



Telecommunications and **Audiovisual Sector** **Economic Report 2015**

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Letter from the Chairman

2014 was characterised by the dynamism of the sector. The fast technological development was accompanied by new consumption habits, new commercial strategies and, naturally, new regulatory challenges in the sphere of OTT and ultra-fast broadband services.

The sector moderated the reversal experienced in previous years and recorded strong growth in investment, indicating a more positive outlook for the coming years. Total revenue stood at €30,888 million, down 6% on the previous year. In some spheres, change was more positive than the aggregate figure, as shown by the 5% growth in revenue from audiovisual services after six consecutive years of decline, spurred mainly by advertising revenue.

The strategy of bundling fixed and mobile telecommunications services, initiated in October 2012, has given rise to extraordinary growth in quintuple-play offers, which grew from 700,000 to 2.2 million. At year end, 64% of fixed telephone lines and practically all broadband lines were bundled.

The commercial battle shifted to content and the improvement in the economic situation enabled 8% growth in advertising and the significant development of pay television. This, together with the ever-increasing predominance of bundles combining fixed and mobile services, pushed quintuple-play bundles (which adds pay television to both fixed and mobile voice and broadband services) to centre stage in 2014, with 1.5 million new subscriptions. Another indicator of this trend was the addition of over one million new pay television subscribers, which for the first time exceeded 5 million customers.

The **rise in investment is one of the most outstanding developments, growing 30% to €5,000 million**. In 2014 there was a veritable race to roll out optical fibre to homes. The development of the fourth-generation network (Long Term Evolution) by mobile operators has also influenced this process. At year end, total NGA (Next Generation Access Network) connections reached 26 million, with over 9 million new connections.

Fixed broadband network connections grew 6% to over 13 million. This volume of lines situated penetration at 28 lines per 100 inhabitants. The improvement in access networks was reflected in the higher speed of subscribed broadband lines. Nearly a quarter of the lines had a speed equal to or greater than 30 Mbps, which was 66% more than in 2013.

There is no doubt that users prefer mobile phones to landline phones. This change in habits was evident in the 17% drop in traffic originating from fixed networks, equivalent in minutes to the 12% rise from mobile networks. This trend has grown due to the widespread application of flat rates to mobile broadband with mobile voice. The sale of quintuple-play bundles drove demand for mobile lines, giving rise to penetration of 109 lines per 100 inhabitants.

From the viewpoint of competition, **there was a business consolidation process in the sector similar to that of other European countries**. In July 2014, the acquisition of Ono by Vodafone was approved. In 2015, two additional transactions were approved: the acquisition of Canal+ by Movistar and Jazztel by Orange, both subject to conditions. These transactions and their impact on consumer well-being are being closely watched by the CNMC.

In the audiovisual sector, **the revenue obtained by radio and television operators grew 5% to €3,786 million, due to the recovery of advertising expenditure**. If to this figure we add grants, sector revenue totals €5,571 million.

In short, it is a sector undergoing deep transformation, which requires adaptation of the regulatory framework in line with an integrated vision that combines the free play of market forces with fulfilment of competition rules and effective regulation. The CNMC is in a well positioned to tackle this challenge effectively, given its broad responsibilities in terms of competition and regulation of the audiovisual and telecommunications markets.

I cannot conclude without publicly expressing my sincerest **gratitude to all the CNMC experts who dedicate their efforts to analysing and responding to the rapid, profound changes that are currently taking place and their consequences on the service provided to the public.** Without them we would not be able to present this Telecommunications and Audiovisual Economic Report.

José María Marín Quemada
Chairman of the CNMC

Madrid, December 2015

2014 highlights

The Telecommunications and Audiovisual Sector

Total sector revenue fell by 6% to a total of €30,888.5 million

Revenue from end services, which fell 6.2% year-on-year, totalled €25,553 million. Wholesale services –those provided between operators– fell somewhat less, 4.6%, to a total of €5,335 million.

Revenue from broadband end services, both fixed and mobile, and audiovisual communication services rose in 2014.

Mobile broadband was the service that experienced the strongest growth, 9.2%, although at lower rate than in previous years. Furthermore, revenue grew 4.8% after six consecutive years of falls, mainly on the back of advertising revenue, which grew 8%.

Portability continued to record very high values, achieving a record high for fixed-line numbers.

End consumers continued to change operators in response to more attractive bundled service and price offerings. Fixed-line portability recorded a record high with 165,000 fixed numbers each month, while 517,000 mobile numbers were ported each month.

The penetration of all end services grew

Penetration of mobile broadband grew to 78.3 subscriptions per 100 inhabitants, while that of

fixed broadband grew to 28 lines per 100 inhabitants. Penetration of the pay television service grew 31% in the year, while that of voice services, both fixed-line and mobile, saw moderate growth.

Consumer spending fell significantly, whether on account of reduced unit prices or improved service bundling

Household expenditure on electronic communications services continued to fall. By way of example, the average rate among households that subscribed to the quintuple-play bundle was €56.1 per month, while for the quadruple-play bundle it was €38.1 per month, approximately €5 less than in 2013.

Success of quintuple-play bundles, which add pay television to voice services and broadband over both fixed and mobile networks

Quintuple-play bundles recorded extraordinary growth, growing from 700 thousand to 2.2 million, while quadruple-play bundles grew more moderately to 5.8 million.

Higher degree of service bundling

Some 64.3% of fixed telephone lines and nearly 95% of fixed broadband lines were bundled. As regards pay television, slightly over 60% of subscribers related to joint offers with other services.

Investment grew in 2014 to over €5,000 million

Investment grew 30% due mainly to the rollout of fibre-optic networks by the leading telecommunications operators and also to the rollout by mobile operators of their fourth-generation network (Long Term Evolution).

More extensive rollout of next generation access networks (NGA)

At year end, NGA (Next Generation Access Network) connections totalled 26 million, of which 16 million were fibre connections and 10 million were HFC DOCSIS 3.0. These figures represented 9.2 million new connections compared to the previous year, which are almost all fibre connections.

Consolidation process in the sector

In July 2014, the acquisition of Ono by Vodafone was approved. In 2015, two additional transactions were approved: the acquisition of DTS by Movistar and Jazztel by Orange, both subject to conditions.

Fixed communications

Fixed telephony

The total number of fixed lines remained practically stable

For the second consecutive year, an increase in the number of lines was recorded in the residential segment, which in 2014 nearly offset the loss in the business segment. Penetration grew to 41.7 lines per 100 inhabitants.

In 2014 average traffic per line fell significantly

Traffic originated on fixed networks fell by 17% compared with the rise in traffic originated on mobile networks. In light of the increased presence of flat-rate voice tariffs for calls originated on both types of networks, users opted for using mobile phones instead of landline phones.

Record high of 2 million instances of porting

The amount porting recorded in the year grew to nearly 2 million, the highest figure recorded to date, denoting the strong dynamism of the fixed telephony market.

Most fixed-line bundles included mobile services

Some 41% of fixed telephone lines were included in quadruple- or quintuple-play bundles, compared to 22% in double- and triple-play bundles.

Alternative operator market share by lines stood at 45%

Alternative operators continued to gain ground and achieved a share by fixed lines of 45.4%, while Movistar lost 3.7 percentage points in the year.

The new Reference Interconnection Offer came into effect in November 2014

After the market analysis carried out on wholesale termination on fixed networks, a new termination price was set, without bands or levels, thereby eliminating the existing asymmetry. The new price, which was fixed on the basis of an incremental cost model for an efficient operator, was 0.0817 euro cents per minute.

Broadband over fixed networks

Broadband connections exceeded 13 million lines

Fixed network broadband connections grew 6.2% in the last year, exceeding 13 million. This volume of lines situated penetration at 28 lines per 100 inhabitants.

Significant growth in FTTH lines

xDSL technology fell for the first time in 2014, by 3.6%, while FTTH connections multiplied by 2.5 in 2014 to 1.6 million.

3 million lines with a connection speed of 30 Mbps or higher

The improvement in access networks was reflected in the higher speeds of subscribed broad-

band lines. Some 23.3% of lines had a speed equal to or higher than 30 Mbps, or 66% more than in 2013.

Alternative operators recorded considerable growth in fixed broadband lines

A total of 762,903 new broadband lines were added to the market. Of these, the three leading alternative operators (Vodafone, Orange and Jazztel) accounted for 90%. For its part, Movistar ended the year with a 44.3% market share by lines, 2.5 percentage points less than in 2013.

Intensification of bundled products with fixed and mobile services

Nearly 95% of broadband lines were bundled with another service. It should be noted that, in 2014, 61.7% of lines were bundled with fixed and mobile services together, compared to 48.1% in 2013.

The wholesale local loop unbundling service continued to be the main mode of access for alternative operators

The local loop unbundling service continued to grow, reaching 4.1 million units. In those areas where these operators do not have this local loop unbundling service, they have indirect access to broadband, which totalled 738,409 lines, thereby completing their nationwide offering.

The demand for the wholesale indirect Ethernet broadband access service (NEBA) intensified its presence in the second half of the year, with 18,544 lines at year end.

Mobile communications

In 2014 the total number of mobile lines rose slightly to 50.8 million

The demand for lines reversed its two-year downward trend and, in 2014, recorded 1.3% growth with a penetration rate of 109.2 lines per 100 inhabitants.

Revenue from mobile telephone end services fell by 18.7% in the year

In 2014, revenue from mobile telephone end services –which include voice and messaging services– fell sharply. Revenue stood at €6,161.8 million, despite the fact that the volume of voice traffic generated grew significantly by 12.1%.

Portability exceeded 6 million

Users continued to be very active when seeking the most competitive mobile service offerings. Portability in the year totalled 6.2 million, slightly lower than the record high recorded in 2013.

More than half of mobile lines were bundled

Some 51.6% of mobile lines were bundled with another service, fixed or mobile, compared to 36.7% the previous year.

The price of mobile calls fell by 27.6%

Average revenue from voice services as a whole fell; in 2014, average revenue fell by 27.6% to 6.98 euro cents per minute of conversation.

Growth in mobile broadband services slowed in 2014

In 2014, a total of 36.4 million mobile lines accessed the Internet over mobile communication networks, 5.1 million more than in 2013. Most of these lines connected to the Internet via a mobile phone. Furthermore, revenue grew 9.2% compared to the double-digit rates of previous years.

The wholesale mobile network access service provided by MVNOs brought in 32% more than in 2013

In 2014, wholesale market revenue totalled €1,403.2 million, down 9.3% on the previous year. However, the service for enabling access to mobile communications networks by third-party operators, mainly MVNO operators, recorded a 32% rise in revenue, reaching a total volume of business of € 572.2 million.

Audiovisual communication services

Revenue (excluding subsidies) obtained by radio and television operators grew 4.8% to €3,786.4 million.

The recovery of advertising revenue, which grew 8% in the year, was the main driving factor behind this growth in revenue.

If the subsidies received by operators from public authorities are added to that figure, sector revenue totalled €5,571.4 million.

The national free-to-air audiovisual offering fell from 28 to 19 channels

In 2014, nine national DTTV channels closed as a result of the Supreme Court decision declaring the process whereby the channels had been awarded void, with the consequent reduction in the free-to-air audiovisual offering, which fell from 28 to 19 channels.

Audiovisual content has become the differentiating element of telecommunications operator offerings

The commercial strategy of the telecommunications operators focused on audiovisual content as a differentiating element. This, together with the ever-increasing predominance of bundles combining fixed and mobile services, pushed quintuple-play bundles (which adds pay television to both fixed and mobile voice and broadband services) to centre stage in 2014, with 1.5 million new subscriptions in the year, totalling 2.2 million bundles.

Pay television service subscriptions exceeded 5 million

For the first time, the total number of pay television subscribers in Spain exceeded 5 million

customers, 1.2 million more subscribers than the previous year.

Movistar, through its bundled Fusión offer, led the pay television market in 2014. It ended the year with 1.9 million subscribers, representing an additional 1.1 million customers in the year.

Pay television bundling

Some 61.4% of pay television subscriptions were bundled with some other service. It should be noted that 42.8% of total subscriptions included quintuple-play bundles, compared to 17.5% in 2013.

1 The telecommunications and audiovisual sector

1.1 The Spanish sector in the European context

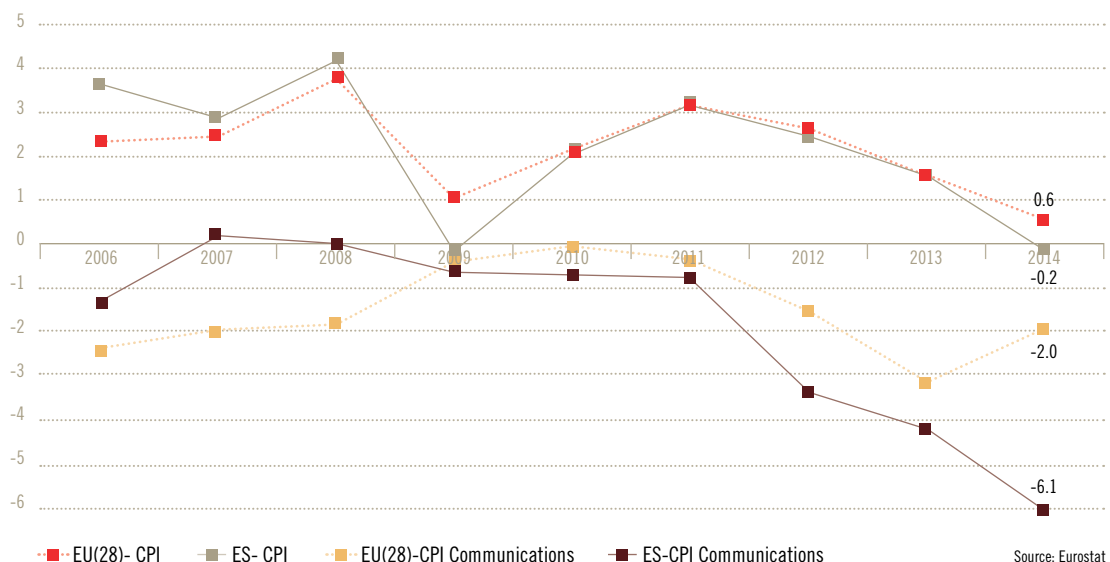
Economic recovery gained strength in 2014, both in the EU (28) and in Spain, with real growth in GDP of 1.4% in both cases. Furthermore, inflation (measured on the basis of year-on-year CPI growth) was relatively low in the EU (28), with 0.6%, and slightly negative in Spain, with -0.2%.

In this slightly more favourable economic context than that of previous years, worldwide revenue from telecommunications fell by 0.9% and, in Europe, by 3.5%, slightly less than in 2013 (5.1%) (IDATE data¹). This same IDATE report indicates that all European operators except Deutsche Telekom and Telenor, experienced falls in revenue. The European Commission (EC) estimates a fall of 6.6% in sector revenue in Europe since 2010.

In Spain, sector revenue fell by 6% and prices dropped sharply by up to 6.1%, following a trend contrary to that of EU (28) prices, which fell less than in 2013. Both the EU (28) and Spain have seen several consecutive years of falls in prices and revenue. Despite this, a significant factor in Spanish telecommunications markets in 2014 was the strong growth in investment, with year-on-year growth of 30% due mainly to the extensive rollout of fixed next generation networks.

The need to finance heavy investment and the sustained fall in revenue facing the European sector were two of the factors leading to the market consolidation processes initiated in 2013. In 2014, mergers and acquisitions between operators of the same market segment, for example, Telefóni-

Rate of annual change in the general prices index and the communications subindex for the EU(28) and Spain



ca Deutschland-E-Plus in Germany, Hutchinson 3G-Telefónica in the UK or Liberty Global-Ziggo in the Netherlands, and between operators whose main business targeted different segments were initiated or completed.

In fact, in Spain there have been significant combinations of the latter type. Firstly, between fixed segment and mobile segment operators, such as the acquisition of Ono's assets by Vodafone in 2014 or the acquisition of Jazztel by Orange,

¹ World Telecom Services Market, IDATE, 2015

approval of which by the EC in 2015 was conditional on various divestments of fixed network assets. These transactions arose from operators' need to strengthen their chances of competing in the Spanish market, which is characterised by strong convergence, demonstrated by the fact that 41.4% of fixed voice lines and 61.7% of fixed broadband lines were subscribed in fixed and mobile service bundles. Also, in 2015, the Spanish National Markets and Competition Commission (CNMC) placed conditions on the acquisition of DTS by Movistar. Through this acquisition, the long-standing operator consolidated its audiovisual content offering. These services allow operators to differentiate their offerings and mitigate the fall in revenues from the traditional segments, which are more homogeneous and provided in a more competitive context.

Broadband

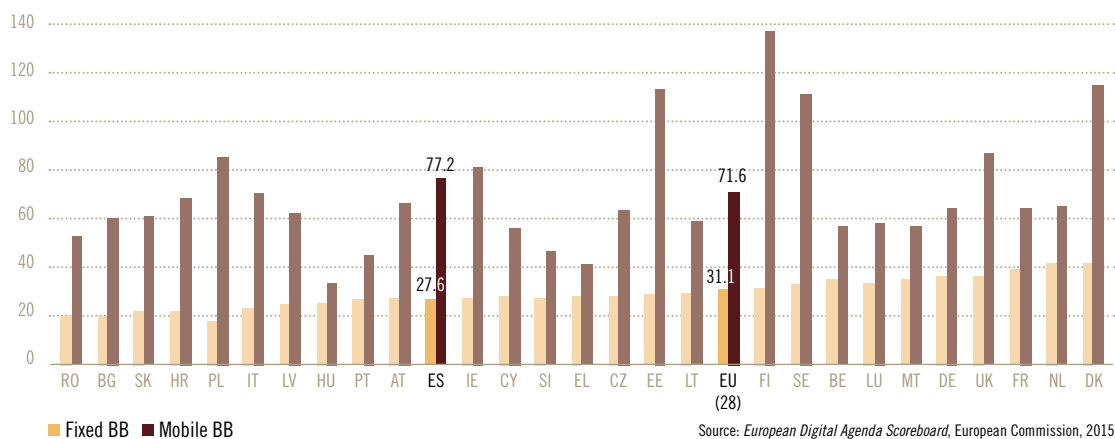
The development of broadband and, in particular, fast and ultra-fast broadband, is considered a key factor for European economic recovery and an improved quality of life for EU citizens. The European Digital Agency is one of the seven pillars of the Europe 2020 strategy, which aims to achieve sustainable and sustained growth in EU countries. In 2010, the Agency established ambitious broad-

band connectivity and use objectives for Europe and, from 2015, will be implemented with the execution of the European Digital Strategy, published in May 2015, through which it aims to create a European digital market encompassing companies and consumers of different countries.

In 2014, the penetration of broadband in the EU continued to rise, both fixed broadband –at a year-on-year rate of 4.4%– and mobile broadband, at a year-on-year rate of 12.4%. According to CNMC data, in Spain both services grew somewhat faster, at 6.9% and 16.9%, respectively².

In fact, the approval of Law 9/2014, the General Telecommunications Act, in May 2014 means a simplification of licensing and municipal administrative authorisations for rolling out networks and provides rights of occupation in the public and private domain. For example, the law requires the provision of access under non-discriminatory and transparent conditions to the infrastructure of so-called 'utilities'. This law eliminates obstacles to the rollout of new electronic communications networks to help achieve the objectives of the European Digital Agenda; universal access to broadband at 10 Mbps in 2017, at 30 Mbps in 2020 and also the objective that 50% of Spanish households will have a connection speed higher than or equal to 100 Mbps in 2020.

Fixed and mobile broadband penetration in the EU(28) and Spain (lines/100 inhabitants), December 2014

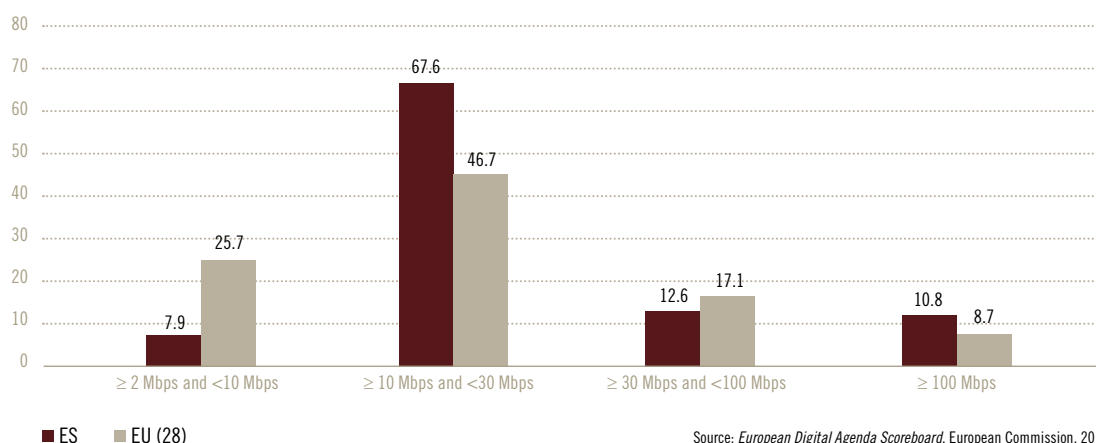


² The 'European Digital Agenda Scoreboard' data corresponding to Spain used in this section may differ from annual CNMC data, as the former are based on quarterly data.

In 2014, the percentage of lines with a speed equal to or higher than 100 Mbps in Spain was 10.8%, a figure 1.8 times higher than that recorded at the end of 2013. In Europe the percentage of lines whose speed exceeded 100 Mbps was 8.7%. Progressively, the rollout of fixed next gen-

eration access networks, which allow speeds of over 30 Mbps, has enabled the marketing of higher-speed services and with relative success. In Spain, 23.4% of fixed broadband lines had speeds of over 30 Mbps, while in the EU (28) that percentage was slightly higher: 25.8%.

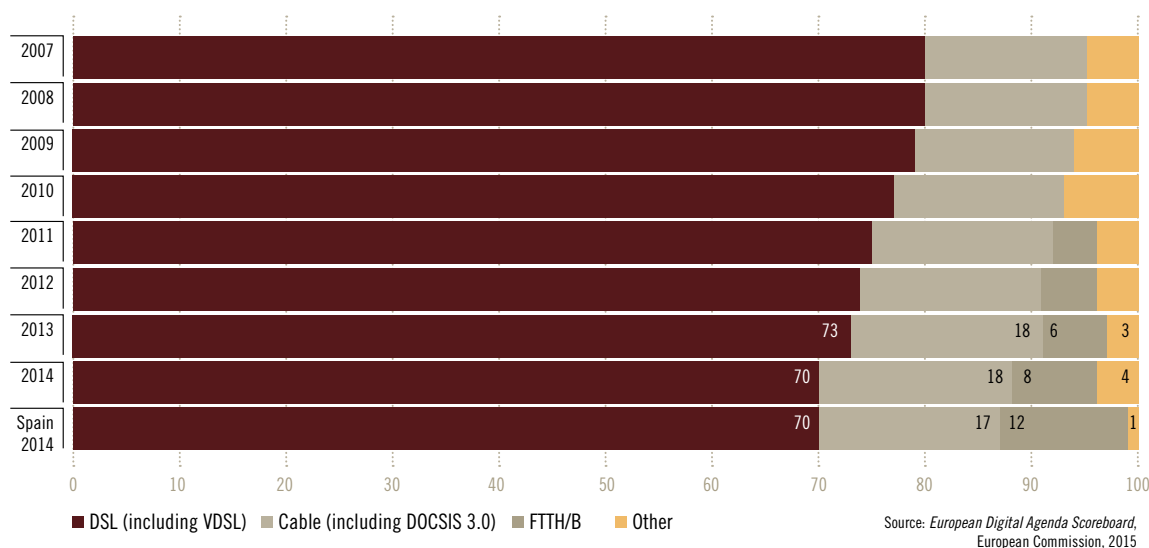
Distribution of fixed broadband lines by download speed in the EU(28) and Spain (% of total lines)



Most fixed broadband services are provided over three different networks. Firstly, the traditional copper network (xDSL standards), which supports 70% of broadband lines in the EU and Spain. Secondly, different networks that allow the user to enjoy high speeds, such as for exam-

ple cable networks, nearly all of which use the DOCSIS 3.0 standard, which account for 18% of European broadband lines (17% in Spain), but also fibre networks (FTTH and FTTN/C) which, at year end 2014, accounted for 8% of active broadband lines in the EU (12% in Spain).

Fixed broadband lines by technology in the EU(28) and Spain (% of total lines), 2014

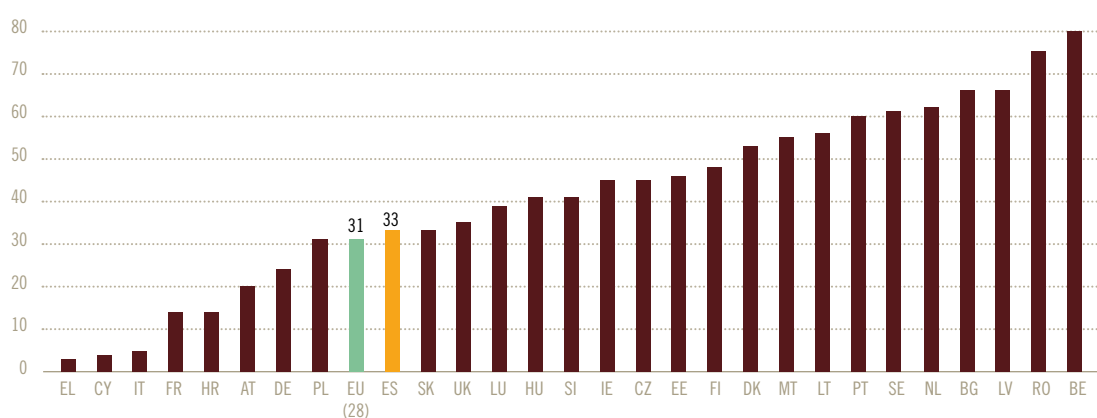


Of these three networks, fibre networks were the only networks whose active connections grew in Europe in 2014, growing from 6% of the total in 2013 to 8%. The total number of xDSL lines is gradually falling as customers opt for higher-speed offers, or simply because the operating cost for operators is lower with these networks, due to which some prefer to migrate their customers to the new networks even if

they do not currently request services with more bandwidth.

In the EU (28), 31% of fixed broadband lines were active NGA lines, a figure slightly lower than that of Spain, 33%. However, according to EC data, although coverage of fixed NGA networks totalled 62% of European households in 2014, subscriptions to products with speeds higher than 30 Mbps represented only 15 lines per 100 inhabitants.

Active NGA lines with respect to total broadband lines in the EU(28) (%), January 2015

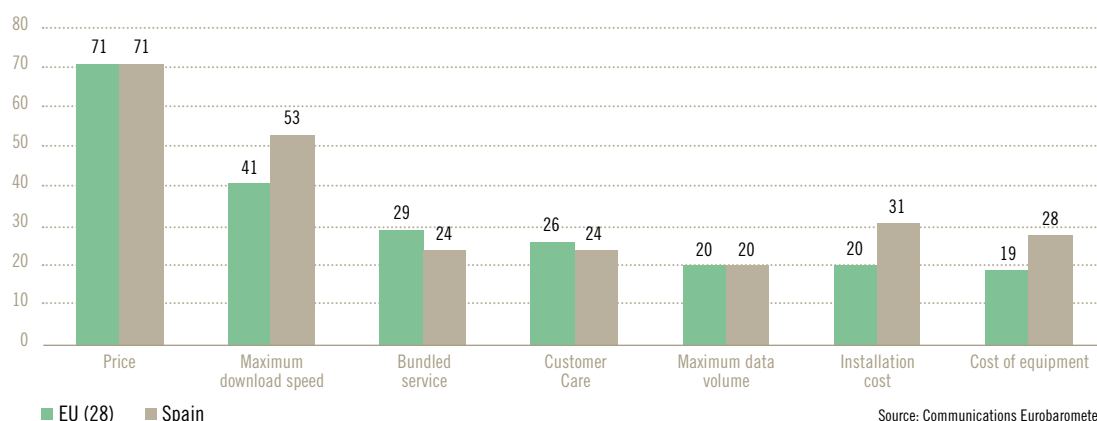


Source: European Digital Agenda Scoreboard, European Commission, 2015

In fact, according to data from the last EC Communications Eurobarometer (January 2014), in the EU (28) price was one of the determining factors for broadband users when subscribing to

the service, followed by download speed, which in Spain seems to have a greater bearing on consumers' decisions.

Deciding factors for user broadband subscription (% of users)



Source: Communications Eurobarometer, European Commission, 2014

Lastly, mobile broadband continued its upward trend. In the EU, 71.6 subscriptions for each 100 inhabitants were recorded, approximately six less than in Spain. These data include both active subscriptions from *smartphones* and dedicated connections that use a SIM data card in tablets, PCs or USB connectors for computers. According to the most recent Eurobarometer communications data, relating to the first quarter of 2014, 52% of mobile phone users had a subscription to a mobile broadband service compared to 63% in Spain.

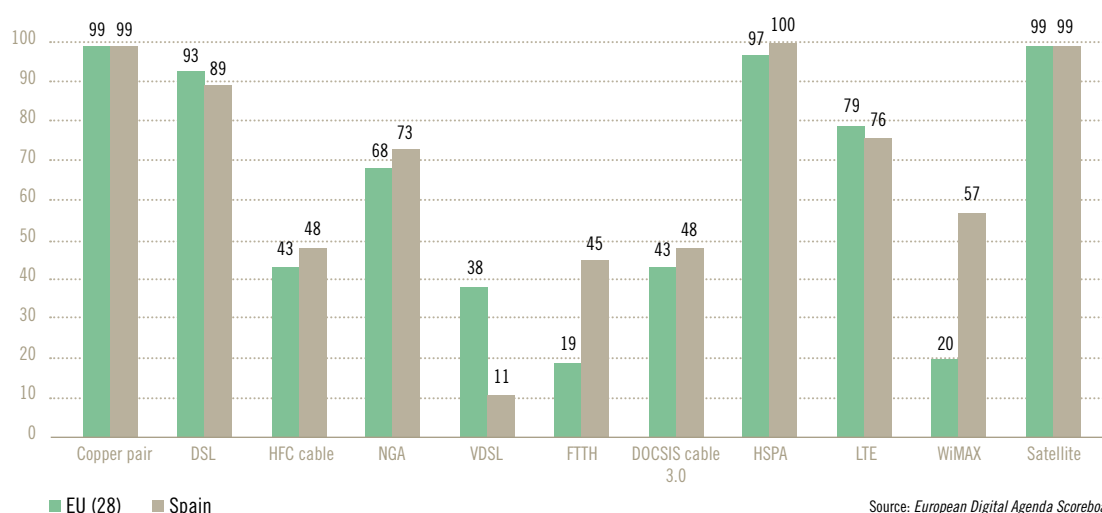
In fact, in Spain revenue from mobile broadband grew the most in 2014, at a year-on-year rate of 9.2%, which was not sufficient to offset the 18.7% fall in revenue from other mobile services. Similarly, in the EU (28) revenue from mobile broadband has experienced strong growth, 36% since 2010, and this revenue accounted for one fourth of total sector revenue in 2014. At the same time, voice services declined and, in particular, mobile voice recorded billings 23.7% lower than in 2010.

Broadband networks, coverage and rollout of next generation networks

In the EU there are fixed and wireless networks with practically universal coverage, such as copper pair networks or the HSPA mobile network, which enable the provision of telephony and limited-speed broadband services. For example, the broadband service is provided over traditional copper networks using xDSL standards, which also have very broad coverage. Also, in Spain the universal service definition states that all citizens are entitled, regardless of their location, to subscribe to a data connection speed of 1 Mbps.

These ubiquitous networks coexist with other, next generation networks, both fixed and mobile, which enable the user to enjoy higher connection speeds, fast broadband (with a speed higher than 30 Mbps) or ultra-fast broadband (with a speed higher than 100 Mbps). These new networks are some way off providing coverage similar to traditional networks. For example, in December 2014, 68% of EU households were covered by at least one NGA network and 79% of households by a 4G or LTE network.

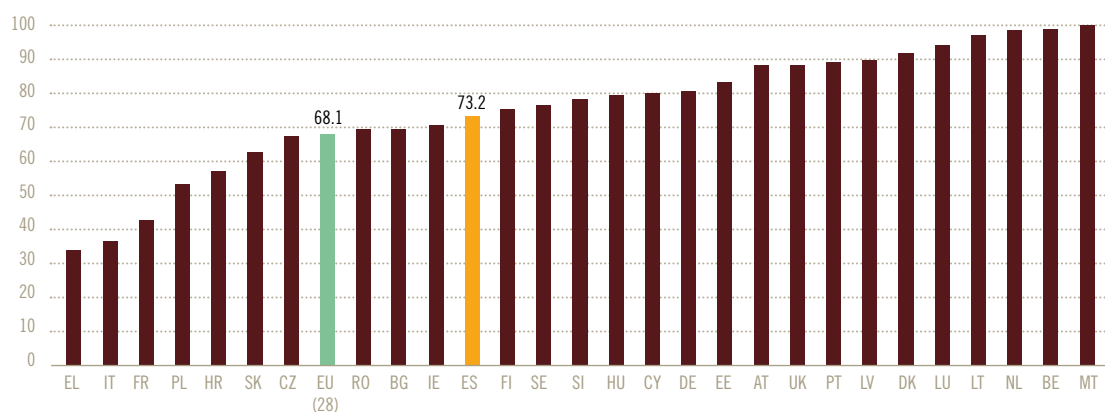
Coverage of the different fixed and wireless networks in the EU (28) in relation to households (%), January 2015



The reason is that the rollout of these new networks is expensive, particularly fixed networks, due to the high cost required to build and install the civil infrastructure. It should be recalled that there are different fixed networks which make it possible to offer broadband at speeds higher than 30 Mbps and that the amount of investment made by operators ultimately depends on the capillarity of these networks, i.e. the proximity of the technology to the end user's connection point. The VDSL standard used in Germany and the UK uses traditional copper networks and is cheaper and quicker to deploy than an FTTH network, which entails connecting a fibre cable

directly to the end user's home or location. However, this last network ensures higher speeds and better latencies than VDSL, due to which, in the long term, the viability of these investments could be greater than those made in other technologies. In 2014, 38% of European households could have connected to a VDSL network while only 19% could have connected to an FTTH network. However, the rollout of FTTH networks was greater than that of VDSL technology (35.7% and 26.7%, respectively). Lastly, the global coverage of fixed NGA networks in the EU (28) was 68.1 out of every 100 households and 73.2 in Spain.

Coverage of NGA fixed networks in the EU(28) in relation to households, January 2015



Source: European Digital Agenda Scoreboard, European Commission, 2015

In the Spanish market, operators have opted for developing FTTH networks. In 2014, there was heavy investment in these types of networks, contributing to a great extent to the year-on-year growth of 30% in overall investment, after two consecutive years of decline for this indicator. Nearly all the major fixed network operators saw more than double-digit growth in investment and, in some cases, for example Vodafone and Jazztel, very substantial growth, at around 66%. Movistar, which is the operator with the most extensive FTTH network rollout, ended the year with 10.3 million FTTH connections installed, with FTTH connections installed in the market totalling 15.1 million.

In Spain, in addition to the new General Telecommunications Act, Law 9/2014, approved in May 2014, various regulatory actions have facilitated the rollout of these networks. Since 2009, the MARCo reference offer of the CNMC grants the other operators access to the ducts and conduits of Telefónica de España S.A.U., in order to facilitate the rollout of their optical fibre networks using the same civil infrastructure as that of the historical operator. There are 13,234 km of shared sub-ducts and, since its origin, 63 operators have used this offer to install their optical fibre cables. There are also obligations imposed by the CNMC relating to access to vertical ducts in buildings which apply to all operators.

Although these obligations remain in effect, the new General Telecommunications Act reserves the authority to impose vertical obligations for the Ministry of Industry, Energy and Tourism.

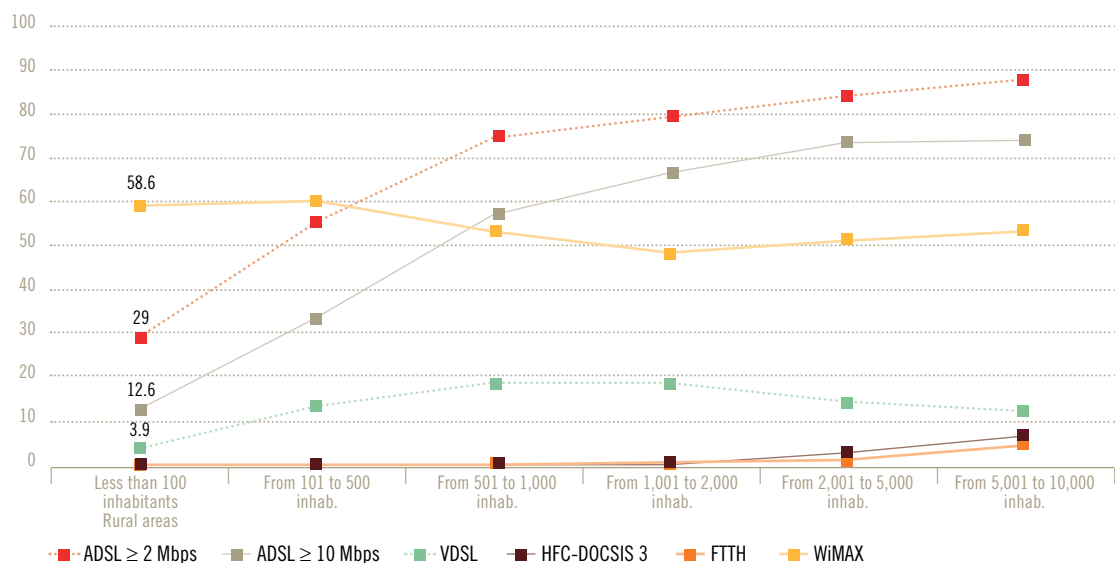
Voluntary infrastructure sharing and co-investment agreements are also in place. In 2012, Movistar and Jazztel entered into an agreement to share their vertical optical fibre infrastructure and to co-invest in the rollout of new distribution cables, with the aim of reaching three million property units. Similarly, in 2013, Vodafone and Orange entered into an agreement to jointly rollout optical fibre to reach six million property units in 2017.

Cable operators, whose HFC networks were initially developed to offer television services, practically completed their upgrade to the DOCSIS 3.0 standard in the years leading up to 2014. This standard makes it possible to offer fast and ultra-fast broadband services. The growth of its coverage was moderate in 2014: 2.4%. Some 43% of European households were able to connect to these types of access. The presence of

these types of networks varies a great deal from one country to another; for example, in Belgium and the Netherlands these are the most widespread type of network, with coverage reaching nearly 90% of homes, while in other countries they do not exist.

Given the cost of rolling out the new networks, they are not found nationwide, but rather are concentrated in areas with greater service demand, such as large or medium-sized cities with higher population densities, a younger population and greater economic activity. There is, therefore, less coverage in rural areas. For example, according to EC data, in the EU (28), 89.6% of households located in rural areas (defined as municipalities of less than 100 inhabitants) were able to access a broadband network. In Spain, broadband coverage in rural areas was 91.6%. However, in these areas the coverage percentages of the new networks and even ADSL are relatively low and WiMAX wireless networks are used as an alternative to rolling out fixed networks, reaching approximately half of the homes in these areas.

Coverage in Spain of fixed broadband networks in different municipality 'geotypes' by population (% of households), January 2015



Source: Coverage Report 2015, Ministry of Industry, Energy and Tourism

Lastly, in terms of mobile networks, 3G/HSDPA networks, which enable mobile broadband, have a practically universal coverage of over 97% of the population in the EU (28) and in Spain. According to Cisco's forecasts (VNI Forecast Highlights), in Western Europe, mobile data traffic will grow 219%, from 341 petabytes in 2014 to 2.4 exabytes in 2019. On average, each intelligent terminal user is expected to generate 4 GB of mobile data traffic in 2019. In Spain, data traffic originated on mobile networks in 2014 was 208,521 terabytes, up 55.7% on the previous year.

In order to address this demand, Europe must roll out advanced mobile networks that will allow users to benefit from the capabilities and applications of new mobile terminals. In fact, LTE coverage in Europe grew 20 percentage points in 2014, reaching 79% of homes. Countries with the greatest LTE coverage are Sweden, Denmark, the Netherlands, Portugal, Switzerland, Finland and Estonia. According to the GSMA Association, in Europe there are 80 operators which have launched 4G offers. However, despite European investment, the number of 4G subscriptions is not very high. In Spain, according to CNMC data, there are six million 4G network users.

Telephone services

The most traditional voice communications services have been going through a chronic crisis for years. The EC estimates a 20.5% fall in fixed telephone revenue between 2010 and 2014 and a 23.7% fall in mobile telephone revenue. In Europe, as a proportion of total sector revenue, these services fell from 63% to 52% in this period.

Spain was also affected by this crisis, recording respective falls in revenue of 40.6% and 50.1% during this four-year period. In fact, unlike in 2014, in previous years the sustained growth in mobile broadband revenue managed to offset the fall in revenue from telephone activity. Despite all the above, they are important services

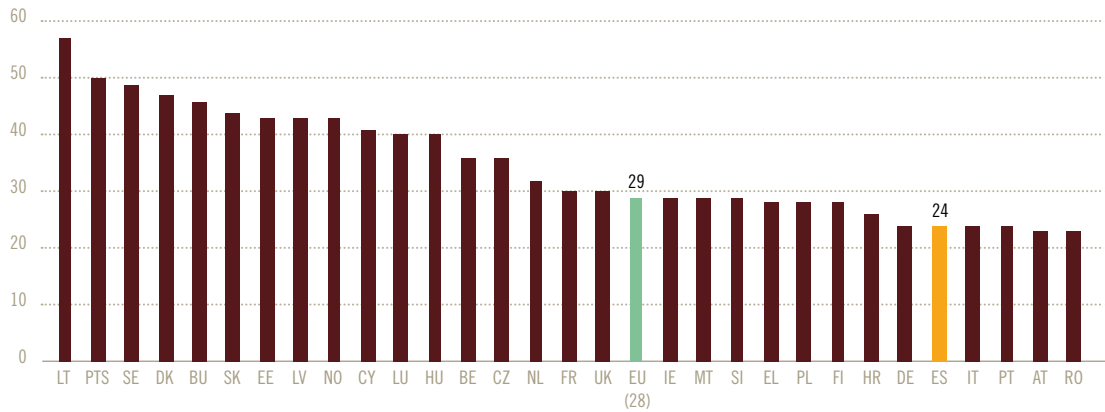
for society and for the sector and accounted for 37.7% of operator revenue in 2014.

There is significant competition in telephone markets in Europe; fixed voice services have not been directly regulated for years and mobile voice and messaging services have never been regulated. However, in both cases there are obligations and the regulation of various wholesale services which allow numerous players into those markets. For example, the sharp falls in termination rates, both on fixed and mobile networks, have enabled operators to compete, offering flat-rate tariffs and bundled services, which in many cases benefit the end user. For example, in Spain the emergence of convergent bundles in 2012 brought about the development of comprehensive competition due to different customer demands and led, together with other factors such as the persistence of the economic crisis, to more favourable treatment of users by operators, particularly as regards prices.

The decline in revenue from voice services was also due to the emergence of IP networks and *Over The Top* (OTT) communications services, i.e. services offered over the Internet without any control or specific management by network operators, but offering services similar or superior to the traditional telephone and messaging services offered by telecommunications operators. According to Eurostat data, in Europe 29 out of every 100 citizens used the Internet to make calls.

OTT communication services have reduced the demand for traditional services and undermined operators' ability to generate voice revenue. In Spain, for example, according to CNMC-Red.es Household Panel data, in the first quarter of 2015, 59.3% of mobile users used online messaging services on a daily basis, which make it possible not only to send and receive messages, but also enable communication between the members of a group of individuals and the free transfer of all manner of files such as photos or videos. Of these, 73.5% stated that, since using the online messaging service, they no longer require SMS.

Individuals (aged between 16 and 74) who have used the Internet to make calls or video calls in the last three months, EU(28) (%)



Source: Eurostat, 2014-I

Regulatory outlook

On 6 May 2015, the EC published the Digital Single Market Strategy. It is a crosscutting Communication that affects a multitude of sectors (e-Commerce, postal, telecommunications, media, etc.) and which addresses such diverse issues as reviewing the regulatory frameworks for electronic communications and the audiovisual sector, the harmonisation of value-added tax, data protection and intellectual property.

A Digital Single Market should provide European companies and citizens with obstacle-free access to all the activities they perform over the Internet, regardless of their location or nationality, under conditions of fair competition and adequately protecting consumers and their personal data. The main objective of the EC proposal for a Digital Single Market is to transfer the free movement of goods, services and persons of the Single European Market to the digital environment and leverage the resulting innovation and business development opportunities. This strategy is considered a key factor for economic growth, job creation and improvement in the provision of European public services. The EC Communication is structured around the following pillars:

- i. Improved access to digital goods and services for consumers and companies

This pillar includes actions for favouring e-Commerce between European countries. To this end, the regulations on consumer rights and contracts must be harmonised, promoting the transparency and regulatory control of cross-border courier services. It will also address unjustified differentiation in relation to access to services offered over the Internet based on the consumer's geographical location (*geo-blocking*) and the elimination of difficulties accessing services arising from lack of coordination of national intellectual property regulations and the existence of various indirect taxes.

- ii. Establishment of the necessary conditions for promoting digital networks and services

Communications networks enable the emergence of all manner of Internet-based services and activities and, in order to ensure the successful execution of the strategy, the proper functioning of electronic communications markets, with high-quality access and adequate prices, is essential. It is also necessary to review the suitability of European regulations on audiovisual services in light of the emergence of new providers and Internet-based services.

Also, *online* platforms will be analysed to guarantee the quick elimination of illegal content and data protection rules will be reinforced to boost the public's trust in *online* services.

iii. Maximising the potential growth of the digital economy

In this area, the measures necessary to ensure the development of cloud computing and big data will be dealt with, taking into account both the benefits they may bring to the economy and the challenges they pose in areas such as intellectual property and data protection. It is also considered important to promote the adoption of common standards in Europe and the interoperability of new electronic services in order to promote more competitive markets favourable to consumers. Lastly, the establishment of an inclusive electronic society will be promoted through the adoption of new technologies by the industry, the development of society's digital skills and cross-border harmonisation of public services and sharing of data between the authorities of the different Member States.

Despite its general scope, the Digital Single Market Strategy is destined to have a particularly significant impact on both the telecommunications and audiovisual sectors by laying down the principles, objectives and outline of the future regulation of these sectors.

Electronic Communications

Prior to the publication of the Communication on the strategy, the EC adopted the review of the Recommendation on Relevant Markets³, one of the most relevant initiatives for the sector and a formative element of the European regulatory framework for electronic communications services. In the review, the EC identifies markets which, a priori, admit of *ex-ante* regulation, based on the assumption that these markets

fulfil the criteria that would justify the imposition of obligations on operators with significant market power. After the approval of this new Market Recommendation, authorities have a two-year period in which to notify their market analyses to the EC. The review of the Recommendation on Markets, which is aimed at technological and market development, is the mechanism whereby the EC adapts part of the sector regulation to the changes in market competition conditions and constitutes one of the key tools for harmonising regulation between the different European countries. The number of relevant markets identified was reduced from the eighteen envisaged in the Recommendation of 2003 to eight in the review of 2007 and to the current five, in response to a progressive 'deregulation' of the sector. Specifically, with regard to the previous Recommendation, the EC has removed retail access services and voice origination services from the list of markets admitting of *ex-ante* regulation. The EC has also reorganised the wholesale broadband and rented lines markets. In accordance with this new Recommendation, access to the loop includes products for physically accessing the loop of the former market 4, together with virtual wholesale products. Indirect access is divided into two different markets: mass consumption and high-quality services, which would include rented lines.

Additionally, in the fourth quarter of 2015 the Regulation on measures concerning open Internet access and amending Regulation (EU) No. 531/2012 on roaming, was adopted, which arose from the ambitious proposed Regulation on a single European electronic communications market, presented by the EC in September 2013 and which, in the end, has only materialised in these two areas. Firstly, the new Regulation addresses network neutrality-related proposals: it envisages users' right to open Internet access.

³ Recommendation of the EC of 9 October 2014 concerning relevant product and service markets of the electronic communications sector which may admit of *ex-ante* regulation, pursuant to Directive 2002/21/EC of the European Parliament and of the Commission concerning a common regulatory framework for electronic communications networks and services.

Secondly, in relation to roaming, it establishes that, from June 2017, rates for calls, SMS/MMS and data traffic within the EU while roaming abroad must be the same as domestic prices for reasonable consumption (*Roam like at Home*).

Lastly, the review procedure of the Regulatory Framework for Electronic Communications that must address the new needs arising from technological and market development and adapt the current regulations to ensure the achievement of the objectives of the Digital Single Market Strategy commenced in mid-2015. The strategy's objectives include achieving greater harmonisation of national regulations, particularly those relating to radioelectric spectrum in the EU. According to the EC, greater regulatory harmonisation of electronic communications markets is required to provide the necessary conditions for European investment in next generation networks. Another of the strategy's objectives and, therefore, issues that must be addressed in the Regulatory Framework review, are: identifying and establishing the necessary incentives for investing in fast and ultra-fast networks, tackling the issue of whether current regulations are sufficiently balanced in light of the appearance of new OTT services, which at times have functions very similar to those of electronic communications and which are not currently subject to the same obligations, and, lastly, determining the need to review the European institutional framework to best adapt it to the new needs.

The first steps taken by the EC in the regulatory framework review include, notably, the publication of a public consultation in September 2015 and various preparatory studies on different topics such as: inter alia, the interoperability of wholesale services, OTT services, different investment models and the need to review the Universal Service. Also, in July 2015, the EC requested an opinion from the ORECE regarding evaluation of the application of the current regulatory framework and amendment proposals.

In conclusion, the review of the Regulatory Framework for Electronic Communications and the Digital Single Market Strategy arise in re-

sponse to the significant changes which have taken place in digital markets and are the processes that will ensure that European regulations are best adapted to the new needs and realities, after reaching the necessary consensus.

Audiovisual Sector

2015 was a year of abundant legislative initiatives that will have a significant impact on the future of the European audiovisual sector. On publishing its Communication on the Digital Single Market Strategy, the EC announced the launch of a public consultation for the review of the Audiovisual Media Services Directive (AVMSD). Its results will be factored into the proposed review of the AVMSD announced by the EC, which it will present in mid-2016. The proposal will come at a time when operators such as Netflix are increasing their market share in Europe and when other operators, such as Apple and Amazon, are looking for ways to increase their video-on-demand offering in the European market.

The AVMSD is the most important piece of legislation for broadcasters, media companies, distributors and producers in the European audiovisual sector. Approved in 2007, its basic objective is to ensure the free movement of audiovisual communication services with the aim of creating an internal market. Likewise, the Directive promotes the protection of certain public interests, such as cultural diversity, the right to information, media pluralism and the protection of minors and consumers.

The current AVMSD covers the activities and services of linear operators (classic television networks) and non-linear operators or on-demand services, which in 2015 is thought insufficient to address the challenges posed by the new audiovisual landscape. The fast development of convergence between traditional audiovisual media and online media is raising the question of whether some areas of the European regulatory framework for the audiovisual industry need to be reviewed in order to adapt it to the reality of the new services, media and consumers.

The audiovisual market is more open and competitive than the traditional analogue market. The new connected television is giving rise to a reassessment of current business models, to a new type of advertising, to the creation of new content and to viewers who are no longer passive and interact with the content viewed and with an endless number of applications.

These are some of the challenges faced by European legislators and which are reflected in the formulation of the consultation, which is basically aimed at: (i) Determining whether it is still relevant to regulate linear and non-linear services differently; (ii) Assessing the adequacy of current obligations in relation to commercial communications, protection of minors, freedom of information, pluralism and cultural diversity, to achieve the objectives established in the Directive and determine whether it should be amended; and (iii) Lastly, proposing a debate on the possible regulation of services which until now were not subject to regulation, such as, for example, audiovisual content platforms or providers that offer services within the Community area, but which are not established within the EU.

Two years ago, in 2013, some of these issues had already been identified in the consultation on the Green Paper *'Preparing for a Fully Converged Audiovisual Work: Growth, Creation and Value'* (April-September 2013), which proposed reflecting on the changes in audiovisual media, the impact of the Internet on market conditions, interoperability and infrastructure and their implications in the current Community framework.

The role of the European Regulators Group for Audiovisual Media Services (ERGA) within the review of the AVMSD

ERGA was created in February 2014 as an EC working group intended to advise on the imple-

mentation of the AVMSD and, in general, give its opinion on any topic relating to the development of the audiovisual sector. It is made up of the independent national regulatory authorities of the 28 Member States of the European Union and has an ambitious action plan for 2014 and 2015.

The Work Plan focuses essentially on assessing the relevance of the AVMSD and on preparing a set of recommendations on several specific aspects for its review, in particular: the independence of regulatory bodies, the scope of application of the Directive, the application of the country of origin principle and the protection of minors. ERGA is expected to issue its reports in November 2015 and the EC has announced that it will take the recommendations they contain into account in the draft new Directive.

Other legislative initiatives affecting the audiovisual sector

In parallel with the AVMSD's public consultation, the EC launched another public consultation in September 2015 for the review of the Cable and Satellite Directive, which dates from 1993. The aim of this Directive is the coordination of certain provisions relating to copyright and similar rights in the sphere of satellite broadcasting and cable distribution, in order to facilitate cross-border broadcasting and the reception of broadcasting services. This consultation is another of the 16 actions included in the Digital Single Market Strategy and its results will be published in spring 2016.

Lastly, the legislative proposal for copyright reform aimed at reducing differences between the each country's legislation and facilitating online access to cultural content by members of the public.

1.2. The sector in Spain

Revenue

Total sector revenue fell in 2014, although at a slower rate than in the previous two years. Revenue totalled €30,888.5 million, down 6% on 2013, as a result of the negative variation rates of approximately 7% recorded in the two previous years.

Regarding the main retail services, three grew in terms of revenue –fixed broadband, mobile

broadband and audiovisual communication services–, in contrast to data for the period 2011-2013, when growth was only recorded in revenue from mobile broadband. Growth in this service slowed in 2014 and the positive rate of 9.2% contrasts with the double-digit growth recorded in the preceding years.

Revenue from end services 2013-2014 (millions of euros and percentage)

	2013	2014	VARIATION 2013/2014
Fixed communications	9,235.47	8,573.82	-7.2%
Fixed telephony	4,190.79	3,471.77	-17.2%
Fixed broadband	3,558.82	3,641.08	2.3%
Business communications	1,445.28	1,429.60	-1.1%
Telephone info.	40.58	31.38	-22.7%
Mobile communications	10,888.97	9,777.54	-10.2%
Mobile telephony	7,576.89	6,161.81	-18.7%
Mobile broadband	3,312.08	3,615.73	9.2%
Audiovisual communication services	3,613.30	3,786.41	4.8%
Other	3,516.56	3,415.57	-2.9%
Total	27,254.30	25,553.33	-6.2%

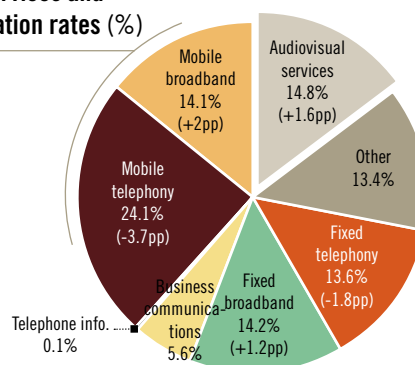
Source: CNMC

Continuing the downward trend of recent years, the market presence of voice services, on both fixed and mobile networks⁴, continued to fall. However, these still represent the largest source of retail revenue –37.7% of the total in 2014; 5.5 percentage points less than in 2013–. Revenue from voice services originating from fixed or mobile networks fell at an annual rate of nearly 20% –despite the fact that the total number of fixed lines remained practically stable and the number of mobile lines grew– and were not offset by the growth in broadband and audiovisual communication services, resulting in a 6.2% fall in total revenue from end services.

Revenue from end services, which had declined since 2008, began to register growth from the

second quarter of 2014. This was due mainly to the recovery in advertising revenue.

Distribution by revenue from end services and annual variation rates (%)



Source: CNMC

⁴ Includes messaging services.

On the other hand, billings from wholesale services fell by 4.6%. The interconnection service, which accounts for 53.9% of this revenue, fell by less than in 2013 because the new price of termination on mobile networks (1.09 euro cents per minute) came into effect in July 2013 and its effect in 2014 was only noted in the last two quarters. In turn, the coming into effect in November of the new price for termination on fixed networks, after the last wholesale market review, led to a reduction in revenue from interconnec-

tion on fixed networks. Once again, revenue from wholesale fixed broadband services recorded growth, due mainly to the demand for the local loop unbundling service by alternative operators.

The acquisition of Ono by Vodafone, which was formalised in July 2014, is not reflected in the data relating to these services, as they continue to operate and report data separately and, therefore, reporting revenue from the wholesale services provided between the two companies.

Revenue from wholesale services 2013-2014 (millions of euros and percentage)

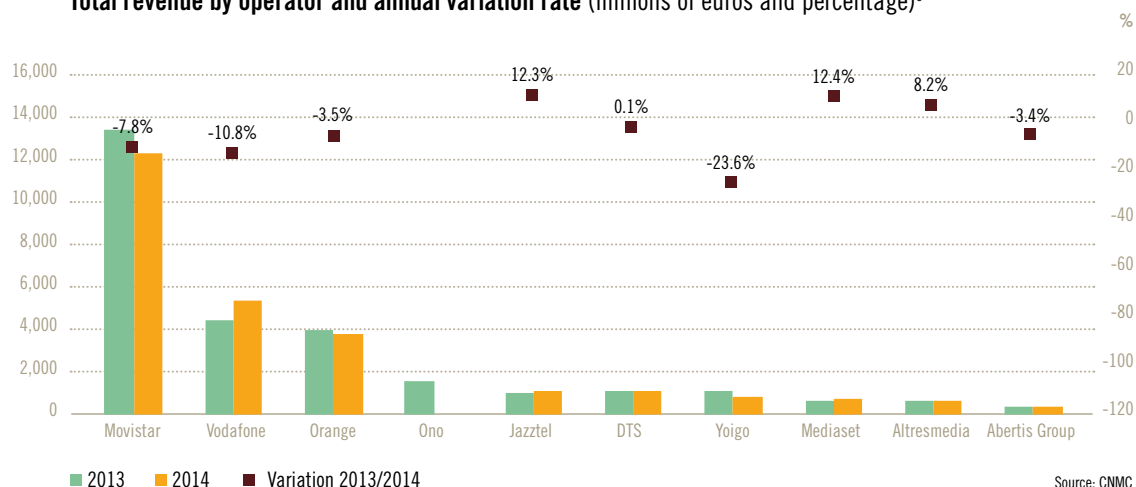
	2013	2014	VARIATION 2013/2014
Interconnection	3,155.97	2,877.79	-8.8%
Circuit rental	727.1	677.22	-6.9%
Data transfer	57.9	50.3	-13.1%
ADSL services	653.82	693.28	6.0%
Transport and broadcast	374.48	357.64	-4.5%
Other services	621.3	678.91	9.3%
Total	5,590.58	5,335.14	-4.6%

Source: CNMC

Total revenue of the ten operators⁵ with the highest billings in 2014 fell compared to the previous year, except that of Jazztel, Vodafone and the two leading free-to-air television operators, Mediaset and Atresmedia. The recovery in advertising revenue spurred the growth of these two companies, as it represents over 95% of their total revenue. Furthermore, Jazztel recorded significant growth in the mobile communica-

tions business, due mainly to the success of its combined fixed and mobile service offerings. Movistar's revenue fell by 7.8% overall, with a sharper drop in the mobile business than in the fixed business. Lastly, Vodafone, after acquiring Ono, recorded a negative variation of 10.8% compared to the combined revenue of the two operators in 2013.

