



Economic Report on the **Telecommunications and Audiovisual Industry 2014**

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Letter from the Chairman

2013 was characterised by significant regulatory changes in the electronic communications and audiovisual industries and, at the same time, by being a year of great dynamism. The retail markets for bundles combining fixed and mobile network services into one commercial offer were consolidated; the demand for mobile broadband services grew strongly, signing up 6.6 million new subscribers; the end of the year saw the start of the deployment of 4G/LTE networks, and, lastly, the operators made significant efforts to deploy new generation fixed networks, or NGA networks. The deployment of NGA networks, which provide very high transmission rates, provided 3.4 million more deployment points than in 2012, with 16.9 million deployment points deployed by the end of the year.

It should also be remembered that on 7 October Spain's National Authority for Markets and Competition (Spanish initials, CNMC) started operating. It took on, among others, the activities and functions of the *Comisión del Mercado de las Telecomunicaciones* and the supervisory duties assigned in Act 7/2010 on Audiovisual Communication. An independent regulator was thus set up for the Spanish audiovisual industry, with specific powers of oversight over advertising and the rights of minors and persons with disabilities, as well as generic powers to supervise the proper functioning of competition in the industry. Subsequently, other important regulatory changes affecting the industry were the approval of the General Telecommunications Act on 15 May 2014 and Community legislative initiatives aimed at ensuring that operators have equal conditions in the roll-out of new networks.

During this period there was also a certain continuity in some important market trends. Firstly, in 2013, the industry was still showing the effects of the economic crisis, and overall revenue from both wholesale and retail services fell by an annual rate of 7%. This figure was due in part to large reductions in the rates for these services, which followed on from others in previous years and reflected both a growing trend on the part of users to seek the best offers – with record fixed and mobile portability figures during the year – and the effects of increased competition for the basic services.

The electronic communications industry also continued to register increasing broadband penetration and consumption. For fixed broadband, 725,000 new lines were installed, to reach 26.2 lines per 100 inhabitants, but for mobile broadband in particular, the number of lines accessing the Internet from a mobile network grew to over 31 million, to reach 67.1 mobile broadband subscriptions per 100 inhabitants. In contrast, mobile and fixed telephone services and even pay-TV saw their subscriptions fall.

Lastly, in spite of the significant challenge presented by incorporating a number of different organisations into one single authority, regulatory activity for the electronic communications industry has continued on course, and in 2013 the CNMC took some important decisions. Termination rates for calls between different mobile networks were significantly reduced, and a similar proposal was made for fixed termination rates in the review of that market. In addition, the rates for wholesale bit-stream access services were also reduced, these services being of great importance to the alternative operators.

All this occurred at a time of imminent major structural changes in the markets. These changes are due, on the one hand, to a trend towards greater consolidation in the industry resulting from the corporate acquisition initiatives announced in recent months. On the other hand, they are due to the emergence of a greater number and variety of bundled offers, the operators' need to position their audiovisual offering and the appearance of new audiovisual consumption habits both in terms of platforms and content providers. These are changes that require

convergent regulation, for which the CNMC is well placed given its multi-industry nature.

Lastly, I would like to express my thanks to the staff of the CNMC for their dedication in drawing up this Economic Report on the Telecommunications and Audiovisual Industry.

José María Marín Quemada
Chairman of the CNMC

Madrid, October 2014

Highlights of financial year 2013

The industry

Turnover for the industry fell by 7% to a total of €32,787.2 million

Revenue from end services was €27,272.9 million, a year-on-year decrease of 6.8%. Wholesale services – those provided by the operators to each other – fell somewhat more, by 8.3%, to a total of €5,514.3 million.

The end service that grew most was mobile broadband, with 6.6 million new subscriptions over the year and an increase in revenue of 19.7%.

The penetration of mobile broadband grew to 67.1 subscriptions per 100 inhabitants and fixed broadband to 26.2 lines per 100 inhabitants. In contrast, the penetration of pay-TV declined, as did fixed and mobile telephony.

Consumer spending fell significantly, either due to reductions in unit pricing or to improvements in the packaging of services.

Spending per household on a dual bundle of fixed broadband and unlimited domestic voice services (including access) fell by 5.7%, while spending on triple bundles, which also include pay-TV, fell further, by 7%. The cost per minute of domestic calls from a mobile network was substantially reduced over the year, by 25.3%, while the cost of calls from a fixed to a mobile network fell by 16.4%.

Success of quadruple play packages, which offer voice and broadband over both a fixed and a mobile network in one single commercial offer.

Quadruple play packages consolidated their position in the market and became the bundle most in demand, at 5.2 million, considerably ahead of the dual pay package of fixed telephony and broadband, which had been the bundle of choice up to 2012. The number of quadruple play packages rose by more than 4.1 million, while dual play packages fell by 3.4 million.

By contracting all four services in one bundle, consumers decreased their spending by 13.2%, compared to what they would have spent by subscribing to their fixed and mobile services separately.

Very high volumes of portability for fixed telephony and mobile broadband and telephony

Portability reached record figures, with over 160 thousand fixed numbers and over 560 thousand mobile numbers ported per month in 2013.

These portability figures meant that 15.4% of households stated that they had changed their fixed telephony provider in 2013, 17.4% had changed their Internet provider and 17.2% their mobile telephony operator.

Increased number of bundled services

Almost 60% of fixed telephony lines had joint subscriptions with another, additional service.

Over 92% of fixed broadband lines were bundled and almost half of pay-TV subscriptions were part of one commercial offer including other telecommunications services.

Investment remained at practically the same level as the previous year, at €3,899.9 million.

After excluding payments to obtain radio-electric spectrum licences, investment fell slightly, by 1.9% year on year.

Most of the investment was channelled into the deployment of FTTH/FTTN optical fibre networks by the alternative operators and Telefónica and of the 4G/LTE mobile network by the four operators who have their own networks.

Significant headway made in the roll-out of Next Generation Access (NGA) networks

A total of 16.9 million NGA deployment points (new generation networks) were rolled out by the end of the year, of which 10 million were over DOCSIS 3.0 and 6.9 million over optical fibre (FTTH and FTTN). The number of NGA connections available rose by 3.4 million from the previous year, most of these being optical fibre deployment points.

Expansion of fourth generation 4G/LTE mobile networks

These networks reached a population coverage of 60%, using the 1,800 MHz frequency bands (and in a more limited manner, 2.6 GHz).

Fixed communications

Fixed telephony

In 2013 revenue from retail fixed telephony fell by 13.3%

In 2013, revenue from retail fixed telephony fell by 13.3% compared to the previous year, to a total turnover of €4,190.8 million.

There was a decrease of some 200,000 lines even though the number of lines for the residential segment increased

The consolidated figure fell by 190,381 lines, even though in the residential segment the number of fixed lines rose by 125,901, but without compensating for the loss in the business segment of more than 310,000 lines. The penetration rate was 41.5 lines per 100 inhabitants.

An all-time record for portability: over 1.9 million

The number of numbers ported during the year exceeded 1.9 million, the highest figure recorded to date, indicating the high level of dynamism in the fixed telephony market.

Quadruple bundles overtook dual bundles for the first time in number of contracts, to become 26.8% of the total number of fixed lines

59.1% of fixed lines were for bundled voice. Quadruple bundles grew to 26.8% of the total number of fixed lines, compared with 22.4% for dual fixed voice and fixed broadband, which had been the most popular bundle to date.

The market share of alternative operators by number of lines exceeded 40%

The alternative operators continued to gain ground and reached a market share by lines of more than 40%, although Telefónica continued to be the market leader with 58.3% of the total.

Revenue from fixed network interconnection wholesale services was down 4.2% on the previous year

In 2013, the total revenue from interconnection was €1,608.9 million. In April 2014, the CNMC launched a public consultation on the proposal for regulating the fixed network call termination wholesale service

in order to gather the opinions of the players in this market.

Fixed network broadband

Broadband connections rose to over 12.2 million lines

Fixed network broadband deployment points increased by 6.3% during the past year to more than 12.2 million. This volume of lines brought the penetration rate to 26.2 lines per 100 inhabitants. xDSL technology, with 9.33 million lines, and HFC networks, with 2.14 million deployment points, together accounted for 94% of active broadband deployment points. Once again, the increase in FTTH connections was noteworthy, practically doubling in the space of one year and reaching 626,678 lines.

Internet services, which include fixed broadband, brought in a total of €3,577.4 million, 2.2% less than the previous year.

Over 1.8 million lines connected at a bitrate of 30 Mbps or higher

The improvement in access networks was mirrored by higher bitrates for broadband line subscriptions. Lines with a connected bitrate of 30 Mbps or higher were up by 56.4% last year, totalling 1.8 million, of which 33.5% were FTTH lines and the rest HFC and VDSL.

Alternative operators saw line numbers increase considerably

725,069 new broadband lines joined the market. Of these, the alternative xDSL operators captured 80%. Telefónica ended the year with almost 145,000 new lines. In spite of this, its market share fell to 46.8%.

Boost in bundled offers featuring fixed and mobile services

The 2013 financial year was characterised by huge numbers of subscriptions being taken out

for commercial offers with more bundled services. Bundled offers of fixed broadband and voice with mobile broadband and voice services were the most numerous offers on the market. These quadruple bundles represented 42.4% of the total number of broadband lines, compared with 9.2% in 2012.

The effective price of the bundle most often contracted, the quadruple play package, was between €34.90 and €45.90 (with mobile broadband traffic of between 100 MB and 300 MB and mobile voice traffic of between 100 and 200 min). These figures show that the difference in pricing between a quadruple bundle and a dual bundle of broadband and fixed voice is between €3 and €5.

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

The number of Telefónica local exchanges in which alternative operators were co-located continued to rise, in line with the increase in the local loop unbundling service, which reached the figure of 3.8 million loops. In areas where these operators do not have a local loop unbundling service, they have bit-stream access available with GigADSL and ADSL-IP services, which reached 689,815 lines, allowing them to complete their offer nationwide.

Demand for the wholesale Ethernet bit-stream access service (NEBA), which went into operation in 2012, was still not significant last year.

Mobile communications

In 2013, the number of mobile lines fell slightly

The demand for lines continued the downward trend seen in previous years; in 2013 it fell by 1%.

Revenue from mobile telephony end services fell by 20.1% in one year

In 2013, revenue from mobile telephony end services,

including voice and text services, was €7,576.9 million, a 20.1% drop from the volume posted in the previous year.

Strong increase in the turnover of MVNOs.

In 2013, the total revenue of the MVNOs rose to €726 million. This figure represents a year-on-year growth of 16.9%.

All-time record for mobile portability

In 2013, users were very active in choosing the most competitive mobile service offers. One result of this activity was that portability reached a new record level, with an average of 560,000 transfers per month.

The price of mobile calls fell by 20.9%

For the ninth consecutive year, average voice service revenue per minute was down on the preceding year. In 2013, it fell 20.9%, situating average revenue at 9.6 cents per minute. Over the past ten years, the total fall-off in call revenue has been over 58%.

Mobile broadband contracts continued to grow strongly throughout 2013

In 2013, a total of 31.4 million lines accessed the Internet over mobile communication networks, 26.7% more than in 2012. Out of this total, 18.4 million had rates that bundled data traffic with other telecommunications services – in the majority of cases the mobile voice calling service.

A high growth rate displayed once again in 2013 for mobile broadband services as a whole

As was the case in previous years, this service was the only one to experience significant revenue growth, with an increase of 19.7% on the previous year and a turnover of €3,312.1 million.

Wholesale mobile network access for MVNOs was the only service that recorded significant revenue growth

In 2013, the total revenue from the wholesale market was €1,547.1 million, a drop of 23.5% from the previous year's figures. However, the network access service for third-party mobile communications operators increased significantly, to a turnover of €433.3 million.

Television and radio services

The commercial revenue of the radio and television operators dropped back €3.9% to €3,613.3 million.

If the subsidies received by the operators from the public administrations are added to this amount, the industry took in €5,591.2 million, resulting in a year-on-year decrease of 5.3%.

The crisis has affected this industry, which is very dependent on advertising revenue, bringing down its revenue for 2013 to the lowest level in ten years.

For the second consecutive year, the revenue of the pay-TV segment surpassed that of free-to-air television

The €1,715.2 million revenue of the pay-TV segment – 1.8% less than in 2012 – was higher than that of free-to-air television, altering the historical trend in which free-to-air services earned more than pay-TV. This change is due to the decline in free-to-air revenues, which, with an overall turnover of €1,579.7 million, recorded the lowest figure since 2000.

Audience and revenue concentration in the two main free-to-air groups

With the 2011 merger of Gestevisión Telecinco with the Cuatro channels and the 2012 merger of Antena 3 with La Sexta, the scenario has become highly polarised, with these two media groups together capturing 88.3% of the advertising revenue of free-to-air television and 57.7% of the audience.

Bundling of pay-TV

There has been a notable increase in subscriptions to pay-TV through quintuple bundles: at the end of the year, they accounted for 48.9% of IP platform pay-TV subscribers and 23.5% of cable television subscribers.

1 The telecommunications industry

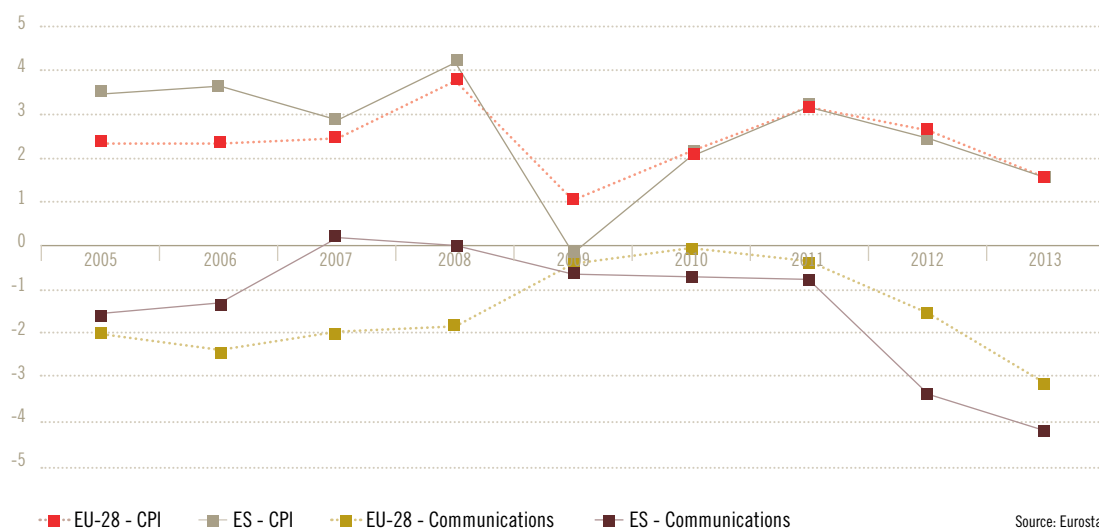
1.1 The Spanish industry in the European context

In the current climate of timid economy recovery, with an annual growth in real GDP of 0.4% for the EU-28 in 2013, increases were posted in the use and penetration of most electronic communication services, as well as significant progress in the roll-out of new generation networks, both fixed and mobile. However, in Europe, according to estimates from IDATE, revenue for the industry fell by 2.7%. Negative revenue growth rates have been recorded by the industry since 2009 but in 2013 these were more noticeable in the five major European economies (France, Germany, United

Kingdom, Italy and Spain), whose joint revenue fell by 4.6%¹. In Spain, the industry's revenue downturn of 7% was even higher, similar to the levels posted in France and Italy.

The appearance of new players in the market, the regulation implemented in recent years and the search by households and companies for better deals have led to an environment with lower prices: while the EU-28 communications price index fell by 3.1%, in Spain it fell even more, by 4.2%.

Annual rate of change in the general CPI and the communications sub-index for the EU-28 and Spain (ES)



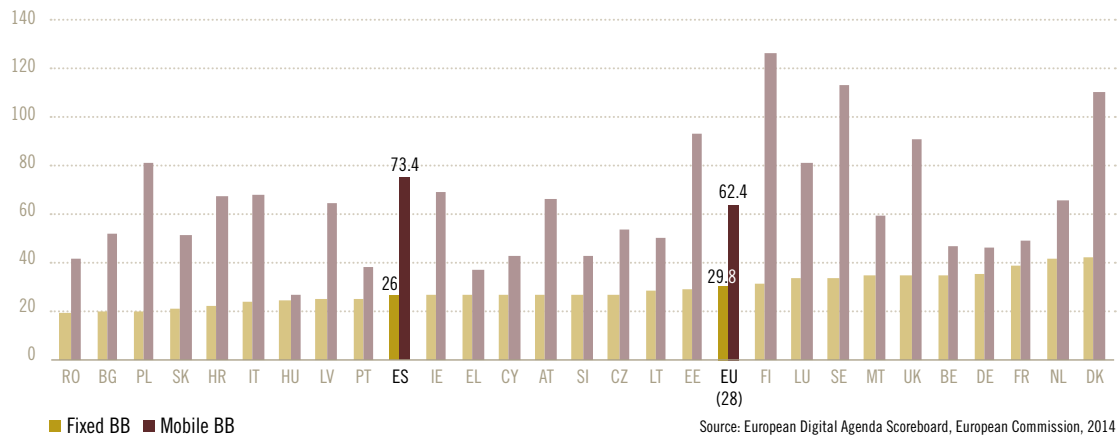
¹ Throughout this section, data are used from the *DigiWorld Yearbook*, IDATE, 2014, and the *ICT Market report 2014/15*, EITO, 2014.

Broadband

In 2013, the penetration of broadband continued to increase in the EU, both for fixed broadband, with a penetration rate of 29.8 lines/100 inhabitants,

and mobile broadband, with 62.4 mobile data subscriptions/100 inhabitants. The greatest growth occurred, as in previous years, in mobile broadband subscriptions, which increased by 8% in 2013.

Fixed and mobile broadband penetration in the EU-28 and Spain (lines/100 inhabitants), December 2013

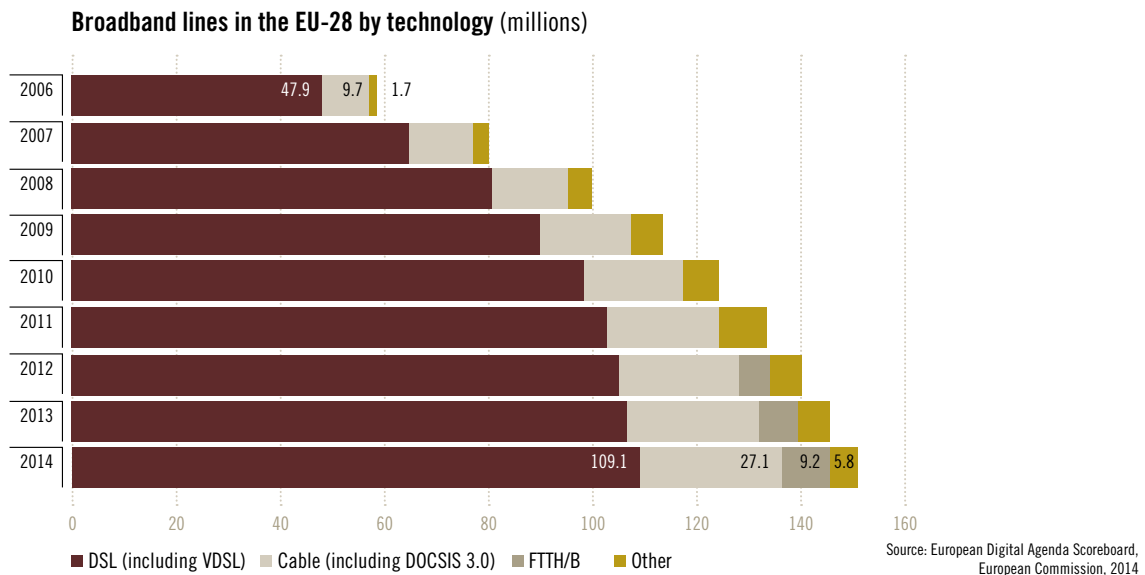


For fixed network broadband, the increase in penetration between 2012 and 2013 was 4%. This service is mainly offered on three different types of network: copper-based xDSL connections, which rose in the EU by 2.2% and continue to be the majority of active lines (72% of the total); cable-based connections, almost all of them under the DOCSIS 3.0 standard, which allows the user to enjoy high speeds. These connections increased by 7.5% and attained an 18% share of the total number of lines. The third type, connections over optical fibre (FTTH and FTTN/C), which also offer very high bitrates, grew by 22%, even though at the end of 2013 they represented only 6.1% of the total of active broadband lines in the EU.

The trends in Europe are clear: lower growth rates in the xDSL installed base, even if they are still positive,

and the migration of users to networks that permit higher bitrates, such as coaxial cable and optical fibre. In the case of fibre to the home, the operators themselves are beginning to migrate their customers as their networks are rolled out, so as to abandon the traditional copper network and enable them to save on maintenance and operations costs. The deployment of optical fibre allows operators to develop customer loyalty and offer better quality connections. However, as is happening with cable, many customers who have migrated to optical fibre are not subscribing to very high-speed services.

The evolution of the fixed networks is gradually bringing about a range of higher bitrates and of packages with bundled services. As a result, it can be seen that the

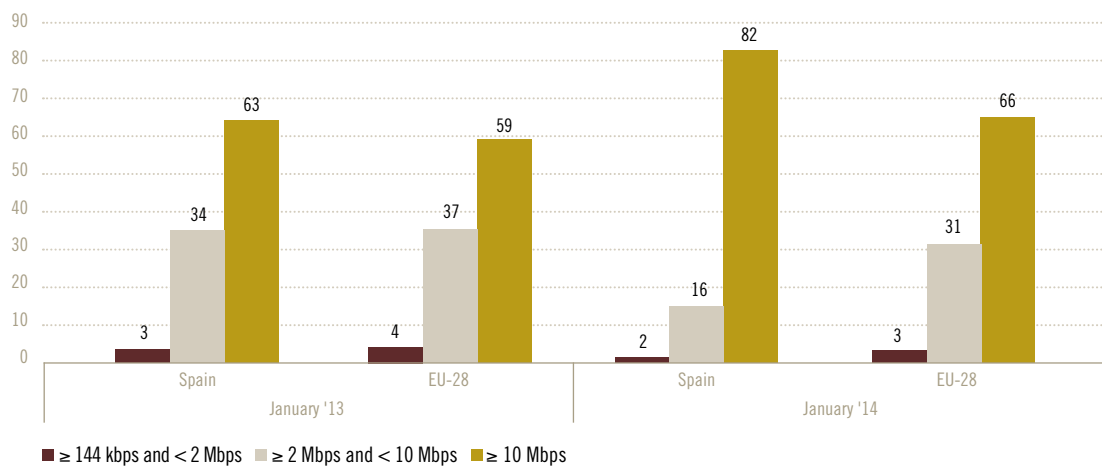


proportion of high-speed and very high-speed lines is increasing year by year. In January 2014, 66% of the lines in the EU were enjoying a (nominal) download rate of 10 Mbps or better; in Spain this proportion was

higher, 82%.

Mobile broadband has continued to grow both in terms of subscribers and the intensity of use and revenue. In the EU, there were 62 data subscriptions

Distribution of broadband lines by download rate, EU-28, as % of total no. of lines



Source: European Digital Agenda Scorecard, European Commission, 2014 and CNMC, 2014

per 100 inhabitants. This figure includes not only active subscriptions from smartphones but also dedicated connections that normally use a "data-only" SIM card on tablets and PCs or computer USB connector devices. According to the Eurobarometer², 52% of households in the EU stated that they had at least one subscription that gave them mobile Internet access. In Spain, the proportion of households with the possibility of enjoying mobile data was higher, 65% in 2013.

Mobile broadband was also the service that saw the greatest growth in revenue. The revenue that operators receive from voice and text services is constantly shrinking – revenue from text messages has fallen very significantly – and they are not managing to compensate for it with the revenue from data and mobile broadband.

One of the reasons explaining the trend in mobile voice revenue is that, as occurred with fixed services ten years ago, there has been a proliferation of bundled offers that cost less than the separate services, especially a combination of voice, messaging and data. In part, these bundled offers are made possible by the substantial reductions in regulated prices for the mobile voice termination service.

A relevant factor is the appearance of new players who use the Internet as their distribution medium for offering alternatives to traditional communications services. Communication by *over-the-top* (OTT) services, such as *Whatsapp* or *Skype*, are heavily used by a large proportion of EU citizens. According to the latest Eurobarometer, 36% of EU citizens used an OTT service to make voice calls over the Internet from a computer, and 21% of individuals who had a mobile terminal stated that they had used it to make calls with a non-traditional provider.

Coverage of the different networks and roll-out of new generation networks

In the EU, there are fixed and wireless networks with very wide, almost universal coverage: on the one hand is the traditional copper twisted-pair network with a coverage of over 95% of households and, on the other, the 3G/HSDPA mobile networks, with over 96% coverage.

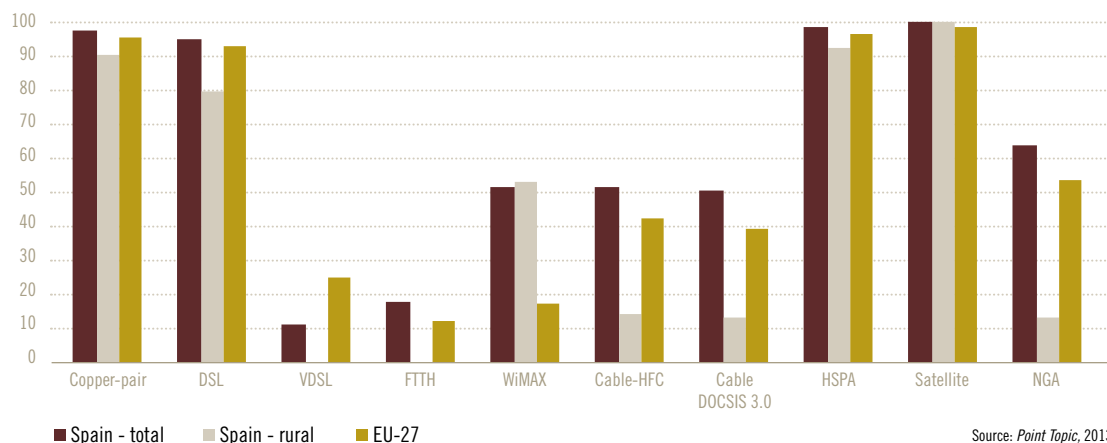
In addition, a broadband service with a variety of xDSL standards is run over the traditional copper network. The coverage of this technology is also very wide, over 93% of households in the EU (and 95% in Spain). Lastly, 9 out of 10 households can access a broadband-speed connection from their homes. In some countries, such as Spain, there is also the guarantee of a Universal Service, under which all citizens are entitled, regardless of their location, to contract a data connection with a bitrate of 1 Mbps. A small proportion of households in Spain are offered this speed over Wi-Fi, since it is impossible to do so over a copper network. In 2013, the European Commission began preparing for the fourth review of the Universal Service by asking the regulators for information on the application of the Directive in the different member states.

Cable networks (fibre-coaxial hybrids) covered 42% of EU-27 households, although this indicator varied considerably from country to country. There were countries, such as Belgium and the Netherlands, with coverage of over 85% of households and others, such as Italy and Greece, in which cable networks barely existed.

In Spain, cable networks covered over half of local households, as their deployment has been

² E-communications and telecom single market household survey. Eurobarometer, European Commission, March 2014.

Coverage of homes by the different fixed and wireless networks in the EU-27, December 2012



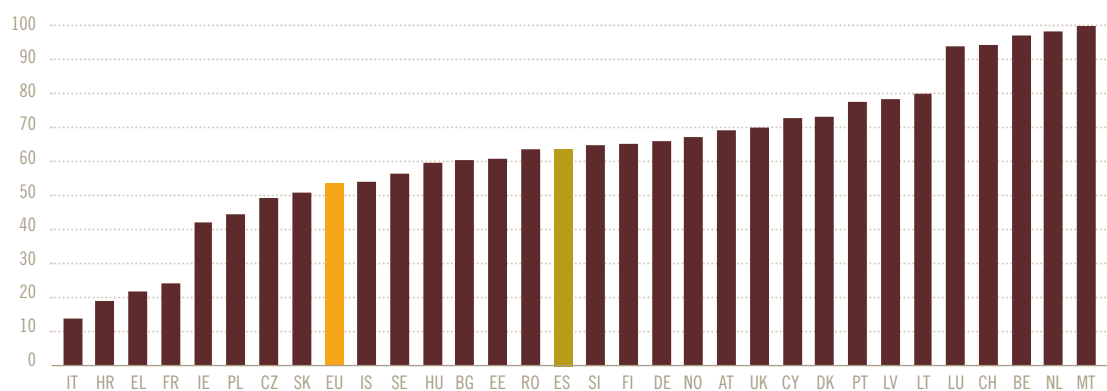
concentrated in the medium-sized towns and big cities, while in rural areas the coverage was only 14%. It is precisely in these population centres that, as an alternative to the costly deployment of a fixed network, there was a significant presence of WiMAX wireless networks, which covered 53% of households in rural areas.

New generation or NGA networks, with a possibility of offering data connections at a bitrate of 30 Mbps or higher, can be organised either on an existing network or on new networks that include the physical deployment of optical fibre cable in the section from the node to the home. These new networks are

still far from offering similar coverage to traditional networks. For example, in December 2012, 53.7% of households in the EU were covered by at least one NGA network.

In the EU, most NGA network coverage is the result of investment by the cable operators, covering 39.3% of households, followed by VDSL, with a coverage of 25%. The VDSL standard is being used as a solution for offering very high bitrates in some countries, such as Germany and the United Kingdom. In Spain, VDSL covered 11% of households. Lastly, fibre to the home, FTTH, had a 12.3% coverage of European households. In Spain, household coverage is above

Coverage of homes by the various fixed NGA networks in the EU-28, December 2012



the average for the EU and has a similar distribution by technology to the rest of Europe³.

The leading role in new investment in 2013 was assumed by the incumbent operators and the alternative operators who base their strategy on deploying fibre to the home (FTTH), since the cable operators had already updated practically all their fixed networks to the DOCSIS 3.0 standard in previous years. Thus the number of FTTH connections rolled out in the EU doubled last year.

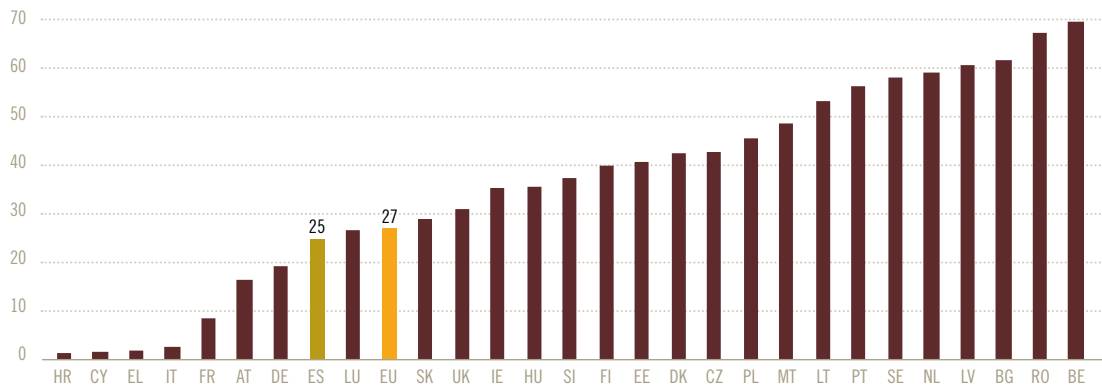
In order to reduce fibre roll-out costs, especially those relating to the access section or "last mile" to the end customer's home, it has been common in the EU to see joint investment agreements between rival operators. In Spain, the roll-out of optical fibre was led by Telefónica, which went from over 3.9 million

deployment points deployed to a total of 5.94 million at the end of the year, including FTTH. For its part, Jazztel rolled out 870 thousand FTTH deployment points. 2014 also brought the start of deployment for Orange and Vodafone, two operators that have reached a co-investment agreement for the horizontal and vertical sections of the deployment.

