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**The European telecoms framework review – nirvana at last?**

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Note: This response represents the view of the author only, and does not represent a corporate view of Communications Chambers

## Introduction

The proposed revised European telecoms framework was released today.<sup>1</sup> The proposals, in my view, represent a departure from principles that have underpinned the framework to date; namely technology neutrality, a competition law based framework, the single market goal and a primary reliance on market and consumer driven outcomes.

They involve an extension of regulation in response to more end-to-end infrastructure competition and more competition from so called over-the-top applications such as Skype and WhatsApp. At their heart the proposals are dirigiste – involving sector specific regulators in investment choices and plans, the choice of business model and the boundary between rapidly evolving applications.

## The wider context – ICT & growth

Whilst the telecoms framework review is couched in terms of a broader strategy for growth and jobs in Europe, there is little linkage between the review and what is required to ensure that information technology diffuses throughout the economy and generates growth.

There has, in recent years, been a mixed narrative around information technology and growth, with Robert Gordon questioning whether it has run its course and pales compared to previous innovations such as electricity and the motor car.

As a follower of information technology, news of its demise seemed premature to me - with mobile, apps, cloud and artificial intelligence all making strides. Unfortunately, the aggregate productivity statistics looked like they were on the side of Robert Gordon (and likely still are in terms of aggregate productivity growth).

If there is a way out of the information technology productivity paradox, new evidence pointing to a key, but poorly measured role, for software services is likely it. With improved accounting for software R&D, services and their relative

rate of price decline Bryne and Corrado (2016)<sup>2</sup> find a significant productivity growth contribution from information technology for the US in recent years.

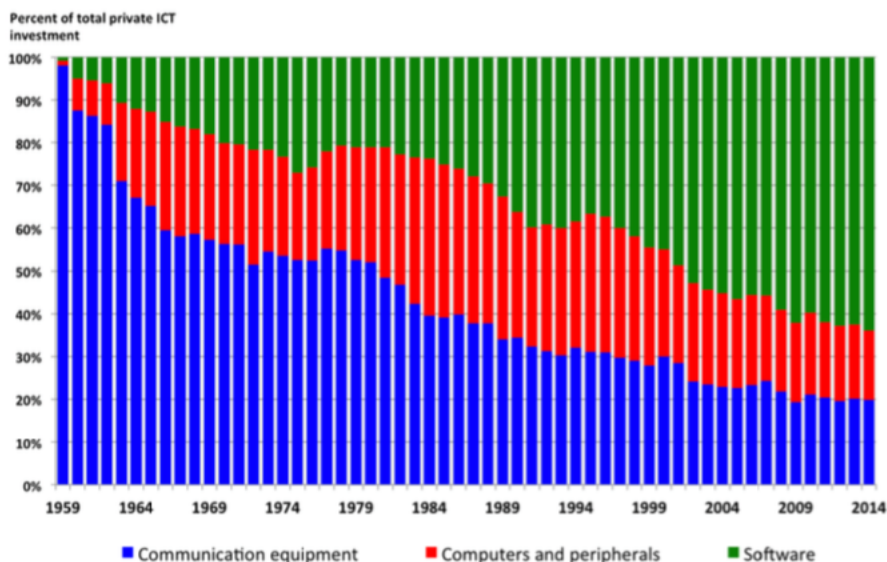
Whilst connectivity is a key part of the story, the relative share of communications investment in overall information technology

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<sup>1</sup> EC, [Proposed Directive establishing the European Electronic Communications Code](#), September 2016.

<sup>2</sup> Bryne and Corrado, [ICT Prices and ICT Services: What do they tell us about Productivity and Technology?](#), 2016.

investment - shown below - has been in decline since the 1960s (not shown is the relative shift towards mobile within telecoms).



**ICT investment component shares 1959 to 2014**

Ensuring that incentives are there for communications investment, to ensure it is responsive to market needs, is essential; but prioritising fibre investment in its own right could prove a misallocation of resources and distract us from other priorities.

Bryne and Corrado (2016) also make clear that economies with little domestic information technology production derive benefits from faster productivity growth in information technology elsewhere, via an improving terms of trade i.e. the declining price of cloud service imports, their expanding capability and diffusion benefits the importing country.

This is pertinent to how we should think about information technology and competitiveness – openness to the use of information technology, and the transformation of the rest of the economy this entails, may be more important than producing information technology (though Europe is, in any case, a significant producer of apps for example<sup>3</sup>).

### Wither technology neutrality?

A new objective of the revised framework is to “promote access to, and take-up of, very high-capacity data connectivity, both fixed and mobile...” where very high-capacity connectivity is defined as consisting: “wholly of optical fibre elements at least up to the

<sup>3</sup> Williamson, Chan and Wood, [A policy toolkit for the app economy - where online meets offline](#), March 2016.