Total revenue by operator and annual variation rate (millions of euros and percentage)⁶



Source: CNMC

⁵ In this report, Vodafone data for 2014 include Ono data for the whole year, despite the fact that the acquisition was formalised in July 2014. Movistar includes fixed and mobile business data for all years.

⁶ Vodafone's annual variation rate is calculated adding Ono's revenue for both 2013 and 2014.

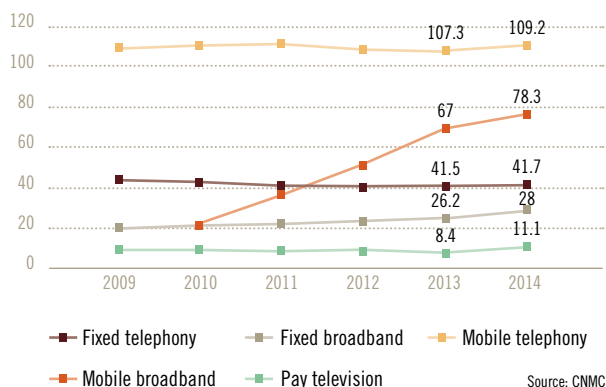
Penetration of end services

All end services increased their penetration rate in 2014. The biggest rises in this indicator were for pay television (not included in mobile television) and mobile broadband services, with year-on-year growth rates of 31.1% and 16.9%, respectively. The growth in pay television subscribers (1.2 million) was due to IP television, sales of which grew gradually during the year, mainly due to Movistar's various marketing campaigns promoting this service by bundling it with other telecommunications. Thus, the percentage of pay television lines bundled with other services grew by 11 percentage points and 69.7% of these bundles with pay television were of the quintuple-play type, i.e. they involved subscribing to this service together with fixed and mobile telephony and broadband services.

The upward trend in mobile broadband access was sustained over time and, in 2014, there were 34.7 million mobile voice lines linked to a broadband service, 5.3 million more than at the end of 2013. Lastly, the penetration of mobile telephone grew moderately after two consecutive years of declines and fixed broadband recorded growth once again, standing at 28 lines per 100 inhabitants. The total number of fixed telephone lines remained stable, but the decline in population led to a slight increase in penetration for this service, which had fallen since 2008.

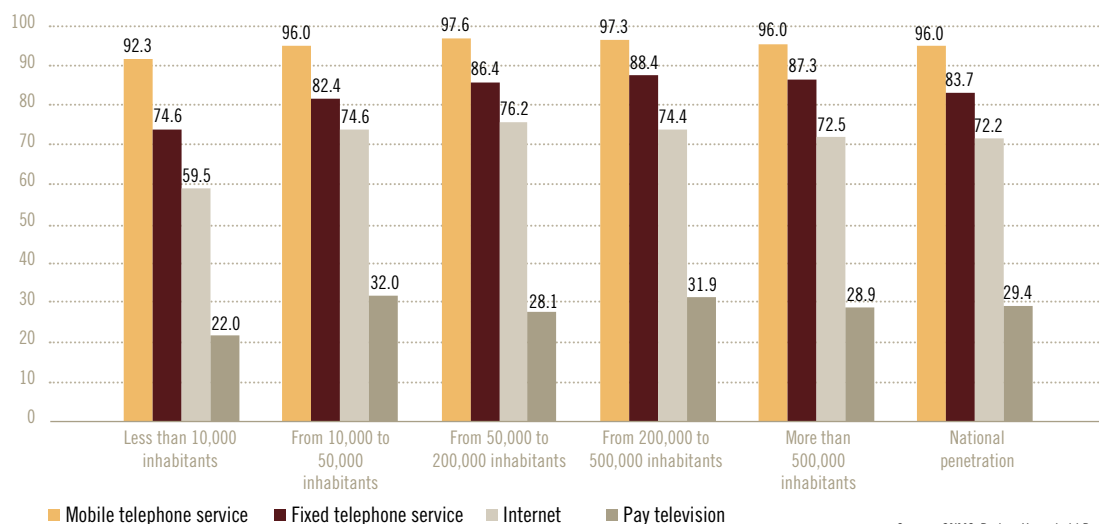
According to CNMC-Red.es Household Panel data, 83.7% of households had a fixed-line tele-

Evolution of penetration of the main services (lines/100 inhabitants)



phone service and 96% had a mobile telephone service. Furthermore, 29.4% of households had pay television and 72.2% had Internet access. However, there are significant differences as regards the penetration of the services in Spain, particularly in relation to Internet and pay television services. These differences are partly due to the relative urbanisation of the locations and, therefore, the size of the municipality in which a household is situated is taken into account; in those with less than 10,000 inhabitants, the penetration of the Internet is 12.7 points lower than the national figure and that of pay television, 7.4 points.

Penetration of the main services in households by size of municipality (percentage of households with service)



In the case of the Internet, there is also a significant difference between the percentage of households that subscribed to the service according to the age of the head of the family. For example, in households where the head of the family was aged 65 and over, the percentage with Internet was 41.1%, while this percentage reached 86.7% in households where the head of the family was aged under 35. There is a large generation gap in the use of and subscription to broadband services, both fixed and mobile.

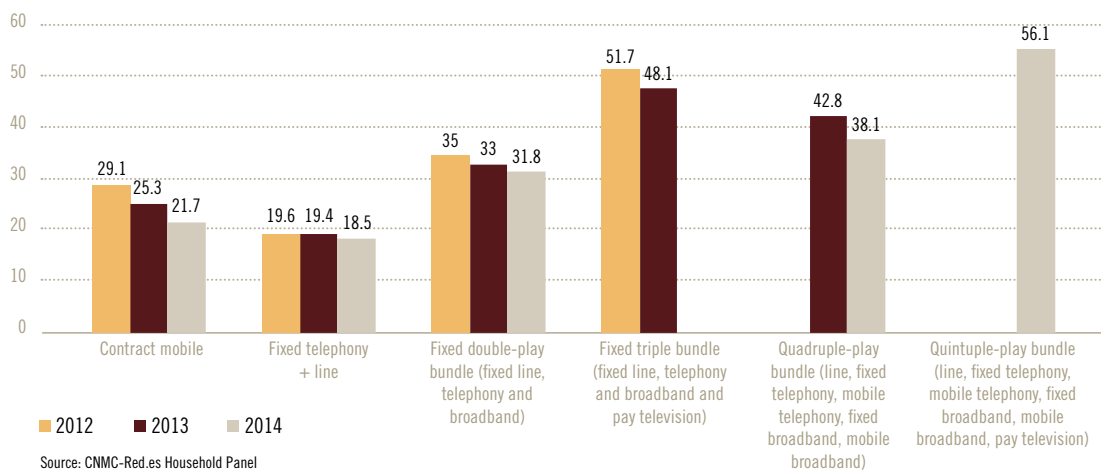
Prices

A major cause of the decline in operator retail revenue has been the reduction in the rates for the most popular products. For example, in 2014, according to CNMC-Red.es Household Panel data, 36.9% of households with fixed telephony had subscribed to a quadruple-play bundle. That is, for a fixed monthly charge, the household had the following services: a fixed line, fixed-line broadband access and, also, flat-rate or semi-flat-rate

fixed-line telephone, mobile telephone and mobile broadband tariffs. The average rate for the quadruple-play bundle (among households which had this bundle) was €38.1 per month, approximately €5 less than in 2013.

Also, the average rate for quintuple-play bundles, which differ from quadruple-play bundles in that they include a subscription to pay television, was €56.1 per month. The marketing of this bundle, subscribed to by 19.5% of households with fixed telephony in 2014, began in 2013, so its average price is not available. However, in order to indicate the extent of the reduction in the rates for these bundles, it should be noted that in 2013, the average rate for the fixed triple-play bundle, which in fixed services was equivalent to the quintuple-play bundle but did not include mobile services, was €48.1, i.e. only €8 less. In 2014, only 1.9% of households with fixed telephony subscribed to a fixed triple-play bundle and the sample of households with a triple-play bundle was insufficient to estimate their monthly expenditure.

Average monthly expenditure on the main services by household (euros/month)



In fact, the significant reduction in prices of fixed bundled services in recent years has resulted in the alignment of the prices of these services in Spain with average European prices. By way of example, according to Digital Agenda Scoreboard data, the minimum tariff for the double-play bundle with a speed of between 20 and 100 Mbps in Spain has declined progressively

and, in 2014, fell below the European average. This was also true in the case of triple-play bundles and other speeds.

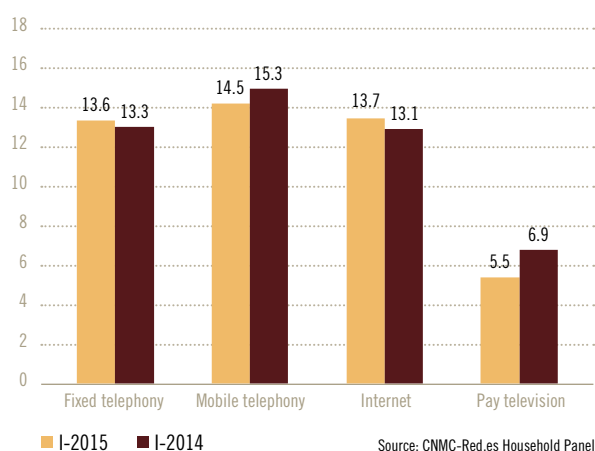
Lastly, average effective household expenditure on contract mobile telephone services also fell sharply (from €25.3 per month in 2013 to €21.7 per month in 2014).

Portability and changing operator

Portability allows a user to change their service provider without having to change their telephone number. This possibility, which eliminates the drawbacks that users would otherwise encounter, makes it easier to change operator and Spain is traditionally one of the EU countries with the highest portability rates. In the last five years, average monthly figures for porting of mobile and fixed-line numbers were 476,995 and 156,522 numbers, respectively. In 2014, the figure for porting of mobile numbers was 6.2 million, down 8% on the previous year, and the figure for fixed-line numbers was 1.9 million, a similar order of magnitude to 2013.

The graph below shows the operator switching percentages for services. Nearly all the percentages are similar to those for 2014, but the discrepancies between operator switching rates for the different services are somewhat smaller. The reason lies in the popularity of quadruple-play and quintuple-play bundles in 2013, i.e. the subscription to various fixed and mobile services in a single contract and with a single monthly charge. With these types of contracts it is more likely that when a household changes the provider of one service, it also changes the provider of the other services, due to which the switching rates of the different services are similar.

Change of operator by service (% of households that changed operator)



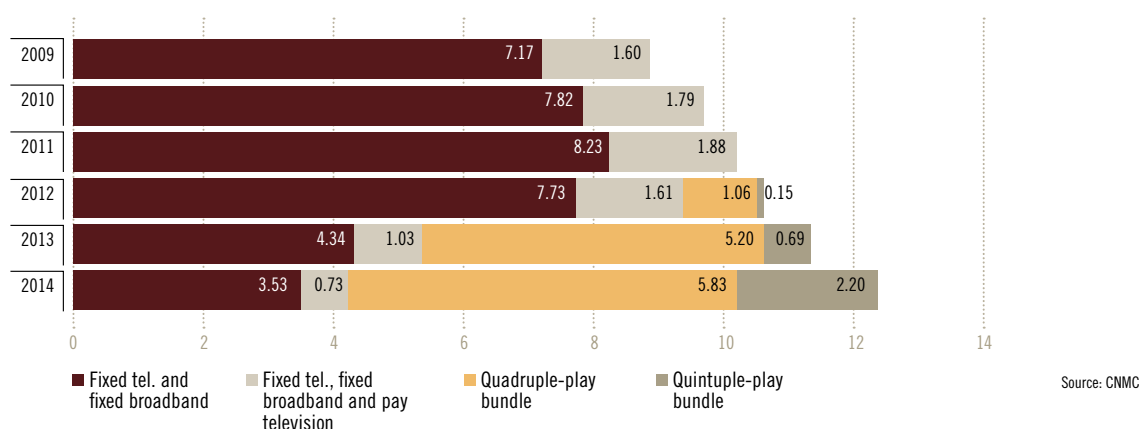
A relatively common practice with operators is the use of minimum term clauses, which establish a financial penalty to be imposed on users if they decide to cancel the operator's service before a certain time period. These contractual conditions, agreed between operators and customers, indemnify operators for any losses arising from their customers ending the contract early, such as, for example, when the operator subsidises the purchase of a terminal or other pieces of equipment. In competitive markets, if users are aware of the minimum clauses and they are reasonable, they should not constitute a problem for competition, although they would restrict changing service providers.

However, in some cases, minimum term clauses give rise to anticompetitive behaviour, have restrictive effects on market competition and are detrimental to consumers. In October 2014, the CNMC imposed a €25 million fine on Movistar for failing to comply with Article 1 of Law 15/2007, on the Defence of Competition, by establishing an organised practice of maintaining a set of agreements with their corporate customers with minimum term commitments, the aim of which was to restrict competition by excessively limiting the ability of business segment customers to change provider.

Bundles

The total number of bundles that combine fixed and mobile services was 8 million at the end of 2014, compared to 5.9 the year before. If quadruple-play bundles showed the most growth in 2013, in 2014 it was quintuple-play bundles that took centre stage. This type of bundle –which jointly markets telephone and broadband services both on fixed and mobile networks plus pay television– gained an additional 1.5 million new subscriptions, ending the year with more than 2.2 million. Furthermore, quadruple-play bundles, while being the most popular in 2014 at 5.8 million, grew at a much slower rate than in 2013.

Evolution of the most commonly subscribed bundles (millions of bundles)

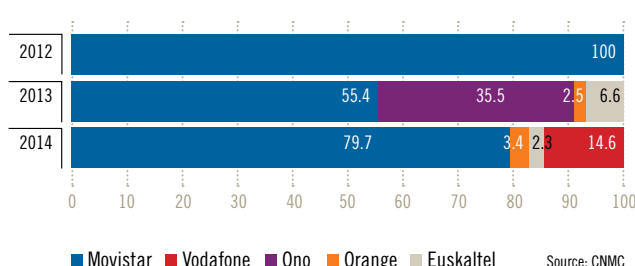


Double-play fixed telephony and broadband bundles, which until 2012 were the most popular, and triple-play bundles, which additionally include pay television, continued their downward trend of the last three years, coinciding with the appearance of quadruple-play and quintuple-play bundles at the end of 2012, as a significant number of new subscriptions to these offers, which combine fixed and mobile services, stem from the migration of customers who had subscribed to double-play or triple-play bundles.

In the case of quintuple-play bundles, the growth recorded in 2014 put them ahead of triple-play bundles for the first time and, moreover, by a wide margin, tripling the growth of the former. This growth was due mainly to Movistar's clear commitment to its television service, Movistar TV. The success of its commercial offering, Fusión, which bundled fixed and mobile services with pay television, allowed it to end the year with a total of 1.9 million pay television subscribers, nearly tripling the total at the end of 2013.

Therefore, data by operator reflect Movistar's dominance in these types of bundles, although in absolute terms all the operators recorded gains in bundles in 2014.

Distribution of quintuple-play bundles by operator⁷ (%)



The acquisition of DTS by Movistar, formalised in April 2015, falls within this traditional operator strategy of differentiating its product on the basis of audiovisual content. These and other differentiation strategies are expected to prosper in the coming years, given that traditional telecommunications services –access and voice– are homogeneous and, therefore, offer less profitability and a reduced possibility of retaining the customer in the current context of greater competition.

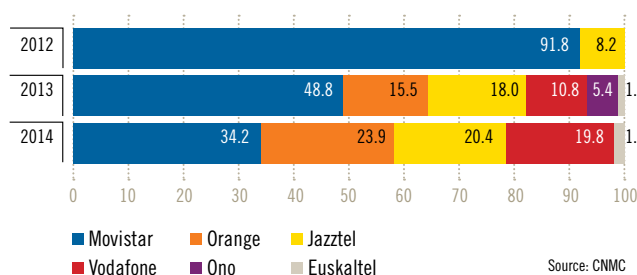
The CNMC approved this purchase transaction subject to a set of obligations that must be fulfilled by Movistar, in order to guarantee operator access to audiovisual content under conditions

⁷ In 2012, Movistar was the only operator that offered quintuple-play bundles. In 2014, Vodafone data relate exclusively to Ono, since Vodafone ceased to provide xDSL pay television services in December 2012.

that guarantee competition. Specifically, Movistar will be obliged to grant its competitors access to at least 50% of all its premium channels, both Movistar and those from DTS, which will include the most popular content, both sports and series and movies. Also, Movistar can only use acquired content exclusively for a period of two years.

A different situation is observed for quadruple-play bundles that do not include the pay television service, where the distribution in 2014 was more equal among the four leading operators. Movistar was the only operator that recorded a fall in the number of these types of bundles in 2014, since its marketing efforts were focused on quintuple-play bundles, as opposed to the other operators which gained market share.

Distribution of quadruple-play bundles by operator (%)



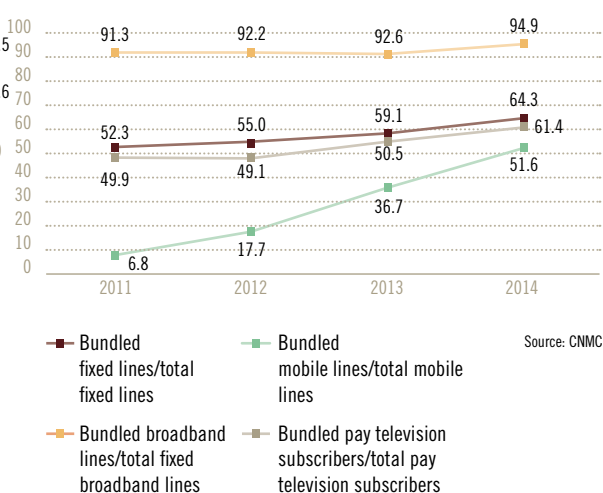
As a result of how the sector is evolving, less and less lines are sold unbundled; however, in contrast to other countries, in Spain there are still a significant number of customers who subscribe to fixed-line and mobile telephone services separately. The former are usually households inhabited by elderly people who do not subscribe to fixed broadband services and the latter are individuals who subscribe to prepaid mobile telephone services.

Without a doubt, in 2014, the most significant growth was recorded by bundles including pay television and mobile lines, both of which rose approximately 10 percentage points in the ratio of bundled lines to total lines. In the case of pay television, at year end 2014, 61.4% of subscribers had subscribed to the service with some oth-

er service, due mainly to the success of quintuple-play bundles, which already accounted for 42.8% of total subscribers, compared to 17.5% the previous year. Additionally, with the acquisition of DTS by Movistar, it is possible that the number of unbundled pay television subscribers will fall substantially in the future, since these customers come almost entirely from the former operator.

In the case of mobile lines, more than half of the total number were bundled, either with the mobile broadband service only or also with fixed network services. In 2011 only 3.6 million mobile lines were bundled with a single service, which was also exclusively that of mobile broadband while, three years later, 26.2 million lines –51.6% of the total– are subscribed to together with one or more services.

Percentage of bundled lines / total lines per service (%)



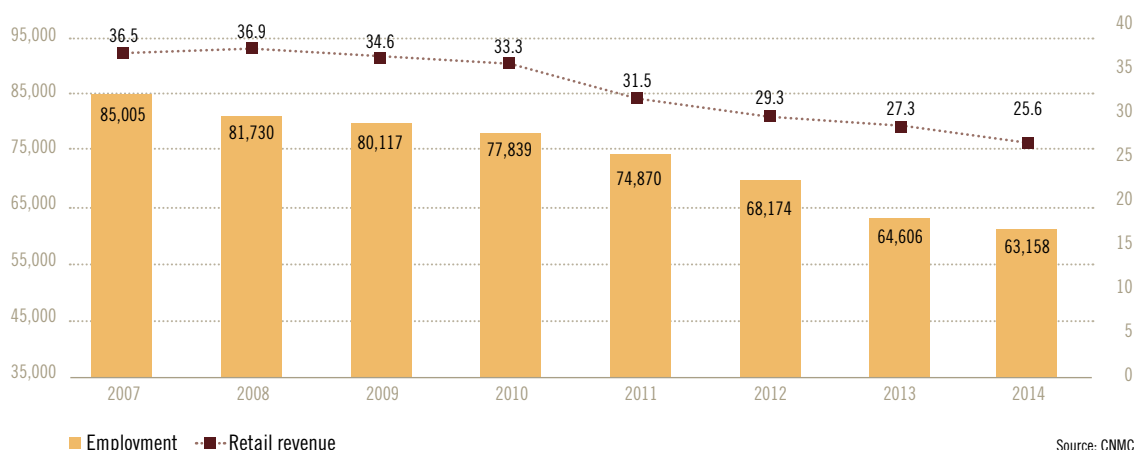
With more moderate growth, fixed telephony and fixed broadband were increasingly subscribed to jointly with other services. Thus, 64.3% of fixed telephone lines (12.4 million) and 94.9% of fixed broadband (12.3 million) were bundled at the end of 2014. It was characteristic of the latter service that it was subscribed to bundled in most cases, until 2012, together with the fixed telephony service and, in 2013, with voice and mobile broadband services as well.

Employment

The number of employees in the sector, including the audiovisual segment, continued the downward trend initiated in 2007, although with a fall of 2.2% in 2014, significantly lower than that of the three previous years. The sector employed a

total of 63,158 people compared to 64,606⁸ the previous year. The workforce of the leading telecommunications operators operating in Spain increased or remained stable in 2014, although the current consolidation process will foreseeably affect employment in the coming years.

Evolution of employment in the sector and revenue from end services
(number of employees and thousands of millions of euros)

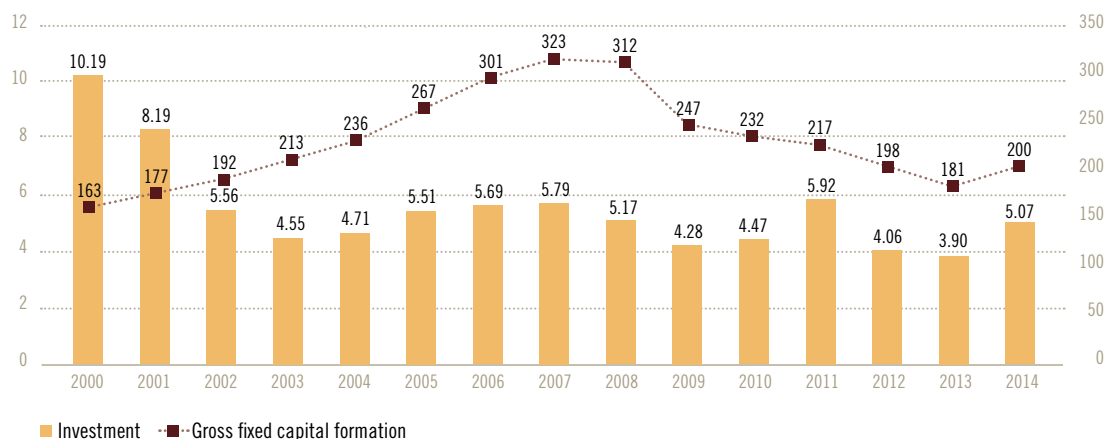


Investment

In 2014 investment in the sector totalled €5,068 million, including that relating to the audiovisual segment, up 30% on the previous year. The principal driver for investment was the rollout of next generation access networks by the main operators, particularly the optical fibre access net-

work. The number of fibre connections installed grew more in 2014 than in the three previous years, when nearly all connections belonged to Movistar. During the year Vodafone, Orange and particularly Jazztel, which had already carried out a significant rollout in 2013, increased their presence.

Total investment in the sector and gross fixed capital formation (thousands of millions of euros)

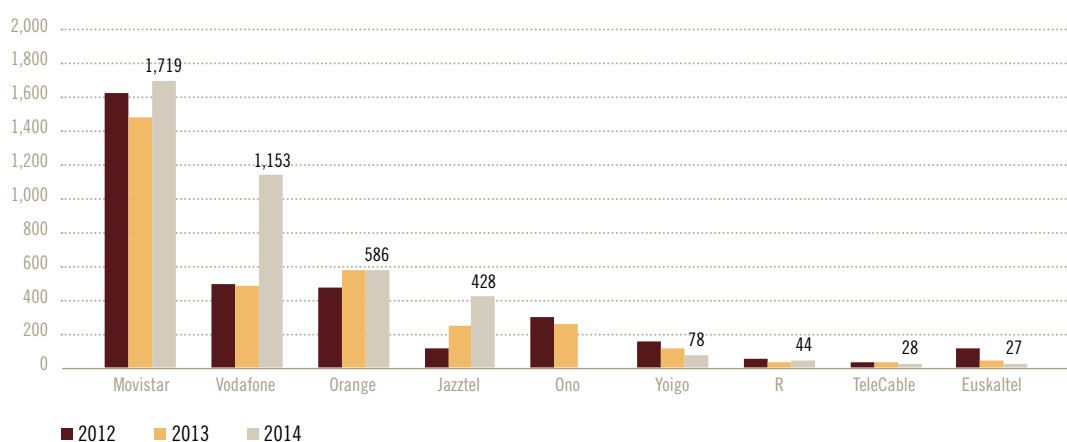


⁸ According to the Encuesta Nacional de Servicios del 2013 (2013 National Services Survey) published in June 2015 by the INE (Spanish National Statistics Institute), the telecommunications sector generated the greatest productivity (added value per employee) with €226,194, when the average for the services sector as a whole was €35,363.

Individual investment data reveal that the four main operators increased their investment in 2014. Movistar, which has both fixed and mobile businesses, increased its investment in 2014 by 14.4%, investing €1,434 million in the fixed communications business, in contrast to the fall of nearly 27% in investment in the mobile communications business.

Most notable was the investment made by Vodafone and Jazztel, which invested €1,153 million and €428 million, respectively. The former, after the acquisition of Ono, recorded a 53% rise compared to the combined figure recorded by the two operators in 2013, while Jazztel's rose by nearly 67%. In both cases, these positive rates are attributable to the aforementioned rollout of their access network.

Evolution of investment in the sector by operator (millions of euros)



Source: CNMC

Infrastructure

Fixed network infrastructure

In 2014, operators continued their investment in the rollout of fibre to the home (FTTH) networks. In addition to Movistar, which has an extensive FTTH access network, alternative operators had significant presence in this technology. It should be noted that there is significant rollout of FTTH networks in larger towns; this has enabled operators to offer their services over optical fibre connections rather than traditional xDSL connections.

Specifically, Movistar was able to end the year with a total of 10.34 million FTTH connections installed. It was followed by Jazztel, with just over three million connections. For their part, Vodafone and Orange achieved more than 839 thousand and 826 thousand FTTH connections, respectively. Overall, more than 15.13 million FTTH connections were installed.

HFC connections (connections with fibre to a node and coaxial cable to the subscriber), grew moderately. In the last year, the number of HFC connections installed grew 3.1% to 10.42 million. Of this figure, 98.4% related to connections installed in nodes with DOCSIS 3.0 technology, allowing speeds of over 100 Mbps. It should be noted that this is the first year in which the volume of FTTH connections installed exceeded the number of HFC NGA connections.

On the other hand, copper pair connections continued to predominate as a proportion of total connections –with 15.44 million lines–, being the most commonly used, both by the historical operator and by alternative operators that do not use HFC access, through the local loop unbundling service, to offer voice and data services.

These traditional copper connections –from a subscriber to an exchange– do not constitute the only manner of reaching users by means of xDSL technology. In addition to conventional

exchanges, there are other network elements, called remote nodes, connected to the exchange by optical fibre and providing service to a few hundred loops, and there may be multiple remote nodes within the area of the exchange. Given that the quality of the xDSL service is very sensitive to the distance from the loop, the objective of these remote nodes is to reduce that distance through the installation of a network element halfway. These elements are deployed

either to improve broadband services in certain areas of an exchange or to provide services to new urban areas. Broadband access services based on the use of remote nodes therefore substantially improve speed compared to that which would be obtained providing the service from the exchange. At the end of 2014 there were a total of 6,101 remote nodes in the network, with 1.18 million copper loops dependent on them.

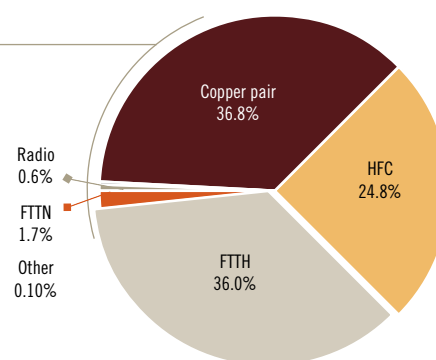
Evolution of installed connections

	2010	2011	2012	2013	2014
Copper pair	15,996,403	16,065,690	15,740,106	15,539,052	15,435,440
HFC	9,439,863	9,497,692	9,773,825	10,107,515	10,422,742
FTTH	524,370	1,607,108	3,250,556	6,244,313	15,134,930
FTTN	668,724	691,435	700,495	709,946	716,744
Radio	226,186	236,807	219,532	262,030	234,445
Other	20,027	14,207	19,322	19,167	40,467

Source: CNMC

The following graph shows the percentages for the different technologies as a proportion of installed connections. The significant rise in FTTH connections in the last year placed the percentage of installed connections using this technology at a value close to that for copper pair. The figure for copper pair fell by more than 10 percentage points in one year to 36.8%. For their part, fibre to the home (FTTH) connections nearly doubled their share to 36% in the last year. Installed HFC connections occupied third place with a share that fell by six percentage points to 24.8%. Lastly, the other, less significant, access modalities, ended the year with similar figures to those of previous years.

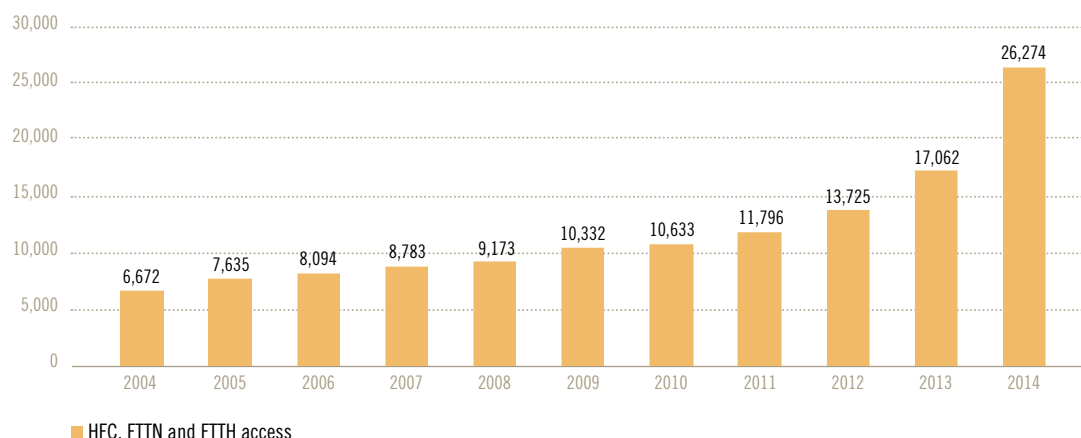
Installed connections
by type of medium
(%/total)



Source: CNMC

The analysis of the evolution of installed HFC and optical fibre connections (FTTH and FTTN) reveals the exponential growth in the number of these connections in the last four years. At year end 2014 there were a total of 26.27 million connections installed using these media, representing growth of nearly 54% compared to the previous year, driven by the rise in FTTH connections.

Evolution of installed HFC and fibre connections (thousands of connections)



Source: CNMC

The breakdown of installed HFC DOCSIS 3.0 and optical fibre (FTTN and FTTH) connections by operator reveals that Movistar obtained the highest share of connections installed; specifically, it obtained a share percentage of 42.4% combining, where applicable, the fibre to the node (FTTN) and fibre to the home (FTTH) modalities. Vodafone, which acquired the operator Ono in mid-2014, occupied second position with 31.6% of connections, taking into account the HFC and FTTH connections resulting from the combination of the two companies.

Lastly, mention should be made of the investment in the rollout of FTTH access by alternative operators that use mainly xDSL, as in the case of Jazztel and Orange.

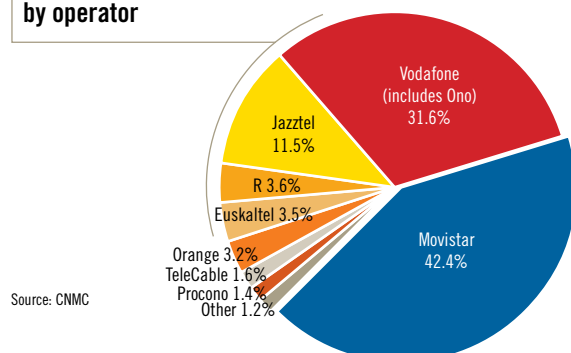
The following table shows the evolution of the volume of installed HFC DOCSIS 3.0 and optical fibre connections in recent years by operator. In the last year, the progress made by Movistar and Jazztel with their FTTH fibre rollout stands out.

Installed NGA connections by operator
(DOCSIS 3.0, FTTH and FTTN)

	2011	2012	2013	2014
Movistar	2,274,614	3,907,699	5,935,292	11,062,959
Vodafone			1,868	8,242,122
Jazztel			868,500	3,008,881
R	757,155	838,255	900,250	945,702
Euskaltel	890,368	904,263	909,260	913,473
Orange			67,377	826,689
TeleCable	400,875	417,515	422,899	426,855
Procono	250,762	282,747	322,226	363,079
Ono	6,708,603	7,063,153	7,171,267	
Other	66,130	142,860	261,935	321,223
Total	11,348,507	13,556,492	16,860,874	26,110,983

Source: CNMC

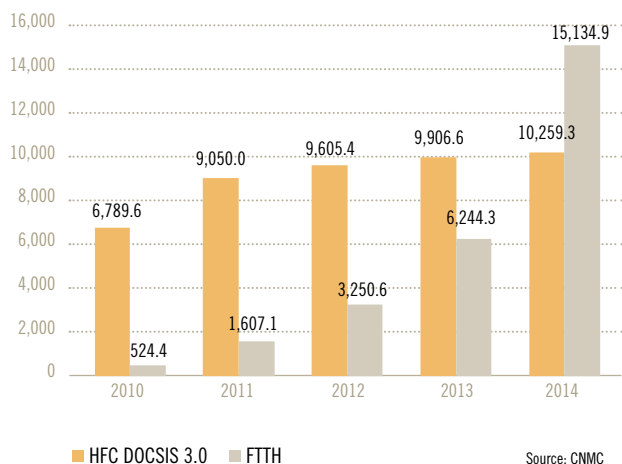
Share of installed HFC and fibre connections by operator



Source: CNMC

The following graph shows the evolution of installed NGA connections (HFC DOCSIS 3.0 and FTTH). As indicated in previous sections, fibre to the home (FTTH) connections were the next generation connections (NGA) with the highest growth in the last year. Installed FTTH connections reached 15.13 million, representing growth nearly 2.5 times that of 2013. For their part, HFC DOCSIS 3.0 connections totalled 10.26 million (3.6% more).

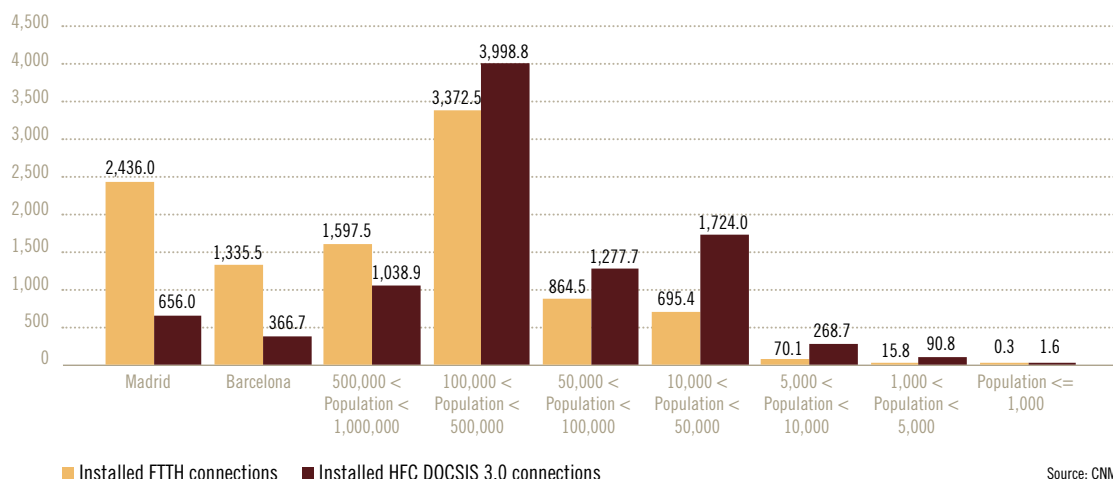
Evolution of installed NGA connections
(thousands of connections)



Geographically, the presence of NGA connections differs considerably among the different Spanish towns and cities. The following graph shows the distribution of NGA connections based on FTTH and HFC DOCSIS 3.0 by size of municipality, based on data for June 2014. The most significant rollout of FTTH connections focuses on municipalities with a population of over 500,000. In these towns, the percentage of connections in relation to the population as a whole exceeded 58%.

As regards HFC DOCSIS 3.0 connections, the most significant introduction was observed in municipalities with populations of between 100 thousand and 1 million inhabitants, taking into account both the number of connections installed and the overall population of these municipalities.

Distribution of installed NGA connections by type of municipality (thousands of connections)

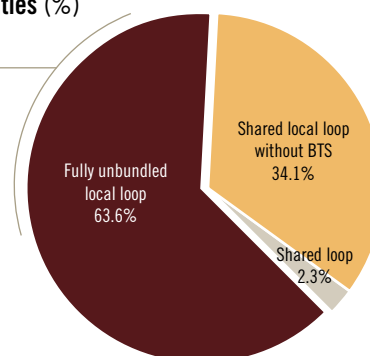


As regards the use of wholesale local loop unbundling, 2014 saw the addition of 204 new exchanges with at least one co-located operator, reaching a total of 1,528 exchanges with the presence of alternative xDSL operators in Spain. The total number of unbundled local loops reached 4.09 million local loops, up 7.9% on 2013.

The following graph shows the percentage of local loops by unbundling modality. The full local loop unbundling and shared without basic telephone service (BTS) modalities continued to rise. Both modalities totalled nearly four million local loops with 9.2% growth and account for 97.7% of total unbundled local loops. The operators that made use of this modality bundled the

different voice and data services over copper pair without making use of Movistar's fixed telephony service. Lastly, shared local loops followed the downward trend of recent years, recording a fall of 28%, representing only 2.3% of all unbundled local loops.

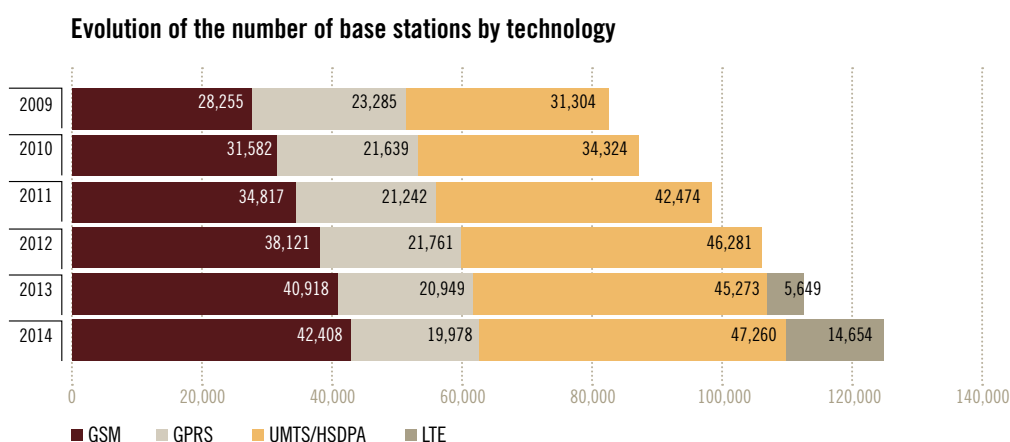
Distribution of unbundled local loop modalities (%)



Mobile network infrastructure

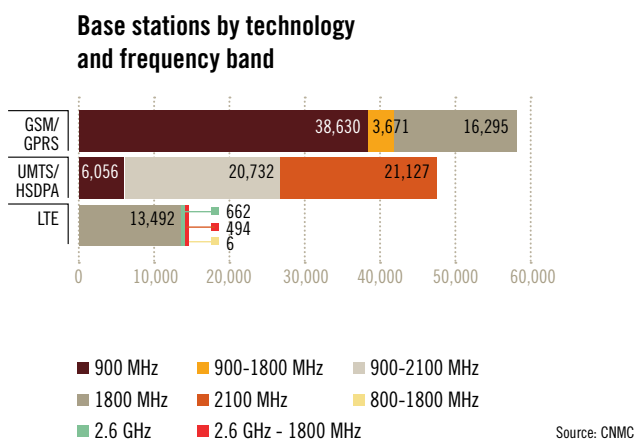
In 2014, for the second year in a row, mobile communications operators rolled out their networks based on Long Term Evolution (LTE), i.e. the fourth generation of the mobile communications standard, also called 4G technology. It should be noted that network access using LTE technology makes it possible to reach data transmission speeds which can be in excess of 100 Mbps.

In 2014 mobile network operators installed a total of 14,654 LTE base stations. This first phase of the rollout focused on the largest Spanish cities, mainly provincial capitals. Operators also continued to invest in other mobile technologies. An example of this was the number of UMTS/HSDPA base stations reported in 2014 – 47,260 active stations –, representing year-on-year growth of 4.4% compared to those reported the previous year.



It should be noted that the amendment of 87/372/EEC (known as the GSM Directive) and Decision 2009/766/EC at European level introduced the principle of technology and service neutrality. One of the consequences of the application of this principle was the possibility of using 900 MHz and 1800 MHz bands, not only for GSM technology-based systems, but also

for other systems that enable higher data transmission speeds, such as UMTS/HSDPA, LTE or other compatible technologies. This measure will help to drive the rollout of mobile broadband access systems, particularly in rural areas. The following graph shows, for 2014, the distribution of base stations according to their technology and frequency band used.



The development of radioelectric equipment has enabled a single telecommunications site associated with a mobile technology to transmit the signal at numerous frequencies. Thus, in the previous graph it can be observed that part of the equipment deployed by mobile operators incorporated this possibility, thereby enabling better coverage and a clear saving on the cost of rolling out new mobile technologies. By way of example, in 2014, 20,732 base stations with UMTS/HSDPA technology transmitted simultaneously in 900 MHz and 2100 MHz frequency bands. In fact, this form of transmission became the most widely used when rolling out UMTS/HSDPA technology in Spain.

In turn, the graph also shows that the rollout of 4G technology was carried out mainly in the 1800 MHz frequency band and also, to a lesser extent, in the 2.6 GHz band. This model –combining the 1800 MHz frequency band with the 2.6 GHz band– was the most widely implemented in other European countries. In the near future it is envisaged that mobile operators may also use the 800 MHz frequency band to promote the rollout of this type of technology in Spain.

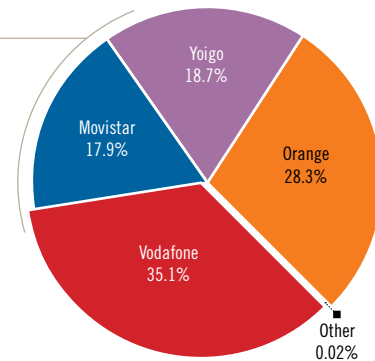
The following graph details the total number of LTE base stations according to the network operators that installed them. We can therefore observe that Yoigo, the network operator with the smallest market share, has installed a greater number of LTE stations than operators with a substantially larger market share. This can partly be explained by the fact that, in May 2013, Yoigo became the first Spanish operator to announce its intention to offer its customers commercial products with 4G speeds. Subsequently, the other network operators started announce their fourth-generation technology rollout plans until, in September of that year, the four 4G technology networks that currently offer high-speed mobile connectivity began to operate.

It should be noted that the category 'Other' refers to the operator Consorcio de Telecomunicaciones Avanzadas (COTA) which, despite being a

local initiative focused on the province of Murcia, became, at year end 2012, the first operator that officially offered LTE connectivity in Spain.

The main consequence of the growth in 3G base

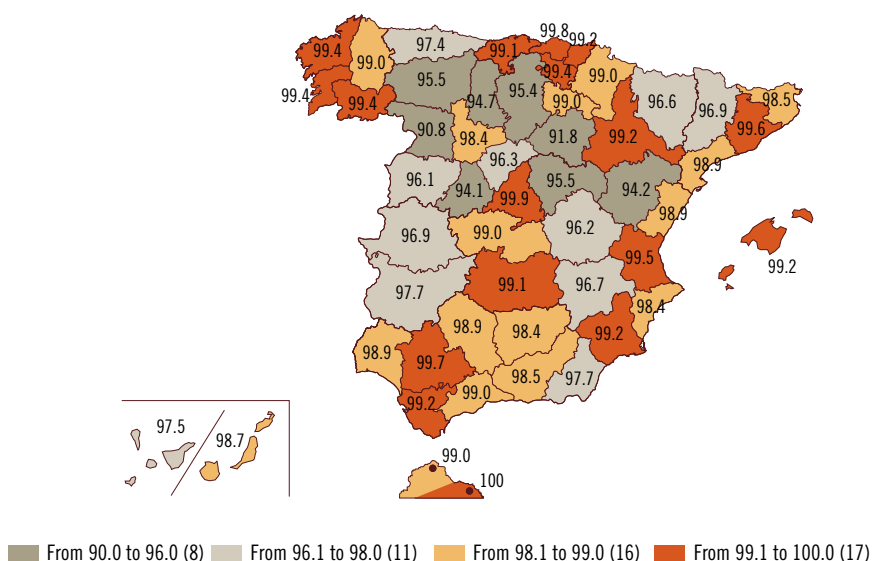
Distribution of base stations by operator, 2014 (%)



Source: CNMC

stations was the increase in population covered by this type of technology. The following graph represents, at provincial level, the mobile network with the highest degree of 3G service coverage, in accordance with minimum required quality standards⁹. In general, provinces with higher concentrations of urban population had broader 3G network coverage.

Population with access to next-generation networks (UMTS/HSDPA) (%)



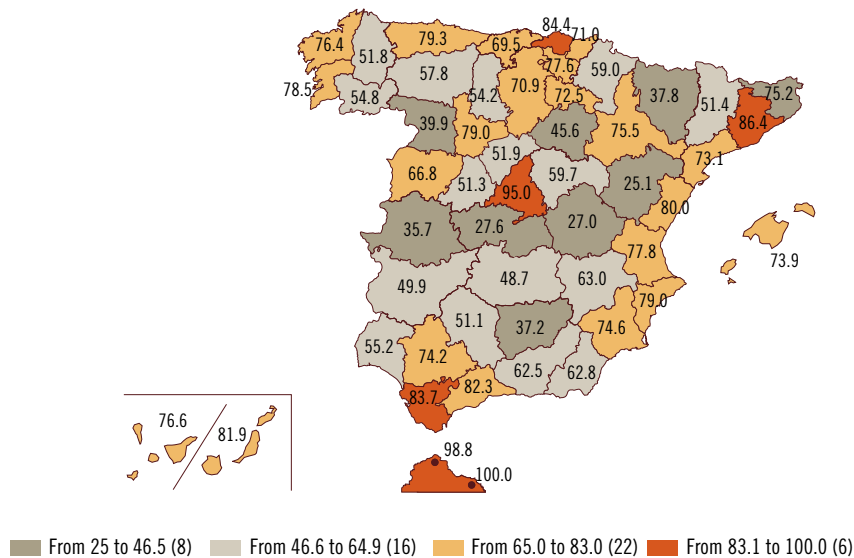
Source: CNMC

⁹ The 3G service coverage reported ensures a data traffic speed higher than 300 Kbps.

In the case of 4G coverage, this trend is even more marked. Thus, Madrid and, to a lesser extent, Barcelona, had greater coverage than the

rest of Spain. These differences are expected to level out progressively as operators broaden their base station network.

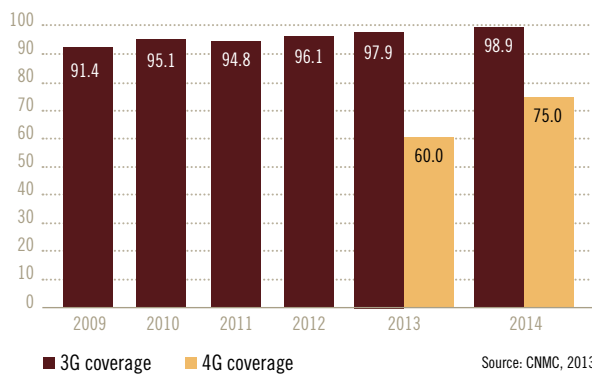
Population with access to fourth-generation networks (LTE) (%)



Source: CNMC

According to the data reported by the four mobile operators with proprietary networks, 98.9% of the Spanish population was covered by at least one next-generation network, whether using UMTS or HSDPA technology. Furthermore, the data reported by network operators also show that, initially, 75% of the population would have the option of connecting at least to a fourth-generation network (LTE).

Population covered by at least one 3G/UMTS or 4G/LTE network (%)



Source: CNMC, 2013

2 Analysis of the sector in Spain

2.1 Retail fixed-line communications

2.1.1 Fixed-line telephony

In 2014 revenues and, above all, fixed-line telephony traffic saw a sharper drop than in previous years, despite the fact that the number of lines remained practically stable compared to 2013. For the second consecutive year, an increase in the number of lines was recorded in the residential segment, which in the last year nearly offset the loss in the business segment.

Average consumption per fixed line dropped substantially for all types of traffic, while consumption per mobile line increased. Total national traffic originating in fixed and mobile networks¹⁰ remained stable in 2014, reversing the downward trend recorded in previous years, although fixed network traffic accounted for only 36.3% compared to 43.5% the previous year, with more traffic consequently originating in mobile networks. In an environment in which flat voice rates for fixed lines¹¹ and mobiles are a frequent choice among users, these opted for mobiles over fixed lines for making calls.

The trend for bundled fixed-line telephone service contracts continued to advance and, at the end of 2014, only 35.7% of fixed telephone lines were subscribed to separately. The forms of joint subscription preferred by consumers were, as in 2013, quadruple-play and quintuple-play bun-

dles – made up of fixed-line telephone, fixed-line broadband, mobile voice and mobile broadband plus pay TV as a fifth service –, which accounted for 64.5% of total bundles with fixed-line telephone compared to 51.4% the previous year.

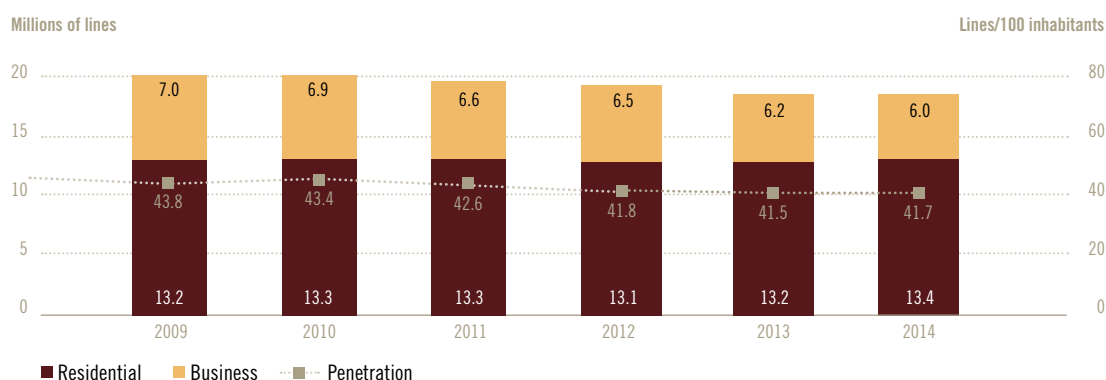
Fixed-line number portability, which in 2014 totalled nearly two million transactions, reflected that, despite the maturity of this market, users continued to change providers as a result of more attractive offers from operators, particularly bundled offers with a greater number of services, better prices or more features.

This is reflected in Movistar's decreased line share, which fell by 3.7 percentage points, although this operator continued to account for 55% of total fixed telephone lines. The other operators increased their market share and Vodafone, after acquiring Ono, became the second-largest operator in this market with 20% of the lines.

Lines

The number of active fixed telephone lines stood at 19.4 million, only 5,794 lines less than the previous year. The business segment lost nearly 195,000 lines, a much smaller drop than that recorded in 2013, and the rise in the residential segment almost entirely offset this decline.

Lines and penetration of fixed-line telephony (millions of lines and lines/100 inhabitants)



¹⁰ Fixed-to-fixed traffic does not include local calls to narrowband Internet. Traffic from mobiles is calculated in airtime minutes and does not include international roaming.

¹¹ Most bundled tariffs include a certain number of fixed-to-mobile minutes.

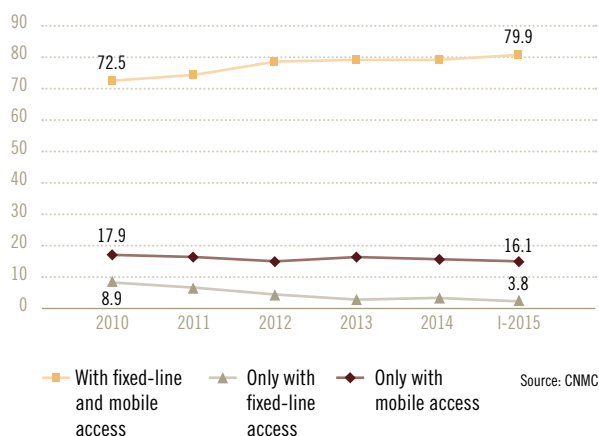
Fixed-line telephony penetration, defined as the total number of active fixed lines per 100 inhabitants, stood at 41.7¹², slightly higher than that recorded in 2013, which was 41.5¹³.

According to the data provided by the CNMC-Red.es Household Panel, in the first quarter of 2015, 83.7% of Spanish households had a fixed-line telephone service, practically the same percentage as in 2014. Of these, 95.4% had fixed and mobile access, while 4.6% had only fixed access. On the other hand, 16.1% of Spanish households had only mobile access, not fixed-line access. This last percentage has dropped nearly two percentage points since 2010 and the percentage of households that only have fixed access also fell, even more sharply (decline rate of over 50% since 2010). Over the same period, households with both types of access have increased year after year and their percentage has increased 7.4 percentage points since 2010.

These households with two types of access also have mostly fixed broadband and represent the most common household profile in Spain, characterised by higher voice consumption than the others. Quadruple-play and quintuple-play offers are aimed mainly at this target audience and have given rise to an increase in the percentage of households with both types of access in the last two years, given that in some cases they offer households with only fixed-line services the possibility of enjoying a mobile line at no extra cost. In fact, these convergent bundles reduce the substitution effect between fixed and mobile access, as shown by the fact that there is an ever-increasing number of households that have both.

According to the CNMC-Red.es Household Panel, among households with only one type of ac-

Households by type of telephone access
(% of households compared to the total)



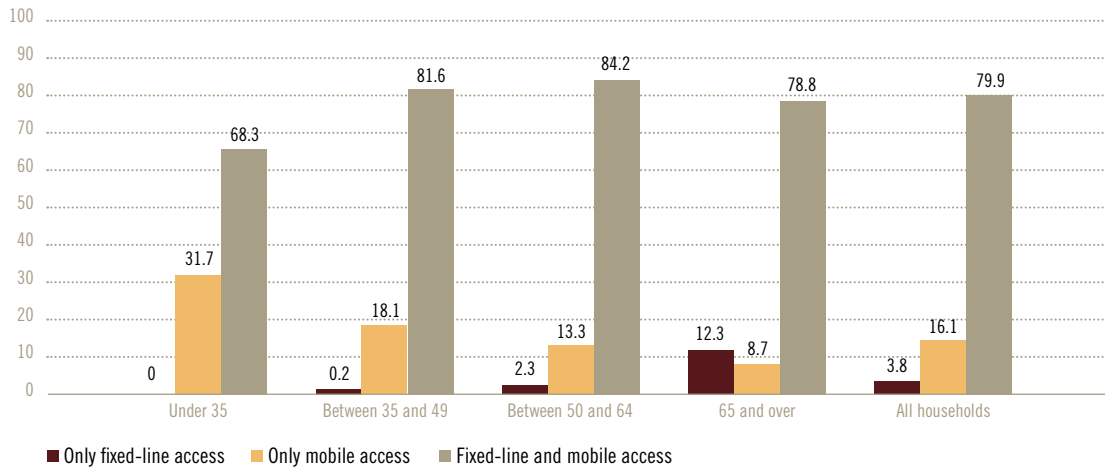
cess the most frequently mentioned reason for not having fixed-line access is that mobile access is cheaper (53.4%), followed by the fact that mobile access suffices (45.3%). On the other hand, the reason most frequently given by individuals for not having mobile access was that fixed-line access suffices (44.0%), while just 9.3% said that they did not have mobile access because it was expensive.

Lastly, the data provided by the CNMC-Red.es Household Panel also show the strong generational change in terms of access had. In particular, in households with occupants aged 65 and over, 12.3% only had fixed-line access, when the overall percentage is 3.8%. On the other hand, in households with younger occupants (aged under 35), 31.7% had only mobile access with a substantially lower overall percentage (16.1%). In fact, the percentage of households with occupants aged under 50 who only have fixed-line access is practically nil.

¹² Calculated on the basis of total fixed telephone lines and the population figure for 2014, obtained from the census update of 2011: 46,512,199 inhabitants (source: INE - Spanish National Statistics Institute).

¹³ Calculated on the basis of total fixed telephone lines and the population figure for 2013, obtained from the census update of 2011: 46,727,890 inhabitants (source: INE - Spanish National Statistics Institute).

Subscription to telephone access by age of the household head
(% of households compared to total households in each age group)



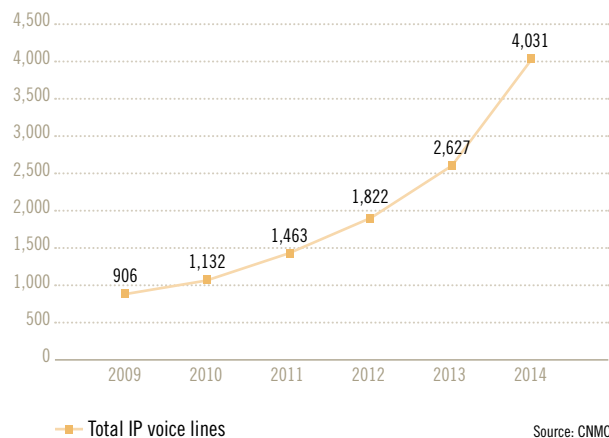
Source: CNMC-Red.es Household Panel

As regards the technology used to provide the fixed-line telephone service, operators increasingly offer the IP voice service. At year end 2014, the number of fixed lines supported by this technology exceeded four million, with annual growth of 53.4%. Thus, 20.8% of the total fixed-line market used this technology to offer the fixed voice service.

Some of the alternative operators have been offering their customers voice over IP for some time, making use of two wholesale services regulated by the CNMC. Specifically, Orange, through local loop unbundling without basic telephone service (BTS), offers voice in the wide-band frequency range. Vodafone uses another wholesale service, naked indirect access, to provide Internet and voice services to its customers without them having to subscribe to a fixed line with Movistar in areas where the alternative operator does not have co-located equipment allowing it to unbundle the local loop. In both cases, the consumer is fully dissociated from Movistar.