As mentioned above, 3G/HSDPA mobile networks, which permit mobile broadband, have almost universal coverage, with over 96% of the population of the EU-28 and 98% in Spain.

The roll-out of new 4G/LTE networks has brought with it significant increases in consumption. In the USA, where at least two operators already had coverage of more than 80% of the population at the end of 2013, data consumption was double that of the EU.

Active NGA lines as a % of total no. of broadband lines in the EU-28, December 2013



Source: European Digital Agenda Scoreboard, European Commission, 2014

The feedback effects from the roll-out of advanced networks and the introduction of terminals with better definition, features and applications are leading to increased consumption and revenue, while pricing per minute can go down because of the economies of scale achieved.

In Europe, the roll-out of the 4G/LTE network is progressing more slowly, and in 2013 investment in mobile networks increased by just 3.8%, according to the EITO. The GSM Association⁴ estimated that by the end of the year 19% of all mobile service subscribers in the USA would be using 4G/LTE networks.

³ Broadband coverage in Europe in 2012, Point Topic 2013. For more up-to-date geographical details focusing on the evolution of networks in Spain, see "Geographical Analysis of Broadband Services and NGA Deployment in Spain", CNMC, February 2014.

However, the estimate for the EU-28 was for only 2% of subscribers to be using 4G/LTE.

A total of 10 million European users had a connection to the Internet via LTE in the second half of 2013 and more than 90 operators had rolled out this technology. However, although the use of LTE/4G is growing, there are great differences between the countries and in 2013, only eight European countries had coverage of over 50% of the population.

The digital dividend or the availability to mobile operators of the 800 MHz frequency band, previously used to broadcast television signals, has still not been finalised in a large number of countries, including Spain. At the end of 2013, Spanish operators still could not use this band as it was occupied by television services. This fact has held back the development of the mobile data market, since the bands currently in use – mainly 1,800 MHz and in densely populated cities the 2.6 GHz band – involve higher deployment costs. Given the expected growth in mobile network data consumption – estimated at 66% a year – driven in particular by user demand for video and content, it is essential to make progress on rolling out these 4G/LTE networks throughout the EU⁴.

The deployment of 4G/LTE mobile networks is substantial, even though it is far from complete, and due to the characteristics of mobile networks it is too early to set up direct competition with very high speed connections on fixed NGA networks.

The European Digital Agenda has set some specific objectives for new generation network coverage and subscriptions. To promote the achievement of the objectives, in September 2013 the EC adopted a Recommendation on non-discrimination obligations and costing methodologies that supplements the NGA Recommendation of 2010 and, in May 2014, the European Council and Parliament approved a Directive to reduce the costs of deploying new generation networks.

The Recommendation on non-discrimination obligations and costing methodologies: (i) seeks to strengthen the non-discrimination obligation by including, among other measures to guarantee technical and economic replicability, the general application of this obligation through access with equivalence of inputs; (ii) establishes the principles of the methodology for calculating wholesale costs in broadband markets; and (iii) sets the necessary conditions for not imposing an obligation for cost orientation on NGAs. This is a regulation that will have a great impact on the design of the obligations for broadband wholesale markets which the regulators will have to take into account in the next market reviews, and which may lead to a new regulatory focus which will nuance the provisions of the NGA Recommendation setting cost-oriented access as being a principle.

The Directive on the reduction of new generation network roll-out costs, adopted in May 2014, guarantees the right of telecommunications operators to access the infrastructure of other “network services” (e.g., water, sewers, electricity, transport, etc.) to deploy broadband networks in exchange for a reasonable charge. Bearing in mind that the civil engineering infrastructure can account for up to 80% of the deployment costs, this provision may have a great impact on promoting the deployment of new generation networks in the coming years.

Consolidation: mergers and acquisitions in the European market

The price reductions of recent years, the intensity of technological convergence and the need to deploy new high-capacity networks combined to produce a very high level of activity in terms of corporate mergers and acquisitions in 2013 in many EU countries.

In the mobile services markets, the industry's competition and regulation authorities were notified

⁴ Mobile Wireless performance in the EU and the US, GSMA, May 2013.

⁵ Cisco Visual Networking Index Mobile Forecast, 2013.

of mergers and other corporate transactions implying a reduction in the number of active mobile operators with their own networks in some countries, acceptance of which was subject to approval and in some cases to fulfilment of conditions imposed by the relevant authorities, such as, for example, the European Commission. Such was the case of Hutchinson Whampoa, an operator based in Hong Kong and active in several EU countries under the brand name Three, which offered to buy the mobile operator O2, Telefónica's Irish subsidiary. Hutchinson had entered Austria one year earlier when it acquired Orange Austria, the country's second biggest mobile operator. This purchase meant that the number of operators active in the Austrian market fell from four to three. The European Commission set strict conditions for the acquisition: it imposed an obligation of third-party access to the network of the newly merged operator and required it to dispose of a portion of the frequencies acquired.

Similarly, the agreement between Telefónica and Hutchinson Whampoa for the sale of the former's Irish mobile telephony subsidiary, O2, was also the object of conditions imposed by the European Commission. In Germany, Telefónica proposed to purchase E-Plus, a subsidiary of the Dutch mobile telephony operator KPN. If this transaction is approved by the competition authorities, it will involve the merger of Germany's third and fourth largest mobile operators, since Telefónica already has a presence in the country's mobile segment through its O2 brand.

However it was not only the mobile communications segment that was affected by merger and acquisition transactions. In a converging environment, in which the major players offer bundles of fixed and mobile services in a single commercial offer, operators that had so far been active in only one part of the market were seen to be acquiring assets in complementary segments.

For example Vodafone, one of the world's major mobile operators, took control of Germany's leading cable operator, Kabel Deutschland. One year previously, it had acquired the British cable operator,

Cable&Wireless, and, more recently, at the beginning of 2014, it announced the acquisition of Spain's leading cable operator, Ono, for €7.2 billion.

In France, following the entry of Free Mobile as the number four operator in the mobile segment two years before, the number two mobile operator in importance, SFR, was acquired by Numericable, one of the major fibre optic network operators. In a similar transaction, Zon, a Portuguese fixed network operator, took over mobile operator Optimus in 2013.

The entry of players from other parts of the world has also been observed in the EU in recent years. The significant presence of Hutchinson in various EU countries has already been mentioned (Austria, Ireland, United Kingdom, Italy and the Nordic countries); Liberty Global, a US-based cable operator with a presence in various countries in the EU-28, purchased the UK's number two cable operator, Virgin Media, as well as the German number two, Kabel BW. Recently, it also offered to acquire the Dutch cable operator Ziggo. In 2012, América Móvil, the major active operator in Mexico, with a very notable presence in much of Latin America, acquired a large share in the Dutch incumbent operator, KPN, as well as in the Austrian benchmark operator, Telekom Austria.

In Spain, two large-scale transactions were announced early in 2014. Vodafone's offer for Ono, the number one Spanish cable operator, has already been mentioned. Secondly, Telefónica announced its intention to purchase the satellite pay-TV platform Canal+, Spain's largest operator with 42% of the customers in the market, for €720 million, which would mean that the new operator would have a market share of more than two thirds of pay-TV customers. Telefónica also reached an agreement with Mediaset to acquire the share it has held in Canal+ since it acquired Cuatro TV, if this transaction is approved by the CNMC.

Regulatory outlook

Digital single market

In September 2013, the European Commission

presented a draft Regulation on enabling a digital single market. The Commission's proposal tackles the following issues, among others:

- Single EU notification for operators.
- A coordinated European framework for assigning radio-electric spectrum.
- The convergence of: (a) the principles and procedures for defining and analysing markets and imposing obligations and (b) the harmonised supply of certain wholesale broadband products.
- The freedom to supply and make use of access to an open Internet, and reasonable traffic management (network neutrality).
- The harmonisation of the regulations on end user rights.
- Regulations to make changing operator easier for users (portability).
- Roaming within the EU (international roaming).
- The internal structure and functioning of the Board of European Regulators for Electronic Communications (BEREC).

This proposal will be submitted for amendment by the European Parliament and the Council in 2014 and may therefore undergo significant changes. However, whether by means of this Regulation or of an overall review of the regulatory framework, Europe must undertake a review of the regulatory framework that will affect a large number of open questions in the next few years, such as the regulation of network neutrality and the treatment of *over-the-top* services.

Recommendation on significant markets

In the first half of 2014, the European Commission began a review of the Recommendation on significant markets which it plans to adopt in the second half of the year. In this Recommendation,

the Commission identifies the markets that are susceptible to *ex ante* regulation, on the grounds that they meet the criteria for justifying the imposition of obligations on operators with significant market power. After its adoption, the regulators will have two years to notify their markets, in accordance with the configuration of this new recommendation.

With regard to the regulation currently in force, the European Commission's proposal includes removing the retail access and voice call origination markets from the list and reorganising the existing wholesale broadband and leased line markets. Loop access would include the products from the old market 4 and virtual wholesale products with characteristics similar to virtual unbundled local access (VULA). Bit-stream access would differentiate between mass consumption and high-quality services, which would include leased lines.

The changes proposed take into account technological progress, the competitive pressure of Internet-based services (OTT) and, in particular, voice over IP (VoIP), the evolution towards IP networks, the competition between bundles and the availability of converging fixed-mobile services. This new recommendation establishes a new regulatory environment which will also greatly affect the regulation of the EU broadband wholesale markets.

Revision of the EU roaming regulation

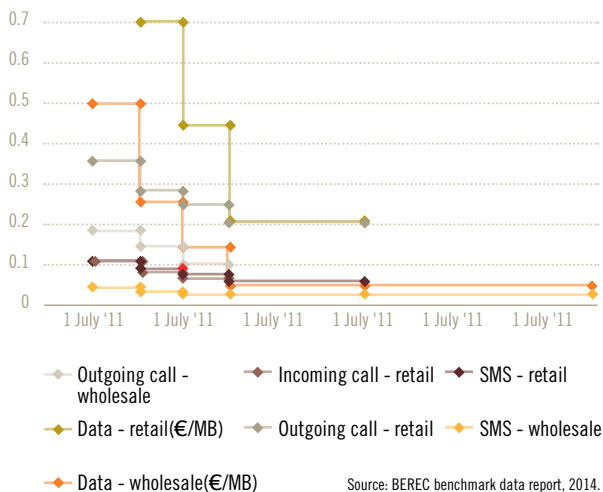
The latest revision of the roaming regulation (III), in force since June 2012, led to a significant reduction in 2013 in the maximum retail and wholesale rates for regulated roaming services from the levels in force in 2012. The following graph shows the recent trends and the current forecast for these rates, both for retail and wholesale services.

The reductions in the maximum charges for data roaming services have been especially

noteworthy, as they dropped from the 70 cents/MB applicable in July 2012 to 45 cents/MB in July 2013 and stabilised at 20 cents/MB from July 2014.

What is even more significant is that, according to BERECE's latest comparison of the second and third quarters of 2013⁶, in practice the operators did not even make full use of the previous price caps, instead launching commercial offers onto the market with significantly lower rates. In the third quarter of 2013, the average flat-rate charge for the European Union

Maximum roaming rates for voice, SMS and data (€ per minute, message and MB)



(with a fixed charge per MB) was less than half of the maximum limit (22.2 cents/MB instead of the maximum of 45 cents/MB in July 2013). Moreover, the report emphasises that alternative rates based on data vouchers were becoming cost-effective for users for the very first time as the rate per Mb of consumption was even less. Specifically, data roaming service users who purchased vouchers paid on average 17.5 cents per MB actually consumed instead of the 22.2 cents paid by users who had flat rate contracts⁷. All this could confirm that data roaming services are subject

to a certain elasticity of demand – a reduction in the charges leads to an increase in consumption on the part of the users – and therefore the operators are striving to launch somewhat more competitive rates onto the market than the maximum limits set by regulation.

But the new regulation has not only meant a decrease in rates, it has also led to some additional measures. Now, when travelling to destinations outside the European Union, users will be informed and protected from possibly finding high bills when they return home (the dreaded *bill-shock*) since the operators are obliged to offer them transparency measures equivalent to those provided to them when travelling to countries within the European Union. In particular, they will be informed by SMS of the applicable rates, and also have a default maximum limit of €50 for the data consumption service, which they can exceed only if they give their express approval. They will also be notified when they near the maximum consumption limit (an SMS informing them they have reached 80% or €40), so they know the data service is about to be cut off and can decide what to do.

In addition, two of the most innovative measures will come into effect in July 2014. One is the date planned for the entry into effect of the structural measures contained in the regulation, whereby users of mobile services will be able to use an alternative operator when roaming while keeping the same SIM card (ARP, *alternative roaming provider*).

During the second half of 2014 it will be possible to assess whether the structural measures have been attractive enough to encourage alternative roaming providers (ARPs) to offer their services and whether their adoption by users has been as hoped and has had the desired effect of introducing greater competition as regards the number of players and the number of offers that will lead to a greater reduction in charges.

⁶ http://berce.europa.eu/eng/news_consultations/whats_new/1982-focus-and-charts-galleries-international-roaming-berce-benchmark-data-report-april-2013-september-2013. Figure 34. Average Data Price per MB, 3Q2013.

⁷ The average data for the Spanish operators' rates are somewhat different from the European average, as the average flat rate charge in the third quarter of 2013 was 32.8 cents/MB and the average alternative rate charge was 41.1 cents/MB.

But if there is one thing of note for the coming years with regard to roaming in Europe, it is the European Commission's Single Market proposal and, more specifically, the draft proposal presented by the European Parliament. It proposes the end of roaming as we have known it hitherto. If this proposal should become a resolution, towards the end of 2015, users in the European Union would have the same domestic rates when in their home country and when they travel to other countries within the EU (a proposal known as *'Roam like at Home'*) for reasonable use, in other words, for use that replicates their normal domestic consumption. Beyond that reasonable roaming service consumption level, the operator will have to inform them by SMS of the new applicable rates, which in no circumstances may exceed the maximum retail caps set for July 2014.

The exact definition of what is meant by reasonable use of roaming services will depend on what the European Commission decides in the implementing regulation, which will set a series of rules for implementation. In this regulation, different parameters might be considered, such as the number of days per period (month/year) or the consumption per period (day/month/year). In setting these rules, account will be taken of the BEREC guidelines, which will be published prior to the Commission's implementing regulation and after consulting all the players in the industry.

With regard to existing *'Roam like at Home'* charges, according to the BEREC document on transparency and comparability of roaming charges in the European Union⁸, the first such charges already began to appear in 2013, under which it was possible to continue to use domestic rates, paying only the cost of establishing the call. It was after the announcement of the new regulatory measures and, above all, as the July 2014 date for the new reduction in maximum charges drew near that the operators began adapting to their users' needs and gradually bringing to market

domestic tariffs for use abroad which already included voice, SMS and/or data vouchers by default.

Implementation of the Recommendation on termination rates in the EU

The growing deployment and coverage of NGA networks and the corresponding migration of customers to networks of this type means that the regulation also needs to change. A traditional service like voice calling will migrate to IP network environments, in which inter-operator interconnection involves different costs from the costs on traditional networks. The CNMC has been promoting a discussion forum with the operators since 2012 with the aim of making progress on the technical specifications that must exist to make VoIP interconnection possible and, at the same time, to guarantee the interoperability of IP and switched networks.

At the beginning of 2014, the CNMC launched a public consultation on the analysis of the fixed network call termination market (or market 3). Although as far as the lack of effective competition and significant market scope there have been no substantial changes from the previous market analysis carried out in 2009, there are new items in this proposal that are the result of the adaptation of interconnection and its regulation to the new IP network environment. In Spain, at the end of 2013 there were a total of 2.62 million active VoIP lines but, given the speed with which they are being rolled out, it is foreseeable that there will be substantial migration to VoIP in the next few years. Following the EU Recommendation on termination rates (2009/396/EC), the regulated termination rate must be cost-oriented and the standard used must be that of long-run incremental costs. To calculate them, a bottom-up cost model has been developed for a network that is wholly IP (NGA network), which includes, as mentioned above, the fact that part of the interconnection traffic will be based on the IP protocol. The result of the model used is a very significant

⁸ http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/3903-report-on-transparency-and-comparability-of-international-roaming-tariffs. P.16. 1.5. Diversity of tariff structures

reduction in the interconnection rate, setting it at 0.0862 cents per minute, which means a reduction of some 80% on the average rates currently charged.

Another new item in this proposed regulation is based on eliminating the different interconnection levels (local, metropolitan, single and dual traffic) defined to date for switched networks. In the context of migration to IP trunk networks, these different interconnection levels are insignificant. The number and topology of interconnection points are reduced and, with them, the underlying costs.

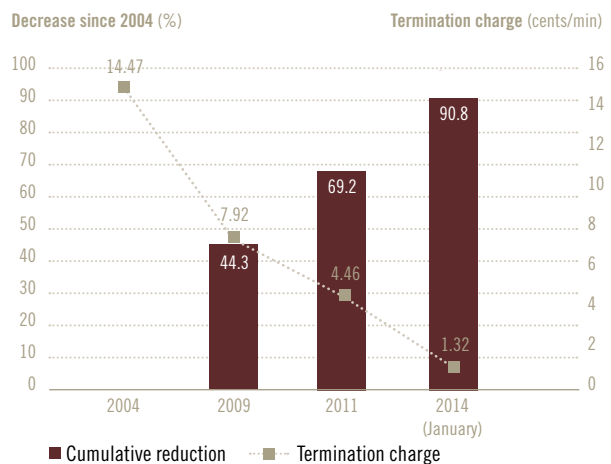
Since the market failure identified originates from the very slight possibility of the termination operator's being replaced, the significant weight in the market is held by each of the fixed networks, since each network can act as a monopolist for the termination service on its own network. Therefore, all the operators who handle their own interconnection will be subject to this proposed regulation. It is also proposed to include the condition of symmetry, thereby eliminating price differences among operators who offer the same service.

It is foreseeable that after the public consultation and after receiving the comments of the market players, during 2014 the CNMC will adopt the definitive regulation of this wholesale service.

With regard to termination rates on mobile networks, in its 2012 market analysis, the former CMT (now the CNMC) approved the rates and conditions that must govern this service. After applying a bottom-up incremental cost model, it decided that the rate trend must converge at 1.09 euro cents per minute for all types of mobile operators, and that this rate would be reached in July 2013. With this rate, no significant short-term changes are expected in the conditions that regulate termination rates. It should be noted that a very significant adjustment has occurred in regulated termination rates that has been applied equally in the EU-28 and in Spain as a result

of the implementation of the EU Recommendation on termination rates (2997/396/EC). Cumulative reductions in this rate have been 90% for the entire EU-28 over the last ten years. This very substantial reduction has also made possible very large decreases in retail rates, the emergence of quasi-flat rates for voice and the widespread bundling of mobile voice with mobile broadband.

Regulated mobile termination charge (average) for the EU-28 and cumulative reduction since 2004



Source: Mobile Termination Rates Benchmark, BoR 14 (55), BEREC, May 2014

Review of the audiovisual regulatory framework and the creation in Spain of a regulator for the industry

The rapid development of convergence between the traditional audiovisual media and on-line media has led to a need to review some areas of the European regulatory framework for audiovisual services so as to bring it into line with the reality of the new services, media and consumers.

The converging audiovisual market is more open and competitive than the traditional market of the analogue age. The new connected or 'smart' television with the possibility of Internet access is paving the way to a

reformulation of the existing business models, a new type of advertising, the creation of new content and viewers who are no longer passive but interact with the content displayed and choose the time and place of consumption. The traditional television channels currently coexist in the market with a growing variety of players offering all kinds of content over the Internet, the over-the-top (OTT) providers. The control of premium content (sports broadcasts, series, feature films, etc.) is a deciding factor in capturing and maintaining the loyalty of consumers.

The emergence of connected television has demonstrated the inadequacy of the current regulatory framework for audiovisual services, basically the Audiovisual Media Services Directive, which was designed to regulate a traditional television environment and excludes the new players from its scope of application. In 2013, the Community institutions decided to start a process to review the regulatory framework for audiovisual services with the aim of adapting it to the challenges posed by the new converging reality.

In April 2013, the European Commission published the Green Paper *Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values*, with the objective of opening a public discussion on the implications of the current transformation of the audiovisual media. The Green Paper identifies two broad lines of action, the first related to “Growth and Innovation”, which discusses questions such as the market, financing, the interoperability of connected television, and infrastructure and spectrum, and the second related to “Values”, which looks at the regulatory framework, media freedom and pluralism, commercial communications, minors and accessibility.

The Commission held a public consultation on the Green Paper, ending in September 2013. The results

of the public consultation will be a deciding factor for the new European Commission and Parliament – resulting from the European Elections held in May 2014 – in its decision on the appropriateness of starting to review the Audiovisual Services Directive in 2015.

Another of the topics to be discussed within the review of the legal framework of the audiovisual services industry is the independence of the National Regulatory Authorities (NRAs). After launching a public consultation process in 2013 on the independence of the NRAs, the European Commission noted the need to formalise the cooperation between the NRAs and the Commission, along the same lines as the recommendations of the European Council⁹ of November 2013 and those of the “High Level Group on Media Freedom and Pluralism”¹⁰. As a result of these requests, on 3 February 2014, the European Regulators Group for Audiovisual Media Services (ERGA)¹¹ was founded for the purpose of advising the Commission on the implementation of the Audiovisual Communication Services Directive. ERGA is made up of the independent national regulators from the 28 member states. The Group’s first Plenary Session was held in Brussels on 4 March 2014.

The European Commission has also started to review the financing framework for the European film industry. The Commission adopted the *Communication on European film in the digital era* (May 2014), in which it identified the current challenges to the European film industry and launched the “European Film Forum”, a forum for public discussion on film industry-related public policies in which all the players in the industry can take part.

In Spain, the most important regulatory change was the creation of Spain’s National Authority for Markets and Competition (Spanish initials, CNMC) in October 2013. This institution has assumed all the regulatory

⁹ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/139725.pdf.

¹⁰ “A free and pluralistic media to sustain European democracy”, *High Level Group on Media Freedom and Pluralism*, January 2013 (<https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/HLG%20Final%20Report.pdf>).

¹¹ Commission Decision of 3.2.2014 on establishing the European Regulators Group for Audiovisual Media Services: <https://ec.europa.eu/digital-agenda/en/news/commission-decision-establishing-european-regulators-group-audiovisual-media-services>.

and supervisory functions over the audiovisual industry approved in Act 7/ 2010 on Audiovisual Communication, which envisaged the creation of an independent regulatory body. With the creation of the CNMC, a regulator was finally set up for the audiovisual industry in Spain, which had been one of the few countries in the EU not to have an independent institution of this type.

In the first place, as the body responsible for promoting, preserving and ensuring the supervision of the conditions for effective competition in the markets, the CNMC is also responsible for supervising and monitoring the proper functioning of the audiovisual market.

The CNMC has also taken on all the competences and functions created in Act 7/2010, which had created the State Council for Audiovisual Media as an independent regulatory body, which body however had yet to be set up. Act 3/2013 on the creation of the CNMC thus includes the specific functions of overseeing among other things compliance by the operators with the obligation to give effect to the rights of minors and people with disabilities, the conformity of content and self-regulating codes with existing regulations, compliance with limits on advertising and on the exclusive contracting of certain content, fulfilment of the public service mission entrusted to

the providers of a nation-wide public service and the appropriateness of the public resources allocated to it.

The European Digital Agenda

To promote the digital single market, in 2010 the European Commission drafted the so-called European Digital Agenda (EDA), which set objectives to be met with regard to the deployment and use of very high-speed deployment points with a time horizon of 2020. In February 2013, the Spanish government approved the Digital Agenda for Spain, with which it is attempting to achieve the objectives of the European agenda, to promote the deployment in Spain of ultra-fast networks and the extensive use of ICTs by society. The objective of reaching universal broadband coverage in Spain in 2013 was met when the government included connection with a download rate of at least 1 Mbps in the universal service. The objective of having 100% of the population covered by an NGA network by the end of this decade is still far from being met, as is the objective of having 50% of homes contract a very high-speed subscription by 2020. The objectives laid down in the EDA are those that will also set the regulatory guidelines for the next few years.

1.2. The industry in Spain

Revenue

Total revenues of the electronic communications industry continued to decline in 2013, with turnover falling by 7% from the previous year. This negative rate of change was practically the same as in 2012 despite the significant decline in wholesale services, specifically mobile network interconnection services.

Among the retail services, mobile broadband, which rose by 19.7%, was, for the second consecutive year, the only one of the important services that grew. However, revenue from fixed network broadband connections fell, as occurred in the two previous years, although the number of active lines continued to rise. With these results, broadband services overall came to represent 25.3% of the total revenue from retail services, compared with 22% in 2012.

Revenues by type of end service 2012-2013 (€ millions and percentage)

	2012	2013	CHANGE 2012/2013
Fixed communications	10,045.35	9,254.02	-7.9%
Fixed telephony	4,832.66	4,190.79	-13.3%
Fixed broadband	3,659.01	3,577.37	-2.2%
Corporate Coms.	1,502.39	1,445.28	-3.8%
Tel. information	51.29	40.58	-20.9%
Mobile communications	12,252.30	10,888.97	-11.1%
Mobile telephony	9,485.67	7,576.89	-20.1%
Mobile broadband	2,766.64	3,312.08	19.7%
Audiovisual services	3,761.43	3,613.30	-3.9%
Others	3,200.65	3,516.56	9.9%
Total	29,259.74	27,272.86	-6.8%

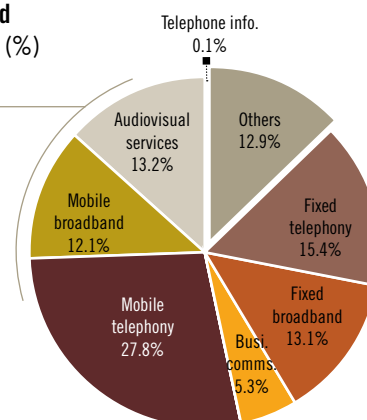
Source: CNMC

In contrast, the weighting of voice services, both on fixed and mobile networks, continued to fall as it had in recent years, although it still forms the major part of retail revenue: 43.1% of the total in 2013¹². The decline of revenue from voice services and, above all, from mobile calls, which had a negative annual rate of change of 20.1%, resulted in a 6.8% drop in total revenue from end services.

Even so, this decrease in retail revenue was less abrupt than in 2012, since services such as audiovisual and the sale and leasing of terminals showed more favourable behaviour during 2013, compensating in part for the drop in voice services.

Turnover from wholesale services fell by 8.3%, due above all to the reduction in the mobile network termination charge to 1.09 euro cents per minute, in force since July. However, revenue from fixed

Breakdown by end service revenues (%)



Source: CNMC

broadband wholesale services continued to rise, thanks to the demand from the alternative operators, especially for local loop unbundling services.

Revenues by type of wholesale service 2012-2013 (€ millions and percentage)

	2012	2013	CHANGE 2012/2013
Interconnection	3,701.29	3,155.94	-14.7%
Circuit rental	747.75	727.1	-2.8%
Data transmission	51.17	57.9	13.2%
ADSL services	593.29	653.82	10.2%
Transport and broadcasting	394.5	374.48	-5.1%
Other services	522.19	545.07	4.4%
Total	6,010.19	5,514.32	-8.3%

Source: CNMC

¹² Messaging services are included.

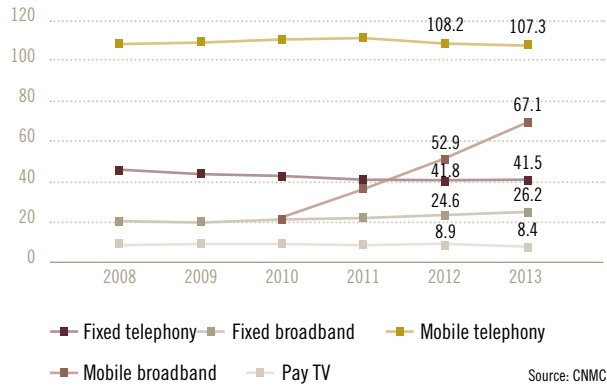
Penetration of end services

Fixed and mobile broadband were the only services with increased penetration in 2013, reaching 26.2 and 67.1 lines per 100 inhabitants, respectively. Once again in 2013 the leading light of the industry was mobile broadband, with 14.2 percentage points more than in 2012. Connections using *smartphone* terminals, of which there were 29.4 million compared with 22.3 the previous year, compensated for the decline in data-only lines, which fell to under two million.

The penetration of the other services fell. Total fixed telephony lines continued to decline slightly, as has been the case in recent years. The number of mobile lines and the number of pay-TV subscribers fell for the second consecutive year.

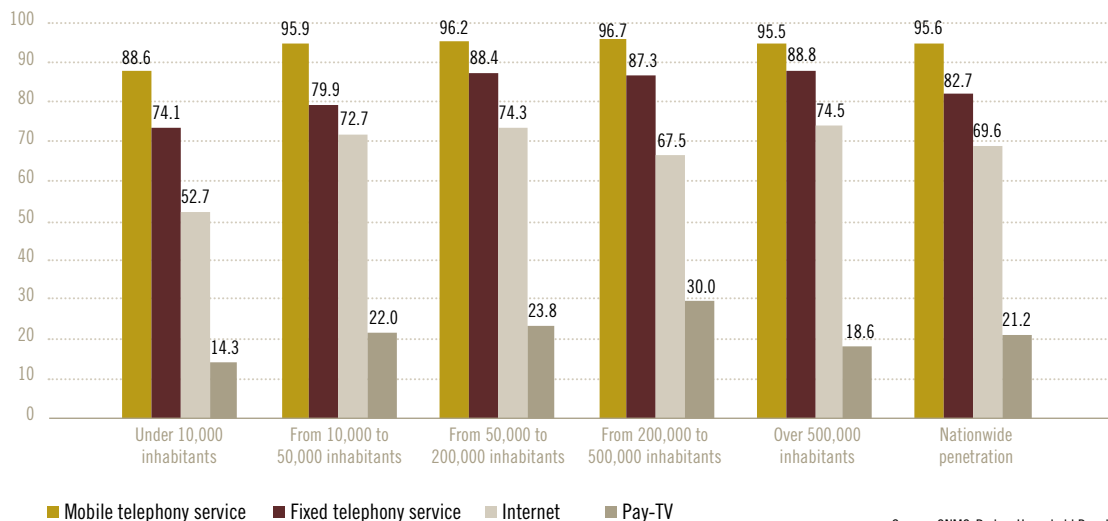
According to figures from the CNMC-Red.es Household Panel, 82.7% of households had a fixed telephony service, while 95.6% had a mobile phone. 21.2% of homes had pay-TV and 69.6% already had internet access. Fixed telephony and pay-TV were the services with less penetration than in the previous year.

Trends in the penetration of the main services (lines/100 inhabitants)



However, penetration rates for the various services are not uniform, but vary depending on the size of the locality. In homes located in towns with fewer than 10,000 inhabitants, the penetration rate for all services was appreciably lower than the respective national averages. In particular, the greatest differences in penetration rates were observed in Internet and pay-TV services. However, the penetration of the Internet in towns with fewer than 10,000 inhabitants was over 52% in the third quarter of 2013, compared with 48.1% the previous year.

