

# **Contribution of Orange**

**to**

## **BEREC Report on Oligopoly analysis and regulation - Questions to stakeholders**

Document number: BoR (14) 172

**January 2015**

- Name of the organization responding to the questionnaire: Orange
- Brief description of the role of the organization : Orange is one of the world's leading telecommunications operators with sales of 41 billion euros in 2013 and has 159,000 employees worldwide at September 30, 2014, including 99,800 employees in France. Present in 30 countries, the Group served 240 million customers worldwide as of 30 September 2014, including 182 million mobile customers and 16 million broadband internet customers. Under the Orange Business Services brand, Orange is also one of the world leaders in providing telecommunication services to multinational companies.  
Orange is listed on NYSE Euronext Paris (ORA) and on the New York Stock Exchange (ORAN).
- Name, e-mail address and phone number of the contact person: Vianney Hennes, [vianney.hennes@orange.com](mailto:vianney.hennes@orange.com), phone number 32 28008730

## Executive summary

The decrease of unit prices – as well as other sustainable consumer benefits - essentially depend on investments in networks. These reflect operators' expectations regarding profitability, expectations which in turn are closely related to the actual level of market concentration. However, using market concentration as the only assessment indicator is not a suitable manner to comprehend how the telecommunications industry operates and to measure how it can support European people and the European economy.

BEREC should acknowledge that competition has matured and that deregulation is now the normal and expected evolution; in this line, the major sound public policy objective remaining today is to support private investment in new NGA fixed and mobile infrastructure.

Consequently Orange considers that the next regulatory framework:

- should limit access regulation to wireline access infrastructure:
  - o because mobile operators already have license obligations,
  - o because mobile wholesale access has been off the list of relevant markets for nearly a decade and will not return,
  - o because mobile and fixed data services are complement for customers, so that access to fixed infrastructure is vital for pure MNOs to meet customers demand and survive,
  - o because interconnection and mobile termination issues can best be solved by a symmetric approach.
  
- wireline access regulation should take the form of generic access obligations that would apply to all wireline infrastructures and be subject to proportionality conditions by geography. This format would lead to light touch obligations on generic access but may be complemented, if appropriate, with stricter asymmetric obligations for a specific provider's generic access, for example when this wireline access infrastructure provider is SMP in a given geography.

## Situations of oligopolistic competition in the electronic communications sector

1. In the electronic communications sector, do you consider that there are markets that were characterized by oligopolistic structures from the outset? In your view, which factors (scarcity of spectrum, high level of required investments, etc.) explain the existence of these market structures? Are wholesale markets more prone to oligopolies than retail markets?

Orange has strong concerns with the word “oligopolistic” used in the present consulting because it may be interpreted:

- either descriptively and neutrally to objectively designate markets in which a degree of concentration is natural and efficient
- or with a negative connotation implicitly implying that some form of abuse are necessarily associated with this qualification.

We strongly deny that there is any necessary link between these two interpretations and to avoid any misinterpretation of our answer we will use the words “concentrated markets” or “concentration” in the following.

Furthermore, the concept of “oligopoly” is absent from the regulatory framework that the National Regulatory Authorities represented in BEREC are supposed to apply and therefore we also strongly question the appropriateness of considering such an undefined concept for regulatory purposes.

In the answer to this consultation, sections that follow, we refer to a concentrated market as a market featuring a small number of large firms addressing the demand of a large number of consumers.

Some industries have concentrated market structures from the outset. The industry of electronic communications services features a defined range of specific characteristics which lead to concentrated market structures: economies of scale but as importantly, network externalities and fast technical change.

- *First*, the building and operating of a network necessitate high fixed investment costs. These activities are thus characterized by economies of scale (the production function has increasing returns at least up to a certain level of production). The average cost of production decreases and the efficiency of production increases with the volume of production. At the current level of production in our industry, economies of scale which have a significant impact on market structures are mainly localized at the local loop level. Potential competition concerns resulting from economy of scale are addressed within the existing framework through access obligations imposed on SMP operators. It should be noticed that if access obligation may have a static positive effect on welfare due to economy of scales shared between a larger number of undertakings and customers, it also have a negative dynamic impact as it undermines the incentive of any single undertaking to invest in network infrastructure, as it cannot expect to enjoy any competitive edge from such investment on the retail market.