Other operators, such as Movistar and Jazztel, gain increasing presence in total IP voice lines as their FTTH network deployment progresses.

Fixed telephone lines over IP voice¹⁴
(thousands of lines)



Source: CNMC

¹⁴ This figure does not include the use of applications that enable telephone calls over the Internet.

Customers

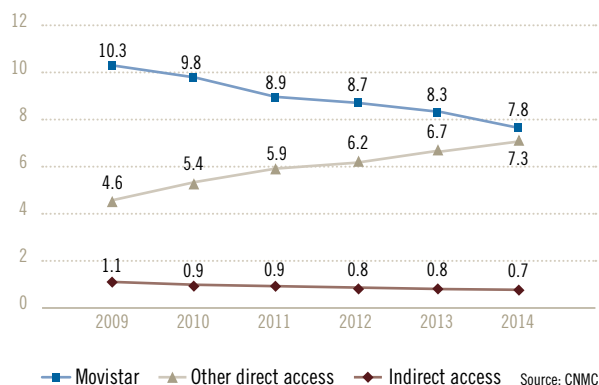
At the end of the year, there was a total of 15.9 million fixed-line telephone customers, of which 15.2 million had direct access and the rest indirect access. Direct access customers showed the same trend as lines, with a decrease in Movistar customers, while the rest of the main alternative operators continued to increase their share.

The competition for fixed communications services has led operators to opt in the main for the direct access service, competing in terms of infrastructure, whether proprietary – mainly HFC or FTTH network – or owned by Movistar, making use of the various wholesale services regulated by the CNMC. In all of these cases, the alternative operator needs to make investments, although of a different magnitude. If the alternative operator decides to use Movistar's fixed network to offer direct access services, it must invest in the co-location of its equipment at this operator's exchanges in order to unbundle and connect the local loop – or last mile – to its own network. In contrast, the alternative operator may configure its own differentiated service offering in the areas covered by the exchanges where it is co-located.

Since year end 2013, and above all in 2014, the leading operators – which use Movistar's access network to reach their customers – have also begun to deploy their own FTTH network to cover the growing demand for services with more bandwidth. This, however, has not implied a reduction in the local loop unbundling service, particularly the fully unbundled modality, which gained an additional 270,000 units in 2014.

In contrast, the indirect access modality has declined in recent years. This service allows the operator to provide fixed-line telephone services over Movistar's physical access through an oper-

Evolution of direct and indirect access customers (millions)



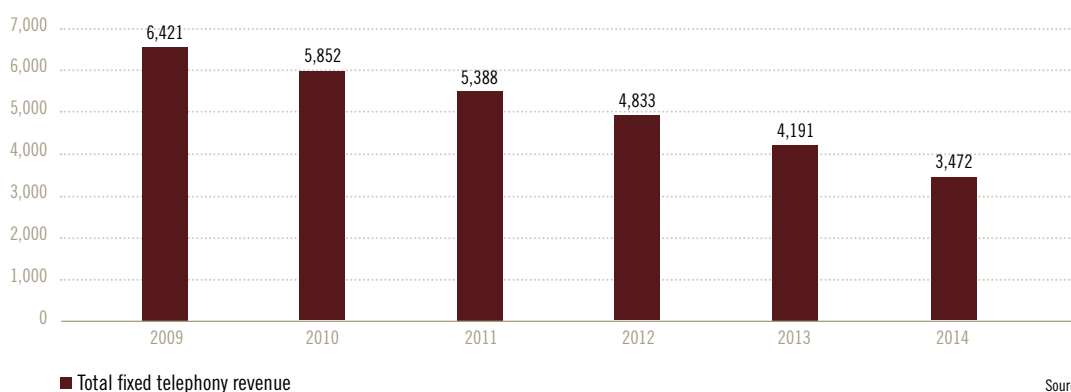
ator selection code. This modality, while currently residual, continues to allow operators to offer the service to customers in areas not covered by their own network or where they are not co-located, so as to be able to offer services by unbundling the local loop. In 2014 the figure recorded was 4.6% lower than in 2013, with only 721,555 indirect access customers.

In general, when an alternative operator offers its services to end customers through the indirect access modality, it also uses the Wholesale Telephone Line Access (WTLA) service. This instrument arises from the obligation imposed by the CNMC on Telefónica de España S.A.U. in the wholesale fixed network access and origination market analysis. Through this service, the alternative operator bills its end customer not only for traffic but also for access in a single invoice, while paying a rental fee to the operator that owns the access, which must be cost-related. In 2014, there were a total of 574,171 WTLA lines, 8.3% more than the figure recorded the previous year.

Revenue and traffic

The revenue corresponding to the fixed telephony retail service – €3,472 million – was 17.2% less than the previous year.

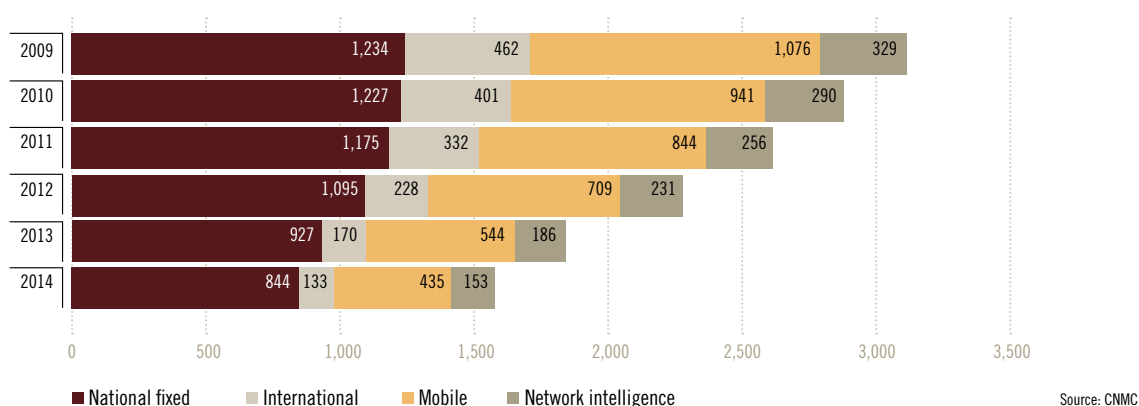
Evolution of revenue from retail fixed telephony
(millions of euros)



The decline in revenue was in line with that of traffic. Despite the fact that the number of fixed lines remained stable in 2014, total traffic originating from fixed networks experienced a significant fall of 17.1%. This fall occurred in all types of traffic, both that generated mainly under flat-rate tariffs and traffic charged by minutes consumed. In fact, this drop was even sharper in the

case of traffic included in flat-rate tariffs – which corresponds basically to national traffic and, to a lesser extent, to fixed-to-mobile traffic –. As regards the proportion of minutes consumed under flat-rate tariffs in relation to total traffic¹⁵, it remained similar to that of previous years, at approximately 80%.

Evolution of revenue for fixed-traffic services (millions of euros)



¹⁵ It is calculated without taking intelligent network and other traffic into account.

Specifically, national traffic, 86.4% of which is generated under flat-rate tariffs, fell by 17%. Also, traffic to mobiles, with a proportion of 41% under flat-rate tariffs, fell by 13.3%, despite the fact that the most popular bundles include (or increase) a certain amount of free minutes to mobiles within the monthly fee. The reduction in the wholesale price for termination in mobile networks, which since July 2013 has been 1.09 euro cents per minute, has facilitated the inclusion of these minutes in bundled fixed and mobile service offerings.

The sharp drop in traffic originating from fixed networks in 2014 can be attributed to lower consumption per line. In fact, the traffic per line ratio fell by 17%, significantly higher than in 2013. This effect was particularly evident in the residential segment, which fell by nearly 20%, in contrast with the increase of nearly 189,000 residential fixed lines in the last year.

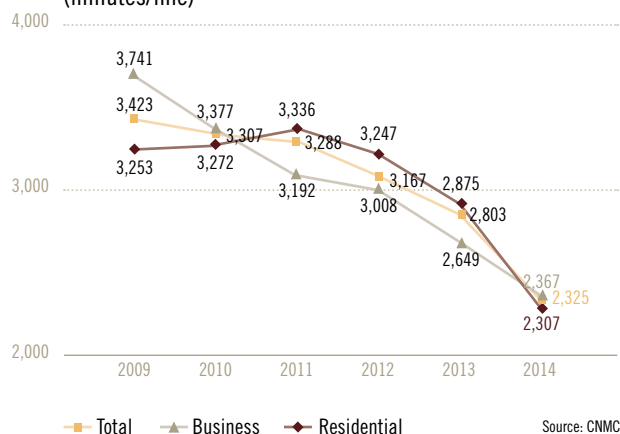
This decline in traffic affected that generated

both under flat-rate and time-based tariffs, with falls of 17.3% and 16.4%, respectively, bigger than those recorded in 2013. In the case of traffic generated under flat-rate tariffs, the decline occurred despite the fact that the number of flat-rate customers increases year after year. In fact, most flat-rate voice tariffs correspond to bundles and in 2014 the proportion of bundled fixed telephone lines grew by more than five percentage points.

The decline in traffic originating from fixed networks can be explained by the fact that users opted to make calls from a mobile network. So, in 2014, traffic originating from mobile networks achieved a year-on-year growth rate of 12.1% – 8.6 billion minutes more than in 2013 –, unseen in previous years. However, total traffic generated by fixed and mobile networks remained nearly stable compared to that of the previous year, due to which the continued decline in traffic originating from fixed networks gave rise to a scenario where it accounted for only 36.3% of total traffic, compared to 43.5% in 2013.

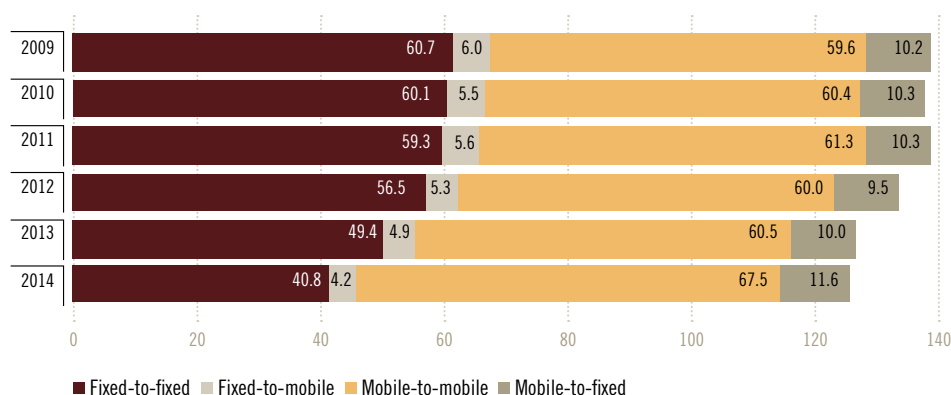
Lastly, international traffic, billed almost entirely on the basis of minutes consumed, fell by 29.7%. This fall may be attributable, on the one hand, to the increasingly frequent use of OTT services and, on the other, to the existence of increasingly attractive mobile-to-international destination tariffs offered by both mobile virtual operators focused on this niche market and by some mobile network operators that include a certain number of minutes to certain international destinations in return for the payment of a monthly fee in addition to the flat rate tariff.

Minutes per line and year¹⁶
(minutes/line)



¹⁶ Fixed-line telephone traffic included in this report corresponds to that recorded by telecommunications operators as a whole and, therefore, does not include traffic handled by *Over-The-Top* operators which enable users to make calls to any destination via Internet applications.

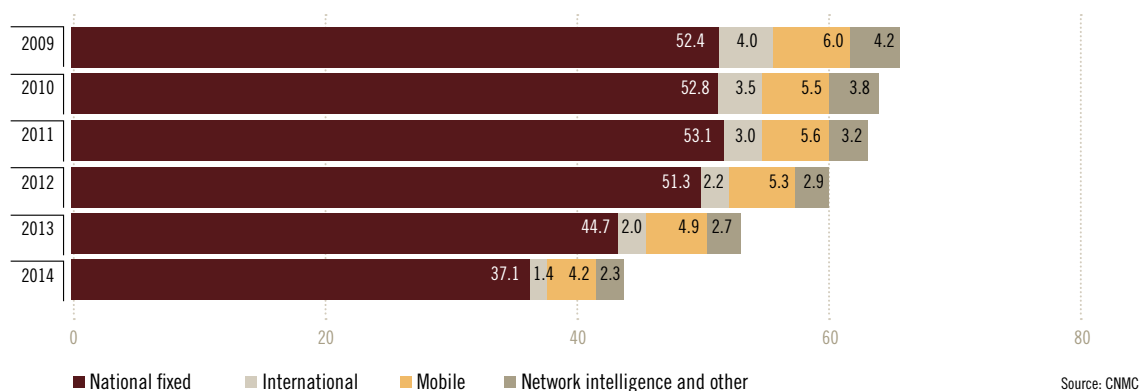
Development of traffic by origin and destination¹⁷ (billions of minutes)



On the other hand, the growth recorded traffic originating from mobile networks – 12.1% – was due more to greater traffic per line than to an increase in the number of lines, which grew by only 1.3% compared to 2013. The ever-growing presence of flat-rate tariffs for mobile services (voice, data or both) and the success of bun-

dles that include fixed and mobile services in a single offering partly explain the reverse in traffic originating from fixed networks. Given a situation of fixed and mobile traffic under a flat-rate tariff – unlimited in most cases except in the case of fixed-to-mobile –, consumers opted to use mobiles rather than landlines.

Evolution of traffic originating from a fixed network (billions of minutes)



Competition

Apart from Movistar, the operators present in the fixed telephony market are mainly those that invested in the deployment of their own HFC network and operators which until now offered direct access services using Movistar's fixed

network by means of different wholesale local loop unbundling services (Jazztel, Orange and Vodafone, among others). The latter continue to increase their presence at Movistar's exchanges but, since the end of 2013 and particularly in 2014, have begun to roll out their own fibre access networks.

¹⁷ Fixed-to-fixed traffic does not include local calls to narrowband Internet. Traffic from mobiles is calculated in airtime minutes and excludes international roaming.

In 2014 the highest fixed-line portability was recorded, close to two million, to a certain extent revitalising a mature market such as the fixed telephony market. The appearance of new bundled offers with better prices and features represented an incentive for consumers to change from one operator to another, particularly those combining fixed and mobile services in a single offering. In fact, the periodic survey carried out by the CNMC showed that 13.6% of households claimed to have changed from one fixed telephony service provider to another in the last year. Thus, 41.4% of fixed lines were subscribed to through a quadruple-play or quintuple-play bundle, when just two years ago 39.5% of the lines corresponded to a double-play voice and fixed broadband bundle.

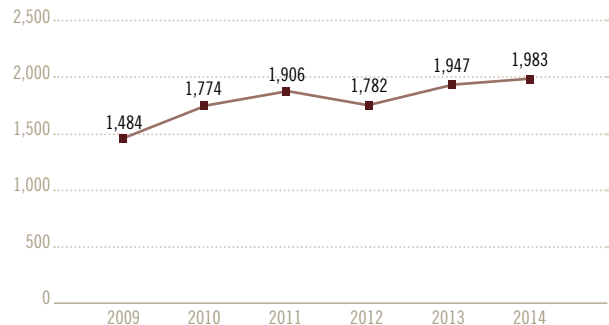
In particular, alternative operators attracted the highest number of lines, 716,000 new lines, ending the year with a market share by line of just over 45%.

Portability

Portability, which makes it possible for consumers to change from one operator to another without changing their fixed-line number, reduces switching costs for users. Portability statistics are a good indicator of the degree of competition in the market. Despite the fact that the fixed telephony market is a mature market, in recent years there have been very high rates of fixed-line portability and in 2014 the monthly average reached 165,229. Once again, this figure exceeded that recorded the previous year, no doubt spurred by integrated offers comprising fixed and mobile services.

However, in most cases these changes in operator correspond to customers who subscribed to bundled services (mainly quadruple-play and quintuple-play bundles in 2014). Customers who subscribe to the fixed telephony service separately – mainly Movistar – are less inclined to change operator and are also less profitable, due to which they are less attractive to the other operators.

Portability of fixed lines (thousands of lines)

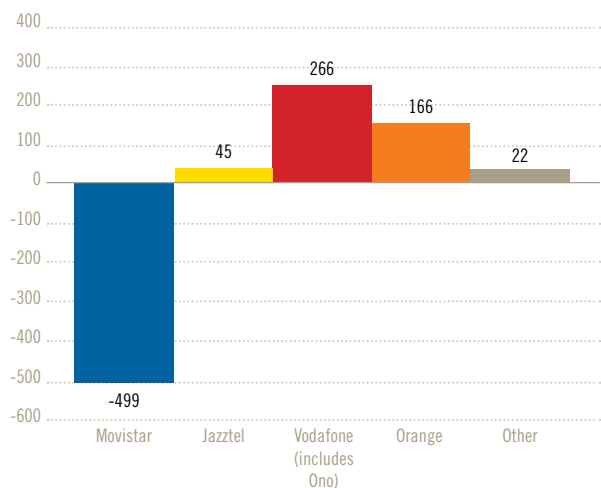


Source: CNMC

Movistar was the only operator who recorded a net negative balance of fixed-line transfers, while the other operators imported a larger number of lines than those lost to other operators. Therefore, there was a transfer of lines from Movistar to the other operators, linked mainly to broadband services.

Vodafone¹⁸, after acquiring Ono, was the operator that recorded the highest positive net balance, followed by Orange and Jazztel. The gain in broadband lines also followed this descending order.

Net portability balance by operator in 2014 (thousands of lines)



Source: AOP-CNMC

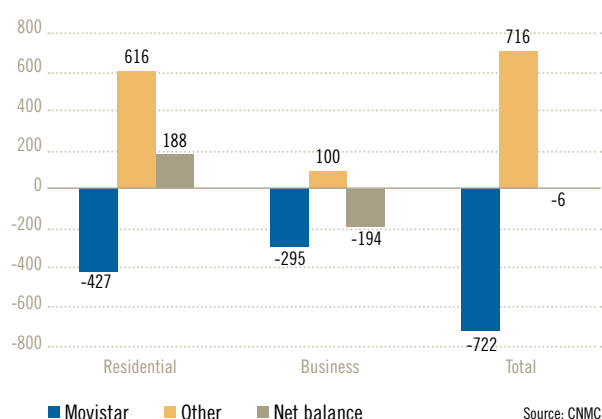
¹⁸ Vodafone data includes Ono data for 2014, although the acquisition was formalised in July 2014.

Gain and loss of lines

Overall, the total number of fixed lines remained stable compared to 2013. Movistar's loss was almost entirely offset by the gain in lines recorded by the other operators.

Movistar's total number of lines, in absolute terms, recorded a fall practically equal to that of 2013, although with different distribution by segment. This loss was more evident in the residential segment than in the business segment. The other operators as a whole increased their total lines in both segments, notably gaining more than 615,000 lines in the residential market, up 37.5% on the previous year.

Gain and loss of lines per segment in 2014 (thousands of lines)



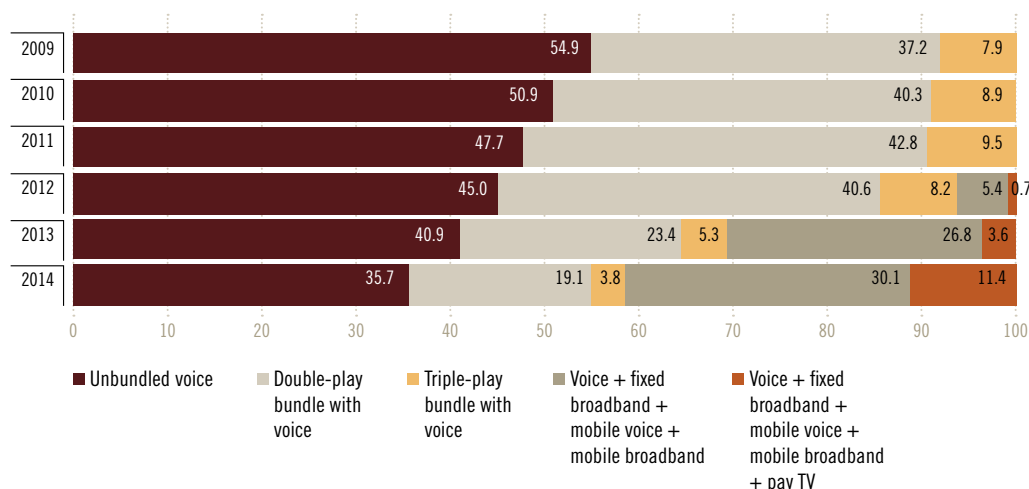
Vodafone – including Ono's net subscriptions –, was the operator that gained most lines in 2014. It was followed closely by Orange, which gained more than 300,000 lines, the same number as Vodafone and, lastly, Jazztel, which added 82,000 lines in the year.

Voice bundling

In 2014 the trend of marketing fixed voice bundled with mobile services continued. Just 35.7% of total fixed lines were subscribed to separately at the end of the year, representing 5.1 percentage points less than the previous year. Quadruple-play and quintuple-play bundles represented more than two million new subscriptions in the year, exceeding the fall of one million subscriptions recorded in double-play and triple-play bundles – which include only services provided over a fixed network.

While quadruple-play bundles took centre stage in 2013, quintuple-play bundles took over in 2014. After totalling more than 1.5 million bundles in the year, quintuple-play bundles accounted for 11.4% of all fixed telephony, compared to 3.6% the previous year. The growth of quadruple-play bundles was more moderate, reaching 5.8 million with the addition of 630,000 new bundles. Altogether, 64.3% of fixed lines bundled with any other service, 64.5% bundled with mobile services.

Proportion of bundled and unbundled voice (% of fixed telephone lines in service)

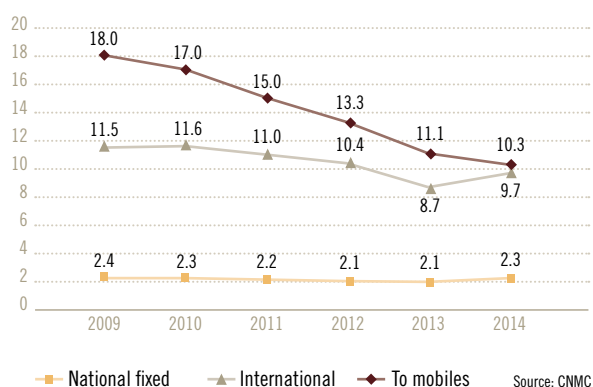


Prices

In order to evaluate the evolution of prices for the different types of fixed telephony traffic, average revenue can be used as an approximation. It should be noted that the greater presence of bundles complicates price analysis, particularly in the case of national traffic and traffic to mobiles, as flat-rate voice tariffs include an unlimited number of minutes to national fixed-line numbers and, increasingly often, a limited number of fixed-to-mobile minutes. In any event, the prices of some services are mainly time-based, such as calls to international destinations or calls to intelligent network services.

Average revenue per call from fixed to mobile networks fell 7.7% to 10.3 euro cents per minute. This drop in price was due, inter alia, to the reduction in the wholesale mobile network termination price included in the glide path defined by the defunct CMT. From July 2013, this price stood at 1.09 euro cents per minute.

Average revenue from traffic to national fixed-line, international and mobile numbers (euro cents/minute)

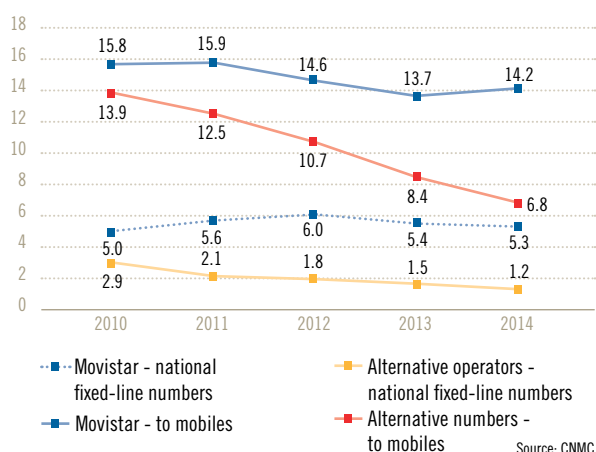


The following graph provides information on average revenue from national traffic and traffic to mobiles, which are priced on a time basis, that is,

per minute consumed. In fact, 59% of fixed-to-mobile network traffic is priced on a time basis, as opposed to that same proportion for traffic to national destinations, which fell by 13.6%. Movistar recorded a slight rise in average revenue from time-based traffic to mobile destinations, while falling 19.4% in the case of the other operators. This traffic decreased in 2014, although so did flat-rate traffic, as mentioned earlier, despite the fact that the flat-rate tariffs for quadruple-play and quintuple-play bundles include an increasing number of minutes of this type.

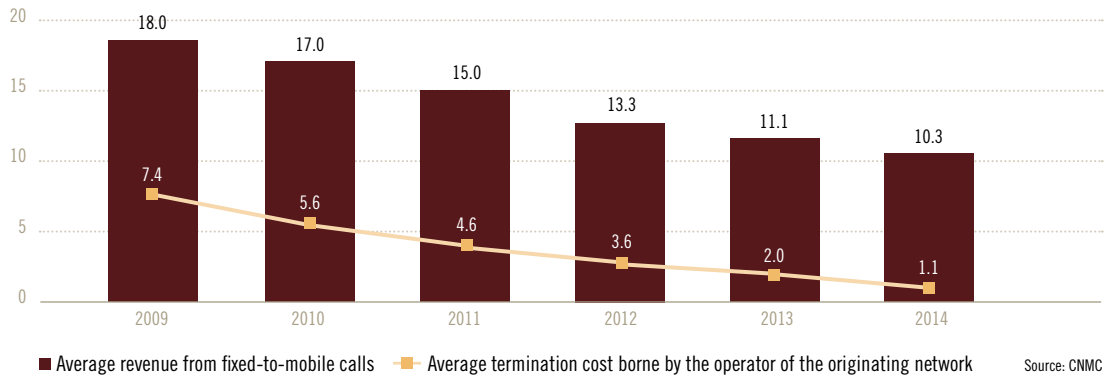
Lastly, it is of interest to analyse together average

Average revenue from time-based traffic to national destinations and mobiles recorded by Movistar and alternative operators (euro cents/minute)



revenue from calls to mobiles and the wholesale termination price borne by the fixed-line operator. Since 2006, the wholesale mobile network termination price has been regulated with prices falling. Even so, this reduction has not been fully reflected in the final fixed retail market prices, although it has facilitated the inclusion of fixed-to-mobile minutes in flat-rate voice tariffs. In the last six years, the wholesale price fell by 85.2% compared to the 42.8% drop in end customer tariffs.

Retention margin for fixed-to-mobile calls¹⁹ (euro cents/minute)

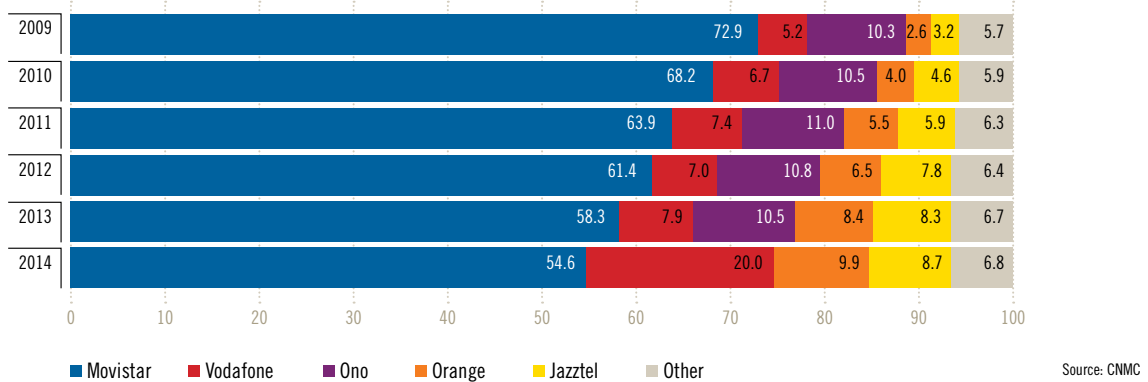


Market share²⁰

Movistar supplied 54.6% of the lines, with an annual decline of 3.7 percentage points, while the shares of the other leading operators increased. Vodafone, after the acquisition of

Ono, ranked second, with 20% of the lines, representing growth of 1.6 percentage points compared to the combined share of both operators in 2013.

Market share by fixed telephone lines (%)



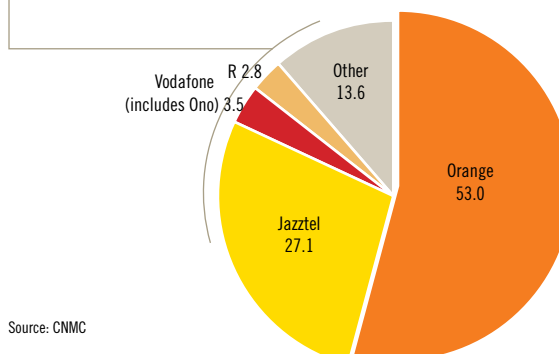
¹⁹ Not all the relevant service provision costs are included, as only one type of cost is detailed: those charged by other operators for the wholesale service implicit in the service.

²⁰ Vodafone data includes Ono data for 2014, although the acquisition was formalised in July 2014.

The indirect access modality continued to fall, recording a total of 721,555 customers in 2014. Orange maintained its position as the operator with the highest number of customers of this kind, with 54.4% of the total. It was followed at some distance by Jazztel, with 27.8% of the market, while Vodafone and R accounted for 3.6% and 2.9%, respectively. These four operators used the WTLA wholesale service mainly to offer the indirect access service to their customers and represented 83% of total WTLA lines (particularly Orange and Jazztel, which together totalled 78%).

Movistar practically maintained its share of total traffic compared to 2013 and accounted for 49.2% of the market, despite having lost more than 700,000 lines. Vodafone, which ranked second after the acquisition of Ono, obtained

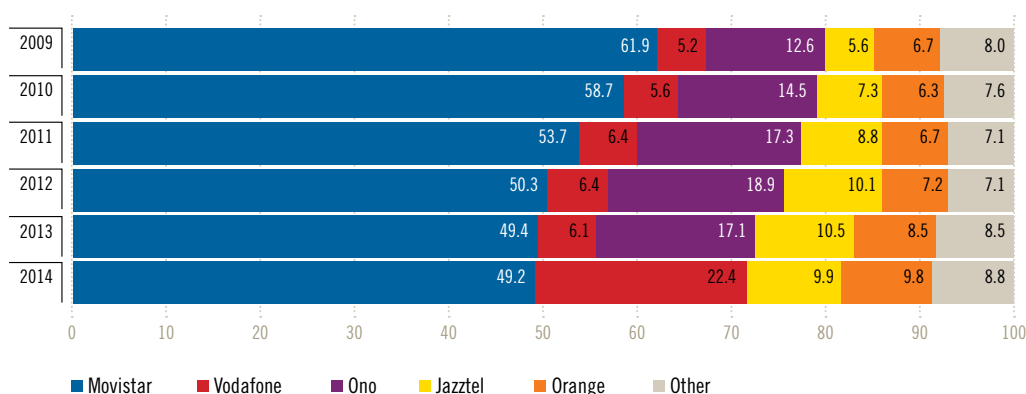
Market share by indirect access customers in 2014 (%)



Source: CNMC

22.4% of traffic, slightly less than the combined share of both operators in 2013. Lastly, Orange was the only one of the leading operators that increased its share of traffic – adding 1.3 percentage points – while Jazztel fell slightly and obtained around 10%.

Market share by fixed-line telephone traffic (%)



Source: CNMC

2.1.2. Fixed broadband

In 2014, revenue from fixed broadband retail services experienced a remarkable recovery after three consecutive years of falls. Billings grew 3.3% to €3,344.8 million. This revenue, added to that associated with switched access and other services, totals €3,641.1 million, 2.3% higher than the previous year.

The total number of fixed broadband lines followed the same trend as in previous years, showing significant growth. In the last year

the volume of connections grew 6.2% to 13 million. Orange, Jazztel and Vodafone (which merged with the operator Ono in mid-2014) were the operators which recorded the highest levels of attraction, offering their services to end users mainly through the regulated local loop unbundling wholesale service and the rollout of fibre-optic cable access to homes (FTTH) or HFC.

As regards the rollout of next-generation access networks (NGA), which allow high-speed connections, there was significant progress made

with the rollout of fibre-optic access to homes (FTTH), such that, at year end, the FTTH technology connections installed totalled 15 million, more than double the previous year. Also, the number of hybrid fibre-coaxial connections (HFC DOCSIS 3.0) installed reached 10.3 million, slightly more than in 2013.

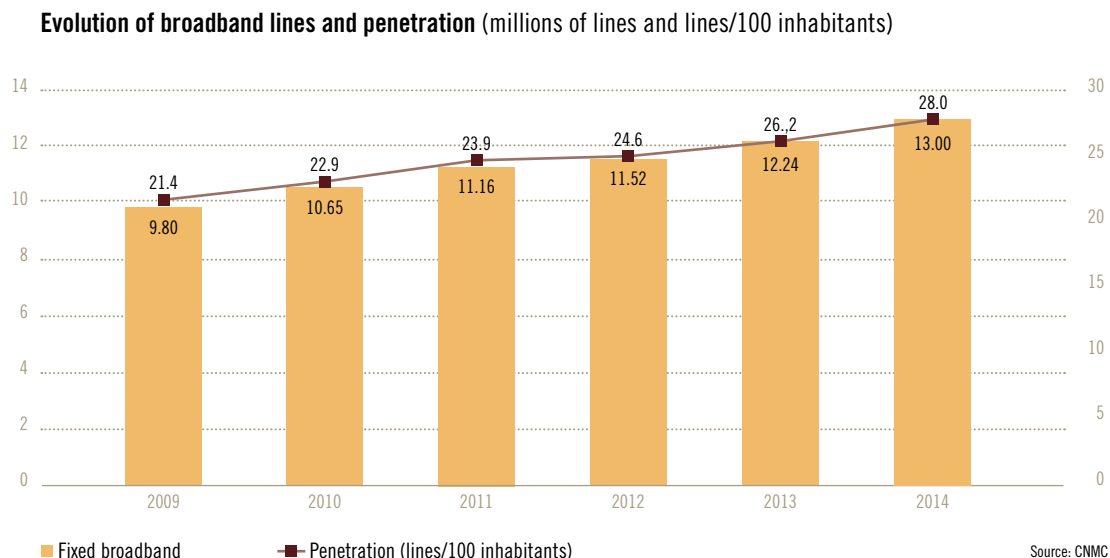
This introduction of next-generation access networks enabled operators to configure broadband offerings with higher connection speeds. The financial year closed with 90.3% of lines with a subscribed speed of 10 Mbps or higher, compared to 82.2% the previous

year. In addition, lines with speeds of 30 Mbps or higher exceeded 3 million, accounting for 23.3% of total connections.

Lines and penetration

Fixed broadband connections grew 6.2% in the last year, a figure similar to that of the previous year.

This situated the total number of lines at 13 million, raising penetration to 28 lines per 100 inhabitants, which represented an increase of 1.76 lines per 100 inhabitants in the last year.



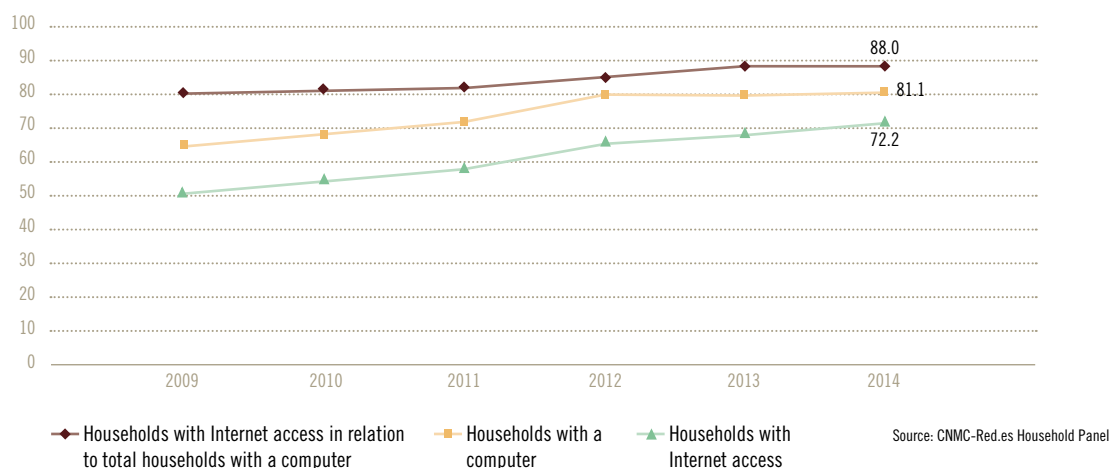
The CNMC-Red.es Household Panel makes it possible to track the development of the penetration of the main final services. In the first quarter of 2015, 72.2% of households had Internet access services (narrowband services and/or fixed and/or mobile broadband services). Some 81.1% of households had a computer as the main fixed broadband access device. However, households also had other devices through which they could access fixed broadband, such as video game consoles (19.3% of households) or *smart* TV (16.2% of households).

According to the survey of equipment and use of information technologies and communica-

tion in households in 2014 carried out by the INE (Spanish National Statistics Institute), 31% of households without Internet claimed that the cost of a PC was too high. This was therefore the third most frequent reason why households did not have Internet access, after lack of interest in the service (mentioned by 60.6% of households without Internet) and not knowing how to use it (mentioned by 38.6% of households without Internet).

The following graph shows the growth of both Internet penetration and the presence of computers in households in recent years.

Internet penetration and PCs in households (%)



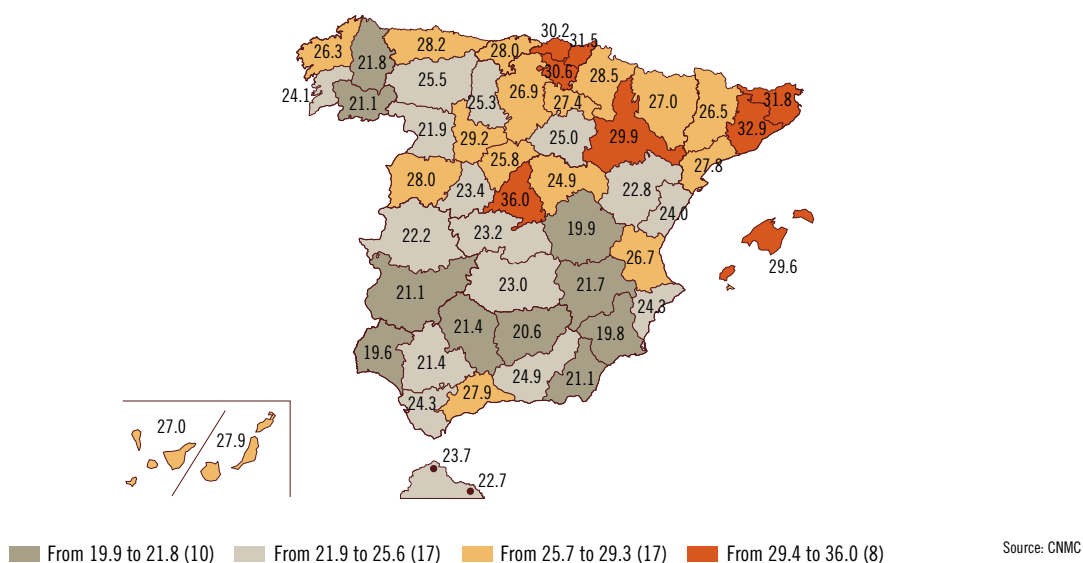
There were significant differences in fixed broadband penetration from a geographical viewpoint. These differences can be explained, inter alia, because operators invested more heavily in rolling out networks in more densely populated regions which offer a higher return on their investment. Additionally, in these regions users have a wider range of offerings and services to choose from.

The geographical differences in broadband penetration are shown and analysed below, considering different geographic units such as autonomous regions, provinces and municipalities.

There were significant differences in fixed broadband penetration from a geographical viewpoint.

The following map shows the penetration of broadband connections at provincial level. A total of 15 provinces ended the year with a penetration equal to or higher than the national average, which stood at 28²¹ lines per 100 inhabitants. Most of these provinces also recorded a penetration rate higher than the average penetration rate for the previous year. Madrid and Barcelona recorded the most significant penetration, exceeding 32 lines per 100 inhabitants.

Broadband penetration by province²² (lines/100 inhabitants)



²¹ Penetration calculated taking into account the total number of broadband lines.

²² The intervals have been established based on average \pm the standard deviation. The lower and upper limits are determined by the minimum and maximum values, respectively.

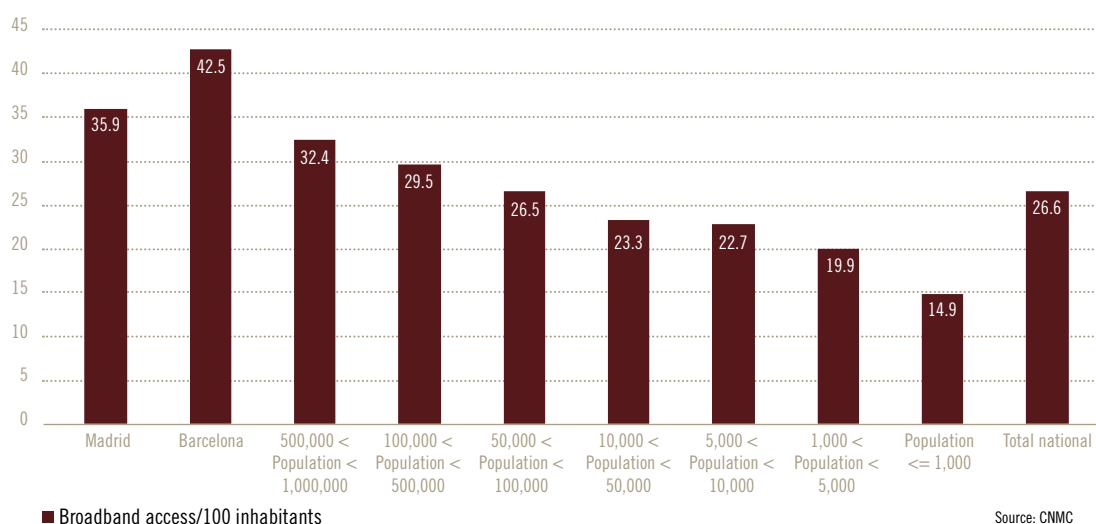
The following graph shows the penetration of the broadband connections according to size of municipality in June 2014. A clear downward trend in penetration can be observed parallel to the reduction in number of inhabitants in the municipality.

On average, municipalities with a population of more than 50,000 inhabitants showed a penetration equal to or higher than 26.5²³ lines per 100 inhabitants, a figure close to the national average for June 2014, which stood at 26.6 lines per 100 inhabitants. For another consecutive

year, the municipalities of Barcelona and Madrid recorded the highest penetration rates.

On the contrary, municipalities with a population of less than 5,000 inhabitants did not exceed 20 lines per 100 inhabitants. However, penetration in these municipalities with a lower population density advanced due to the increase in lines of the historical operator, Movistar, and to the progressive increase in the presence of alternative operators who gained access through the unbundled local loop and indirect broadband access.

Broadband penetration by type of municipality²⁴ (lines/100 inhabitants), June 2014



Technologies

Broadband access services can be provided using many different technologies. In the case of fixed network broadband access, the following classification can be applied:

- Technologies supported over fixed networks: xDSL technologies over copper pair; technologies over cable networks, such as HFC networks using a mixed medium of fibre-optic and coaxial cable with DOCSIS technology; and, lastly, technologies over fibre-optic networks, such as FTTH connections using GPON passive technology.

- Technologies over wireless networks: LMDS, WiMAX (wide-area coverage) and Wi-Fi (smaller coverage environment).

- Networks supported by satellite systems such as VSAT.

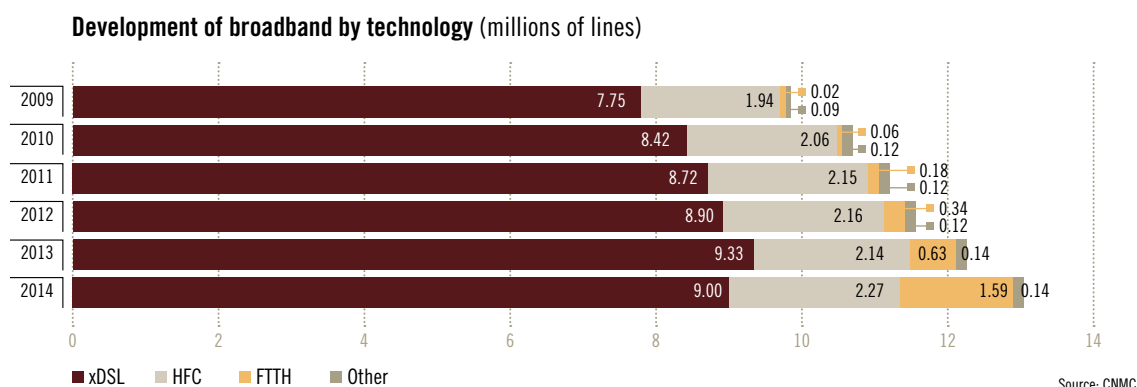
In 2014, xDSL and HFC technologies continued to be the main means of connecting to end users. Additionally, mention should be made of the considerable increase in the number of FTTH connections subscribed to. This fact led, for the first time, to a reduction in the number of active broadband connections using xDSL technology.

²³ The figure indicated at municipal level differs from those indicated in previous points, as the number of operators required to report geographical information is significantly lower than that in the sector economic report.

²⁴ June 2014 data corresponding to the geographical requirement established by the CNMC.

Specifically, active broadband lines based on xDSL and HFC represented 86.7% of the total compared to 93.7% the previous year. This drop contrasts with the increase in the number of FTTH lines, which accounted for 12.2% of total broadband compared to 5.1% in 2013. The other technologies accounted for around 1% of total broadband lines.

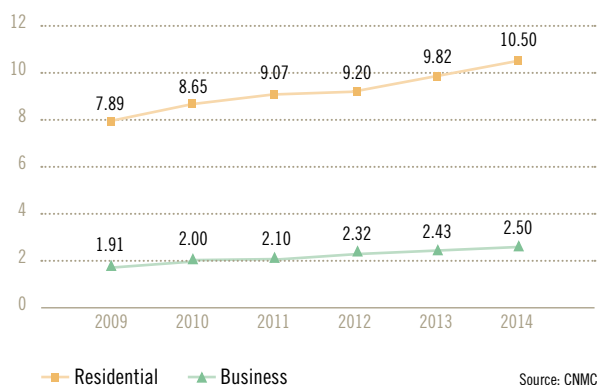
In absolute terms, active xDSL connections reached 9 million, representing a drop of 3.6% in the last year. The number of broadband connections over HFC networks rose sharply (6.1%) compared to 2013. FTTH active connections experienced the greatest increase, growing 153.9% to 1.59 million lines.



In the distribution of broadband lines by segments it can be observed that, at year end, there was a total of 10.5 million lines in the residential segment. The business segment ended the year with 2.5 million lines. The percentages of residential and business lines in relation to total lines were similar to those recorded in previous years, standing at approximately 80.7% and 19.3%, respectively.

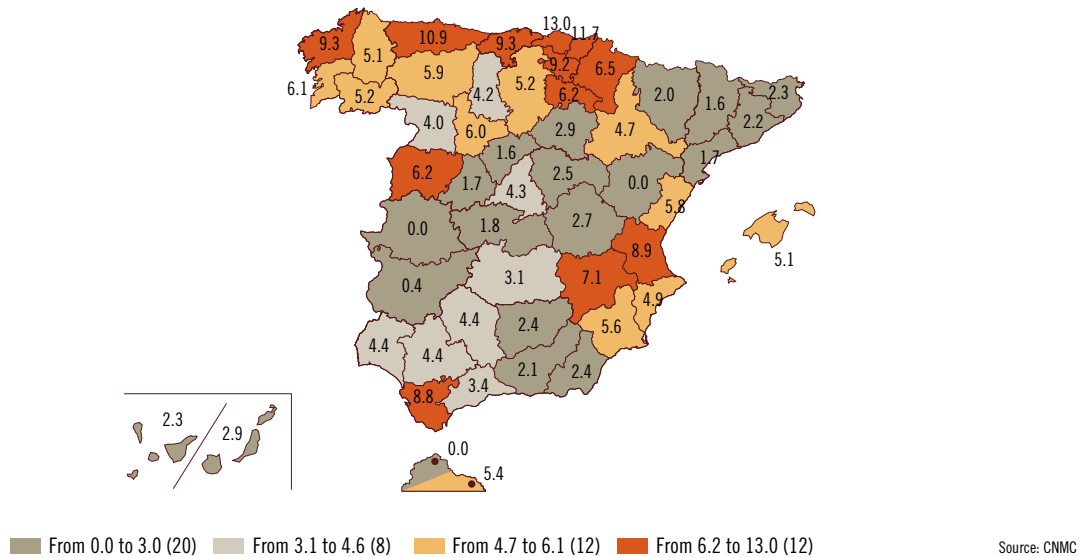
In 2014 the number of active HFC broadband connections grew by nearly 6.1% compared to the 1% drop recorded in 2013. In terms of absolute value, the volume of lines with HFC technology rose by 131,000 lines. Thus, the proportion of lines stood at 4.9 lines per 100 inhabitants (0.3 more lines than the previous year). At geographical level and in contrast with the previous year, all provinces recorded an increase in the number of lines.

Evolution of broadband per segment (million lines)



At year end, HFC penetration in 23 provinces exceeded national penetration. The highest penetration rates were recorded in the Basque Country, with the presence of the cable operator Euskaltel, Galicia, with the presence of R, and the Cantabrian Coast, with TeleCable in Asturias. The high cable penetration rates in the provinces of Levante (Valencia, Castellón, Murcia and Alicante) and some others (Cádiz, Albacete and Salamanca) is due to the presence of the operator Vodafone and of other local operators. As in 2013, the provinces that ended the year with the highest penetration rates were Vizcaya, Guipúzcoa and Asturias, regions that exceeded 10 HFC lines per 100 inhabitants.

HFC penetration by province²⁵ (lines/100 inhabitants)



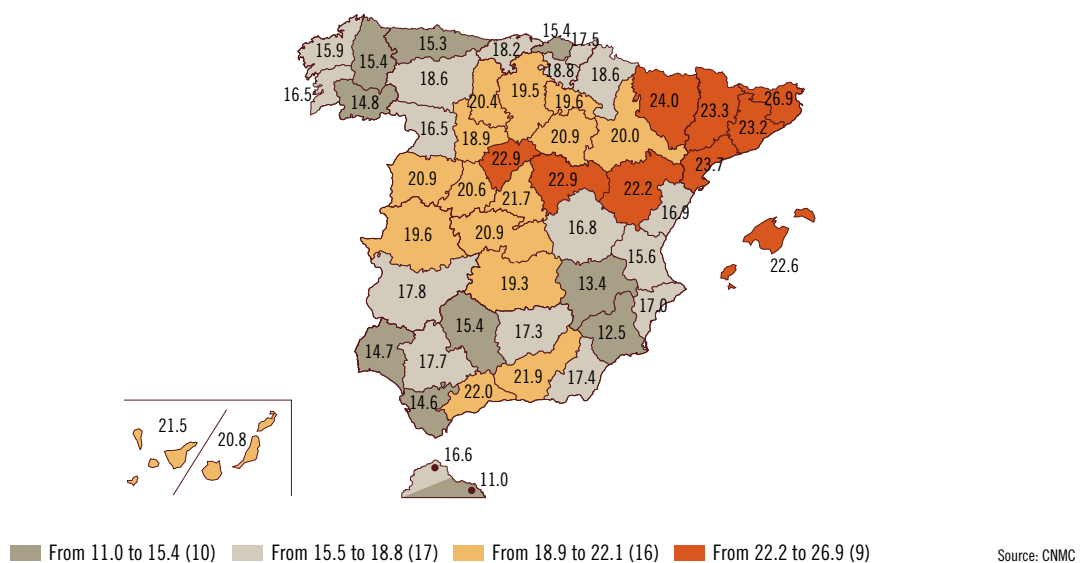
In contrast with the previous year and for the first time, connections using xDSL technology fell by 3.6%. This trend reversal was due to the substitution and subscription of new FTTH connections, which enable higher connection speeds and quality than copper pair-based networks.

In 2014, the penetration of xDSL lines stood at 19.4 lines per 100 inhabitants; a total of 24 prov-

inces recorded figures above the national average.

The following map shows the geographical distribution of lines subscribed with xDSL technology. Huesca and the Catalan provinces are the provinces with the highest penetration, with 23 or more lines per 100 inhabitants. Conversely, the provinces of Melilla, Murcia and Albacete did not reach 14 lines per 100 inhabitants.

xDSL penetration by province²⁶ (lines/100 inhabitants)



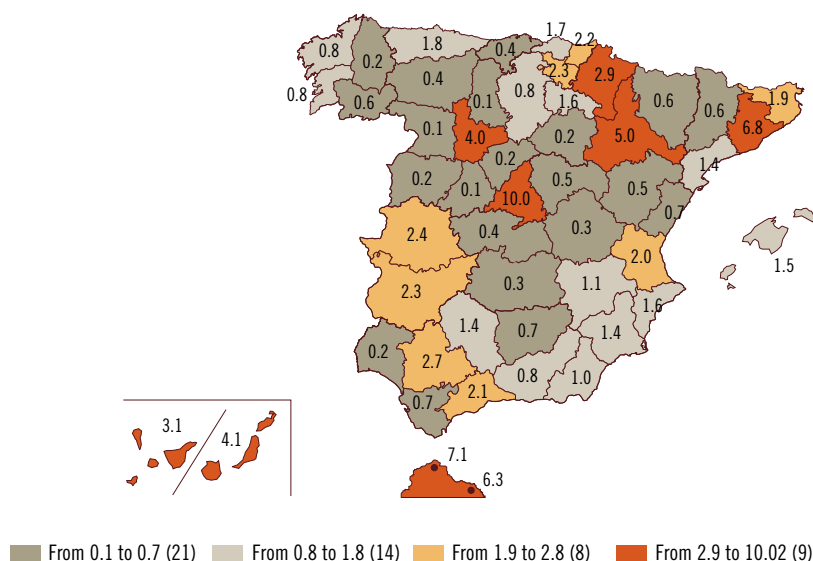
²⁵ The intervals have been established based on the average ± 0.5 the standard deviation. The lower and upper limits are determined by the minimum and maximum values, respectively.

²⁶ The intervals have been established based on the average ± 0.5 the standard deviation. The lower and upper limits are determined by the minimum and maximum values, respectively.

In contrast with the drop in penetration of xDSL lines, the volume of FTTH connections showed significant growth in 2014. The penetration of FTTH lines stood at 3.4 lines per 100 inhabitants. Only five provinces and the two autonomous cit-

ies ended the year with a penetration above the national average. Madrid was the province which recorded the highest penetration of this technology, with 10 lines per 100 inhabitants.

FTTH penetration by province²⁷ (lines/100 inhabitants)



Source: CNMC

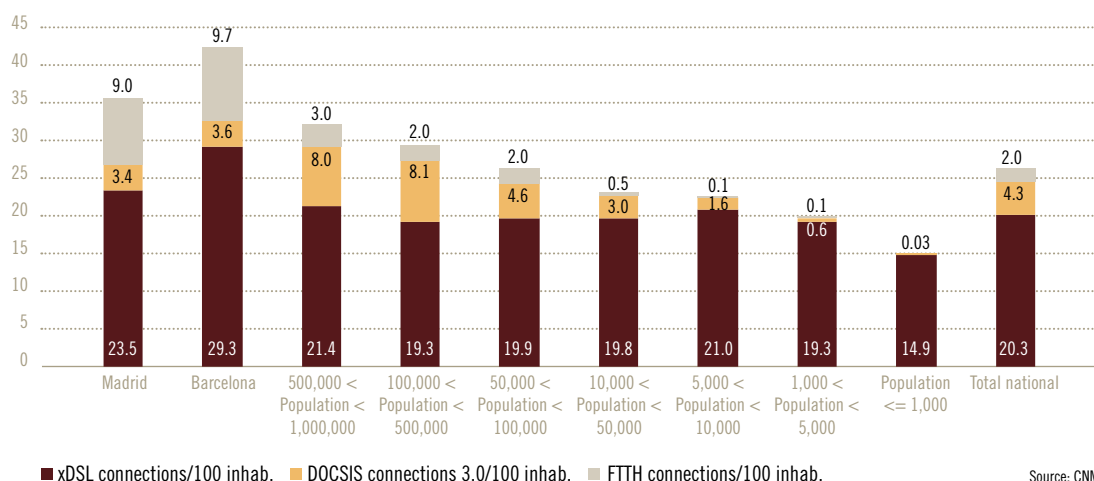
The penetration analysis broken down by municipalities shows that the smaller the size, the lower the penetration of broadband connections (xDSL and HFC). Therefore, municipalities with a population of 50,000 inhabitants recorded penetration rates similar to or higher than the national average, while smaller municipalities recorded penetration rates below that average.

By type of technology, penetration of HFC connections fell considerably in municipal-

ities with a lower population. On the other hand, this technology has a greater presence in municipalities with a population of between 100,000 and one million inhabitants, with penetration rates of nearly eight lines per 100 inhabitants. The significant presence of FTTH connections in municipalities with larger populations should be noted. The penetration of these connections exceeded nine lines per 100 inhabitants in Barcelona and Madrid.

²⁷ The intervals have been established based on the average ± 0.5 the standard deviation. The lower and upper limits are determined by the minimum and maximum values, respectively.

Penetration of xDSL, HFC and FTTH by type of municipality (lines/100 inhabitants), June 2014



Next-generation networks (NGA)

In 2014, operators continued to deploy Next Generation Access Networks (NGA); these networks provided users with high connection speeds and quality, thereby allowing them to offer new services that require greater bandwidth.

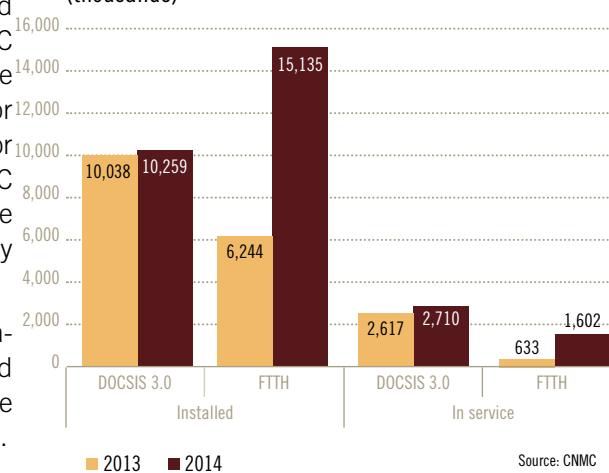
On the one hand, cable operators updated practically all their accesses and nodes to HFC DOCSIS 3.0. In this regard, mention should be made of the acquisition of the cable operator Ono by Vodafone in mid-2014. The operator resulting from the merger has a broad HFC DOCSIS 3.0 network rolled out by Ono and the deployment of FTTH connections initiated by Vodafone in 2013.

On the other, Movistar and the leading alternative operators, which until that time provided their services basically via xDSL intensified the rollout of FTTH (fibre to the home) connections.

As regards installed connections, those based on HFC DOCSIS 3.0 exceeded 10.2 million, with an increase of 221 thousand compared to 2013. Likewise, FTTH connections experienced sharp growth. Therefore, in the last year the volume of connections installed using this technology

reached 15.1 million, compared to 6.2 million the previous year. Also, FTTH active connections recorded a figure 2.5 times higher than that recorded the previous year.