Penetration of the main services in homes by size of locality (percentage)



Prices

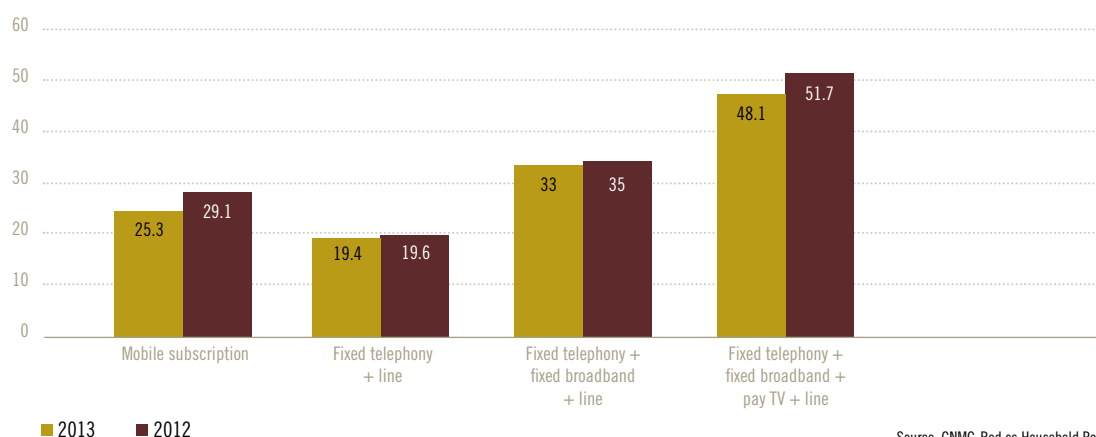
The operators continued to lower the rates for their services and to offer a variety of promotions, as well as, in particular, focusing their sales strategy on bundled offers of fixed and mobile services. As a result, throughout 2013, households' effective spending on the most representative services continued to fall.

The bundle that includes voice and broadband services over both a fixed and a mobile network (including access) – the quadruple bundle – became the most popular by the end of 2013, whereas just twelve months earlier it had been the dual voice and fixed telephony bundle that was most often contracted. The

importance of these offers that include four services – which the major operators have been launching onto the market since the appearance of Movistar Fusión in October 2012 – have led to pricing being one of the decisive variables for designing an attractive offer for customers. The average spending by households that contracted this type of bundled services was €42.8 per month, including the access service.

The spending per household on a dual bundle of fixed broadband and unlimited domestic voice services (including access) fell by 5.7%, while spending on triple bundles, which also include pay-TV, fell even more, by 7%.

Average expenditure per household on key services (€/month)



With regard to traffic prices, the cost of using up a minute of voice from a mobile network with a national destination (to a fixed or a mobile network) fell by 25.3%. The average revenue per minute of voice from a fixed network to a mobile network was down 16.4% on the previous year.

Portability and change of operator

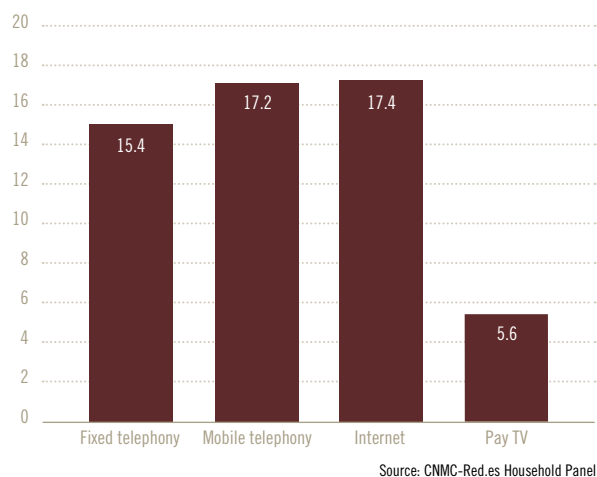
The possibility of changing service provider while keeping the number originally assigned has continued to be used very extensively in 2013, beating the records attained in 2012 both by fixed and mobile numbers. The total number of fixed lines for which portability transfers took place during the year was 1.9

million. The volume of mobile lines whose operator changed was even greater: by year-end there had been 6.8 million mobile portability transfers. In fact, Spain is one of the countries with the highest levels of mobile portability activity in Europe.

Since June 2012, when the changes in the portability transfer process introduced by the CNMC came into effect, it has been possible to transfer a mobile number in just one business day. In 2013, the mobile virtual network operators (MVNOs) were those who had the most positive portability balance: 1.6 million.

The following graph shows the percentages for changes of operator for the most usual services

Change of operator by service (% of lines with a change of operator/total lines for each service)



between the third quarters of 2012 and 2013. Mobile telephony and Internet, both registering a little over 17%, were the services that reported the highest percentage of operator change, followed by fixed telephony with 15.4%. Lastly, pay-TV was the service with the lowest percentage of changes: 5.6%.

Bundles

Throughout 2013, quadruple bundles consolidated their position in the market and became the bundle most in demand, at 5.2 million, considerably ahead of the dual bundle of telephony and fixed broadband,

which had been the one most contracted until 2012.

The first operator to market offers of this kind was Telefónica, which launched Movistar Fusión in October 2012. In the third quarter of that year, other operators, such as Jazztel, reacted by launching equivalent offers onto the market. But it was in 2013 when the major operators, including the cable operators, which had been marketing fixed and mobile services separately up to that time, clearly placed their bets on bundled offers of this type.

The first ones to appear after Movistar Fusión were based on offering more competitive pricing for contracting all four services, although at times they also included fewer minutes of voice or less mobile broadband traffic in their flat rates or a lower fixed broadband speed. This caused some customers to react to the savings that these offers meant for their monthly expenditure by changing, where necessary, their fixed or mobile operator, or even both. The savings were demonstrated in the data obtained from the CNMC-Red.es Household Panel: in 2012, average expenditure on a bundle with voice, fixed broadband and access, plus the average cost of flat-rate mobile voice and broadband was €57.6 per month. A year later, in 2013, this average expenditure was €49.3 per month, while a quadruple bundle was €42.8 per month. In other words, there was a monthly saving per household of €6.50 by contracting fixed and mobile services together from a single operator.

Average monthly expenditure on the main services by household and contract type (€/month)

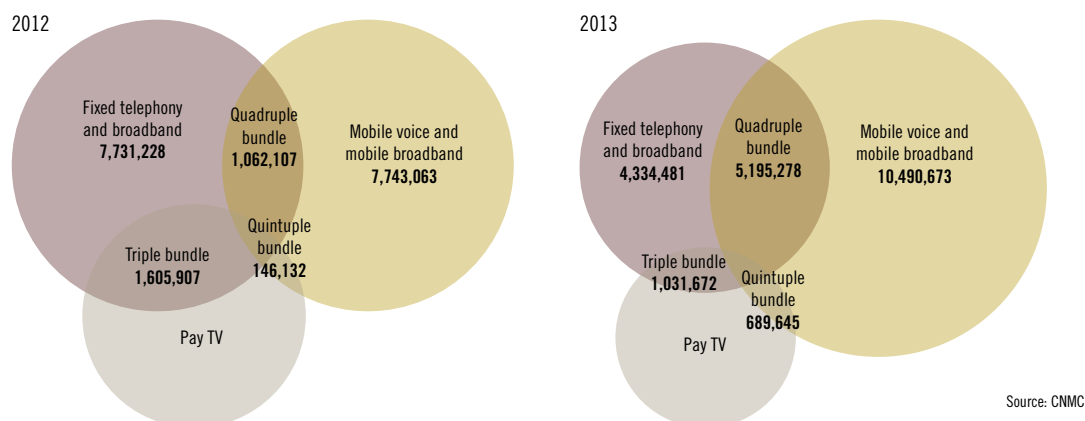
	2012	2013
Separate fixed and mobile service contracts		
Expenditure on a fixed telephony and broadband bundle and fixed access	35	33
Expenditure on flat rate mobile broadband and mobile voice	22.6	16.3
Bundled fixed and mobile service contracts		
Expenditure on fixed access and fixed and mobile telephony and broadband		42.8

Source: CNMC-Red.es Household Panel

The appearance of these quadruple and quintuple offers led to an increase in fixed and mobile portability, although admittedly many of the contracts for quadruple bundles were due to the migration of customers who already had a subscription with one operator or another for a dual fixed telephony and broadband bundle. The result was that the number of quadruple bundles rose by more than 4.1 million, while dual bundles fell by 3.4 million. Similarly, quintuple bundles, which include pay-TV, were a great success and more than half a million bundles

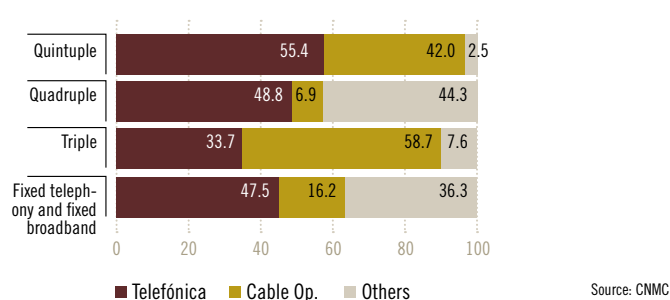
were added during the year, for a final figure of almost 700,000. This figure, as in the case of the quadruple bundle, can be explained in large part by the migration of customers who already had a triple bundle of voice, broadband and pay-TV from the same operator. The number of triple bundles thus fell by 574,000 but, with a total of one million bundles, they still continued to be more in demand than quintuple bundles at the end of 2013.

Trend in the number of bundles 2012-2013¹³



In an analysis by operator, it can be seen that Telefónica and the alternative operators shared the quadruple bundle market almost equally, while the cable operators, although also present in quadruple, gained in importance in the quintuple bundle market, where pay-TV is the differentiating service. Telefónica thus had approximately 50% of the overall market for these two types, competing with the alternative and cable operators respectively.

Distribution of bundles by type of operator (%/ total bundles), 2013

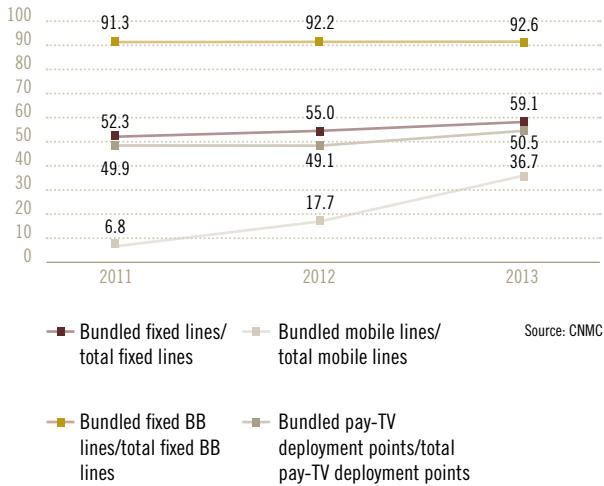


In December, Movistar clearly opted to differentiate its offer based on its television service – Movistar TV – by launching a Christmas campaign that included free television when signing up for Movistar Fusión or contracting an additional mobile line when the user already had a bundle. The result was positive, bringing in 63,000 pay-TV subscribers in the final quarter. Subsequently, in April 2014, Telefónica took the definitive step by launching Movistar Fusión TV, which replaced the initial Movistar Fusión offer, including fibre optics and television content in all its variations, while keeping the rate for the original offer.

As a consequence of developments in the industry, there are ever fewer lines that do not form part of a bundle with the various services. 59.1% of fixed telephony lines (11.5 million) were part of bundles at the end of 2013, almost 700,000 lines more than in 2012. In the case of fixed broadband, 92.6% of lines (11.3 million) were subscribed to with some other service. This service has been characterised by being contracted in most cases as part of a bundle. Up to 2012, it was bundled with fixed telephony and in 2013 mobile voice and broadband were added.

¹³ The figures for mobile voice and broadband bundles were estimated from the number of mobile lines included in any type of mobile voice and broadband bundle (according to data supplied by the operators), subtracting quadruple and quintuple bundles from this figure.

**Percentage of bundled lines / total lines
by service(%)**



However, the most significant increase in the number of bundles has undoubtedly been mobile voice lines. In 2011, only 3.5 million lines were bundled with a service, which moreover was exclusively mobile broadband, whereas two years later, 18.4 million lines, or 36.7% of the total, were contracted bundled with one or more services.

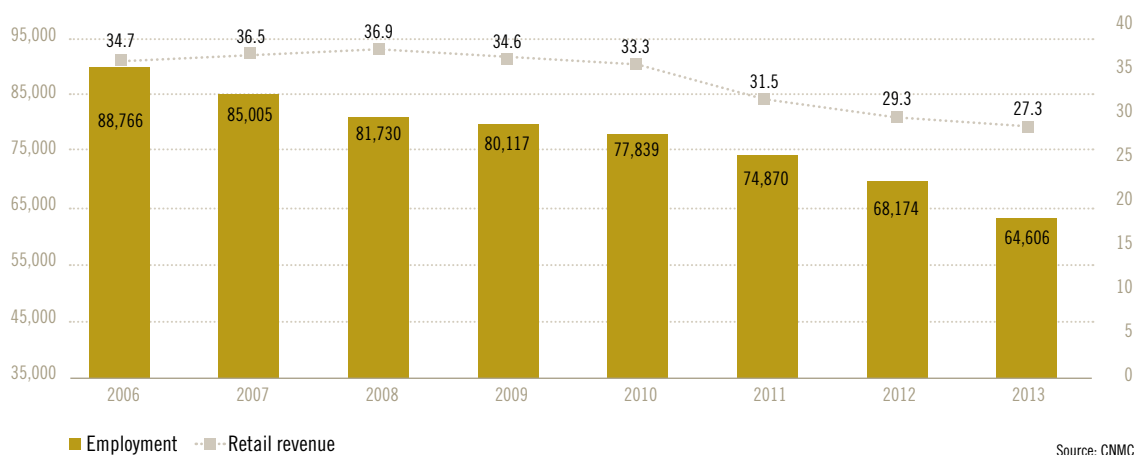
An important aspect of the continuing growth in

bundled end service contracts is knowing whether they affect households' propensity to subscribe to additional services with the same operator. In an analysis of information obtained directly from households regarding the services to which they were subscribing¹⁴, it was found that the probability or knock-on effect does indeed increase. The proportion of households that had subscribed to fixed and mobile services from the same operator before the emergence of quadruple and quintuple bundles in 2012 was 37.2%. A year later, in June 2013, by which time the switch to these new bundle types was gaining strength, this proportion had increased to 44.6%. The knock-on effect, together with the clear trend toward increased integration of services into one single commercial offer, are forces that may lead to greater market concentration.

Employment

The number people employed in the industry, including those in the audiovisual segment, continued the downward trend begun in 2007, although in 2013 the decrease was less marked than in 2012. Most of the decrease was due to reductions in the workforces of Telefónica, Vodafone and Ono. The industry thus employed a total of 64,606 people, compared with 68,174 the previous year.

**Trends in industry employment and revenues from end services
(number of employees and € billions)**



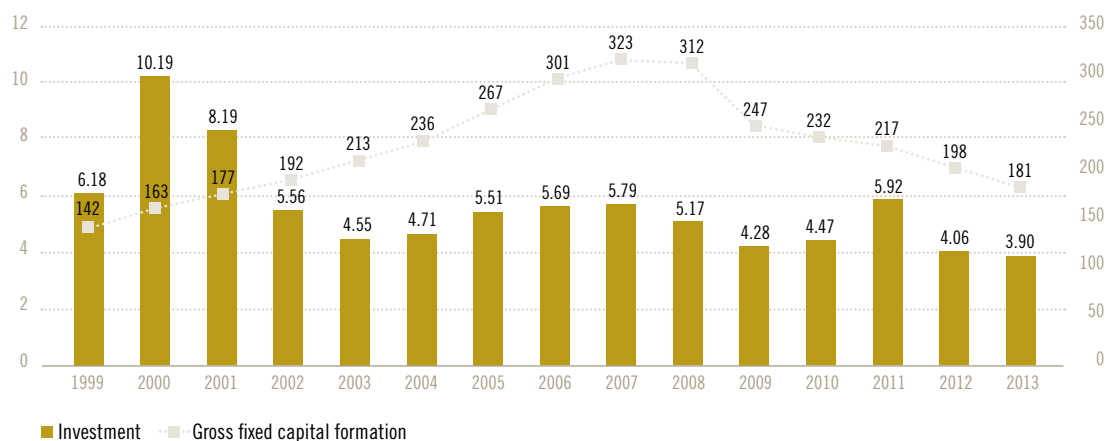
¹⁴ Occasional Note 2 "El efecto arrastre entre las demandas de servicios fijos y móviles" (The knock-on effect between fixed and mobile services) CNMC.

Investment

In 2013, investment (capital expenditure) in the industry totalled €3,899.9 million, including investment in the audiovisual segment. If we compare this figure

with that for the previous year, after subtracting the €82.1 million declared in 2012 for the adjudication of spectrum that took place in 2011, there was a slight inter-annual decrease of 1.9%.

Total investment in the industry and gross fixed capital formation in the economy (€ billions)

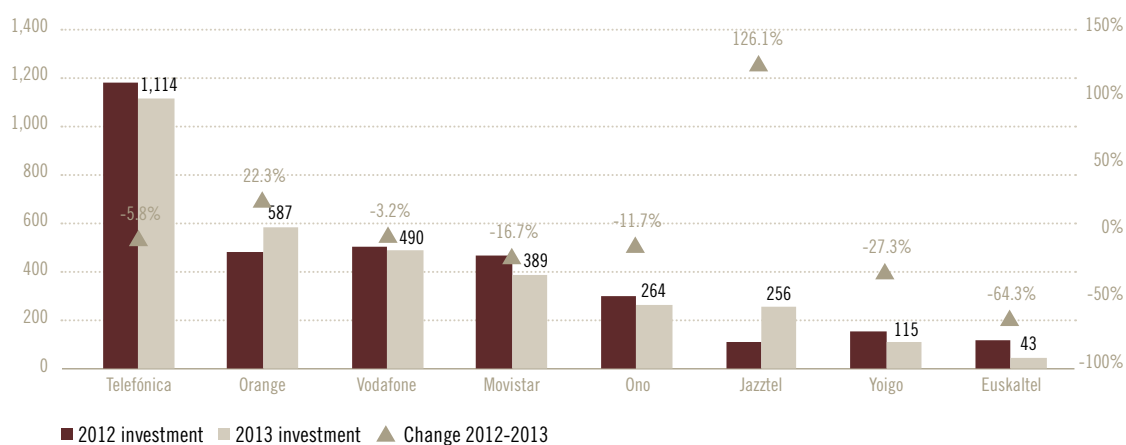


If the data on investment are analysed at the individual level, it can be seen that, of the four major operators, only Orange increased its investment in 2013. The joint figure for Telefónica and Movistar fell by 8.9% from 2012, with a more obvious drop in the mobile communications business of over 16%. Vodafone recorded a slight year-on-year decrease of 3.2% – if

the investment for the adjudication of spectrum that took place in 2011 is not taken into account, part of which the operator declared in 2012.

Jazztel made notable efforts to invest in deploying its fibre access network, ploughing in over €256 million, or twice the amount for the previous year.

Investment in the industry by operator and YoY rate of change
(€ billions and percentage)



Infrastructure

Fixed network infrastructure

In 2013, considerable investment was undertaken to deploy fibre-to-the-home (FTTH) networks. Although in previous years Telefónica had provided a significant number of fibre-to-the-home deployment points, last year the alternative operators also made progress in implementing new generation access networks over FTTH. Jazztel reached over 868,000 fibre deployment points. Orange ended the year with more than 67,000 FTTH deployment points. The greatest advance was made by Telefónica, which increased its installed FTTH access base by two million.

As for HFC deployment points (with fibre to the node and coaxial cable to the subscriber), cable operators continued to make progress in deploying this technology. In the last year, HFC deployed connections points rose by 4.5% to 10.2 million. Of this figure, 98% were deployment points installed at nodes using DOCSIS 3.0 technology, which allows bitrates in excess of 100 Mbps. It should also be mentioned in this regard that the volume of NGA deployment points installed by the cable operators continued to have the largest share of the total compared with the other operators.

In spite of the above, copper pair-based deployment points continue to be in the majority – with 15.5 million lines – as they are the most used to offer voice and data services, both by the incumbent operator and by the alternative operators that do not use HFC deployment points, through the loop unbundling service.

However, these traditional copper-based deployment points from a subscriber to a local exchange are no longer the only means of access to users via xDSL technology. It should be mentioned that, in addition to conventional local exchanges, there are other elements on the network, called remote nodes. They are connected to the exchange by fibre optic cable and generally handle a few hundred loops, so that there may be multiple remote nodes within the exchange area. Since the quality of the xDSL service is very sensitive to the loop distance, the aim of these remote nodes is to shorten the distance by having a network element installed along the way. These elements are deployed either to improve the broadband services in certain local exchange areas or to provide a service for new urban areas. In this way, remote node-based broadband access services significantly improve the bitrate relative to that obtained by providing the service from the local exchange. At year-end 2013 there were a total of 6,083 remote nodes in the network, on which 1,032,529 copper loops depended.

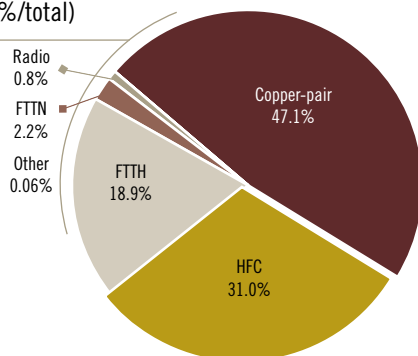
Trends in deployed connections points

	2009	2010	2011	2012	2013
Copper pair	15,865,857	15,996,403	16,065,690	15,740,106	15,539,052
HFC	9,307,653	9,439,863	9,497,692	9,797,680	10,239,078
FTTH	396,065	524,370	1,607,108	3,250,556	6,244,313
FTTN	628,494	668,724	691,435	700,495	709,946
Radio	233,335	226,186	236,807	219,532	262,030
Other	25,349	20,027	14,207	19,322	19,167

Source: CNMC

The following graph shows the percentage weighting of the different technologies in deployed connections points. It should be noted that the percentage for copper pair fell by more

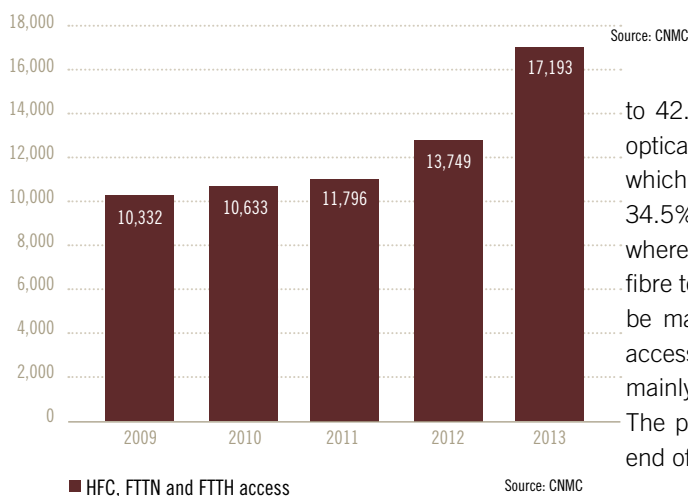
Deployed connections points by type of technology (%/total)



Source: CNMC

than five percentage points in one year, to less than 50%. This trend contrasts with the already mentioned advance of fibre-to-the-home (FTTH) deployment points, which almost doubled their share last year, to 19.0%. The share of HFC deployment points installed by the cable operators fell by two percentage points to 30.7%.

Trends in installed NGA deployment points (thousands of deployment points)

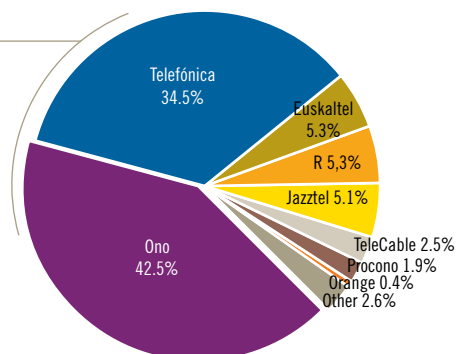


Lastly, the other forms of access closed the year with figures similar to previous years.

If we analyse the trend for installed HFC and fibre optic (FTTH and FTTN) deployment points, a significant rise can be seen in the last three years. 2013 ended with a total of 17.2 million deployment points installed using these technologies 25.1% more than the previous year, driven by the increase in the deployment of FTTH deployment points by Telefónica and Jazztel.

A breakdown of installed HFC and fibre optic (FTTN and FTTH) deployment points by operator shows that Ono continued to be the operator with the most widespread deployment of its own network nationwide, but that its percentage of deployment points fell by nine percentage points

Share of deployed connections of HFC and fibre by operator



to 42.5%. This is explained by the increase in optical fibre deployment points by Telefónica, which in 2013 increased its percentage share to 34.5% (up by six percentage points) by adding where necessary fibre to the node (FTTN) and fibre to the home (FTTH). Lastly, mention should be made of the investment in deploying FTTH access by the alternative operators who were mainly using xDSL, such as Jazztel and Orange. The presence of Vodafone was still slight at the end of the year.

Deployed connections by operator
(FTTH, HFC and FTTN)

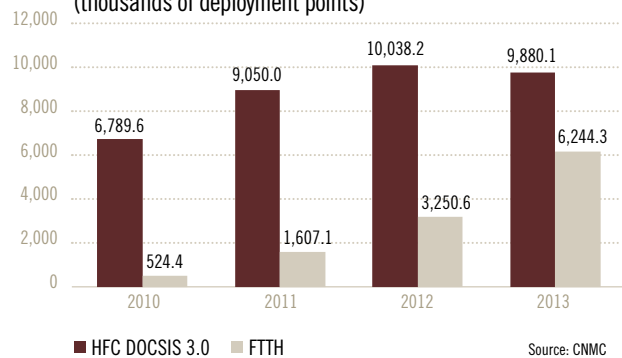
	2011	2012	2013
ONO	6,918,752	7,087,008	7,302,830
Telefónica	2,274,614	3,907,699	5,935,292
Euskaltel	890,368	904,263	909,260
R	841,250	877,783	910,370
Jazztel			868,500
Telecable	400,875	417,515	422,899
Procono	250,762	282,747	322,226
Orange			67,377
Other	470,376	554,463	454,583
Total	11,796,235	13,748,731	17,193,337

Source: CNMC

The following table shows the trend for installed HFC and fibre optic deployment points for the last three years by operator. In 2013, the presence of new players who invested in deploying new generation access (NGA) networks is noteworthy, for example, Jazztel.

The graph below shows trends in NGA (HFC DOCSIS 3.0 and FTTH) deployed connections points. As noted in previous sections, fibre-to-the-home (FTTH) deployment points were the new generation deployment points (NGA) that grew most last year. Thus in 2013 installed FTTH deployment points reached 6.24 million, an increase of 92.1% in one

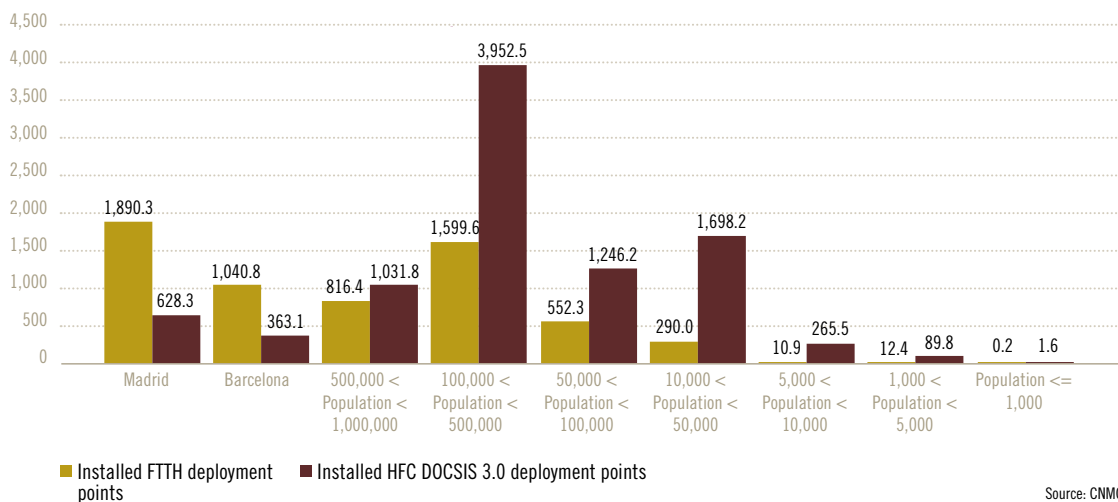
Trend in installed NGA deployment points
(thousands of deployment points)



year. There were also 10 million HFC DOCSIS 3.0 deployment points (up by 4.2%).

Geographically, the presence of NGA deployment points differs greatly among different towns in Spain. The following graph shows the distribution by size of municipality of FTTH- and HFC DOCSIS 3.0-based NGA access as at December 2013. The greatest deployment of FTTH deployment points occurred in Madrid and Barcelona where there were almost three million deployment points (47.2% of the total). In cities with a population of between 100,000 and one million, their presence was also noteworthy. However, in smaller towns they were rare or not present at all.

Breakdown of installed NGA deployment points by type of municipality (thousands of deployment points)

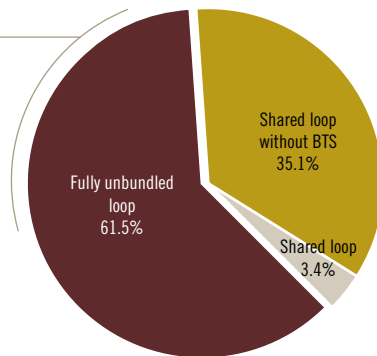


HFC DOCSIS 3.0 deployment points were observed to be implemented mostly in cities with a population of between 100,000 and one million inhabitants, if we count both the number of deployed connections points and the population as a whole.

As regards the use of wholesale loop unbundling, last year 96 new exchanges with at least one co-located operator were added, to give a total for the country of 1,324 local exchanges with alternative xDSL operators. At the end of 2013, there were a total of 3.79 million unbundled loops, an increase of 16.1% in just one year. In this way the operators chose the wholesale loop unbundling service as their preferred way of accessing the broadband market.

Looking at loop unbundling by type, it can be seen that total and shared loop unbundling without a basic telephone service (BTS) continued to increase. These two methods together totalled 3.7 million loops, a rise of 18.8%, and formed 97% of all unbundled loops.

**Breakdown of unbundled
loop types (%)**



Source: CNMC

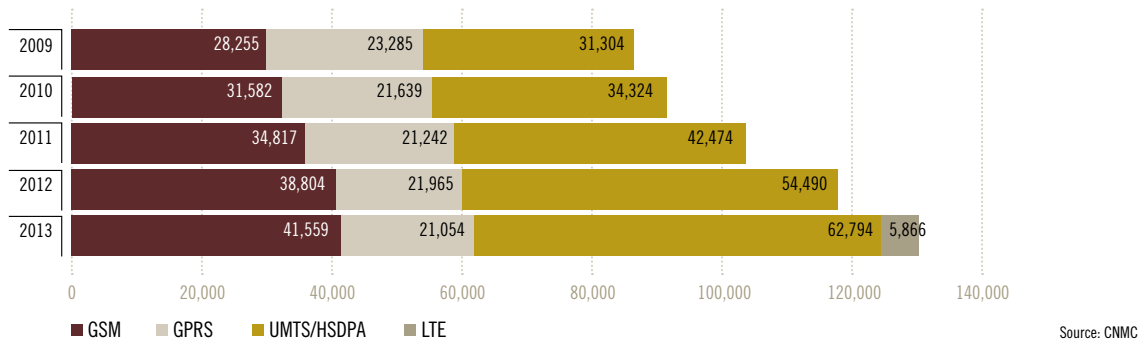
The operators who used this method bundled their various copper pair-based voice and data services without using the Telefónica telephone service. Lastly, shared loops fell by 29%, to become a residual wholesale product with barely 3.4% of the total of unbundled loops.

