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**Conference Paper**

## Telecom operators and the aftermath of the European Commission agenda for the termination of roaming charges within the EU

26th European Regional Conference of the International Telecommunications Society (ITS), Madrid, Spain, 24-27 June 2015

**Provided in Cooperation with:**

International Telecommunications Society (ITS)

Suggested Citation: Ntarzanou, Vasiliki; Portela, Miguel (2015) : Telecom operators and the aftermath of the European Commission agenda for the termination of roaming charges within the EU, 26th European Regional Conference of the International Telecommunications Society (ITS), Madrid, Spain, 24-27 June 2015, International Telecommunications Society (ITS), Madrid

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Conference paper:

# Telecom operators and the aftermath of the European Commission agenda for the termination of roaming charges within the EU

*26th European Regional Conference of the International Telecommunications Society*

*San Lorenzo de El Escorial, Spain, 25th – 27th June 2015*

Ntarzanou, Vasiliki

Portela, Miguel

## **Abstract:**

The telecommunication sector within the European Union is facing fundamental changes, both because of global developments such as the introduction of OTT services and because of the hurdles along the way towards the transition to a European Digital Single Market. In this unified market many European operators possibly won't survive in their current form but it is expected that the resulting ones be more resilient and strong.

This leads to extended interactions between technology, market and regulation and the possible outcome scenarios, deriving from these interactions, shape to a great extent the developments in the European Telecommunications market, bringing changes in the strategies of OTT and Telecom operators and leading the evolution of their surrounding ecosystem.

In a unified market in the telecom sector, mandated by EU regulation and developments in the field of communications, there is potential for fundamental changes that will ensure that the market evolves and adjusts successfully to this new frame and that the consumers' needs are fully met. On the one hand, it is important that the EU regulatory frameworks are clear and well thought, but in return Telecoms need to make their own strategic adjustments to survive within those frameworks. This paper explores the possible effects of the termination of international roaming charges on Telecom operators and sets the ground based on which strategic changes can be made in order to compensate for the loss of this revenue stream.

Inside the European Union several voices have been raised about the economic gains of a Single Market of telecommunications. The scale of these gains are difficult to predict but the transition to a more unified telecommunications market is a vision that the EU attempts to complete gradually, demanding that Telecom operators eventually comply and adjust.

There is a big sea of possibilities for corporate strategies that telecom operators can follow to grow in revenue and profitability and some companies are already showing signs of what they

plan to do. Also there are already trends observed in terms of capital for concentration and consolidation in this sector which leads to a basic conclusion that companies are trying to get ready even in adverse financial times.

This paper aims at identifying the players in the roaming market and making clearer which strategic trends are being popularized and have more chances of resulting in a successful strategy for telecom operators.

# 1 INTRODUCTION & BACKGROUND

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The EU Telecom market has for years been a fragmented market with each national Telecom market initially being dominated by national monopolies. The EU has been trying to change that for over two decades now first through the liberalization and harmonization of the European markets and the Open Network Provision and nowadays with policies that promote competition through the creation of a European Telecom Single Market (Liikanen, E., 2001).

Nevertheless, one of the most awaited regulatory decisions that the previous Vice President of the European Commission, Neelie Kroes, has been pushing for but hasn't been implemented to this day is the elimination of roaming charges in the EU. This paper focuses on this subject from the Telecom operators' perspective as part of the broader discussion about the Telecoms Single Market in Europe.

The absence of regulation in mobile communications regarding international roaming had for many years allowed significantly high prices for roaming services and an important source of revenue for mobile operators. In Spain they accounted for more than 8% of total revenue before the euro tariffs were being implemented (Portela, M.; Ntarzanou, V., p.p. 115-123, 2015). Roaming fees are what the EU is viewing as one of the most important obstacles for the creation of the single market. Since 2007, roaming charges have been gradually lowered through the implementation of caps on roaming prices, which has led to more than 80% lower fees in the retail prices for voice, SMS and data<sup>1</sup>.

The next step came in 2013 when the "Connected Continent Legislative Package" was passed, a proposal that came to remove barriers, enable competition throughout the whole union and create further progress in the creation on the Telecom single market<sup>2</sup>.

The price caps on roaming fees from the EU and their consequences have been extensively discussed throughout Europe since their implementation. Price caps, while highly beneficial for the roaming citizens of the EU, threaten to make a market worth 4.8 billion euros in 2014 disappear, during a time when operators' revenues are reporting negative growth consecutively since 2009 (ETNO, 2014) (Gentner, A. 2014), which could in turn create a negative environment for investment if operators feel dissatisfied with this development and reluctant to spend billions on infrastructure<sup>3</sup>. This effect can already be observed in the deployment of LTE that has been slower in Europe when compared to the U.S. or even some African and Asian countries<sup>4</sup>.