- *Second*, network externalities arise in markets of electronic communications services (*i.e.*, the value of the service for one given user in a network depends on the total number of services' users on the same network). As a result, the highest market value is reached when the network is monopolistic. To keep the same benefit in a competitive market with several networks operate, the current framework imposes symmetric interconnection obligations to all network operators in order to maximize the consumer benefit of network externality in the industry. However, as the complexity and cost of interconnecting several networks grow more than proportionally to the number of networks, it is more efficient to have a limited number of networks. Besides, it should be noticed that if the universal obligation of interconnection imposed to electronic communication networks has a static positive effect on welfare due to the externality effect, it also have a negative dynamic impact as it requires high and complex coordination efforts between all network operators to introduce innovations in networks.
- *Third*, the electronic communications industry is characterized by a very high rate of technological change. The high level of investment needed to permanently incorporate technological change is a major explanatory factor of market concentration. The level of profits needed to sustain the continuous pace of investments which incorporate the technological change into infrastructures and services can only be achieved through concentrated market structures. Such market structures allow for private investment which enables the diffusion of technological progress into the global economy and society alike and is by far the major driver of price reductions in the telecommunications industry. The optimization of this powerful engine of diffusion of technical progress and unit price reduction in the economy should be the major concern of regulatory and competition policies in the electronic communications industry.
- Concerning the scarcity of spectrum, it is true that an efficient use of scarce spectrum, benefitting from large slices of frequencies for maximal technical efficiency is better insured by a concentrated marked structure. But it is difficult to consider spectrum as an explanatory factor as concentrated market structures are also observed in markets (for instance oversea islands) where spectrum is not scarce.

NRAs have imposed entry of additional competitors in retail markets with the *per se* objective of reducing the concentration of these markets. The promotion of entry, aimed at increasing the number of players, can lead to inefficient market outcomes. In the 90s and the beginning of years 2000, there has been a fast and widespread development of mobile services in Europe and then all over the world, and a general increase in the volume and the quality of services. This outcome has been achieved by a process of competition through investments in very concentrated markets. A high level of dynamic competition through permanent investment occurs in technological markets such as telecommunications provided markets are sufficiently concentrated to allow for investments.

There is no general economic law which would imply that retail activities *per se* are necessarily more or less concentrated than production activities. Very concentrated brands of retailers sell the output of very fragmented sector of producers. In the digital domain, the 5 major Internet

platforms (GAFAM) addressing both retail and business segment proves that retail markets can be extremely concentrated.

In telecommunications, the split between wholesale and retail activities is essentially the artificial outcome of regulatory decisions. Regulatory intervention is structurally designed to generate less concentrated retail markets than wholesale market. Therefore, it would be circular to derive from the observation that retail markets may be currently less concentrated than wholesale market, that intervention is required to artificially maintain this state of things.

It may be that current policies have prevented efficient moves leading for instance to more vertical integration. Moreover, the multiplication of small local publicly funded infrastructure operators all over Europe is generating more fragmentation at the network level. It may require a high degree of concentration at the retail level to have a chance that these local public infrastructures are efficiently used.

**2. Do you consider that there has been an increase in oligopolistic market structures (including duopolies) in any of the electronic communications services markets or more generally in the sector?**

This question may be understood in three ways:

- 1) Has there been a decrease of monopolistic situations in electronic communications in recent years, with more and more competitors between two, three or more networks in competition?