Mobile network infrastructure

In 2013, the major new factor in mobile telecommunications networks was the start of the deployment of the fourth generation *Long Term Evolution* (LTE) mobile communications standard, also known as 4G. This standard means that customers are offered higher transmission rates, with the effects on the demand for content, videos and application that this improvement is capable of bringing. Access to networks with LTE technology provide data transmission rates that can exceed 100 Mbps.

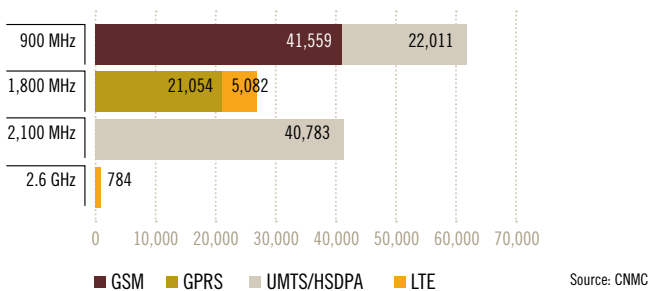
It has already been noted above that the development of these networks is taking place in Spain more slowly than in other neighbouring countries. In 2013, the mobile network operators deployed a total of 5,866 LTE base stations, almost all using the 1,800 MHz frequency band, with the exception of the big cities where the 2.6 GHz band has also been used. Logically, the first phase focused on the major cities, mainly Madrid and Barcelona. But the operators' investment was not focused only on the fourth generation, LTE; they also continued to invest in the other mobile technologies. One example was the number of UMTS/HSDPA base stations declared in 2013 — 62,794 active stations — which represented an inter-annual increase of 15% over the number declared the previous year.

Trends in base station numbers by technology



An important regulatory decision was the introduction of technological and service neutrality, through the amended GSM Directive and EU Decision 2009/766/EC. As a result of applying this principle, it was possible to use the 900 MHz and 1,800 MHz bands, not just for systems based on GSM technology, but also for other systems that allow higher data transmission rates, such as UMTS/HSDPA or LTE technology and others that are compatible. This measure may help stimulate the roll-out of mobile broadband systems, especially in rural areas. The graph below shows the 2013 breakdown of base stations by technology and frequency band used.

Base stations by technology and frequency band



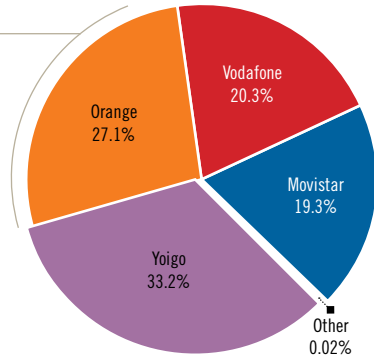
It can be seen that, in 2013, for the third year running, the operators deployed a significant number of UMTS/HSDPA stations in the 900 MHz frequency band. At

the same time, there was a slight decrease in the total number of base stations using the 2,100 MHz frequency band.

At the same time, the graph also shows that the deployment of 4G technology has occurred mainly in the 1,800 MHz frequency bands but also, albeit to a lesser extent, in the 2.6 GHz band. This model – combining the 1,800 MHz and 2.6 GHz bands – has been implemented in most other European countries. In the near future, it is forecast that the mobile operators will also be able to use the 800 MHz frequency, which offers better propagation characteristics, in order to promote the deployment of this type of technology throughout the country, once this band is free of television operators.

The following graph shows the LTE base station base according to the network operators that deployed them. It can be seen that Yoigo, the network operator with the smallest market share, is at the same time the operator with the most LTE stations deployed around the country. Yoigo was in fact the first operator to offer a very high speed service over LTE commercially. Subsequently, the other network operators began to announce their plans to deploy fourth generation technology until, in September 2013, they had started operating on the four 4G platforms that currently offer high-speed mobile connectivity. As a result, at the end of 2013, most large and medium-sized cities were covered by at least one LTE network.

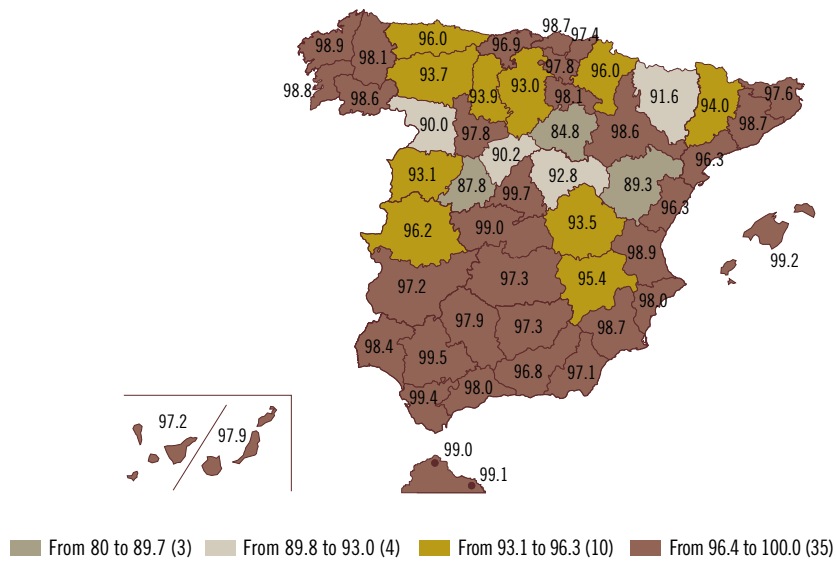
**Breakdown of base
stations by operator,
2013 (%)**



Source: CNMC

The main outcome of this rise in the number of 3G base stations was the rise in the population covered by this type of technology. The following graph shows the population covered by 3G services, by province, in accordance with certain minimum quality standards required¹⁵. As a general rule, the provinces with the highest concentrations of urban population had the greatest 3G network coverage.

Population with access to 3G/UMTS networks (%)



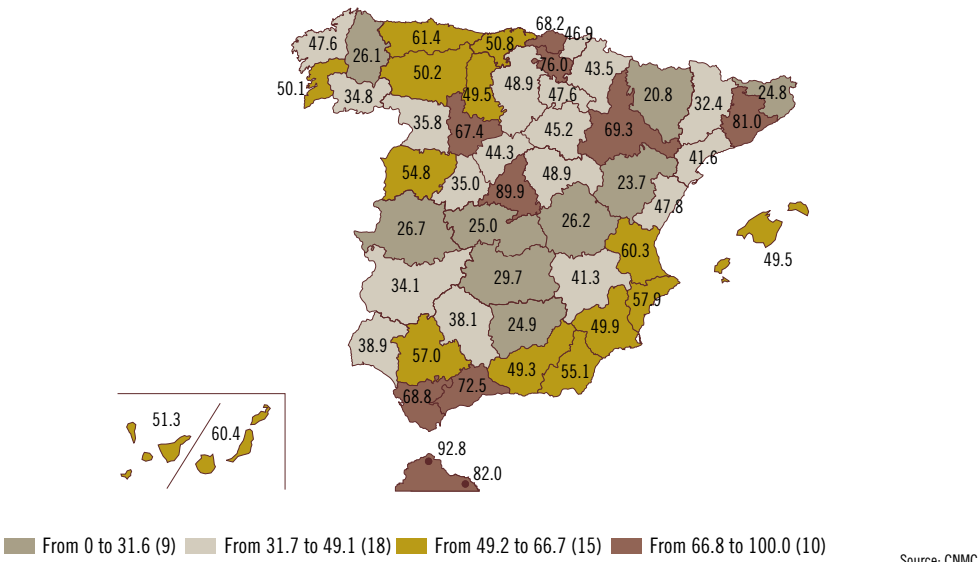
Source: CNMC

In the case of coverage by 4G platforms, this trend is even more obvious. Barcelona and Madrid have much greater coverage than the rest of the country.

However, these differences are expected to be reduced gradually as the operators expand their base station network.

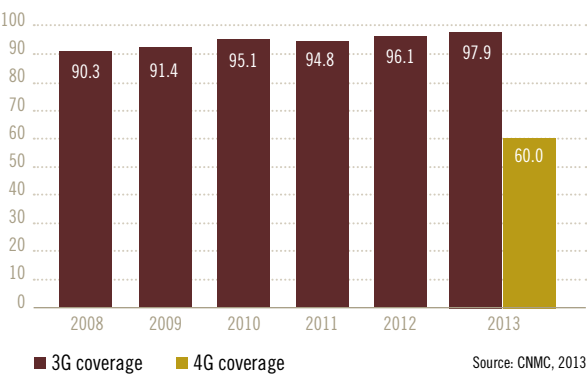
¹⁵ The declared coverage of 3G services ensures a data traffic rate of over 300 Kbps.

Percentage of population covered by a 4G/LTE network (%)



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

According to the figures provided by the four mobile operators, 97.9% of the Spanish population was covered by at least one third-generation network, either via UMTS or HSDPA technology. The data provided by the network operators also showed that 60% of the population had the option of connecting to at least one fourth-generation (LTE) network.



1.3. Interventions by the public administrations

In the search for a balance between the participation of the public sector as a telecommunications operator and the minimising of possible distortion to competition, the CNMC continued its advisory and monitoring activities throughout 2013 – including managing the Register of Operators – and its supervision of the activities of public bodies, prominent among which were those relating to compliance with the conditions

established in Circular 1/2010 of 15 July 2010 of the *Comisión del Mercado de las Telecomunicaciones* (Telecommunications Market Commission) regulating the conditions for the operation of networks and the provision of electronic communications services by the Public Administrations.

In July 2013, amendments to Circular 1/2010 were submitted to public consultation. Fifteen replies were

received, from operators, Public Administrations and other bodies. In the proposed amendment, there continued to be an emphasis on the importance of the Public Administrations' adhering to the principle of private investment and changes were introduced in the control exercised by the Commission over the activities of these bodies.

The major changes focused on improving the resolution system, delimiting the activities that were to be registered in the Register of Operators, and simplifying and establishing – in light of the experience gained over the years of application – the cases in which public sector operators needed to submit certain information regarding their actions.

The passage through Parliament of the new draft General Telecommunications Act, which amended the legislative framework for the Public Administrations, led to the procedure being held in abeyance until this regulation is approved, in which case a decision would be made depending on the final wording.

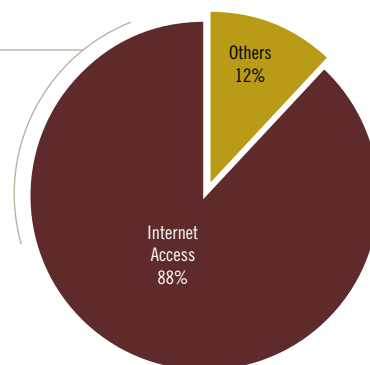
Throughout 2013, a variety of consultations and requests for reports were received, including registry-related topics, the management of digital multiplexes and the application of Circular 1/2010. In some cases, due to their novel character, the decisions were issued by the Board, such as those regarding the right of access to the Asturcom fibre optic network, the Retegal infrastructure and Internet access services on trains, among others.

In a different connection, as envisaged in Circular 1/2010, the CNMC posted an announcement on its website throughout 2013 regarding the consultations launched by three Autonomous Communities (regional governments), which wished to know the intentions of the private operators regarding the deployment of NGA networks in their regions, with the aim of drawing up coverage maps that would allow them to better design the areas that could be the recipients of aid for deployment.

Specifically, consultations were published by the Government of Catalonia on fibre optic networks for industrial estates and NGA broadband infrastructures; the consultation by the Government of Extremadura on identifying infrastructure deployment and ultra-fast broadband and basic broadband activities; and by the Government of Aragon on the areas with network deployment that could support broadband services of more than 30 Mbps. In the last case, at the end of 2013, the Government of Aragon submitted the project for this Authority's consideration prior to notification being sent to the European Commission in accordance with the rules on state aid.

With regard to the registration situation, the total number of operators associated with a Public Administration registered as at 31 December 2013

**Services provided by the
Public Administrations
2013**



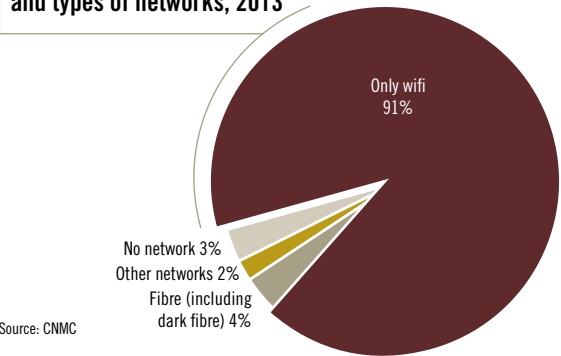
Source: CNMC

was 1,243, of which 673 are subject to Circular 1/2010. This regulation was not applicable to the other operators¹⁶.

There have been no significant changes in the distribution of the different types of networks and supported services since 2012. Most public sector bodies – 88% of the 673 – were offering some type of Internet access together with other electronic communications services.

¹⁶ Article 1.3 of Circular 1/2010: "Single frequency network ground stations for broadcasting digital terrestrial television to the public that comply with the conditions laid down in additional Resolution twelve of Royal Decree 944/2005 of 29 July approving the national technical plan for digital terrestrial television are excluded from the scope of application of this Circular.

**Operators associated with
the Public Administrations
and types of networks, 2013**



With regard to the types of networks, of the 673 operators, 29 had deployed some kind of fibre network, including dark fibre, although the majority – 627 – were operating Wi-Fi networks, 613 exclusively and the others in conjunction with the deployment of fixed networks¹⁷.

¹⁷ Types of networks: only wifi: 613; fibre including dark fibre: 29; other networks: 11; no network 20.

2 Analysis of the industry in Spain

2.1 Retail fixed communications

2.1.1 Fixed telephony

In 2013, revenue from fixed communications fell from the previous year's level, as did the number of lines, which has been gradually shrinking since 2003. In the residential segment, there was an increase of 125,901 in the number of fixed lines, which did not compensate for the more than 310,000 line decrease in the business segment, resulting in a smaller installed base.

The number of portability transfers recorded during the year exceeded 1.9 million, the highest figure to date, which, together with the bundling of services and reductions in prices, indicated the market's high level of dynamism.

In 2013, subscriptions to quadruple packages – made up of fixed telephony, fixed broadband, mobile voice and mobile broadband – overtook those to dual

packages and were by far the preferred option on the part of users. 59.1% of fixed lines were contracted as bundles and the quadruple package accounted for 26.8% of the total number of fixed lines, compared with 22.4% for dual fixed voice and fixed broadband, which had been the leader up to this time.

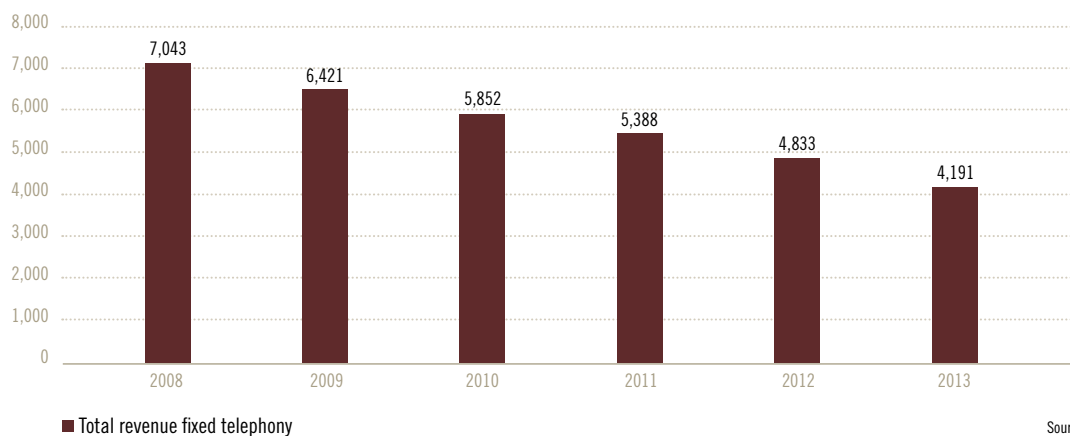
All these changes caused the alternative operators to continue to gain ground and reach a market share by lines of more than 40%, although Telefónica continued to be the market leader with 58.3% of the total.

Revenues

Revenue from retail fixed telephony services reached €4,190.8 million, down by 13.3% on the previous year.

In a context in which traffic declined by 12.4%, revenues from this traffic fell by 19% compared with

Evolution of revenue from retail fixed telephony¹⁸ (€ millions)

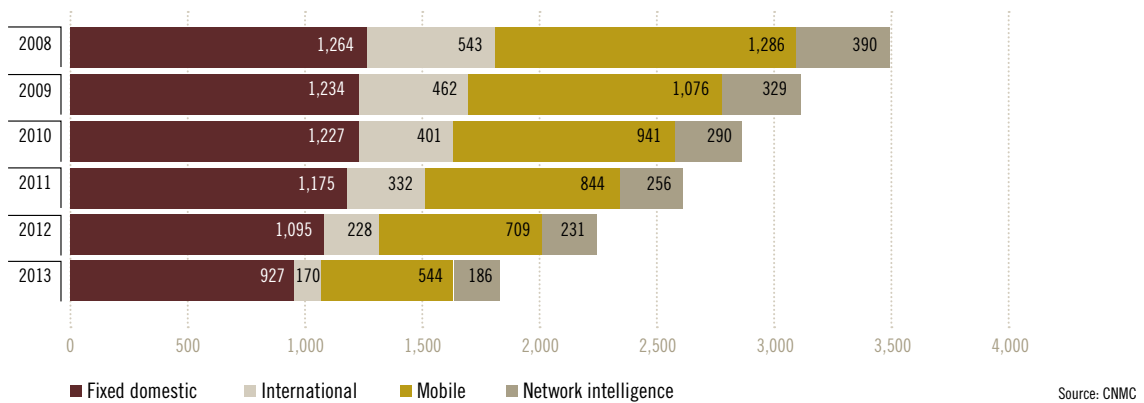


¹⁸ Includes services that combine a fixed and a mobile number in one single offer.

the previous year. The biggest decline in billing was for outbound international calls, which were down by 25.4%. Revenues from traffic to a mobile destination dropped by 23.3%, while those from network

intelligence fell 19.5% year-on-year. Lastly, the traffic service most used, calls to domestic fixed lines, saw billing fall by 15.4%.

Evolution of revenue from fixed traffic services (€ millions)

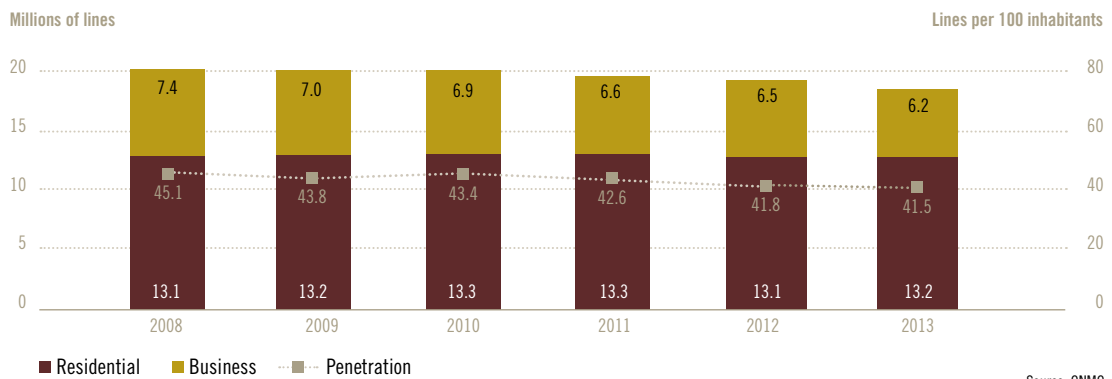


Lines

The number of active fixed telephone lines totalled 19.4 million, 190,381 lines fewer than in 2012, with

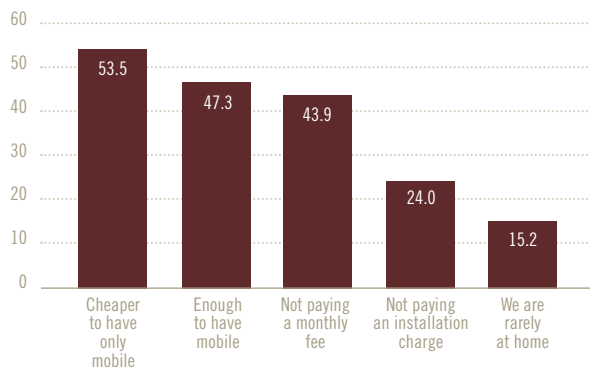
a drop of 316,282 lines in the business segment that was not compensated by the growth in the number of lines in the residential segment of 125,901.

Number of lines and penetration rates for fixed telephony (millions of lines and lines per 100 inhabitants)



The penetration of fixed telephony¹⁹, defined as the total number of fixed lines per 100 inhabitants, was 41.5, a slightly lower figure than in 2012, when it was 41.8²⁰. According to data from the CNMC-Red.es Household Panel, at the end of 2013, 82.7% of Spanish households had a fixed telephone service, one percentage point less than in the previous year. There has been a gradual increase in recent years in the number of households that have access only over a mobile network – now 17.2% – and a simultaneous decrease in the penetration of fixed telephony among households. In a recurring survey carried out by the CNMC, when households that did not have a fixed telephone were asked the reasons for this choice, they emphasised financial arguments: slightly more than half stated that it was cheaper to have only a mobile and more than four out of ten stated that they did not wish to pay a monthly fee.

Households by reasons given for not having fixed access (% of total households)



Source: CNMC-Red.es Household Panel

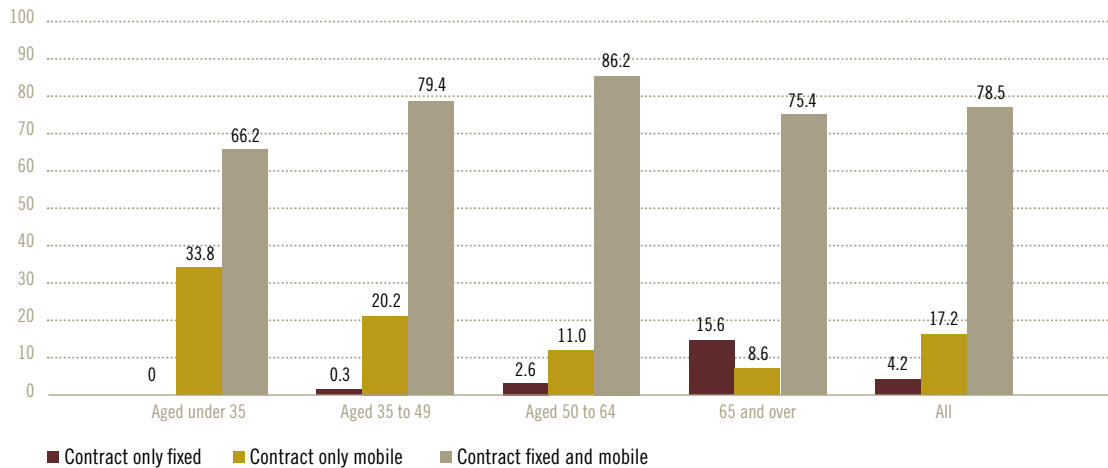
The data from the CNMC-Red.es Household Panel also indicated that households where the head of the family was aged 65 or older were more inclined to have only fixed access, and 15.6% of these households had only this service, whereas the national average was 4.2%. In contrast, in households where the head of the family was under 35 years of age, the percentage that had only fixed access was zero, and one in three households had only mobile access. The data thus show that there is a wide technology gap between the generations.

Another notable statistic was that in small towns with less than 10,000 inhabitants, the percentage of households that had only one type of access, whether fixed or mobile, was relatively high: 10.7% had only fixed access, whereas the national average was 4.2%, and 25.2% had only mobile access, whereas the national average was 17.2%. The figure for fixed service is explained by the fact that in these towns there was a greater proportion of elderly people less inclined to use a mobile phone. The figure for the mobile service is harder to explain, although it is possible that in rural communities the fact of having a job that means working outdoors and moving around reduces the attraction of fixed access. Another factor is that in some areas it is often more economical for the operator to provide a wireless telephone system such as mobile telephony. Even so, in the residential sector high rates of replacement of fixed by mobile access have not been seen.

¹⁹ Calculated from the total number of fixed telephone lines and the population in 2013, obtained from the census update: 46,727,890 inhabitants (source INE, the Spanish National Statistics Institute).

²⁰ Calculated from the total number of fixed telephony lines and the population in 2012, obtained from the census update: 46,818,216 inhabitants (source INE, the Spanish National Statistics Institute).

Telephone access subscriptions by age (%)

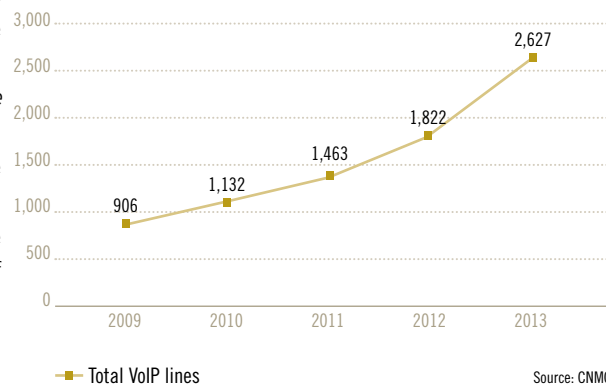


Source: CNMC-Red.es Household Panel

The difference between having fixed or mobile access loses its significance when a fixed number is supported by a mobile network. In Spain there were a total of 461,000 fixed lines of this type active in 2013: these are the services known as *home zone* or similar. Also, there are services that are provided over a mobile network but combine a fixed and mobile number, so that either one can be used at the end user's discretion. Lines of this type, which are more prevalent in the business segment, reached a total of 480,000 active lines in 2013.

Out of the total of fixed lines in the market offered by the operators, 13.6% used voice over IP (which does not include the Internet telephone service offered by OTT players). The voice over IP service posted year-on-year growth of 44.2%, reaching a total of 2,627,379 lines. The contribution of these lines to the total increased by over four percentage points from 2012 and their growth was boosted by bundled broadband offers. Orange led this activity with 49.9% of the lines, while Vodafone and Telefónica followed with 28.4% and 17%. Orange and Vodafone used the wholesale methods of renting loops without PSTN and naked bit-stream access, respectively, to provide fixed voice services using IP technology. For these two operators, VoIP lines represented more than two-thirds of their total base.

Fixed telephone lines using VoIP²¹ (thousands of lines)



Source: CNMC

Customers

A service provider can offer two types of fixed telephony. With direct access, the operator offers the customer access via his own network or by using a wholesale local loop unbundling service. With indirect access, the operator can use the pre-selection mechanism or Wholesale Line Rental (WLR). With the latter mechanism, operators that do not have their own network on which to reach subscribers can offer an access service using the incumbent operator's network – with regulated prices and conditions – and offer a voice service to subscribers through carrier

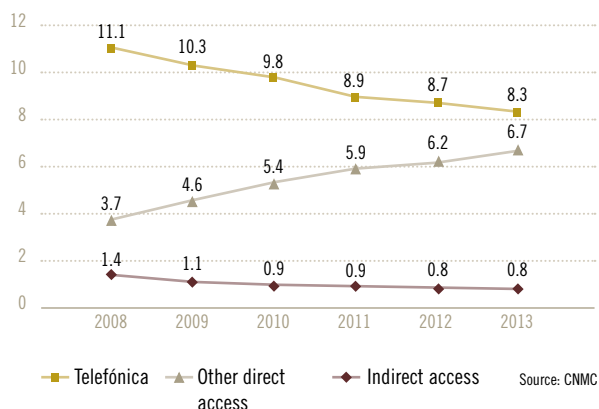
²¹ This figure does not include the use of applications enabling telephone calls to be made over the Internet.

pre-selection. The operators can thus bill their customers for the access service and traffic in an integrated manner, disassociating themselves entirely from Telefónica. WLR has enabled alternative operators to market new bundles and offers to compete more effectively with the dominant operator. In 2013, the total number of WLR lines was 530,117, 8.3% more than in the previous year.

The smaller number of customers with indirect access is a result of increased competition in infrastructures, not only through roll-outs of proprietary networks but also through the use of wholesale services involving some capital expenditure on the part of the alternative operators such as, for example, local loop unbundling.

At the end of the year there were 15.8 million fixed telephony customers, 95.2% of whom were proprietary network or direct access customers. Only

Change in the number of customers with direct and indirect access (millions)



4.8%, or 756,418 customers, had some form of indirect access.

Number of customers by segment in 2013

	RESIDENTIAL	%/TOTAL	BUSINESS	%/TOTAL	TOTAL
Direct access	12,577,108	79.8%	2,431,403	15.4%	15,008,511
Indirect access	627,214	4.0%	129,204	0.8%	756,418

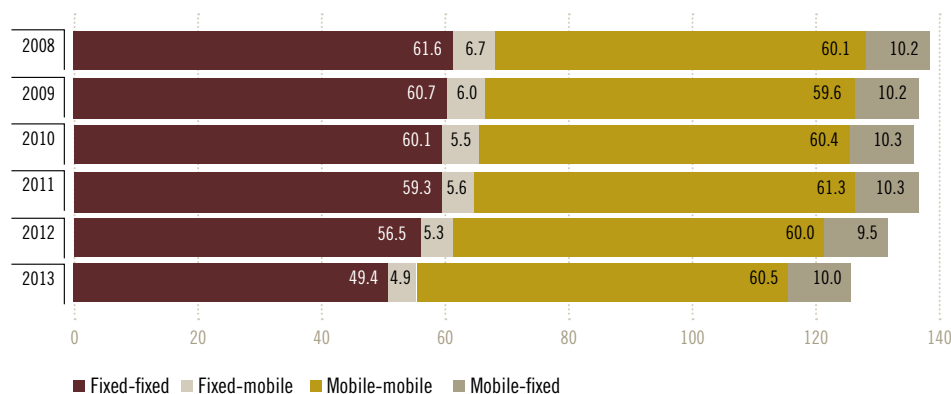
Source: CNMC

Traffic

Once again this past year, voice traffic on mobile networks exceeded that on fixed networks. Traffic originating from mobile networks represented 56.5% of the total traffic – three percentage points more than

the previous year – with a total of 70.5 billion minutes, surpassing the total handled by fixed networks, which reached 43.5% of the total, 54.3 billion minutes.

Trends in traffic by origin and destination²² (billions of minutes)

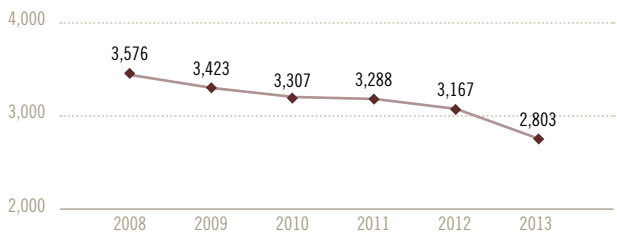


²² Fixed-to-fixed traffic does not include local calls to narrow-band Internet. Traffic from a mobile is calculated in air minutes and does not include international roaming.

The 12.4% drop in total traffic from fixed networks was due to the figure for traffic per line, which fell, on the consolidated level, by 11.5% year-on-year, showing very similar behaviour in both the residential and business segments.

Flat-rate fixed telephone traffic accounted for 75.8% of the total number of minutes, the same figure as a year ago. The remaining 24.2% was traffic charged by time.