Evolution of DOCSIS 3.0 and FTTH connections installed and in service (thousands)



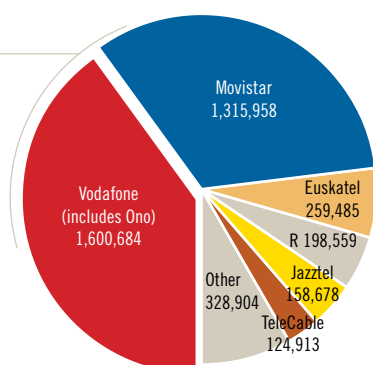
The previous year ended with a total of 2.24 million²⁸ active fixed broadband lines over HFC wired to a node updated to DOCSIS 3.0. This figure represented 98.7% of connections. FTTH

²⁸ Active broadband connections over HFC and different from the figure of 2.71 million HFC active connections of the preceding graph, as it also includes connections solely for voice or other services other than fixed broadband.

active connections added 1.59 million connections²⁹. It should be noted that the speed of these connections depends on what is finally subscribed for by customers and that some of these connections still had a connection speed of less than 30 Mbps.

At year end, 82.7% of FTTH broadband connections belonged to Movistar, although this percentage fell compared to the 95% recorded in 2013. Therefore, the presence of alternative operators with FTTH connections grew significantly in the last year.

Distribution of active NGA lines (DOCSIS 3.0 and FTTH) per operator



Source: CNMC

Lastly, it should be noted that Vodafone became the operator with the highest number of NGA connections due to the acquisition of the operator Ono. Thus, this operator's HFC DOCSIS 3.0 active connections and FTTH connections together totalled 1.6 million.

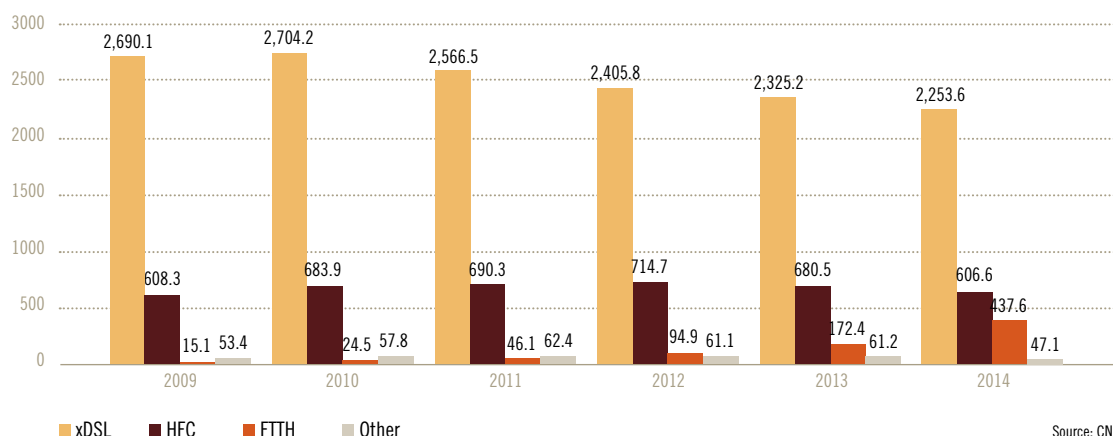
Revenue

In 2014, the trend in revenue from Internet services changed. The total volume of revenue from Internet services grew 2.3% compared to the previous year to €3,641.1 million. These figures contrast with the decline recorded in the previous three years.

As regards broadband, revenue totalled €3,344.8 million, 3.3% more than in 2013.

The breakdown by technology reflects the decline in revenue both from xDSL and HFC connections, although this decline was offset by the rise in revenue from FTTH connections. Specifically, revenue corresponding to xDSL connections fell by 3.1% to €2,253.6 million. Revenue from HFC also fell by 10.9% to €606.6 million. Lastly, the positive development of FTTH line subscriptions multiplied the revenue obtained the previous year by 2.5 to €437.6 million.

Evolution of broadband revenue by technology (millions of euros)

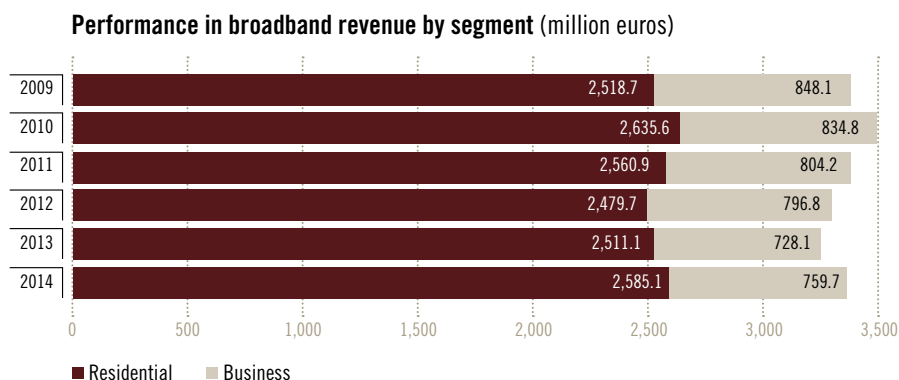


Source: CNMC

²⁹ Active broadband connections over FTTH and different from the figure of 1.6 thousand FTTH active connections of the preceding graph, as it also includes connections solely for voice or services other than fixed broadband.

In 2014 a change in trend was observed in revenue from the business segment. Revenue from this segment reached €759.7 million, a figure representing total growth of 4.3% (compared

to the falls observed in the five previous years). Revenue from the residential segment grew 2.9% to €2,585.1 million.



Traffic

In 2014 the improvement in broadband access networks and the marketing of products with higher connection speeds continued. Additionally, the widespread and intensive use of Internet-based services together with the increase in the number of active broadband connections was reflected in the recorded growth in data traffic. Thus, at year end, a total traffic of 6.5 million terabytes was recorded, up 33% on 2013.

The following graph shows the evolution, in the last four years, of the average volume of data for

each broadband line in gigabytes per month. In the last year, average monthly traffic grew 8.4 gigabytes compared to 2013.

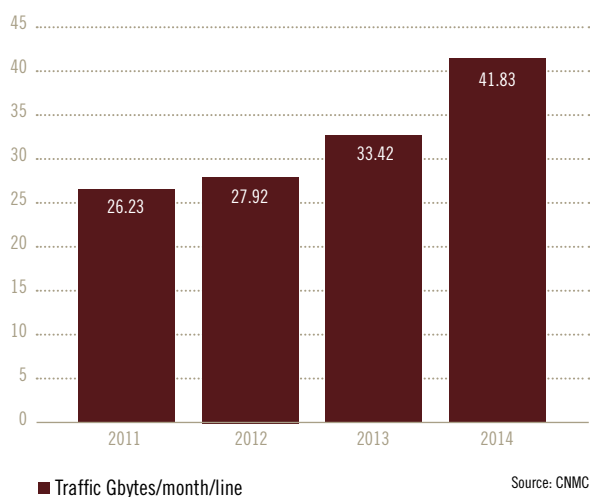
Competition

In 2014, there were significant changes in the number of market players. In this regard, in July 2014 the operator Vodafone acquired the leading cable operator with national coverage, Ono. This transaction had a noticeable effect on the market share and specific position of the operators, as will be discussed later.

Furthermore, also in 2014, Orange announced the acquisition of the operator Jazztel; this acquisition was authorised by the European Commission in May 2015. The merger was approved taking into account a series of commitments by Orange not to reduce the level of competition in the fixed broadband market.

In general, most operators continued to increase the number of active fixed broadband connections and improve access networks. The alternative operators that traditionally offered their services over xDSL intensified the rollout and subscription of FTTH connections. Movistar also intensified the migration of xDSL connections to its extensive fibre-to-the-home network. The share of lines and revenue of the other local or regional operators with HFC connections remained stable.

Evolution of broadband line data traffic (GBytes/month/line)



As regards commercial offerings, the marketing and subscription of products with higher connection speeds and a higher degree of bundling with mobile network services (mobile voice and broadband) continued. These convergent bundles represented significant savings for consumers compared to subscribing to the different services individually.

Market share

Alternative operators – those which accessed the end user by means of the regulated local loop unbundling wholesale service – showed greater dynamism, with a considerable increase in their market share in terms of lines. In those areas where these operators are not present in the exchanges to offer the service, they used the regulated broadband indirect access service.

Specifically, Orange, Vodafone and Jazztel were once again the operators that recorded the highest growth in active connections. Also, for the first time these operators recorded strong growth in FTTH connections. In fact, for the first time Jazztel saw a reduction in active xDSL lines, offset by the significant rise in FTTH connections.

As can be observed in the following table, xDSL connections saw a reduction in lines to 9 million. This figure accounts for 69% of total broadband connections, compared to 76% in 2013. This reduction contrasts with the rise in FTTH connections to 1.59 million (12.2% of broadband lines compared to 5.1% the previous year). The other technologies remained stable relative to the previous year.

Evolution of broadband lines by operator and technology

	2013				2014			
	xDSL	HFC	FTTH	Other	xDSL	HFC	FTTH	Other
Movistar	5,114,002	-	597,889	14,400	4,432,432	-	1,315,958	13,075
Orange	1,692,543	-	-	-	1,911,874	-	53,277	-
Ono	70,138	1,466,363	-	-				
Jazztel	1,429,393	-	428	-	1,393,441	-	158,678	-
Vodafone	954,606	-	-	-	1,181,143	1,577,258	23,426	-
Euskaltel	2,086	254,186	-	3,722	1,862	259,485	-	3,377
R	21,605	192,618	-	-	18,788	197,199	1,360	-
TeleCable	-	113,129	7,924	641	1,675	115,457	9,456	553
Other	50,227	115,526	20,435	120,205	59,671	123,463	28,835	123,226
Total	9,334,600	2,141,822	626,676	138,968	9,000,886	2,272,862	1,590,990	140,231

Source: CNMC

The evolution of market share in terms of lines reveals that Movistar's share continued to fall. Despite a slight increase in the volume of lines (0.6%), its share stood at 44.3%, losing 2.5 percentage points in the last year.

Alternative operators that use xDSL as the primary means of accessing end users saw more or less growth in market share. Orange, together with Vodafone, achieved the highest growth

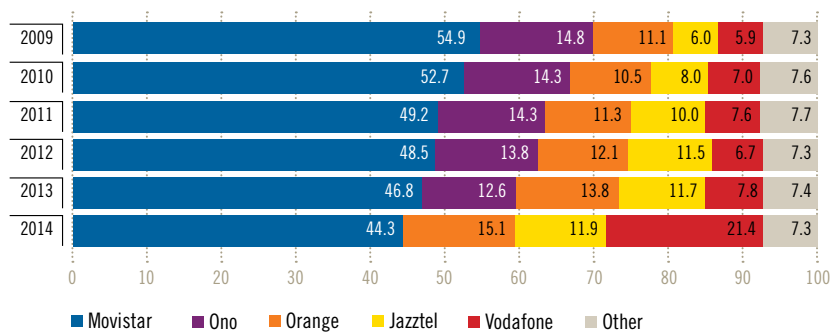
in new accesses and its share exceeded 15%. However, it went from being the second-largest operator in the market in 2013 to the third in 2014 due to the merger between the operators Ono and Vodafone. This last operator, which resulted from the merger, achieved a share of 21.4%; this figure made it Movistar's main competitor. Therefore, after the acquisition, Vodafone has the most extensive network and

number of customers with HFC connections in Spain, added to its FTTH customer base and customers connected by means of un-bundled local loops to offer the xDSL service. Last year, Jazztel maintained its fourth position with slight growth in market share. It should be noted that, after the acquisition of Jazztel

by Orange, approved in mid-2015, the share resulting from the merger stood at over 27%.

Lastly, significant changes were not recorded in the combined share of the other operators, accounting for 7.3% of total broadband lines.

Distribution of broadband lines per operator (%)

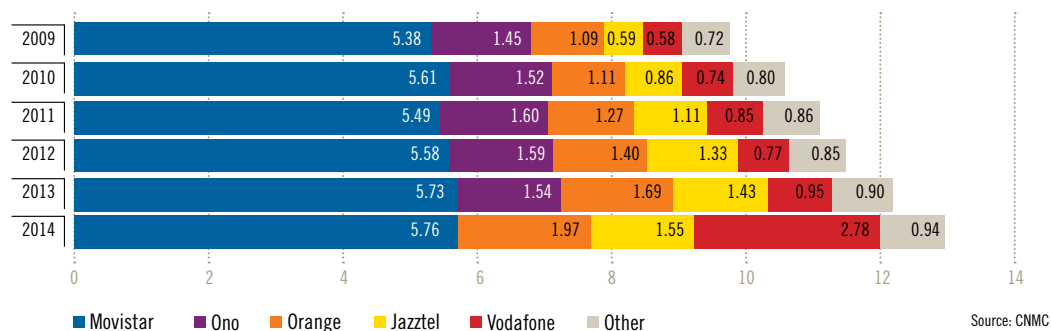


As regards volume of connections, 2014 saw the addition of 762,903 new broadband lines to the market, exceeding the figure recorded in 2013.

Vodafone, Orange and Jazztel were the alternative operators that accounted for the greatest contri-

bution to total new connections, with 685,626 lines; they were followed by Movistar with 35,174 lines. Lastly, the other operators did not record significant growth.

Evolution of broadband lines per operator (millions of lines)

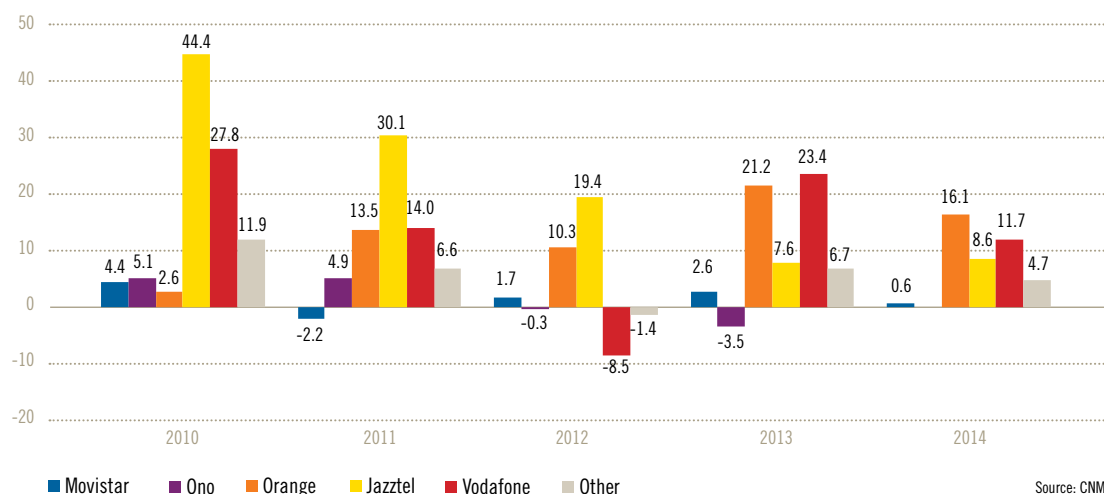


The following graph shows the year-on-year growth in lines³⁰ recorded in recent years. As can be observed in the data, the three main alterna-

tive operators reported significant variation rates, relatively close to each other.

³⁰ The sum of Ono's and Vodafone's lines were taken into account when calculating Vodafone's variation rate in 2014 (with the inclusion of Ono).

Annual variation rate of broadband lines per operator (%)



The following table shows that the leading operators ended the year with growth in their total number of lines. In terms of share of lines, Orange ranked third behind Vodafone (which includes the lines of the cable operator Ono). Jazztel maintained its position relative to the previous year.

With respect to Movistar's share, it remained below 50% with a loss in share of 2.5 percentage points, despite the fact that its total number of lines recorded slight growth. The positions of the other operators remained stable.

Market share by number of broadband lines (lines and percentage)

	LINES 13	SHARE 13	LINES 14	SHARE 14
Movistar	5,726,291	46.8	5,761,465	44.3
Orange	1,692,543	13.8	1,965,151	15.1
Ono	1,536,501	12.6		
Jazztel	1,429,821	11.7	1,552,119	11.9
Vodafone	954,606	7.8	2,781,827	21.4
Euskaltel	259,994	2.1	264,724	2.0
R	214,223	1.7	217,347	1.7
TeleCable	121,694	1.0	127,141	1.0
Other	306,393	2.5	335,195	2.6
Total	12,242,066	100	13,004,969	100

Source: CNMC

In terms of breakdown by segments, Movistar continued to dominate the business segment but with a sharp fall of three percentage points in share to 67%. It was followed by Vodafone as its main competitor with a 12.6% share of business lines. Orange also stood out, obtaining a 10.5% share, while

the other operators maintained a small presence in this segment.

Furthermore, Movistar's share fell by more than two percentage points in the residential segment to below 39%. In this segment, Vodafone achieved 23.5% of active lines.

Market share by number of lines and segment (lines and percentage)

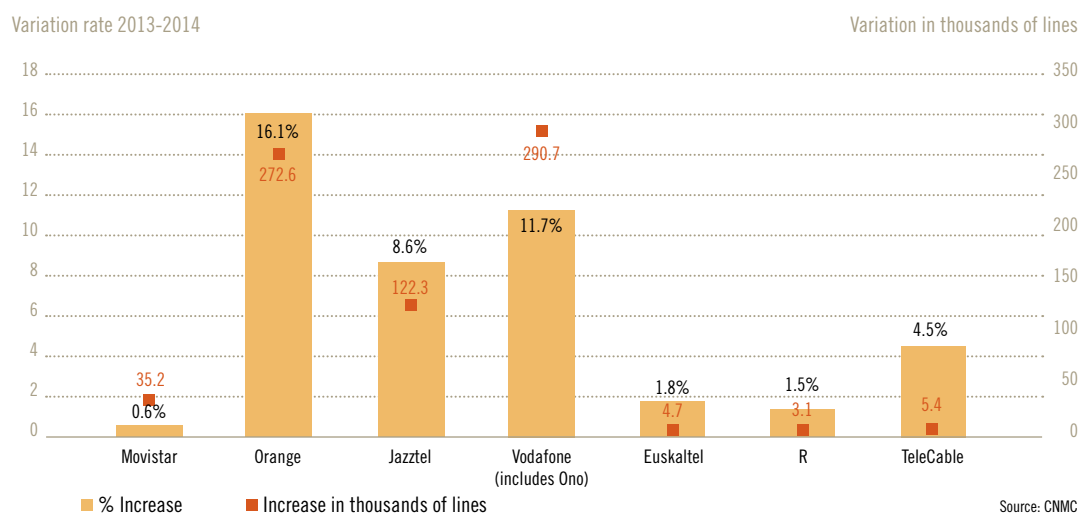
	RESIDENTIAL LINES	RESIDENTIAL SHARE (%)	BUSINESS LINES	BUSINESS SHARE (%)
Movistar	4,084,082	38.9	1,677,383	67.0
Vodafone (includes Ono)	2,465,725	23.5	316,102	12.6
Orange	1,701,860	16.2	263,291	10.5
Jazztel	1,475,306	14.0	76,813	3.1
Euskaltel	217,807	2.1	46,917	1.9
R	170,553	1.6	46,794	1.9
TeleCable	107,694	1.0	19,447	0.8
Other	277,547	2.6	57,648	2.3
Total	10,500,574	100	2,504,395	100

Source: CNMC

As mentioned earlier, in the last year alternative operators obtained the best results in terms of line subscriptions. As can be observed in the graph, Vodafone, Orange and Jazztel obtained the highest growth in terms of both percentage and net increase in lines. Therefore, in 2014 these operators added 290,720, 272,608 and 122,298 new connections to their portfolios,

respectively, jointly accounting for 90% of new lines in the year. Movistar recorded slight growth in its customer portfolio, but with a lower level than that achieved in 2013. Lastly, regional cable operators recorded some growth but of a different magnitude.

Net variation in broadband lines per operator and annual variation rate 2013-2014 (thousands of lines and percentage)



Parallel to the growth in broadband line subscriptions, most operators recorded an increase in associated revenue. These include, namely, Orange with the highest growth in billings –17.2% to €573.7 million– and Jazztel, which grew 15.4% to €515.3 mil-

lion. Movistar's revenue also grew 5.2% and its share exceeded 40%. On the other hand, Vodafone achieved revenue of €661.3 million, including operator Ono's revenue, representing a decline in the joint revenue of the two operators in 2013.

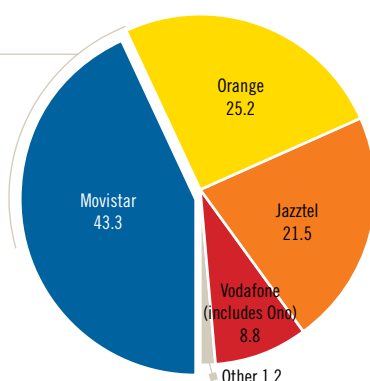
Market share by revenue (millions of euros and percentage)

	Revenue 13	Share 13 (%)	Revenue 14	Share 14 (%)
Movistar	1,287.6	39.8	1,354.9	40.5
Vodafone	187.0	5.8	661.3	19.8
Ono	531.6	16.4		
Orange	478.8	14.8	573.7	17.2
Jazztel	482.5	14.9	515.3	15.4
Euskaltel	69.7	2.2	65.8	2.0
TeleCable	41.2	1.3	42.2	1.3
R	38.1	1.2	35.3	1.1
Other	122.6	3.8	96.3	2.9
Total	3,239.3	100	3,344.8	100

Source: CNMC

The analysis of revenue by technology associated with broadband lines revealed that Movistar maintained its leadership position in xDSL technology with 43.3% of revenue, despite losing nearly five percentage points. Orange and Jazztel ranked second in terms of revenue from xDSL, with percentages of 25.2% and 21.5%, respectively.

Share by xDSL revenue
(percentage)



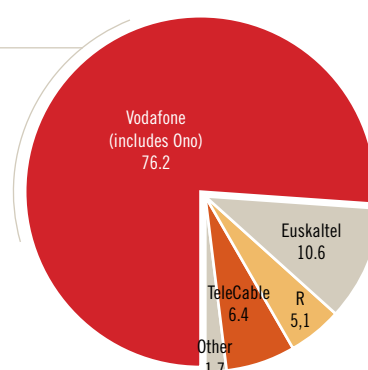
Source: CNMC

Revenue associated with HFC connections fell by 11% in the last year to €606.6 million. There was a significant change in the distribution of

revenue associated with HFC connections; after the merger between Ono and Vodafone, the latter became the owner of the HFC connections and revenue from those connections. Thus, Vodafone became the operator with the highest billings and ended the year accounting for 76.2% of total revenue (compared to 75.8% recorded by Ono the previous year).

The other cable operators that provide their services in certain geographic zones ended the year practically with the same overall market share and some falls in revenue.

Share by HFC revenue
(percentage)



Source: CNMC

Lastly, revenue associated with FTTH lines recorded the highest growth. In the last year, revenue from fibre-to-the-home connections multiplied by 2.5 to €437.6 millions.

In 2014, Movistar obtained the highest proportion of this revenue, as in the case of lines. Its share stood at 85.9% compared to 84.7% recorded the previous year. This rise in FTTH revenue enabled Movistar to offset the fall in revenue from xDSL line billings. In terms of absolute value, revenue from fibre connections obtained by Movistar exceeded €376 million compared to €146 million in 2013.

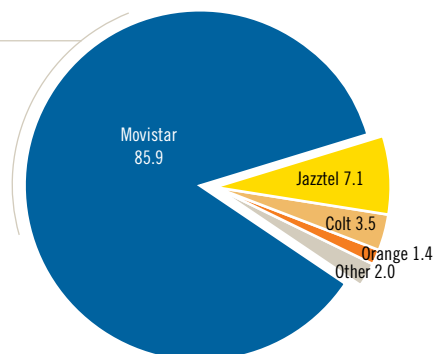
The second operator in terms of revenue from FTTH connections was Jazztel. In 2014, the volume of billings obtained by this operator stood at nearly €31 million compared to €3.5 million the previous year.

Lastly, the revenue associated with this technology obtained by the other operators was barely significant.

Bundling

Subscription of broadband bundled with other services continued to be the primary form of

Share by FTTH revenue
(percentage)

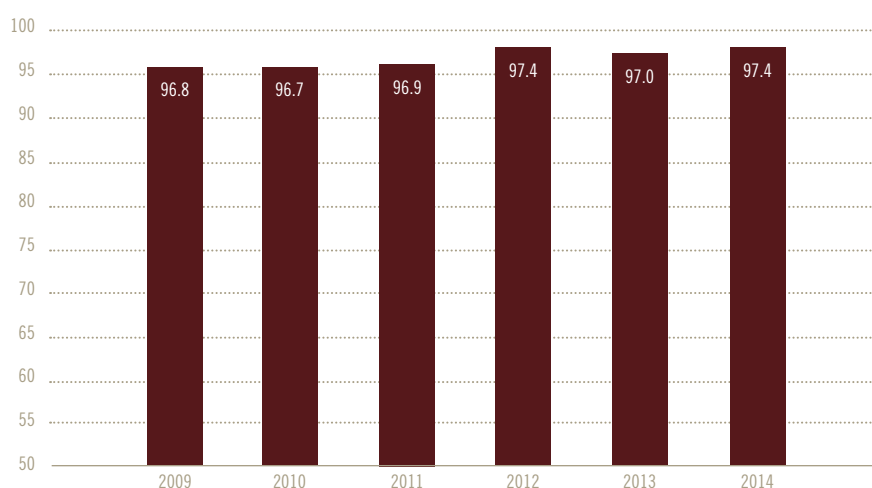


Source: CNMC

accessing broadband by consumers. In 2014, bundled fixed-line and mobile services, including or excluding pay TV, with the same operator was the most in-demand modality.

In the residential segment, the number of broadband lines subscribed together with another service was 10,229,819, accounting for 97.4% of the total. In the business segment, the percentage of bundling was 84.7% (2.12 million lines) compared to 74.9% in 2013.

Broadband lines bundled in the residential segment (percentage)



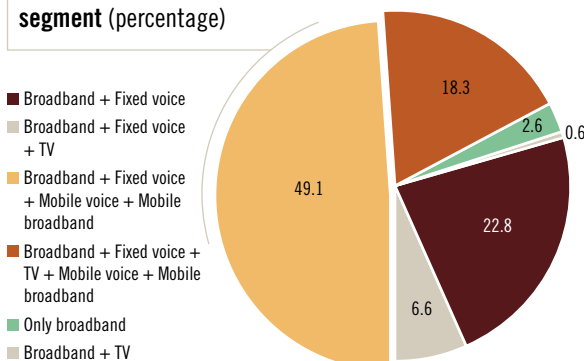
Source: CNMC

The analysis of residential broadband lines by bundle type reveals that the fixed broadband service offered together with the fixed-line telephone service and mobile broadband and mobile voice services (quadruple-play bundle) achieved a percentage of 49.1%, three percentage points higher than the previous year.

Additionally, taking into account the bundles that include at least fixed broadband and fixed voice services, the percentage rose to 96.8% of lines compared to 96.2% in 2013.

Furthermore, triple-play bundles – which include the fixed broadband service, voice service and TV service – jointly accounted for 6.6% of lines; if we add to that bundles including mobile voice and mobile broadband (quintuple-play bundle), this percentage rises to 24.9%.

Broadband lines by type of bundle in the residential segment (percentage)



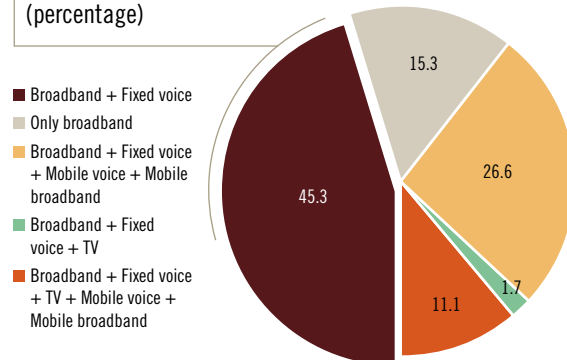
Source: CNMC

The broadband bundle with fixed-line telephone predominated in the business segment. These bundles accounted for 45.3% of lines. The percentage of quadruple-play bundles, which include mobile voice and mobile broadband, grew slightly to 26.6%.

Lastly, as in previous years, unbundled broadband offerings had a significant presence in the business segment, although that presence was considerably reduced. These offerings accounted for 15.3% of the total compared to 20.6% in 2013.

In 2014 the trend of subscribing to mobile services in fixed services bundles continued. Sub-

Broadband lines by type of bundle in the business segment (percentage)



Source: CNMC

scription levels of these types of bundles (quadruple-play and quintuple-play) exceeded 50% of total bundles, both those subscribed with Movistar and from alternative operators as a whole. However, in the case of the latter, the percentage of bundles including the TV service was significantly lower than that recorded by Movistar.

The analysis of subscriptions per operator reveals that, in the case of Movistar, the percentage of triple-play bundles stood at 2.12% or 122,245 bundles. If we add to this figure bundles that also include mobile voice and broadband services, quintuple-play bundles, which accounted for 30.5% (1,755,110 bundles), bundles including pay TV totalled 32.6%. This figure contrasts with the 12.7% achieved in 2013. Therefore, the data indicate that subscriptions to bundles including pay TV have increased.

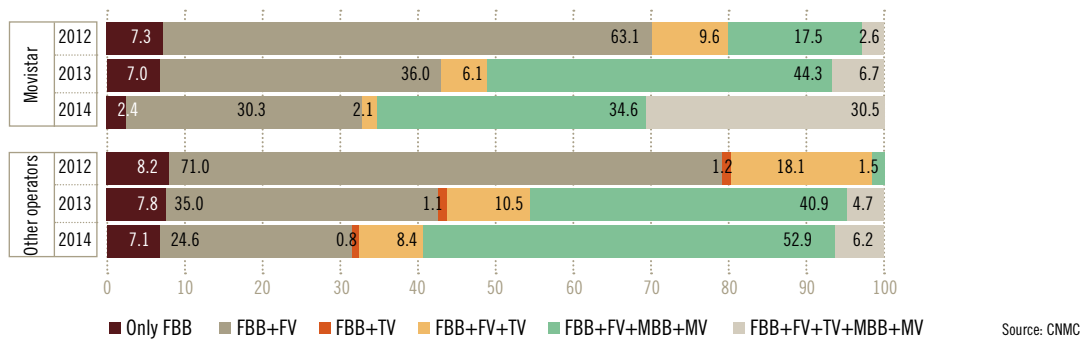
Double-play bundles with broadband and voice accounted for 30.3% of Movistar's total lines. If we add to this percentage the 34.6% represented by the quadruple-play bundle (i.e. fixed broadband, fixed voice, mobile voice and mobile broadband bundles), the percentage totals 65%, compared to 80% the previous year.

The other alternative operators ended the year with 3.8 million lines bundled with fixed broadband, fixed voice, mobile broadband and mobile voice, i.e. 53% of quadruple-play bundles. This figure represents an increase of 12 percentage points relative to 2013.

Furthermore, the percentage of bundles subscribed to with these operators including the TV service was relatively low. The total volume

of bundles including pay TV reached 1.1 million (15.4%).

Evolution of broadband lines by type of bundle and type of operator (percentage)



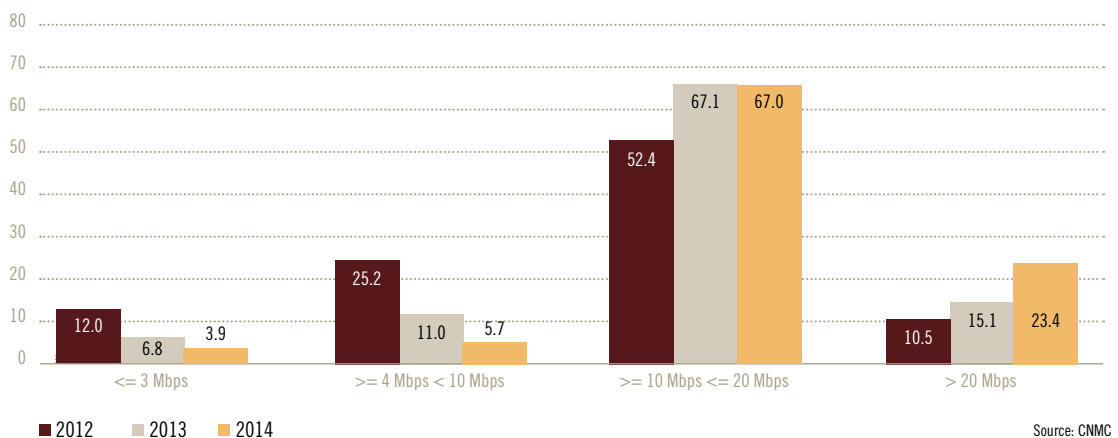
Line speed

The following graph shows that the percentage of lines with higher speeds continued to rise. Thus, cable operators (by updating their nodes to DOCSIS 3.0) and Movistar and other alternative operators (by rolling out FTTH access) boosted subscription to broadband offerings with higher connection speeds. Also, despite the limitation of copper networks, some operators also launched products offering higher connec-

tion speeds (up to 30 Mbps) using VDSL technology (a modality of xDSL which enables higher connection speeds than ADSL).

At year end, 90.3% of broadband line subscriptions had a connection speed of 10 Mbps or higher, compared to 82.2% the previous year. Furthermore, 23.4% of lines had a connection speed higher than 20 Mbps (in absolute terms, more than three million connections).

Evolution of broadband lines by subscribed speed (percentage)



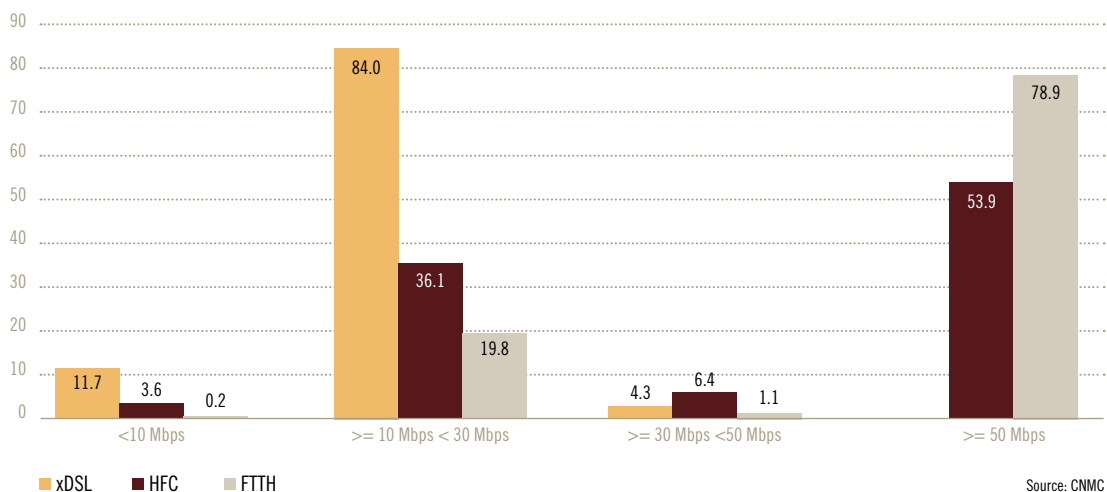
The breakdown of subscribed speeds by access technology reveals significant differences in subscribed speed by type of access network. The limitations of access networks based on copper pair, as regards service speed and quality, are reflected by the fact that the xDSL line speeds offered and subscribed for ranged mainly between 10 and 30 Mbps, accounting for 84%.

Furthermore, HFC and FTTH connections were the only connections that offered speeds

of 50 Mbps or higher, accounting for nearly 79% of connections in the case of FTTH. The foregoing notwithstanding, nearly 20% of active FTTH lines ranged between 10 and 30 Mbps. This range includes Movistar's Fusión commercial offering over FTTH with a connection speed of 10 Mbps.

HFC lines showed greater speed dispersion: 60.3% of its lines already had a subscribed speed of 30 Mbps or higher and, additionally, 53.9% exceeded 50 Mbps.

Broadband lines by subscribed speed and technology (percentage)



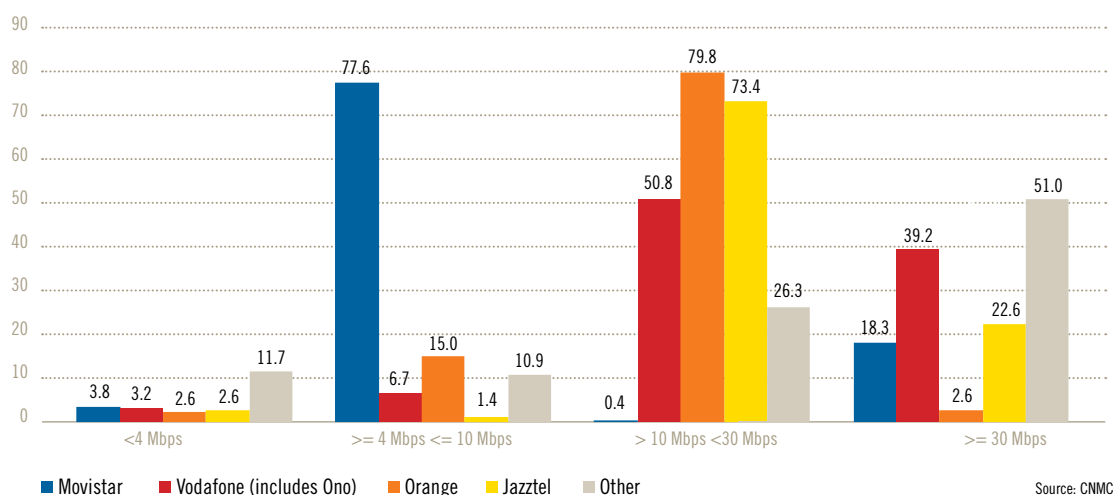
The following graph shows the distribution of broadband lines by subscribed speed for the main operators. In the specific case of Movistar, 77.6% of the total 5.76 million lines of this operator had a connection speed of between 4 Mbps and 10 Mbps. Furthermore, more than one million lines had a subscribed speed higher than 100 Mbps over FTTH.

As regards Vodafone, Orange and Jazztel, most of the lines correspond to xDSL technology and

with a subscribed speed of between 10 Mbps and 30 Mbps. In the case of Vodafone, there was a considerable percentage of connections (39.2%) higher than 30 Mbps, as Ono's HFC connections are included.

Lastly, 51% of the active lines of the other operators – which include mainly those which access the end market over HFC connections – had speeds equal to or higher than 30 Mbps.

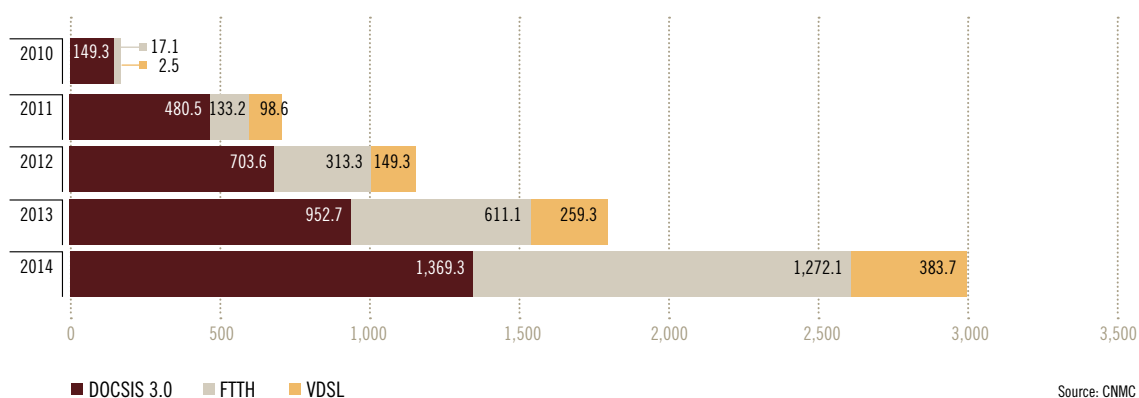
Broadband lines by subscribed speed by operator (%)



The following graph shows the evolution of the volume of lines subscribed with a speed of 30 Mbps or higher. Thus, in 2014 these lines grew 66% to three million. Of these, lines that use FTTH and HFC DOCSIS 3.0 technologies recorded the highest growth in absolute terms.

Lastly, in the last year VDSL lines with a speed of 30 Mbps, offered by Movistar and other operators such as Jazztel and Vodafone, grew by 48%.

NGA broadband lines with a download speed equal to or higher than 30 Mbps (thousands)



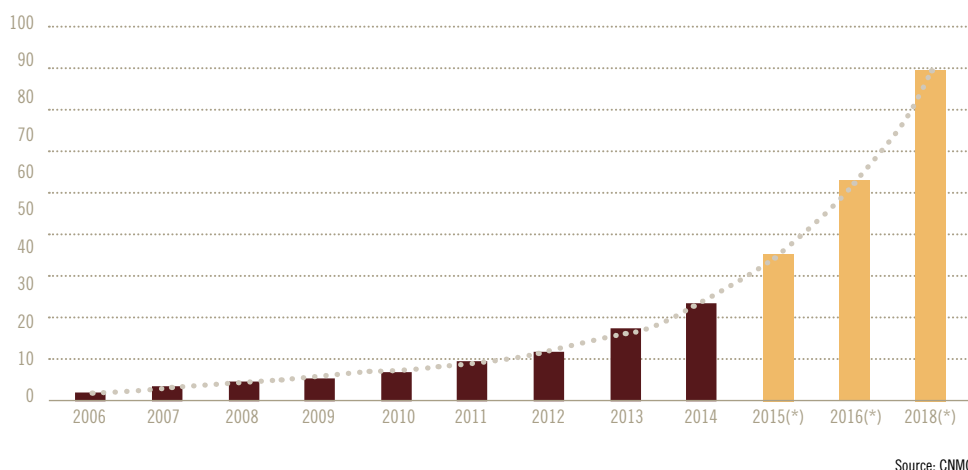
The evidence shown in the preceding sections reveals a progressive increase in subscribed connection speed, as a result of the improvement in access networks achieved by updating existing networks, such as HFC networks, or by investing in the rollout of new fibre-to-the-home

(FTTH) networks. In this regard, the progressive implementation of next generation networks (NGA) is expected to drive a growing demand for new services and, therefore, the need for greater bandwidth.

The following graph shows the development of average subscribed speed of broadband lines as a whole and the estimated trend for the next three years. In 2014, this connection speed reached 26.5 Mbps compared to an average 20

Mbps in 2013, representing an increase of nearly 34% in the last year. Looking ahead, average subscribed speed will reach 90 Mbps in the next three years.

Evolution of average subscribed connection speed and forecast (Mbps)



Fixed broadband prices.

It is well known that fixed broadband services have traditionally been marketed jointly with others. In 2014, 98.1% of fixed broadband connections were sold in this manner. Therefore, this section evaluates the evolution of prices of the most relevant bundles that include fixed broadband. These bundles are: fixed double-play bundle (including broadband and fixed voice services), triple-play bundle (including pay TV, fixed broadband and fixed voice services) and, lastly, convergent bundles, which offer all fixed retail services (broadband and flat-rate telephone) at a fixed monthly fee and, at the least, postpaid mobile access which includes semi-flat-rate voice and mobile broadband tariffs. These last bundles appeared on the market at the end of 2012 and, since then, users have been subscribing to

them to replace their fixed services bundles. In 2014 convergent bundles were the most in-demand bundles, representing more than half of bundles sold in Spain. As indicated below, the costs of these bundles fell substantially in 2014, by around 11-12%.

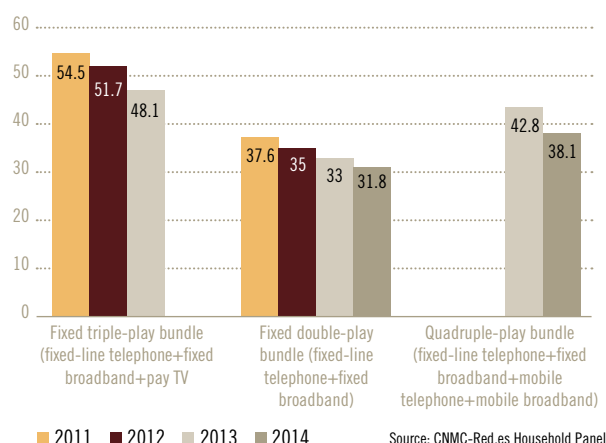
The CNMC-Red.es Household Panel provides more accurate data relating to the prices of these bundles³¹ (data for the last quarter of each year). According to this source, average expenditure per household on the broadband and voice bundle was €31.8 per month, with a year-on-year fall of 3.6%. However, in 2014 prices fell even more if we take into account that the most common bundle with fixed broadband among households was the quadruple-play bundle (48.9% of households with fixed broadband subscribed to this bundle) and that this represented expend-

³¹ The CNMC-Red.es Household Panel periodically provides data relating to the prices of subscribed bundles through a representative sample of households based on bills provided those households. The invoices contain information on both the monthly fee for the bundle subscribed by the household and, if any, on the discounts associated with that fee. These fees (less the discounts), together with the cost billed for the fixed access service when billed separately, give rise to the indicator of expenditure per bundle.

iture of €38.1 per month per household, 11% less than expenditure at the end of 2013.

Lastly, a distinguishing feature in 2014 was the strong growth in the number of households that subscribed to quintuple-play bundles, which means fixed, mobile and pay TV services subscribed together. This growth was due mainly to the increase in sales of this type of bundle by Movistar and was at the expense of the volumes of households that subscribed to the fixed triple-play bundle. Thus, 25.8% of households that subscribed to fixed broadband did so by means of a quintuple-play bundle, while the percentage of households with a triple-play bundle was very low (2.5%, CNMC-Red.es Household Panel). For this reason, the Panel data are not

Evolution of average monthly expenditure per household on the main bundles that include the fixed broadband service (euros/month)

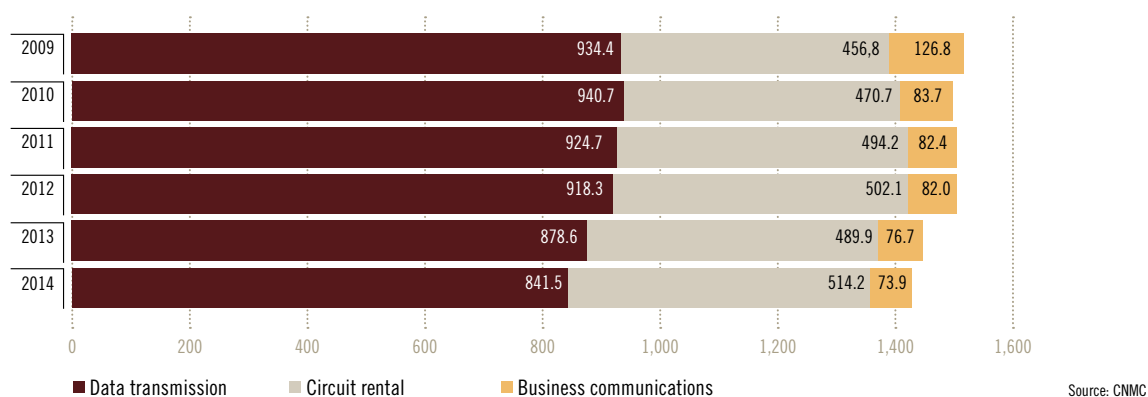


sufficiently representative to reliably estimate the triple-play bundle expenditure indicator in 2014 and, on the other hand, enable the estimation of average household expenditure on quintuple-play bundles: €56.1 per month. This amount is €8 higher than average expenditure on triple-play bundles at the end of 2013, when the individual expenditure on the postpaid mobile service was €15.7. That is, the price of the quintuple-play bundle is 7.7 less than expenditure associated with its constituent services in 2013 (€48.1 per month and €15.7 per month). This implies a year-on-year fall of 12.1%.

2.1.3. Business communications

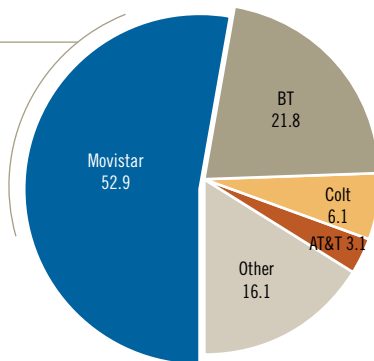
Business communications comprise corporate voice communications – virtual private networks –, circuit rental and data transmission services aimed at the business segment. This activity generated a business volume of €1,429.6 million, which implied a fall of 1.1 percentage points compared to the previous year. In terms of absolute value, this fall represented €15.7 million. Of the three services that comprise business communications, two of them recorded a drop in revenue compared to 2013; data transmission recorded a year-on-year fall of 4.2%, while voice communications fell by 3.7%, representing losses of €37.1 and €2.8 million, respectively. On the other hand, revenue from circuit rental recorded year-on-year growth of 5% (which is reflected in the rise in revenue of €24.3 million), the highest amount achieved by this service.

Revenue from business communications services (millions of euros)



The analysis of revenue from data transmission reveals that Movistar – with €445.2 million – continued to be the leading player in the sector, with a market share of 52.9%, lower than that obtained in 2013 – 0.8 percentage points less. It was followed by BT, with revenue of €183.5 million – representing a market share of 21.8%

Market share by revenue from data transmission (percentage)

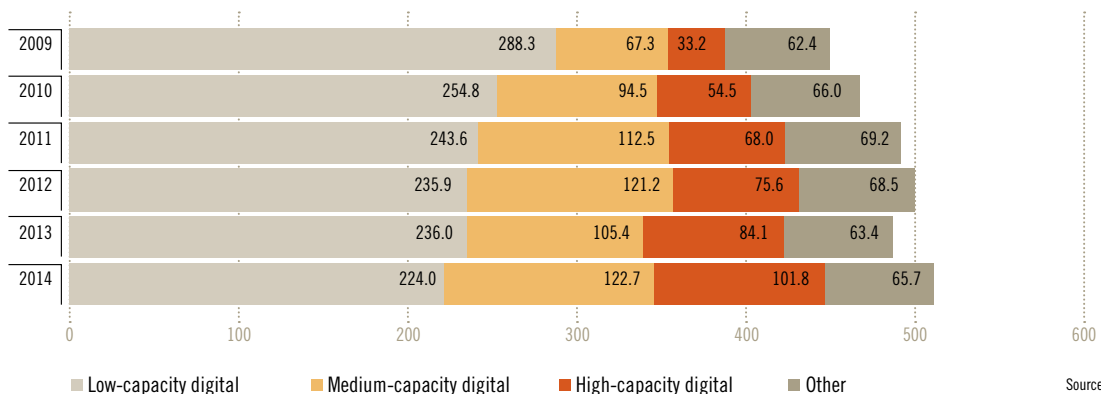


Source: CNMC

– very similar to that obtained in 2013. The third player in this sector was Colt, with revenue of €51.6 million and a market share of 6.1%, representing another increase of €5 million, the same as achieved in 2013.

As mentioned earlier, revenue from circuit rental recorded year-on-year growth of 5%, the highest recorded to date, with revenue of €514.2 million. A capacity-based analysis reveals that low-capacity circuits recorded a decline in revenue – with a year-on-year fall of 5.1% – and in their presence in the sector as a whole, accounting for 43.6% of total revenue but dropping 2.3 percentage points compared to 2013. Revenue from medium- and high-capacity circuits grew 16.4% and 21.0%, respectively, accounting for 23.9% and 19.8% of total revenue and confirming the market trend of subscribing to circuits with higher speeds and using Ethernet technology.

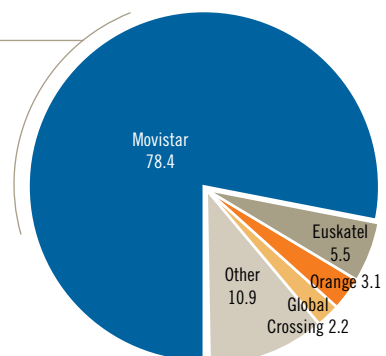
Revenue from rented circuits (millions of euros)



Source: CNMC

The analysis of revenue per operator for this service reveals that Movistar maintains its leadership position with 78.4%, the same percentage as in 2013. It is followed by Euskaltel and Orange, with 5.5% and 3.1%, respectively, representing a slight drop in their market share, but in the case of Euskaltel with revenue very similar to that obtained in 2013.

Market share by revenue from rented circuits (percentage)

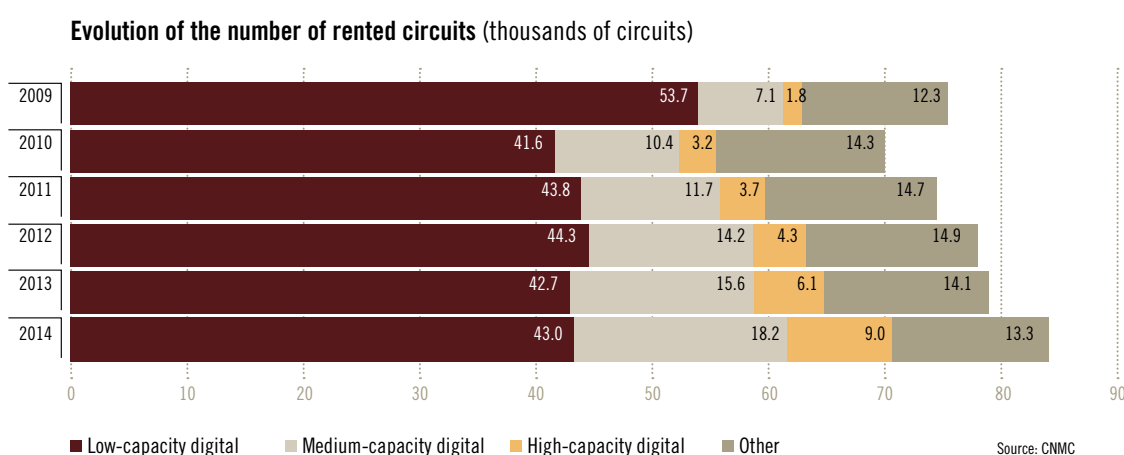


Source: CNMC

The analysis of the number of circuits reveals that they follow the same trend as revenue, with year-on-year growth of 6.4% and the highest growth to date in total number of circuits – standing at 83,441. The total number of circuits was divided as follows: low-capacity circuits represented 51.5%, reducing their share by 2.9 percentage points relative to 2013; medium-capacity circuits accounted for 21.8% of the total, increasing their presence relative to 2013, and high-capacity circuits – 622 Mbps, 2.5 Gbps,

10 Gbps and Gigabit Ethernet – represented 10.8%, increasing their market share by three percentage points.

The circuits that grew most were Fast and Gigabit Ethernet and 10 Gbps circuits, contrasting with the trend indicated in the revenue, which reflected subscription to circuits with higher speeds due to service needs and that could be reinforced by the drop in the price of the Reference Line Rental Offer (RLO) in 2013.



2.1.4. Telephone information services

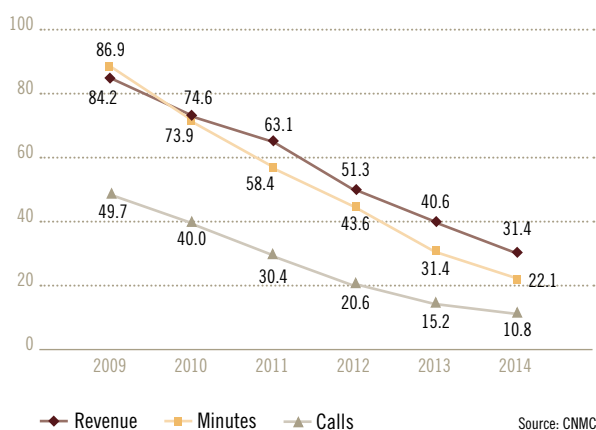
Telephone information services are offered by different fixed or mobile network companies or by those which do not have a proprietary network and use other distribution means, such as the Internet, to make subscriber-related information available to end users.

One of the reasons that could explain the downward trend in these services is the existence of free similar or equivalent services on the Internet.

Revenue from these services, with the aforementioned exception, stood at €31.4 million, with a year-on-year fall of 22.7%, which represented a decline of €9.21 million compared to the previous year. This trend, although similar in the last seven years, has become more marked in the last year. The analysis of traffic records and number of calls reveals a very similar trend

to that followed by revenue, with 22.1 million minutes consumed and 10.8 million calls, with falls of 29.6% and 28.7%, respectively.

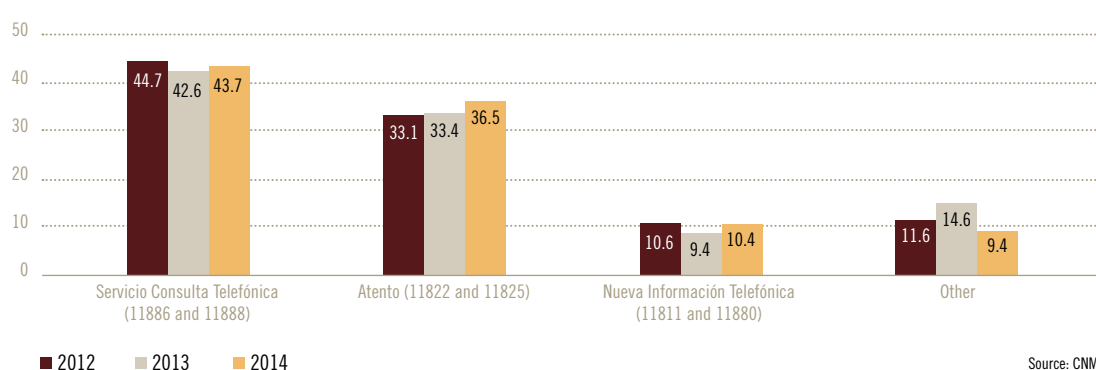
Revenue, traffic and calls for information service providers (millions of euros, minutes and calls)



As regards the main market agents by volume of billings, Servicio de Consulta Telefónica (which uses the number 11888 nationally and 11886 internationally) led with a 43.7% share. Next in line was Atento (which uses the number 11822 for national service and 11825 for international service), with a 36.5% share. In third place was Nueva Información Telefónica (which uses the

number 11811 for national service and 11880 for international service), with a 10.4% share. The three aforementioned operators have increased their market share relative to the previous year and, following the trend of recent years, the order of the leading agents has not changed.

Market share by revenue for information service providers (percentage)



2.2 Wholesale fixed communications

2.2.1. Wholesale voice services

The traffic exchange originated between the network of one operator and another is possible due to the interconnection of networks. The termination service is a service whereby the operator with a fixed network obtains revenue from calls made to customers in its network originating from a network other than its own, whether fixed or mobile. In the access service – which makes it possible to make indirect access calls –, the operator that supplies the line to the subscriber obtains revenue from delivering, to the interconnected operator, traffic chosen by the operator, short numbers, access to narrowband Internet (909) and the access component of special tariff services (intelligent network) destined for its network. To these two wholesale services we must

add the transit service, which enables an operator to deliver calls to another operator with which it is not directly connected through a third operator. The latter, in addition to charging for termination in accordance with the type of call, adds a margin for making the call through its network to deliver it to the destination operator.

There are also other services, such as those with special tariffs, telephone information, short numbers, etc., for which interconnection services are also necessary.

The most significant milestone in terms of wholesale services in 2014 was the approval of the third wholesale fixed network call termination market review, which is included in the recommendation of the European Union on relevant markets that are candidates for *ex-ante*³² regulation. In

³² Recommendation of the European Commission relating to the relevant markets for products and services within the electronic communications sector that may be subject to *ex-ante* regulation (2014/710/EU).

April, a proposal was launched for public consultation with the aim of gathering feedback and opinions from the actors involved in this market and, in July, the draft measure was notified to the European Commission. This market analysis was finally approved in September 2014, which significantly changed the regulatory backdrop to the fixed network termination service.