On the other hand, this development has increased competition with operators offering "Roam like Home" roaming plans, as suggested in the 2013 Commission's proposal. Alternative

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<sup>1</sup> <http://ec.europa.eu/digital-agenda/en/roaming>

<sup>2</sup> <http://ec.europa.eu/digital-agenda/en/node/67489/#roaming>

<sup>3</sup> <http://www.strandreports.com/sw5664.asp>

<sup>4</sup> <http://www.strandreports.com/sw5700.asp>

Roaming Providers, or ARPs, meaning local providers that are allowed to offer the roaming user roaming services, instead of his or her home provider, is another possibility facilitated by this proposal (Gentner, A. 2014).

The proposal for the termination of roaming charges by December 2015 was voted and passed by the European Parliament in April 2014<sup>5</sup> but the approval from the European Council and the Italian Presidency at the time did not come due to the presidency's significantly different proposal on the subject<sup>6</sup>. The elimination of roaming charges is reported to stay on hold until 2018<sup>7</sup>.

In the meantime, there has been significant increase of data in the mobile market and this also applies to roaming, while prices are dropping due to EU regulations and competition in the market. European Telecom operators and more specifically mobile operators are looking for strategies to restrict the losses from the roaming revenue stream while keeping up to the demand for mobile communication across Europe (Gentner, A. 2014).

These challenges and strategic trends are under investigation in this paper. The new regulatory developments have fueled the creation of new and innovative ideas from mobile operators regarding roaming plans and even though the elimination of roaming fees has not been achieved completely, operators have gained time to come up with strategic plans to counteract its imminent implementation.

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<sup>5</sup> [http://europa.eu/rapid/press-release\\_IP-14-373\\_en.htm](http://europa.eu/rapid/press-release_IP-14-373_en.htm)

<sup>6</sup> <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2015923%202014%20INIT>

<sup>7</sup> <http://uk.reuters.com/article/2015/03/04/eu-telecommunications-idUKL5N0W62K220150304>

## 2 THEORY

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The subject under investigation in this paper, namely the EU plans for the elimination of roaming fees and the extent to which it affects European Telecoms, is an issue that involves on the one side political institutions, such as the European institutions, including the Commission, the Council and the European Parliament as well as national legislators and regulators, and on the other, Telecom operators and MVNOs that are affected by their decisions and the pending TSM (Telecoms Single Market) regulation that will define to a certain extent their future business strategies.

Due to these close interactions between the Telecom market and European and national institutions this paper explores the elimination of roaming fees by exploring how the interrelations between the two influence the business choices and strategies in the Telecom world. Besides, this relationship between political institutions and Telecom operators goes way back as the Telecom industry, previously dominated exclusively by state-owned network operators, has always been subject to national and later European regulations and adding the ambitious European vision of a single market in Telecoms, the interactions are even more substantial. This approach will be based upon the mother of the modern science of Economics, which is Political Economy.

Political Economy has for years studied the relationship and interactions between socio-political and economic systems of a society, traditionally at a country level. Society provides the legal provisions and rules within which the market activities and developments take place and political economy studies the interrelations between the two and the results of their interactions on the economy and the political system itself (The SAGE Glossary of the Social and Behavioral Sciences, 2009).

Whether on a national, urban (Urban Political Economy) or international (International Political Economy), Political Economy, due to the developments of the analytical tools in the field of economics, has been used by economists to perform the economic modeling of the political processes in order to study more closely those models in relationships with companies, thus deviating from the field of political sciences and relating more to the modern science of economics (Dewan, T. and Shepsle K. A., 2008).

The fact that the field of economics, which originated from Political Economy, is re-approaching the effect of political institutions and in essence the field of political sciences (Besley, T., 2007), has created a New Political Economy which marks a new era where global economies and political systems are subject to major changes (Gamble, A. 1995). Both are shifting to accommodate more large-scaled businesses that cross over national borders and need to adapt to the political systems of each country, some of which are also converging, which can be exemplified by the unified political processes taking place in Europe.

The New Political Economy can be broken down to four areas of study, namely international political economy (IPE), state theory, comparative government-industry relations and public choice. The new political economy reflects the changes made in the global economy and political systems of today (Gamble, A. 1995).

The Political Economy approach will be used to show how regulation and the rules imposed by the political system in Europe affect the operation of a market facing significant challenges in the light of the unification of the market across European countries. The way the data gathered and the empirical evidence are being used to perform the analysis for this paper is explained in the following methodology section.