Minutes per line and year (minutes/line)

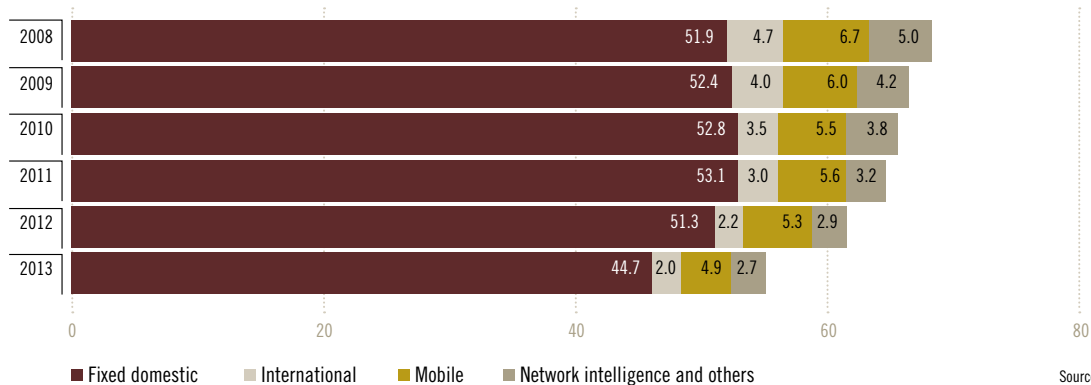


Source: CNMC

In regard to the different types of traffic originating on fixed networks, the most significant downward trend occurred in calls to domestic fixed phones, 12.9%. Traffic to international destinations shrank by 11.4% during the year and traffic to mobile destinations and network intelligence both fell in a similar manner, by around 8%. This traffic corresponds to that recorded by all the conventional operators and does not include traffic handled by *over-the-top* operators, which enable calls to be made to any destination using Internet applications.

The use of OTT services for voice communications is gaining in importance. According to data from the European Commission's Eurobarometer, recently published with figures up to January 2014, in Spain, 29% of households reported that they had used free Internet services to make calls.

Trends in traffic originating from a fixed network²³ (billions of minutes)



Source: CNMC

Competition

For years now competition has been focused on the end customer, not on an exclusive service such as fixed telephony. This is why the operators compete with ever more extensive service bundles, in which one of the services is voice calls. In 2013, the number of portability transfers reached 1.95 million

transactions, 40,000 more than in 2011, which had previously held the record. This figure shows the high number of operator changes. In the regular survey carried out by the CNMC, it was found that 15.4% of households stated that they had changed their fixed telephone provider in the last year.

²³ Does not include switched access.

The appearance of the quadruple package, combining fixed telephony, fixed broadband, mobile voice and mobile broadband, gave a boost to the fixed telephony market. There was a fall in subscriptions to dual bundles of 3.4 million, which mostly switched to quadruple bundles. In all, by the end of 2013, 26.8% of the total number of fixed lines were part of quadruple packages, pulling ahead of the dual fixed voice, fixed broadband bundle, which accounted for 22.4% of the total number of fixed lines. Two trends occurred simultaneously. On the one hand, the operators migrated a large proportion of their customers on fixed telephone contracts, normally with broadband, to quadruple offers, with the aim of ensuring their loyalty. On the other, as shown by the stream of portability transfers, customers also moved among operators in significant numbers.

The operators who gained the most benefit were the alternative operators, especially Vodafone and Orange, which substantially increased their fixed line bases, with growth rates higher than in previous years. By year-end, the share of the total market held by the alternative and cable operators had grown to over 40% of lines.

Pre-selection and portability

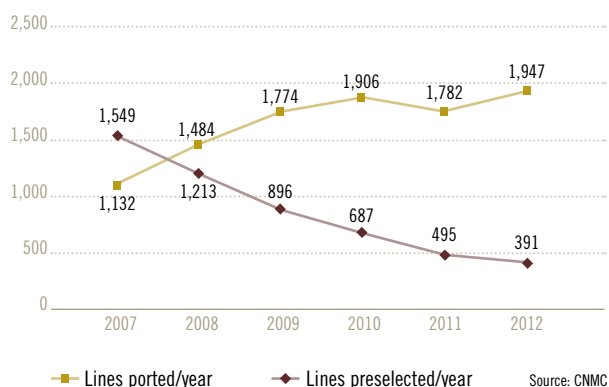
Portability and pre-selection are the mechanisms stimulating competition in the fixed voice market. In particular, portability allows consumers to change operator while keeping the same fixed number, which reduces changeover costs, and its use is a good indicator of the degree of competition in the market.

In recent years, portability reached very high levels and in 2013 the monthly average was 162,214. In addition, the total number of transfers recorded in 2013 grew by 9.2% compared with the previous year.

The growing supply of direct access from alternative operators hastened the decline in the use of pre-selection, which is an increasingly residual service. The number of active preselected lines fell to 390,783, a decrease of 21.1% from the previous year. Thus the importance of this mechanism in generating more

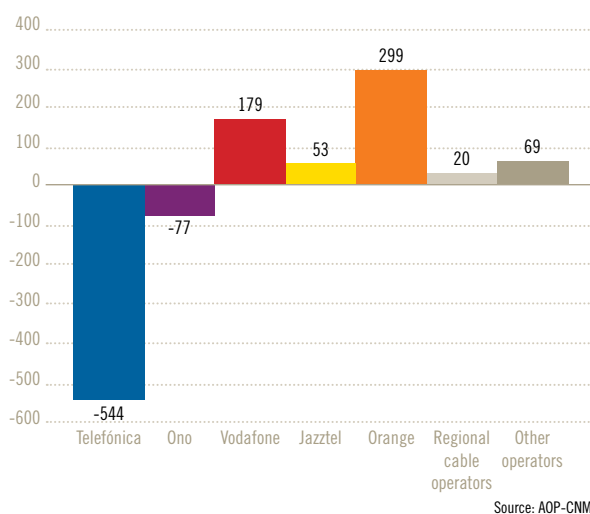
competition in the market for fixed telephony has gradually diminished.

Portability and pre-selection of fixed lines (thousands of lines)



The net balance of portability transfers is defined as the difference between the number of lines imported by an operator and the number of lines exported by that same operator to the other operators in the portability process. Telefónica, with a negative balance of 543,529 lines, lost ground to its competitors. In contrast, Orange and Vodafone were the operators that profited most from portability, with overall positive balances of 298,778 and 179,170 lines respectively.

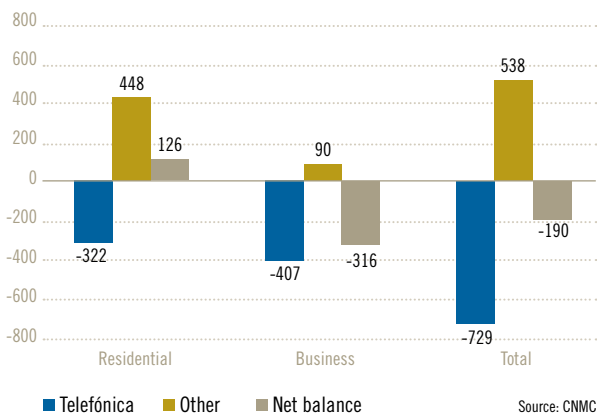
Net balance of portability by operator in 2013 (thousands of lines)



Lines: gains and losses

Telefónica's total line base showed a downward trend, falling by 728,607 during the year. The other operators gained 538,226 lines, an increase of 447,987 in the residential segment and 90,239 in the business segment. The increase was not enough to compensate for Telefónica's losses in the residential and business segments over the course of the year and the final consolidated balance was therefore negative, with a net loss of 190,381 lines. It was in the business segment that the greater loss of lines occurred for Telefónica and lower gains for the other operators, so that there was a net loss of lines in this market.

Lines gained and lost by segment (thousands of lines)

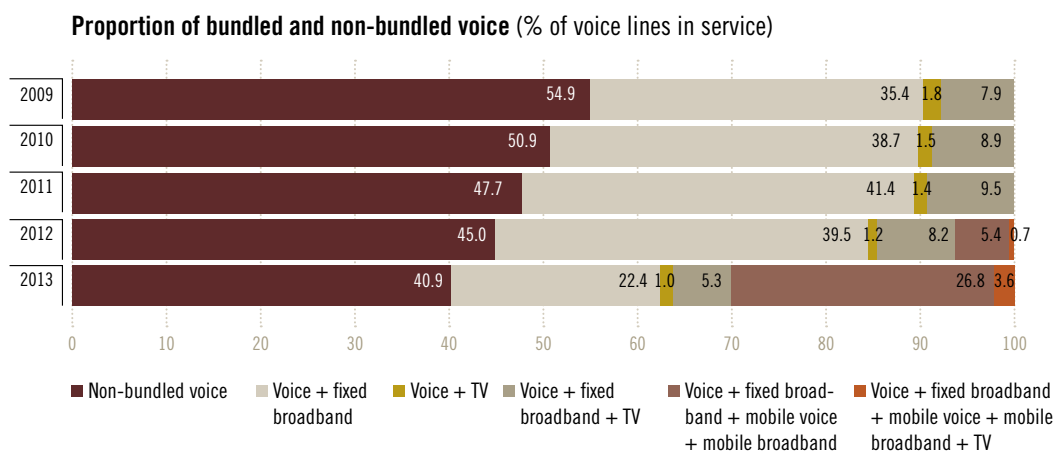


The migration of lines between Telefónica and the alternative operators, demonstrated by the portability figures and the alternative operators' increased

number of lines, indicates more competition, made possible in part by regulation by the CNMC. The alternative operators continued their strategy of offering direct access services to their customers, basing this on wholesale local loop unbundling, which allows them to use Telefónica's access at regulated prices and conditions under different modes. They made particular use of the complete unbundling mode, which enables an alternative operator to offer the entire range of services to the end customer, including access. Secondly, shared loop access without PSTN also allows operators to offer the same services to customers, although in this case voice calls use VoIP. In 2013, there were 3,786,733 loops in the completely unbundled and unbundled without PSTN modes, representing a 16.1% growth compared with the previous year.

Voice bundling

Bundling is a clear industry-wide trend that has brought benefits to the users. Ever fewer lines are contracted solely for the voice telephone service. An event to be noted in 2013 was the significant change that took place in the type of bundle that was most in demand. Of the 59.1% of fixed lines with subscriptions to bundled voice, over half also had fixed broadband and mobile services, as against 6.2% one year previously. In other words, in 2013 there was a very clear surge in quadruple bundles and a decline in the number of dual bundles of voice and fixed broadband, which had been the bundle most in demand until this year. Dual bundles fell by 3.4 million, while there were 4.1 million new quadruple bundles, out of a total installed base of 5.2 million.



Source: CNMC

Prices

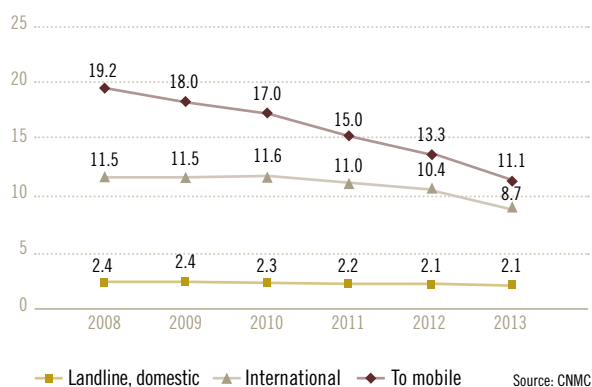
As well as the increased bundling of services, there have been more flat or quasi flat rates for voice service from a fixed network (for calls to a domestic destination). In general, a household that subscribes to more than one service from the same operator receives practically unlimited minutes of use of the national fixed network with that offer and, ever more frequently, a certain limited number of minutes to the mobile network within that rate. There are services, however, that are still mostly charged by time, such as those to international destinations or value-added service calls.

During 2013, reductions occurred in unit pricing, due to the increase in the amount of consumption permitted in each rate and by the increased number of services included in the rate. The revenue per unit is shown below as an estimate of the price per service unit.

Average revenue per call from a fixed network to a mobile network fell by 16.4% to 11.1 cents per minute. This price drop was due, among other things, to the reduction in the price per minute for termination on a mobile network given on the glide-path defined by the CNMC. From July 2013, this price was 1.09 euro cents per minute.

Average revenue from calls to international destinations also declined – by 15.8% relative to 2012 – and the average price was 8.7 euro cents per minute.

Average revenue from traffic to domestic and international fixed lines and mobiles (euro cents per minute)



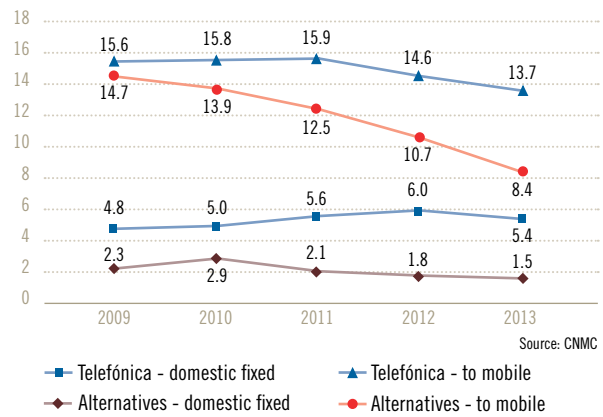
Source: CNMC

In 2013, 25% of the traffic flowing over fixed networks was still priced by time. The trend in the average revenue from this type of traffic showed a similar tendency to that mentioned above. For example, Telefónica posted reduced average revenue from calls to a mobile or fixed network destination. The increase in the rates for domestic fixed destinations that occurred in November 2011 brought about an increase in the 2012 price per minute. But in 2013 in contrast, there was a fall in price of 5.4 euro cents per minute for fixed destinations and 13.7 euro cents per minute for mobile destinations.

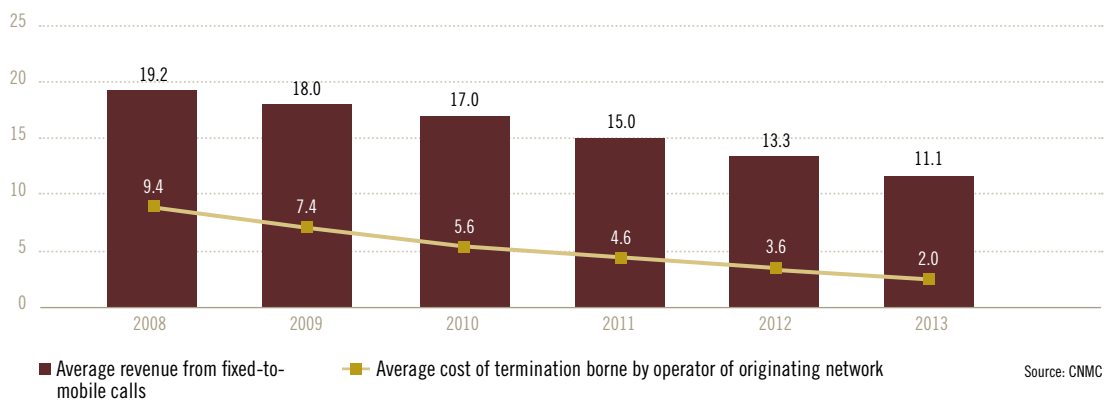
At the same time, the same type of average revenue by time for the alternative operators, for calls between fixed domestic numbers, was 1.5 euro cents per minute, 2.5 euro cents cheaper than Telefónica's average revenue. For calls to mobile destinations, the alternative operators' average revenue was 8.4 euro cents, 62.7% lower than Telefónica's revenue.

Lastly, it is interesting to analyse average revenue for calls to a mobile network and the termination rate to be paid by fixed operators. Since 2006, the price of termination on mobile networks has been regulated along a descending price path, which in this past year involved a reduction of 43.3%. Even so, this reduction was not fully passed on to end prices in the retail fixed market. The price of a call from the fixed network to a mobile network also came down, but by less, 16.4% for the year.

Average revenue from traffic measured by time to domestic and mobile destinations for Telefónica and the alternative operators (euro cents/minute)



Retention rate of fixed-to-mobile calls²⁴ (euro cents per minute)



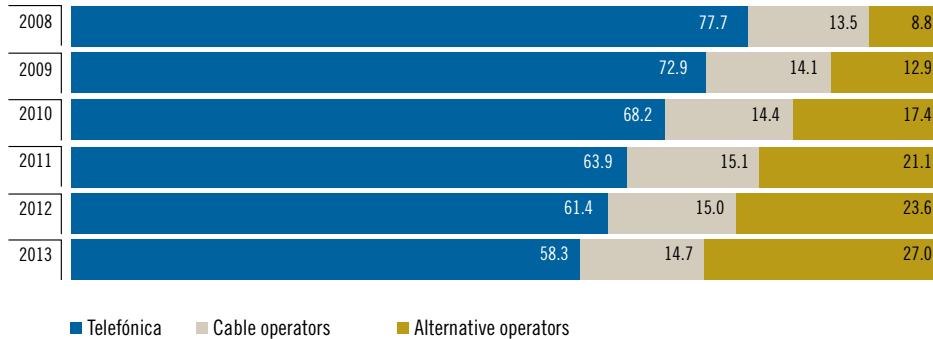
Market shares

Telefónica obtained 58.3% of the lines while the shares of the major cable operators held steady and

that of the alternative operators rose by 3.4 percentage points to 27% of the market.

²⁴ This does not include all the important service provision-related costs, since only one type of cost is broken down: that charged by other operators for the wholesale service implicit in the service.

Market shares, fixed line (%)

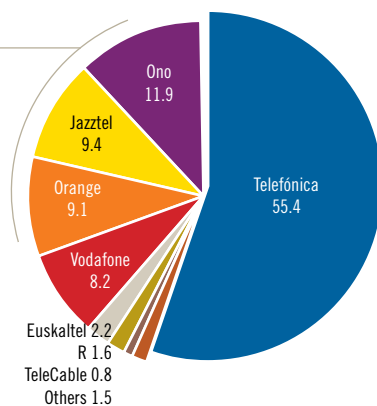


Source: CNMC

When analysing market shares for direct access customers, it was found that Telefónica maintained a significant position, albeit clearly decreasing over time. Telefónica accounted for 55.4% of direct access customers, representing a decline of three percentage points in one year. The cable operators captured 16.4% of the total number of direct access customers, most of them in the residential segment. The other alternative operators had 28.2%, a gain of more than three percentage points for the year. Jazztel, Orange and Vodafone stood out in this group.

Ono was the number two operator by market share, with 11.9%. For the second consecutive year, Jazztel was in third place, with 9.4% of the total number of direct access customers.

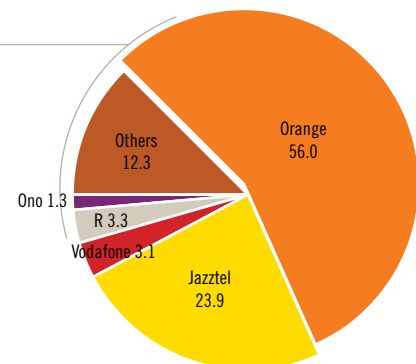
Market shares for direct access customers, 2013 (%)



Source: CNMC

Indirect access continued to diminish as a way of capturing users, with a total of 756,418 customers in 2013. Orange maintained its position as the operator with the greatest number of customers for this mode, with 56% of the total. Some distance behind came Jazztel, with 23.9% of the market, followed by Vodafone with 3.1%.

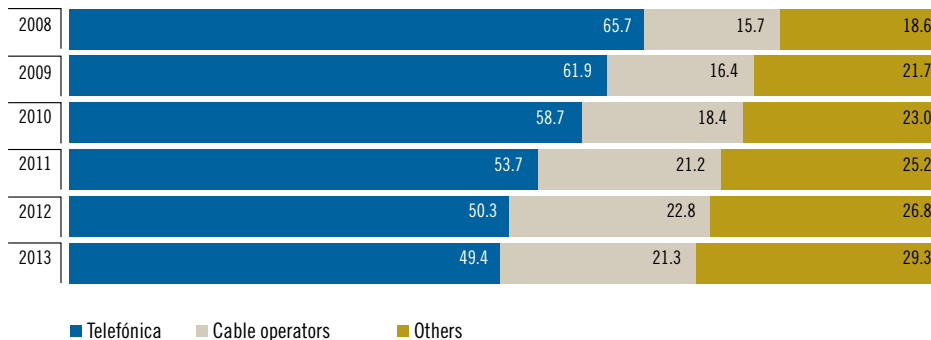
Market shares for indirect access customers in 2013 (%)



Source: CNMC

During 2013, Telefónica held on to its lead position for total traffic, with a market share of 49.4%, less than its share in the number of lines. The cable operators accounted for 21.3% in 2013, losing half a percentage point in weight, while the remaining operators gained market share to reach a total of 29.3%, almost three percentage points higher than in 2012.

Market shares, fixed line traffic (%)



2.1.2 Fixed broadband

In 2013, revenue from fixed broadband retail services continued the downward trend of the past three years. Turnover declined by 1.1% to €3,239.3 million. If the revenues associated with the switched access service and other services are added in, this figure rises to €3,577.4 million, 2.2% down on the previous year.

In contrast, the number of fixed broadband lines showed an increase of 6.3%, to 12.24 million. In general, the major xDSL operators continued to enjoy high levels of capture and to offer their services to end consumers mainly through the regulated wholesale local loop unbundling service. As will be seen in the section on wholesale broadband services, this regulated service was in great demand, which led to an increase in lines and revenues.

The increase in lines contracted from Telefónica should also be mentioned. Telefónica improved on its gains of the previous year, attaining similar levels to those of the alternative operators. In its case, the boost from fibre optic to the home (FTTH) access subscriptions compensated for the loss of lines with xDSL technology.

As for the roll-out of new generation access (NGA) networks, offering very high-speed connections, both hybrid fibre-coaxial (HFC DOCSIS 3.0) and fibre optics to the home (FTTH) continued their advance. The number of deployed connections points with DOCSIS 3.0 technology surpassed 10 million, and FTTH deployment points numbered 6.24 million, almost twice as many as in the previous year.

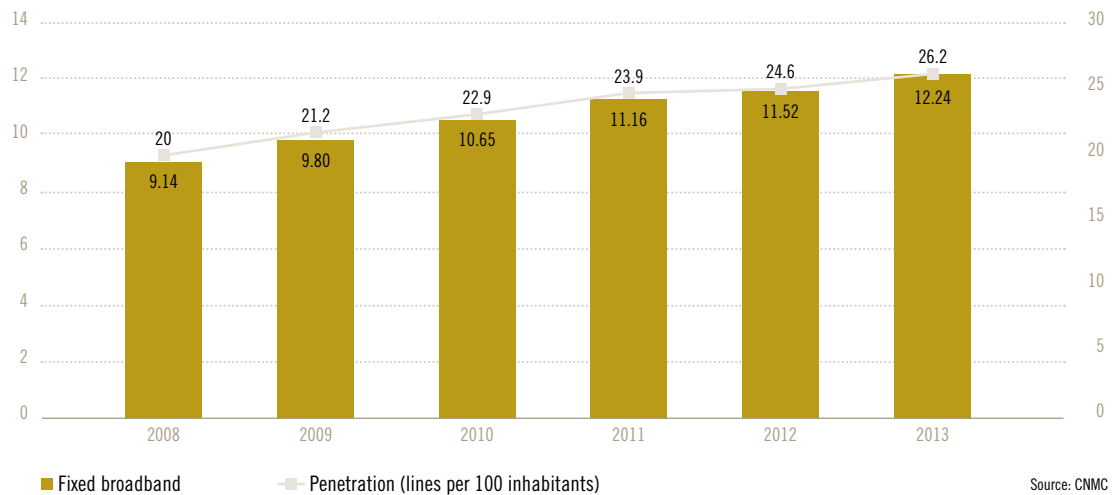
This improvement in access networks allowed the operators to configure broadband offers with higher connection speeds. At year-end, 82.2% of lines had a contracted speed of 10 Mbps or more, compared with 63% the year before. In addition, the number of lines with 30 Mbps or higher exceeded 1.82 million, 15% of the total number of deployment points.

Lines and penetration

Fixed broadband deployment points posted growth of 6.3% last year, substantially higher than the 3.2% growth rate of 2012 and the largest increase in the past three years.

This increase raised the line base to 12.24 million and penetration to 26.2 lines per 100 inhabitants, which represents an increase of 1.6 lines per 100 inhabitants in the past year.

Evolution of broadband lines and penetration rates (millions of lines and lines per 100 inhabitants)

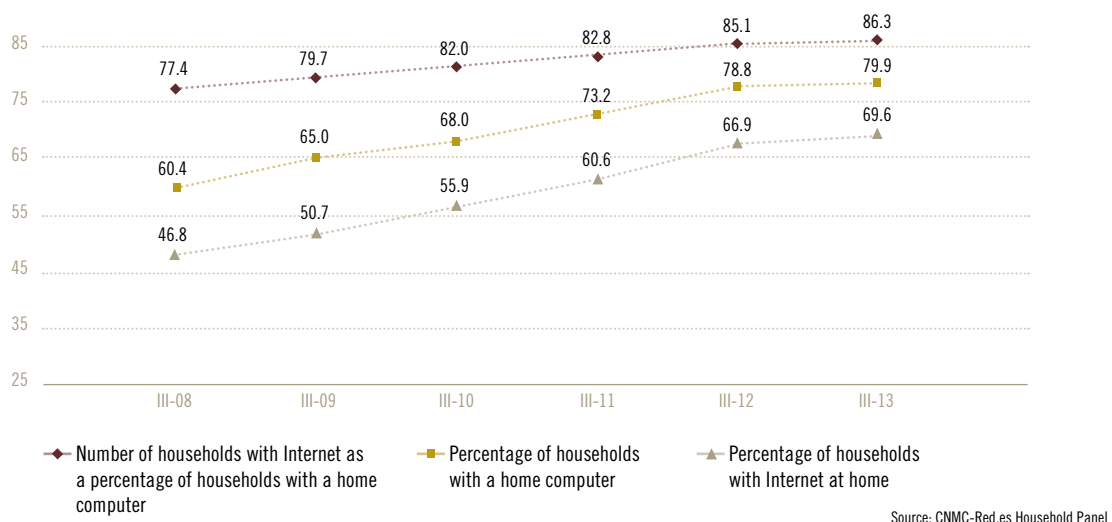


Through the CNMC-Red.es Household Panel, the CNMC follows the trend in the penetration of the main end services nationwide. In 2013, it found that 69.6% of households had Internet access services (this item includes narrow band and fixed and mobile broadband services) and almost eight in every ten households had at least one computer. Therefore,

86.3% of households with a computer subscribed to some type of Internet service.

The following graph shows the growing trend in both Internet penetration and computer ownership in households over the past few years.

Internet and PC penetration in households (%)



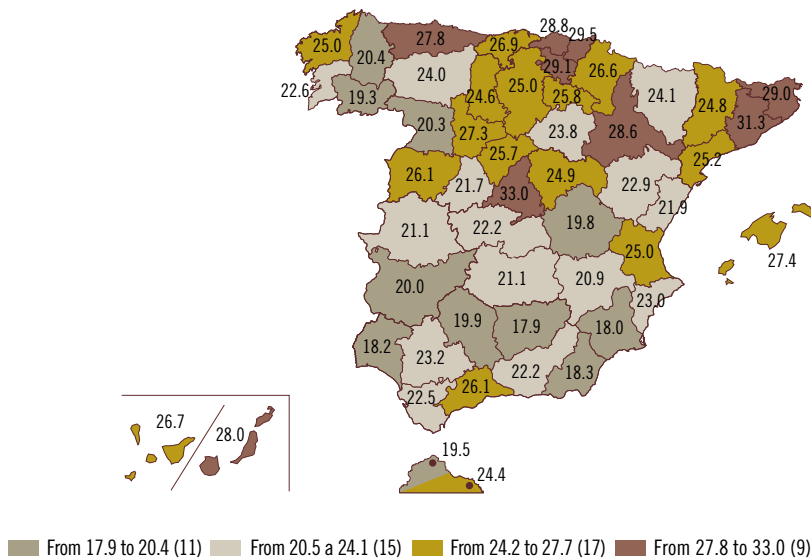
The above-mentioned figure for fixed broadband penetration showed some significant differences from the geographical point of view. The differences are explained, among other reasons, by the operators' investing in and rolling out networks more intensively in the more densely populated regions, which offer greater profitability.

The geographical differences in broadband penetration are shown below and are analysed by looking at

different geographical units, such as Autonomous Communities (regions), provinces and municipalities.

The following map shows the penetration of broadband connections by province. A total of 14 provinces ended the year with a penetration rate equal to or in excess of the national average of 26.2²⁵ lines per 100 inhabitants. These same provinces had also had above average penetration the previous year. Madrid and Barcelona were in the lead with more than 31 lines per 100 inhabitants.

Broadband penetration by province²⁶ (lines per 100 inhabitants)



The following graph shows the penetration of broadband connections by size of municipality in December 2013. A clear tendency can be seen, whereby the smaller a municipality's population, the lower the penetration rate.

On average, municipalities with populations of over 50,000 had a penetration of 25.7²⁷ or more lines per 100 inhabitants, ahead of the national average. It should be noted that in 2012 only cities with a

population of 100,000 inhabitants or more had a higher penetration rate than the national average.

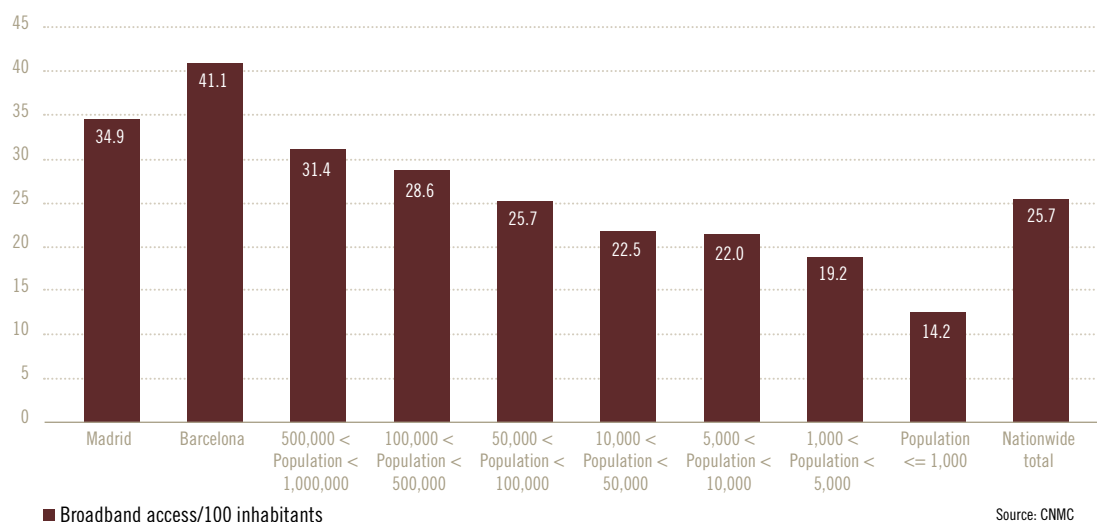
In contrast, municipalities with fewer than 5,000 inhabitants had at most 20 lines for every 100 inhabitants. Penetration increased in these smaller municipalities however, because of the incumbent operator, Telefónica's, growing number of lines and the gradually increasing presence of alternative operators providing access via unbundled loop and using indirect broadband access.

²⁵ Penetration calculated based on the total number of broadband lines.

²⁶ The intervals were set from the mean \pm standard deviation. The upper and lower extremes are determined by the maximum and minimum values respectively.

²⁷ The figure indicated at municipal level differs from those indicated in previous sections because the number of operators required to report geographical information is significantly smaller than the sample in the economic report on the industry. For greater detail on the network roll-out and fixed and mobile broadband penetration situation in Spain, see "*Análisis geográfico de los servicios de banda ancha y despliegue de NGA en España*" (Geographical analysis of broadband services and NGA roll-out in Spain), CNMC, February 2014.