The new market definition includes both the traditional termination service (switched voice users) and users with voice over IP, regardless of the access technology. Each fixed network operator gives rise to a reference market in which it holds a monopoly position for terminating calls on its network. The analysis determined that there was no effective competition in any of the markets and a single price for termination on fixed networks, much lower than the previous price and without differentiating between interconnection bands or levels, was set based on an incremental cost model for an efficient operator. Price asymmetry between Telefónica de España S.A.U.³³ (Telefónica) and the other operators was eliminated bearing in mind that, given the long period elapsed since the liberalisation of the sector, alternative operators had had sufficient time to converge with an efficient operator in terms of costs and that maintaining the asymmetry could be detrimental to the end user. Likewise, the obligation to handle termination traffic from other operators under the capacity-based interconnection modality³⁴ that applied only to Telefónica was eliminated, taking into account that this modality was irrelevant after implementing an in-

cremental price. Additionally, it was determined that all the operators with IP voice subscribers were obliged to offer the call termination service on their networks using IP interconnection. Telefónica was obliged to propose an IP interconnection offering to the CNMC within a period of two months from the approval of the measure. However, the obligation to grant access to IP interconnection facilities came into effect immediately after market approval and independently of the date of approval of Telefónica's IP RIO (Reference Interconnection Offer), provided that the access request was reasonable..

Interconnection services

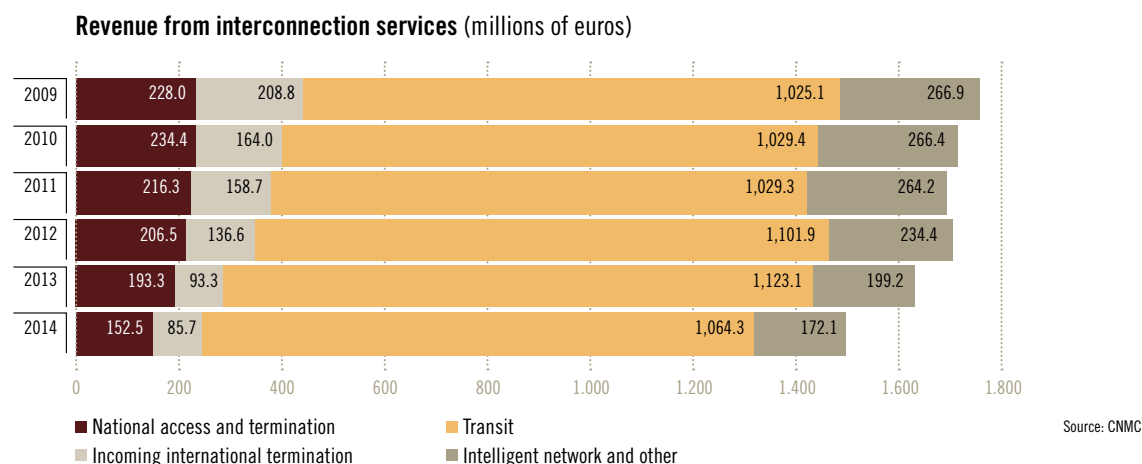
The heterogeneous nature of the different services means that total revenue and traffic figures do not reflect the evolution of the market. In fact, transit services, which have a significant bearing on the total, may record strong fluctuations from one year to another, to a great extent determined by the price offered on the wholesale market and by the different bearings of the different types of transit on the total.

Therefore, the following analysis focuses mainly on fixed network access and termination services, which are those regulated by the CNMC, as a result of the obligations established in the corresponding analyses of wholesale origination and termination markets.

In 2014, total revenue from wholesale interconnection services amounted to €1,474.6 million, down 8.3% on the previous year, while traffic fell by 7.2%.

³³ Despite the fact that trade names are used to designate the operators in this report, Telefónica is used in the fixed network interconnection analysis instead of Movistar, given that the obligations arising from the analyses of wholesale fixed network access and termination markets correspond exclusively to Telefónica de España S.A.U. Also, the revenue declared by Telefónica de España S.A.U., includes revenue from Telefónica Móviles España S.A.U. for the provision of wholesale services included in this section.

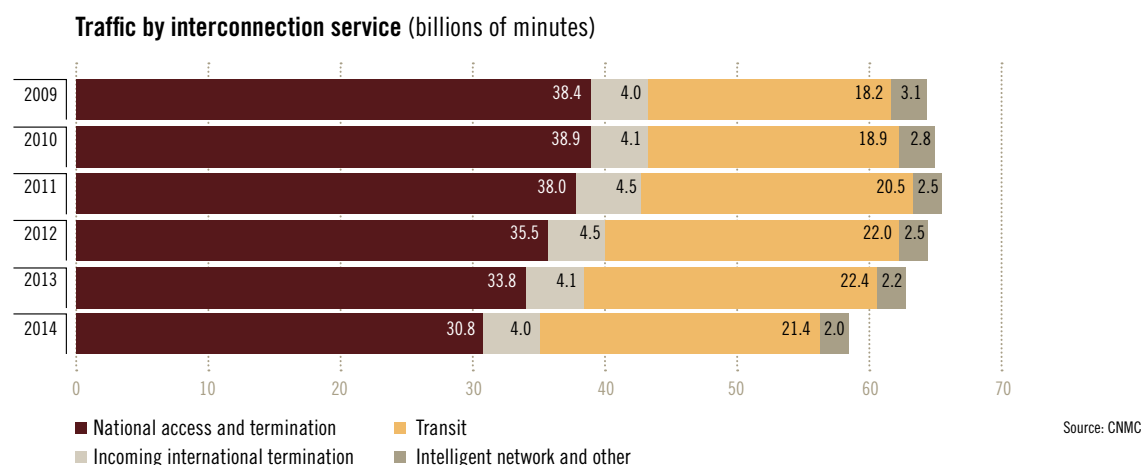
³⁴ The interconnection modality is maintained for access traffic.



Revenue declined for all services and in a manner similar to traffic. The most significant fall in relative terms was that of revenue from the wholesale fixed network termination service.

This service, together with access, were the two leading interconnection services, despite the fact

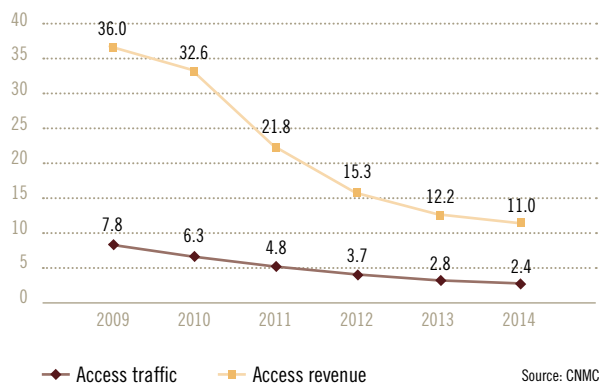
that their total contribution to revenue was not very representative. In 2014, total revenue from these two services fell to €152.5 million, mainly caused by the sharp fall of more than 20% recorded by revenue from the termination service.



The access service declined, as in previous years, both in terms of revenue and traffic. Despite the fact that billings fell by 10.4%, this drop was much lower than that recorded in the three last years. The same occurred with access traffic handled, which fell by 13.9%, compared to the negative variation rates of nearly 25% recorded since 2011.

This traffic has followed a downward trend for years directly related to the lower demand for the retail indirect access service. Thus, in 2014 total indirect access customers fell by nearly 5% to stand at slightly above 700,000.

Evolution of access revenue and traffic
(millions of euros and billions of minutes)



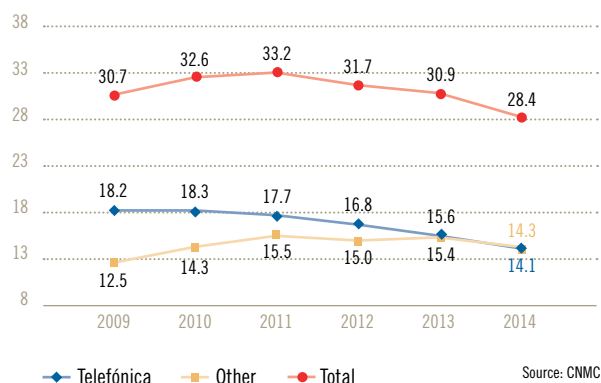
As regards the wholesale termination service, a fall of 9.2% was recorded in traffic, while revenue recorded a sharper fall of 21.8% due to the new termination prices coming into effect in November 2014. This service is directly related to retail traffic originating from any network and terminating on a fixed network which, as analysed in the fixed telephony section, recorded a fall of nearly 12%. This decline resulted from the sharp drop in retail traffic generated by fixed telephony customers to fixed destinations, which was not offset by the increase recorded in traffic from mobiles to fixed-line national numbers

This decline in voice termination traffic affected both Telefónica and the other operators. The traffic handled by each direct access operator is closely related to its number of fixed telephone lines. Thus, the evolution of Telefónica's traffic in recent years partly reflects the loss of fixed lines recorded the operator year after year. However, it has remained practically stable in the case of the other traffic operators since 2011, although in the last four years their total number of fixed lines has grown by 22.5%. This confirms the downward trend followed by retail traffic destined for fixed-line numbers – which entails a decrease in wholesale termination traffic – rather than the increase that could be expected due to the evolution in fixed lines of alternative operators.

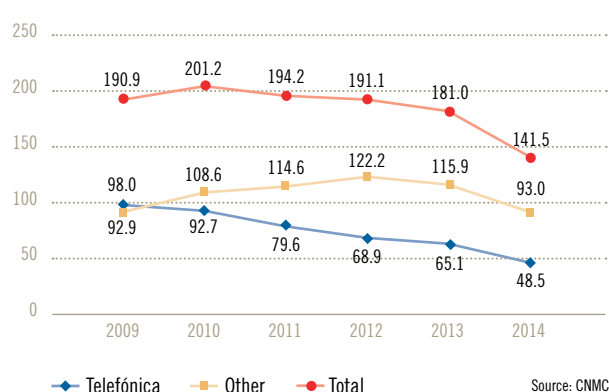
Also, the current situation with various combination transactions in the sector leads to a scenario with less operators, where wholesale termination traffic will tend to decline, as the operators that once exchanged traffic will stop doing so when the acquisition or merger becomes effective³⁵.

The drop in voice termination revenue was more than double that recorded in traffic and was pronounced for both Telefónica (25.5%) and the other operators (19.8%).

Evolution of national voice termination minutes for Telefónica and the other fixed network operators
(billions of minutes)



Evolution of revenue from national voice termination for Telefónica and the other fixed network operators
(millions of euros)

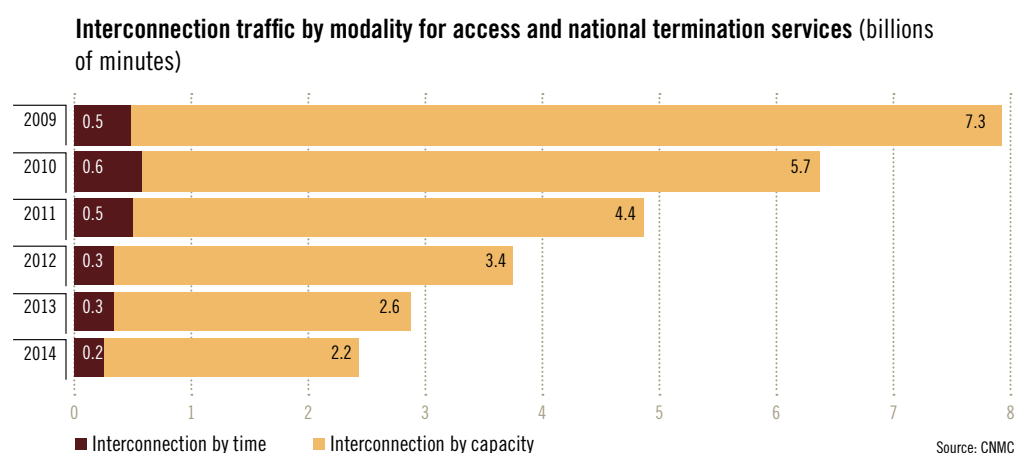


³⁵ Vodafone and Ono reported their data separately in 2014, due to which the impact of the acquisition of Ono by Vodafone is not reflected in the data of this section.

For Telefónica, this revenue has followed a downward trend since 2011, in line with the evolution of termination traffic, due to the application of the lower prices of the most recent Reference Interconnection Offer (RIO) in 2010. In the case of the other operators, in 2014 the effect of the elimination of price asymmetry in the RIO was evident, as it enabled alternative operators to charge 30% more for terminating a call on their networks than the corresponding termination price at local level defined in the RIO for Telefónica. Following the Recommendation on termination tariffs published by the EC³⁶ and the Common Position on termination tariffs prepared by the ERG³⁷, in the termination market analysis performed in 2014, it was considered that, given the long period elapsed since the liberalisation of the sector, there was no justification for maintaining the price asymmetry in favour of alternative operators and that it could also be detrimental to competition and to consumer well-being.

Until November 2014 there were two interconnection billing modalities: by time and by capacity. In the time-based modality, the traffic handled is billed in minutes, while in the capacity-based modality it is billed by the capacity of the subscribed link, regardless of the volume of minutes handled through it. Therefore, average revenue per minute in this modality varies according to the effective degree of occupation of the links. Telefónica was the only operator which was obliged to offer its access and termination interconnection services in both billing modalities.

After the market analysis, the capacity-based interconnection modality for the termination service was eliminated. From November, Telefónica was only obliged to offer that modality for the access service, which has also been provided for some time almost completely under the capacity-based scheme.



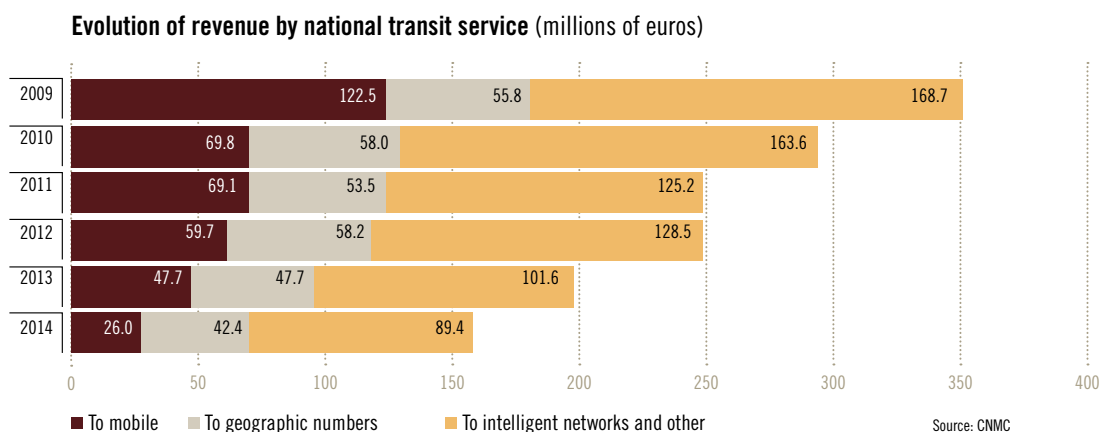
³⁶ In May 2009, the European Commission published a specific recommendation on cost orientation in termination prices for both fixed networks and mobile networks (2009/396/EU), where it established that the cost criterion to be used is that of avoidable costs and, to that end, the long run incremental cost (LRIC) of providing the service is established.

³⁷ In February 2008 the ERG adopted a common position on termination tariff symmetry, in which it called for symmetry in fixed network tariffs, arguing that asymmetry for an excessive amount of time can lead to inefficiencies and adversely effect competition and consumer well-being.

As regards other fixed network interconnection services, transit represented 72.2% of total revenue and 36.7% of traffic.

International transit fell both in terms of revenue and traffic, although to a lesser extent than the national transit service, which recorded €157.8

million, down 20% on the previous year. This drop was largely caused by the decline in transit to mobile numbers, which recorded 15% less traffic compared to a reduction in revenue of 45%, due to the application in 2014 of the new price for termination in mobile networks effective from July 2013 (1.09 euro cents per minute).



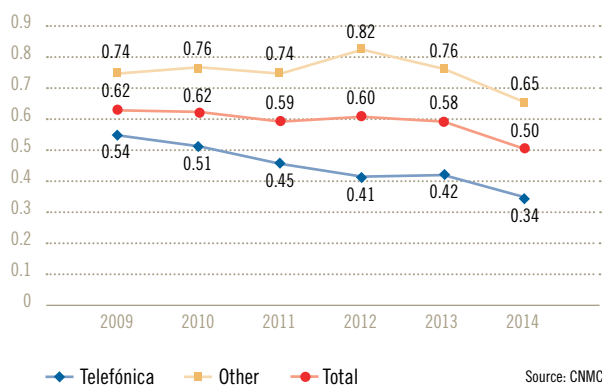
Average revenue

In the market review, the new fixed termination price was calculated on a cost-oriented basis based on a bottom-up LRIC model of a theoretical efficient operator³⁸, with a resulting price of 0.0817 euro cents per minute. This represented a reduction of approximately 80% compared to the current prices for Telefónica at the time and for alternative operators the fall was even greater, since they were able to fix a termination price on their network up to 30% higher than that of Telefónica's local termination price.

This new price is configured as a maximum price, symmetrically for all operators and with the obligation of billing only by traffic consumed and without time bands. Operators interconnected at the exchanges associated with the 21 nodal areas of Telefónica's current network structure, taking their NGN (*Next Generation Network*) rollout into account, will be able to apply this price, as well as those which are interconnected to those areas at lower levels. Otherwise, they must negotiate the conditions of transit to numbers excluded from the scope of the nodal areas where they are present with Telefónica.

As a result of this change, in 2014, average consolidated voice termination in fixed networks stood at 0.5 euro cents per minute, down 14.5% on 2013. Despite the fact that the new price came into effect in November, its effect was already evident for the year as a whole, given the significant reduction it implied relative to the current prices up to that date, and so the fall in average revenue in 2015 is expected to be much steeper.

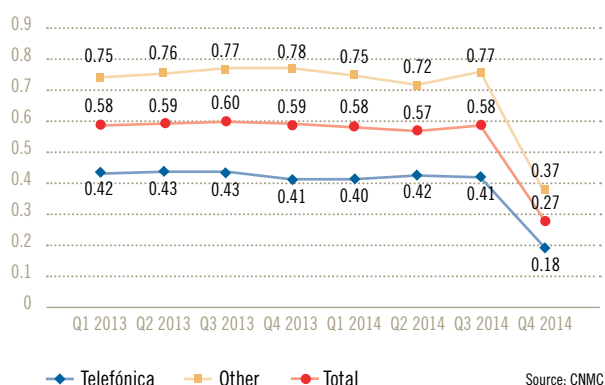
Average revenue from national voice termination for Telefónica and other operators (euro cents/minute)



³⁸ As recommended by the European Commission, the price is calculated using a model orientated towards the costs incurred by an efficient operator, applying the prospective long run incremental cost (LRIC) methodology using a bottom-up financial/technical network model. The EC considers that the cost model for fixed networks could be based on NGN networks.

In order to see the development of the new termination price in greater detail, the quarterly series where the drop in the last quarter of the year for both Telefónica and the other operators is shown.

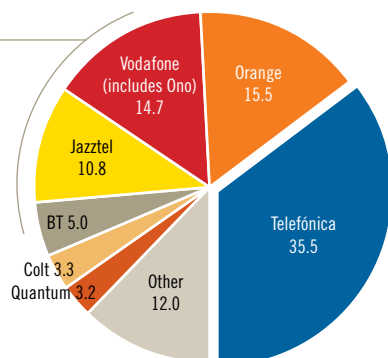
Average quarterly revenue from national voice termination for Telefónica and other operators (euro cents/minute)



Market share

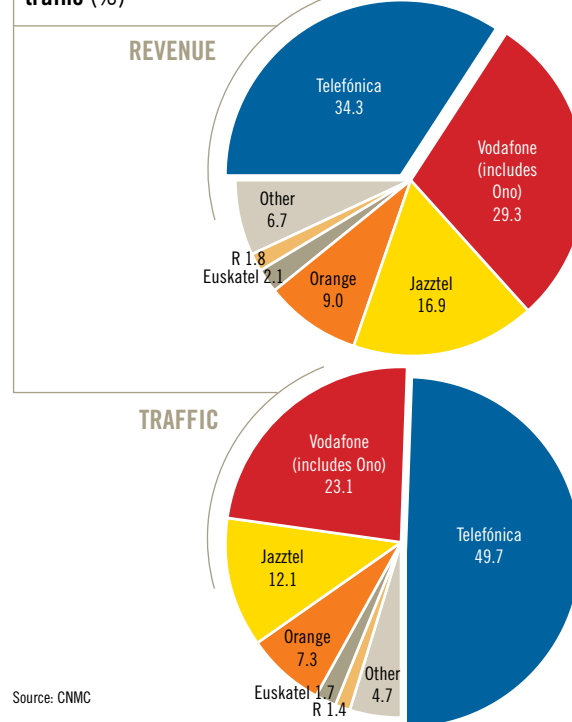
Market share by revenue – including all interconnection services – was 35.5% for Telefónica, followed by Orange, Vodafone – which includes Ono – and Jazztel. Operators such as BT, Colt and Quantum, whose revenue comes mainly from transit to international destinations, follow.

Market share by revenue from national interconnection services (%)



An analysis of distribution by operator exclusively considering the national termination service reveals that the market is shared between the leading direct access operators that operate at national or local level. Although the order of the operators remains the same in terms of revenue and traffic, there are differences in the percentages due to the termination price asymmetry in the first ten months of 2014. Thus, Telefónica, which accounts for nearly 50% of fixed network termination traffic, obtained only 34.3% in revenue, while the other operators had a higher share of revenue than of traffic.

Market share by national termination interconnection services revenue and traffic (%)



2.2.2. Wholesale fixed broadband services

In 2014 the CNMC initiated the wholesale market review relating to broadband services after the last analysis performed in 2009. The new market review will entail significant regulatory challenges, considering the current rollout of Telefónica's NGA network, the progressive transformation of its network and regulatory objectives of promoting competition and incentivising investment in alternative NGA networks³⁹

In this regard, in December 2014 the CNMC published a public consultation⁴⁰ relating to the third wholesale fixed-location network access infrastructure market review and wholesale broadband access market review (new markets 3a, 3b and 4), so that the various actors in the sector could formulate their observations or make suggestions on the draft measure presented.

Notwithstanding the foregoing, the *ex-ante* obligations imposed on Telefónica de España S.A.U.⁴¹ (Telefónica) in the market review still, which the CNMC approved in January 2009, still applied last year. Specifically, market 4, which is the wholesale network infrastructure access market (physical) (including shared and fully unbundled access) at a fixed location; and market 5, which is the wholesale broadband access market.

The regulation of market 4 enables alternative operators to offer fixed broadband services to consumers through wholesale access to the physical infrastructure of the operator with significant market power, which is currently Telefónica. In particular, alternative operators can access Telefónica's copper pair and provide direct services to users through the regulated wholesale local loop unbundling service. In this access modality, alternative operators must connect their trunk network to Telefónica's exchanges and in-

stall equipment in them in order to unbundle the pairs of the exchanges' subscribers (last mile of the access network) and connect them to their network.

Telefónica has three modalities in this local loop unbundling service. Firstly, fully unbundled access: through this service, Telefónica transfers the use of copper pair to the operator in the entire frequency range. Secondly, shared unbundled access: Telefónica transfers the use of high pair frequencies to the operator – which are used for xDSL services – and reserves the use of low frequencies to continue offering the user the basic telephone service. Lastly, the non-BTS shared access modality, i.e. without telephone subscription to Telefónica, in the sense that it is the alternative operator that provides all the services to the end user: xDSL and telephone over IP (VoIP) in the high frequency range.

Also, the obligations of market 4 also include enabling access, by alternative operators, to Telefónica's passive infrastructures (ducts, conduits, manholes, etc.), which has allowed alternative operators to roll out their FTTH networks with time and cost savings. Likewise, the maximum regulated prices of such access were established by the approval of the Reference Cabinet and Duct Offer (MARCo).

Furthermore, the regulation of market 5 enables alternative operators to connect to a number of access points on the Telefónica network, enabling these operators to provide the broadband service to the end customer in Spain, even in areas beyond the scope of proprietary networks or local loop unbundling. This network connection of the historical operator can be established at ATM or IP level; Telefónica markets these two types of wholesale service under the trade names GigADSL and ADSL-IP (the latter at provincial and national level), respectively. As with the ac-

³⁹ It should be noted that the European Commission published a Recommendation in September 2013 on non-discrimination and cost methodologies for promoting competition and driving investment in broadband.

⁴⁰ http://www.cnmc.es/Portals/0/Ficheros/Telecomunicaciones/Consultas_Publicas/Consulta_cnmc/20141219_ProyectoMedida.pdf

⁴¹ Despite the fact that trade names are used to designate the operators in this report, in the case of wholesale broadband services, Telefónica is used instead of Movistar, given that the obligations imposed on markets 4 and 5 relate exclusively to Telefónica de España S.A.U.

cess to non-BTS shared loop modality, users can subscribe to the indirect access service without having to subscribe to the telephone service with Telefónica (so-called naked indirect access).

In the previous year, the wholesale broadband Ethernet indirect access service (NEBA) recorded a rise in demand. It should be noted that this service, which will progressively replace the current GigADSL and ADSL-IP, enables wholesale access to Telefónica's copper network and new fibre network for speeds of up to 30 Mbps and makes it possible to offer quality-assured services to provide telephony using voice over IP or business services. The objective of the NEBA service is to improve competition in the broadband services available to users who live in areas where there is no competition in terms of infrastructure and where alternative operators make use of the indirect access.

It should be noted that, in January 2014, the CNMC approved the first NEBA service price review at the same time as updating GigADSL and ADSL-IP prices. Likewise, in April 2014, the res-

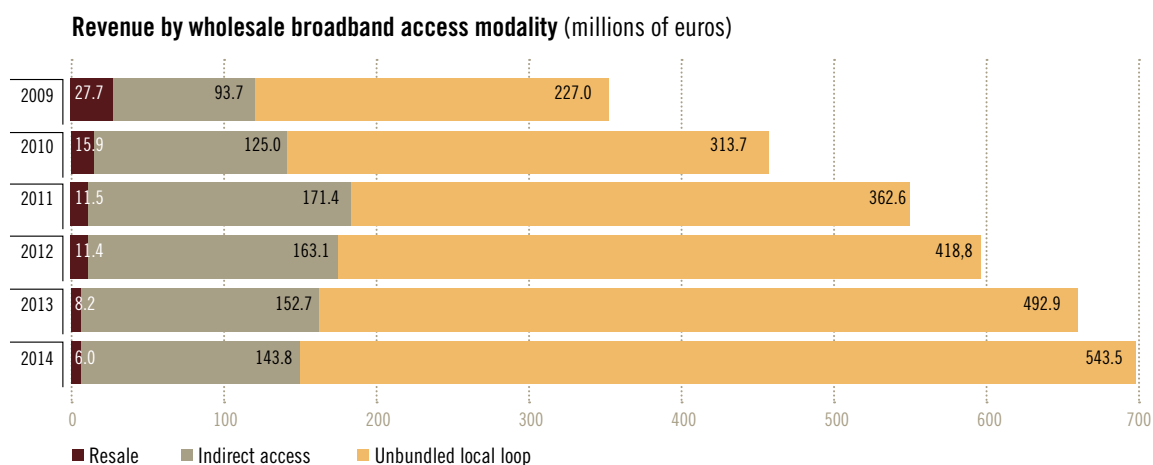
olution on the effective availability of NEBA was approved, which implied the start of the "deregulation" process of the GigADSL and ADSL-IP services in those areas where there is NEBA coverage.

Revenue

The volume of revenue from regulated wholesale broadband and resale services grew 6% in the last year to €693.3 million. This growth is substantially lower than that recorded in 2013, when revenue rose by 10.2%.

The local loop unbundling service, the most in-demand service, grew both in terms of lines and revenue. On the other hand, revenue from broadband indirect access services and the non-regulated resale service fell as a whole.

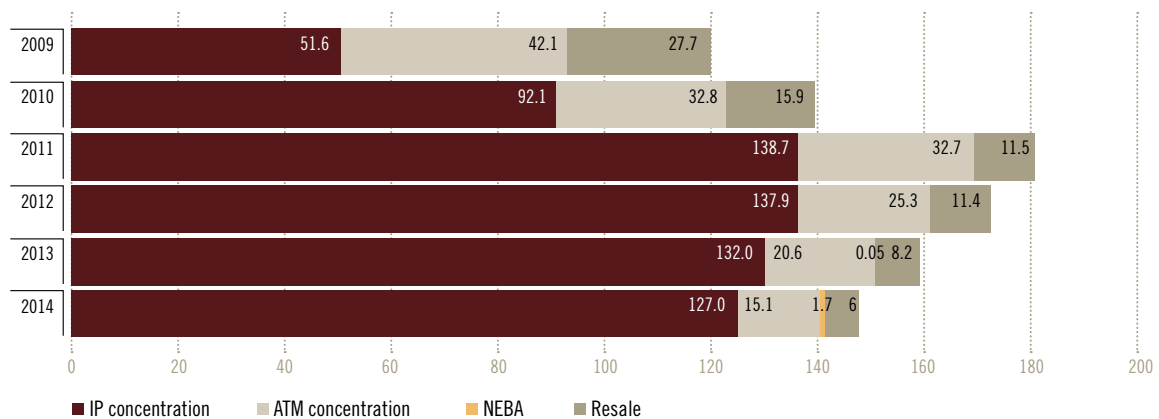
Specifically, billings for the local loop unbundling service amounted to €543.5 million, up 10.3% on the previous year. Broadband indirect access services fell by 5.8% to €143.8 million. Lastly, revenue from the resale service fell by 27.1%.



The following graph shows the breakdown of revenue from the different broadband indirect access modalities and from the non-regulated resale service. On the one hand, revenue from IP

and ATM concentration services fell by 3.8% and 26.8%, respectively, and, on the other, revenue from NEBA reached €1.7 million, compared to the meagre figure recorded in 2013.

Evolution of revenue from indirect access by modality and resale (millions of euros)

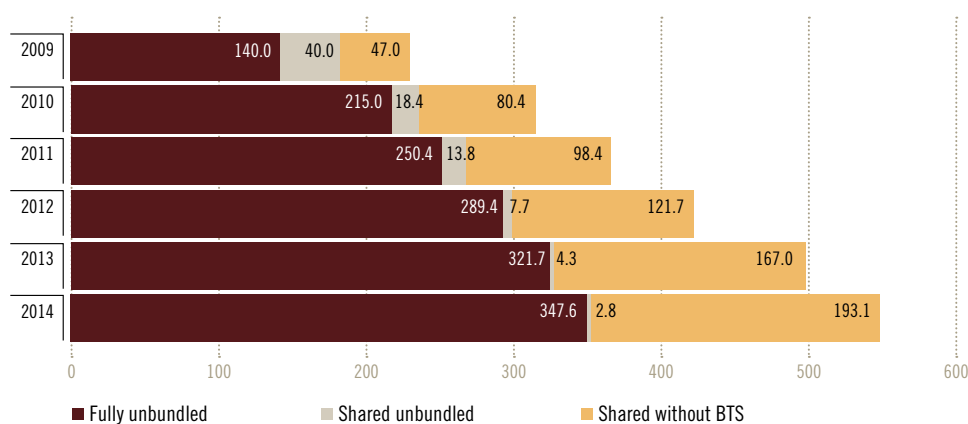


Source: CNMC

As regards the breakdown of revenue from the most in-demand service modalities, unbundled local loop, the highest growth in billings was observed in non-BTS shared local loop and in fully unbundled local loop. It should be noted that these modalities enable alternative xDSL operators to offer the broadband and voice service, disassociating the user from Telefónica. Jazztel, Orange and Vodafone are the main operators that use these modalities to offer their services to consumers.

In 2014, revenue associated with the subscriber full local loop unbundling modality totalled €347.6 million, up 8% on the previous year. Shared non-BTS loop service billings grew 15.7% to €193.1 million. Lastly, revenue from the shared loop service fell by 34.8% to €2.8 million.

Evolution of revenue from local loop unbundling (millions of euros)



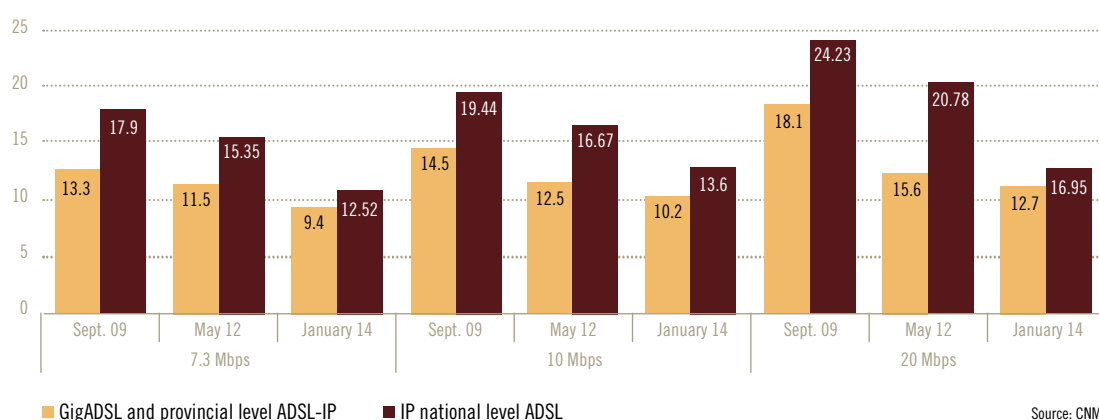
Source: CNMC

The fall in revenue from broadband indirect access (IP and ATM concentration) was partly due to the reduction in regulated prices of these services in recent years. It should be noted that, in May 2012, the CMT reduced the prices of GigADSL by 13.7% and ADSL-IP by 14.2% relative to the prices set in September 2009. Additionally, in January 2014, the CNMC applied a reduc-

tion of 18.4% to the prices of these wholesale services.

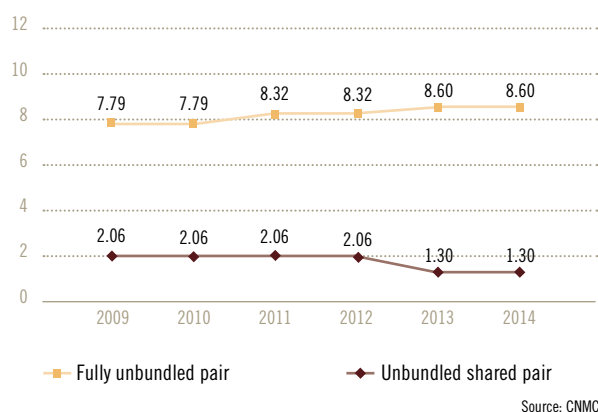
These regulatory measures in wholesale services enable alternative operators to configure offerings for consumers in areas where they do not have proprietary infrastructure, without disincentivising investment in the improvement of access networks.

Evolution of regulated prices for the main broadband indirect access modalities (euros/month)



As regards unbundled local loop access service prices, in 2014 they remained stable after the CMT applied a 37% discount to the monthly fee for shared loop and a 3.4% increase in the fully unbundled local loop modality in July 2013. After these changes, prices stood at €1.30/month and €8.60/month, respectively.

Evolution of regulated prices for subscriber local loop unbundling (euros/month)

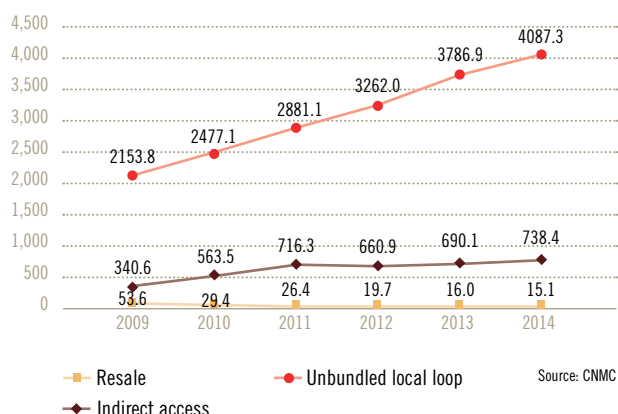


Lines

The wholesale local loop unbundling service continued the trend followed in recent years with significant rises in the number of lines. It should be recalled that the main alternative operators such as Vodafone, Orange and Jazztel make use of this service to offer broadband services. Although these operators intensified the rollout of FTTH networks in the last year, xDSL continued to be the main access technology. Furthermore, the broadband indirect access service recorded an increase in line demand in some modalities.

Specifically, unbundled loops grew by more than 300 thousand (7.9% more) in the last year, exceeding four million loops. The total number of connections of the indirect access modalities stood at 738 thousand lines – more than 98% corresponded to Telefónica –, compared to 690 thousand lines in 2013, which represented a rise of 7%. Lastly, resale lines continued the downward trend of recent years and ended the year with 15 thousand connections.

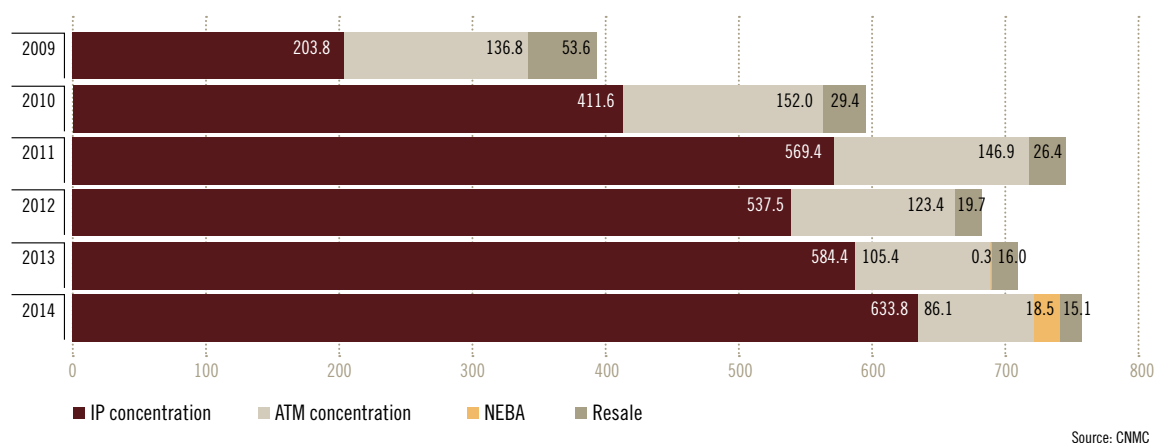
Evolution of wholesale broadband access (thousands)



The following graph shows the breakdown of lines for the different indirect access modalities. The IP concentration modality, marketed by Telefónica under the name ADSL-IP experienced 8.4% growth in connections. On the other hand, the connections for the ATM concentration or GigADSL modality and resale service fell by 18.3% and 6.1%, respectively.

Lastly, in 2014 the number of active connections to the NEBA wholesale service grew significantly to 18,544 connections, compared to the slightly more than 300 connections in 2013. It should be recalled that this new service will progressively replace ADSL-IP and GigADSL services.

Indirect access lines by modality and resale (thousands)



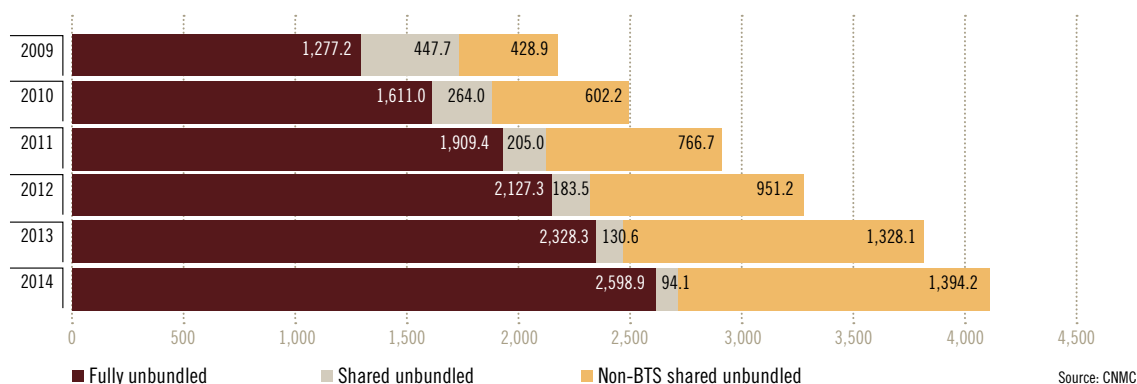
As regards the wholesale local loop unbundling service, in 2014 more than four million local loops were unbundled, representing a 7.9% rise relative to 2013 and over 300 thousand new connections. This growth was lower than that observed in previous years, partly due to the gradual migration of these copper pair-based connections to the newly rolled out fibre-to-the-home (FTTH) networks. However, the FTTH network coverage of alternative operators is still limited and, therefore, the local loop unbundling or indirect access service continued to be the options chosen by these operators to offer service to consumers.

The most in-demand modalities were fully unbundled local loop and non-BTS shared

loop. On the other hand, the number of shared unbundled local loops fell by 28%, continuing the downward trend seen in previous years.

The following graph shows the evolution of the volume of unbundled local loops broken down into units. Non-BTS shared loop wholesale service lines reached 1.39 million loops (most of them belonging to the operator Orange), with a 5% rise in the last year. Furthermore, the fully unbundled loop modality, which is used by Jazztel and Vodafone, reached 2.59 million loops – up 11.6% on the previous year–. Lastly, the total number of shared unbundled loops fell by nearly 28% to 94 million.

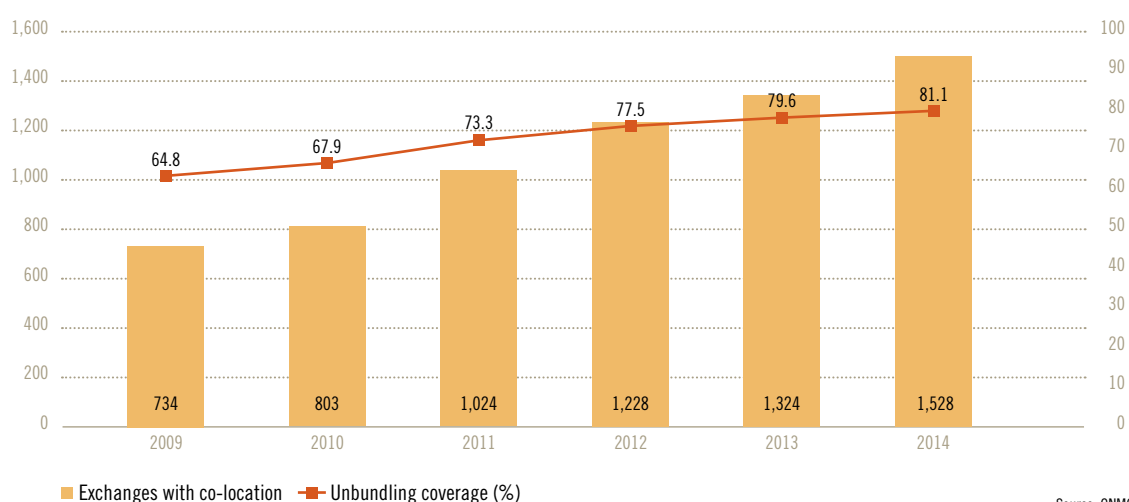
Evolution of unbundled loops (thousands of units)



The preceding sections reveal that alternative operators continued to make intensive use of wholesale access services to provide broadband services to customers. In particular, unbundled local loop continued to be the main access mode used by alternative operators. In that regard, these operators continued to invest in the connection of new exchanges in which to co-locate themselves, thereby increasing service coverage in most of Spain. With co-location, these operators rent space in Telefónica's exchanges to locate equipment for offering services by unbundling subscriber loops.

The following graph shows the evolution of the number of exchanges which include the presence of at least one co-located operator and the percentage of accessible pairs relative to Telefónica's total number of copper pairs. Thus, in the last year there were a total of 1,528 exchanges with at least one co-located operator. This figure represents an increase of 204 exchanges relative to 2013. The connected exchanges as a whole make it possible to potentially access 11.8 million pairs, representing coverage of 81.1% of accessible pairs relative to the total number of Telefónica pairs.

Evolution of exchanges with co-location and local loop unbundling coverage (exchanges and %)



The following map shows the geographical distribution of exchanges in which there is at least one co-located operator. Investments for connecting new exchanges – up to a total of 1,528 exchanges – have enabled operators to have greater presence and coverage in Spain.

According to geographical data for June 2014, exchanges with co-located operators provided services to a total of 1,889 municipalities,

compared to 1,835 municipalities in 2013, showing an increase in the geographical area where loop operators have the capacity to offer broadband services. Also, it should be noted that a total of 337 municipalities with unbundled loops had a population of less than 1,000 inhabitants. Therefore, alternative operators significantly increased their presence in less densely populated areas.

Geographical distribution of exchanges with co-location



Source: CNMC

Geographical distribution of the unbundled local loops.

The analysis of the evolution of the retail fixed broadband sector points to advances made by alternative operators, which based their broadband service coverage mainly on the use of local loop unbundling. In addition, there is the evidence indicated in the preceding sections relating to the increase in lines and revenue from the wholesale unbundled local loop service and the growth in the number of exchanges with co-location and in the coverage of copper pairs accessible by these operators.

However, there are significant geographical differences in the use of the wholesale unbundling service. This is due to that fact that the most densely populated areas, in which an exchange

covers a greater number of potential consumers, are very attractive for maximising the return on investment made by alternative operators.

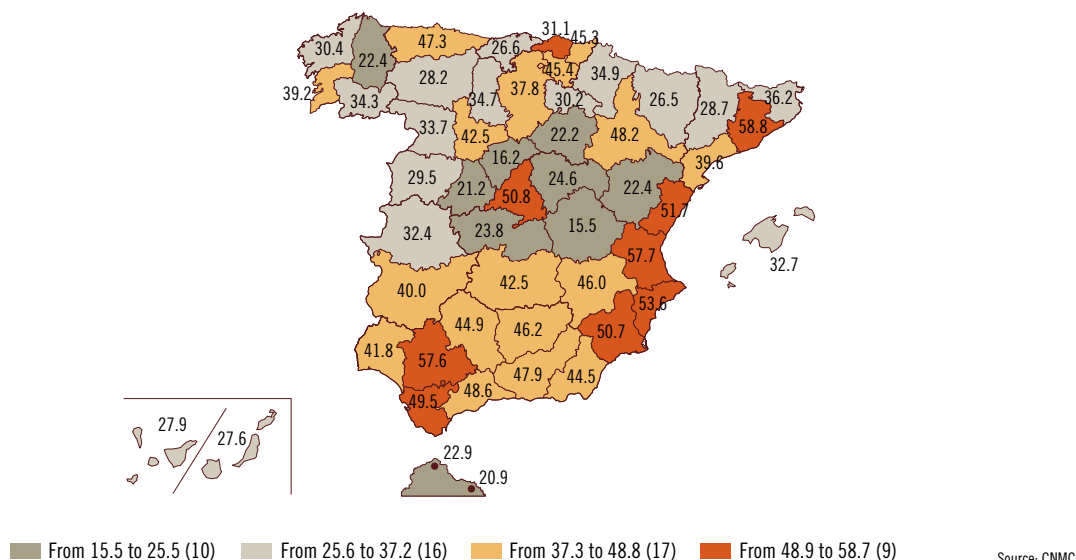
The following map shows the distribution of unbundled local loops relative to retail market xDSL broadband lines. In the previous year, the national total of unbundled local loops per 100 xDSL lines was 45.4, representing an increase of nearly five loops compared to 2013. A total of 16 provinces reported a percentage equal to or higher than the national total. Barcelona, Valencia and Seville topped the list as the provinces with the highest penetration, exceeding 57 unbundled local loops per 100 xDSL lines.

Furthermore, Asturias and the autonomous city of Melilla recorded the highest increase in pen-

etration of unbundled local loops, totalling 10.9 and 8.7 unbundled local loops per 100 xDSL lines, respectively. At the other end of the spec-

trum are the provinces of Ávila, Granada and Guadalajara with growth in penetration of less than two loops per 100 xDSL lines.

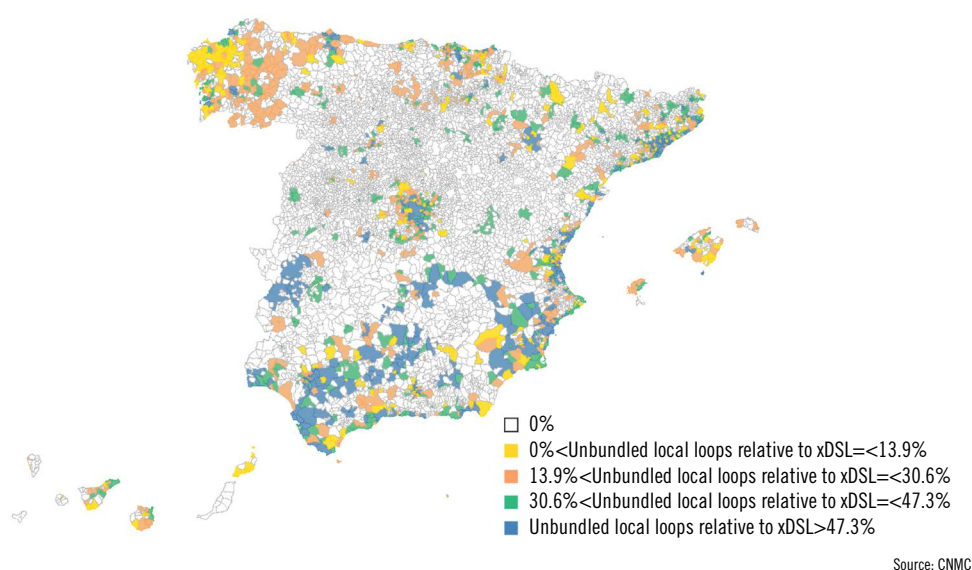
Penetration of unbundled local loops by province⁴² (loops/100 xDSL lines)



The geographical breakdown at municipal level shows that, despite the increase in the number of exchanges where operators are co-located, there are extensive geographical areas where al-

ternative operators are not present through local loop unbundling. On the other hand, the most densely populated areas and regions showed the highest penetrations of unbundled local loops.

Penetration of unbundled local loops per municipality⁴³ (loops/100 xDSL lines), June 2014



⁴² The intervals have been set based on the average \pm the standard deviation. The lower and upper limits are determined by the minimum and maximum values, respectively.

⁴³ The intervals have been set based on the average \pm the standard deviation. The lower and upper limits are determined by the minimum and maximum values, respectively. The data reflected correspond to the June 2014 geographical requirement established by the CNMC.

2.2.3 Circuit rental and data transmission to operators

Circuit rental

The wholesale circuit rental service is that provided between operators to provide a certain transmission capacity between two points. The wholesale rented circuits are divided into two categories: terminal circuits – which extend to the end customer's premises for connecting to the operator's networks – and trunk circuits – which join two nodes of the operator's backbone –.

This section includes the aggregated data corresponding to the trunk lines, terminals and those used to connect SLO rooms (Subscriber Loop Offer). Therefore, the lines leased by Telefónica de España S.A.U.⁴⁴ (Telefónica) under conditions regulated by the RLO (most of the terminal lines and connection lines for SLO rooms) and under commercial conditions (most of the trunk lines and those provided by Telefónica to Telefónica Móviles España S.A.U. to connect the latter's base stations).

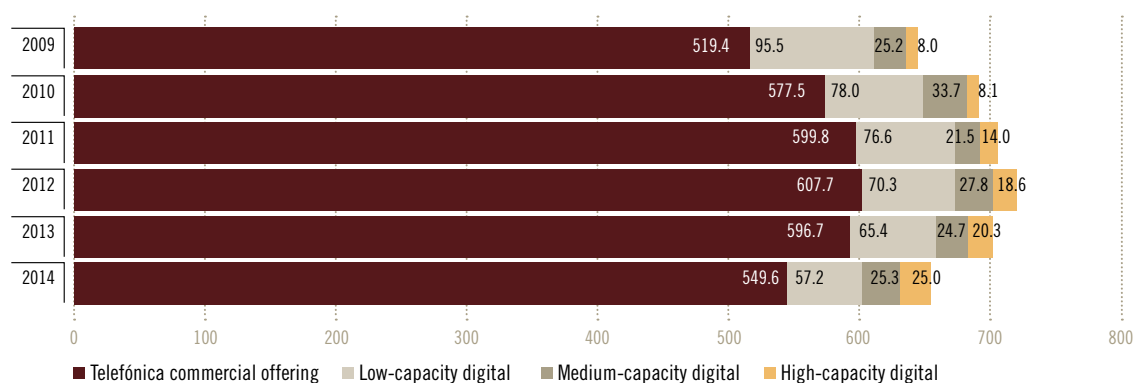
Revenue

Revenue from low-, medium- and high-capacity circuit rental, together with Telefónica's carrying capacity, totalled €657.1 million, i.e. 7.1% less than the previous year.

Most of this revenue corresponded to Telefónica's commercial circuit rental offer, also known as "carrying capacity". That revenue – €549.6 million – represented 83.6%, down 7.9% on 2013, meaning two consecutive years of decline and much more pronounced than in the previous year. Low-capacity circuits also recorded a drop in revenue, with a year-on-year fall of 12.3%.

The other circuits recorded positive results, due to which revenue corresponding to medium-capacity circuits recorded the highest year-on-year growth, 23.3%, while high-capacity circuits grew 2.3%.

Revenue from circuits leased to operators⁴⁵ (millions of euros)



⁴⁴ Despite the fact that trade names are used to designate the operators in this report, in the case of wholesale circuit rental services, Telefónica is used instead of Movistar, given that the terminal and trunk lines regulated under the RLO, arising from the obligations imposed on Telefónica de España S.A.U. in the corresponding market analyses, are included. Also, Telefónica's revenue includes revenue from Telefónica Móviles España S.A.U. for the provision of the wholesale services included in this section.

⁴⁵ It does not include revenue from other circuits or other revenue.

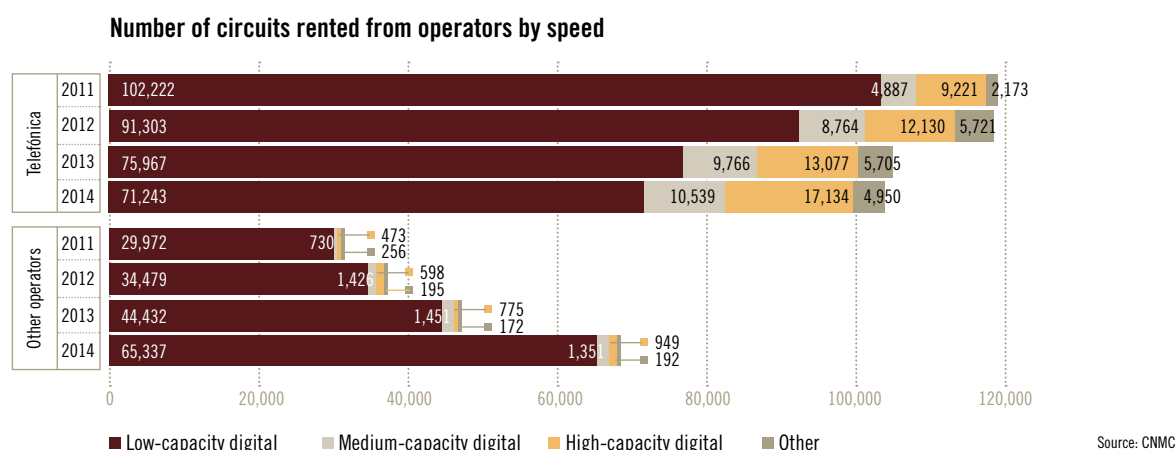
Number of circuits

As regards the number of circuits, it increased considerably compared to 2013, with year-on-year growth of 13.4% to a total of 171,695 circuits. In that year, Telefónica's circuits accounted for 60.4%⁴⁶ of the total, representing a fall in market share compared to previous years.

High-capacity circuits – speeds of 620 Mbps and higher – grew 30.5%, accounting for 10.5% of total circuits.

The circuits offered by Telefónica saw a slight year-on-year fall of 0.6% relative to 2013, following the trend which began in 2011. A detailed analysis reveals that medium- and high-capacity circuits grew relative to the previous year – by 7.9% and 31% respectively –, while low-capacity and other capacities fell – by 6.2% and 13.2% respectively –.

The circuits offered by the other operators rose by 44.8%, with year-on-year growth of 47.0% in the case of low-capacity circuits and 22.5% in the case of high-capacity circuits.



It should be noted that rented circuits are playing an essential role in the increasing coverage of loop services throughout Spain, particularly in small and medium-sized exchanges. While alternative operators connect to Telefónica's large exchanges by their own means, they use the signal delivery service of the SLO by means of rented circuits. Through this service, operators can connect SLO rooms to the circuits regulated under the RLO. The following table shows the number of co-located exchanges in which one of the circuit modalities available for delivering SLO signals are used. In December 2014, total exchanges grew 15.7% compared to December 2013 on the back of connections made using Gigabit Ethernet, which increased the number of

exchanges connected using this type of circuits by 24.3%.

Circuit speed	Number of exchanges
2 Mbps	1
34 Mbps	0
155 Mbps	164
Fast Ethernet (100 Mbps)	176
Gigabit Ethernet (1000 Mbps)	808

Also, since the last market review, the use of RLO circuits for the connection of mobile operator base stations has been allowed. Mobile operators are using this facility to increase the coverage of their 3G networks.

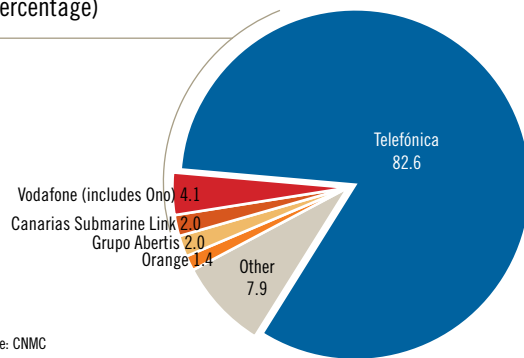
⁴⁶ Telefónica's circuits also include the breakdown of carrying capacity circuits.

Market share

As has become customary in the wholesale circuit market, Telefónica emphatically maintained its leading position, accounting for 82.6% of total revenue, although with a slight decline in market share compared to previous years.

In turn, Vodafone continues to be the second-largest operator in this market in terms of revenue, with 4.1%, a slight rise on 2013. The third position is occupied by Canarias Submarine Link, with 2.0%, followed by Tradia Telecom (Abertis Group), also with 2.0%.

Market share by revenue from circuits leased to operators (percentage)



Source: CNMC

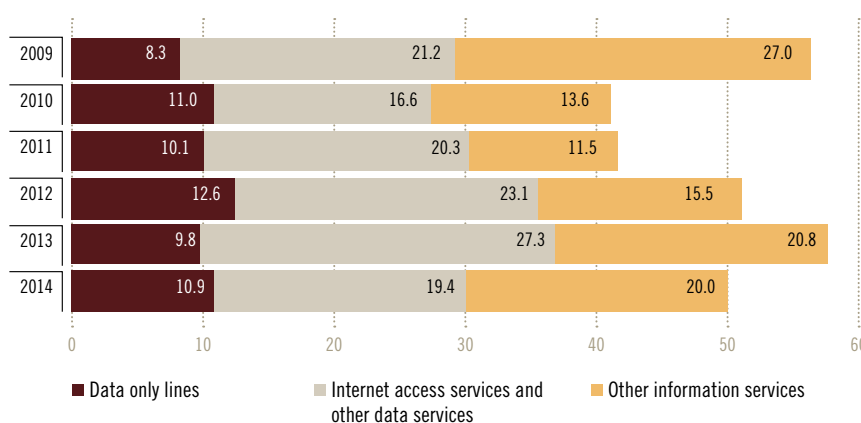
Data transmission

Wholesale data transmission services include data only line services using any type of technology – whether Frame Relay, IP, ATM, x.25, VSAT networks or ISDN –, as in the case of Internet access services provided to operators.

