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Increasing the Value of Telecom Operators with a Single EU Market

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Increasing the Value of Telecom Operators with a Single EU Market

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Abstract

In this paper we analyze the risks the European Telecom market is experiencing. Many economic disincentives to investing in infrastructure are related to the fact that market value of the companies can be lower than expected. Next Generation Networks (NGN) deployment require great amounts of capital but investing in new networks is not attractive for all players. The internet ecosystem is a much more complex scenario than the traditional telecommunications market and has changed the economic models. There are diverse regulatory approaches within the European Union (EU) nowadays. The Single European Market could be the solution to increase competitiveness and to rise the value of European Telecom Operators.

Keywords

Telecom operators, Next Generation Networks, EU Single Market, Regulatory risk

JEL Classification

G38, L25, L96

1. Introduction

Since the mid 90s the European Commission has been working on a Single European Telecom market. The objective of creating a common market has been a main issue since the origin of the European Economic Community (EEC) and the establishment of the Treaty of Rome in 1957. However the evolution towards the single telecom market has followed a long and complex process that started at the very beginning with the liberalization of the national telecom markets. The traditional role of governments providing incentives that made possible the development of telecoms, power, transportation and other sectors have evolved to a regulatory approach and pro-competition environment, promoting entrepreneurship and reducing social costs. The European Single Market is still far from the full market integration expected according to Mariniello et al. (2015) at Bruegel, mainly because barriers continue in the EU, avoiding the exploitation of the potential benefits of full market integration (e.g. roaming, use of radio spectrum), the lack of complementary policies' to support the single market that should have been put in place, and because the project has not sufficiently been considered as a key part of the process of creative destruction to modernize European economy.

In only a few decades Internet has consolidated as the major communication platform, transforming the society and the economy worldwide. The number of Internet users globally has grown dramatically in the last 20 years. Internet is an essential tool that allows the production, communication and share of information from any place in the world in real time.

Most users access the network via fixed line broadband connections but the adoption of mobile internet is increasing and growing more than any other service. There are around 7 billion mobile phone subscriptions globally (ITU, 2015). The mobile Internet is creating new businesses and has a great impact on individuals, countries and the economies, and is still accelerating.

In Europe demand of mobile internet data traffic remains strong and will continue to expand (BCG, 2014). The rise of smartphones and other devices like tablets and laptops help to explain the mass adoption of mobile internet, but without fixed and mobile networks the rapid increase of mobile internet penetration could not have been possible. Investing in telecom's infrastructure is crucial to guarantee connectivity and growth in the Internet and the global economy that is rapidly becoming digital.

The availability of alternative technologies, NGN, to guarantee connection and access to internet at a high speed, requiring different levels of investment, configures a varied scenario. The impact of public policy on new network development is high. Regulatory risk can increase if there is a bad regulatory design or it is not well implemented. Risks impact the value of telecom operators

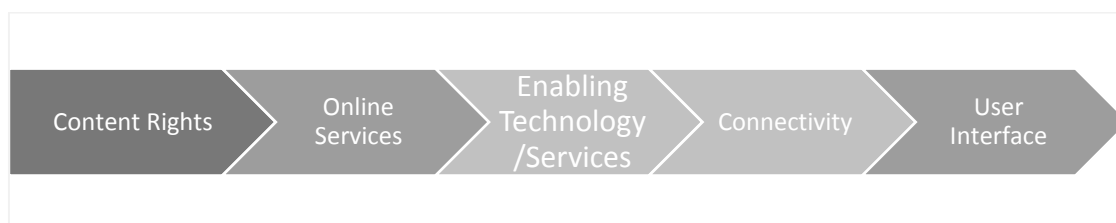
in the market and reduce incentives to increase capital expenditures on fixed assets by network operators.

In Europe the regulatory environment could be more supportive and help to promote infrastructure expansion with a good combination of effective competition, regulatory harmonization and an open minded approach over the digital market by national regulatory authorities. The complexity of the internet ecosystem demands coordination and harmonization of regulations across EU on technical issues like spectrum assignment, fees, but also on consumer rights or net neutrality.