Broadband penetration by type of municipality²⁸ (lines per 100 inhabitants)



Technologies

Broadband access services can be provided using a variety of alternative technologies. For fixed network broadband access, they can be classified as follows:

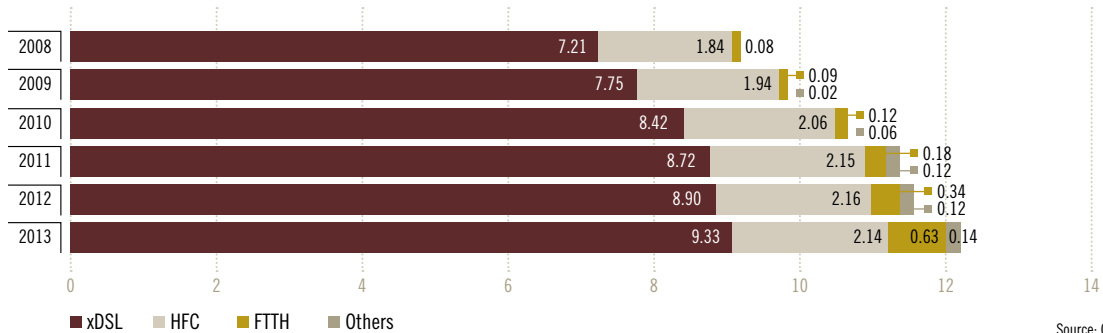
- a) Fixed network-based technologies: xDSL on copper pair technologies; cable network technologies, such as HFC networks using mixed optical fibre and coaxial cables with DOCSIS technology; and, lastly, fibre-optic network technologies, such as FTTH access with GPON technology.
- b) Technologies over wireless networks: LMDS, WiMAX (coverage of wide distances) and WiFi (limited coverage).
- c) Networks based on satellite systems such as VSAT.

In 2013, the xDSL and HFC technologies continued to be the major end-user access modes. Active broadband lines based on these technologies represented 94% of the total, a slightly lower percentage than in previous years due to the increasing deployment of and subscription to FTTH. The other technologies had around 1% of the total number of broadband lines.

Specifically, active xDSL deployment points reached 9.33 million, representing a 4.9% increase on the previous year. The number of HFC network-based broadband connections declined slightly (by 1%) compared with 2012. The greatest increase came from active FTTH deployment points, which grew by 86.1% to 626,000 lines.

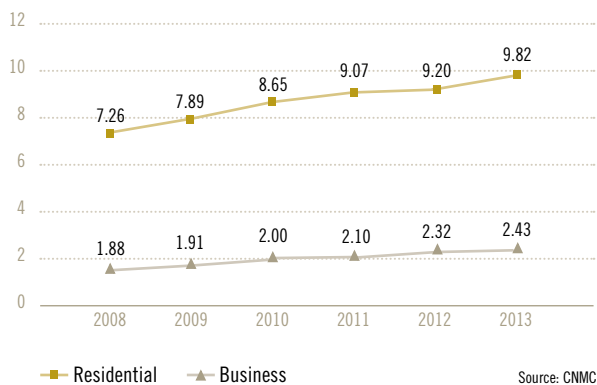
²⁸ Data for December 2013 corresponding to the CNMC's geographical requirement.

Evolution of broadband by technology (millions of lines)



In the distribution of broadband lines by segment, it can be seen that at year-end the residential segment had a total of 9.82 million lines. The business segment ended the year with 2.43 million lines. The numbers of residential and business lines as percentages of the total were similar to those for previous years, at around 80% and 20% respectively.

Evolution of broadband by segment (millions of lines)



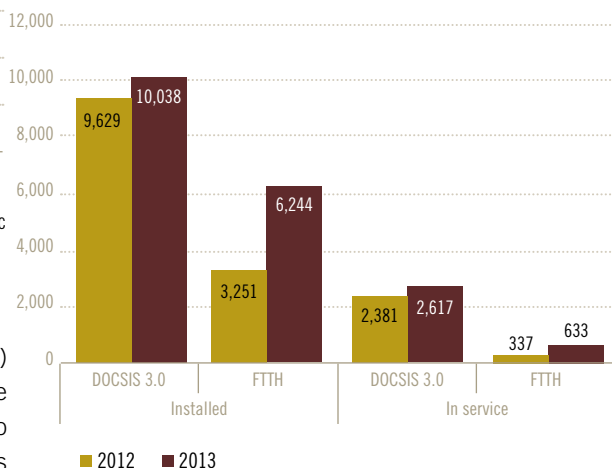
New generation (NGA) networks

In 2013, the roll-out of New Generation Access (NGA) networks continued, allowing operators to provide users with fast connection speeds and therefore to offer better quality connection as well as new services requiring greater bandwidth.

The cable operators updated almost all their deployment points and nodes to HFC DOCSIS 3.0, while Telefónica and the major alternative operators increased their deployment of FTTH (fibre to the home).

With regard to deployed connections points, HFC DOCSIS 3.0 deployment points exceeded 10 million, an increase of 400,000 over 2012. FTTH deployment points saw even greater growth. Last year, the number of installed FTTH deployment points almost doubled, to 6.24 million. The number of active FTTH deployment points was also double that of the previous year.

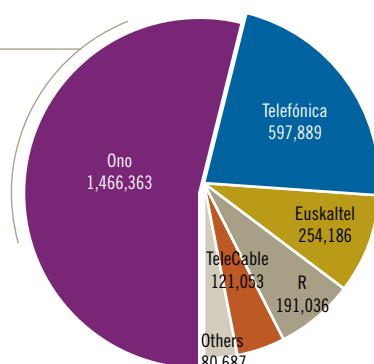
Change in number of DOCSIS 3.0 and FTTH connections installed and in service (thousands)



The past year ended with a total of 2.08 million active HFC lines²⁹ belonging to an updated DOCSIS 3.0 node. This figure represents 97.3% of connections. Active FTTH connections, on the other hand, totalled 626,000³⁰. It should be noted that the speed of these connections depends on what customers eventually sign up for, and that some of these connections still have speeds of less than 30 Mbps.

At year-end, 95% of FTTH broadband connections were owned by Telefónica, and the number of alternative operators with FTTH access was still small. It should be mentioned that the main impact of the agreements signed between operators since 2012 to share the roll-out of fibre to the home will probably be seen in 2014-2015.

**Breakdown of active NGA
(DOCSIS 3.0 and FTTH) lines by
operator**



Source: CNMC

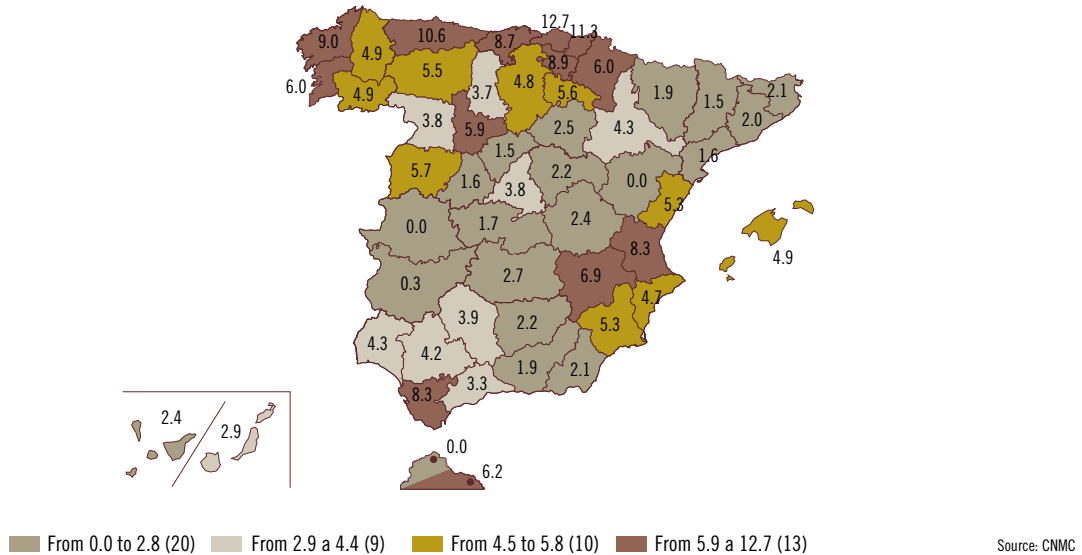
In 2013, the number of active HFC broadband deployment points fell by almost 1%, as against the slight increase of 0.6% seen in 2012. For the first time, therefore, the volume of lines held by cable operators decreased, by 20,000 lines. The proportion of lines was thus 4.6 lines per 100 inhabitants (0.1 fewer than in the previous year). Some advances were seen at the provincial level but in most provinces the number of lines fell.

At the end of the year, 23 provinces showed HFC penetration rates in excess of the national rate. The highest penetration rates were recorded in the Basque Country with the cable operator Euskaltel, Galicia with R and Cantabria with TeleCable in Asturias. The high levels of cable penetration in the provinces on the east coast (Valencia, Castellón, Murcia and Alicante), Albacete and a few others were due to the presence of Ono and other local operators. The provinces that ended the year with the highest penetration figures were Biscay, Guipúzcoa and Asturias, which all had over 10 HFC lines per 100 inhabitants.

²⁹ Active HFC broadband connections differ from the 2.6 million shown in the previous chart, since the chart includes only connections for voice or other services.

³⁰ Active FTTH broadband connections differ from the 633,000 shown in the previous chart, since the chart includes only connections for voice or other services.

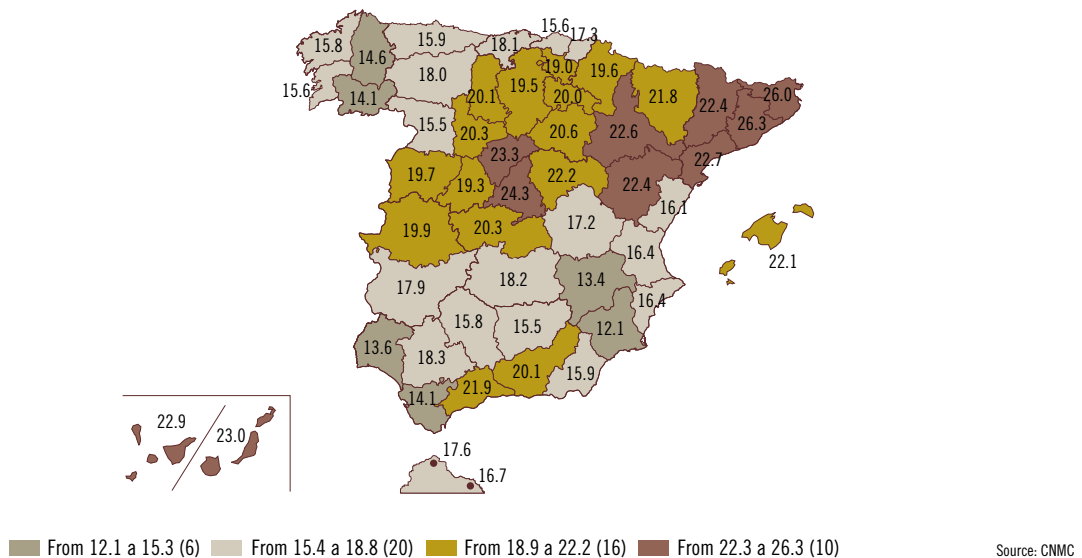
HFC penetration by province³¹ (lines/100 inhabitants)



Deployment points using xDSL technology grew by 4.9% last year, more than double the figure of 2% in 2012. This increase in the number of lines took the penetration rate to 20 xDSL lines per 100 inhabitants, while a total of 20 provinces recorded figures in excess of the national average.

The following map shows the geographical distribution of xDSL lines. Barcelona and Gerona were the provinces with the greatest penetration, with 26 or more lines per 100 inhabitants. At the other extreme, the provinces of Huelva, Albacete and Murcia had fewer than 14 lines per 100 inhabitants.

xDSL penetration by province³² (lines/100 inhabitants)



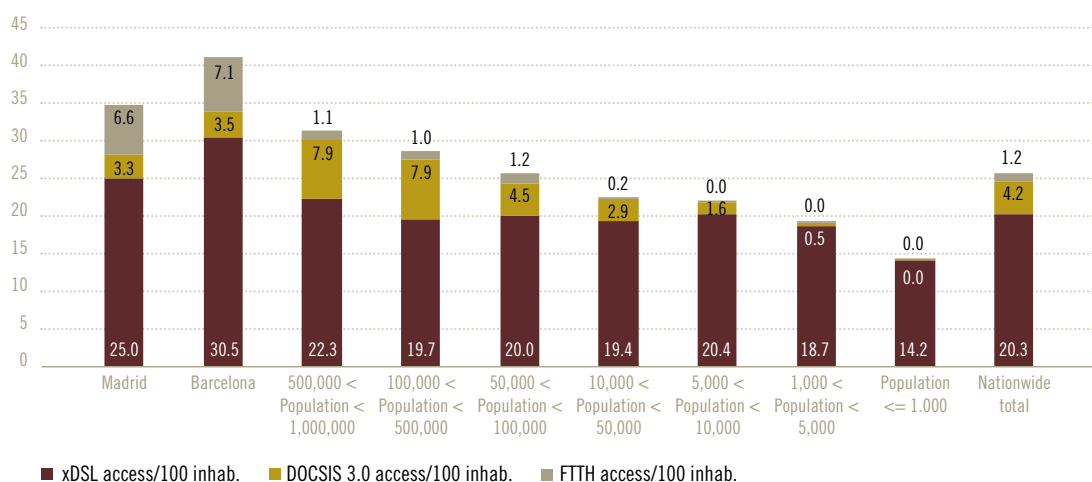
³¹ The intervals were set from the mean \pm 0.5 standard deviation. The upper and lower extremes are determined by the maximum and minimum values respectively.

³² The intervals were set from the mean \pm standard deviation. The upper and lower extremes were determined by the maximum and minimum values respectively.

The breakdown of penetration rates by municipality shows that the smaller the municipality, the lower the penetration rate for broadband connections (xDSL and HFC). Thus towns with populations of over 50,000 had penetration rates above the national average, while the penetration rates of smaller municipalities were below this average.

By type of technology, the penetration rate for HFC connections is considerably lower in municipalities with small populations. In contrast, this technology is more in evidence in cities with populations of between 100,000 and one million, with penetration rates of nearly eight lines per 100 inhabitants.

xDSL, HFC and FTTH penetration rates by type of municipality (lines/100 inhabitants)



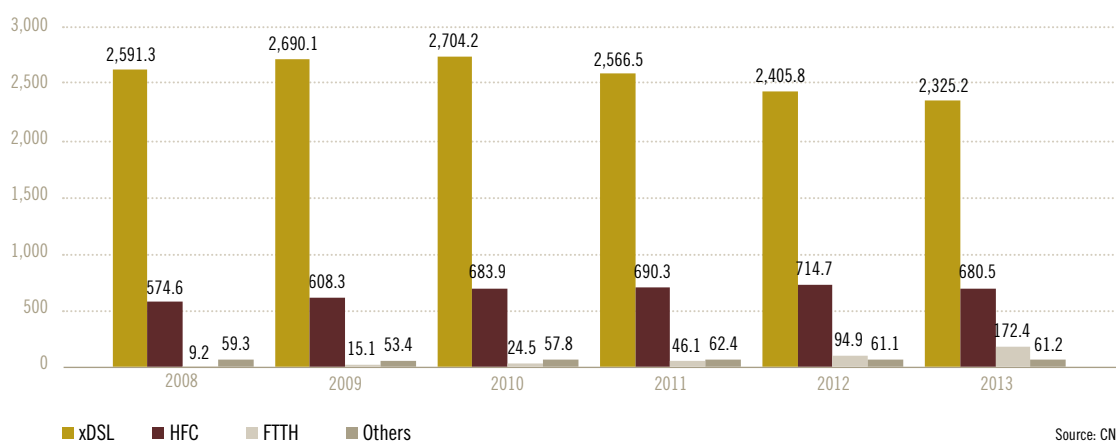
Source: CNMC

Revenues

The total volume of revenue from Internet services fell by 2.23% year on year to €3,577.4 million. Revenue from broadband was €3,239.3 million, down 1.1% from 2012.

By technology, revenue from xDSL connections fell by 3.4% to €2,325.2 million. Revenue from HFC fell by 4.8%, to €680.5 million. In contrast, the positive trend in FTTH line subscriptions boosted their revenue by 81.5% to €172.4 million.

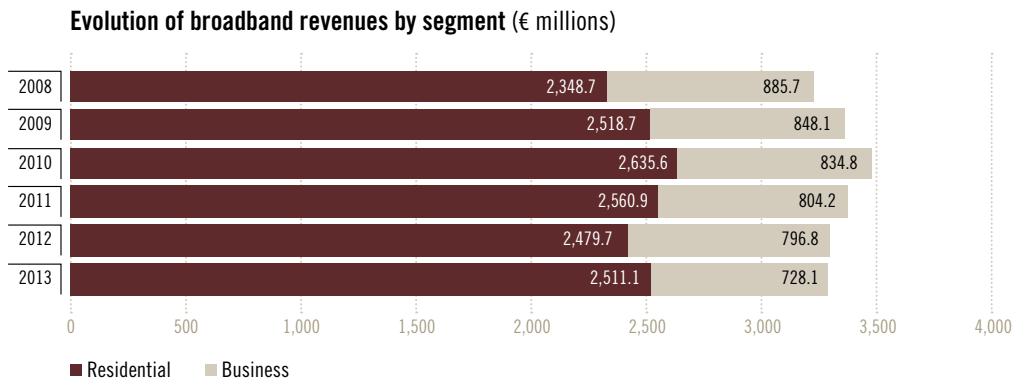
Evolution of broadband revenues by technology (€ millions)



Source: CNMC

In 2013 a change of trend was seen in revenues from the residential segment. Revenues from this segment reached €2,511 million, an increase of 1.3% (in contrast to the declines seen in 2011 and 2012).

Revenues from the business segment, on the other hand, fell by 8.6% to €728.1 million. Revenues from this segment fell for the fifth consecutive year from their 2008 peak.

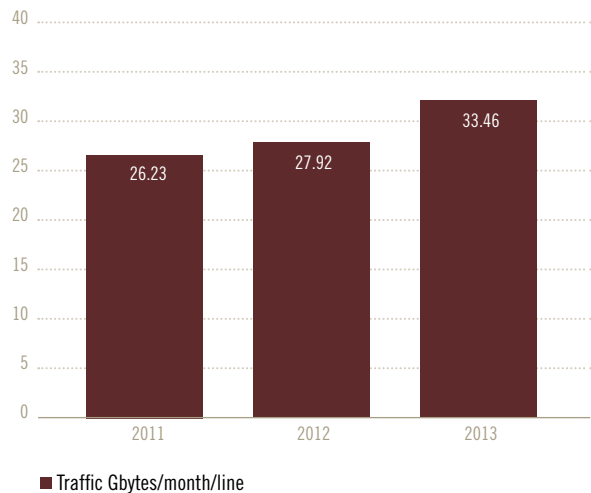


Traffic

The continuing improvement of broadband access networks boosted the marketing of offers with higher connection speeds. Also, the generalised, intensive use of Internet-based services, together with the increased number of active broadband connections, led to growth in recorded data traffic. Total traffic for the year was 4.9 million terabytes, 27.2% more than in 2012.

The following chart shows the trend over the past three years for the average volume of data per broadband line in gigabytes per month. It can be seen that in the past year the increase in average traffic per line was substantial, adding 5.5 gigabytes per month and line to the average traffic for 2012.

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



Competition

In 2013, the majority of operators continued to increase the number of active broadband connections and to improve their access networks. The alternative xDSL operators increased their market shares, in line with the trend in past years. Telefónica and the HFC operators, on the other hand, saw their shares of lines and revenues fall.

For commercial offers, there was an increase in the marketing and contracting of higher speed connections and more bundling with mobile network services (mobile voice and broadband). These converging bundles led to significant savings for consumers compared with contracting the different services individually.

Market shares

The alternative operators that accessed final users through the regulated wholesale local-loop unbundling

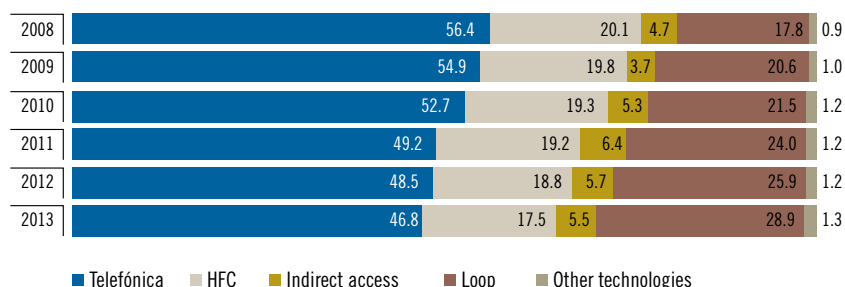
service showed greater dynamism, considerably increasing their market shares in terms of lines. In areas where these operators are not present in the local exchanges to offer the service, they used the regulated bit-stream (indirect) broadband access service.

At the end of the year, the percentage of broadband connections via loop unbundling was 29%, an increase of three percentage points. As the analysis in the section on wholesale services will show, the fully unbundled loop mode was the one most in demand by the operators.

With regard to indirect access, its use was barely significant. Last year the number of lines grew by 3.4% but their share of the market fell slightly.

Lastly, operators providing services with proprietary networks, Telefónica and the HFC cable operators, showed slight declines in their market shares.

Evolution of number of broadband lines by access mode (percentage)

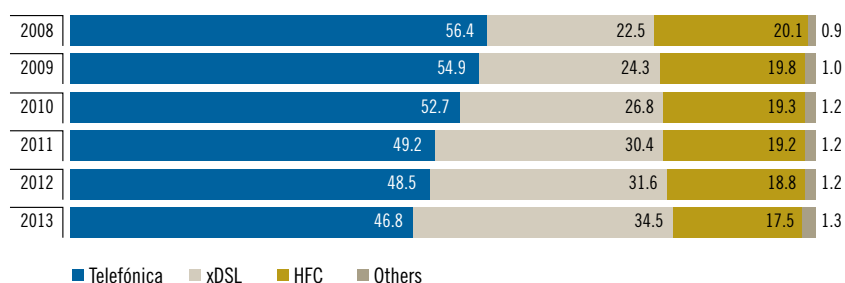


Source: CNMC

From the trend in market shares by line, it can be seen that Telefónica's share continued to drop. In spite of a 2.6% increase in the number of lines, Telefónica's share was less than 47%, 1.7 percentage points less than in the previous year.

The alternative xDSL operators, on the other hand, increased their share by three percentage points, with a 15.9% increase in lines in 2013. Lastly, the cable operators' HFC lines lost 1.3 percentage points of their share.

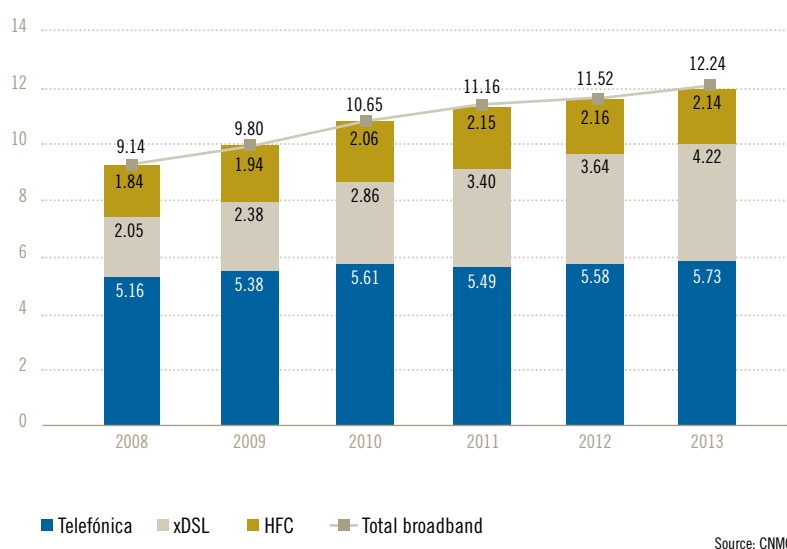
Distribution of broadband lines by type of operator (percentage)



In terms of deployment points, in 2013, 725,069 new broadband lines were added to the market. This figure is more than twice that for 2012. The alternative xDSL operators made the biggest contribution to the

total number of new deployment points, with 579,006 lines; Telefónica followed them with 144,922 lines. Lastly, the cable operators' HFC lines were in decline.

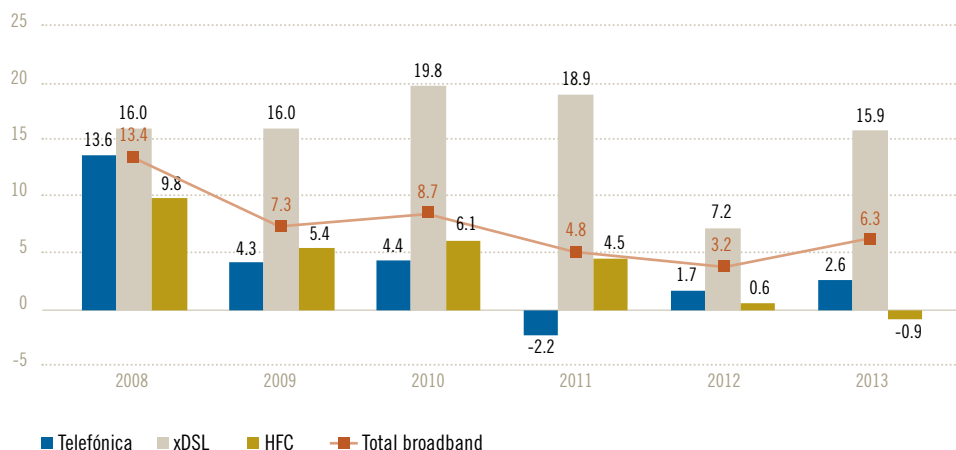
Growth in broadband lines by type of operator (millions of lines)



The following chart shows the rising trend in lines year on year for the last few years. As can be seen, in 2013, the trend toward growth in the number of

broadband lines changed and rose above the values posted in 2011 and 2012.

Annual change in broadband lines by type of operator (%)



Source: CNMC

The following table shows that most of the operators ended the year with increases in their line bases, with some exceptions, such as Ono. In terms of line share, Ono lost second place in the market and fell behind Orange, which was the operator with the biggest rise in broadband lines in 2013.

Telefónica's share remained below 50%, losing 1.7 percentage points, even though its line base grew by 2.6%. The loss of lines by the cable operator Ono meant that its share decreased by more than one percentage point. In contrast, Orange's share rose by 1.7 percentage points. The positions of the other operators remained unchanged.

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

	LINES 12	MKT.SH. 12	LINES 13	MKT. SH 13
Telefónica	5,581,369	48.5	5,726,291	46.8
Orange	1,395,998	12.1	1,692,543	13.8
Ono	1,591,678	13.8	1,536,501	12.6
Jazztel	1,328,771	11.5	1,429,821	11.7
Vodafone	773,647	6.7	954,606	7.8
Euskaltel	249,778	2.2	259,994	2.1
R	200,395	1.7	214,223	1.7
TeleCable	120,489	1.0	121,694	1.0
Others	274,872	2.4	306,393	2.5
Total	11,516,997	100	12,242,066	100

Source: CNMC

When broken down by segment, Telefónica continued to dominate the business segment, but with a significant drop in its share of almost five percentage points, to 70.1%. Vodafone continued its upward trend, taking second place with a 7.8% share of business lines. Orange, with a 7.6% share, was also

noteworthy, while the other operators retained their minor roles in this segment.

In the residential segment, Telefónica's decline was less pronounced, at just 0.8 percentage points. The other operators maintained their relative positions as indicated in the overall market for lines.

Market shares by number of lines and segments, 2013 (lines and percentages)

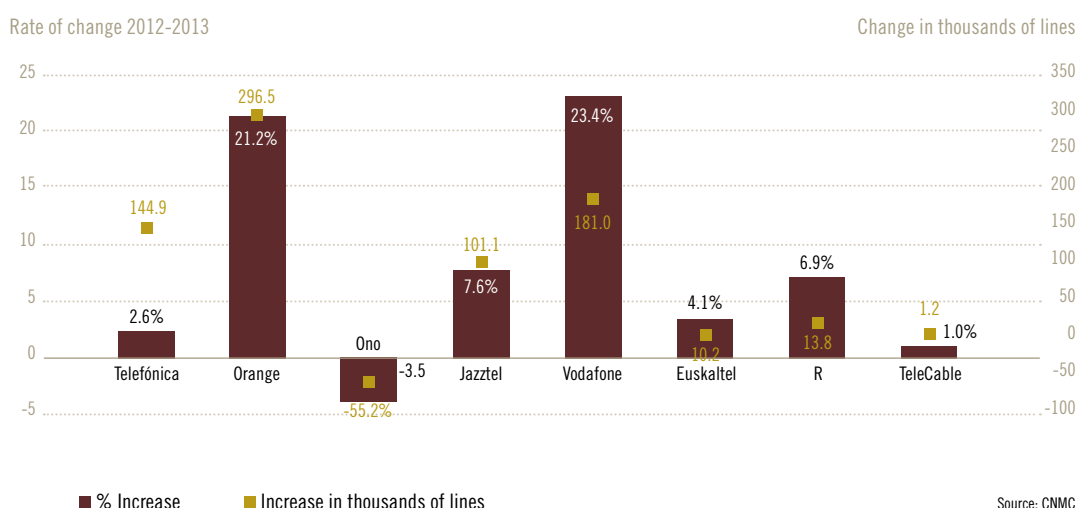
	RESIDENTIAL LINES	RESIDENTIAL MKT.SH. (%)	BUSINESS LINES	BUSINESS MKT.SH. (%)
Telefónica	4,025,037	41.0	1,701,254	70.1
Orange	1,508,108	15.4	184,435	7.6
Ono	1,417,722	14.4	118,779	4.9
Jazztel	1,358,164	13.8	71,657	3.0
Vodafone	764,431	7.8	190,175	7.8
Euskaltel	215,639	2.2	44,355	1.8
R	168,662	1.7	45,561	1.9
TeleCable	105,699	1.1	15,995	0.7
Others	251,932	2.6	54,461	2.2
Total	9,815,394	100	2,426,672	100

Source: CNMC

Last year, the alternative operators had the best results in terms of new subscriptions of lines. As shown in the chart, Orange, Vodafone and, to a lesser extent, Jazztel stood out with the highest percentage increases and net increases in lines. In 2013, these operators added 296,545, 180,959 and 101,050 new connections to their portfolios respectively, which

together represented 80% of the new lines for the year. Telefónica had an outstanding result of 145,000 new lines (a rise of 2.6%). At the other extreme was Ono, which lost 55,000 lines. Finally, it can be seen that the regional cable operators made positive progress, although of a different magnitude.

Net change in broadband lines by operator and YoY rate of change 2012-2013 (thousands of lines and percentage)



Source: CNMC

An analysis of the information for December 2013 on broadband lines by municipality shows that the smaller the municipality, the greater Telefónica's market share, which is in line with the fact that in

towns with small populations, both investment by and the presence of alternative operators with proprietary infrastructure was rare. In Madrid and Barcelona, the incumbent operator's market share was less than

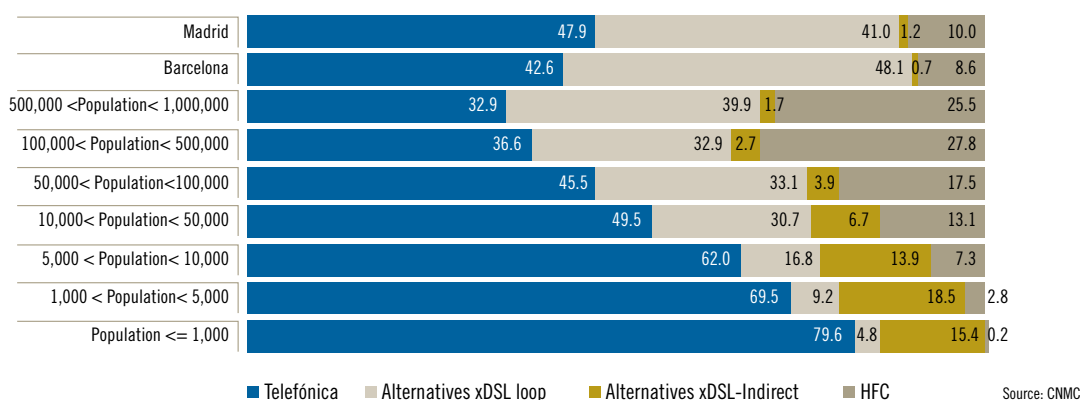
50%, but with a slight rise in Madrid. In the remaining municipalities, Telefónica's market share shrank relative to the 2012 figures.