The revenue generated by this sector stood at €50.3 million, falling 13.1% compared to the previous year to stand at an equivalent level to that seen in 2012.

The analysis of this item by its three constituent components (data only lines, Internet access services and other information services) reveals that Internet access services suffered a year-on-year fall of 28.9% to €19.4 million, the biggest fall of the three aforementioned components. The other information services also recorded a smaller year-on-year fall of 3.9%, to €20 million. On the other hand, data only lines recorded year-on-year growth of 11.2%, with total billings of €10.9 million, a value similar to that obtained in 2010.

Revenue from data transmission services to operators (millions of euros)

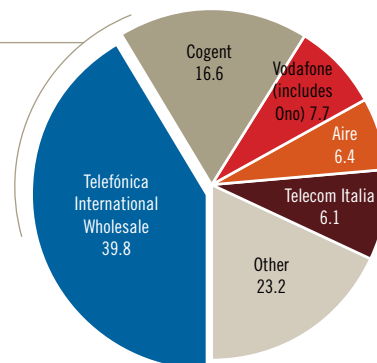


Source: CNMC

In terms of market share by data transmission revenue, Telefónica International Wholesale Services maintained its market leading position with a share of 39.8%, higher than the previous year but maintaining a similar level of revenue. It was followed in second place by Cogent, with 16.6% of market value and a performance similar to that of the operator with the highest market share, which maintained its level of revenue while increasing its share of the market as a whole. Vodafone retained third place, with 7.7%, its market share having fallen in previous years, while its level of revenue grew 50% relative to the previous year. The three main players jointly accounted for 64.2% of total sector revenue.

Following behind these are Aire (6.4%) and Telecom Italia (6.1%).

**Market share of data transmission
to operators by revenue (percentage)**



Source: CNMC

2.3 Retail mobile communications

In 2014, mobile telephone revenue fell by 18.7% to €6,161.8 million. This decline was due to numerous factors, namely the still negative economic environment, the reduction in the use of certain services (SMS messaging) and a sharp drop in the final prices of certain services. However, mobile services operators partially offset this result with revenue from the expansion of the mobile broadband service, which grew 9.2% to €3,615.7 million.

The total number of mobile telephone lines –excluding lines associated with machines and data only services– grew 1.3% in 2014 to 109.2 mobile lines per 100 inhabitants.

In 2014, the market was characterised, mainly, by an increase in the number of mergers and acquisitions carried out by sector operators. Therefore, operators such as Vodafone or Másmovil became majority shareholders of companies such as Ono or Xtra Telecom, while, at the end of the year, Orange submitted a formal bid for the acquisition of the operator Jazztel⁴⁷. Logically, these transactions affected the distribution of market share and the level of concentration recorded in the market.

The volume of revenue from wholesale services –those provided by operators to each other– fell by 12% in 2014, thereby maintaining the downward trend recorded in recent years. However, mention should be made of the increase in wholesale traffic –25.6%– driven mainly by the rise in the demand for services enabling access to mobile communications networks by third-party operators, mainly Virtual Mobile Operators (MVNO).

2.3.1 Mobile telephony

Situation of the sector

In 2014, revenue relating to final mobile telephony services –which include voice calls and messaging– totalled €6,161.8 million, down 18.7% on the volume of business recorded the previous year. In relation to the voice traffic volume managed through mobile networks, it should be noted that, for the first time in recent years, a significant increase –12.1%– has been recorded relative to 2013. On the other hand, SMS and MMS messaging services recorded, once again, a significant decline in traffic volume.

Also, the demand for lines successfully reversed the downward trend observed in recent years and, in 2014, recorded a 1.3% increase. It should be noted that this increase in lines was concentrated exclusively in the contract segment, while in the prepaid segment, the demand for lines recorded a year-on-year decline overall.

Consumers made extensive use of portability to change from one operator to another. The beneficiaries of this process were mainly Virtual Mobile Operators (MVNO). However, this gain in lines did not result in a significant increase in the presence of those operators in the market, since mobile network operators (MNO) acquired some of the main MVNOs on the market in 2014.

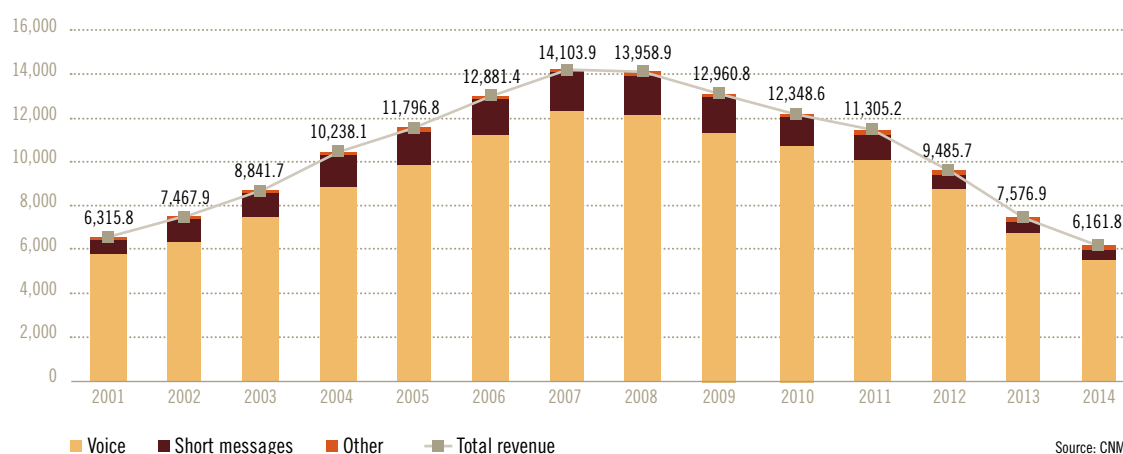
Revenue

As mentioned in the preceding section, in 2014 revenue relating to final services totalled €6,161.8 million. This figure represented an 18.7% drop in revenue compared to the previous year.

⁴⁷ In relation to this bid, it should be noted that in May 2015 the European Commission conditionally approved the acquisition of Jazztel by Orange.

There was a sharp drop in revenue from both voice calls and messaging (SMS and MMS), which fell by 18.3% and 30.5%, respectively.

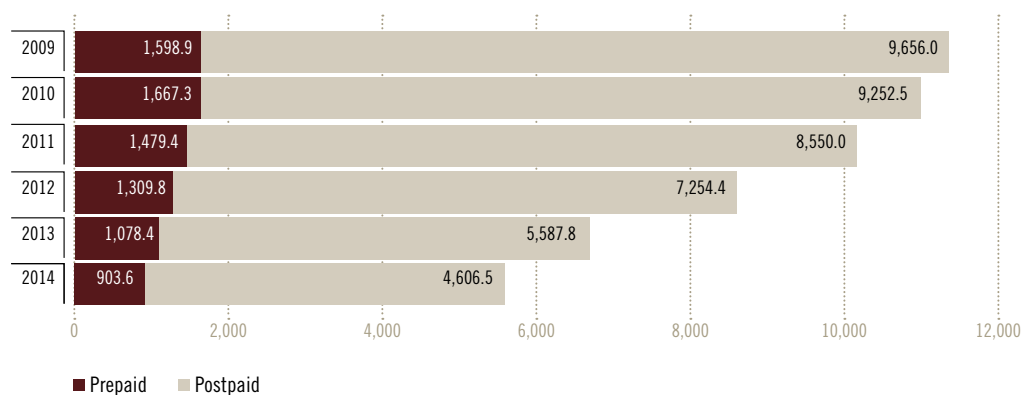
Evolution of revenue from final services⁴⁸ (millions of euros)



Revenue from voice traffic fell both in the pre-paid and postpaid modalities, although the latter recorded the sharpest drop (17.6%). Additionally, revenue from subscription charges and monthly fees already accounted for 47.1% of total revenue from the voice traffic service. This result confirms the current predominance of offers linked to the payment of a flat-rate tariff, mainly those which bundle the voice service with mobile Internet. It should also be noted that revenue from customers' minimum month-

ly use commitments has also been included in the monthly payments and fees category. In this regard, mention should be made of the fact that revenue associated with this item totalled €102.9 million in 2014, down 49.5% from the previous year. The reason for this sharp drop is that, as mentioned earlier, most of the currently marketed tariffs include the payment of a monthly fee. This renders the consumer's commitment to use a minimum amount of mobile services unnecessary.

Evolution of revenue from voice traffic (millions of euros)

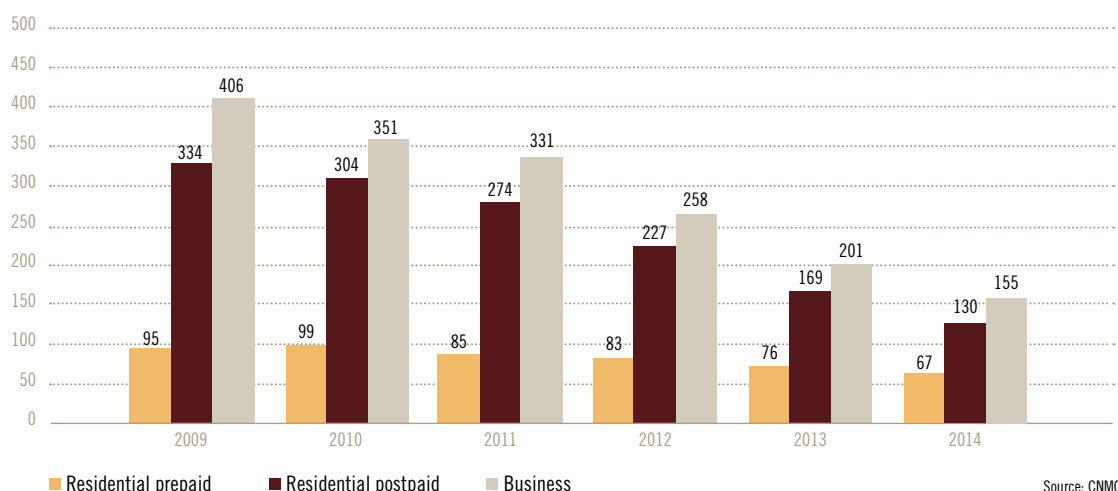


⁴⁸ The final services analysed include voice (which, in turn, includes revenue from voice traffic and from set-up fees and payments), short messages and other services (comprising less relevant services, such as the TETRA mobile radio system, the SPICA network and telemetry and remote control services).

Average revenue per line –also called ARPU– for mobile operators has declined in recent years. Thus, ARPU for the prepaid residential segment fell by 8.8% compared to 2013, with average revenue of €67 per line and year. However, in

the business segment, in which lines are contracted under the postpaid modality, ARPU fell by 22.1%. Lastly, the postpaid residential segment recorded a bigger fall in average revenue per line, recording a decline of 25.5%.

Average annual revenue per line (euros/line)



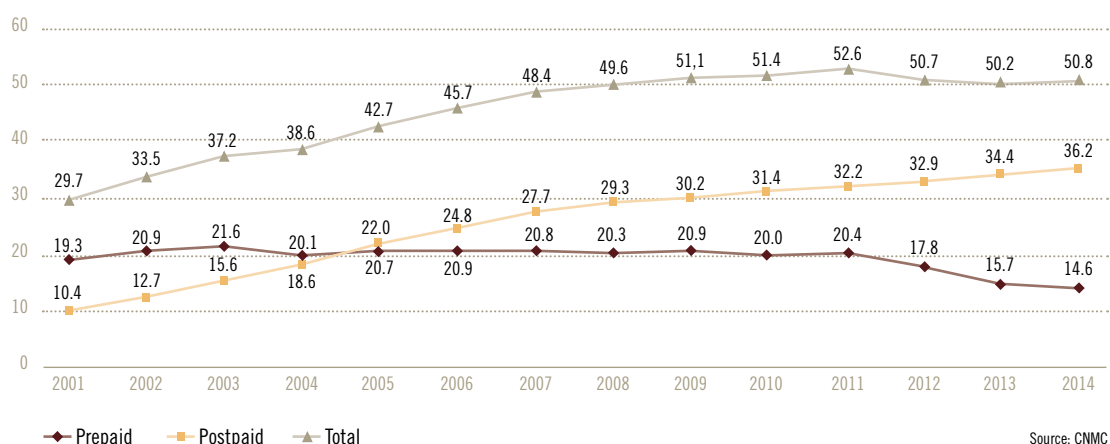
Lines

In 2014, the total number of mobile telephone lines –excluding data only and machine-linked lines– stood at 50.8 million, which represented an increase of 647 thousand lines compared to the previous year. This result represented a slight recovery in total mobile lines relative to the figures recorded in recent years. It should be noted that the 5.2% increase in lines in the postpaid segment succeeded in offsetting the 7.1% decline observed in the prepaid segment. Furthermore, the total number of machine-linked lines –

lines associated with telemetry or remote control services– reached three million, representing, for the first time, a decrease in the volume of lines dedicated to these types of services.

Mobile telephone lines achieved a penetration rate of 109.2 lines per 100 inhabitants, representing an increase of 1.9 percentage points in one year. In line with the performance of the total number of lines, these results revealed an improvement in the penetration of mobile communications services compared to those obtained in previous years.

Evolution of mobile telephone lines (millions of lines)

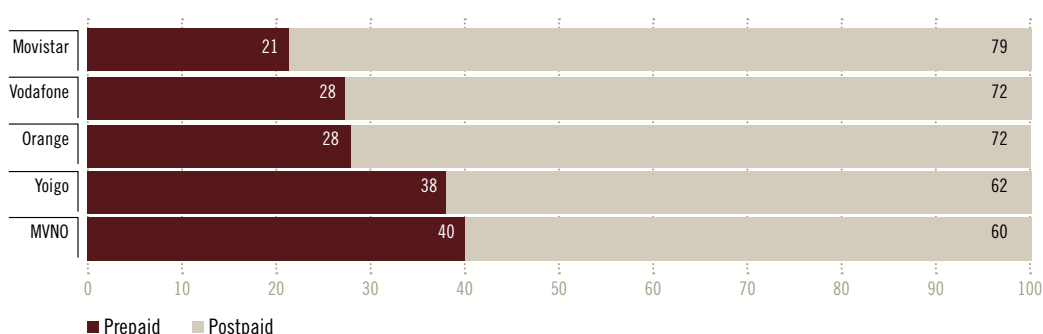


The graph below shows the total number of mobile lines per operator according to subscription modality: prepaid or postpaid. A significant correlation can be observed between operator market share and the proportion of contract customers in relation to the total portfolio. Thus, a very high percentage of Movistar and Vodafone customers –the operators with the highest market share– is concentrated in the postpaid modality. This pro-

portion falls in line with the market share of the operator in question. However, the postpaid segment predominates both in operators represented individually and in MVNOs as a whole.

Mention should also be made of the fact that postpaid lines represent the modality with the highest revenue per line. Therefore, in the residential segment, a postpaid line generates 1.9 times more revenue than a prepaid line.

Total lines per contract modality (%)



Source: CNMC

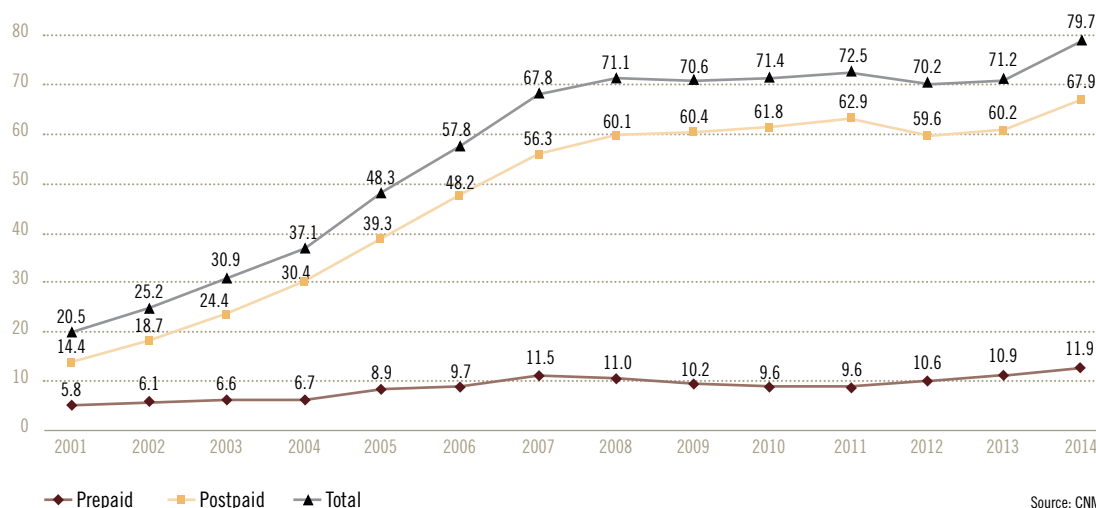
Traffic

Voice calls

In 2014, voice traffic grew a significant 12.1%, thereby accelerating the trend observed in the previous year, when a recovery in total traffic managed by mobile networks was recorded.

This growth was observed in both market segments. Thus, the postpaid and prepaid modalities recorded a year-on-year increase in voice traffic of 12.7% and 8.9%, respectively.

Evolution of traffic over mobile communications networks (billions of minutes)



Source: CNMC

The traffic recorded between mobile communications networks grew by a mere 11.3%, although on-net traffic grew only 2.4%, while off-net traffic grew 21.7%. This uneven performance has been observed in recent years, which is probably a consequence of the progressive reduction in the degree of market concentration and the homogenisation of prices linked to these two destinations.

After off-net traffic, the traffic that recorded the highest growth was that destined for fixed-line telephone networks, with a year-on-year change of 18.6%. In this regard, it should be recalled that most flat rates currently marketed by mobile operators also include calls terminated on these types of networks.

As regards international communications, the international roaming service grew 0.9%, while the international calls service grew 19.7%.

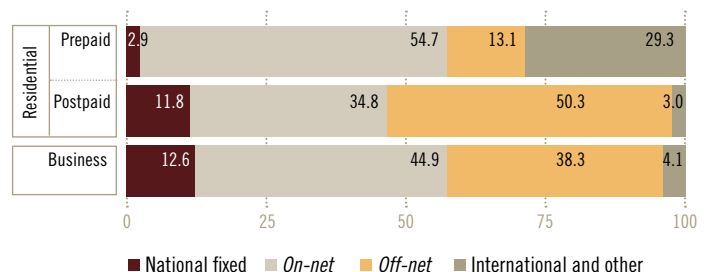
The increase in total mobile voice consumption also drove consumption per mobile telephone line. Thus, upon analysing consumption of traffic per line by contract modality, it can be observed that the postpaid segment recorded an increase of 7.1%, while the prepaid segment grew 17.4%. In line with that observed to date for the other variables, 2014 was also a year of recovery in traffic managed over mobile communications networks.

Minutes per line and year by contract modality⁴⁹ (minutes/line)



The disaggregation of traffic between the different market segments gave rise to clearly differentiated consumption patterns. Therefore, the prepaid segment recorded a percentage of traffic in international calls significantly higher than that of the other segments while, on the other hand, the business segment recorded a higher proportion of fixed network calls.

Distribution of traffic (%)

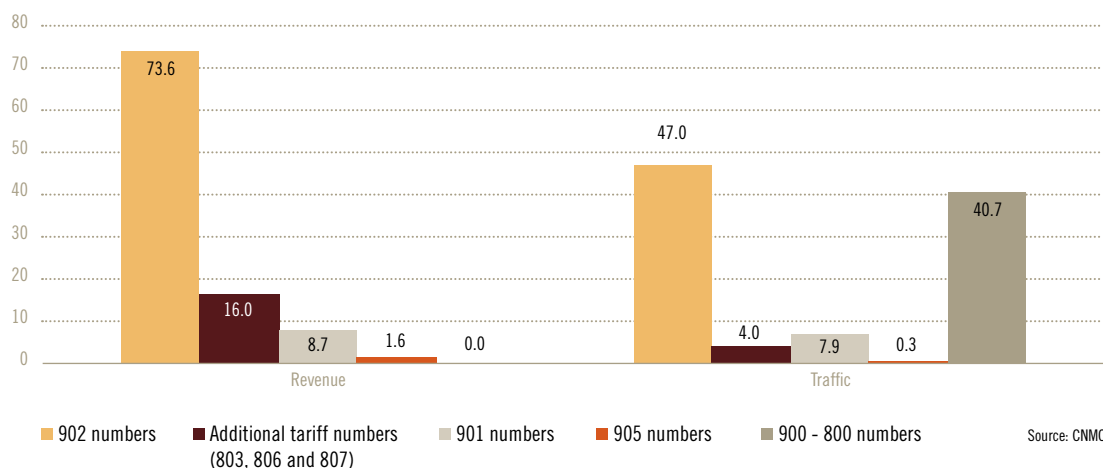


⁴⁹ The item 'Total' reflects average consumption per line in the market and considers the weight of each segment of that market (prepaid and postpaid).

As regards services with special fees –or network intelligence– in 2014, a total of €200 million was billed in connection with the provision of these services. Below is a graph showing the

weight, both in terms of revenue and traffic, of the different intelligent network services in accordance with the numbers to which each is linked.

Distribution of the different special tariff services (%)



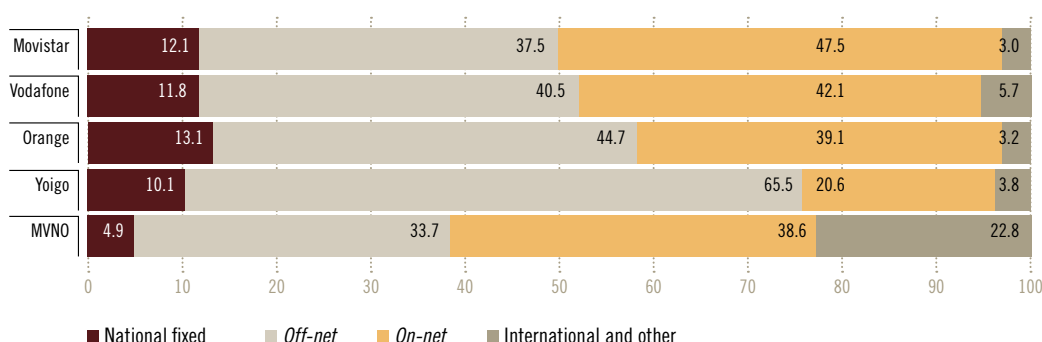
As can be observed, the service with the highest revenue and traffic was that based on 902 numbers, a service fully paid by the user originating the call; the following services by revenue were those corresponding to 803, 806 and 807 numbers. These numbers include various services, such as leisure and entertainment or exclusive adult services. These were followed by 901 numbers, whose main characteristic consists of the shared payment between the calling user and the receiving user. The following service in terms of revenue is that based on 905 numbers aimed at handling mass calls. The services provided with 900-800 numbers ranked last in terms of total revenue due to their freephone nature for end customers. On the other hand, they accounted for 40.7% of total traffic.

Upon analysing the distribution of the traffic generated by the customers of each operator, clear differences between them can be observed. Therefore, the operators with the highest market share generated mostly on-net traffic. On the oth-

er hand, the operators with lower market share generated mostly off-net traffic. This result is logical, as the higher the market share, the greater the probability that a customer of an operator will communicate with another customer of the same company. The exception would come from some MVNOs –with much higher on-net traffic than expected–, mainly due to the fact that some of these operators offer their customers the possibility of making *on-net* calls completely free of charge, exponentially increasing traffic in these types of destinations.

Also worthy of note is the high traffic share that international calls represent for MVNOs; this phenomenon is due mainly to the existence of various MVNOs specialising in these types of services, such as Lycamobile, Lebara Móvil or Digi mobil, inter alia. The volume of international traffic generated by these operators is so high that some even exceed the total international traffic declared by Movistar, the operator with the highest market share in mobile telephony.

Distribution of traffic by destination (%)



Source: CNMC

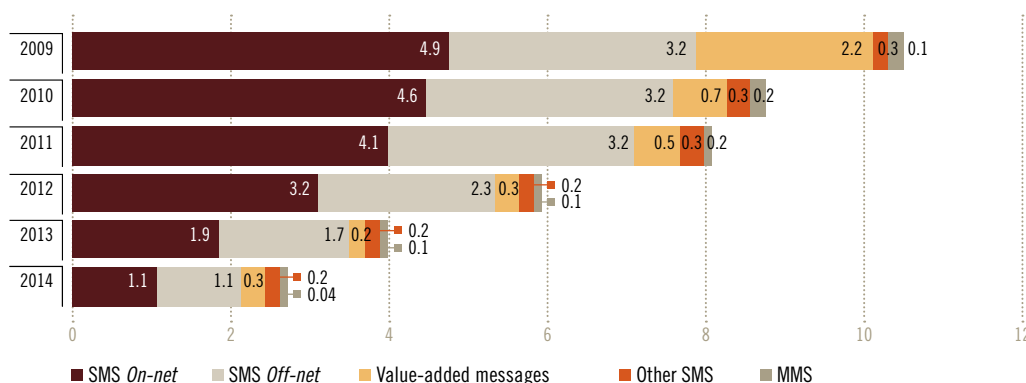
Messages

In recent years, mobile communications based on short messages (SMS and MMS) have recorded significant reductions in traffic. Specifically, in 2014, SMS traffic between subscribers (excluding value-added SMS) fell by 37.3%. It was the sixth consecutive year in which there was a sharp drop in SMS and MMS traffic. This decline was observed mainly in the SMS messaging service between subscribers of the same

operator (*on-net* messages), with a year-on-year decrease of 40%.

The volume of MMS messages stands at 35.4 million. This figure provides evidence that the demand for this service is far below that recorded for the SMS service, with a total of 2,240 million messages sent in the same period. According to these figures, in the Spanish market one MMS message is sent per 63 SMS messages.

Evolution of message traffic (billions of messages)



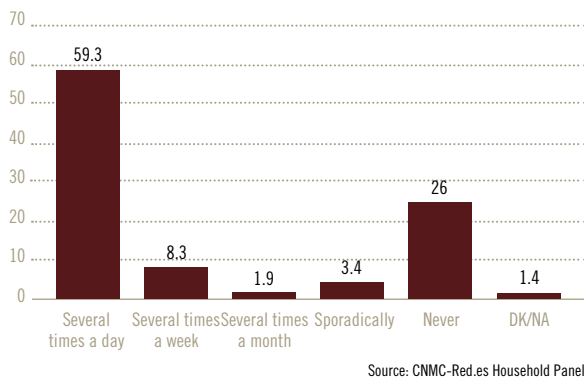
Source: CNMC

The surge in the use of mobile broadband on voice terminals is giving rise to a process whereby traditional SMS messaging is being replaced by new *online* instant messaging services such as WhatsApp, Telegram and others. As well as not representing costs to users in addition to those of the mobile broadband connection, these OTT services have similar or even superior

features to those of SMS, since they allow not only the delivery and receipt of messages, but also communication between the members of a group of individuals and free transfer of all manner of files, such as photos or videos. As a result, these *online* messaging services are a new form of competition for traditional communication services and have negatively affected operators'

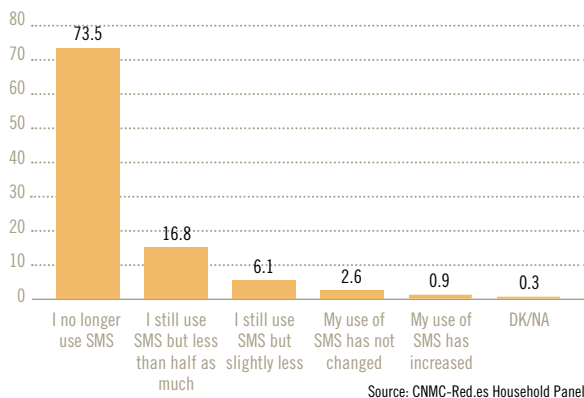
revenue generating capacity. According to CNMC-Red.es Household Panel data, OTT mobile messaging services are very popular: in the first quarter of 2015, 59.3% of mobile users used these services on a daily basis.

Individuals by frequency of Internet messaging use(percentage of individuals with mobile service),
I-2015



The following graph corroborates the adverse effects on demand for traditional services: OTT messaging service users declare that, since using this service, they have substantially reduced their use of traditional SMS messages. For example, 73.5% of these users no longer demand SMS services and, among those who continue using them, the majority group is that of individuals who have considerably reduced their use (“I still use SMS but by less than half”)

Online messaging users by change in SMS use
(percentage of total *online* messaging users),
I-2015



Competition

In 2014, users actively sought more competitive mobile service offerings. One consequence of this is that, on average, over 517 thousand instances of porting were recorded per month.

Also, the marketing of bundle tariffs which include various services became widespread; i.e. tariffs that included the use of a limited amount of minutes in both voice calls and data traffic. In practice this tariff structure led, in most cases, to a reduction in unit price per minute actually consumed.

These developments gave rise to a certain dynamism in market share by lines. The leading market operator –Movistar– recorded a net loss of 968 thousand lines while, on the other hand, Vodafone increased its presence by 1.1 million lines. In this regard, it should be noted that the increase in Vodafone's market share was largely explained by the acquisition of the telecommunications operator Ono in July 2014. Without this acquisition, Vodafone's total number of mobile lines would have fallen, along the same lines as Movistar. Orange achieved a net gain of 99 thousand lines, while Yoigo and MVNOs as a whole gained more than 426 thousand lines throughout the year.

It should be noted that, in the following section, the data relating to the operators Tuenti, Ono, Lowi and Simyo were excluded from the MVNO group due to being operators owned by Movistar, Vodafone and Orange, respectively. The revenue generated by these four MVNOs have been included in the data declared by the network operators that own those MVNOs.

Portability

One of the most effective mechanisms for creating competitive conditions in the mobile telephony market is portability, i.e. the possibility for consumers to change from one provider to another while retaining their phone numbers.

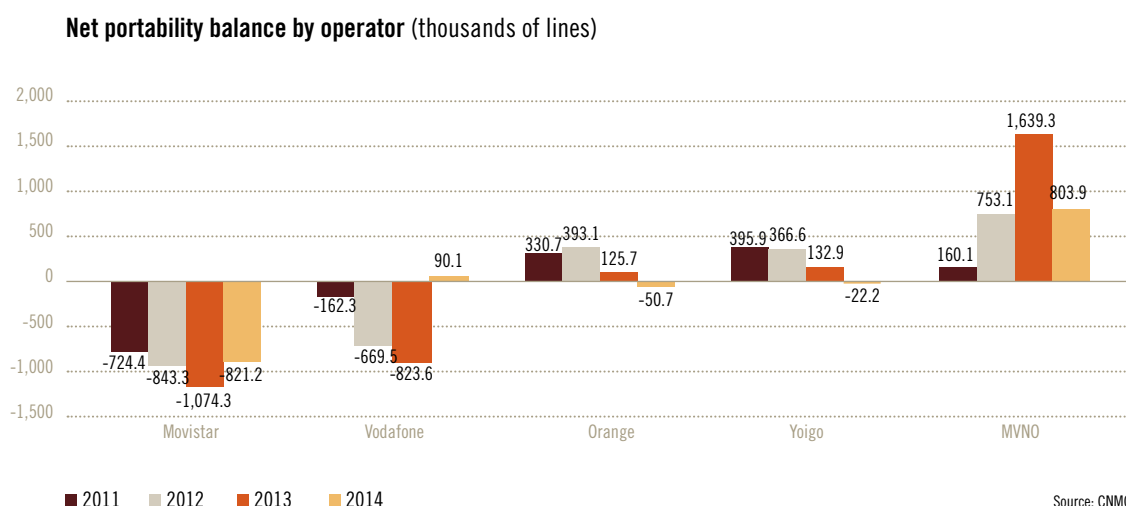
This regulation reduces the cost that changing from one provider to another entails for users

and was used extensively in 2014, in line with previous years: 6.2 million instances of porting. Despite the fact that this figure is lower than that recorded in the previous year (down 8.3%), Spain continues to be one of the leading European countries in terms of porting volume. In this regard, it should be recalled that the figure obtained in 2013 represented the highest volume of porting since this service was first introduced in June 2000.

Upon analysing the net portability flows between operators, it seems clear that consumers preferred operators with lower market share. The following graph shows that the leading market operator –Movistar– recorded a net negative portability balance of 821 thousand numbers.

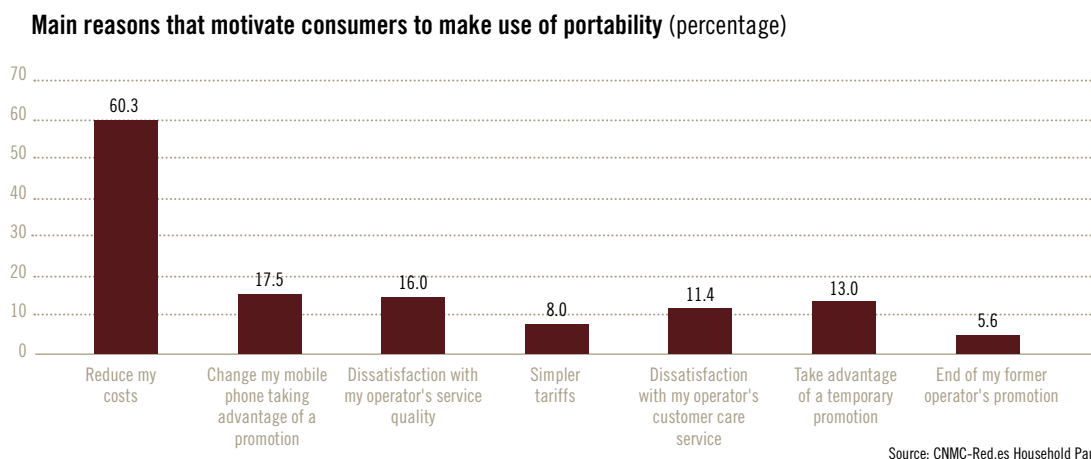
On the contrary, MVNOs –not owned by a MNO– as a whole obtained the best results, with a net gain of 802 thousand lines in 2014. Of these MVNOs, operators based on an integrated telecommunications service offering, such as Ono or Jazztel, obtained the best results.

In this respect, it should be noted that the acquisition of Ono by Vodafone –in July 2014– led to the attribution of the gain in lines from this MVNO to the operator Vodafone, enabling the latter to reverse the loss in lines recorded in recent years. The following graph shows that Vodafone obtained a positive balance of 90 thousand ported lines in 2014.



Lastly, the following graph, the source of which is the CNMC-Red.es Household Panel, shows the reasons given by users for changing from one operator to another. More than 60% of the users

declared that they wanted to reduce their costs and nearly one in every five indicated that they wanted to change their mobile handset taking advantage of a promotion.

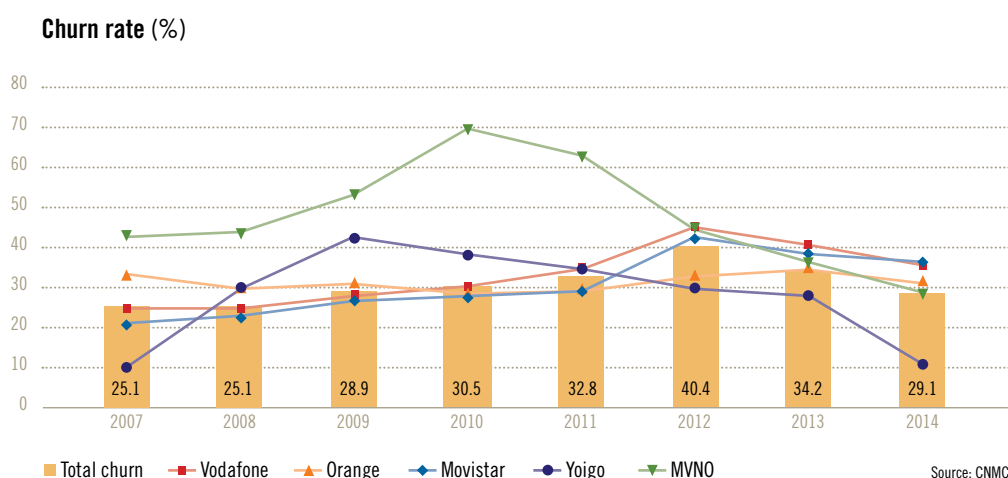


Churn rate

Customer churn rate relates the number of an operator's unsubscribed lines to the average number of total lines held by that operator in the market in the last two years⁵⁰.

Churn rate is used to estimate customers' degree of loyalty to their mobile telephone operator. At year end, overall market churn rate stood at 29.1%.

Considering the operators individually, it was observed that both network operators and MVNOs as a whole reduced their churn rate without exception. Movistar was the operator that retained the highest number of mobile telephone customers, obtaining the lowest churn rate in the market (20.5%).



Performance in unit revenue⁵¹ by service

Average revenue by voice service

The mobile telephony service is characterised by offering a wide variety of tariffs, many of which are non-linear; i.e. operators do not usually price per unit of time. Therefore, user call price may depend on the hourly or destination tariff or may be affected by all manner of volume discounts, bonuses or flat-rate or semi-flat-rate tariffs. Given this variety and complexity of tariffs, it is difficult to summarise call price in a single indicator, although the average revenue per minute ratio is normally used as an approximation, i.e. the quotient between total

revenue from voice traffic and the total number of minutes consumed by users.

Analysing that variable, it can be observed that, for the tenth consecutive year, average revenue from voice services⁵² as a whole fell with respect to the previous year; in 2014 this reduction reached 27.1%, establishing average revenue at 7 euro cents per minute. In the last decade, the total reduction in average revenue exceeded 70.4%.

Without a doubt, this sharp drop in average revenue is linked to various events occurring in recent years. Firstly, the regulation of termination price, i.e. the service which allows

⁵⁰
$$\text{Churn rate}_{it} = \frac{\text{no. of unsubscribed lines}_{it}}{\frac{\text{total lines}_{it} + \text{total lines}_{it-1}}{2}}$$
, where the subindex i refers to the operator and t refers to the period (year)

⁵¹ Average revenue per minute and average revenue per message –unit revenue– have been used in this section as approximate measures of the final prices observed in the market.

⁵² The voice services item includes call services to national destinations (to mobile or fixed network), international destinations, network intelligence and international roaming.

an operator to terminate a call in an external telecommunications network, has been instrumental in explaining the downward trend in national prices. The CNMC (which substitutes the former CMT -Telecommunications Market Commission- since 2013), like the other European Union National Regulatory Authorities (NRA), has been setting the termination price on a declining path since 2001. Thus, in July 2013, the price of this service was set at 1.09 euro cents per minute.

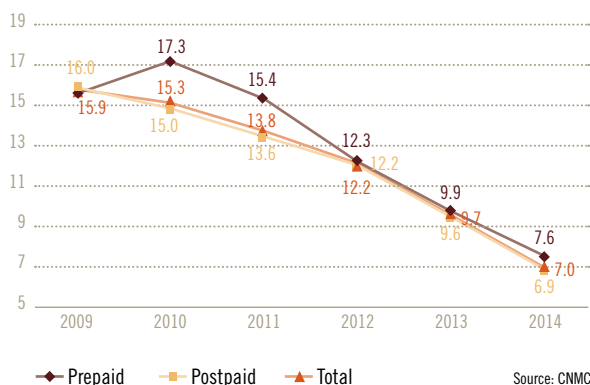
Secondly, in 2006 the CMT introduced the obligation of granting access to networks providing mobile communications. This enabled new players to enter the markets: MVNOs. In this regard, it should be noted that, in December 2014, there was a total of 19 MVNOs whose capital was not majority-owned by mobile network operators⁵³.

A third variable that would explain this continued drop in average revenue would be the mass marketing of flat-rate or semi-flat-rate tariffs. On most occasions, these types of tariffs include the traffic of various bundled services which, generally speaking, include the use of a limited amount of minutes in both voice calls and data traffic. In practice, this tariff structure implies, in most cases, a reduction in unit price per minute of conversation actually consumed.

In recent years, these measures –some of which are regulatory in nature– have had clear effects on the market: an increase in competition arising from a larger number of players offering products and, consequently, a reduction in the level of market concentration year after year.

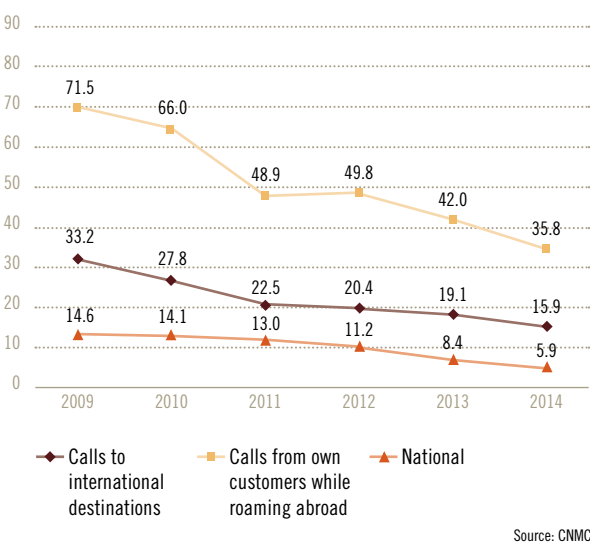
As in the previous year, average revenue from the different market segments (prepaid and postpaid) was similar: 7.6 euro cents per minute and 6.9 euro cents per minute, respectively.

**Evolution of average revenue per minute
(euro cents/minute)**



The following graph shows the evolution of average revenue from the most in-demand services: mobile calls to national and international destinations, and calls made by own customers abroad (international roaming service).

**Evolution of average revenue per minute by
type of traffic (euro cents/minute)**



⁵³ The MVNOs Simyo (Orange), Tuenti (Movistar) and Ono and Lowi (Vodafone) are majority-owned by network operators.

In recent years, the price of the three services has dropped considerably, although the calls that fell most in price were calls to national fixed network and mobile destinations, with a decrease in average revenue per minute of 28.8% in just one year.

As regards international communications services, calls to international destinations and calls made while roaming abroad also showed a downward trend. Average revenue fell by 16.7% in the former and slightly less in the latter, 14.8%. The downward trend in average revenue from international calls in recent years is largely explained by the entrance, after 2007, of several MVNO operators specialising in services with international destinations at highly competitive prices.

As regards international roaming services, the decline observed in recent years was due mainly to the Community regulation approved in June 2007 (Regulation 717/2007), which established a declining path for prices for voice communications while roaming within the EU. That regulation has been periodically updated to progressively expand the number of regulated services. In fact, in June 2012, a new regulation expanding the regulation of these services until 2016 was approved. The regulation on *roaming* within the EU for the coming years is presented schematically in the table below.

Retail market

		July 2012-June 2013	July 2013-June 2014	From July 2014
Voice call (euros/minute)	Call made	0.29	0.24	0.19
	Call received	0.08	0.07	0.05
SMS messaging (euros/SMS)	Sending of SMS	0.09	0.08	0.06
Data service (euros/MB)		0.70	0.45	0.20

Wholesale market

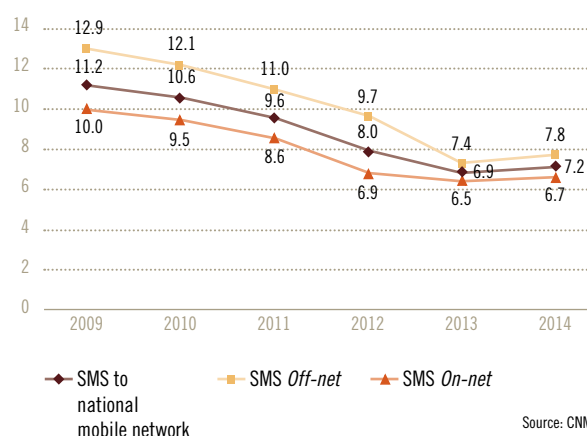
	July 2012-June 2013	July 2013-June 2014	From July 2014
Voice call originating from a national network (euros/minute)	0.14	0.10	0.05
SMS service originated from a national network (euros/SMS)	0.03	0.02	0.02
Data traffic over a national network (euros/MB)	0.25	0.15	0.05

Average revenue from messaging services

Lastly, average revenue from the SMS messaging service with national mobile destinations grew slightly in 2014; specifically, it stood at 7.2 euro cents per minute per SMS sent, up 5% on 2013. It is the first time since 2009 that the average price for sending a SMS message increased compared to the previous year, thereby halting the downward trend observed in recent years.

Also, once again, a sharp drop in total volume of recorded SMS messages was recorded –in 2014 it fell by 37.3%– no doubt caused by the substitution effect from certain OTT instant messaging applications, such as WhatsApp or Line.

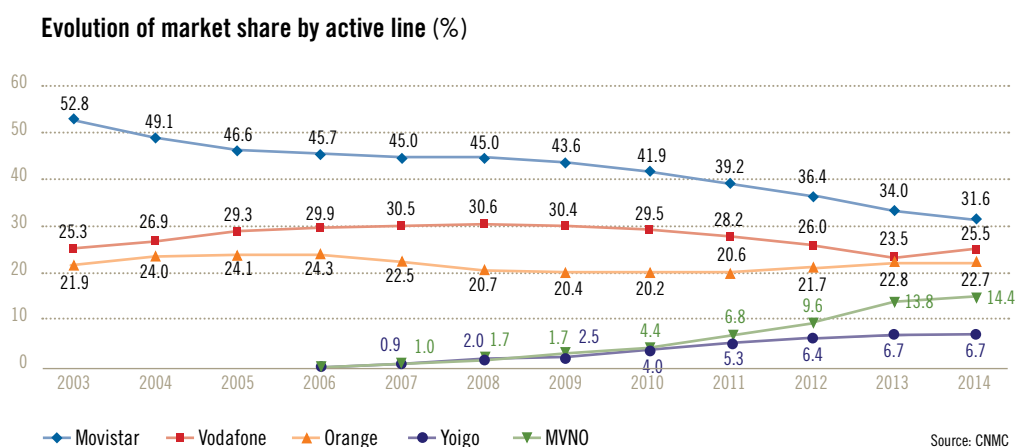
Evolution of average revenue per message
(euro cents/message)



Market share

In 2014, the two leading operators saw uneven market share evolution. Taking the number of mobile lines as a reference, Movistar reduced its market share by more than two percentage points, while Vodafone increased its market share in a very similar proportion. In this regard, it should be noted that the increase in Vodafone's market share would be largely explained by the acquisition of the telecommunications operator Ono in July 2014.

The figures recorded by the other operators (Orange, Yoigo and MVNOs⁵⁴) were similar to those obtained in the previous year. Despite this, Yoigo and the MVNOs achieved a joint market share of 21.1%, such that one out of every five active lines in 2014 were contracted with a late entrant operator.

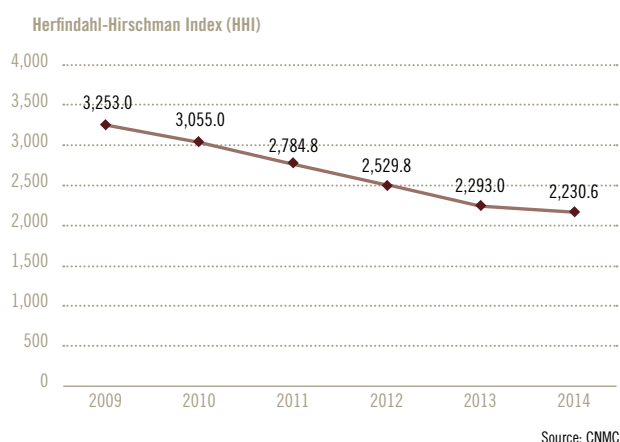


The Herfindhal-Hirschman Index (HHI) was used to calculate the concentration index. As in the calculation of market share, this index was estimated grouping together the different operators in accordance with the group of companies to which they belong. The results show that, in 2014, market concentration (HHI = 2,230.6) maintained the downward trend observed in recent years. However, the results for 2014 showed the smallest decline of the historical series since Yoigo and the first MVNOs appeared in the market in 2006. This change in trend was due to several factors. Firstly, due to a merger and acquisition process detected among the MVNOs themselves. Examples of this phenom-

enon would be, for example, the acquisition of the mobile operators Happy Móvil and Neo by Másmóvil or the acquisition of Orbitel Móvil's portfolio by Lebara. Secondly, in 2014 MVNOs were acquired by mobile network operators. This was the case with the acquisition of Ono by Vodafone. In this regard, it should be recalled that in 2014 Orange made an offer for the purchase of the operator Jazztel which, subsequently, in May 2015, received the necessary authorisation from the EU Directorate-General for Competition. Lastly, MVNOs created directly by the network operators themselves have also proliferated. This was the case with Lowi, an operator launched by Vodafone.

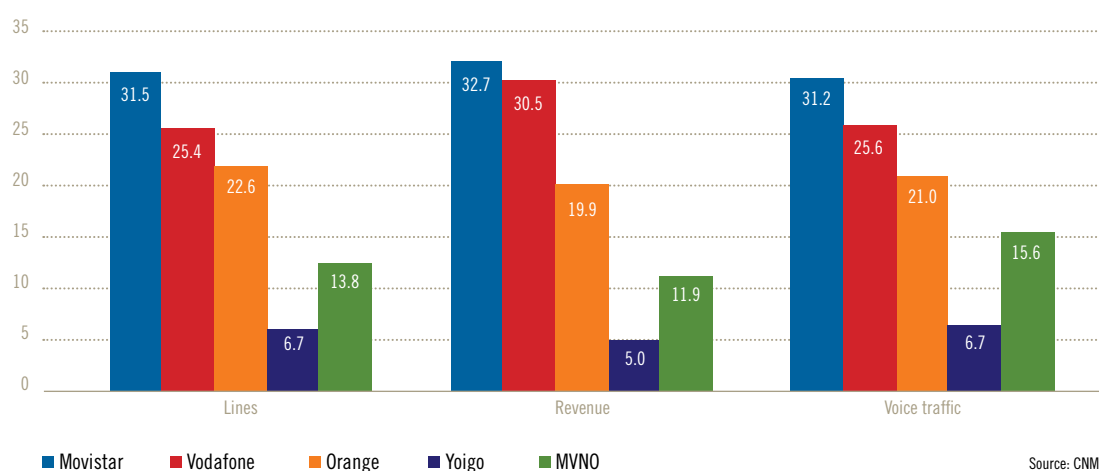
⁵⁴ Data corresponding to operators were excluded from the estimation of MVNO market share Tuenti, Ono, Lowi and Simyo are operators which are already owned by Movistar, Vodafone and Orange, respectively. Therefore, when calculating the market share of each operator, the revenue generated by these four MVNOs was added to the data declared by the network operators that own the MVNOs.

Evolution of the market concentration index (HHI)



The graph below compares the distribution of the mobile line fleet by operator with the traffic shares and revenues recorded by those same operators. It can be observed that market shares by revenue indicate a higher degree of concentration in favour of the two main operators. As regards the traffic generated by the different operators, the distribution is very similar to that observed in mobile telephone lines.

Market share 2014 (%)

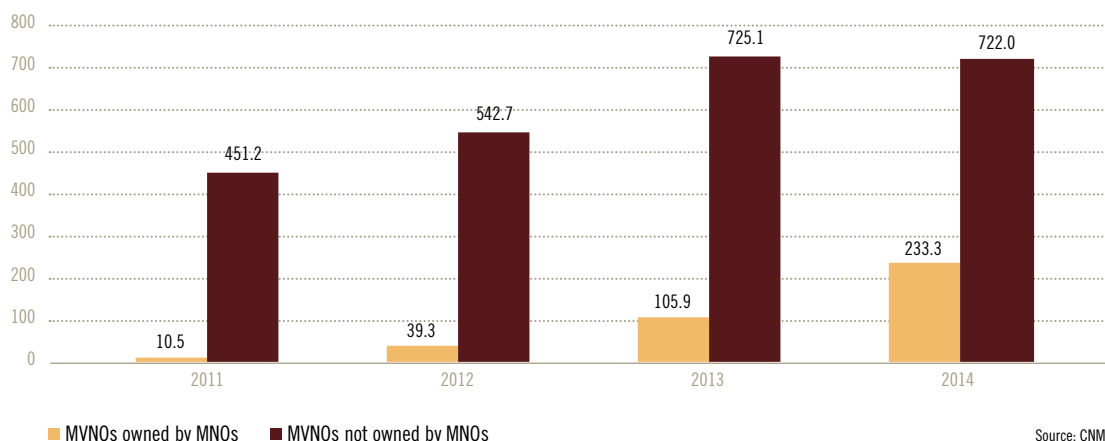


In 2014, the revenue generated by the MVNOs in the retail mobile market totalled €722 million. Contrary to the results observed in recent years, this figure represented a drop of 0.4% in revenue compared to the previous year. This change in trend can be largely explained by the acquisition of some MVNOs by mobile network operators (MNO). Consequently, the revenue generated by these MVNOs was no longer recorded under the MVNO category, but rather under the total revenues of the operators that acquired them. In this regard, the graph below compares the business volume generated by MVNOs majority-owned by network operators with the revenue generated by MVNOs not owned these operators. It can be

observed that, in 2014, the revenue generated by investee MVNOs accounted for 32.3% of the amount generated by the MVNOs whose capital was not majority-owned by the leading market operators.

The different MVNOs did not employ a unified business strategy; rather, these operators display highly differentiated strategies. Those strategies can be grouped into: 1) operators with a specialised offering in competitive international tariffs; 2) operators based on a mobile offering integrated with other services provided by fixed networks; 3) operators with extensive distribution networks through which they can offer their mobile servic-

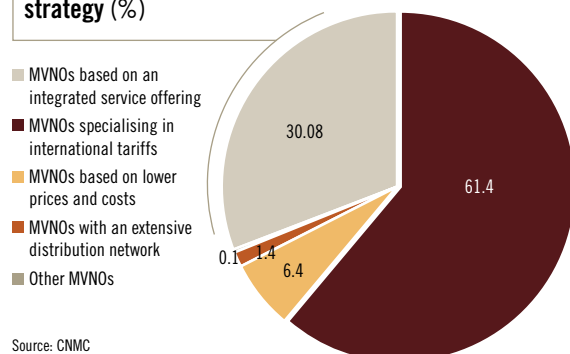
Revenue generated by non-investee MVNOs in relation to the revenue generated by MVNOs owned by MNOs (millions of euros)



es to a large number of customers; and 4) operators whose main business case is the offering of highly competitive mobile tariffs by eliminating supplementary services, which affords operators significant cost savings.

As can be observed in the graph below, those operators with a competitive international tariff offering obtained a higher percentage of total revenue recorded by MVNO operators as a whole. This is due to the significant competitive dynamism observed in these types of operators. Proof of this is that, despite their small market share, some of these operators recorded a higher volume of international calls than that declared by the leading mobile telephony operators.

MVNO market share according to business strategy (%)



2.3.2 Mobile broadband

In 2014 a total of 36.4 million lines accessed the Internet over mobile communications networks, up 15% on 2013. As regards billings, in line with previous years, this telecommunications service recorded the highest growth in revenue –9.2%– compared to the previous year, obtaining total revenue of €3,615.7 million.

It should be noted that there are different options for connecting to the mobile Internet service: 1) connection via a mobile device linked exclusively to the data traffic service, as in the case of devices such as *datacards*, USB modems, tablets, etc.; or 2) connection via a voice mobile phone that simultaneously provides, inter alia, voice services, SMS messaging and Internet access. *Smartphones* would be included in this category.

Therefore, of the total number of active mobile Internet users, 34.7 million connected via their mobile phone. However, the total number of data-only lines –mainly USB modems and tablets– stood at 1.7 million, implying a sharp drop –12.7%– compared to the previous year. This result indicates that most of the users who acquired these types of devices, mainly tablets, chose to connect to the Internet over a Wi-Fi network.

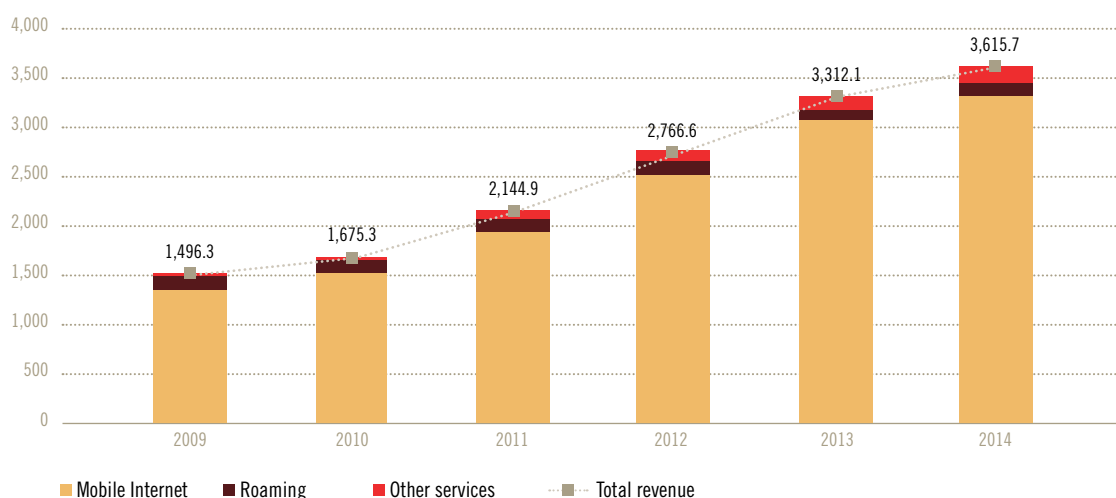
Lastly, it should be recalled that so-called 4G technology burst onto the Spanish scene in 2013, which will no doubt have important future effects on the degree of penetration and use of these services by the population.

Situation of the sector

Revenue

In 2014 the volume of business for mobile broadband services as a whole stood at €3,615.7 million, up 9.2% on 2013.

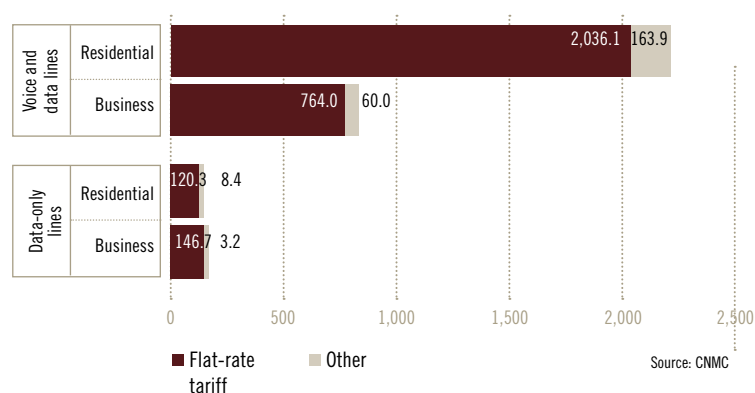
Evolution of revenue from mobile broadband (million of euros)



The preceding graph shows that if this revenue is broken down into the different services that generated it, it can be observed that the national Internet connection service predominates –91.3%– in the market. Supplementary services rank second and, while currently having a minority weight –only 4.6% of revenue–, have significant future growth capacity. This section includes services such as, for example, download of content or transactions performed via *m-Commerce* applications. Connection to the Internet while roaming abroad ranks last, accounting for 4.1% of total revenue.

Below is a breakdown of total revenue by type of device from which the mobile Internet service was accessed. The 'Voice and data lines' item refers to mobile telephones, while the 'data only lines' item refers to tablets or USB modems.