### 3 METHODOLOGY

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This paper was written in parallel with a master's thesis when it became apparent that there were important results from the research that the authors wanted to explain and discuss as well as go further and deeper than the platform that they were using (their long thesis).

The research comprised of two main sources of information: desktop research in the available literature, such as books, papers and reports published both in the academic world and by European institutions. In addition, research from consultancies was also studied and analyzed and finally a set of interviews with leading experts in the field were conducted for the collection of empirical evidence. As the paper focuses on the regulatory impact of EU rules on Telecom operators, the interviews were conducted mainly with experts in the regulatory field in leading European telecom companies but were not restricted to that. There were also important research contributions gathered from interviewees within the regulatory authorities, governmental institutions, associations and consulting companies.

The contributions from these experts together with all the material collected will be used to analyze possible effects of the termination of international roaming charges on Telecom operators and strategic adjustments that telecoms implement to comply with the EU regulatory frameworks.

As a political economy approach is used, emphasis is given to the regulatory aspect of the implementation of roaming caps and the plans for the termination of roaming fees. Initially the base for the work is provided by the EU documents regarding the TSM (Telecom Single Market), and the announcements of the different EU institutions such as the Council and the Commission, in order to get the background and history of the roaming policy of the Union. Subsequently, there was a thorough examination of the data gathered from the interviews and the academic papers and consultancy reports in order to extract information and form a better picture of the size of the roaming market and its importance for European operators. With the objective of making it more clear and easy for readers to relate and understand, examples of practical situations and how companies are reacting to the current uncertainty are going to be provided. At this point, a case study on Spain, from the author's more extensive work for their master's thesis, will be used to exemplify the above and provide a better understanding of this market sector. Finally the data from this analysis will be used to look at the trends regarding the business strategies of operators when it comes to international roaming within Europe and commence a discussion on the future of roaming.

The forthcoming analysis attempts to shed some light on the roaming market in Europe and the choices of operators in their attempt to recover part of the loss that the EU regulation on roaming has brought.



## 4 THE EUROPEAN ROAMING MARKET

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### 4.1 THE EUROPEAN ROAMING MARKET STRUCTURE

The roaming service is based on the provision of wholesale roaming services for access and capacity offered by a Mobile Network Operator (MNO) to foreign MNOs, whose users roam in the respective countries creating the need for retail roaming services, including voice, SMS and mobile broadband. Roaming services costs consist of mobile origination, mobile/fixed termination, international transit as well as billing and accounting costs. Although these costs imply that the cost for international roaming is higher than the costs of providing the service within one's network, roaming charges have always been characterized as unreasonably high compared to the actual costs for providing them (Scott Marcus, J.; Philbeck, I., 2010).

Before the EU regulation was implemented the roaming market presented very low competitiveness due to inelastic demand for the services, very few or non-existent alternatives that substituted for the service, lack of transparency regarding charges and natural oligopolies with low competition (Scott Marcus, J.; Philbeck, I., 2010). Another reason for the high international roaming prices can be the low customer awareness regarding roaming tariffs, as this is in principle, not a criterion based on which customers pick their mobile operator, which remains an issue today (Gentner, 2014).

Nowadays the situation is to a certain extent reversed due to the proliferation of MNOs and MVNOs, technological advancements, roaming substitutes such as VoIP services, global SIM cards, WiFi access, harder negotiations and alliances at the wholesale level, increased transparency due to EU regulation (Scott Marcus, J.; Philbeck, I., 2010).

Since 2007 the EU roaming regulation has initiated regulatory intervention in the EU roaming markets based on a price-cap mechanism that annually reduces prices in both retail and wholesale roaming prices (Official Journal of the European Union, 2012). This development is strongly supported by the political world, where the belief among European politicians is that the elimination of roaming fees is a key step towards a true Single Market of Telecommunications and its completion, despite being re-scheduled to 2018<sup>8</sup>, rather than 2015 as ex-commissioner Neelie Kroes and the European Parliament strongly supported. Nevertheless it remains an inevitable goal of the EU.