2. Telecom Operators business model and the Internet Ecosystem

Internet can be seen as a major disruptive innovation with a great impact on everyday life and most, if not all, societies around the world. New economic models have emerged due to the new businesses, activities and social adoption of the network. Internet has changed the way in which businesses operate and has transformed the traditional telecommunications sector. A simple description of the internet's value chain defined by A.T. Kearney is shown in Fig. 1.

Figure 1: Internet Value Chain



Source: A.T.Kearney Analysis (2010)

The major key markets in the internet value chain are: (i) Content rights, an activity that does not necessarily involve remuneration to content creators though is one of the most growing markets and demand is sharply increasing. (ii) Online services of many different sorts, e.g. e-Commerce, communications or search engines. (iii) Enabling technology and services, e.g. billing and payment services, technical service platforms like content delivery services. (iv) Connectivity, internet access provided by telecom operators. (v) User interface, involving network element providers like devices and software, e.g., operating systems. (vi) Suppliers for the internet markets, e.g. manufactures of test & measurement equipment for telecom.

Telecommunications industry has traditionally been considered a natural monopoly, and thus subject of economics of regulation (Kahn, 1988). Telecom operators were considered public

utilities. Investment in infrastructure (telecommunications, energy or transport networks) usually causes rapid growth in both employment and gross domestic product. This growth is much more visible in less developed countries that lack basic infrastructure. Externalities from public investments encourage the expansion and development of other productive sectors.

After the liberalization processes, that took place in most countries a few decades ago, the telecom industry has been a regulated market. Network and infrastructure investment has been done by telecom operators encourage most of the time by governments and national regulatory authorities, supporting a reasonable regulatory environment. In many countries the telecom sector has served as a reference for the liberalization of other regulated activities. In the UK, the privatization of BT in 1984 was a useful reference for privatizations in the energy sector (Pollitt, 2010; Beesley & Littlechild, 1989). The development and growth of the internet ecosystem has been possible thanks to network infrastructure provided by operators.

The regulation of telecom networks in the EU is currently done by national regulatory authorities that set prices for access networks. But changes in the market can result in an industry no longer being a natural monopoly. An important task for regulators should be to identify when such a transformation takes place and then open the industry up and eliminate price controls (Viscusi et al., 2005). The EC has recently recommended changes regarding broadband networks giving access providers capacity to set prices themselves (EC, 2013a) under competition safeguard regulatory measurements.

Allowing operators to set wholesale prices for NGN try to make investment in new networks more attractive and foster competition in superfast broadband markets. Under the EU framework, national regulators can impose ex ante regulation on operators which have significant market power in the defined relevant markets. Ex ante measurements include price regulation and requirements to provide access, or publish information on the services provided. Uncertainty over access price regulation impact on telecom operators' growth and future value.

The irruption of Over the Top (OTT) players have created difficulties to the traditional telecom operators. These new players have never been considered utilities or natural monopolies by regulatory authorities and economic regulation have not been applied to these activities, but competition policy is also applied to OTT players. The evolution of returns on Telecom Operators regulated services have made broadband products evolved most likely to be bundle with telephony, pay-TV and mobile (4-Play, 4P bundles) and with mobile internet (5P). This strategy in aligned with the consolidation of the telecom market that is taking place in some countries and vertical mergers.

3. The European Telecom Single Market

The European Commission (EC) has recognized the importance of a connected Europe for growth and innovation. In 2010 the EC designed a Digital Agenda for Europe (EC, 2010). More recently, in September 2013, the EC made a proposal for a Regulation of the European Parliament and of the Council laying down measures towards the European single market and amending several Directives (EC, 2013b). The main objectives, that were to build a connected, competitive continent, making easier for European businesses and entrepreneurs to create jobs and reduce red tape, have not been fulfilled.

The analysis of some specific emerging businesses in the Information and Communications Technology (ICT) sectors have shown that the problem in Europe seemed to be in bringing ideas successfully to the market. Barriers identified by several authors (Veugelers, 2012); highlight the lack of a single digital market, fragmented regulation on very important matters (e.g., intellectual property), lack of an entrepreneurial culture and limited access to risk capital and other financial sources, or very limited ICT clusters. The fragmentation and lack of harmonization of the European telecom market are probably the most important problems.