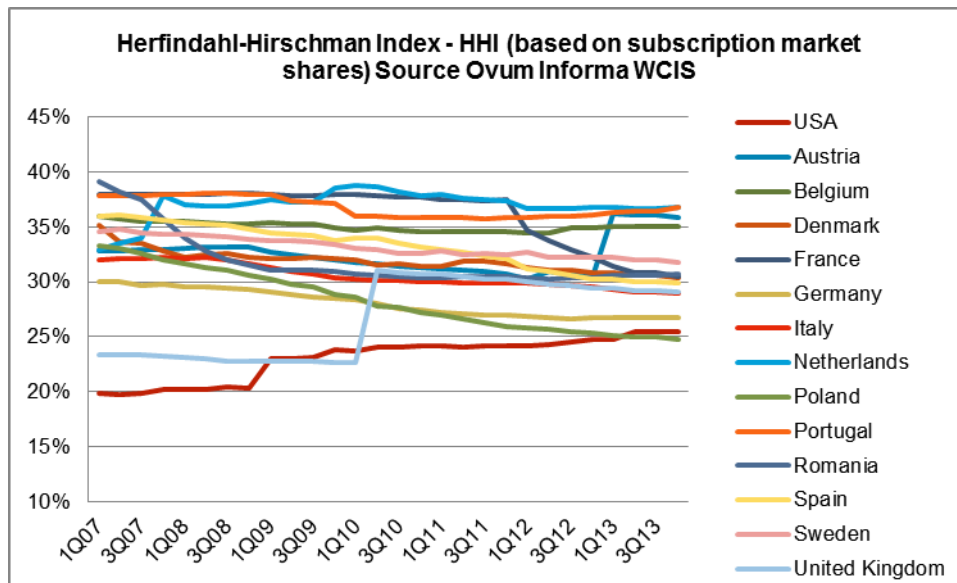
The answer is yes and this has resulted in an increase of the general level of competition in electronic communications markets. Head on competition between cable operators and telecom operators on triple play offers, the parallel roll out new fibre infrastructure in competition with existing copper, the multiplication of publicly subsidized local fixed infrastructures, all these evolutions change former monopolistic activities into competitive activities.

Concerning mobile networks, they always have been competitive from the outset, the current motions of entry and mergers reflect that markets are currently at the borderline of sustainability from a structural point of view. Any artificial regulatory intervention to increase the number of players is likely to generate an unstable and unsustainable market structure.

- 2) Has there been a significant change in the descriptive statistics of market structures and the metric of market concentration?

Retail market structures have remained rather stable both in the sector and in any electronic communications services market. Depending on the time horizon used to answer the question one could say that even if the market remains concentrated the number of actors increased during the past period, despite very few mergers that have not change the global landscape. The sector has now more actors and plate-forms than few years ago, the number of services offered and the competition have increased.

The levels of market concentration in the majority of the largest mobile European markets have not increased between 2007 and 2013, as shown by the evolution of the HHI in these countries. In general, the HHI in the main mobile markets of the European Union do not exhibit any increasing trend, while it has steadily increased in the U.S. during the same period.



- 3) Has there be an increase of the market power of the undertakings operating in electronic communications markets in Europe? The dramatic decline of turnover, profits and investments in Europe, a unique and extremely concerning state of things in the worldwide digital world, clearly proves that the answer is no.

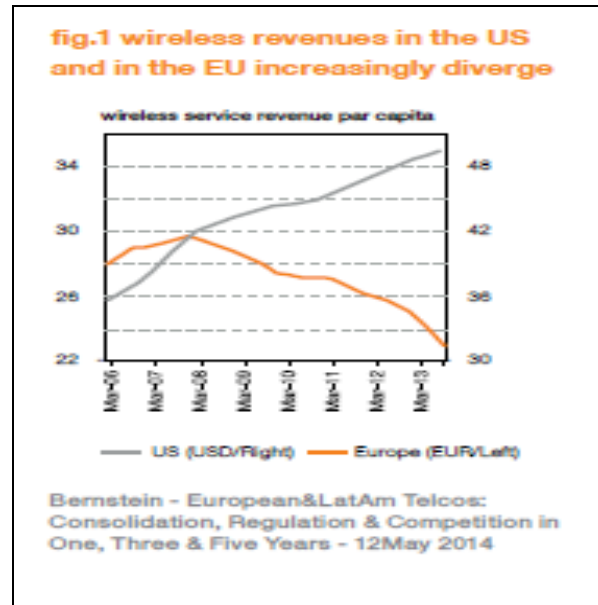
Depending on the sources between -1.1% and -3.3% decline in turnover of the electronic communications industry in Europe has occurred in 2012<sup>1</sup>. All sources, the EC, OECD, all major consultants on the subject (Idate, ADL, BCG, ...) confirms the negative trends in turnover and in margins of the European electronic communication industry as a whole in recent years. According to Arthur D Little, the revenues of the European digital ecosystem decreased of 16% between 2007 and 2013, which is a unique case worldwide.<sup>2</sup>

This directly contradicts any hypothesis that players of the electronic communications markets may enjoy any increase of market power, especially as volumes have steadily increased during the last period.