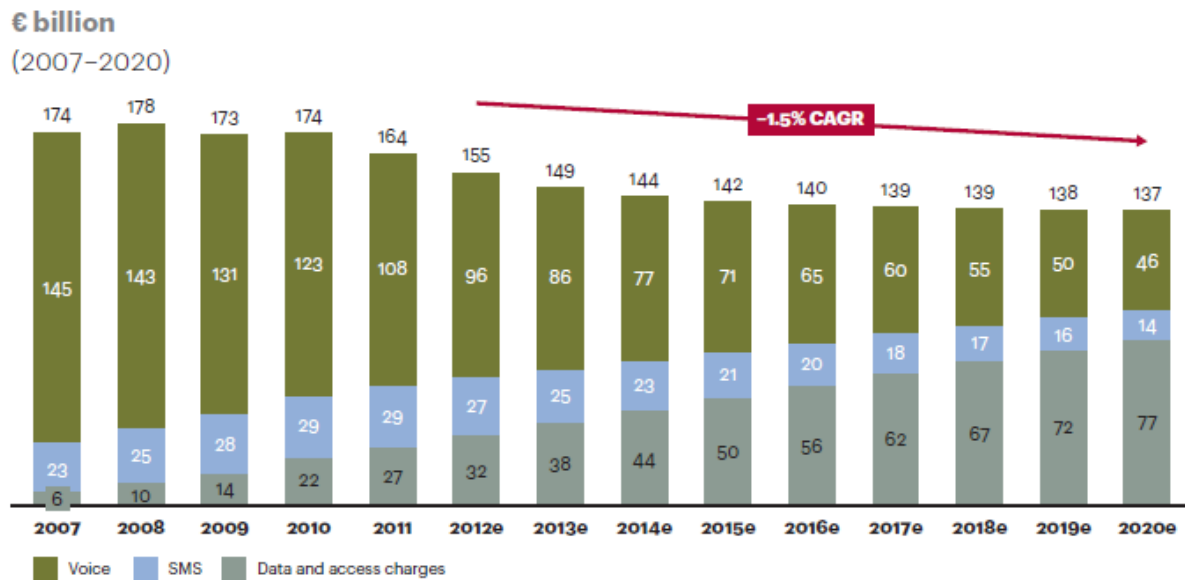
The European international roaming market is a large market, which presents important differences between member states. For touristic countries such as Spain or Greece the revenue stream that roaming fees produce is relatively significant. In Spain, a market that has seen a significant decline of revenues in the mobile communications sector since 2007 (CMT, 2014), roaming revenues have also been declining due to the price caps every year, reduced to almost half in 2011, accounting to 6.28% of the total revenues, compared to 8.72% in 2007 (Portela, M.; Ntarzanou, V., pp. 115-123, 2015). Voice services account for the majority of roaming traffic, with data and SMS following (CMT, 2013).

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<sup>8</sup> <http://www.reuters.com/article/2015/03/04/eu-telecommunications-idUSL5N0W62K220150304>

The importance of roaming revenues for Telecoms in more touristic European countries is also reflected in the interviews conducted with operators for this work. The same observation can be made for operators in countries with much less tourism (such as Denmark) where balancing the costs after the implementation of the eurotariff is easier, provided that the wholesale and retail prices are also kept balanced. The different conditions and structure of the roaming market in each European country are an important reason why the elimination of roaming charges is still impossible to put in effect (Scott Marcus, J.; Philbeck, I., 2010) (Infante, J.; Vallejo, I., 2011).

The decline in prices in the roaming market due to the eurotariff have been followed and accordingly implemented, while roaming services usage grew all over Europe according to BEREC (BEREC, 2014). The European Union notes that this resulted in achieving “retail price reductions across calls, SMS and data of over 80% since 2007; Data roaming is now up to 91% cheaper compared to 2007; Since 2007, the volume of the data roaming market has grown by 630%”<sup>9</sup>. Nevertheless the implementation of roaming price caps has not had the desired effect on competition, as can be noticed by the fact that prices have been kept close to the level of the caps, which can be attributed to low competition and inelastic demand (Infante, J.; Vallejo, I., 2011) (BEREC, 2014)



Notes: Data refers to EU27, Switzerland, and Norway. Actual data was used through April 2012; all subsequent numbers are estimates. Figures may not resolve due to rounding.  
Sources: IDC; A.T. Kearney analysis

Figure 1: Mobile revenues 2007-2020 (A.T. Kearney, 2013)

The leading sector that grew and keeps growing significantly in the European market is mobile broadband and the same trend seems to be present in the international roaming market. This trend in roaming, can be attributed not only to the rollout of LTE networks all over Europe, but also to the substitution of traditional communication services with OTT services, such as Skype

<sup>9</sup> <http://ec.europa.eu/digital-agenda/roaming>

and WhatsApp, and people's desire to be connected and use their social networking apps constantly. In addition, substitution could also be attributed to the use of WiFi in order to use OTT services, as an alternative to making calls or sending SMSs from a mobile phone (Portela, M.; Ntarzanou, V., pp. 145-169, 2015). The evolution of networks towards an all-IP model, driven by the transition to LTE and the wide availability of electronic devices, is leading towards this substitution and in the case of roaming makes roaming data services more relevant to operators that are deploying strategies to deal with the declining revenues in this sector.