The EC has recently identified three priority areas to work on (EC, 2015a; EC, 2015b): (i) Better access for consumers and businesses to digital goods and services across Europe. This include unlocking e-commerce potential and simplifying VAT arrangements. Modernizing copyright. (ii) Creating the right conditions for digital networks and services to flourish. High-speed, secure and trustworthy infrastructures supported by the right regulatory conditions for investment and a level playing field. (iii) Maximizing the growth potential of European Digital Economy. Investment in ICT infrastructures and technologies, e.g., Cloud computing or Big Data. There is almost unanimous consensus on these measurements among stakeholders but there are serious doubts regarding the fulfillment of these ambitious aims in a short period of time.

There are ambitious targets for the rollout of NGN in Europe. By 2020 the aim is to give all households access to broadband speeds above 30Mb/s and at least 50% of households should have access to 100 Mb/s. Digital Single Market Strategy pushes telecom operators to invest but regulatory asymmetries among the different key players in the internet value chain persist.

The benefits of a single market with common rules are great in number but even more in scope. A single market can significantly reduce risks, and also increase the profits of other companies and social welfare in the context of a global competitive economy. Europe has failed to specialize in the new business sectors like online services or user interface business. Telecom operators are at crucial momentum. There is a real threat from OTT players (e.g. Google, Facebook) better

positioned in the internet ecosystem to capture new economic revenue from innovation and new technological developments (e.g., Cloud computing, Big Data, Internet of Things IoT). Data portability and interoperability will be potential competition problems in the short future that the EC will have to face (Graef, 2015).

4. Market perspectives. Empirical methods

Taking into account the complexity of the internet ecosystem we have followed a simple model breaking down the Internet value chain into the five main markets following A.T. Kearney, (2010), vid fig.1.

The methodology for analysis of the economic situation and perspectives for the telecom operators in the internet ecosystem consists in the study of the major telecom operators in Europe. A comparison between Telecom operators in Europe is established with major operators in other regions of the World. To understand what is happening in the connectivity business within the internet ecosystem we have defined a “reference company”, not a real one but the result of the combination of the selected companies, vid. Fig. 2, to establish a comparison between the different businesses along the internet value chain.

We have examined key financial data and key parameters including ownership structure, market power and market competitiveness. The analysis has been done using financial data of the analyzed companies in fig.2 from 2010 till 2014. Information has been provided by Google Finance, Reuters and the Companies’ Annual Reports.

The three types of agents that have been considered in the analysis are:

- Online Services, that include platform and application providers (e.g. Amazon, Google, Facebook). These platforms are multisided markets. Online platforms such as Google or Facebook compete for users and advertisers.
- User interface business, providing network elements and services (e.g. Samsung, Microsoft, Apple). These companies gain most revenues by selling their technology to consumers instead of online services platforms whose business model rely on the information they collect about their users.
- Connectivity, network operators (fixed and mobile).

Figure 2, presents the lists of companies analyzed. The selection of companies corresponding to each element of the value chain have been done taking into account size of the company, market

capitalization and geographic area. Though some of the companies provide services that could be considered part of other elements of the internet value chain, the main activities and financial data have been considered to classify them.

Figure 2: Selection of companies by major activity in the Internet value chain

Online Services	Connectivity	User Interface
<ul style="list-style-type: none"> •Amazon •Baidu •EBay •Facebook •Google •Yahoo 	<ul style="list-style-type: none"> •AT&T •BT •China Mobile •MTN •MTS •NTT DoCoMo •Verizon •Vodafone •Telefónica 	<ul style="list-style-type: none"> •Adobe •Apple •Dell •Microsoft •Samsung •SAP