*distribution point at the serving location or which is capable of delivering under usual peak-time conditions similar network performance in terms of down- and uplink bandwidth, resilience, error-related parameters, and latency and its variation.”*

Technically the definition is neutral, but the intent is not. Some will applaud this, and recognition of the importance of investment and dynamic efficiency is to be applauded. But, and this is a big but, overly focusing on fibre to the premise may not be in consumers’ interests or the interests of the digital or wider economy in Europe.

Fibre to the premise can be slow and costly to deploy, so overly focusing on fibre to the premise may delay good enough speeds now at an affordable cost (and investors will anticipate that if the cost is not affordable they will not get to recover their investment). In some circumstances and locations fibre to the premise is the right solution today, but by no means all.

Australia had a policy of pursuing fibre to the premise to over 90% of premises, but has now switched to a mixed technology approach after years of slow progress and high costs.<sup>4</sup> Korea and Japan both made substantial investments in fibre to the premise, but arguably have little to show for it. As Kushida (2013) noted regarding Japan:<sup>5</sup> *“Japan quickly discovered that taking advantage of the broadband environment to produce innovation, productivity growth, and economic dynamism, was far more difficult than facilitating its creation. It discovered regulatory barriers for the use of [ICT] in various areas of the economy. Like Europe, Japan was not home to the ICT lead-user enterprises and industries that drove the ICT revolution, producing innovation and productivity gains. Moreover, the advent of US-centred cloud computing services potentially decreases the minimum bandwidth requirement to access global-scale computing power.”*

As for the future, it is genuinely uncertain. The global shift to mobile access is motivating a reduction in the quality of connectivity apps require; whilst on the supply side Facebook, Google and Verizon have all announced that they plan to test gigabit wireless solutions for the “last mile”. Whilst there has been a trend towards bringing fibre closer to the user, innovation could stall that trend.

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<sup>4</sup> NBN Co, [Strategic review](#), December 2013.

<sup>5</sup> Kushida, [Public Private Interplay for Next Generation Access Networks: Lessons and Warnings from Japan's Broadband Success](#), October 2013.

Iterating quickly on “present proof” solutions may deliver more for consumers and the economy than the hard problem of knowing what is “future proof” and making it happen. Bureaucrats and politicians may prefer the simple narrative of fibre, but it is a narrative that is unlikely to serve us well. Instead, it is preferable to get the incentives right and let consumers and investors decide (beyond basic universal service, to ensure inclusion, where there is likely to a role for government).

### **Dilution of a competition based threshold for intervention?**

A new trigger for intervention, namely the over-riding principle of a level-playing-field, is put forward to justify extension of regulation to next generation communications services: *“...competition between local providers of electronic communications services that bundle network access with services and global providers of services over the top of the network reinforces the right of the EU to act to ensure a level playing field.”*

The notion of a level playing field isn’t a sound overriding principle for regulation<sup>6</sup>, and use of the word “right” to justify economic regulation is curious. Different services delivered in different ways may require different regulation, even if they are viewed as competing or equivalent in certain respects by consumers. For example, some consumers may see mobile as a substitute for fixed, but we do not necessarily conclude that fixed network access price controls should be extended to mobile networks to ensure a level playing field.

It would also be absurd to attempt to level the playing field by removing all the advantages that legacy communications services enjoy vis-à-vis next generation communications services. These include exclusive access to a managed network service, effective zero rating (their use does not count towards data allowances) and bundling by default on devices and within mobile contracts.

It would, however, make sense to phase out regulation made redundant by competition from next generation communications including voice origination, voice and SMS (but not data) roaming and call termination regulation.

### **Responding to more competition with more regulation?**

Over the past decade we have seen the emergence of more intense end-to-end competition including from cable, fibre entrants and

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<sup>6</sup> Williamson, [Next generation communications and the level playing field – what should be done?](#), June 2016.

mobile, and from next generation over-the-top communications services. Yet under the proposals these outcomes could lead to more regulation, not less.

In relation to broadband access, the picture is complex with some areas where regulation may be reduced, but with new and lower thresholds for intervention in relation to symmetric remedies (including access to in-building wiring) and new powers to intervene to stop others investing in less commercially attractive areas where first-movers plan to invest. Efforts to favour fibre to the premise may also weaken investor expectations regarding returns to investment in other technologies, thereby delaying upgrades.

In relation to next generation communications services such as Skype, WhatsApp, Facebook Messenger, Google Hangouts and iMessage the proposals involve an unambiguous extension of regulation. Next generation communications apps are also becoming platforms for other apps, for example, iMessage is now an app platform following the release of Apple iOS 10, so an extension of regulation touches on a much broader set of applications. These applications have made a significant contribution to the achievement of the single market goal. It would appear perverse to extend sector specific regulation to applications.

### **Will the Commissions dirigiste vision beget complexity & disappoint?**

The desire for investment in very high-capacity networks (and the implicit desire to see less investment in intermediate, and perhaps more timely, upgrades) moves the approach away from a market driven approach and towards a planned vision.