The case of Spain, is also pointing to the same direction when it comes to mobile broadband, where we see a generalized positive performance with a growth of 30%, in a market that shrank about 15% on an annual basis. Another observation from the Spanish case study though, can be that despite the increase in usage of roaming services, there was a decrease in total revenue, meaning that the decline due to the price caps was higher than the influx of revenues from the increase in usage (Portela, M.; Ntarzanou, V., pp. 115-123 2015).

At this point it is important to make a reference to the wholesale market. The European Union stresses the importance of regulating both wholesale and retail prices, as regulating only retail prices would not be enough and would possibly leave very thin margins for profit to the wholesale buyers that do not own network infrastructure (Official Journal of the European Union, 2012). But despite the additional reduction in wholesale prices it was observed that these reductions were not passed on to the retail level, where charges remained close to the price caps (Infante, J.; Vallejo, I., 2011). Cross-border alliances and the ability of some operators to provide roaming services using their own network infrastructure as alternatives to the wholesale roaming market, have not been very fruitful in bringing down wholesale and retail prices (Falch, M.;Tadayoni, R., 2013). And while the part of the plan of the EU to increase transparency and protect consumers from bill shocks has succeeded to a large extent, the second part, namely competition and innovation is not as apparent<sup>10</sup>.

An example that came up in the interviews conducted for this work, was that of the wholesale market in Spain, where in the part of the market that is regulated, that is the mobile market, there is almost no investment in networks, as it is more profitable to rely on buying wholesale to provide mobile communication services. On the other hand, in the part of the market where there is no wholesale regulation, such as fiber networks for speeds over 30Mbits, there is much more investment in the networks. At the same time, in Spain, although there is an increase in usage, driven mainly by third party operators and international call termination, wholesale revenues are declining (CMT, 2014). As reflected by the interviews with operators in Europe, regulation in wholesale prices will define to a great extent the impact of roaming regulation on the revenues of Telecoms but this is a complicated matter that needs further study.

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<sup>10</sup> <http://www.europedia.moussis.eu/discus/discus-1343718686-976307-8045.tkl>

## 4.2 “ROAM LIKE HOME” AND ALTERNATIVE OFFERS IN THE EUROPEAN ROAMING MARKET

Under adverse financial times for mobile telecom operators that are facing annual losses of 1.5% annually (A.T. Kearney, 2013), there are warnings, made mainly by consulting firms, about revenue loss, cost cutting and decline of investment due to roaming regulation, amidst a more generalized negative growth in the Telecom sector. The revenues at risk account for 2% to 6% of the industry’s revenues (A.T. Kearney, 2013) (Kennedy, S., 2014) (Gentner, A., 2014).

The plan of the EU is for operators to start offering “Roam like Home” plans, offering the consumer the ability to roam in other countries and experience charges that are similar to those back in their home network when they use their electronic devices. At the same time inbound calls or SMSs will not inflict any additional charges to the roaming user, just like when they are in their home network. The final goal would be to achieve similar prices across Europe so that communication from one country to another won’t differ from calling within the same country<sup>11</sup>.

Several companies in countries such as France, Germany, Sweden and the UK have decided to make such “Roam like Home” offers to their customers changing the way that international roaming was being charged until today and avoiding shocking bills for consumers as intended by the EU. These services come with different variations from operator to operator, with some offering them for a limited amount of days, for a restrained amount of destinations, based on the user’s type of bundle chosen in country they reside in, or paying an additional fee to their monthly bundle, or even limiting the user to consume minutes or SMSs only towards their home country. The launch of such services by several European operators indicates how there is an effort to adjust to this new reality of seamless international roaming at the expense of part of their revenues (Gentner, A., 2014).

The problems identified with “Roam like Home” offers, besides the difficulties caused by the different cost and tax structures across Europe, are also border trade and SIM card arbitrage, where customers would choose to buy their SIM card and a subscription from a cheaper country instead of the one they are residing in<sup>10</sup>.

Another change that the Roaming regulation brought to the market, in an attempt to increase competition, is the ability of operators, other than the home network operator of the user, to offer roaming services, allowing for these Alternative Roaming Providers, also known as Virtual Roaming Operators, to compete with the home telecom operator of the user with more attractive offers (Gentner, A., 2014). Providing support for these virtual operators requires additional investments on behalf of network operators for billing and customer handling (Kennedy, S., 2014).

With Average Revenue Per User in roaming dropping and with the fierce price competition that operators with “Roam Like Home” offers and ARPs can induce due to their disruptive nature, a very large part of roaming revenues can vanish, leaving mainly network operators at a disadvantage<sup>10</sup> (Gentner, A., 2014).