The situation in Europe is in stark contrast with the situation elsewhere, as exemplified by the graph below from Bernstein (but all sources converge on these points) which compares wireless revenue trends between EU and USA.

<sup>1</sup> European Scoreboard 2013, COMMISSION STAFF WORKING DOCUMENT Implementation of the EU regulatory framework for electronic communications - 2014

<sup>2</sup> The Economics of Telecommunications in France 4th Arthur D. Little study for the French Telecom Federation



### Possible effects of oligopolistic competition

### 3. What are the main threats to competition and to the interests of end-users, which might result from the oligopolistic market structures referred to above?

We consider that there is no contradiction between a high intensity of competition and a concentrated market structure. Markets with a small number of large firms can be highly competitive. In the mobile industry, concentrated markets with high intensity of dynamic competition have allowed for the rapid worldwide diffusion of digital services. The relevant question for policy makers is to set up the optimal degree of competition which allows for the sufficient levels of investments. Industries with high levels of investments in fixed assets and high rate of technological progress such as mobile telecommunications are likely to exhibit concentrated market structures, and are at the same time subject to intense competition.

A competition issue could arise if mobile-only providers were excluded from the process of fixed-mobile services convergence. The market power of integrated and complementary fixed-mobile service providers could increase if mobile-only service providers were being cut-off from competition in integrated electronic communications services. The setting of an efficient level of competition has to take account of the process of fixed-mobile convergence and the provision of related services by integrated providers (and the possibility for mobile-only operators to compete with integrated fixed-mobile service providers).

In this respect, it should be noticed that a recent econometric analysis from Grzybowski and Liang (2014)<sup>3</sup> has proven that fixed and mobile data services are complementary and not substitute. Therefore policy should favor the ability of mobile players to provide mobile fixed convergent offers rather than support competition between mobile and fixed pure players.

<sup>3</sup> Lukasz Grzybowski and Julienne Liang (2014) « Estimating Demand for Fixed-mobile Bundles and Switching Costs Between Tariffs ». <http://idei.fr/doc/conf/sic/conf%202015/liang.pdf>

4. Do you consider that there are any benefits or opportunities (for instance related to the roll-out of NGA networks in the context of broadband access) that could arise from oligopolistic situations? Please explain your reasoning.

In industries like electronic communications services, benefits are essentially brought to the consumers and the global economy alike through dynamic efficiencies. They occur in concentrated market structures where network operators compete through investments. The benefits relate to the provision of a wide range of services at a lower unit price. These services are continuously increasing both in terms of volume and quality through the investments of network operators, according to dynamic efficiencies. In order to sustain the investments which incorporate technological change and allow for these improvements, network operators need sufficient profit margins. These levels of margins are obtained provided the degree of competition is the most efficient. The optimal intensity of competition can only occur in a concentrated market structure. These investments will be engaged provided the network operators expect sufficient returns. They will occur if the current levels of profit margins are sufficient to finance the capital expenditures.

As a result, the main concern of competition and regulatory authorities and policy makers alike should be the research of the optimal level of competition intensity allowing dynamic competition through investment, rather than the increase in the number of market players for the sake of reducing the degree of market concentration.

Two economic papers illustrate the relation between market structure, profit margin, investment and unit prices. The first one is related to the level of competition intensity that maximizes investment in the mobile telecommunication industry.<sup>4</sup>

This paper empirically assesses the impact of the intensity of competition on investment in new technologies in the mobile telecommunications industry. Using firm level panel data and an instrumental variable estimation it evidences an inverted-U shaped relationship between competition intensity and investment. Competition intensity is measured using the Lerner index at the firm level. The level of competition intensity that maximizes investment stands at 62 percent. This means that the maximal level of investment is reached, on average, when the operating profit (Ebitda Margin) represents 38 percent of total revenue. This result is furthermore confirmed through a theoretical model that yields an inverted-U relationship between competition and investment. It shows that the potential technological progress, measured by the impact of investment on the reduction of marginal cost of production, is the main driver of the investment maximizing intermediate level of competition. The higher the potential technological progress, the higher the level of concentration that maximizes investment. New, more refined versions of this work will soon be available but will not significantly modify the general conclusions.