Revenue from mobile Internet services by type of device and segment (millions of euros)



Source: CNMC

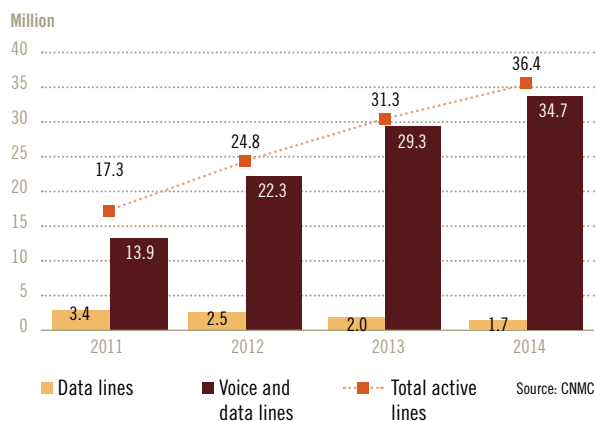
It can be observed that most revenues were generated by the residential segment –accounting for 70.5% of total recorded revenue–, while the business segment accounted for only 29.5% of revenue.

The mobile broadband service saw exponential growth in revenue from flat-rate tariffs. In fact, 92.9% of total revenue stemmed from this type of tariff. However, revenue based on connectivity billing has plummeted in recent years, to the point that this billing modality is nearly non-existent as regards data-only lines.

Lines⁵⁶

In 2014, 36.4 million lines actively connected to the mobile Internet service, implying a penetration of the service of 78.3 lines per 100 inhabitants. The graph below shows the change in this figure compared to 2010 and its breakdown according to the type of device from which the Internet was accessed.

Evolution of active mobile Internet lines
(millions of lines)



The number of lines associated with voice and data devices –i.e. mobile phones and *smart-phones*– that actively connected to the Internet totalled 34.7 million. This figure implied an increase of 18.2% compared to the active lines of the previous year.

As regards data-only lines –mainly tablets and USB modems– in 2014, there were 1.7 million lines actively connected to mobile Internet services, down 12.7% on 2013.

With regard to the proliferation of flat-rate tariffs offered on the market, mobile operators declared that 32.4 million of the 36.4 million active mobile Internet lines were linked to a flat-rate data tariff. Of this total, 26.2 million related to tariffs that bundled data traffic with other telecommunications services, in most cases, with the mobile voice calls service. These results reveal that, in just one year, the number of users who contracted the mobile Internet service bundled with other services grew by nearly 7.8 million.

The joint marketing of voice and data services is undoubtedly inspired by the double deals offered in services over fixed networks, where the bundling of Internet and voice calls has been common practice in the market for years.

Lines with access to a 4G network

In 2014 a total of six million mobile lines accessed a network incorporating 4G technology. It should be noted that Spanish operators initiated the deployment of this technology in mid-2013 and in the last two years have installed base stations with this technology in the main Spanish cities.

If we relate this figure to the lines that actively used the mobile broadband service in 2014, it can be observed that 16.5% of the lines ac-

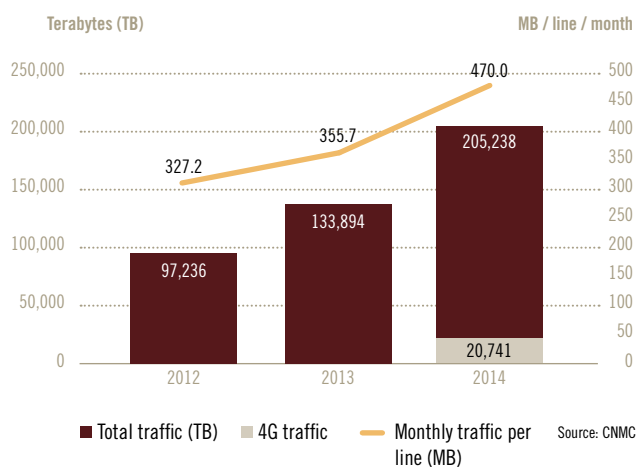
⁵⁶ The calculation of the volume of active lines linked to this type of service encompassed all the lines linked to a dedicated tariff implying the payment of a recurring tariff (for example, payment of a flat rate tariff) plus all lines with a data tariff which, while not being subject to the payment of a recurring amount, accessed the Internet in the last 90 days.

cessed these services over a 4G network, thereby enabling them to reach theoretical connection speeds in excess of 100 Mbps.

Traffic

The increase in the number of subscribers to mobile Internet access, whether through data lines or voice and data lines, gave rise to significant growth in data traffic managed through mobile networks with high data transmission capacity, mainly through 3G technologies (UMTS, HSDPA, HSPA+) or 4G (LTE). Therefore, total traffic generated in these types of networks amounted to 205,238 terabytes, up 53.3% on the previous year. In relation to this, it should be noted that 4G or next-generation networks –with a data transmission capacity of up to 100 Mbps– generated traffic of 20,741 terabytes in their first year of introduction.

Total and monthly traffic per line (TB and MB / line / month)



This strong growth in total traffic had an impact on monthly traffic per line. Thus, in 2014, active mobile Internet lines, on average, recorded monthly traffic of 470 MB, up 32.1% on 2013.

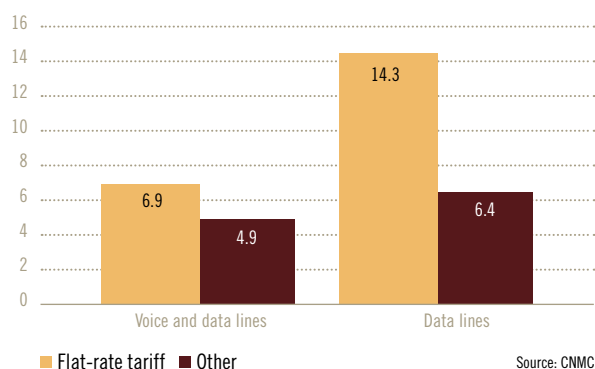
The preceding graph shows that a total of 20,741 terabytes were managed through 4G networks. This figure reveals that, in 2014, 10.1% of total traffic was generated by next-generation networks, thereby enabling access to Internet services via a high-speed mobile connection.

Competition

Prices

The data presented in the preceding sections reveal that voice and data lines experienced the highest growth in recent years in terms of both active lines and revenue obtained. However, the data analysed show that average revenue per line –or ARPU– of data only lines is higher than that generated by voice and data lines. This can be explained by the fact that customers who contract a data only line make more intensive use of these services and, consequently, need to contract tariffs which allow a greater volume of data traffic.

Monthly revenue per line (ARPU) (euros / line)



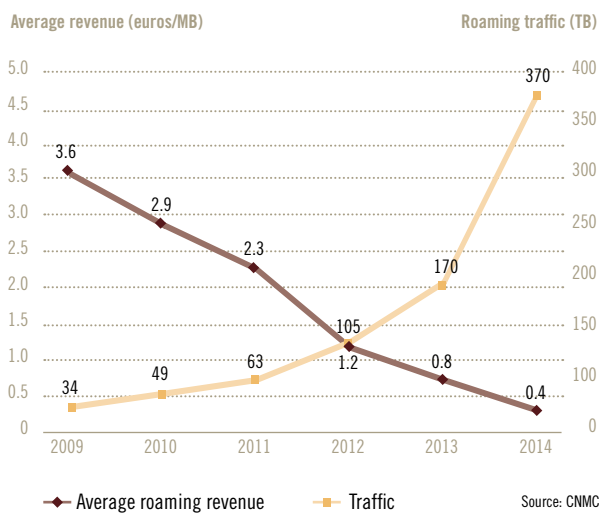
As regards the international roaming data traffic service, the following graph shows the spectacular growth recorded by this service in recent years. In 2014, the demand for data traffic over foreign networks grew 117.6% compared to the previous year.

The graph also shows a clear downward trend in average revenue per megabyte, a variable used as an approximation for the price level of this service. So, since 2008, average revenue fell by 91.7% to €0.4 per megabyte (MB). This price includes the roaming data services provided both in EC and non-EC countries.

In this regard, in 2012 the EC approved a new Community regulation on international roaming

services. This regulation established, among other new developments, that operators must offer, from July 2012, a maximum price of 70 euro cents per megabyte for roaming data traffic within the EC. This price continued on a downward path in subsequent years, until reaching 20 euro cents in July 2014. The establishment of this limit was the main cause of the repeated falls in the price of these services.

Evolution of average revenue per MB and volume of international roaming traffic (euros/MB and TB)



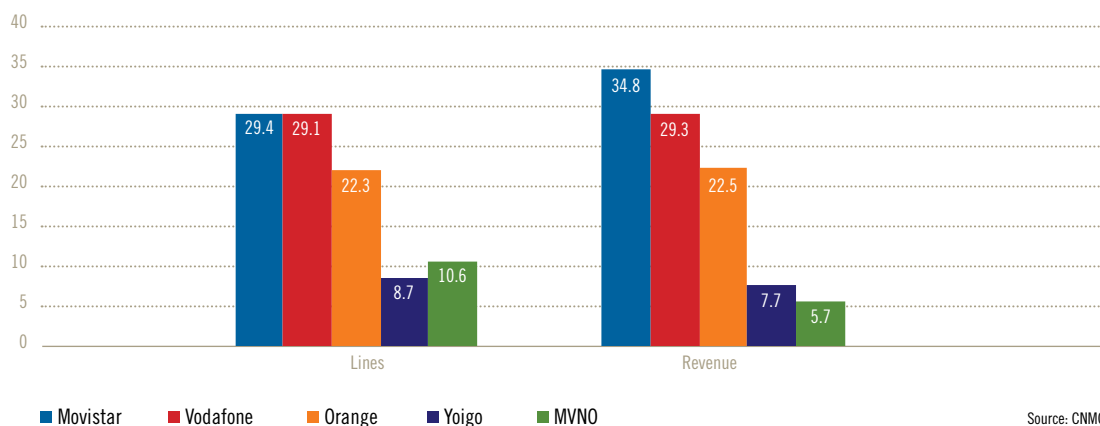
Market share

The following graph shows the market share held by the different operators in mobile Internet services, both in the case of voice and data devices (mobile phones) and data only lines (USB modems).

Firstly, market shares per mobile Internet service line showed concentration levels similar to those of mobile telephony. As in the section on mobile telephony services, the different acquisition processes recorded in 2014 had a clear effect on the concentration levels observed in the mobile broadband market. Likewise, Yoigo and all the MVNOs as a whole accounted for 19.3% of mobile broadband lines.

The analysis of market share based on total revenue shows that Movistar led the market, accounting for 34.8% of total revenue. Vodafone accounted for 29.3% of the market, followed by Orange (22.5%). Late-entrant operators –Yoigo and MVNOs– accounted for 13.4% of total revenue from mobile broadband.

Market share by lines in 2014 (%)



2.4. Wholesale mobile communications

The wholesale mobile telephony market is composed of various services aimed at allowing third-party operators access to a mobile communications network and interconnecting all networks, whether fixed or mobile. The most relevant services are as follows: national termination, i.e. the service which enables the completion of a mobile communication originating from a network other than the destination network; the international *roaming* service, used by customers of foreign operators who, although their operator does not have proprietary infrastructure in Spain, may continue using the mobile services via an external national network; the international termination service –which makes it possible to terminate calls originating from abroad on a Spanish mobile communications network–; and the service enabling access to mobile networks by third-party mobile operators without proprietary infrastructure.

Revenue from these wholesale services fell by 9.5%, while total traffic rose by 25.6%, due mainly to the growth in traffic related to the service enabling access to mobile communications networks by MVNOs.

Situation of the sector

Revenue

In 2014, the revenue generated by the wholesale market totalled €1,403.2 million, a figure that, as mentioned earlier, represented a 9.5% drop compared to the previous year and the eighth consecutive year in which billings declined. In absolute terms, and taking wholesale revenue for 2006 as a reference point, revenue in 2014 fell by 57.6%.

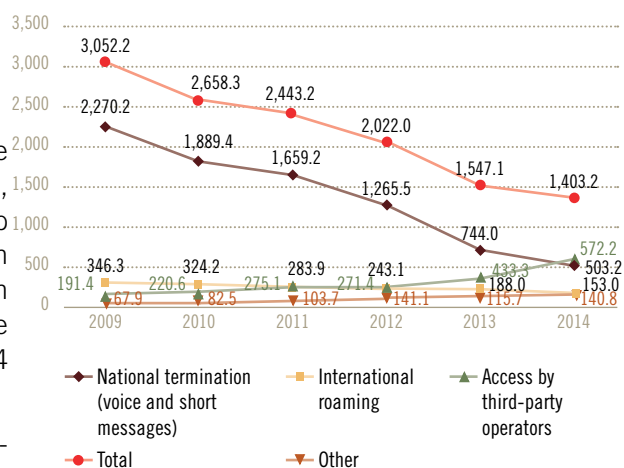
The service for enabling access to mobile communications networks by third-party operators, mainly MVNO operators, recorded a 32% rise in revenue, reaching a total business volume of €572.2 million. In this regard, it should be noted

that the demand for these types of services has experienced significant growth in recent years. In fact, in 2014 this growth was so high that the network access service generated the highest revenue in the mobile interconnection market.

The national mobile voice termination service – the wholesale service with the highest volume – saw a year-on-year drop in revenue of 34.9%. This drop was due mainly to the regulatory intervention of the CNMC, which in recent years has established a *glide path* of declining prices to reach a final price, from July 2013, of 1.09 euro cents per minute. Consequently, the average cost of completing a call on an external mobile network in 2014 was 1.09 euro cents per minute.

The international roaming service recorded a drop in revenue of 18.6%. These results confirm the downward trend initiated in 2007 as a result of the enforcement of the Community regulation in June of that year setting retail and wholesale international roaming prices within the EU.

Evolution of wholesale revenue (million euros)



Source: CNMC

The access obligation imposed by the defunct CMT in 2006 gave rise to the emergence and expansion of multiple MVNOs in the mobile telephony market. In 2014, there were 19 active MVNOs⁵⁷ on the Spanish market, whose market share accounted for 14.4% of the total number of mobile lines. The table below shows the map of active MVNOs in the Spanish market distributed by operator providing access to the mobile network. With regard to the operator Pepephone, in September 2014 this MVNO entered into a network access agreement with Movistar, which implied cancelling its agreement with Vodafone, its host operator until that date. This change in operator required a transition period –in order to successfully complete this process, it was necessary for the operator to renew all of its customers' SIM cards–, due to which Pepephone continued operating with Vodafone in 2014.

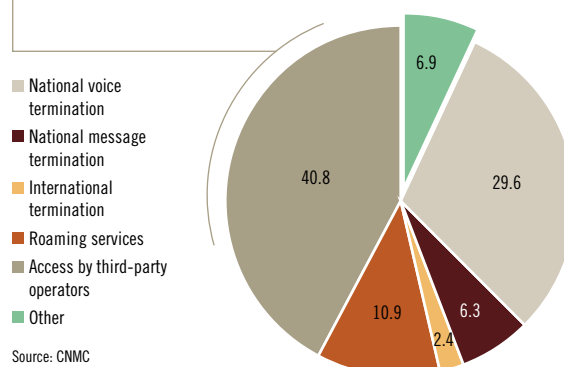
The table also shows the MVNOs majority-owned by mobile network operators. In this regard, it should be noted that, despite the fact that Ono was acquired by Vodafone in July 2014, access to the mobile network continued to be offered by Movistar, the network operator with which it entered into an interconnection agreement in 2014.

Distribution of virtual mobile operators by host operator

Movistar	Vodafone	Orange
FULL MVNOS		
Ono	TeleCable	Jazztel
Digi Mobil	R	Simyo
Lycamobile	Lowi	Euskaltel
MVNO SERVICE PROVIDERS		
Tuenti	Lebara ⁵⁸	Carrefouronline
	Pepephone	Día Móvil
	Hits Mobile	Moreminutes
	BT ⁵⁹	You Mobile
	Eroski Móvil ⁶⁰	MÁSmovil
		LCR Telecom
		Aire Networks
		Procono
MVNOS MAJORITY-OWNED BY MNOS		
Tuenti	Ono	Simyo
	Lowi	

Due to the recurring decline in revenue observed in recent years, in 2014 national voice termination services ceased to be the services with the highest share of total wholesale market revenue. Specifically, it accounted for 29.6% of wholesale revenue. These variations situated the third-party access service as the service with the highest share of the wholesale mobile market, accounting for 40.8% of total market revenue.

Revenue from interconnection services (%)



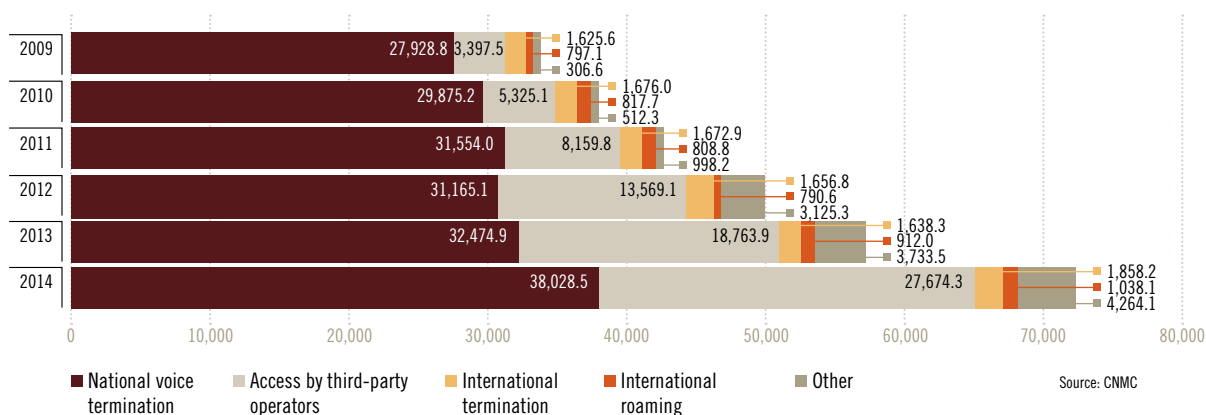
Traffic

Wholesale market traffic volume, as opposed to that observed in revenue, recorded positive year-on-year rates. The traffic volume generated in the market totalled 72,863.1 million minutes, representing strong growth, with a 26.7% increase on 2013. This result reflects, as discussed in the preceding section, the fact that the decline in wholesale revenue was caused by a drop in prices –most of which regulated– and not by a hypothetical fall in traffic.

⁵⁷ When estimating the market share of MVNOs as a whole, the data relating to the operators Tuenti, Ono, Lowi and Simyo was excluded, as they are operators owned by Movistar, Vodafone and Orange, respectively. Therefore, the calculation of MVNO market share includes the revenue of these four operators.

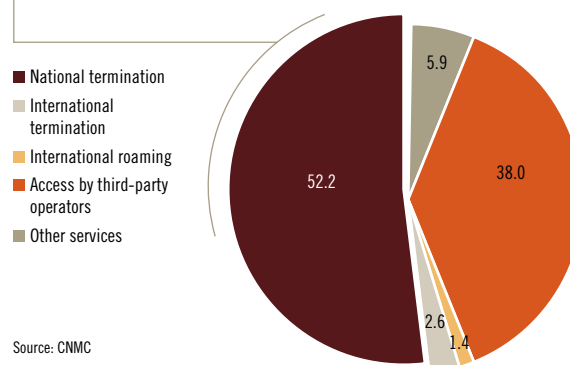
^{58, 59, 60} The operators Eroski Móvil, BT, Lebara and Orbitel access Vodafone's network through an agreement entered into with the MVNO Vodafone Enabler, owned by the Vodafone Group. The table reflects the most representative MVNOs in 2014.

Distribution of wholesale service traffic (millions of minutes)



The breakdown of total traffic by service provided reveals that the service that concentrated the highest traffic volume was the national termination service, which accounted for 52.2% of the total. Secondly, the third-party operator access service, which recorded annual growth of 47.5%, ranked highest among wholesale services. The use of the international roaming service –i.e. customers of foreign operators who used mobile services over a Spanish network– grew 13.8%.

Distribution of traffic volume by wholesale service (%)

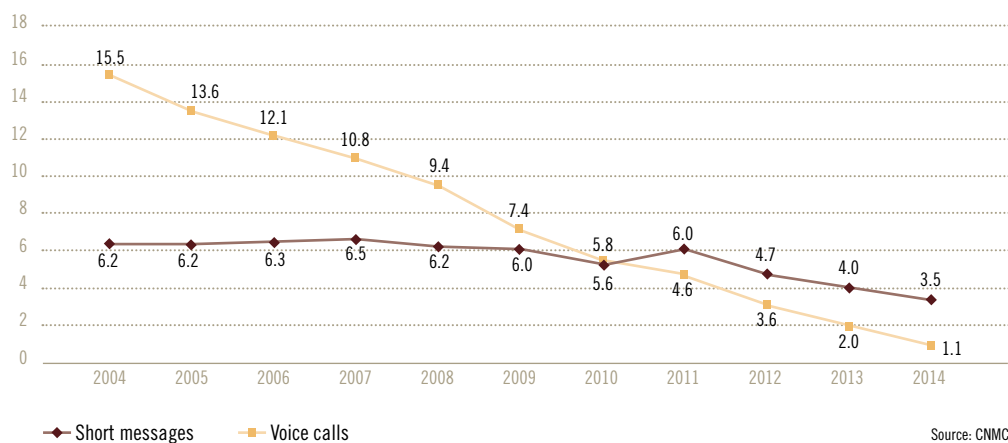


Evolution of prices

In this section, as in that relating to the retail market, average revenue per minute is used as an approximation of the prices of the different wholesale services analysed.

The following graph shows that, in 2014, average revenue from termination in own networks of calls originating from external networks fell by 44.4% to 1.09 euro cents per minute. Likewise,

Average revenue from national termination (euro cents/minute and euro cents/message)



the price of termination of a short message stood at 3.5 euro cents.

The prices applied by the different operators to the voice termination service are considered of key importance for the correct development of the mobile telephony market and it is, therefore, a service regulated by all the European NRAs. In this regard, in 2012 the CMT carried out an analysis of the call termination market on individual mobile networks. In that analysis, all the network

operators (NO) and full mobile virtual network operators (MVNO) were identified as operators with significant market power. Consequently, as in previous analyses, the CMT imposed a series of obligations on these operators. In this regard, the main difference consisted in establishing a new declining path for prices relating to the call termination service. A target price of 1.09 euro cents per minute was set for operators with significant market power, to be reached by July 2013.

Maximum price applied to the national voice termination service (euro cents/minute)

	From 16/04/2012 to 15/10/2012	From 16/10/2012 to 29/02/2013	From 01/03/2013 to 30/06/2013	From 1/07/2013
Movistar, Vodafone and Orange	3.42	3.16	2.76	1.09
Yoigo	4.07	3.36	2.86	1.09

Source: CNMC

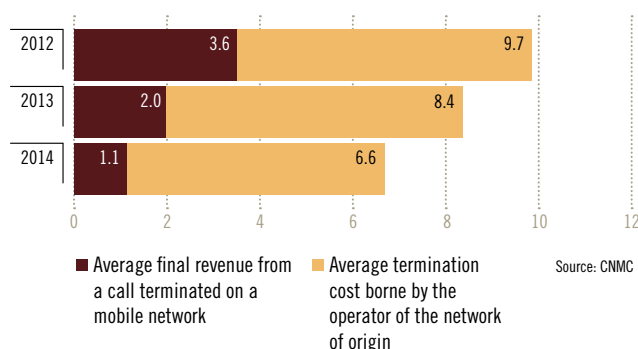
As regards the short message termination service, the preceding graph revealed a significant reduction in average revenue compared to 2014. It is the fourth consecutive drop in price and is undoubtedly related to the impact of instant messaging applications on the traditional messaging service. In this regard, mobile telephone operators have gradually modified their interconnection contracts so as to reduce the price of messaging service termination, in an attempt to avoid the decline in this service in favour of the use of OTT applications.

It should be noted that, despite this downward trend, completing a message in an external network was three times more expensive than one minute of conversation.

It is of interest to analyse average revenue from calls to mobile networks together with the termination price borne by the operator. Call termination cost –1.1 euro cents per minute– accounted for 16.6% of the average revenue obtained by a voice call terminated on a mobile network, which generated average revenue per minute of 6.6 euro cents. In this connection, it should be noted that the retention margin has increased significantly in recent years, i.e. the cost of termination borne by the operators for completing

a call on an external network dropped relative to the final price that those operators charge their customers for this service.

Retention margin of a call to a mobile communications network (euro cents/minute)



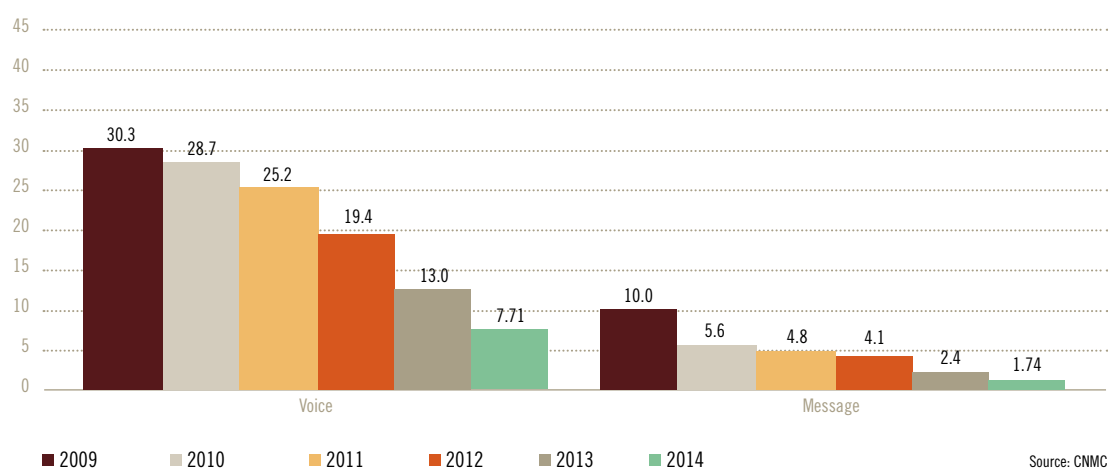
As regards wholesale international roaming services, when provided between EU operators they are regulated by Regulation (EC) 531/2012 of the European Parliament and of the Council.

The following graph shows the effect of Community regulation on average revenue from roaming services. Average revenue per minute from calls fell dramatically by 40.5% compared to the previous year. With this reduction, average revenue per minute in 2014 was 80% lower than average

revenue in 2008. Average revenue from the international roaming messaging service recorded

a significant year-on-year drop –28.4%–, standing at 1.7 euro cents per message on average.

Average revenue from international roaming (euro cents/minute and euro cents/message)

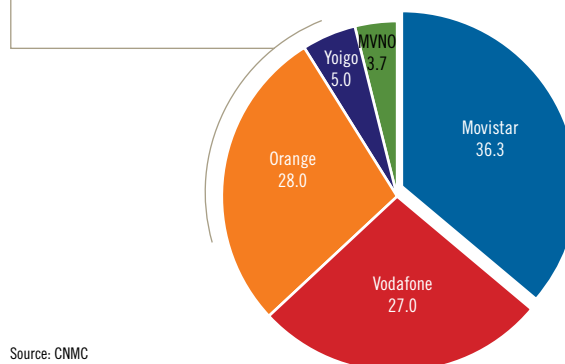


Market share

In the wholesale market, the degree of concentration of revenue is traditionally higher than that observed in the retail market. This is due to the fact that a percentage of MVNO operators does not have proprietary infrastructure and, therefore, their interconnection traffic is concentrated in the networks of the three leading operators which, in turn, receive a payment.

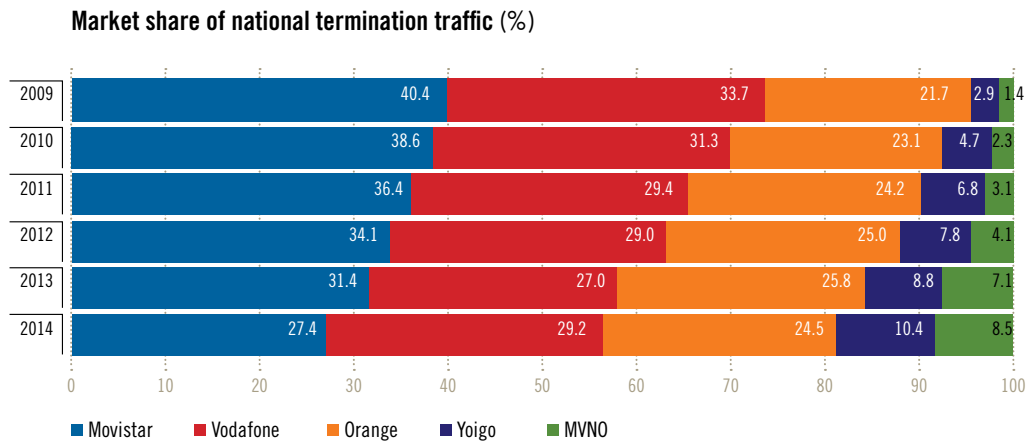
Consequently, Movistar (36.3%), Orange (28%) and Vodafone (27%) accounted for the majority market revenue. Yoigo obtained 5% of the total revenue generated by this market and full MVNOs, those which manage received call termination traffic, obtained 3.7% of the total.

Wholesale revenue market share (%)



National voice termination service traffic was distributed among the various operators in a different manner to that observed in mobile lines. Vodafone obtained 29.2% of national termination traffic, followed by Movistar with 27.4%. In this connection, it should be noted that Vodafone includes both termination traffic managed

by the operator Vodafone itself and that recorded by the MVNOs Ono and Vodafone Enabler, both owned by the British holding company. Orange reduced its market share slightly, while Yoigo and full MVNOs not owned by MNOs increased their market share in the national termination service.



2.5 Audiovisual communication services

2.5.1. Sector data

2014 was a year in which advertising revenue saw growth after various consecutive years of declines since the effects of the economic crisis began to be felt in audiovisual communication services in 2008.

Increased advertising spending in the media led to an improvement in total revenue, which grew compared to the previous year, after recording cumulative losses of 37.4% in recent years compared to the level of revenue achieved in 2007.

The number of nationwide DTTV channels available to the public was reduced by the closure, at the start of the year, of the nine DTTV channels awarded in 2010, as a result of the decision issued by the Supreme court declaring the Resolution of the Council of Ministers of July 2010 to be void⁶¹.

As regards market structure, after the two major consolidation transactions that took place in the free-to-air TV market –the mergers between Telecinco and Cuatro on the one hand and Antena 3 and La Sexta on the other– another two processes were initiated in 2014 that would have significant implications for the pay television market. On the one hand, the acquisition of satellite TV operator DTS by Movistar and, on the other, the acquisition of Ono, the largest cable

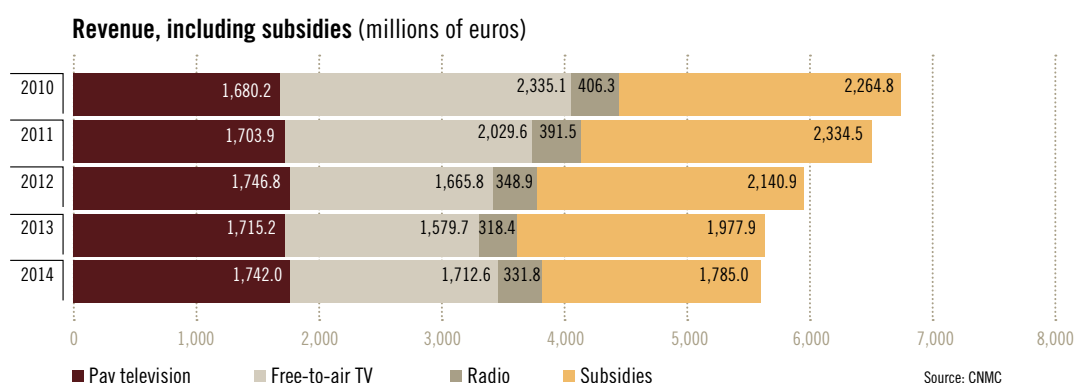
operator, by Vodafone. These two transactions, whose effects began to be felt from 2015, involve the three largest pay television networks (DTS, Movistar and Vodafone), which jointly accounted for 84.4% of the total number of pay television subscribers in Spain. The union between pay television operators and telecommunications operators will make it possible to increase and broaden the already successful commercial offerings of bundled services that combine, for a fixed price and in a single bill, telephone services (fixed and/or mobile), broadband (fixed and/or mobile) and pay television.

The surge in these types of commercial offerings has driven the extraordinary growth in the number of pay television subscribers in 2014 and is taking shape as one of the distinctive features of the year ending 31 December 2015.

Revenue

In figures, in 2014 audiovisual communication services⁶² obtained commercial billings of €3,786.4 million, without including subsidies, representing growth of 4.8% compared to the revenue obtained in the previous year.

Including the subsidies received by operators from public authorities, revenue from this market totalled €5,571.4 million, representing a year-on-year fall of 0.4%.



⁶¹ Decision issued in December 2013 declaring void the Resolution of the Council of Ministers of July 2010 awarding a whole multiplex channel to Antena 3, Telecinco, Sogecable, Veo7, Net Televisión and La Sexta.

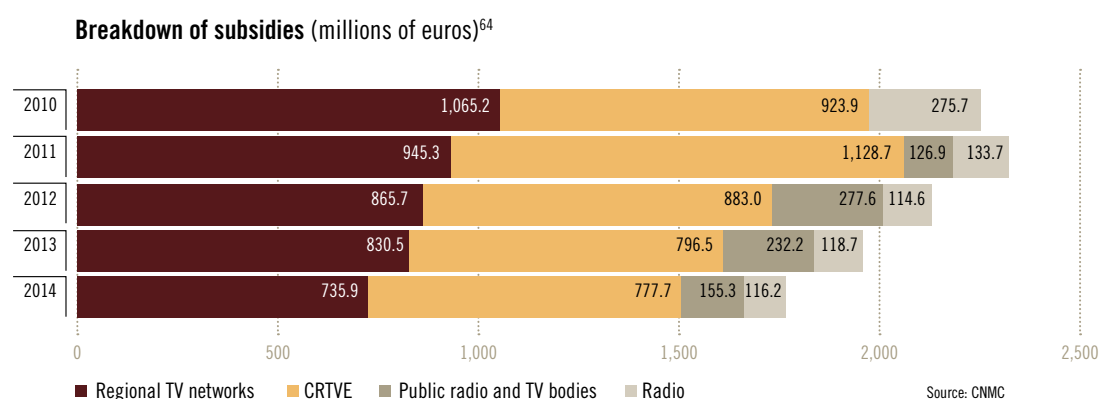
⁶² Refers to free-to-air TV, pay television and radio services.

Subsidies

Subsidies received by public operators fell for the third year in a row to €1,784.5 million, down 9.8% on 2013.

Broken down by service, the subsidies received were distributed as follows: (i) €1,513.6 million

allocated to television services – €777.7 million for financing Corporación de RTVE and €735.9 million for financing regional public television networks–, (ii) €116.2 million for radio services⁶³ and (iii) €155.3 million for financing public bodies that manage regional radio and television services.



Revenue from the different business areas

The analysis of the different business segments reveals growth in all areas compared to 2013.

For the third consecutive year, pay television services achieved the highest billings, with net revenue of €1,742 million, representing year-on-year growth of 1.6%. Growth in billings was in line with the significant increase in the number of pay television service subscribers, which grew 30.5% (excluding mobile TV subscribers); however, this relationship was not proportional, since the growth in the number of subscribers was much higher than the growth in revenue. This was due to the different commercial offerings and promotions launched by operators in 2014 with the aim of attracting new customers⁶⁵.

Free-to-air TV services ranked second in terms of billings, which amounted to €1,712.6 million (excluding subsidies), and recorded faster growth at 8.4% year-on-year. This growth marked a turning point in the decline experienced by the segment in the last six years, situating revenue from this segment at levels very similar to those obtained by pay television services, as shown in the graph.

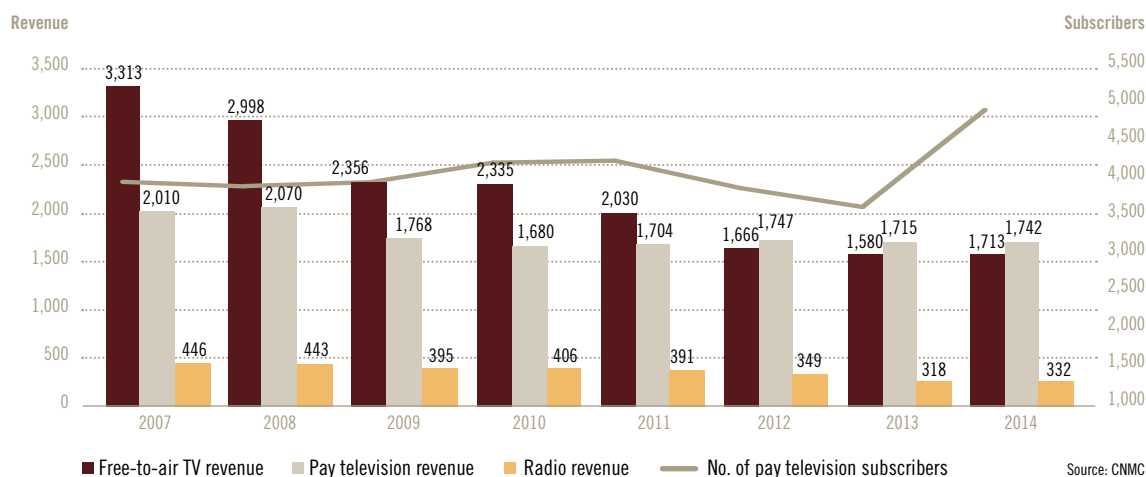
Lastly, the third business area within audio-visual communication services –radio– grew around 4.2%, generating a volume of business of €331.8 million.

⁶³ Regional radio service data. The subsidies received by RNE are included in the €777.7 million received by CRTVE.

⁶⁴ In 2009, Law 8/2009 on the Funding of Corporación de Radio y Televisión Española (CRTVE) was passed.

⁶⁵ In 2014, operators launched promotions for new subscriptions which allowed users to enjoy the service free of charge during the first months after subscribing to the service.

Revenue by business area and number of subscribers (millions of euros and thousands of subscribers)

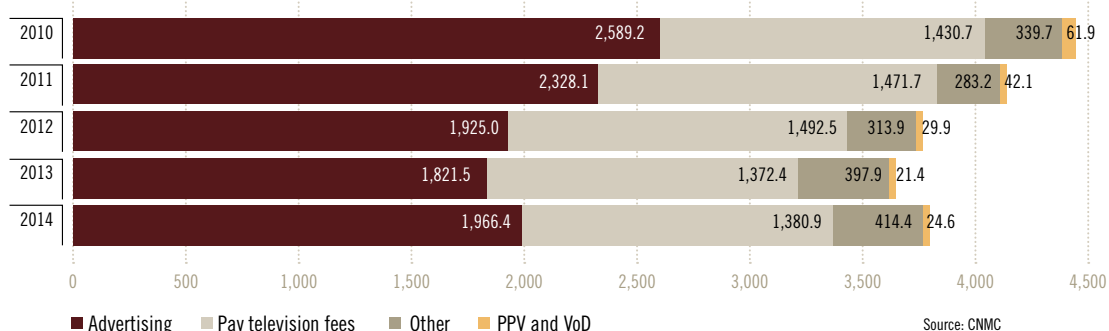


Revenue by items

The most notable feature of the year was the recovery in advertising revenue obtained by operators, in line with the improvement in the economic context. Advertising revenue⁶⁶ in 2014, which accounted for 51.9% of total commercial billings, totalled €1,966.4 million, representing year-on-year growth of 8%.

The other main item, subscriber revenue⁶⁷, accounted for 36.5% of total billings with €1,380.9 million. This figure grew 0.6% compared to the previous year, in contrast to the strong growth of 30.5% in the number of subscribers. This is due mainly to the lowering of prices by operators, which launched competitive promotions in 2014 that included, in some cases, the possibility of enjoying the service free of charge for a limited period of time after subscribing to the service.

Distribution of commercial revenue by item (millions of euros)



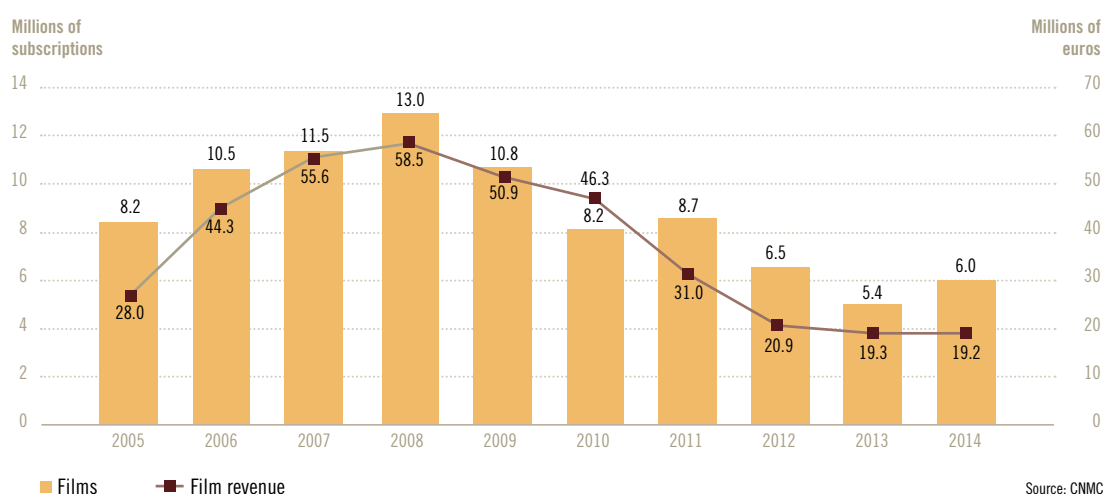
⁶⁶ Includes advertising, sponsorship, teleshopping, product placement, telepromotions and other advertising revenue.

⁶⁷ Includes monthly fees, subscription fees, equipment sale and rental fees, premium channel fees and on-demand channels.

PPV and VoD revenue, –not included in revenue from pay television fees–, recorded year-on-year growth of 15.2% to €24.6 million. Of that, €19.2 million related to film rental and the remaining €5.4 million to other items including concerts, TV shows, documentaries and sporting events.

Lastly, other revenue, including, inter alia, revenue from premium rate calls, premium SMS messaging, sales of merchandising, revenue from the transfer and lease of DTTV licences, sale of proprietary productions and sale of proprietary channels to third-party operators, totalled €414.4 million, recording year-on-year growth of 4.1%.

Number of film subscriptions and revenue from pay television
(millions of subscriptions and millions of euros)



Revenue by technology

An analysis of revenue based on broadcast modality reveals that DTTV, XDSL/FTTH TV and on-line⁶⁸ TV services grew compared to the decline of satellite TV, cable TV and mobile TV services.

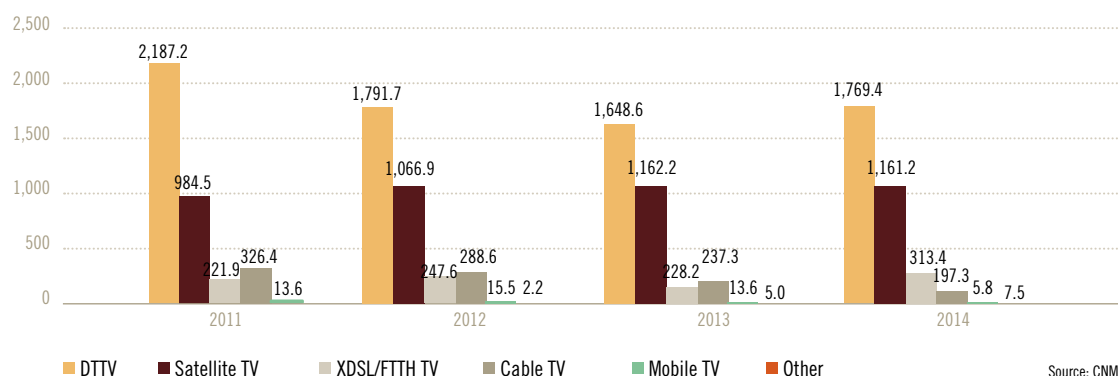
In terms of figures, DTTV services obtained the highest volume of business, standing at €1,769.4 million and accounting for 51.2% of total revenue from television services in Spain. This figure repre-

sented growth of 7.3% compared to the revenue obtained in the previous year, in line with the start of the advertising market recovery.

Satellite pay television ranked second in terms of revenue, down 0.1% on 2013, with total billings of €1,161.2 million, which includes both revenue from subscribers to satellite TV and revenue from subscribers to Canal+ channels using other technologies.

⁶⁸ Includes data relating to the online TV services offered by traditional free-to-air and pay television operators. Does not include data relating to OTT (*Over The Top*) operators that offer the service via websites.

Retail-related revenue from television by broadcast medium⁶⁹ (millions of euros)

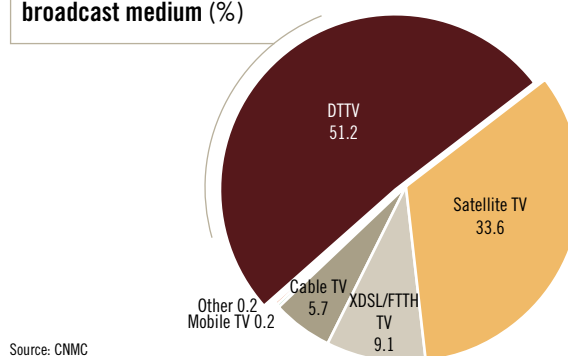


XDSL/FTTH TV services ranked third in terms of revenue, for the first time displacing cable pay television services, which had traditionally occupied that position in terms of volume of business.

This segment experienced strong growth in 2014 –both in terms of revenue and number of subscribers–, arising from the commercial offerings launched by the leading operator in the segment, Movistar, which offered the possibility of adding the pay television service to bundled telecommunications service offerings for a small fee. In this context, revenue from pay television over XDSL/FTTH experienced stronger growth in 2014, with year-on-year growth of 37.4% and billings of €313.4 million.

It was followed by cable TV services which, with a fall of 16.9%, obtained billings of €197.3 million, followed by mobile TV services –offered by mobile telephony operators over 3G and 4G networks– whose billings fell by more than half of the figure obtained in 2013, due to the fact that Movistar stopped offering this service at the end of the first quarter, Orange being the only operator that remained active in this segment at year end.

Distribution of commercial television revenue by broadcast medium (%)



2.5.2 The free-to-air TV segment

In addition to the start of the recovery in advertising revenue, another relevant factor relating to the free-to-air TV market structure in Spain was determined by the closure of nine programme channels at the beginning of the year, as a result of the decision issued by the Supreme Court⁷⁰ declaring the process whereby those channels had been awarded in 2010 to be void. The decision affected the channels La Sexta 3, Xplora,

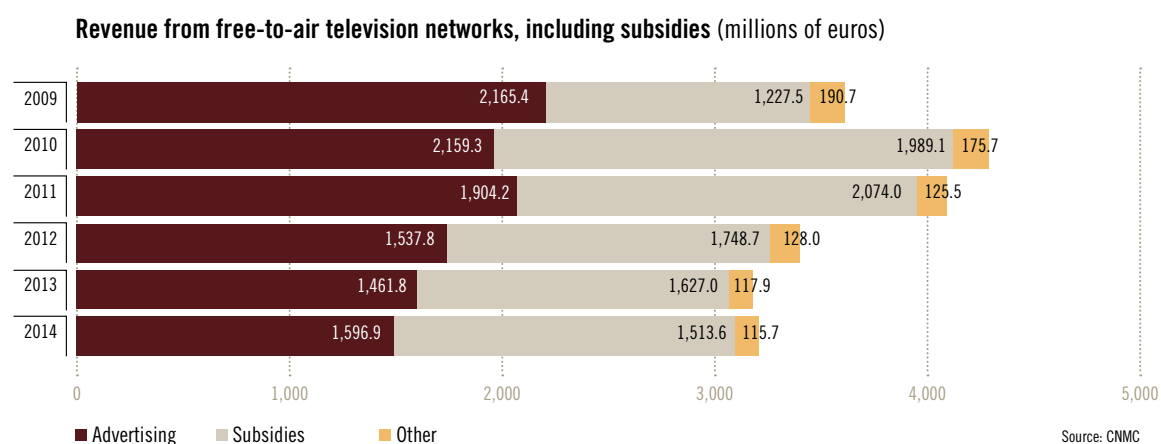
⁶⁹ 'Other' includes revenue from online TV services offered by broadcasters and pay television operators.

⁷⁰ Decision issued by the Supreme Court in December 2011 declaring void the Resolution of the Council of Ministers adopted in 2010 to assign a digital multiplex with nationwide coverage to each of the licensee companies of the national DTTV service.

Nitro, La Siete, Nueve, Net TV, Veo TV, AXN and Marca TV, which closed in the first months of 2014, with the consequent reduction in the national free-to-air audiovisual offering, which went from 28 channels to 19⁷¹.

In terms of figures, in 2014 the free-to-air TV segment had total revenue of €3,226.2 million, of which €1,712.6 million stemmed from commercial billings and €1,513.6 million from the subsidies received by public television networks.

Of the €1,712.6 million in commercial billings, €1,596.9 arose from advertising, sponsorship, teleshopping, product placement, telepromotions and other advertising revenue. The remaining €115.7 million related to other items including, inter alia, revenue from proprietary productions, premium rate calls, website advertising, transfer of channels, the sale of rights, studio rental and, in general, all revenue from audiovisual communication services that do not stem from spending on advertising.



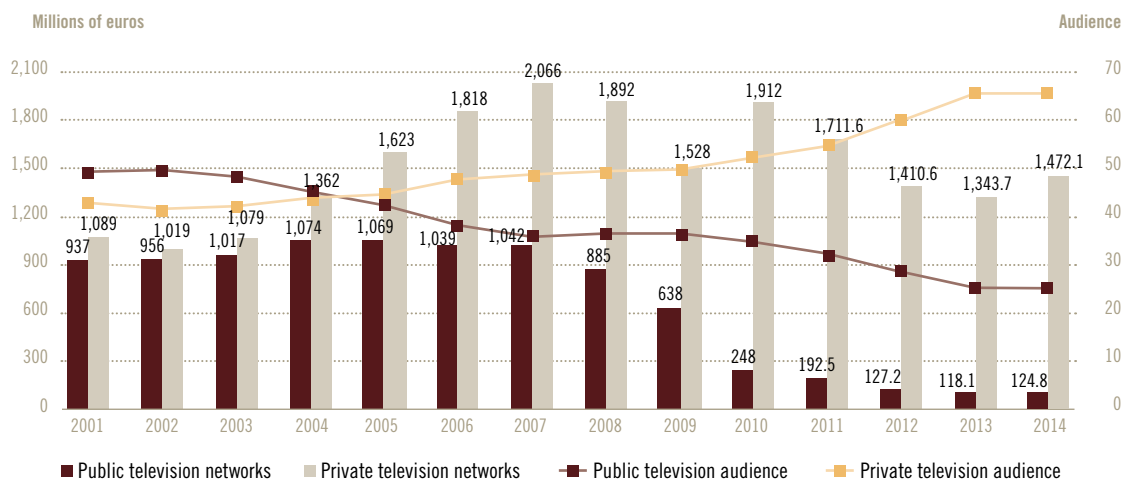
Advertising revenue by type of operator

The distribution of advertising revenue and audiences between public and private operators has undergone a significant transformation in recent years as a result of the restructuring process that accompanied the implementation of the DTTV model and the new funding model of Corporación de Radiotelevisión Española, as a result

of which the public operator has stopped airing commercials since 2010. As can be observed in the graph below, since then there has been a change in the market share of both groups of operators, such that public operators have suffered a gradual loss in market share, both in terms of advertising revenue and audiences.

⁷¹ At the beginning of October 2015, a new call for tenders, launched in April, was decided as follows: six new DTTV channels (three high-definition and three standard) were awarded to Mediaset, Atresmedia and Real Madrid, on the one hand, and, the production company Secuoya, Kiss FM and 13TV, on the other. The awarded channels will not be operational until the end of 2015-beginning of 2016.

Advertising revenue and audience share by groups of operators (millions of euros and percentage)^{72, 73}

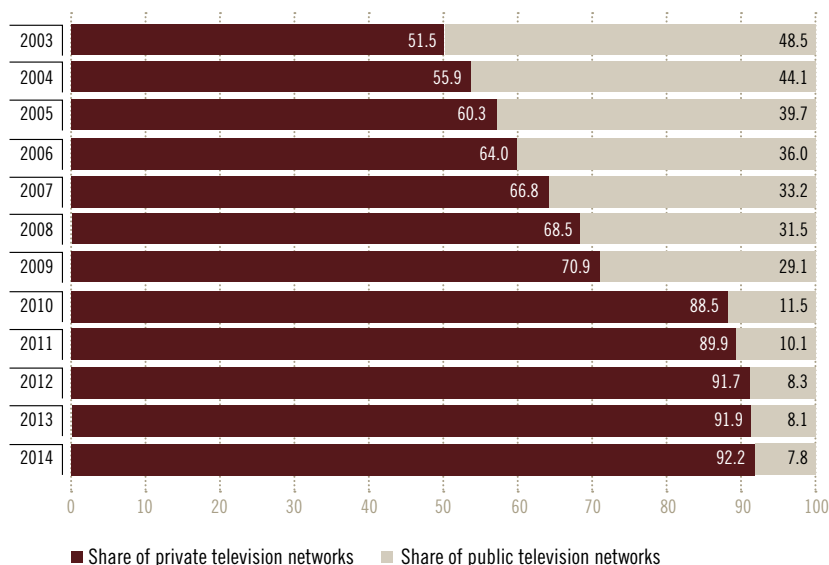


Source: Prepared in-house using on CNMC and Kantar Media data.

At the end of 2014, private television networks obtained 92.2% of advertising revenue generated by the free-to-air TV segment compared to 7.8% obtained by public television networks and,

in terms of audience, the first group –private television networks–, obtained a joint audience of 65.5 points and the second group –public television networks–, jointly obtained 24.7 points⁷⁴.

Evolution of advertising market share by group of operators (millions of euros)



Source: CNMC

⁷² Only includes DTTV channel audiences. Does not include advertising revenue obtained by pay television networks which amounted to €38 million.

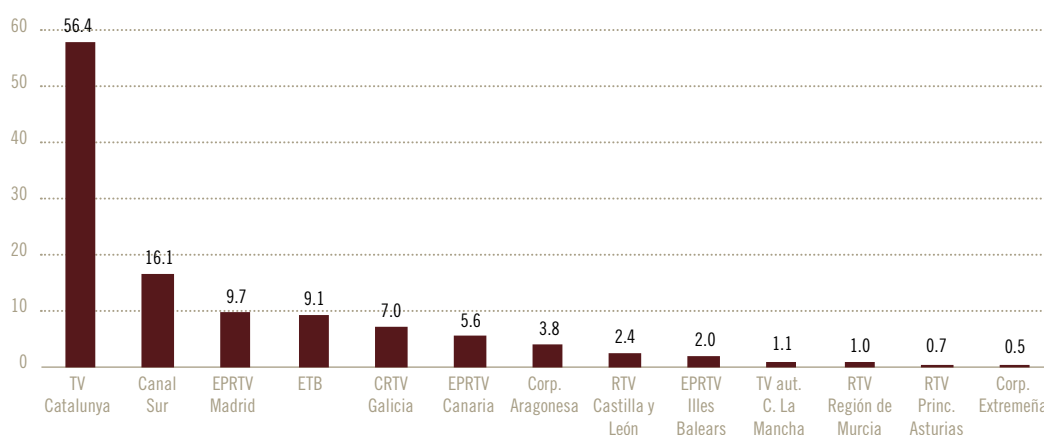
⁷³ The operator RTV Castilla y León is included in the public television networks, since, while it is a privately owned operator, it receives a subsidy in exchange for performing a programme contract it has with that autonomous region.

⁷⁴ Audiences calculated based on the national total; the remainder up to 100 correspond to pay television and local TV network audiences.

Both groups benefited from the recovery in advertising revenue and, in 2014, both private television networks and public television networks recorded a rise in revenue. Private television networks, with an advertising revenue of €1,472.1 million, generated €128.4 million more than in 2013, recording year-on-

year growth of 9.6%. Public television networks obtained advertising revenue of €124.8 million, implying growth of 5.7% which, in absolute terms, represented €6.7 million more compared to 2013 data. The following graph details the advertising revenue of regional television networks by operator.

Advertising revenue of regional public television networks (millions of euros)⁷⁵



Source: CNMC

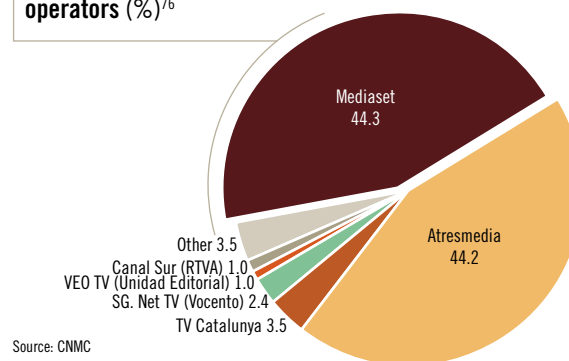
Advertising revenue by operator

After the merger processes involving the leading market operators –Telecinco and Cuatro in 2010 and Antena 3 and La Sexta in 2012– advertising revenue was highly concentrated in the two major groups resulting from these transactions –Mediaset España and Atresmedia–, which jointly accounted for, almost equally, 88.5% of total advertising revenue destined for the free-to-air TV market.

Of the two, Mediaset was the operator that obtained the highest advertising revenue, €707.0 million, up 10.9% on 2013, closely followed by Atresmedia, which obtained advertising revenue of €705.5 million and year-on-year growth of 7.9%.

⁷⁵ The operator RTV Castilla y León is a privately owned operator which has an agreement with the autonomous region whereby it receives a subsidy in exchange for the performance of a programme contract with that autonomous region.

Advertising revenue of the leading free-to-air TV operators (%)⁷⁶



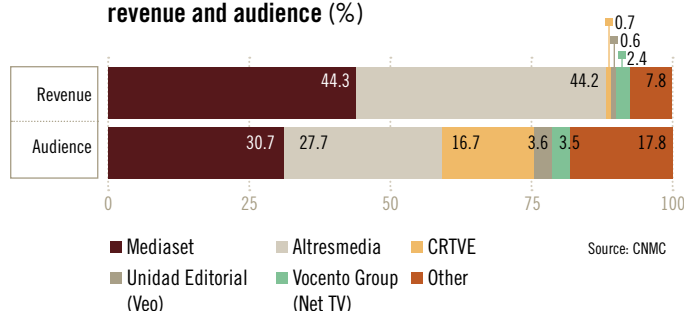
Source: CNMC

⁷⁶ Only includes advertising revenue obtained by free-to-air TV networks and excludes the combined advertising revenue of €37.3 million obtained by the pay television networks. This revenue relates to the free-to-air TV channels that operate over the bandwidth of each operator, regardless of whether the channels are operated directly or indirectly. It does not include private regional and local television networks.

This concentration was also maintained in audiences, although somewhat smaller in this case – both groups totalled 58.4%–, due to the fact that Corporación de Radiotelevisión Española, which is not included in the distribution of advertising revenue, is included in the distribution of audience share.

It should be noted that, at year end, asymmetry was observed with regard to the number of channels operated by each group. The decision issued by the Supreme Court, which determined the closure of nine programme channels at the beginning of the year, affected the operators differently and, while Mediaset lost two programme channels (La Siete and Nueve), Atresmedia was obliged to close three (Nitro, Xplora and La Sexta3), in addition to having another channel rented to the pay DTTV operator Gol Televisión.