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<sup>11</sup> <http://www.strandreports.com/sw5671.asp>

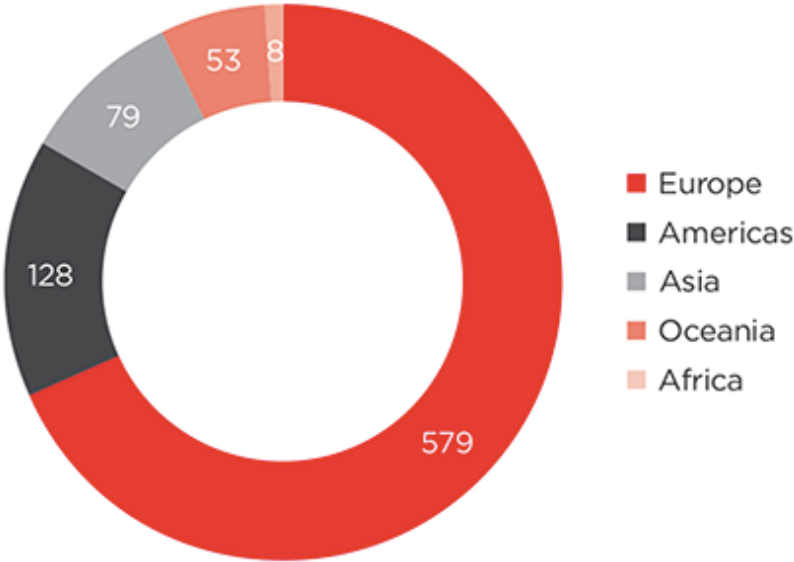
Another option considered is “Roam like a Local” schemes, meaning the consumer paying according to the national prices in the respective country they visit, but this is a less consumer-friendly offer, as the consumer needs to be aware of the charges of each country they visit, but allows for better margin squeeze for operators (European Commission, 2011). In this way, the charges would allow operators to cover costs while it would provide a possible solution to border trade and arbitrage<sup>4</sup>.

**4.3 MVNOS AND THE RISE OF COMPETITION**

The concept of Mobile Virtual Network Operators, or MVNOs, is by now very well-known, but until the wholesale regulation was implemented by the EU, these virtual network brands would have to negotiate and get wholesale deals directly from telecoms. This regulation was very successful in helping the proliferation of these operations especially in Europe<sup>12</sup>.

There are Mobile Network Operators (MNOs) that host 943 Mobile Virtual Network Operators (MVNOs) with 255 of them being MNO sub-brands, as of May 2014. This represents a total of almost 1,200 mobile service providers worldwide hosted by MNOs, a number that was down to 1,036 in 2012, according to GSMA Intelligence<sup>12</sup>.

Most of these MVNOs are situated in Europe like the figure below indicates.

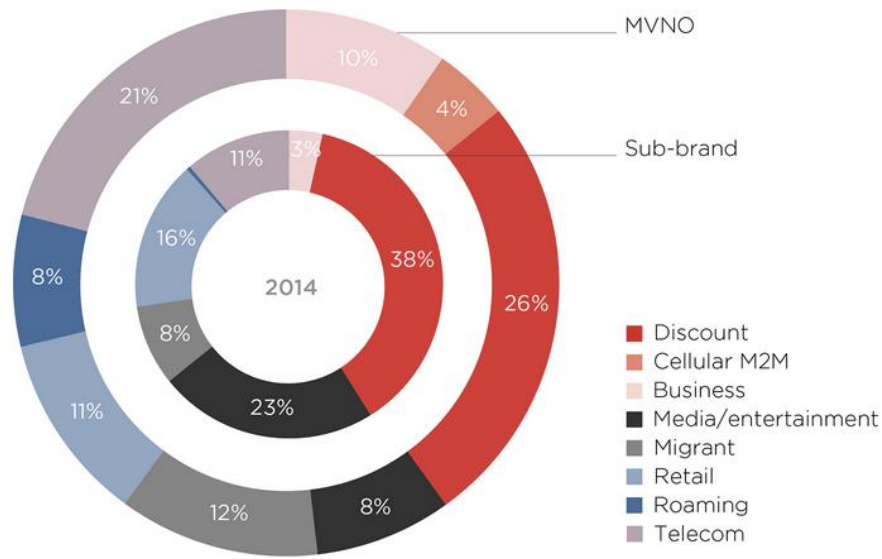


**Global MVNO split by region, 2014**  
*Source: GSMA Intelligence*

*Figure 2: MVNOs globally<sup>12</sup>.*

<sup>12</sup> <https://gsmaintelligence.com/research/2014/06/the-global-mvno-landscape-201214/433/>

The fast growth from these MVNOs, which benefited from a favorable EU regulation is explained in part by who owns them and who their target group is. In the GSMA Intelligence report there were eight separate categories of MVNOs identified, namely discount, telecom, media/entertainment, migrant, retail, business, roaming and M2M. This market is owned at a percentage of 46% by discount and telecoms, 19% by companies with adjacent industries (e.g. retailers, banks, TV or media organizations), leaving 34% of the market focused on segments such as business, migrant, M2M and roamers<sup>12</sup>.