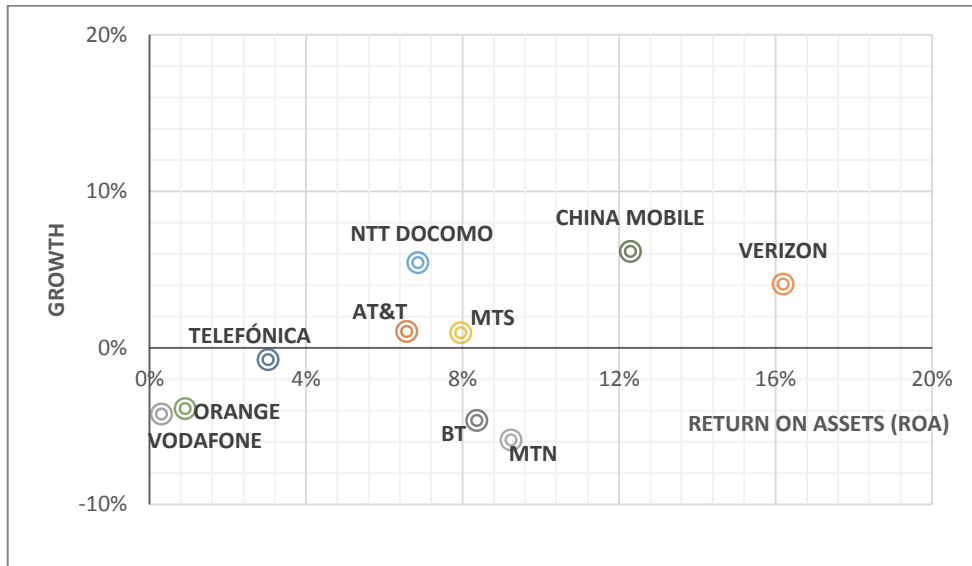
The variables used in the empirical analysis have been: growth, measuring the evolution of the revenues over a period of time; capital expenditure (CAPEX); cash flow from operating activities; return on assets (ROA); Research and Development expenditures (R+D); debt; liability ratio; assets; financial leverage.

In the analysis of the connectivity business we have selected major telecom operators by market capitalization in four geographic areas: Europe (British Telecom BT, Vodafone, Telefónica, MTS), North America (AT&T, Verizon), Africa (MTN), and Asia (China Mobile, NTT DoCoMo). All these operators have a global view in mind and work in different markets and countries.

The comparison of European telecom operators with other telecom companies in the global market shows the big difference between geographic markets but also regulatory diversity (vid. Fig.2) in terms of the foreseeable evolution of the value. For the time period analyzed, European Telecom Operators like Vodafone, Orange or Telefónica show smaller return on assets (under 4%) compared with Japanese NTT DoCoMo (around 7%), Russian operator MTN (9%), China Mobile (12%), or US operator Verizon (around 16%). The type of markets where the different telecom companies are providing their services can explain the difference observed in their ROA. The European market is growing slower compared with other regions where there is a lack of telecom infrastructures and growing number of citizens accessing to the internet. While European telecom operators have the lowest growth, other companies like Verizon delivering services in the US market shows larger growth rates in addition to the highest return on assets

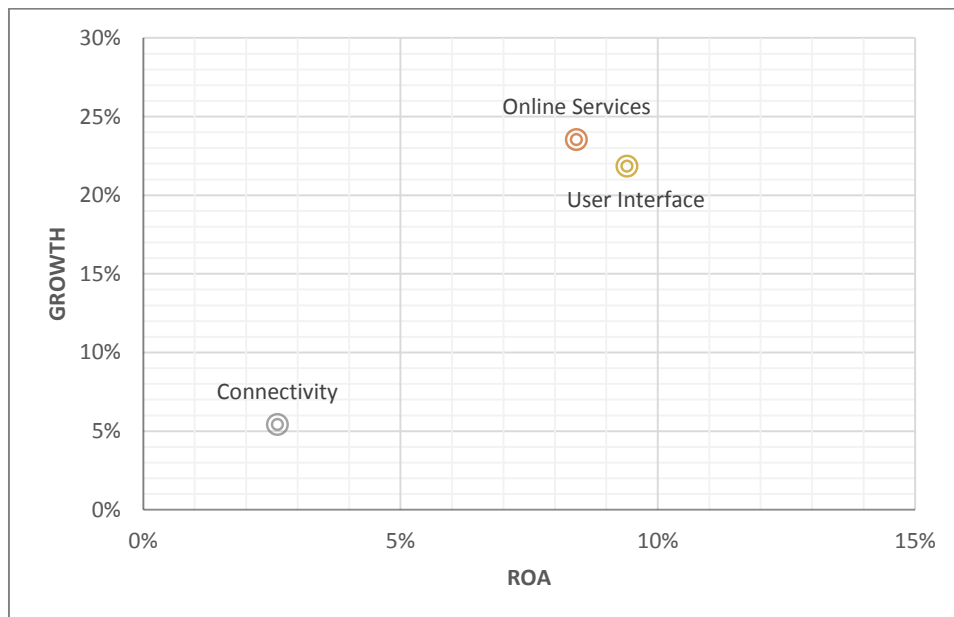
in the sample. The consolidation of the American telecom market can explain Verizon and AT&T results. In other cases, e.g., Asian market, results for China Mobile can be explained in terms of the expansion of their own local market, with millions of people accessing broadband services.