On the other hand, the alternative operators that entered the market by means of unbundled loops captured a market share of more than 30% in towns with over 10,000 inhabitants, almost four percentage points more than in 2012. These operators achieved their biggest market share in Barcelona, with 48.1%. In towns with fewer than 10,000 inhabitants,

their market share was smaller and their access to consumers was by bit-stream broadband access. In these areas, Telefónica's market share was more than 62%.

Lastly, the operators that accessed the market with HFC and FTTH³³ obtained the best penetration rates in cities of between 100,000 and one million inhabitants, where their market share was between 25.5% and 27.8%.

Market shares of broadband by type of municipality (percentage)



Despite the rise in contracts for new lines, most operators saw their revenue from broadband lines fall. Among the advances, Orange should be singled out for its increased billing. Its revenue grew by 16.1% to

€478.81 million. Jazztel's billing increased by 1.7% to €482.5 million. Even though it increased its line base, Telefónica saw its revenue fall by 4.6% and its market share drop below 40% for the first time.

Market shares by revenue, 2013 (€ millions and percentage)

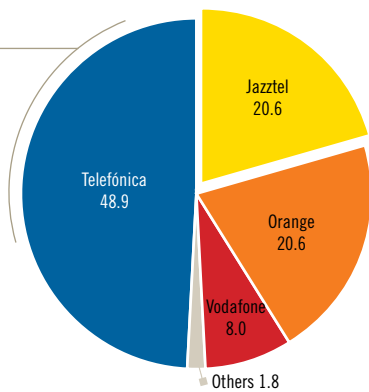
	Revenue 12	Mkt. Sh. 12 (%)	Revenue 13	Mkt. Sh. 13 (%)
Telefónica	1,349.2	41.2	1,287.6	39.8
Ono	552.6	16.9	531.6	16.4
Jazztel	474.6	14.5	482.5	14.9
Orange	412.5	12.6	478.8	14.8
Vodafone	211.4	6.5	187.0	5.8
Euskaltel	79.6	2.4	69.7	2.2
R	45.4	1.4	38.1	1.2
Telecable	40.1	1.2	41.2	1.3
Others	111.0	3.4	122.6	3.8
Total	3,276.5	100	3,239.3	100

Source: CNMC

³³ In the following chart, Telefónica includes all this operator's deployment points, both xDSL and FTTH.

If revenue is analysed according to the technology associated with broadband lines, Telefónica held on to its lead position in xDSL technology, with 49% of the revenue, despite losing almost four percentage points. Orange and Jazztel took joint second place in xDSL revenues, each with 20.6%.

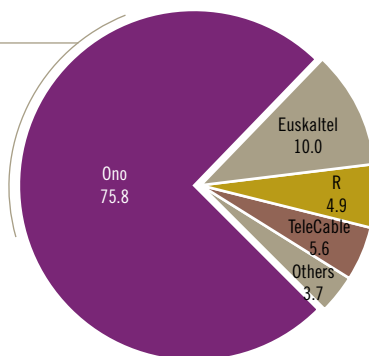
Market shares by xDSL revenue
(percentage)



Source: CNMC

The distribution of market shares among HFC operators showed no significant change from 2012. These operators barely added any new broadband lines to the market, or even lost some, a situation reflected in the almost unchanged shares of total revenues. Ono continued to be the operator with the biggest share of billing, ending the year with 75.8% of total revenues. The other cable operators, which provide services in particular geographical areas, ended the year with practically the same weighting in the market as a whole.

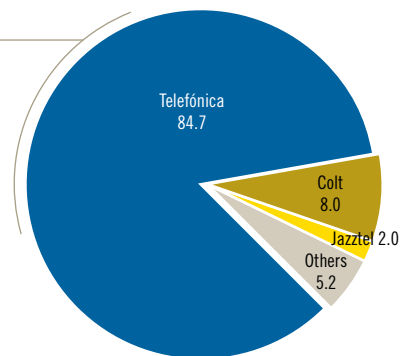
Market shares by HFC revenues
(percentage)



Source: CNMC

Lastly, revenue from FTTH lines grew by 81.5% last year, to reach €172.4 million. The greatest weight, as with the number of lines, was that of Telefónica. Despite this increase in revenues from FTTH, Telefónica was not able to compensate for the loss of revenue from xDSL billing, which is explained in part by its having reduced retail prices. Telefónica's revenue from FTTH lines exceeded €146 million, compared with €76.6 million in 2012.

Market share by FTTH revenue
(percentage)



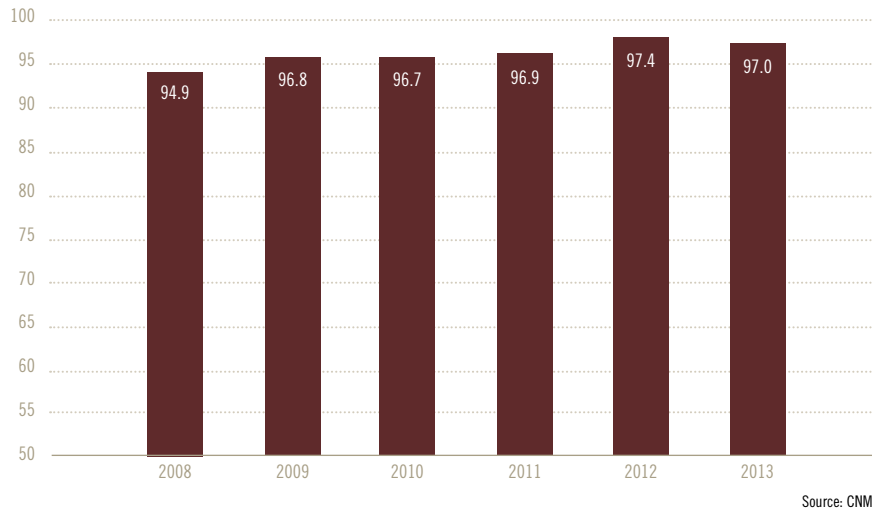
Source: CNMC

Bundling

Contracting broadband in a bundle with other services continued to be the main broadband access mode for consumers. As well as offers selling broadband together with television or fixed telephony, there was a considerable increase in the number of bundled offers including mobile services or giving bigger discounts for contracting a mobile service with the same operator, even if separately. In fact, as we shall see later, subscribing jointly to fixed and mobile services with the same operator was the offer most in demand in 2013.

In the residential segment, the number of broadband lines subscribed to in conjunction with another service was 9,518,761, or 97% of the total. In the business segment, the percentage of bundling was 74.9%, with 1.82 million lines.

Bundled broadband lines in the residential segment (percentage)



A breakdown of residential broadband lines by type of subscriber package highlights the fact that the fixed broadband service offered together with fixed telephony and mobile broadband and voice services (quadruple play package) reached 46.2%.

If bundles that include at least fixed broadband and fixed voice are taken into account, the percentage rises to 80% of lines, compared with 78.6% in 2012.

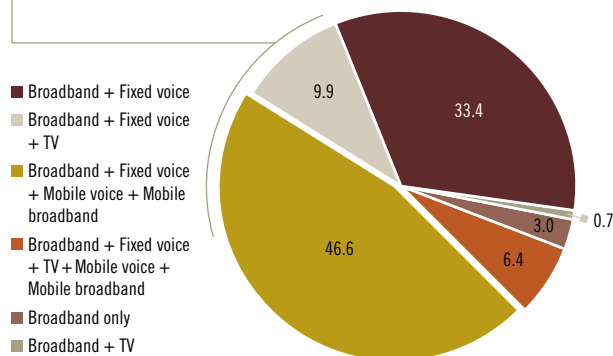
Triple play packages, which include fixed broadband, voice and television, accounted for 9.9% of lines and, if bundles with mobile voice and mobile broadband (quintuple play packages) are added, this percentage rises to 16.3%, somewhat below the 2012 figure of 18%.

2013 was notable in that mobile services were mainly contracted as parts of the most popular fixed service bundles. Subscriptions to these kinds of

packages (quadruple and quintuple play) reached their highest levels with Telefónica and the alternative xDSL operators. However, for these operators, the percentage of bundles that included television was low, whereas television continued to have significant weight in subscriptions to bundles from HFC operators.

A breakdown of new subscriptions by operator shows that, in the case of Telefónica, the number of triple play packages was 302,199, or 7.5%. To this figure we should add the 323,344 packages that also include mobile voice and broadband services (quintuple play), which represented 8%. Therefore, for Telefónica, bundles including pay-TV accounted for 15.6%, a similar figure to 2012. Double bundles with voice and broadband represented 32% of its total number of residential lines. If the 51% represented by quadruple play (i.e. bundles of fixed broadband, fixed voice, mobile voice and mobile broadband) is added in, the percentage rises to 83%, the same as in 2012. Thus, there has been a transfer of broadband and voice bundles to those with added mobile services.

Residential broadband lines by type of bundling(percentage)



Lastly, in the bundles offered to users by HFC operators, television continued to play a leading role, being included in 47.4% of the lines contracted.

Source: CNMC.

Lastly, as in previous years, another notable feature of the business segment was the role played by non-bundled broadband offers. These made up 20.6% of the total, while broadband bundles with television service accounted for 5%.

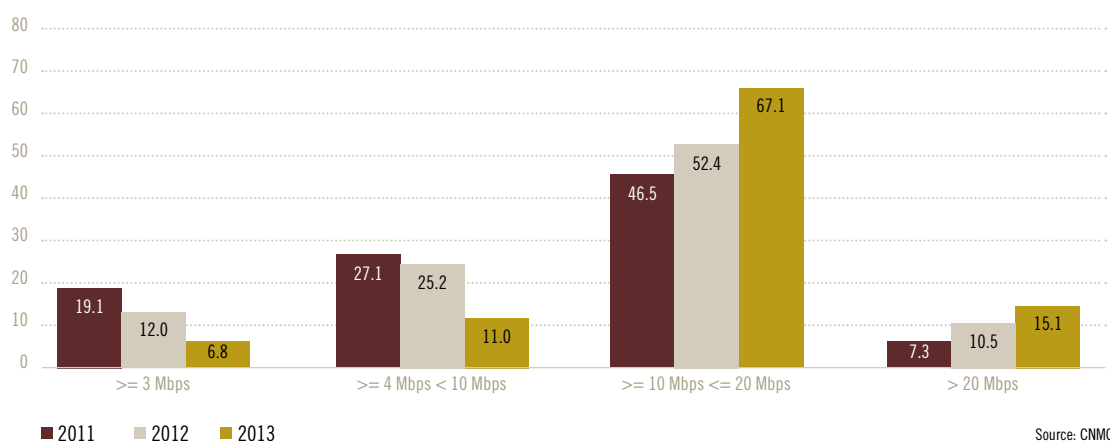
The upward trend in subscribed connection bitrates on broadband lines continued, with an increase in the percentage of lines with higher speeds. Subscriptions to high-speed broadband lines were driven both by the cable operators updating their nodes to DOCSIS 3.0 and by Telefónica and other alternative operators rolling out FTTH deployment points. Also, despite the limitations of the copper network, the alternative xDSL operators also launched offers of higher connection rates (up to 30 Mbps) using VDSL technology (an xDSL technology that allows faster connection rates than ADSL).

Source: CNMC

At year-end, 82.2% of broadband lines contracted had a connection speed of 10 Mbps or more, compared with 63% the year before. Lines with a connection

speed of over 20 Mbps reached 15.1% (in absolute terms there were 1.85 millions deployment points).

Evolution of broadband lines by subscribed speed(percentage)

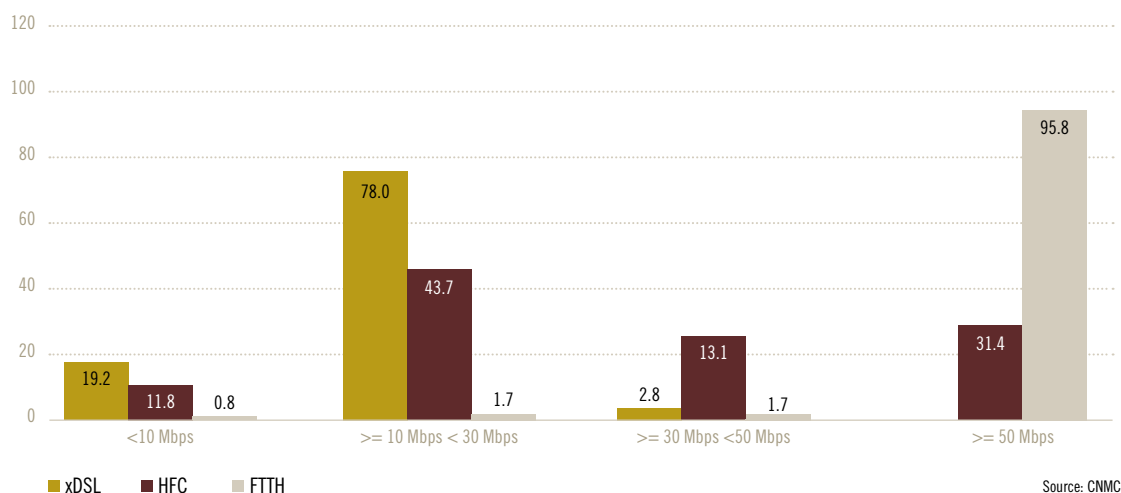


A breakdown of subscribed speeds by access technology shows, on the one hand, the limitations of copper pair-based access networks and, on the other hand, the tendency of the operators to offer services with higher connection bitrates. HFC and FTTH connections were the only ones to offer speeds equal to or greater than 50 Mbps. In the case of FTTH, this was 95.8% of connections. xDSL lines, which are subject to technical limitations in terms of speed, were mainly concentrated in the 10 to 30 Mbps range, with

78% of the total. Lastly, HFC lines showed a greater range of speeds, with 44.5% of lines now having subscribed speeds of 30 Mbps or more, compared with 32.6% in 2012.

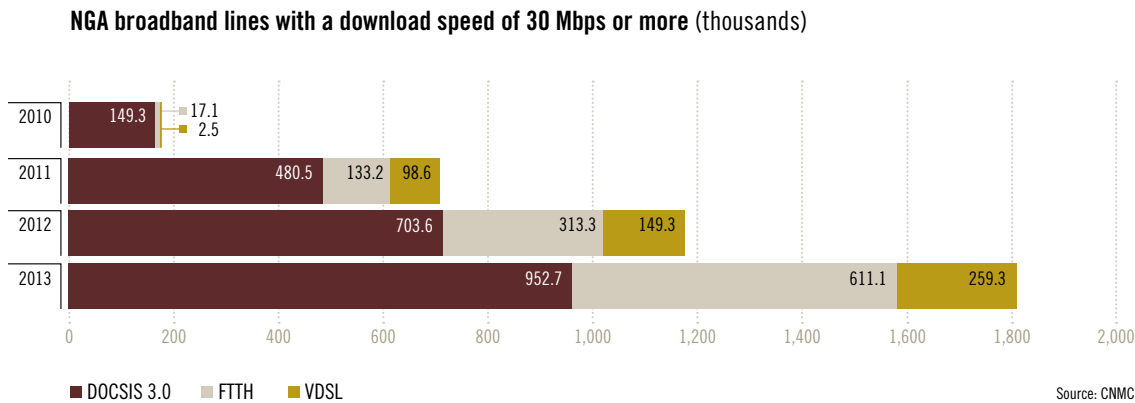
In the case of Telefónica, 71.9% of its total of 4.1 million xDSL lines had a connection bitrate of 10 Mbps. In contrast, its 589,000 FTTH lines had a subscribed speed of 100 Mbps.

Broadband lines by subscribed speed and technology (percentage)



The following graph shows the trends in the number of lines with subscribed speeds of 30 Mbps and over. In 2013, there was a increase of 56.4% in lines with 30 Mbps or more, to 1.82 million lines. Of these, those with FTTH and HFC DOCSIS 3.0 technologies increased most in absolute terms.

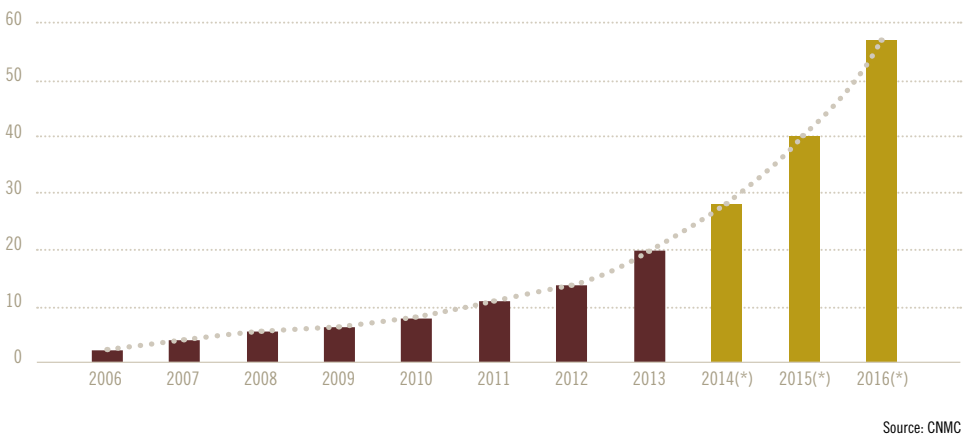
Lastly, in the past year, VDSL lines with a bitrate of 30 Mbps, offered by Telefónica and other operators such as Jazztel and Vodafone, grew by 73.6%.



The data in the previous sections, which show the ongoing increase in subscribed connection speeds, are the result of improvements to access networks thanks to the updating of existing networks such as the HFC network, and investment in deploying new fibre to the home (FTTH) networks. It can therefore be expected that the ongoing implementation of NGA networks will drive growing demand for new services and therefore a need for greater bandwidth.

The following chart shows the trend in average subscribed speed for all broadband lines and the forecast for the next three years. In 2013, average connection speed reached 20 Mbps as against 13.6 Mbps in 2012, an increase of 45.5%. Looking forward, within the next three years, the average subscribed speed will be over 50 Mbps.

Trend in average subscribed connection speed and projection (Mbps)



Evolution of prices and commercial offers

As mentioned above, in this past year, subscriptions to commercial offers with both fixed and mobile services were the most popular. Mobile broadband and mobile voice services were thus added to fixed broadband and fixed voice bundles, with consumers being offered substantial discounts compared with the cost of contracting each service separately.

The following chart compares the effective prices³⁴ (i.e. those resulting from applying the discounts to the nominal prices) of the cheapest broadband and fixed voice commercial offers³⁵ and quadruple play packages (including mobile broadband and mobile voice). The figures show that when mobile services are added to a dual play package, in some cases there is no difference in price and in others the increase in the monthly charge is between €3 and €5. Therefore, consumers who subscribe to fixed and mobile services from the same operator have mobile broadband traffic of between 100 MB and 300 MB and mobile voice traffic of between 100 and 200 minutes for almost the same cost as a dual play package. It should be noted that these are low amounts of traffic and minutes when we consider that quadruple play packages offer higher consumption rates (for example, 1Gb of data

and unlimited minutes for calls) at prices of between €39.9 and €49.9 a month.

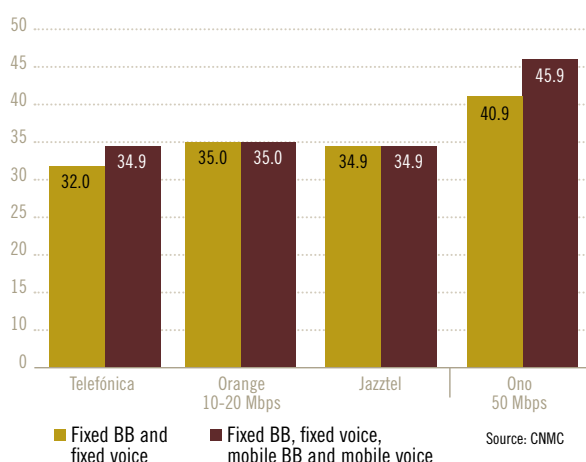
With regard to the effective prices of cheaper bundled offers of broadband and voice, it should be noted that in 2013, the average effective price of offers in the 10 to 20 Mbps range was €33.70 compared with €34.60 in 2012 (with the access fee included). For bitrates of 30 Mbps to 50 Mbps, no reductions occurred and the average price remained at €38.10.

For Telefónica offers, the effective price for the 10 to 20 Mbps range was 6% less than that of the alternative operators, but almost all the offers from these operators had a connection rate of 20 Mbps.

Lastly, the effective prices of 100 Mbps offers, provided via FTTH or HFC DOCSIS 3.0, were between €43 and €48.30.

According to data from the CNMC-Red.es Household Panel³⁶ for the last quarter of the year, average expenditure per household on the broadband + voice bundle – including the access fee – was €33 a month (compared with €35 a month in 2012). In the case of triple play packages, i.e. including pay television, average expenditure was €48.10 a month, compared with €51.70 a month in 2012.

Comparison of the best broadband + fixed voice offers and quadruple bundles (monthly fee in €)



³⁴ The following formula was used to calculate the effective discounted price (PPD_M): $PPD_M = [PD \cdot D + PN \cdot (M - D)] / M$. Where PD = discounted price; D = duration of the discount; PN = nominal price (without discount); M = time horizon. In this case, M was taken as being 24 months. The promotions included correspond to discounts on the price of monthly subscriptions to the service, but do not take into account promotions for non recurring payments (for example, connection or WiFi router fees).

³⁵ The prices given for the offers include monthly line rental. The offers included in the comparison were those in force in December 2013.

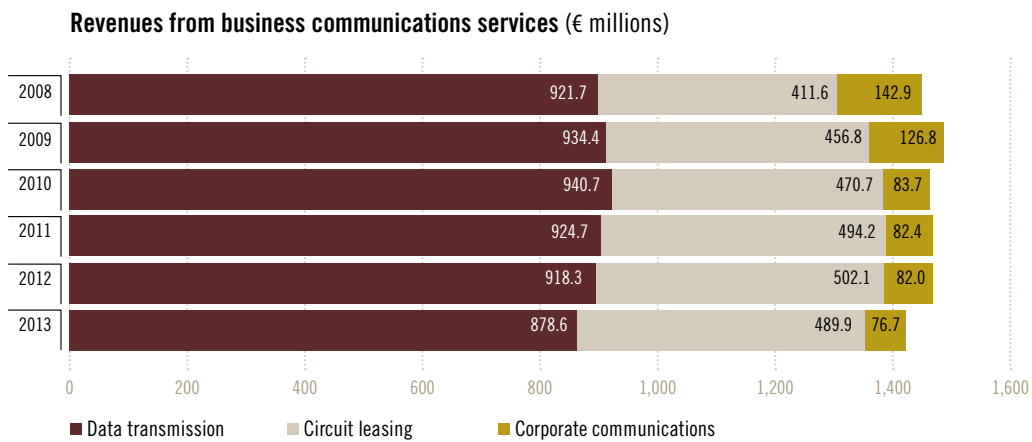
³⁶ The CMT-Red.es Household Panel periodically collects information on the prices of internet services contracted by households, using bills provided by the households themselves. These bills contain information about the recurring payment for the bundle contracted by the household and any discounts associated with it. They also provide information on households that have recently subscribed to offers, as well as those that had them in the past, so that the indicators derived from them are an approximation to the average expenditure of all households.

For quadruple play packages with fixed and mobile telephony, fixed and mobile broadband, average expenditure per household was €42.80.

2.1.3. Business communications

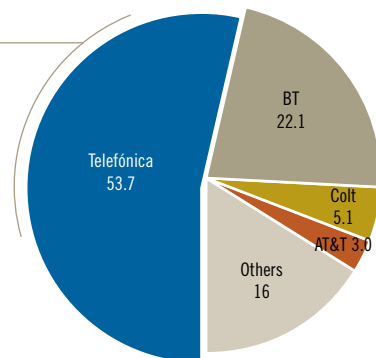
Business communications comprise corporate voice communications (virtual private networks), and circuit leasing and data transmission services for the business segment. This sector generated a turnover

of €1,445.3 million, a decrease of 3.8 percentage points from the previous year. In absolute terms, the decrease was €57.1 million. The three services all had declining revenue. The data transmission service was down 4.3% year-on-year, a loss of €39.7 million. Revenue from leased circuits, which totalled €489.9 million, was down 2.4%, while corporate voice communications fell by 6.4%.



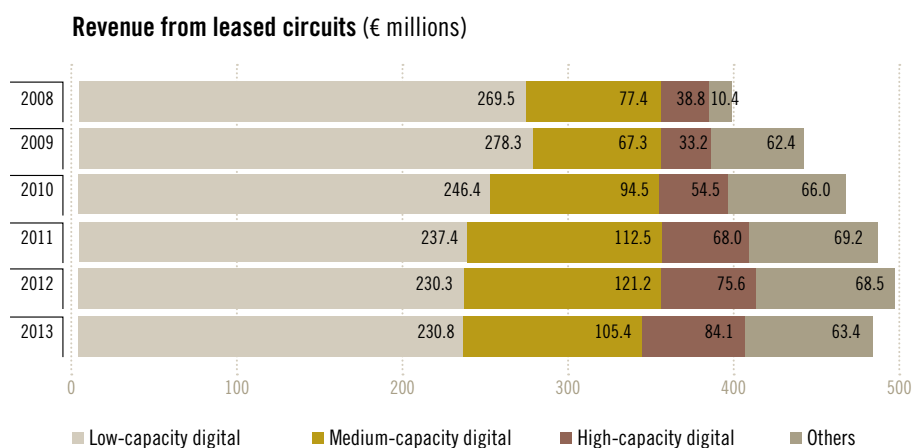
Telefónica continued to lead the field in revenue from data transmission, with €471.7 million and a market share of 53.7%, which was 0.5% lower than in 2012. Next was BT España, with a market share of 22.1%, practically unchanged from 2012, and a turnover of €194.4 million. Some distance behind came Colt, with 5.1% and €45.2 million for the year, adding more than €5 million to this revenue item.

Market shares by operators' revenue from data transmission (percentage)



Revenue from leased circuits fell slightly, by 2.4%, and did not surmount the €500 million barrier reached in the previous year. Turnover from high-capacity circuits – with a speed over 622 Mbps – grew by 11.3% but for

medium-capacity circuits it fell by 13%. Low-capacity circuits, which contributed 47.7% of the total revenue from leased retail circuits, remained stable relative to the previous year.



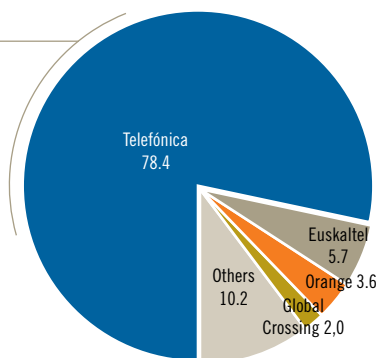
Source: CNMC

As regards operators, Telefónica's market share of circuit leasing revenue was 78.4%, meaning that its share was down on the previous year by a mere 0.4 percentage points. It can therefore be concluded that in this market the presence of the incumbent operator is very important. The second biggest share was that of Euskaltel, with 5.7%, followed by Orange with 3.6%; both holding their market shares relatively steady compared with the previous year.

There was no direct correlation between this slight drop in revenues and the number of circuits, which at consolidated actually increased by 1.2%. It should be emphasised that the circuits posting the biggest percentage rise were 10 Gbps digital circuits, which quadrupled their installed base by the end of 2013, to a total of 192. High-capacity circuits – 622 Mbps Digital, 2.5 Gbps Digital, 10 Gbps Digital and Gigabit Ethernet – thus grew by 44.2%, while medium-capacity circuits grew by 9.8%. In contrast, low-capacity digital circuits fell by 3% compared with 2012. This increase in the number of high-capacity circuits could well be a consequence of the price reduction effected by the 2010 update to the RLO (Reference Line Rental Offer), the effects of which continued to be felt in 2013.

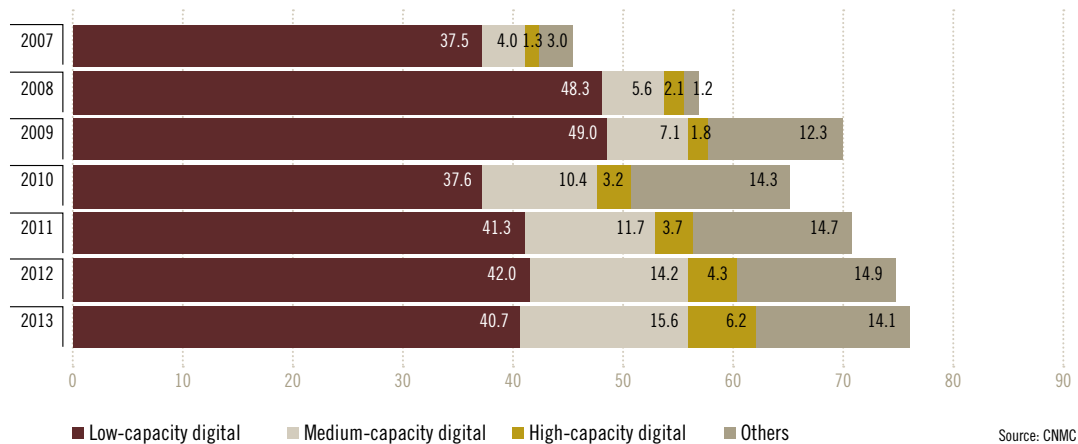
The total was 78,570 circuits, including analogue circuits. The following chart shows a breakdown of the types of circuits by capacity and their historical development.

**Market shares by revenues
from leased circuits
(percentage)**



Source: CNMC

Trend in number of leased circuits (thousands of circuits)



2.1.4. Telephone information services

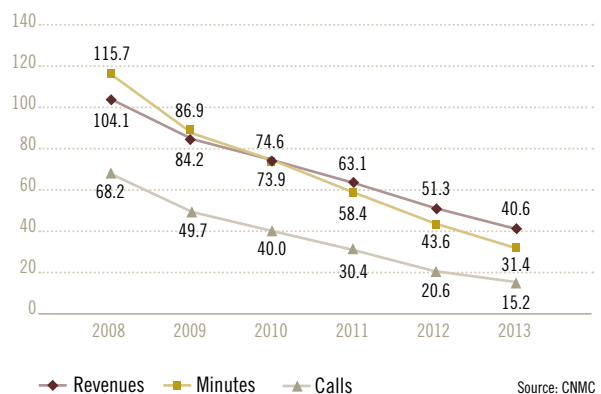
Telephone information services are offered by different fixed or mobile network companies, or by companies that do not have their own networks and use other means of distribution, such as the Internet, to offer end-users information about fixed network service subscribers.

One reason for the downward trend in the demand for these services is that similar or equivalent services are available on the Internet free of charge. The data in this section refer only to the revenue of fixed network operators that provide telephone information services.

Turnover for the year for these services totalled €40.6 million, 20.9% less than in the previous year. The year-on-year decrease in revenue in absolute terms was €10.7 million. This decline was similar to that seen in previous years. In volume of minutes (31.4 million) and calls (15.2 million), the decreases were 27.8% and 26.4% respectively.