DTTV market share in terms of advertising revenue and audience (%)



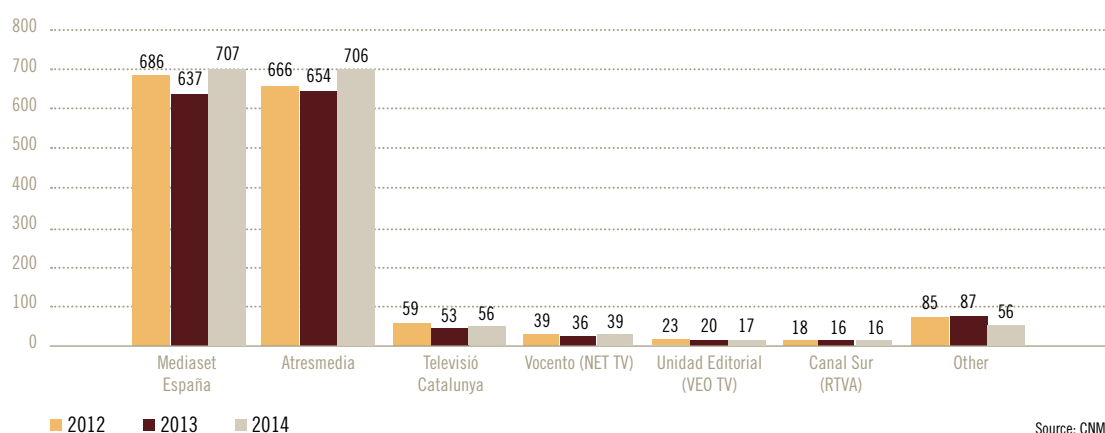
Consequently, at year end, Mediaset ran six programme channels and Atresmedia only four.

The remaining 11.5% of advertising revenue was distributed among the other market participants.

The other two Spanish private operators, Net TV and Veo TV jointly accounted for 3.4% of total revenue (€38.8 million and €16.7 million, respectively)⁷⁷. These figures represented year-on-year growth of 6.8% for channels operating via the Vocento Group and a fall of 14.7% for those operating via Unidad Editorial. These two Spanish operators were also affected by the decision issued by the Supreme Court, which determined the cancellation of two of the four channels of each. In anticipation of the implementation of this decision, at the beginning of 2014 the programme channels Intereconomía TV and MTV –which operated on the Vocento Group's multiplex– and the pay DTTV channel AXN, which operated via Unidad Editorial, ceased broadcasting.

As regards the group of regional public operators, in 2014, after the closure of the Valencian television network in 2013, 13 operators, totalling 24 programme channels, were active in this segment. This group obtained total advertising revenue of €113 million, up 3.5% on 2013, which in absolute terms represented an additional €3.8 million for the entire group. This group includes the third-ranking operator in terms of size, which was the Catalan regional public television network, which obtained advertising revenue of €56.4 million (up 6% on 2013), and the sixth-ranking operator, the Andalusian regional public operator (Canal Sur), with €16.1 million (up 1.5% on 2013).

Advertising revenue of the leading free-to-air TV operators⁷⁸ (millions of euros)



⁷⁷ Net TV and Veo TV shut down their respective channels, La 10 and VE07, in 2011 and currently operate under a business model based on the transfer of television signals awarded to third-party operators. The advertising revenue relates to the channels that operate through their licences.

⁷⁸ The revenue relates to all the channels that operate as free-to-air TV over the bandwidth of each group, regardless of whether the channels are directly or indirectly operated.

Audience by operator

The results obtained in terms of advertising revenue and its distribution among the different market operators is reflected in their audiences, the evolution of which determines operator profits.

In parallel with advertising revenue, the joint dominance of Mediaset and Atresmedia also obtained significant results in terms of audiences. At year end, the two operators dominated the Spanish market with a joint audience share of 58.4%.

In terms of distribution by group of companies, Mediaset occupied the leadership position, reaching a share of 30.7%, up 1.7 points on the previous year. It was followed by Atresmedia, more affected by the closure of channels in May, which obtained a share of 27.7%, down 1.1 points on 2013.

The third-ranking operator in terms of audience share was Corporación de Radiotelevisión Española which, after changing its funding model in 2009, has been immersed in a complex restructuring and adjustment process which has resulted in a progressive loss of audience share in recent years. In 2014, the public operator, which is included in the distribution of audience share but not advertising market share, maintained –partly due to the loss of channels suffered by private operators– its relative position of 16.7% for the second consecutive year, although this is the lowest audience percentage recorded in the company's history.

Evolution of audiences by channel and group (percentage)

Audiences	2012	2013	2014	DIF.
Mediaset	28.1	29.0	30.7	1.7
Telecinco	13.9	13.5	14.5	1.0
Cuatro	6.0	6.0	6.7	0.7
FDF	2.9	2.9	3.5	0.6
Divinity	1.4	1.7	2.1	0.4
Boing	1.7	1.7	1.7	0.0
La Siete*	1.4	1.2	0.3	-0.9
Energy	0.9	1.2	1.5	0.3
Nueve*	-	0.7	0.3	-0.4
Atresmedia	25.8	28.8	27.7	-1.1
Antena 3	12.5	13.4	13.6	0.2
La Sexta	4.9	6.0	7.2	1.2
Neox	2.6	2.3	2.6	0.3
Nova	1.6	2.1	2.5	0.4
Nitro*	1.6	1.7	0.6	-1.1
Xplora*	0.9	1.7	0.6	-1.1
La Sexta 3*	1.6	1.6	0.6	-1.0
Grupo CRTVE	18.9	16.7	16.7	-
La 1	12.2	10.2	10.0	-0.2
La 2	2.5	2.4	2.8	0.4
Clan TV	2.5	2.4	2.3	-0.1
Teledeporte	0.8	0.9	0.9	-
24H	0.9	0.8	0.8	-
Vocento Group (NET TV)	4.4	4.5	3.5	-0.1
Paramount Channel	0.8	1.4	1.9	0.5
Disney Channel	1.6	1.5	1.5	-
Intereconomía*	1.2	0.9	0.1	-0.8
MTV*	0.7	0.6	0.1	-0.5
G. U. Editorial (VE0TV)	3.2	3.5	3.6	0.1
Discovery Max	1.2	1.6	2.1	0.5
13TV	1.0	1.3	1.6	0.3
AXN (pay DTTV channel)	0.3	0.3	-	-
Marca TV	1.0	0.6	-	-

Source: Kantar Media

* Channels that ceased broadcasting in May as a result of the decision issued by the Supreme Court. Channel AXN and the former Marca TV, which had been replaced by a teleshopping channel, ceased broadcasting in anticipation of the implementation of the decision.

Audience by type of channel

In recent years and as a result of the migration to the DTTV environment and the broadening of the television offering, which implied an increase in the number of available channels, the market entered an audience fragmentation process that led to a progressive reduction in the audience share of traditional channels in favour of the new thematic channels. This phenomenon caused the share of traditional general channels to plummet after the introduction of the DTTV model in 2010.

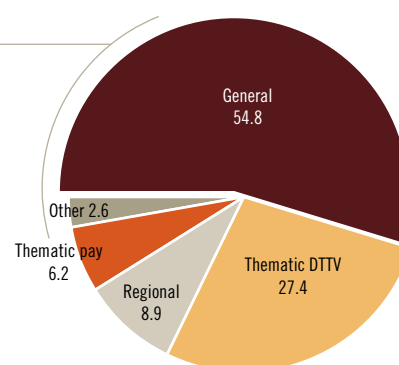
The closure of nine DTTV channels at the beginning of the year –which mainly affected thematic channels–, halted the progressive fragmentation of audiences for the first time, causing growth in the audience share of the traditional general channels⁷⁹, as a whole, of 3.4 points compared to the previous year, with an equal rise in the audience share of all pre-DTTV channels except La 1, which fell by 0.2 points.

At the other extreme were the DTTV thematic channels as a whole, which recorded a fall in audience share for the first time since the introduction of DTTV, coinciding with the 3.4 point growth in market share recorded by the general channels. Thus, in 2014 the joint audience share of free-to-air thematic channels fell, from 30.8 points in 2013 to 27.4 in 2014. For their part, thematic channels increased their audience share by 0.7 points, recording a joint audience share of 6.2%, in line with the increased penetration of pay television services in Spain in 2014.

As regards the regional television networks as a whole, the total operators grouped under FOR-TA (Federation of Regional Radio and Television Organisations or Entities) obtained an average audience share of 8%, the historical minimum recorded by this group after falling 0.7 points compared to 2013. This fall was not homogeneous and, analysed individually, some regional

channels grew in terms of audience share compared to the previous year. This was the case of the public television networks of Asturias, Madrid, Castilla La Mancha and the Canary Islands. To the previous public television network audience figure we must add the audience share obtained by privately owned regional channels, which accounted for 0.9 points of total national audience share in 2014.

DTTV audience share by type of channel (%)



Source: Kantar Media

Audience by channel

An individual analysis of each programme channel revealed that, for the third consecutive year, Telecinco obtained a larger number of viewers and maintained its leadership position with an audience share of 14.5%, up one point on the previous year. Antena 3 ranked second with 13.6% (up 0.2% on 2013) and La 1 of CRTVE ranked third in terms of viewers, although it reached a historic low in 2014, with an audience share of 10% and a fall of 0.2 tenths.

La Sexta and Cuatro occupied an intermediate position, with audience shares of 7.2% and 6.7%, respectively, (up 1.2% and 0.7%, respectively) followed at a considerable distance by the other channels, headed by FDF of the Mediaset Group with 3.5% and La 2 of CTVE with 2.8%, and Neox and Nova of Atresme-

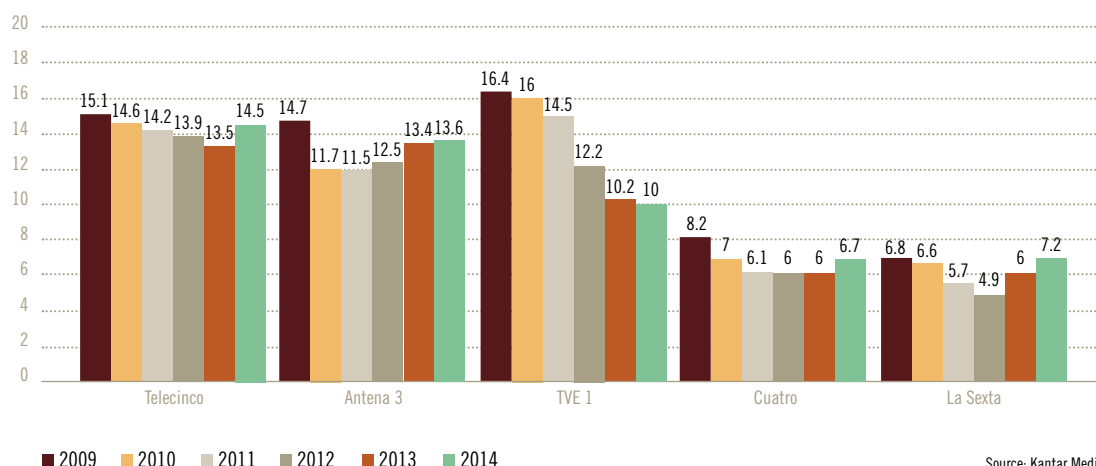
⁷⁹ The general group included the channels La1, La2, Tele 5, Antena 3, Cuatro and La Sexta.

⁸⁰ Federation of Regional Radio and Television Organisations or Entities.

dia with audience shares of 2.6% and 2.5%, respectively. The audiences of these thematic channels were also reinforced by the disap-

pearance of nine DTTVE channels, such that they all recorded growth compared to the previous year.

Evolution of audience share of the five main channels (%)

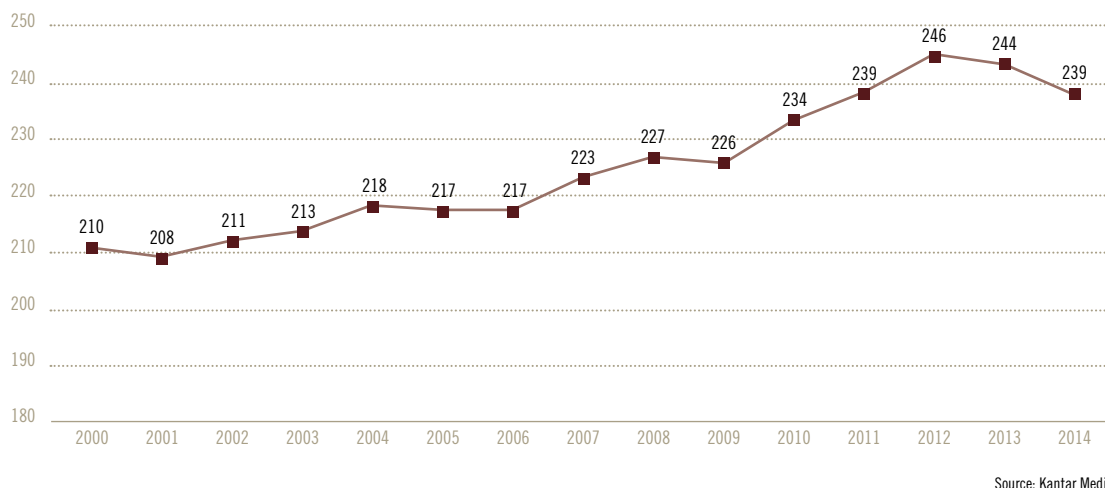


Television audiences and viewing

In 2014, an average of 239 minutes (3 hours and 59 minutes) of television viewing was recorded per viewer per day. This figure implies that each Spaniard watched 5 minutes less than

in 2013 and 7 minutes less compared to the record figure of 2012. Even so, this figure is the third highest since television viewing data were first recorded in Spain.

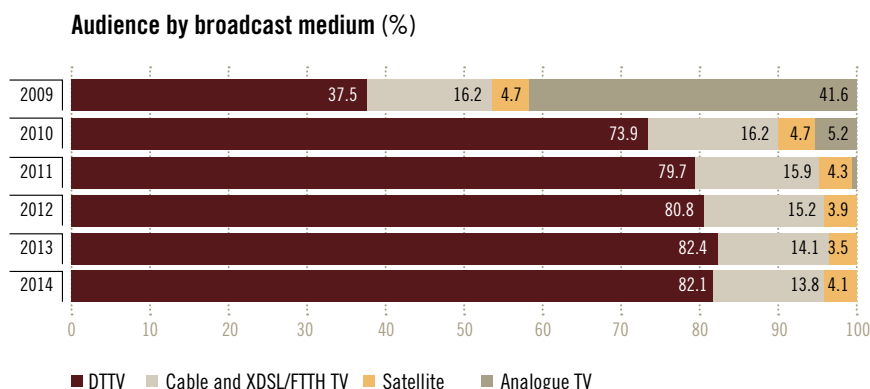
Average daily television viewing (minutes)



Audience by broadcast medium

The distribution of average viewing by broadcast medium was very similar to that of the previous year, with a slight fall in the viewing time of free-to-air DTTV services (82,1%) and cable TV and XDSL/FTTH TV services (13.8%) in favour

of satellite TV, which grew 0.6 points to 4.1%. These figures indicate a slight shift in viewers towards higher consumption of pay television compared to 2013.



2.5.3 Pay television segment

In 2014 pay television operators obtained revenue of €1,742 million, representing year-on-year growth of 1.6%. The most significant development during the year was the strong growth in the number of subscribers to conditional access television services, which grew 30.5% (1.2 million), without taking mobile television services into account. This growth reflected the mass subscription to Movistar's pay television service, bundled in its commercial offering *Fusión*, which in just one year achieved 1.4 million new subscriptions. Another relevant development in the pay television segment in 2014 was the merger between the telecommunications operators Vodafone and Ono, on the one hand, and Movistar and the satellite TV operator DTS, which manages the services of Canal+, on the other. Although the effects of these merger transactions were not yet noticed in 2014, they can entail substantial changes in market operation and structure which will be noticeable from 2015.

Revenue by type of technology

Analysis of pay television revenue by technology becomes increasingly irrelevant from the moment that operators begin to diversify the distribution channels of their pay television services, while simultaneously diversifying their operations related audiovisual communication services.

In the last two years, most operators, in addition to historically offering the television service via the traditional medium, have also begun to offer online services, enabling viewers to access the operator's television via any Internet-connected device⁸¹.

Furthermore, the operator consolidation transactions carried out in 2014 allowed operators to have more than one distribution channel. For example, Vodafone, which has XDSL and FTTH lines throughout Spain, acquired Ono, which has HFC cable connections. As a result of this transaction, the new resulting operator (Vodafone⁸²) may offer pay television services using either of

⁸¹ The online television area includes DTS's YOMVI brand, Movistar's free 'multidevice' services, the 'Ono TV Online' service –renamed 'Vodafone Online TV' since 2015– and the 'Orange Multidevice TV' service.

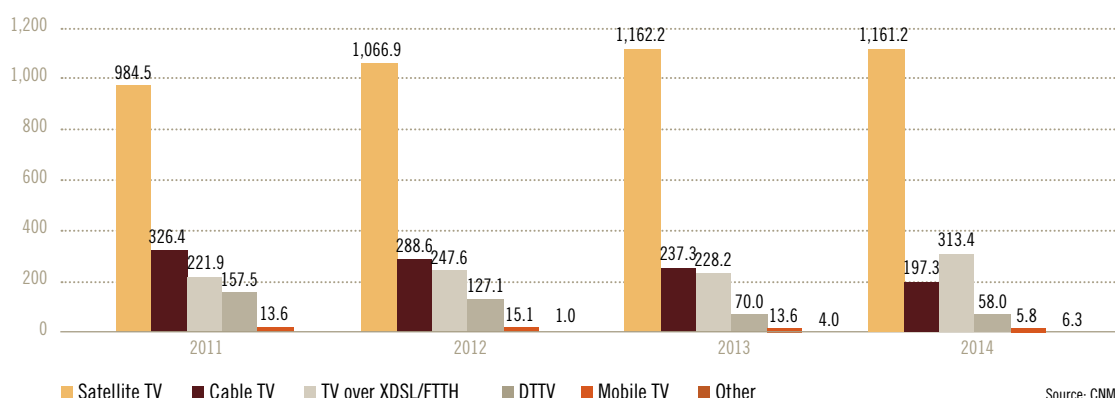
the two technologies. A similar case is that resulting from the consolidation transaction carried out by Movistar, which allows Movistar to offer the pay television service over XDSL and FTTH and which, through the acquisition of a satellite TV operator, also gives it a different technology through which to offer its services.

In terms of operator activity, the satellite TV operator DTS, which traditionally offered access to its channels via satellite, entered into agreements with third-party pay television operators (Movistar, Vodafone, Orange, TeleCable, Euskaltel and R) in 2011 to also offer its channels

indirectly through the services of these pay television operators, such as premium channels. In this context, television revenue of satellite TV operators not only encompasses typical revenue from satellite subscribers but also includes other operator revenue from indirect subscribers, which relate to the distribution of its main channels using other technologies (cable, XDSL and FTTH).

These aspects must be taken into account when evaluating the pay television results by broadcast medium that appears in the following graph and which are analysed below.

Pay television revenue by broadcast medium⁸³ (millions of euros)



Satellite TV maintained its leadership position in 2014, accounting for 66.7% of pay television revenue, €1,161.2 million, 0.1% less than the revenue obtained in the previous year. This revenue stemmed both from subscribers directly subscribed to the satellite service and subscribers subscribed indirectly to premium channels through the pay television services of third-party operators.

The technology ranked second in terms of revenue was pay television over XDSL/FTTH, which

grew 37.4% –positioned ahead of cable TV services for the first time–, with a volume of billings of €313.4 million. The growth in revenue was related to the strong growth in the number of subscribers to pay television over this technology arising from the success of Movistar's bundled service offering, Fusión.

Cable TV services ranked third in terms of revenue, at €197.3 million, down 16.9% on the previous year. This decline was accompanied by a drop in the customer base of 1.4%.

⁸² References to Vodafone refer to the operator resulting from the acquisition of Ono by Vodafone, although in 2014 Vodafone data relate exclusively to Ono, since Vodafone stopped providing the xDSL pay television service in December 2012.

⁸³ It does not include revenue from the online pay television or web TV services offered by the pay television operators.

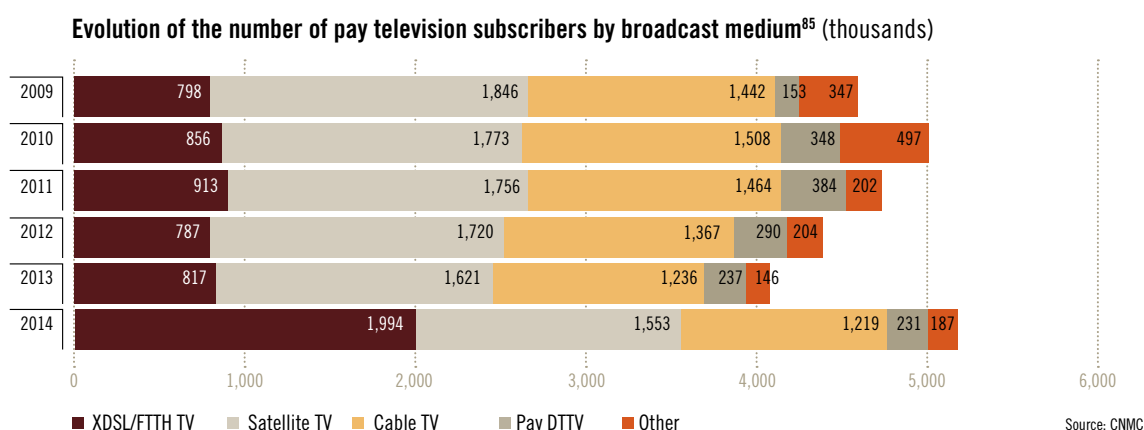
Pay DTTV services, consisting of the sports channel Gol Televisión, ranked fourth in terms of revenue⁸⁴. These services obtained revenue of €58 million, down 17.2% from December 2013, and a fall in subscribers of 2.4%.

The mobile TV services offered by operators over 3G/4G mobile data networks, ranked last. In 2013 only two operators offered this service, Movistar and Orange. At the end of the first quarter of 2014, Movistar ceased its activity in this

area, causing its revenue from this service to fall by 57.1% to €5.8 million.

Number of subscribers by technology

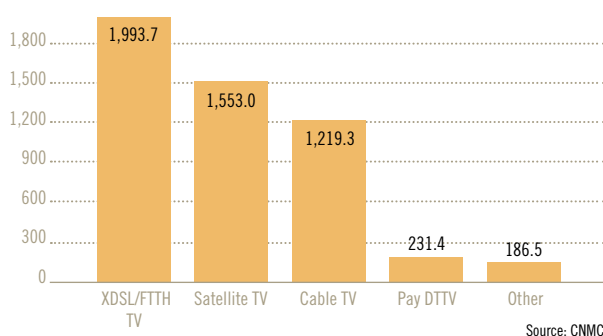
The total number of pay television subscribers in Spain exceeded five million for the first time in 2014. This figure represented a record high in the number of pay television subscribers in our country.



Specifically, the number of subscribers to pay television via fixed connections totalled 5,140,991 customers, representing annual net growth of 1,201,322 subscriptions. If to this figure we add subscribers to mobile TV services, the total number of subscribers to pay television services in Spain stood, at year end 2014, at 5,183,916 customers.

In this connection, mention should be made of the strong growth in pay television services over XDSL/FTTH, driven by the surge in bundled telecommunications –telephony and fixed and/or

Distribution of the number of subscribers by technology⁸⁶ (thousands of subscribers)



⁸⁴ The subscription channel AXN, which formed part of the DTTV offering, ceased its DTS broadcasting activity at the end of April.

⁸⁵ Other includes mobile TV and online pay television or web TV services.

⁸⁶ Other includes subscribers to online pay television or web TV services.

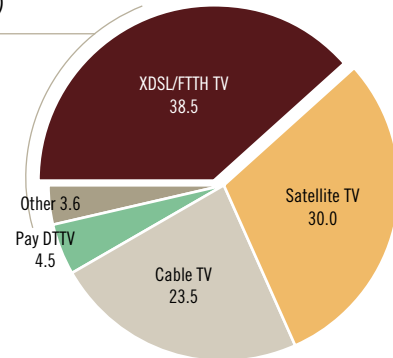
mobile broadband– and pay television services offered in Movistar's Fusión bundles.

Pay television services over XDSL/FTTH technology (which in previous reports was called “IP TV”) grew 144% with 1.18 million new subscriptions in one year. This growth situated television services over XDSL/FTTH as the country's leading pay television technology, overtaking satellite TV - historically the leading form of pay television in Spain - in terms of customer numbers.

The other traditional pay television media (satellite, cable and DTTV) fell in terms of number of customers, ending 2014 with 68 thousand, 17 thousand and 6 thousand less subscribers, respectively.

At year end, subscribers were relatively distributed among the different technologies, the largest being XDSL/FTTH TV with 38.5%, followed by satellite TV with 30% and cable television with 23.5% of users. In 2014 the four leading market operators carried on their activity using different technologies. The three leading pay television operators, DTS, Movistar and Vodafone, offered the service via satellite, cable and over XDSL/optical fibre networks, respectively, and the fourth operator, Gol Televisión –which offers pay-per-view football-related content–, used DTTV technology,

Distribution of subscribers by technology⁸⁷ (%)



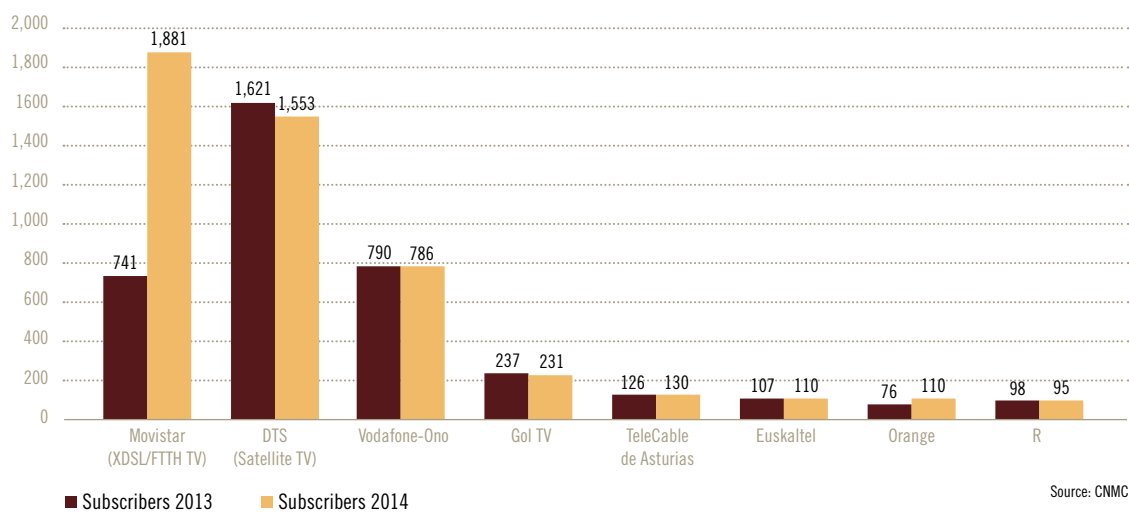
Source: CNMC

although this configuration is expected to change in the coming years, following the operator consolidation processes.

Number of subscribers by operator

At year end 2014, Movistar was the largest market operator with 1.9 million subscribers to the Movistar TV service, followed by DTS with 1.5 million customers subscribed to the satellite TV service and then, at a substantial distance, by the third-ranking operator in terms of size, Vodafone, with 786 thousand customers.

Number of subscribers of leading pay television operators^{88, 89} (thousands of subscribers)



Source: CNMC

⁸⁷ The 'Other' category includes subscribers to online pay television or web TV services.

⁸⁸ DTS includes satellite TV and YOMVI.

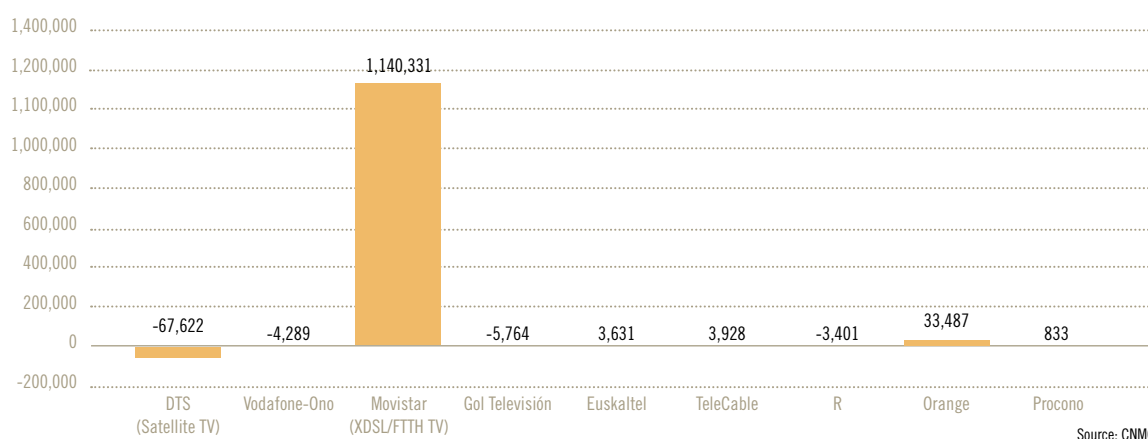
⁸⁹ DTS DISTRIBUIDORA DE TV DIGITAL, S.A. manages Canal+ and YOMVI.

According to a dynamic analysis, as mentioned earlier, the operator that showed the strongest growth by number of subscribers in 2014 was Movistar, with 1.18 million new subscriptions. The second fastest-growing operator was Orange with 33 thousand new customers, followed by the regional cable oper-

ators Euskaltel, TeleCable and Procono, which also recorded slight growth in their customer bases.

At the other end was DTS, which recorded a loss of 68 thousand subscribers, and Gol Televisión and Vodafone, which ended the year with nearly six thousand and four thousand less customers, respectively.

Net change in subscribers 2013/2014⁹⁰ (subscribers)

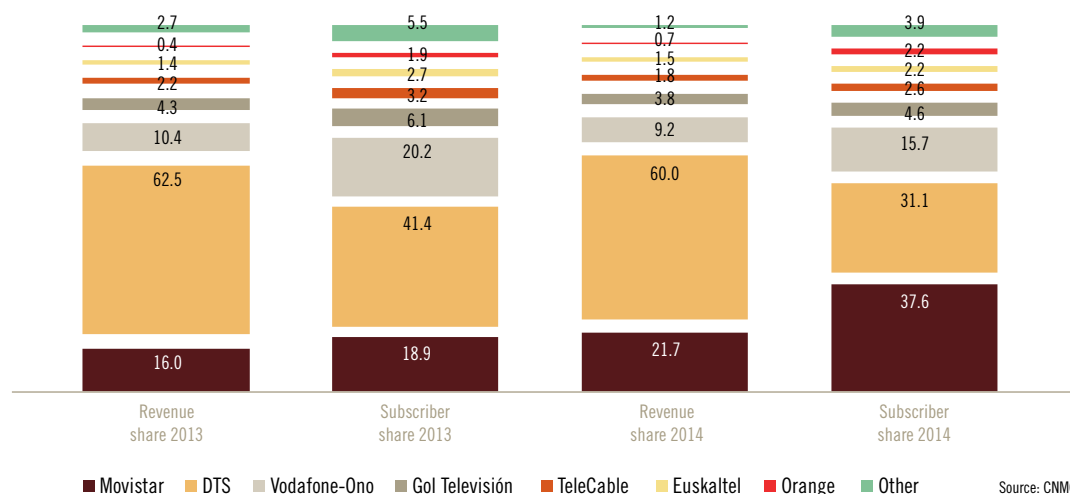


Distribution of revenue by subscribers and pay television subscribers by operator

By market share, the largest operator in terms of customers was Movistar, which accounted for 37.6% of total subscriptions via fixed pay television connections in Spain. However, this op-

erator ranked second in terms of revenue (with 21.7% of revenue from total subscribers), behind DTS, which obtained 60% of total revenue with 31.1% of subscribers.

Market share by revenue from subscribers and number of subscribers⁹¹ (%)



⁹⁰ Does not include mobile TV.

⁹¹ Does not take into account subscribers and revenue from mobile TV and online TV. The data used to prepare this graph only takes into account subscriber revenue, not total operator revenue, so as not to include the effect of other operator activities such as the sale of proprietary productions or other revenue not related to subscribers

Geographical penetration of pay television

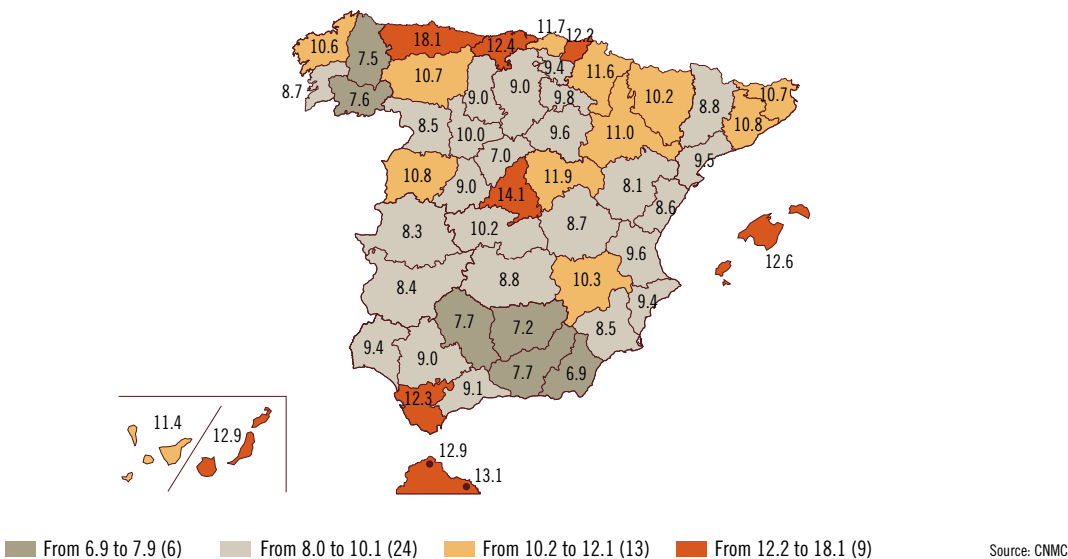
At year end 2014, strong growth in pay television subscribers meant that penetration of this service in Spain stood at 11.1 subscribers per 100 inhabitants on average. The province that recorded the highest penetration was Asturias, with 18.1 subscribers per 100 inhabitants, followed by Cádiz with 14.1%, Melilla with 13.1% and Las Palmas and Ceuta, both with 12.9%.

At the other end of the scale were Almería, Jaén and Lugo, with pay television services penetra-

tion of 6.9%, 7.2% and 7.5%, respectively, followed by Granada and Córdoba, both with 7.7%.

By technology, the form of television with the highest penetration rate was XDSL/FTTH pay television which, at year end, had 4.3 subscribers per 100 inhabitants on average. The medium with the second highest penetration rate was satellite television, with 3.3%, followed by cable TV and pay DTTV, with 2.6% and 0.5%, respectively.

Penetration of pay television by province⁹² (subscribers/100 inhabitants)



⁹² Does not include mobile TV or online TV.

Commercial offerings

In the pay television market there are, on the one hand, operators which are strictly pay television service operators –such as DTS or the pay DTTV operator Gol Televisión– and, on the other, telecommunications operators, whose main business is not pay television but which, over time and as their networks improve, have added pay television services to their initial service offering (telephony and Internet).

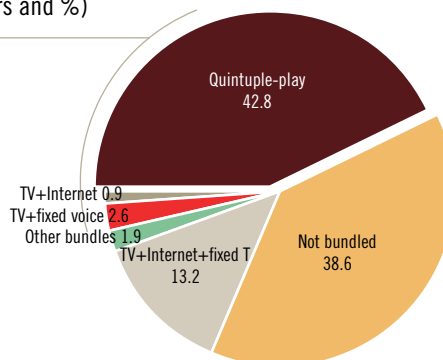
In the case of telecommunications operators, pay television services can be subscribed to in bundled offers that combine voice, data and television services over fixed and mobile networks, so that the end customer pays for all these services in a single bill.

Subscribing to services jointly is cheaper than subscribing to separate services. Subscription to the pay television service is, therefore, linked to subscriptions to joint offers in double-play, triple-play and, more recently, quintuple-play bundles.

Quintuple-play products began to be marketed following the launch of Movistar's commercial offering, Fusión, at year end 2013, which was a commercial success in 2014 and became the main engine of growth in the number of subscribers during the year. So-called quintuple-play products offer discounts on fixed voice, mobile voice, fixed broadband, mobile broadband and pay television services if subscribed to jointly.

The recent consolidation transactions in the pay television market (Movistar and DTS, Vodafone and Ono and Jazztel and Orange) indicate that the subscription of pay television services through bundled offers will be the main trend in the coming years.

**Pay television subscribers
by type of subscription
(subscribers and %)**

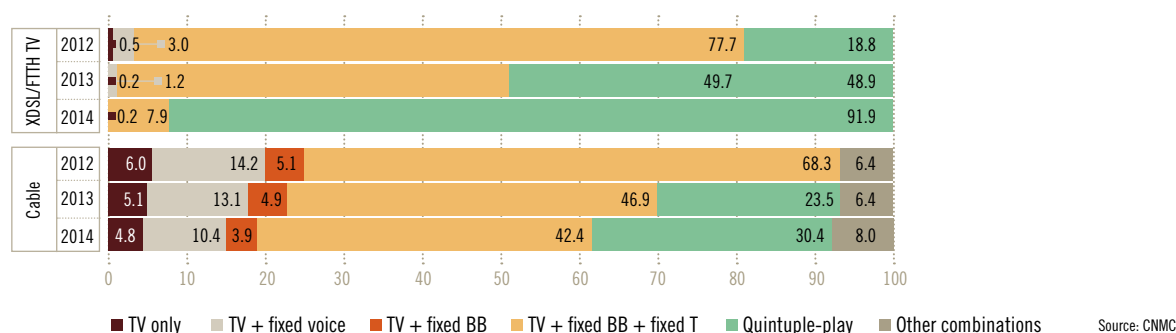


Source: CNMC

As regards the correlation between the pay television service and bundled subscription, in 2014, 61.4% of the 5.1 million pay television subscribers had subscribed to the television service with another telecommunications service. In terms of absolute value, this figure indicated that a total of 3.2 million pay television subscribers had subscribed to the service through a bundled offer that also included another telecommunications service (either telephony and/or broadband) in the same bill.

In 2014 there was exponential growth in the number of subscriptions to quintuple-play bundles, which grew by 1.5 million net subscriptions. As a result of this growth, at year end these types of products –which combine fixed telephony, mobile telephony, fixed broadband, mobile broadband and pay television in a single bill– had become the most frequently chosen pay television subscription modality with a total of 2.2 million subscribers. In addition to Movistar, the operators that offered these types of bundles notably included Orange, Vodafone and Euskaltel.

Pay television subscribers by type of bundle and broadcast medium⁹³ (%)

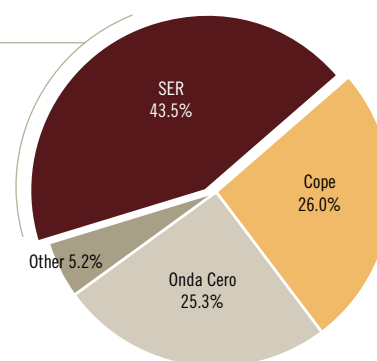


The second most frequently chosen subscription modality was triple-play, which combines fixed telephony services, fixed broadband and pay television in a single bundle. At year end, these types of offers, which fell compared to previous years, totalled 677 thousand subscribers, after losing 310 thousand subscribers relative to 2013. The drop in the number of subscriptions to these types of bundles was explained by the mass migration to quintuple-play offers.

The radio segment

In line with the recovery in advertising spending in the media, the radio sector's commercial revenue grew 4.2% in 2014 to €331.8 million, up €13.4 million on 2013. This figure does not include the subsidies received by public operators in 2014, which amounted to €116.2 million⁹⁴, down 2.2% compared to 2013. If to this net revenue we add subsidies, total radio revenue amounted to €448 million, up 2.5% on 2013.

Revenue of the leading radio groups (%)



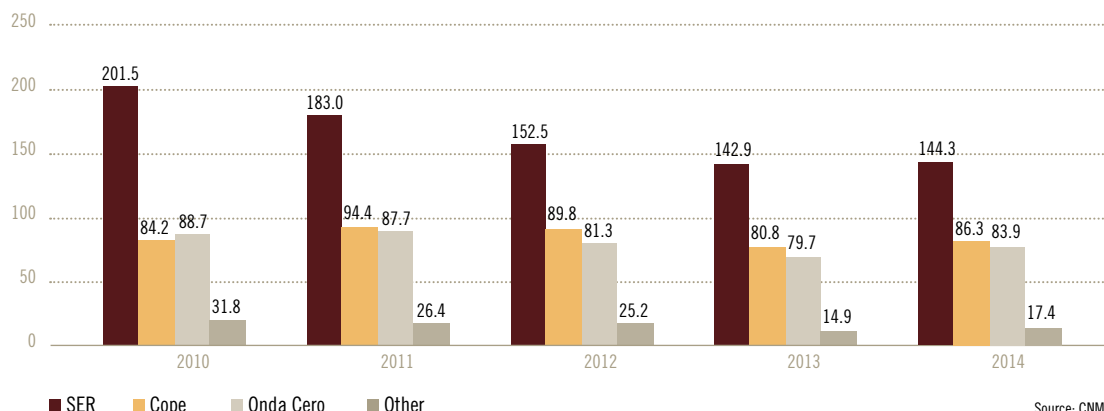
Concentration in the radiobroadcasting market

The market structure hardly underwent any change compared to previous years and advertising revenue was highly concentrated in three major Spanish private operators: Sociedad Española de Radiodifusión (SER), owned by the Prisa Group; Onda Cero, owned by the Uniprex Group; and COPE, owned by Radio Popular, which jointly accounted for 94.8% of the volume of business.

⁹³ Other combinations' includes the following bundles with minority service combinations: TV + fixed voice + mobile voice; TV + fixed broadband + fixed voice + mobile voice; TV + mobile voice and TV + fixed broadband + mobile voice.

⁹⁴ Only includes subsidies destined directly for radio services. This figure does not include subsidies destined for public radio and television entities, which in 2014 amounted to €155.3 million, nor those owned by RNE.

Revenue of leading radio operators (millions of euros)



Radio revenue by operator

By operator, Cadena SER maintained its leadership position as the main group with a market share of 43.5% and commercial revenue of €144.3 million. This implied growth of 1% relative to the previous year. It was followed by Cadena COPE, owned by Radio Popular, which in terms of revenue experienced the strongest growth in advertising spending and year-on-year

growth of 6.8% to €86.3 million. The third-ranking radio operator by size was Onda Cero, owned by the Uniprex Group, with €83.9 million, up 5.2% on 2013.

The remaining radio operators ranked behind the group of the three leading market operators, jointly obtaining €17.4 million after recording year-on-year growth in billings of 16.2%.

2.6 Audiovisual signal transport and broadcasting services

Audiovisual signal transport and broadcasting services are related to electronic communications services purchased by radiobroadcasters from network operators to broadcast their content, so as to reach end users.

The *ex ante* market analyses⁹⁵ carried out of audiovisual signal transmissions defined television signal transmission services as those which include the set of technical activities that an operator offers third parties so that they can configure their offer for television networks. Those activities consist in providing the public with audiovisual content prepared by broadcasters

using telecommunications services as a distribution channel.

Audiovisual signal transmission services are divided into, on the one hand, audiovisual signal transport services –which are those which consist in making the audiovisual signal of the production centres available to the broadcasting centres– and, on the other, broadcasting services, which are those which enable the transmission of the signal from the broadcasting and re-broadcasting centres to users' homes.

The main difference between the two services from the viewpoint of market competition is that

⁹⁵ Decision approving the definition and analysis of the wholesale market of the television signal broadcast carrier service, the designation of the operator with significant market power and the imposition of specific obligations and the agreement on its notification to the European Commission and to the Body of European Regulators for Electronic Communications (BEREC)' (MTZ 2012/1442, of the CMT).

the signal can be transmitted by cable, radio link or satellite. Any operator whose networks fulfil the broadcaster's requirements may potentially provide the transport services. The transport service can, therefore, be provided under competitive conditions, as there are numerous telecommunications companies that can provide the service through their existing infrastructure in Spain (cable, radio link or satellite).

On the other hand, the broadcasting service – which in the case of DTTV is linked to the use of the radioelectric spectrum–, can only be provided by operators which have a terrestrial network with the appropriate broadcasting facilities and infrastructures, which implies heavy investment and explains, in turn, the existence of only a small number of players specialising in the provision of these services.

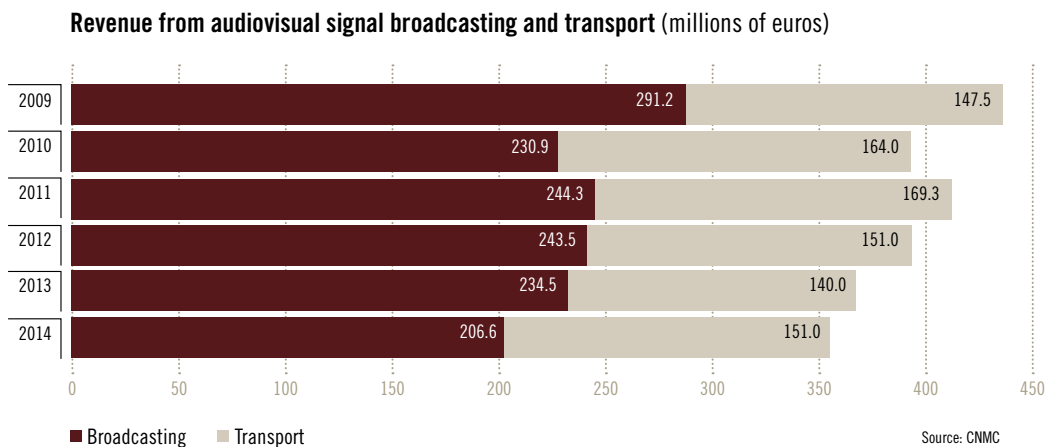
Additionally, in the case of broadcasting services there are other types of barriers to market entry arising from the long duration of contracts and the impossibility of replicating certain infrastructure in the short term. As a result, the wholesale television signal broadcasting market is considered a non-competitive market in which there are structural barriers to entry for new operators

and which is subject to the rules of *ex ante* regulation.

Transport and broadcasting revenue

The audiovisual signal transport market is a wholesale market and therefore its economic performance is connected to what happens further down the market chain. Therefore, at times of expansion in radiobroadcaster activity, growth in billings from these services can be observed, while at times of lower radiobroadcaster activity, freezing and even decline in the economic activity of audiovisual signal operators can be observed.

As regards 2014, the closure of nine programme channels at the beginning of the year affected the agreements entered into with Spanish radiobroadcasters and the volume of wholesale transport revenue and signal broadcasting fell by 4.5% to €357.6 million. Of the two main activities performed by signal-carrying operators, the one which was affected by the closure of DTTV channels was audiovisual signal broadcasting, which recorded a year-on-year fall of 11.9%, which was not offset by the better results achieved by the signal transport activity.



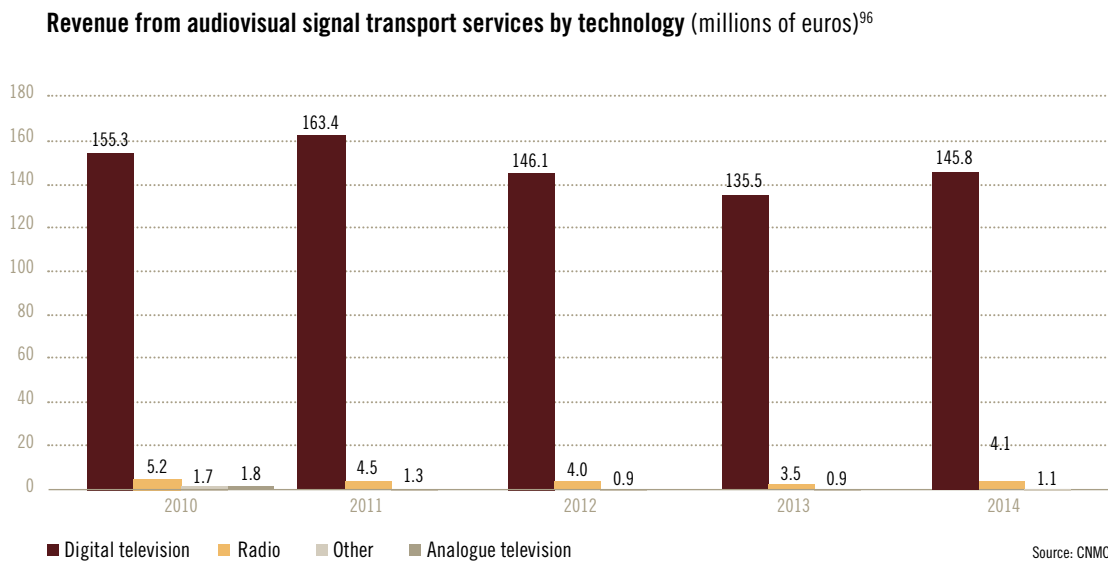
2.6.1 Audiovisual signal transport services

Revenue from signal transport was not affected by the closure of DTTV channels and in 2014 grew 7.9%, with a volume of business of €151 million. This result represented a return to the billing levels reached by the sector in 2012.

Transport revenue by type of technology

According to the type of audiovisual communication service to which they provide support, in

the case of signal transport, the highest billings related to the digital television service, which stood at €145.8 million, representing year-on-year growth of 7.6% compared to 2013. DTTV signal transport was the main activity of this segment, with a 96.5% share of total revenue. The other section of this chapter related to the radio signal transport activity, with revenue amounting to €4.1 million and year-on-year growth of 16%.



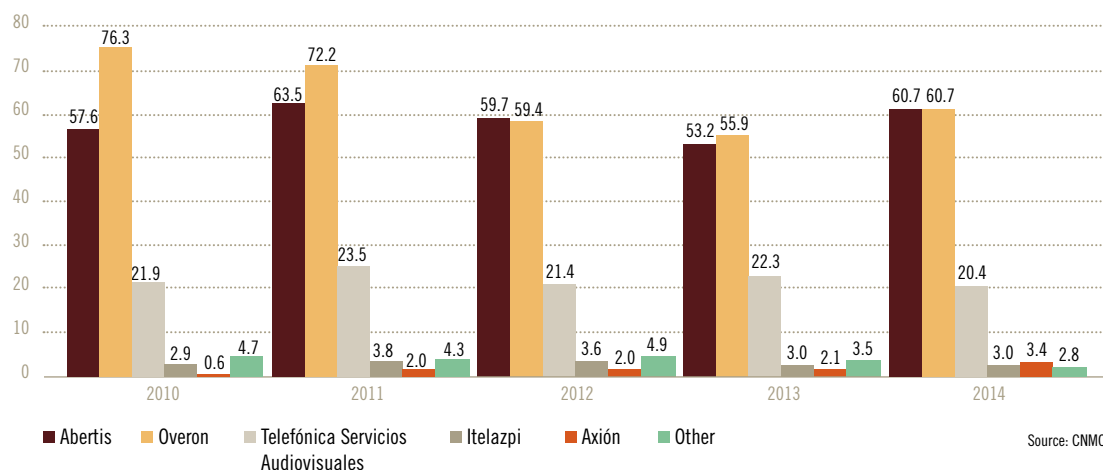
Revenue by operator and share of the audiovisual signal transport services market

Once again, Overon and Abertis were the leading operators in terms of revenue and number of customers. In 2014 the two operators re-

corded identical revenue levels with billings of €60.7 million which, in the case of the former, represented growth of 8.5% and, in the case of the latter, year-on-year growth of 14.1%.

⁹⁶ Other includes occasional contribution and other transport services.

Revenue from audiovisual signal transport services by operator (millions of euros)



The third-ranked operator in terms of size was Telefónica Servicios Audiovisuales, with revenue of €20.4 million, down 8.5% on 2013. These three operators are the only operators with nationwide presence.

They were followed at a substantial distance by the other operators attached to different regional areas. These operators jointly totalled €9.2 million, representing growth of 8.2%

2.6.2 Audiovisual signal broadcasting services

Television and radio signal broadcasting services had the greatest bearing on overall revenue, accounting for 57.8% of total revenue generated in 2014. This segment was affected in 2014 by the Supreme Court decision which required the closure of nine DTTV programme channels, which ceased broadcasting in May.

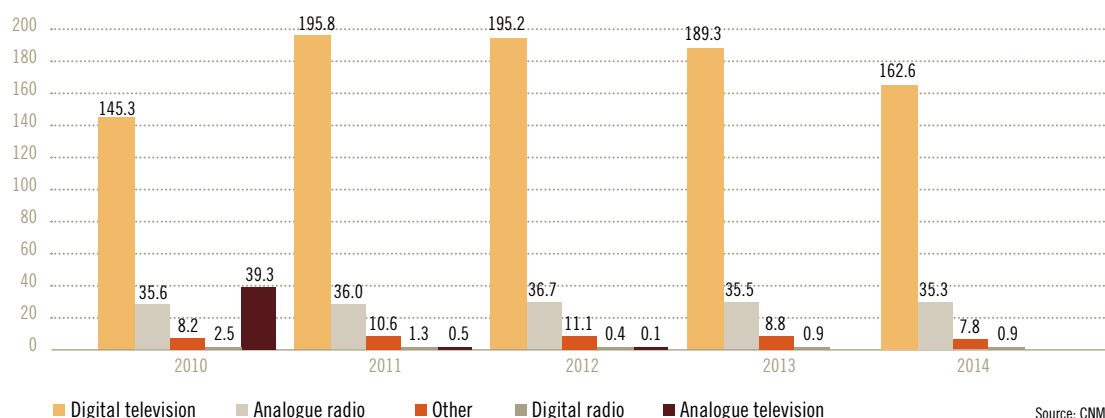
In this context, the revenue obtained from the broadcast of DTTV signals fell by 11.9% compared to 2013 to stand at €206.6 million.

Broadcast revenue by type of technology

The highest volume of revenue corresponded to digital television services, which obtained billings of €162.6 million. Revenue from these services fell by 14.1% compared with the previous year after the nine DTTV channels that closed in 2014 ceased broadcasting. Revenue from DTTV broadcasting accounted for 78.7% of total revenue from audiovisual signal broadcasting.

It was followed by radio signal broadcasting services, with €36.2 million. These services remained stable compared to the previous year and only suffered a slight fall of 0.5%. Overall, radio services accounted for 17.5% of revenue obtained from broadcasting services.

Revenue from audiovisual signal broadcasting services by technology (millions of euros)⁹⁷



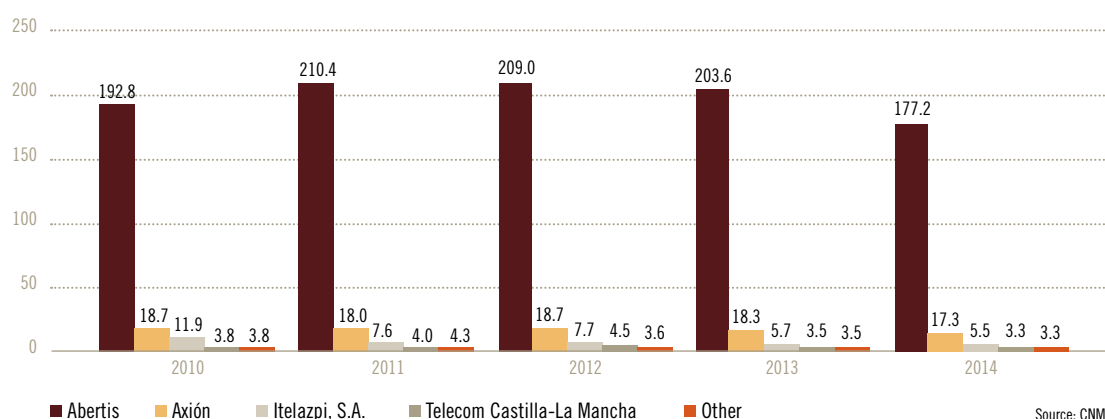
Revenue by operator and share of audiovisual signal broadcasting services market

The leading market operator was the Abertis Group⁹⁸, which is the only nationwide operator. This operator obtained revenue of €177.2 million, down 13% on the previous year due to the fall in the number of DTTV programme channels.

It was followed at a substantial distance by the other operators which carry on their ac-

tivity in their respective regions. The largest regional operator was Axión, whose activity is focused on the Autonomous Region of Andalusia. This operator obtained revenue of €17.3 million, down 5.4% on 2013. The second-largest regional operator was the Basque operator Itelazpi, obtaining billings for services of €5.5 million, down 3% on the previous year.

Revenue from audiovisual signal broadcasting services by operator (millions of euros)



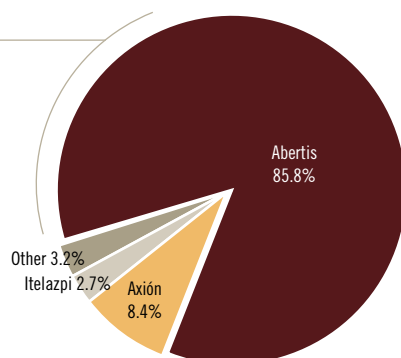
⁹⁷ Revenue from other services related mainly to revenue from Premium DTTV.

⁹⁸ The revenue obtained by the Abertis Group groups together the revenue generated by its subsidiaries Retevisión I, S. A. U. and Tradia Telecom, S. A.

Competition in the audiovisual signal broadcasting services market

The audiovisual signal broadcasting services market is characterised by being a highly concentrated market in which there is a single operator, Abertis Telecom, which operates at national level and accounts for 85.8% of overall billings, compared to the other operators, which operate at regional level, and jointly account for the remaining 14.2% of total revenue.

Share of the audiovisual signal broadcasting service market by revenue (%)



Source: CNMC

According to the last market analysis performed by the defunct CMT in 2013, Abertis is the company with the greatest television signal transport infrastructure in Spain, owning most of the huts and radio towers. There are seven autonomous regions which have an independent television signal operator and jointly provide services to 48.3% of the Spanish population, although most are state-owned operators that provide services in a specific autonomous region and do not offer services to third parties.

According to the analysis, Abertis provides nationwide service to the five Spanish operators –the state-owned operator CRTVE and the four privately owned operators: Mediaset, Atresmedia, the Vocento Group (Net TV) and the Unidad Editorial Group (Veó Televisión). Also at regional level, in 2013, seven of the 13 state-owned regional television network radiobroadcasters had subscribed to the service with Abertis and six with regional operators⁹⁹.

Regulation of the wholesale television signal broadcasting market

In May 2013, the CMT published the decision relating to the third round¹⁰⁰ of the wholesale television signal broadcasting market analysis. This analysis concluded that Abertis continued to have a significant power in the Spanish television broadcasting market, holding a 100% share.

The decision established a number of obligations for the operator, namely:

- The obligation to lease spaces at their broadcasting centres (co-location), which provide services to 93% of the population.
- The obligation to offer the possibility of interconnection at its other network locations.
- The obligation to publish a reference offer relating to access to conduits (ORAC).

The regulation imposed by the CMT only affects the digital terrestrial television (DTTV) signal broadcasting market that provides services to the public's homes; this regulation excludes television signal transport and broadcasting services through other transmission media.

⁹⁹ Mention should be made of the existence of operators, mostly state-owned, which provide services to regional television channels. This fact has caused recipients of television licences in each region to deal with the operator that provides services in that region. The business activity of these operators is, therefore, clearly focused on their specific autonomous region.

¹⁰⁰ The first two reviews were approved by the CMT in its decisions of 2 February 2006 and 21 March 2007, respectively.



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