This is reinforced by a new proposal that operators provide investment plans, and that unjustified departures from these plans might be subject to sanctions. Given the rapid evolution of technology, including the changing specifications for cable DOCSIS, G.fast, development of long-reach VDSL and developments in wireless, changes to plans may be the norm rather than the exception. Regulating against this would mean Europe going against the benefits of technology progress, and in particular the trend towards software augmenting physical capital. In any case, even without a change in technology, a normal part of the competitive dynamic is that changes in investment by one party may alter the optimal investment strategy of other parties.

The Commission is also prescriptive beyond investment choices, favouring particular business models, such as co-investment, over others such as long-term contracts. The proposals go beyond identifying the impact of different business models on competition, to favoring particular business models. Guidance as to how to take business models into account in a competition assessment should stop short of hardwiring a preference for particular business models into the framework.

Risky investment is also singled out and is assumed to be synonymous with very-high capacity investment. Yet if demand for very high capacity networks is anticipated to develop rapidly, an assumption surely implicit in favoring such investment, then investment in intermediate technology upgrades may be the riskiest (whilst demand for such upgrades may grow quickly they would have a short economic life). In truth, we do not know which investments involve the most risk, and it isn't obvious why we would want to favour risky investment *per se*. A degree of pricing freedom is a way of squaring the circle, leaving judgements about risk and return to investors.

### **An alternative way forward**

A desire to move beyond the *status quo* and promote investment and innovation is commendable. But surely there is a simpler more consistent and effective way of pursuing these ends than what is proposed?

In relation to network access, efficient investment maximises the anticipated difference between the benefits of investment and the costs. The way to incentivise such investment is to ensure that returns reflect benefits, and benefits are likely to be broadly aligned with end-user willingness to pay (leaving to one side the separate question of universal service). To align incentives, pricing flexibility is required, but not so much so that material abuse of market power is anticipated.

In relation to discrimination against third party retailers' non-discrimination requirements including equivalence and a replicability test provide safeguards. In any case, during a transition to next generation networks, having other retailers on-board may be a goal not only of policy makers but also investors. Longer-term arrangements including contracts and co-investment also offer safeguards, and should be considered in deciding what additional, if any, regulatory safeguards are required.

In relation to the risk of excessive pricing, the competitive constraint from rival end-to-end networks (including cable, fibre entrants and

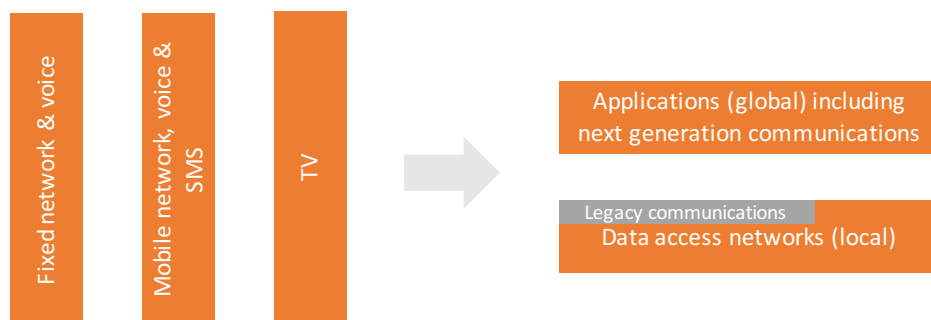
wireless) should be assessed. However, in addition, the constraint of price controlled current generation access on next generation access pricing is likely to be a significant “anchor price” constraint.

Over time copper ADSL may exert a diminishing price constraint (or be withdrawn). In that case, rather than moving to cost oriented price controls on next generation access, the anchor product could be upgraded. The revised anchor, rather than being a particular technology, could be a virtual product supplied irrespective of the access technology. The service level and price should be sufficient, but no more so, to limit scope for abuse of dominance whilst retaining pricing flexibility for higher tier products.

All of this can be accommodated within a competition based approach without favouring particular technologies, capabilities or business models. The approach also has the virtue of maximizing the scope for end-to-end infrastructure competition, thereby creating a virtuous circle in terms of investment and competition.

The growth and diversity of software applications and services is the stand-out success of the past decade, in Europe and globally. Such applications offer substantial social and economic benefits. They also, by default, overcome cross-border constraints in relation to communications and other services. This has happened absent sector specific regulation, arguably because of that absence.

The shift – illustrated below - from vertically integrated national service stacks to a horizontal structure with global applications provided over-the-top of local access networks, is suggestive of a parallel shift in the structure of regulation.



Sector specific *ex ante* regulation could be narrowed to remaining network access bottlenecks, coupled with freedom to innovate in the applications layer (subject to general competition and consumer protection). This approach would support investment and innovation, and a strong contribution of information technology to the European economy and society.