**Market segmentation by category, MVNOs and sub-brands, global, 2014**  
 Source: GSMA Intelligence

Figure 3: Market segmentation<sup>13</sup>

Due to high competition, especially in the European market, and low margins on top of the capped wholesale prices, many MVNOs have gone out of business. The fact that MVNOs operate with low margins has brought prices and profit margins down for network operators as well.

In addition, potentially more disruptive news are coming to the telecoms market. Google might soon enter this market first in USA, with a plan "... to create a global network that will cost the same to use for calls, texts and data no matter where a customer is located"<sup>14</sup>. This is an even more ambitious plan than that of the European Digital Single Market and looking at the track record of Europe and Google, Google will possibly make this a reality sooner than the EU, although the regulatory barriers all over the world to overcome will create many obstacles for them.

<sup>13</sup> <https://gsmaintelligence.com/research/2015/02/the-global-mvno-footprint-a-changing-environment/490/>

<sup>14</sup> <http://www.telegraph.co.uk/finance/11516189/Google-in-talks-with-mobile-operators-for-cheap-overseas-calls.html>

The way Google plans to achieve this is not to build an entire new network but instead rely on the wholesale market. The idea for the analysts is that Google will “use its network to put pressure on the pricing of America’s biggest mobile operators, AT&T and Verizon, who enjoy higher profit margins than their European counterparts”<sup>14</sup>. The disruptive part of this idea can come from Google integrating the carrier networks that they get through wholesale deals with existing WiFi networks<sup>14</sup>.

#### 4.4 OTTs GROWTH AND ENABLERS

The international roaming market was seen as an opportunity, not only by MVNOs; one can even argue that OTTs have been even more successful than MVNOs in this regard. Applications such as Skype, Viber, WhatsApp, Hangouts and Snapchat to name a few, are a part of many people’s daily lives and demand for connectivity keeps growing. Their model makes it easier for people to communicate no matter where in the world one is, with the only prerequisite being internet access, breaking all the traditional telecom boundaries set by international roaming. These apps are mostly free or operating with a “freemium” model with basic services for free and paid “premium” services.

OTTs are, without doubt, filling the void in a telecoms sector lacking for many years innovative ideas for communication services, especially when talking about roaming. One can even argue that if the international call prices weren’t as high as they were in the past, services like Skype may never had come to fruition in the first place or at least not to the extent that they have today. This is reflected in the interviews with operators that noted that services like Skype took away a large piece of the pie when it came to international calls.

The trend created by the OTTs’ growth, can also be noticed in the growth of mobile data usage, especially at national level. In the case of Spain, between 2007 and 2011, mobile broadband roaming grew more than 430% (Portela, M.; Ntarzanou, V., pp. 115-123, 2015) (CMT, 2014). This growth is expected to continue at a steady pace in all of the EU as well<sup>1</sup>.

At the same time, there are Telecom operators looking at this as an opportunity. One of them is ZeroMobile in Italy that created a service called ChatSim which promises free usage of all messaging apps across, not only Europe, but many more countries in the world, for only ten Euros per year. This is an indication of how innovative offers can turn into disruptive services and provide operators with new ways to compete to counteract the immense regulatory pressure. Regarding the specific service, though, there can be other obstacles along the way, one of the main ones being net neutrality regulation and the ban of zero-rating that is in effect in countries such as the Netherlands and Slovenia and is discussed all over Europe.

One thing is clear; at this point OTTs are enjoying their golden age. The question is how much time this will last and how many of them will survive in the end.

## 5 DISCUSSION & CONCLUSIONS

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The developments in the regulatory field regarding intra-European roaming come at a challenging time for the European Telecom sector and operators. But the EU seems to be determined to make the Single Market of Telecommunications a reality sooner or later and the subject of international roaming is on top of the agenda as a barrier to overcome for the good of European citizens travelling within the Union. The benefits for consumers are many, but the impact on telecom operators can have a negative influence on their prosperity at the expense of network infrastructure and in extension European citizens.

Nevertheless, since 2007 European MNOs are being given time to adjust to the new reality that will include no national borders when it comes to communication services. The wait-and-see approach will not work anymore. Up until now roaming prices remained close to the prices caps and MNOs were trying to hold on to this revenue stream for as long as possible, an approach which is still applied to a certain extent today.