Figure 3: European Telecom Operators in the Global Telecom Market. Growth v. ROA



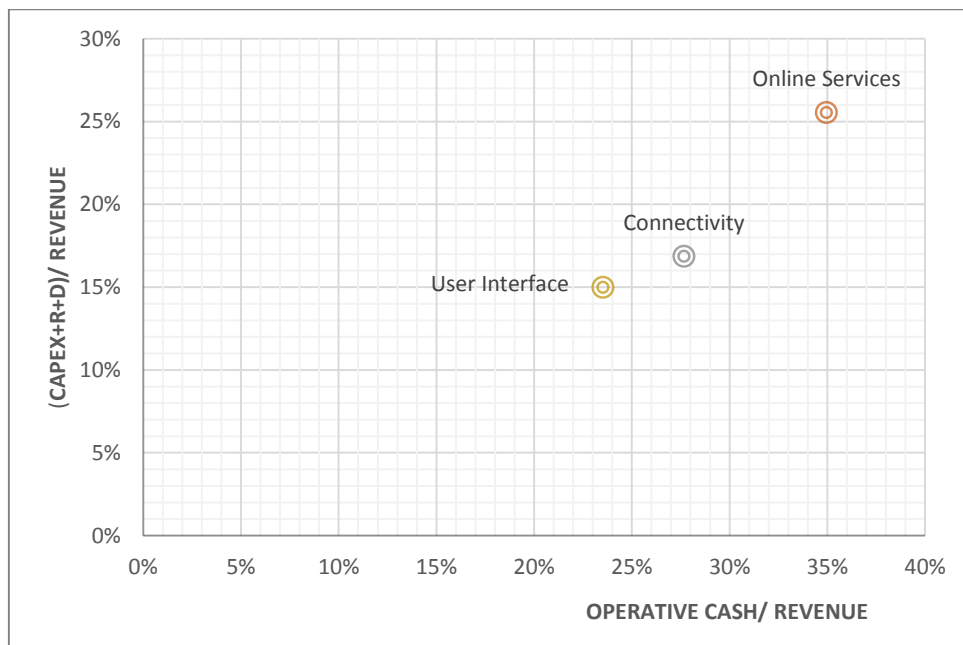
The comparison between companies operating in different parts of the internet value chain in terms of future value, taking into account return on assets and growth in previous years, shows the far distance that exists among connectivity, online services and user interface businesses.

Figure 4: Comparison: Internet Businesses. Growth v. ROA



With growth rates in mean for online services and user interface companies over 20%, telecom operators' growth is hardly over 5%. ROA is also very low in the case of companies in the connectivity sector, around 3%, compared with the online services, around 8%, and companies focused on user interface platforms, around 9%. See fig. 4. Companies delivering online services and user interface platforms are in the best market scenario whilst connectivity is very bad situated and companies delivering those services should try to grow increasing their value, one alternative is to grow with vertical integrations along the internet value chain adding new services to their portfolio related to online services and user interface businesses. Though content link of the value chain has not been considered in this analysis, future growth in the internet ecosystem for any of the three sectors under this analysis should be considered this alternative.