The second paper identifies the relationship between investment and the fall in unit prices of mobiles telecommunications services.<sup>5</sup> Mobile industry is characterized by a sharp fall in

---

<sup>4</sup> Georges Vivien Hougbonon and François Jeanjean (francois.jeanjean@orange.com)

25th European Regional ITS Conference, Brussels 2014 from International Telecommunications Society (ITS)  
<http://econpapers.repec.org/paper/zbwitse14/101384.htm>

<sup>5</sup> What causes the fall in prices of mobile telecommunications services?



megabyte price which highly benefits the consumers. This article identifies the main parameters that lead to such a fall and shows that the growth of traffic is by far the main cause. It proposes a parametric model that shows how the growth of traffic stems from investment. Using a 20-countries wireless market dataset to calibrate the model, it shows that investment actually drives the exponential growth of traffic. As revenues are comparatively much more stable, the price of megabyte decreases sharply. The role of competition is ambiguous. On the one hand it reduces margin and thus price, on the other hand, as the relationship between investment and competition turns to be inverted-U shaped, it may reduce investment and therefore slow down the fall in unit price. The former effect dominates when there is very little competition and the market is close to monopoly. The latter effect starts to dominate when the Ebitda margin is in the range of 40% or below.

**5. In your view, are there any electronic communications services where oligopolistic markets are more susceptible than others to uncompetitive outcomes? Please, explain your view.**

Wireline access infrastructure activities are still in large part of Europe under monopoly or duopoly market structures. For this reason they are likely not to spontaneously operate at the optimal degree of competitive pressure. The outcome may be unsatisfactory mainly in cases when fixed infrastructure owners operate in fixe mobile convergent markets and put at risk the activities of pure MNOs, due to potential cross subsidies between fixed and mobile activities.

The regulatory framework, properly used, can address this issue in case of fixed line monopoly. When a telco and a cabo are competing on the fixed market, the provisions of the regulatory framework to provide a fair and efficient access to wireline infrastructure to pure MNO are not fully satisfactory. As they are based on asymmetrical obligations of one market player they generate both a regulatory distortion between the telco and the cabo and an inefficient access for the MNO if the unregulated infrastructure has a competitive advantage on the regulated one. One possibility based on the current framework may be to impose, if appropriate and supported by the case, an access obligation on one relevant market to one infrastructure (e.g. relevant market 3.a.) and another access obligation on another relevant market to the other infrastructure (e.g. on relevant market 3.b.). But this is a fragile solution.

Joint SMP is a non-starter as it is a confusing and ill-defined notion, at the opposite of the requirement of a secure and investment supportive regulatory environment. This point will be further developed in the coming question.

The right way forward is the possibility of a symmetric access regulation covering all wireline access infrastructures submitted to a proportionality, transparency and notification procedure, taking into account geographic segmentation. More details on this proposal are given at the end of the present document.

## Regulating oligopolies

**6. In your view, are there any areas of concern in relation to oligopolistic outcomes which are not adequately addressed by the current regulatory framework (i.e. both the European Union relevant texts and NRAs' policies)? In particular, what is your appreciation of the concept of**

## collective dominance? What do you consider to be the most effective regulation of anti-competitive oligopolistic situations?

The current regulatory Framework objective is to develop an “effective” competition and to encourage “efficient” investment for the benefit of end users. The task is to consider the competition level on relevant markets and to assess the possible existence of a SMP. Nowhere in the framework “Oligopoly” is mentioned and it is not in question.

De facto, electronic communication sector is a concentrated market, but the question of the adequacy of the current regulatory framework is more related to its implementation with respect to competitive circumstances than the concentrated market structure itself that usually provides competitive outcomes (as electronic communications networks are in capital intensive industries with fast technological change).

The main concern, already mentioned, is the unsatisfactory framework for access to wireline access infrastructures for a pure mobile operator in case the wireline infrastructure market includes a telecom operator and a cable operator.