But the market has changed. Competition is rising from both regulation-facilitated players, such as MVNOs and ARPs, and the emergence of OTTs that boosts demand for, not only national, but also cross-border mobile broadband. MNOs have some strategic options to make. Some have already decided to give up part of their roaming revenues, by creating different versions of “Roam like Home” plans for either low or no charges at all, testing the waters and exploring the possibilities of competing with other European operators by trying to hold on to their customers while they are roaming. The goal is to prevent their customers from choosing any alternative providers when roaming, which would fuel competition. This choice though, if it includes mobile data in the roaming plan as well, entails the danger of passing the roaming traffic on to OTTs. Moreover, if the “Roam like Home” offers become the standard in the market border trade and arbitrage regarding SIM cards will be another problem that the EU has to face, possibly with new regulatory measures.

Other plans such as “Roam like a Local” do not seem to have emerged yet, so their success in the market is still debatable. The battle will also include MVNOs that operate across many countries, such as Lyca or Lebara, that have lower costs compared to MNOs but might encounter problems if they are currently operating a roaming-oriented model and MNOs decide to go for “Roam Like Home” offers. This of course will also depend on how favorable access regulation is towards MVNOs and wholesale prices, intended to foster competition.

Another option provided by the EU regulation that both MNOs and MVNOs can follow is that of becoming an alternative provider themselves in other European countries. This could provide additional customers but it also means buying wholesale from local network operators and it is an investment that many small operators might want to follow to compete cross-border. The news about Google investing in an MVNO “project” shows how large OTTs are actually planning



to enter the market, this time as operators. This type of strategies though will probably be more implemented after the end of roaming charges.

One last trend that seems to be growing and MNOs strategies are focused and keep an eye on, for reasons that also go beyond roaming, is OTT alternatives. Their growing popularity creates the dilemma of competition or collaboration for MNOs. Despite the still relatively high roaming prices for data, demand for mobile broadband when roaming is growing, which can be attributed to a great extent to OTTs. It is indeed very hard to compete with them when they are operating on a free platform such as the open internet also benefiting from the lack of regulation. And in a Europe with no roaming charges the demand for mobile broadband will evidently skyrocket. Leveraging the OTT trend is a possible approach that can provide more value to networks and when roaming data usage increases, more revenue for operators that could balance the decline due to the reduction in the ARPU.

The example of ChatSim is another example of an innovative idea that was used by the Italian operator ZeroMobile to adapt to the new roaming conditions. The idea includes partnerships with both MNOs and OTTs to offer access to the most popular OTT services in other countries with a very low fee. The specific approach though, as mentioned in the analysis, is highly dependent upon another regulatory discussion in Europe, the issue of net neutrality and its regulation.

The main challenge that operators face through all of this is to make sure that they manage to recover the revenues to maintain and upgrade their networks to satisfy demand and find a balance between wholesale and retail prices that will allow for the necessary margins to do that. Price regulation from the EU, although beneficial for competition and consumers, puts additional stress on the ability of operators to do that and creates warnings for systemic increases in telecom service prices.

Europe is making slow but decisive steps to a smooth implementation of the Digital Single Market. This will merge a very important part of the national economies at federal level increasing the irreversibility of the EU project only comparable to the Euro currency. In the future it is not impossible that some federal tax will substitute some national taxes in this sector to harmonize prices in the telecoms sector. This can have a good impact in business growth in Europe but that is left to be seen.

The unification of the Telecom market will create new conditions, within which many Telecom operators will not be able to prosper at a European level and so a possible consolidation of operations might occur, as operators that own networks in many European countries are in this case at an advantage against smaller ones. It is also possible that this regulatory development will lead to some companies operating only in some parts of the market, which in the long run will make them a target of this consolidation. These might not be ideal scenarios for the EU so finding ways to mitigate that and create an equilibrium in the European Telecom market that will allow smaller operators and start-ups to prosper in this environment is fundamental. At the

same time this can help European start-ups to thrive, as they will be able to “talk” to operators at a continental level and not at country level.

No matter what the strategic choices of telecom operators will be, it is important for telecoms to recognize that entering in price wars will only temporarily give a competitive advantage. In the long run, with roaming eliminated completely by the EU, maintaining a sustainable competitive advantage should be the goal of any company and their strategies should reflect that objective.

Assuming that one can put forward innovative and potentially disruptive ideas, such as the one that Google has announced, facilitated by EU regulation, telecom operators are coming up against new challenges that they have to address with new strategic actions in order to face the dawn of a new era in European Telecoms.



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