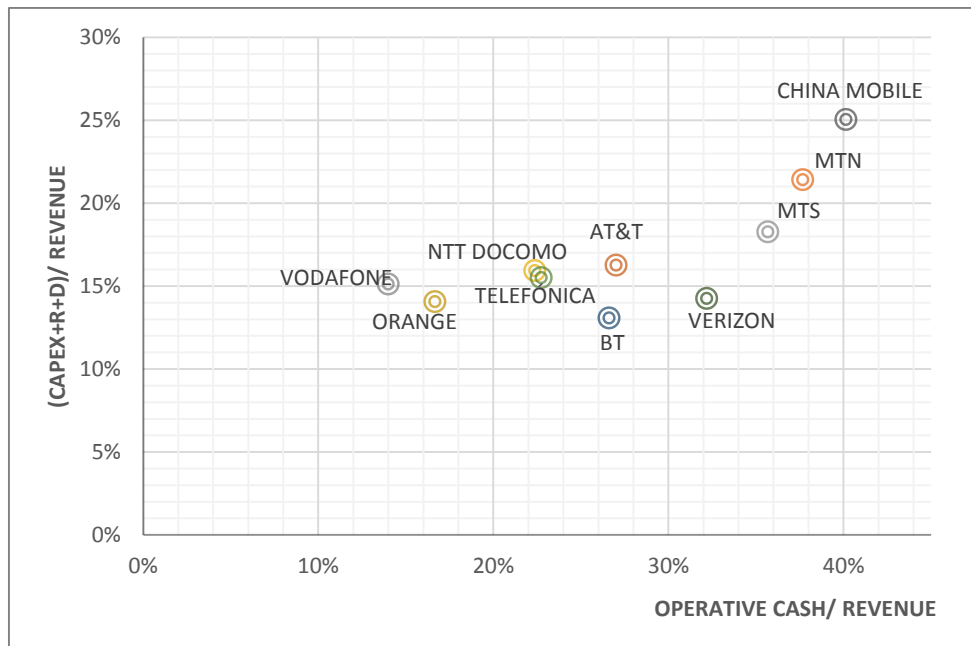
Figure 5: Comparison: Internet Businesses. Financial capacity



If we are considering financial capacity and investment (including R+D), the analysis in terms of activities in the internet value chain (vid. Fig 5) shows online services are very well positioned in the internet ecosystem, with high rates on capital expenditure and R+D over revenue, around 25%, and higher cash flows from operating activities over revenue (around 35%). Connectivity business is well positioned in terms of cash flows over revenue (around 27%) but with lower capacity of investment regarding online services, most investment is done in terms of CAPEX against the R+D. User interface businesses have worst financial capacity than the other sectors under analysis but investment is a key parameter to analyze future growth.

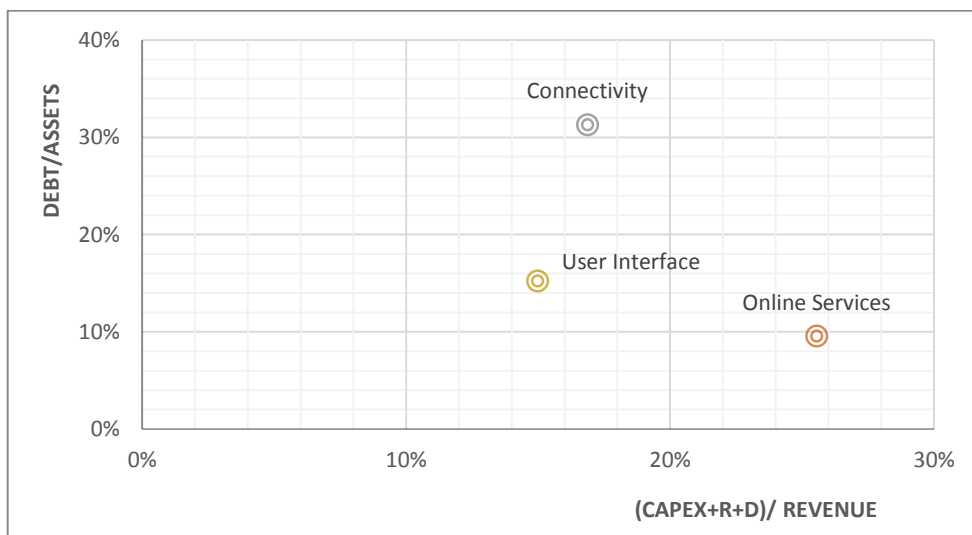
The analysis of European telecom operators in terms of financial capacity taking into account investments (including R+D), vid. Fig. 6, shows similar ratios of investment, in terms of CAPEX and R+D, for US network operators AT&T and Verizon, though the ratio operating cash over revenue is better for the American companies (around 30%) and much better for companies operating in Africa or Asia, like China Mobile (40%) and also with the highest investment.