Regarding collective dominance, to date this option has proved to be inconsistent and impractical. The inability to demonstrate it in case suspicion is raised in a particular market is a clear symptom of the inconsistency of the concept itself.

According to standard competition law practice and jurisprudence it has to be proven that three cumulative criteria would need to be met<sup>6</sup>:

- first, the parties should be able to reach an implicit agreement on a so-called focal point for coordination that is considered to be in everyone’s best interests;
- second, in order for cooperation to be sustainable, there needs to be a credible punishment or retaliation mechanism in place that disciplines the coordinating firms and prevents deviations from the coordinated outcome;
- third, there should be no external factors that undermine the coordinated outcome by putting the longer term projected future profits of coordination at risk.

Consequently, joint dominance concept appears to be a non-starter and should not be included in the tool box of regulators.

Mobile access does not need to be regulated on top of licenses obligations. Concerning wireline access infrastructure, where proportionate, the most effective tool is a symmetric regulation. It is currently used in the case in France for the terminal segment of the fibre network (FTTH).

Such a symmetric regulation should be more systematically used for wireline access regulation: the right way forward is to secure in the framework the possibility of a symmetric access regulation covering all wireline access infrastructures submitted to a proportionality test, a transparency and notification procedure, taking into account geographic segmentation. This symmetric regulation would consist of a generic access obligation imposed to all wireline access infrastructures where the symmetric regulation applies, associated with a limited set of relatively light touch potential symmetric obligations, such as transparency or non-excessive

---

<sup>6</sup> Court of First Instance, Airtours/First Choice, 6 June 2002. See also Bishop and Walker (2010), The Economics of EC Competition Law: Concepts, Application and Measurement, paragraph 7-072.

prices. It may be completed, if appropriate for an efficient outcome, by stricter asymmetric remedies which could only reinforce the generic access obligation resulting from symmetric regulation.

Such a move towards symmetric regulation is necessary for wireline access.. It is also necessary for the interconnection regulation for harmonization and balanced financial flows within Europe reasons.

## Remedies in the context of oligopolies

**7. In your view, what are the main ex ante remedies (which are currently present or could be introduced in the European ex ante regulatory framework) that could be applied to electronic communications services markets exhibiting oligopolistic market structures? (similar or differentiated remedies, symmetric regulation, etc.)?**

Concentrated markets are not per se a regulatory or policy concern. The concern is the optimal competitive intensity to foster investment.

If a concentrated market is competitive there is no need for remedy.

If the market encounters competitive problem with a notified SMP the current remedies related to the access regulation look appropriate as long as they are proportional.

One mandated access level per wireline infrastructure should be sufficient in areas where symmetric regulation of wireline access infrastructure, as defined in the answer to the previous question, appears proportional.

As mentioned in Orange answer to the previous question, the review of the regulatory framework should consider in priority symmetric regulation as the main regulatory tool for access, in the only activity where such regulation may still be appropriate, wireline access infrastructure.

## Other issues

**8. Please, provide any other insight or opinion regarding oligopoly analysis and regulation.**

BEREC should acknowledge that as competition has grown, deregulation is the normal evolution and that the only sound public policy objective today is to support private investment in new NGA fixed and mobile infrastructure.

The key points of Orange present answer are the following.

- Restrict any possible access regulation to wireline access infrastructure:
  - o because mobile operators already have license obligations,
  - o because mobile wholesale access has disappeared from the list of relevant markets for nearly a decade and will not come back,
  - o because mobile and fixed data services are complement for customers and therefore access to fixed infrastructure is vital for pure MNOs to survive,

- because interconnection and mobile termination issue can best be solved by a symmetric approach.
- Wireline access regulation should take the form of a generic access obligation applying to all wireline infrastructures subject to proportionality condition by geography and leading to light touch obligations associated with this generic access. Stricter obligations may be, if appropriate, asymmetrically added to the generic access of a specific provider if this wireline access infrastructure provider is SMP in a given geography.
- Sustainable consumer benefits and unit price decreases essentially depend on network operators' investments. Those depend on operators' profitability prospects which depend on an appropriate level of market concentration. Considering market concentration as a concern per se is the sign of a profound misunderstanding of how telecommunications industry operates and of how it can serve well European people and economy.