49dd8b44e53a3&L=1)

¹⁸ Col (2012), ZDNet, "Mais c'est aussi là que réside l'inconvénient « stratégiques » du VDSL2, puisqu'il peut avoir un effet fortement dissuasif sur le développement massif de la fibre optique". Available at: <http://www.zdnet.fr/actualites/le-tres-haut-debit-en-vdsl2-une-fausse-bonne-idee-pour-la-france-39775634.htm>

tors on how to do so has been via the ladder of investment (aka stepping stones hypothesis).¹⁹ This is the key theory behind the unbundling process. To encourage entry, regulators forced the incumbent to allow access to its copper network's central offices (local exchanges) and to supply various wholesale products at cost-based regulated prices.

For this regulatory strategy to work, the regulator must first assess what is the most upstream input that a competing operator could in due course replicate (i.e. make, instead of buying from the incumbent). After the most upstream replicable asset has been identified, a successful ladder requires the regulator to manage the availability of access rungs so that competitors move up the ladder to the point where they are replicating that input.

However, in most EU countries, the unbundled local loop has turned out to be the roof above which the ladder of investment policy could not break through. The regulatory intervention has not been enough to promote entrants to invest in fiber-based NGA networks: generally, entrants invested in core and some backhaul assets. At the same time, it is likely that the regulation discouraged former copper network incumbents to invest in fiber and may have also slowed cable networks (in countries where they exist) upgrading their networks with fiber. These are potentially key drivers behind the telecoms investment gap between the EU and US.

European regulators' priorities

In general, regulators across Europe have been putting more emphasis on ensuring low prices than ensuring a high level of investment. Admittedly, it is a difficult balance in a fast moving market. Furthermore, over time, this balancing act becomes harder as stakeholders' positions become entrenched. As a result, the outcome of the initial policy decision to pursue broadband unbundling is too little investment (and thus more uniform offering based on the same access infrastructure) and low prices.

While this effect is not an artefact of the regulatory model of unbundling, however, based on practical experience, regulators tend to be on the safe and conservative side – for instance by preferring to keep access prices to the low end and avoid accusations of being too lax on the national incumbent. This not only has some justifications in terms of short-run consumer benefits but, like many decisions focusing on the short-term alone, this can embody a blame avoidance strategy.

Unless US regulators are fundamentally different in their risk profile to European ones, we would predict that a similar policy approach would end up in regulatory decisions that discourage investment and worsen the outcome in the US broadband market, which would risk reducing investments to European levels.

The policy drivers for broadband unbundling in the EU, as well as its economic issues help explain why policymakers' views on broadband regulation in Europe have started to shift over the past few years. In particular, it is clearer today that the "stepping stone" (aka "ladder of investment") unbundling approach does not suit the challenge of promoting investment in fiber-based infrastructure for NGA networks.

¹⁹ See Cave (2006), Encouraging infrastructure competition via the ladder of investment, Telecommunications Policy.

Ultimately, a deeper realization of how regulation can influence the incentives to invest lies at the heart of the July 2012 policy statement by European Commission Vice President Kroes.²⁰ The European commissioner called for less, more focused and smarter regulation in Europe with the explicit aim to send a signal to encourage greater private investment in fixed telecoms infrastructure.

9. Benefits and disadvantages for the US

Having summarized the drivers and likely impact of broadband unbundling regulation in the EU, we identify the key benefits and disadvantages of relevance to the US today.

Table 3 Broadband unbundling in the US today: Pros & Cons

Benefits	Disadvantages
Competing telecom providers (e.g. entrants) could reduce broadband prices and increase service differentiation	Reduces incentives to invest to create, extend or upgrade networks to NGA (e.g. fiber to the home) for: <ul style="list-style-type: none"> • Copper network operators; • Cable operators; • Other fixed players (FTTH; business connectivity suppliers); and • Wireless
Ex-ante regulation can pre-empt any abusive conduct that is not checked by either: <ul style="list-style-type: none"> • Competitive forces • Ex-post antitrust enforcement (e.g. when its scope is limited) 	Where alternative infrastructure platforms compete (with broad coverage), regulating one platform distorts the playing field
	Cost and complexity of administering regulation and managing the clash of unavoidably conflicting interests

Source: Copenhagen Economics

Based on the above, our assessment is that we cannot support the claims made by those who advocate that the US should introduce broadband unbundling. Fixed broadband unbundling would not likely provide real benefits to the present-day US telecommunications markets, which are characterised by multiple competing broadband infrastructures and country-wide players.

Therefore, we do not recommend pursuing an interventionist regulatory approach in the US in this area due to:

- Its high risks: mainly related to the clear possibility of reducing future investments on not just one platform but on all competing infrastructure
- The benefits are much limited compared to what the EU stood to gain a decade ago from this policy: in the US, inter-modal infrastructure-based competition already secures many benefits that the EU sought to reap via regulation

10. Conclusion

In summary, U.S. infrastructure-based competition appears stronger than in the EU due to the presence of alternative operators and platforms. Many competitive pressures are already in place and expected to grow as the roll-outs of LTE, cable DOCSIS 3.0 and fiber-

²⁰ Enhancing the broadband investment environment – policy statement by Vice President Kroes, 12 July 2012. Available at: http://europa.eu/rapid/press-release_MEMO-12-554_en.htm

to-the-home (FTTH) continue throughout the US. DOCSIS 3.0 technology is particularly pivotal at this stage since it can give broadband speeds greater than 50mbps and that a vast share of the US has now access to this technology via cable infrastructure (with a significantly higher availability than in Europe, see Table 1).

Also in Europe, the roll-out of fixed and wireless technology advances will make broadband markets more contestable over time. This is also a reason why EU policymakers are now considering reducing the scope of fixed broadband regulation. In her July 2012 policy statement, European Commission's Vice President stated: "Today in Europe we stand on the brink of a new digital transition. New applications and services, from e-Health to the cloud to Connected TV, stand to offer huge benefits for citizens and businesses, and an overall boost to our economy. But many of these new ideas cannot run on copper-based ADSL broadband networks. We cannot let our networks be the bottleneck for this amazing opportunity: we need investment in new high-speed infrastructure. [...] But the transition to an expensive new generation of high-speed networks, co-existing with the old, poses special challenges. Though the public sector can help, the real heavy lifting must be done by private investment."²¹ Thus the EU is now looking at a different future for its telecoms policy.

In conclusion, one may compare regulation to a medicine with some side effects, especially long-term side effects. A wise physician would then prescribe this treatment to a given patient only when the trade-off between the short-run benefits and the long-term detriment is clearly in favor of doing so.

However, just because the physician recommended the treatment in one case, it does not imply that the same treatment should be administered in another case. Likewise, just because Europe believed there were more benefits than costs from broadband unbundling a decade ago, it does not imply that this would be the case for the US in 2013. In essence, the assessment of the benefits and drawbacks of this policy should be based on the market situation in the US in 2013, rather than on the historic impact in a very different setting as it was in the EU and at a different time, more than a decade ago.

When a decade ago the US opted not to venture the unbundling of fixed broadband, this approach allowed for whole platform competitors to emerge and challenge each other – which did not occur as much in Europe. Thus, the US today is in a quite different place to where the EU was in the late Nineties: this makes the US even more justified today in staying the course in terms of its lighter regulatory policy for fixed telecoms.

²¹ Enhancing the broadband investment environment – policy statement by Vice President Kroes, 12 July 2012. Available at: http://europa.eu/rapid/press-release_MEMO-12-554_en.htm