Figure 6: European Telecom Operators in the Global Telecom Market. Financial capacity



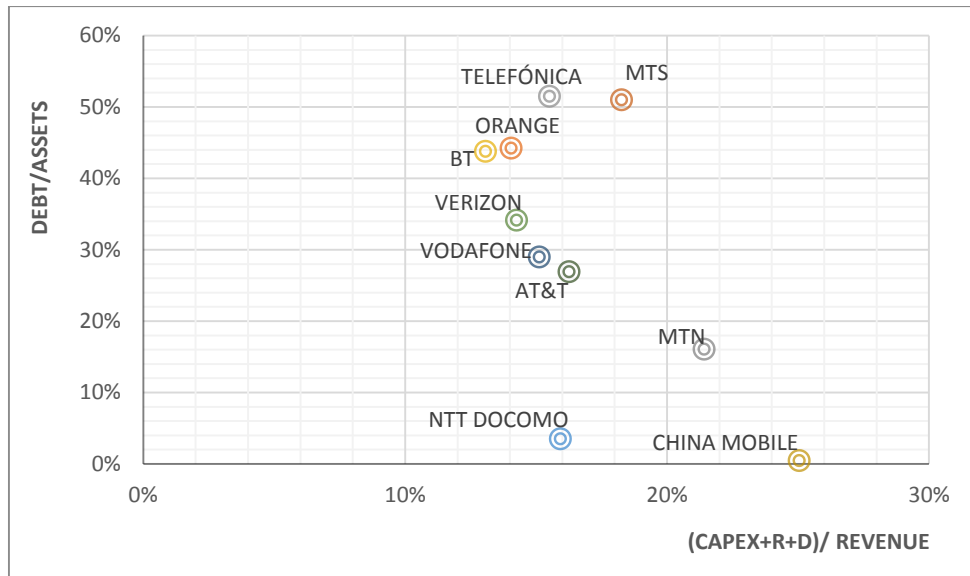
In terms of leverage ratios and capital expenditures (including R+D) over revenues, the comparison between the different activities in the internet value chain shows (vid. Fig. 7) connectivity is the worst position in terms of leverage (around 30%) with higher debt, what compromises the investment effort companies in this business can afford.

Figure 7: Comparison: Internet Businesses. Leverage v. Investment



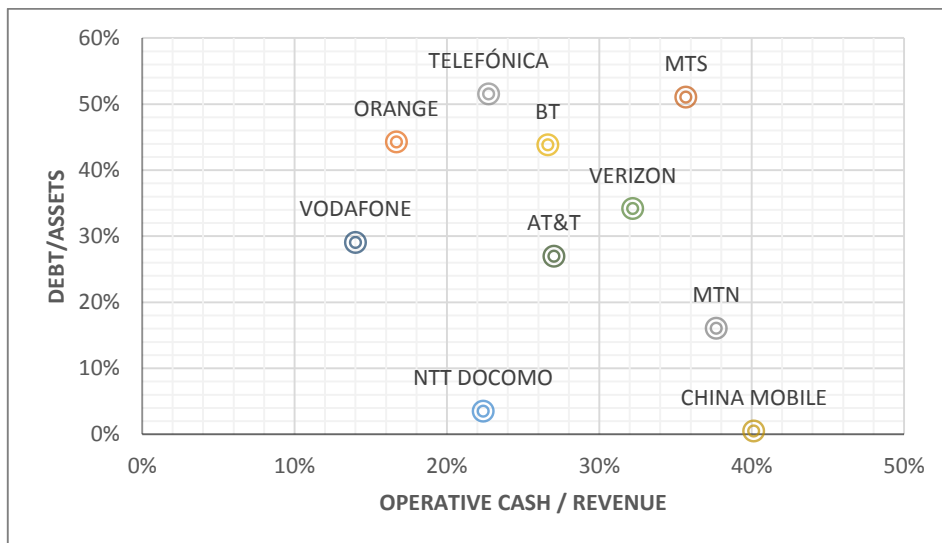
Online services and user interface are in much better conditions to invest in terms of leverage, around 9% and 15% correspondingly. But also because of better ratios of capital expenditures and research and development expenditures over total revenue, online services around 26% and user interface (around 15%).

Figure 8: European Telecom Operators in the Global Telecom Market. Leverage v. Investment



The same analysis but for telecom operators (connectivity business), vid. Fig. 8, shows high leverage ratios, as in Fig. 7. The higher leverage ratios, for Spanish incumbent telecom operator Telefónica and Russian operator MTS, in both cases are around 50%. On the other hand, China Mobile and Japanese NTT DoCoMo have the lowest leverage ratios 0% and 4% rates, respectively.

Figure 9: European Telecom Operators in the Global Telecom Market. Leverage v. Operative cash/Revenue



Regarding capital expenditures (including R+D) over revenues, connectivity has the worst position in terms of leverage (around 30%) with higher debt. These figures compromise the investment effort companies in this business can afford. By contrast, online services and user interface are in much better condition to do future investments in terms of leverage, around 9% and 15% correspondingly. But also because of better ratios of capital expenditures and research and development expenditures over total revenue, online services (around 26%) and user interface (around 15%).

Figure 9 shows the relation between leverage and cash flows from operating activities over revenue, European Telecom Operators have more leverage and lower cash flows from operating activities, what situates them in a worst position in comparison with American (Verizon, AT&T) or Asian telecom operators (China Mobile, NTT DoCoMo).

5. Discussion and conclusion

Telecom operators provide services that are central to many other sectors of the European economy. The internet ecosystem and its economy rely on the investment in next generation networks telecom operators will make. Investment in new mobile and fixed networks has a key role to provide the desired mobile connectivity to internet to millions of European citizens.

The aim of the EC is to strike a balance between promoting sustainable competition and providing incentives for investment in NGN. Interoperability, interconnection, universality, and user rights will most likely be important components but they will have to be re-conceptualized for the new environment (Bauer, 2014).

Telecom operators and OTT players are facing great challenges. Net neutrality debate, network's performance, or regulatory asymmetry will force policymakers to take actions. The institutional European framework influences outcomes and policy choices have to be made by Governments and regulators. European authorities can consider that some of the new services offered by OTT players are in fact electronic communication services and should be treated under a common regulatory framework, like traditional telecom services. This possible new regulatory approach could reduce existing regulatory asymmetries though translating the new approach into practice could create new challenges. The play of influences in the global economy is likely to change under those new conditions.

Telecom business is a fast growing sector having a high research and development component. Regulatory risks and other barriers that could lead to lower investments, or make them less

valuable to telecom operators could be reduced or at least made less intense. The resulting effect of a common regulatory framework and the consolidation of the market on overall welfare maybe positive for Europeans.

Empirical results show that risk factors can significantly affect less when there is a single market, with common rules and opportunities of economies of scale and scope emerge. Those are much more efficient because of the expansion of the market. Bundling superfast broadband with mobile internet, pay-TV and other premium content are some commercial strategies telecom operators are following in different geographic regions.

Mergers and acquisitions among telecom operators are expected to have a significant impact. Consolidation of the telecom market started in the US. Empirical results show this strategy is working in the American market and other regions in the World. It would be desirable a similar strategy for European major telecom operators (e.g., Vodafone, Telefónica, BT, Deutsche Telekom, France Télécom).

A Single European Telecom market can lead to a new scenario with a clear contribution to growth in terms of productivity and technical progress, and a faster consolidation of the market, increasing the value of European telecom operators.

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