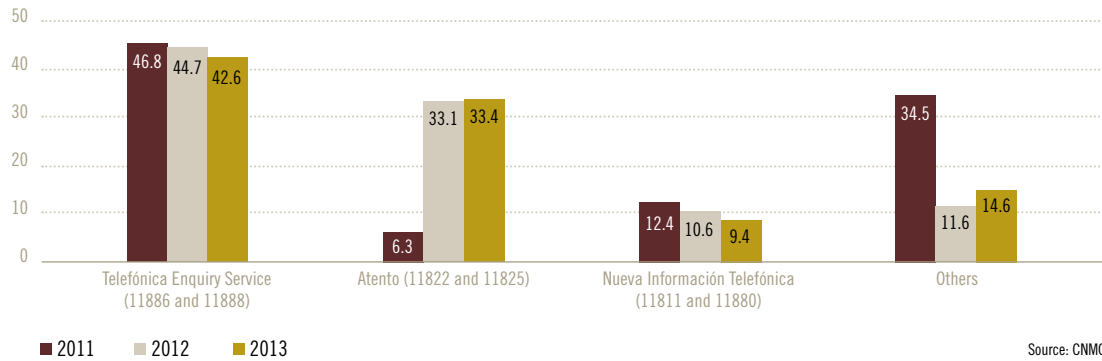
The main player in this market was Telefónica's Enquiry Service (11888 for domestic enquiries and

Revenue, traffic and calls of information service providers (€, minutes and calls in millions)



11886 for international), representing 42.6% of market revenues. In second place was Atento (11822 for domestic enquiries, 11825 for international), with a 33.4% market share. Third was Nueva Información Telefónica (11811 for domestic, 11880 for international), with 9.4%.

Information service providers' market shares by revenue (%)



2.2 Wholesale fixed communications

2.2.1. Wholesale voice services

Revenue from wholesale interconnection services was down 4.2% from the previous year, with a total of €1,608.9 million, €70.5 million less than in 2012.

This year, the definition and analysis of the wholesale termination market is being updated in the framework of the CNMC's market review. In April 2014, a public consultation was launched to collect the impressions and opinions of the players involved in the market, and in July the draft measure was submitted to the European Commission. 2014 will therefore bring a new regulatory framework to fixed interconnection, with significant changes in the type of regulation and, above all, new regulated prices.

Interconnection services

The exchange of traffic originating in the network of one operator with a destination in that of another operator is made possible by network interconnection. For example, origination and termination services are interconnection services. With origination, the operator providing the line to the subscriber receives revenue for providing the interconnected operator with operator selection traffic, short numbers, narrow-band Internet access (909) and the access component of special-rate (intelligent network) services for its network.

The termination service consists in the operator (with its own fixed network) obtaining revenue for calls to customers in its network. These services are complemented by the transit service, which allows one operator to deliver calls to another operator with which it is not directly interconnected, via a third-party operator that has an interconnection with both. There are also other services such as special rates, telephone number information, short numbers, etc. for which interconnection services are necessary.

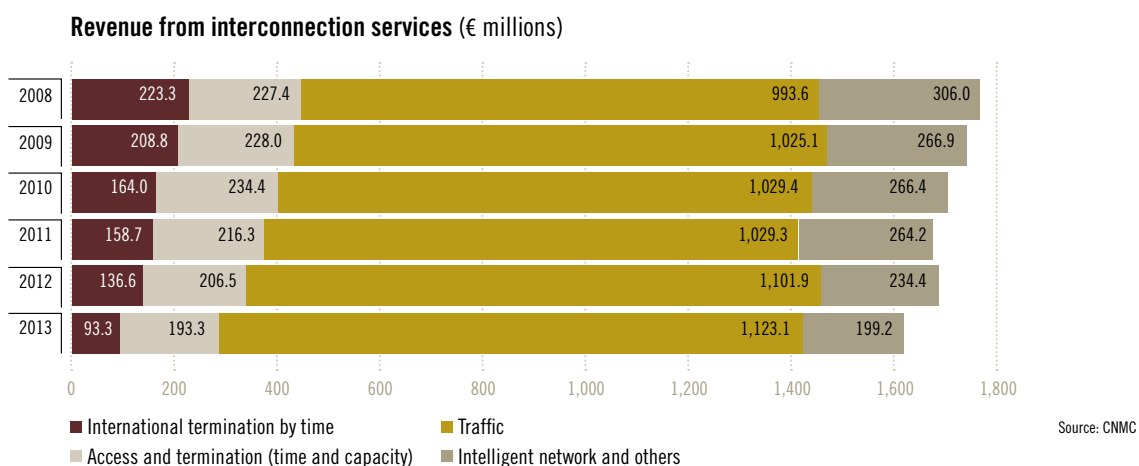
There are two ways to bill for interconnection: time-based and capacity-based. With the time-based method, the traffic exchanged is billed in minutes, whereas with the capacity-based method, it is billed by the capacity of the connection contracted, regardless of the volume in minutes of use. Accordingly, average revenue per minute using this method varies with the actual use of the connections.

Telefónica is the only operator obliged to offer its origination and termination interconnection services in both billing modes.

There are currently 11 fixed operators interconnected with Telefónica using this method at different points of interconnection. In 2013, the total number of operators interconnected was 60 (including time-and capacity-based methods).

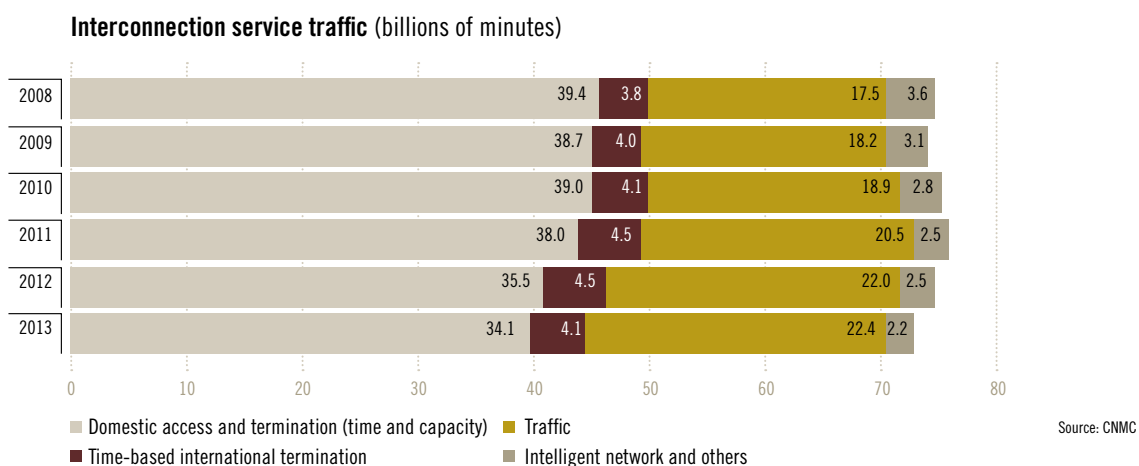
Because of the diverse nature of the various services, the total figures for revenues and traffic do not reflect actual market trends. In fact, traffic services, with an important weighting in the total, can fluctuate significantly from one year to another, as they are largely determined by the price offered

in the wholesale market. The following analysis therefore focuses on domestic fixed network access and termination services, which are regulated by the CNMC in the Reference Interconnection Offer, as a result of the analyses of the wholesale fixed network origination and termination markets.



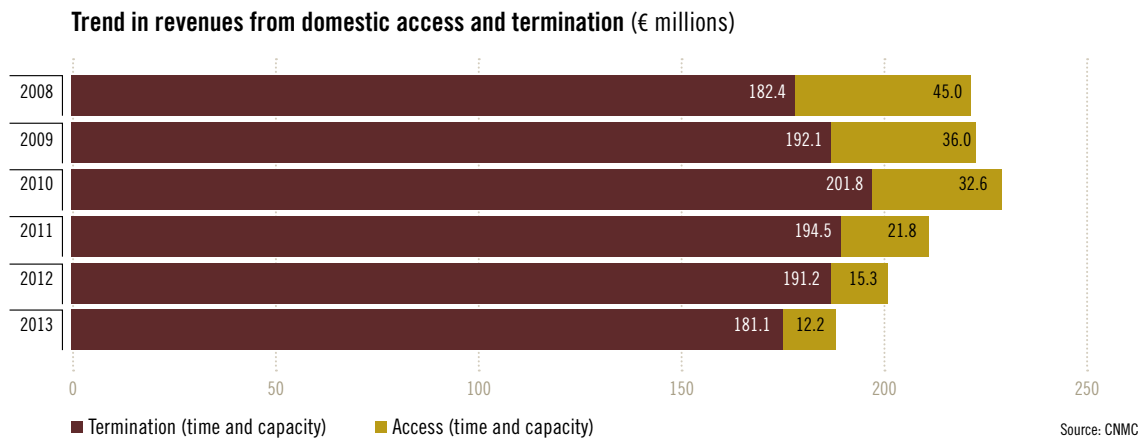
Revenue from interconnection services amounted to €1,608.9 million, 4.2% less than in the previous year. As happened in the retail segment, in which a net loss was posted in the volume of traffic flowing to

fixed networks in 2013, on the wholesale side there was also a downward trend of 2.5% in the traffic exchanged between operators.



Domestic access and termination are the main interconnection services, despite the fact that their contribution to revenue is not very large. In 2013, revenues from these two services totalled €193.3

million, a 6.4% decrease from the figure posted in the previous year. In particular, the turnover for access services dropped 20.1%, while termination fell by just 5.3%.



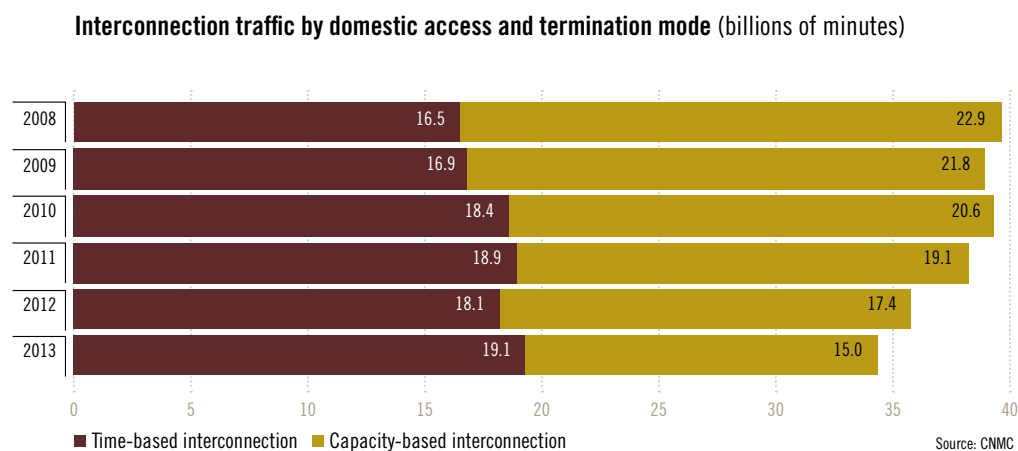
This revenue trend is in line with the figures for traffic, since access minutes fell by 24% while termination was down by just 1%.

Wholesale access traffic has been directly affected by the decrease in demand for indirect access on the part of the alternative operators, which has been falling for a number of years.

Retail traffic to domestic fixed numbers originating on a fixed network also fell substantially in 2013, by 12.4%. On the other hand, mobile-originated

traffic to fixed numbers rose by 12%. Also, because the alternative operators have a greater number of fixed lines, Telefónica's domestic termination traffic dropped 7% year-on-year, while for the alternative and cable operators as a whole, there was a rise of 4.7%.

If the services are broken down by interconnection method, it can be seen that revenues were down for both time-based and capacity-based interconnection, by 2.2% and 14.9% respectively.



The behaviour of capacity-based traffic was very similar, with a decline of 13.6%, resulting in the same average revenue as in 2012. However, time-based traffic grew, partly because of the traffic to fixed-number destinations originating on mobile networks, which mostly uses this method.

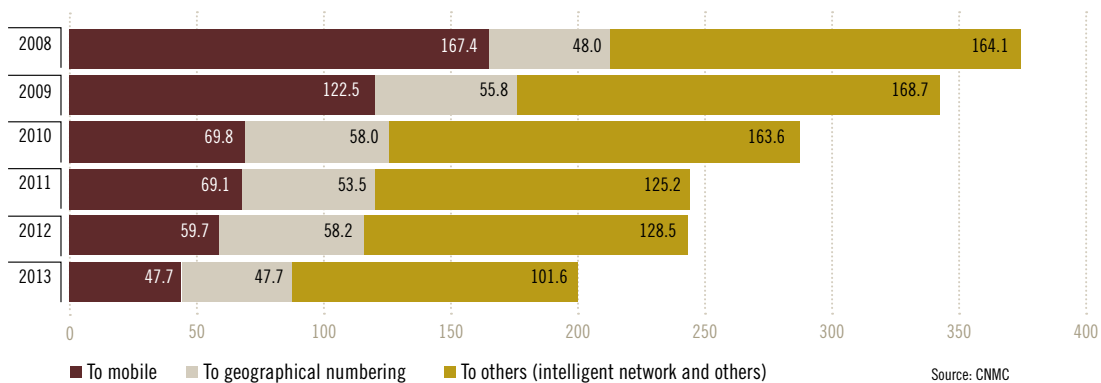
Thus, since 2012, the proportion of time-based traffic has been greater than capacity-based traffic, reversing the trend of previous years. In 2013, time-based traffic accounted for 56% of the total, whereas two years previously it had been less than 50%.

Traffic services accounted for 69.8% of total revenue, of which 57.6% came from international traffic and

12.2% from domestic traffic. These services thus increased their weighting by 4.2 percentage points relative to the year before.

International traffic was the only service to show growth in both revenue and traffic, by 8.2% and 9.8% respectively. In contrast, turnover from domestic traffic fell to €197.1 million, €49 million less than a year before. The three components of domestic traffic – to geographical numbers, to mobile networks and to intelligent networks and other numbers – saw their revenue fall in the same proportion, around 20%.

Trend in revenue from domestic traffic services (€ millions)



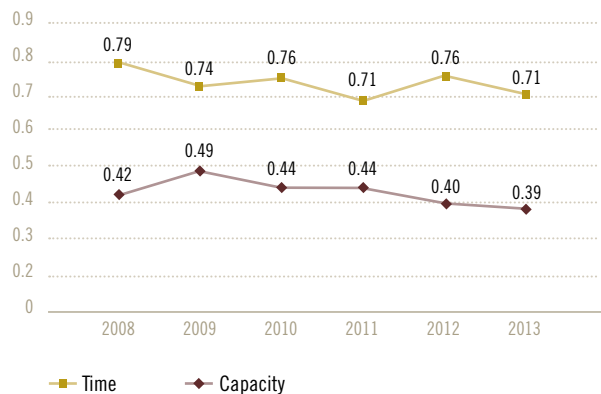
Average revenues

There are four possible levels of interconnection on a fixed network: local, metropolitan, simple traffic and dual traffic. Each of these interconnection methods has a different price. Below is the average rate for the four interconnection levels and its trend over time.

Consolidated average revenue from termination services was 0.57 euro cents per minute. As shown in the following chart, the average revenue for the capacity-based mode remained stable at 0.39 euro cents per minute. In contrast, the average revenue for the time-based mode fell to 0.71 euro cents per minute. Telefónica's average revenue was 0.54 euro cents per minute, while for the other operators it was 0.74. Under the current RIO (RIO 2010), there is asymmetry in the termination price for the alternative operators, as they can set a termination price on

their own networks up to 30% higher than the local price set for Telefónica. In the public consultation on the termination market, we have proposed that this asymmetry be eliminated.

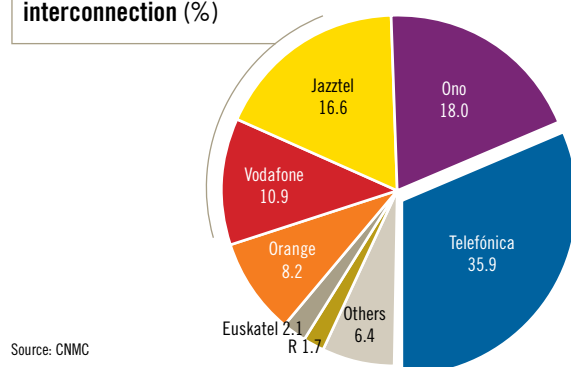
Average revenue from domestic termination by mode (euro cents per minute)



Market shares

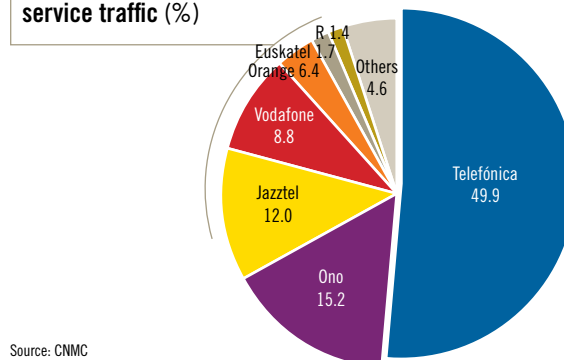
Telefónica's market share of domestic termination interconnection was 35.9%, a substantially lower figure than its proportion of the minute-based traffic handled by other operators, which was 49.9%. Ono and Jazztel took 18% and 16.6% of the market respectively, in parallel with the change in their respective wholesale traffic-based market shares. Vodafone's followed, with a market share of 10.9%. Orange came fifth, with 8.2% of total market revenues from domestic termination.

Market shares by revenues from domestic termination interconnection (%)



Market shares by volume of traffic for domestic termination service traffic behaved similarly to revenue, with a decrease in the incumbent operator's share to 49.9% of the total market. Ono and Jazztel increased their market shares to 15.2% and 12% respectively. Vodafone had 8.8%, while Orange took 6.4% of the market.

Market shares by domestic termination interconnection service traffic (%)



lines and the revenue of the services most in demand from the alternative xDSL operators.

Over the coming months, the CNMC has to undertake a review of the wholesale markets for broadband services, its last analysis having been in 2009. The new market review will involve significant regulatory challenges, bearing in mind Telefónica's current roll-out of its NGA network, the gradual transformation of its network and the regulatory objectives of promoting competition and spurring investment in alternative NGA networks³⁷.

In 2013, the *ex ante* obligations established in the market review that the CMT approved in 2009 continued in force. Specifically, the wholesale market for (physical) access to network infrastructure (including shared and fully unbundled access) at a fixed location (market 4) and the wholesale market for broadband access (market 5).

Regulation of market 4 enables alternative operators to offer fixed broadband services to consumers via wholesale access to the physical infrastructure of the operator with significant market power (SMP), which is currently Telefónica. In particular, the alternative

2.2.2. Wholesale fixed broadband services

Wholesale fixed broadband services continued the trend of recent years with increases in the number of

³⁷ It should be mentioned that the European Commission published a Recommendation in September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment.

operators can access the Telefónica copper pair and provide service directly to users through regulated wholesale local loop unbundling. In this access mode, the alternative operators must connect their trunk network to Telefónica's local exchanges and place equipment in them so as to be able to unbundle the pairs of the exchange's subscribers (the last section of the access network) and connect them to their network.

Telefónica offers three access modes for this loop unbundling service. Firstly, fully unbundled access: whereby Telefónica grants the operator the use of the copper-pair throughout the pair's frequency range. Secondly, shared unbundled access: Telefónica allows the operator to use the pair's high frequencies, which are used for xDSL services, and keeps the use of the low frequencies for itself so as to continue offering users POTS telephony or basic ISDN access. Lastly, there is the shared access without PSTN mode, in other words, without a telephone subscription to Telefónica, which is fully comparable with a fully unbundled loop, in the sense that it is the alternative operator that provides all the services to the end user: xDSL and VoIP telephony in the high frequency band.

In addition, the obligations of market 4 also include allowing the alternative operators to access Telefónica's passive infrastructure (ducts, canals, manholes, etc.), which must allow them to deploy their FTTH networks with time and cost savings. In fact, the alternative operators continued to access Telefónica's ducts and other civil engineering infrastructure in accordance with the obligations imposed on the incumbent operator by the CMT. The approval of the Junction Boxes and Ducts Reference Offer (Spanish initials, MARCo) set the maximum regulated prices for this type of access.

In addition, the regulation of market 5 permitted the alternative operators to connect to a number of deployment points on the Telefónica network, enabling the operators to provide a broadband service to end customers nationwide, even in areas that they do not reach with their own networks or with local

loop unbundling. This connection to the incumbent operator's network can be via ATM or IP; Telefónica markets these two types of wholesale services with the commercial names of GigADSL and ADSL-IP (the latter at the provincial and national levels) respectively. As in the case of shared loop access without PSTN, it is possible to contract the indirect access service without necessarily having a telephone service with Telefónica (often called *naked* indirect access).

Demand for the wholesale broadband Ethernet bit-stream access service (NEBA), which went into operation in 2012, was still not significant last year. It should be mentioned that NEBA will gradually replace the current GigADSL and ADSL-IP, allow wholesale access to the copper network and Telefónica's new fibre optic network at speeds of up to 30 Mbps and enable value-added services with quality guarantees to be offered, to provide VoIP telephony or business services. The aim of the NEBA service is to improve competition in broadband services available to users who live in areas where there is as yet no competition in infrastructure and where the alternative operators make use of indirect access.

The CNMC recently approved, in January 2014, the first review of NEBA pricing and has updated the rates for GigADSL and ADSL-IP. In April 2014, it also approved a resolution on the verification of the effective availability of NEBA, which was the initial milestone in the process to deregulate GigADSL and ADSL-IP services in areas that have coverage from NEBA.

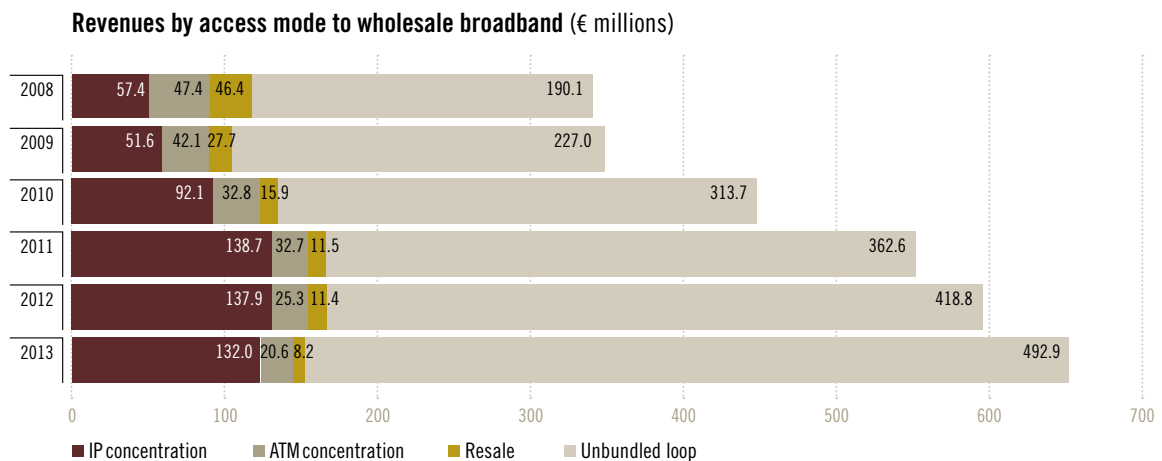
Revenues

The revenue from regulated broadband wholesale and resale services grew by 10.2% last year to reach €653.8 million.

As in previous years, the local loop unbundling service grew in terms of both lines and revenue. In contrast, revenue from the IP concentration service, ATM concentration service and unregulated resale service fell, although in some cases the number of lines did increase.

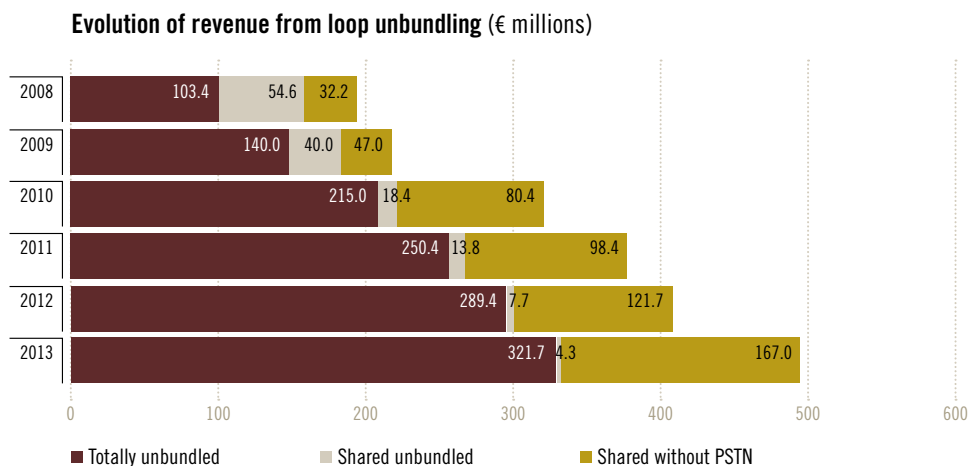
Specifically, turnover from the unbundled loop service rose to €492.9 million, 17.7% above the previous year. The IP concentration service contracted by 4.2% to €132 million. Lastly, revenues from ATM

concentration services and resale fell by 18.4% and 27.7% respectively.



In regard to the breakdown of revenue from the service types most in demand, unbundled loops, the biggest increase in turnover came from unbundled loops without PSTN and fully unbundled loops. It should be noted that these methods allow alternative xDSL operators to offer a broadband and voice service that dissociates the user from Telefónica. Jazztel, Orange and Vodafone are the operators making most use of these methods to offer their services to consumers.

In 2013, revenue from fully unbundled subscriber loops reached €321.7 million, an increase of 11.2% on the previous year. Turnover from the shared loop without PSTN shot up by 37.2% to €167 million. Lastly, revenue from the shared loop service plunged by 44.4%, to 4.3 million.



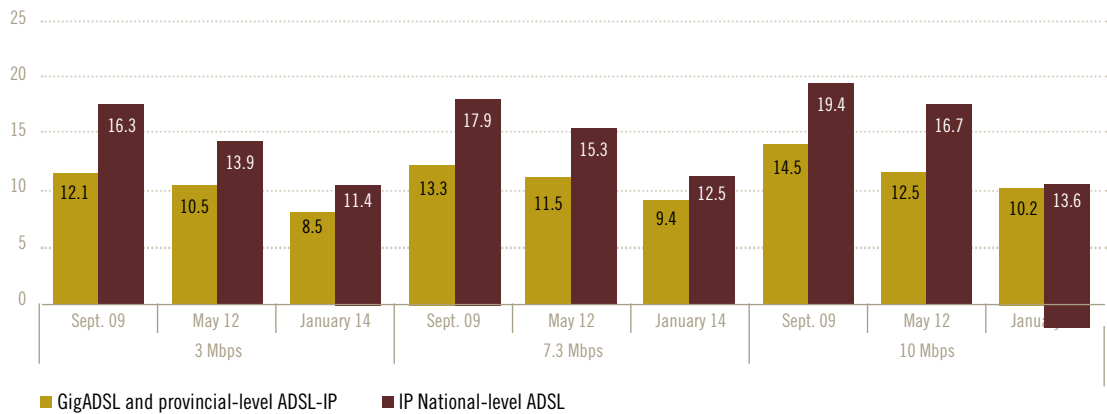
The drop in revenue from bit-stream access services (IP and ATM concentration) was due in part at least to the reductions in the regulated prices for these services made by the CMT in recent years.

In May 2012, the CMT reduced GigADSL prices by 13.7% and ADSL-IP prices by 14.2% compared with the prices set in September 2009. It should be noted that in January 2014, the CNMC applied an additional reduction of 18.4% to the prices of these wholesale

services, even though its impact is not reflected in the information presented in this economic report on the industry.

These regulatory measures on wholesale services allow the alternative operators to configure consumer offers in areas where they do not have their own infrastructure, without removing incentives to investment in improving access networks.

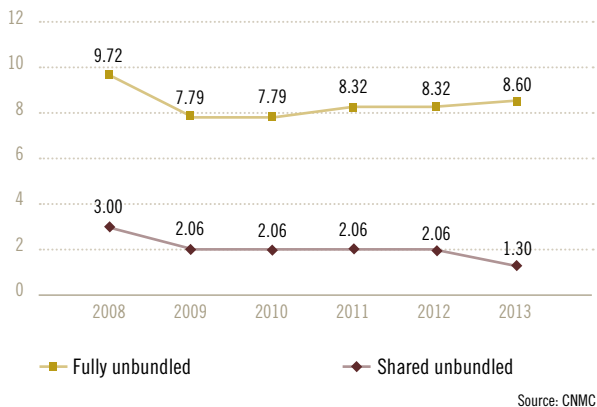
Evolution of regulated prices of the main bit-stream access modes (€ per month)



With regard to unbundled loop access service pricing, in July 2013 the CMT applied a 37% reduction to the monthly fee for a shared loop and an increase of 3.4% to the fully unbundled loop mode. These alterations

set the subscription prices at €1.30 and €8.60 per month respectively.

Trend in regulated prices for subscriber local loop unbundling (€/month)



Lines

When analysing the operators' share in the broadband line retail market, it was seen that the major alternative xDSL operators (Jazztel, Orange and Vodafone) gained over 81% of the new broadband connections in 2013.

These players, as indicated above, mainly had access to the end market though the wholesale local loop unbundling service. This was thus the wholesale service with the greatest increase in lines.

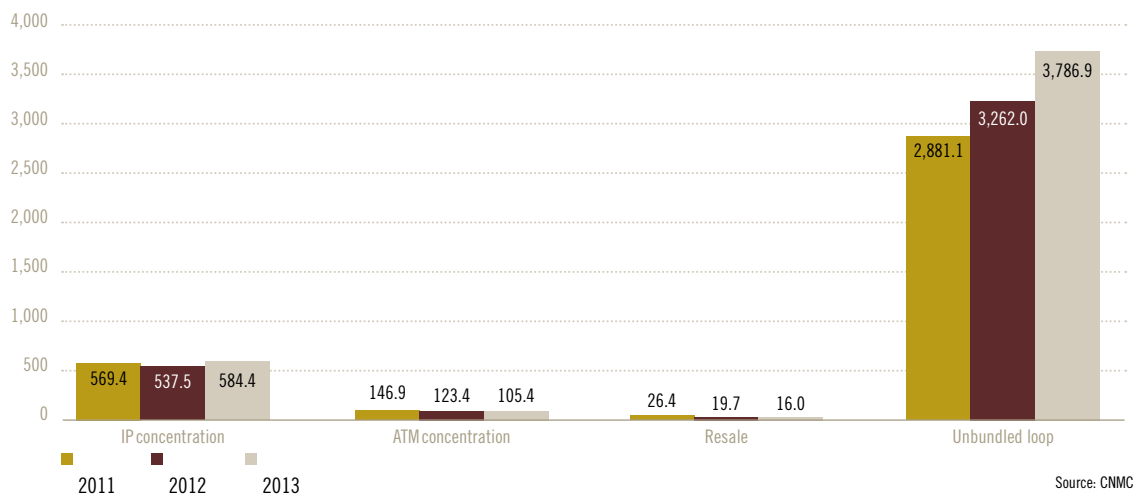
The bit-stream access service had a slight increase in the demand for lines in some modes.

Unbundled loops increased by half a million (16.1%) in this past year. The indirect access and resale mode connection figures totalled 706,000 lines, compared with 681,000 lines in 2012, or an increase of 3.7%. the IP concentration service (marketed by Telefónica under the name ADSL-IP) showed an increase of 8.7%. In contrast, the ATM and GigADSL

concentration modes and the resale service dropped by 14.6% and 18.8% respectively.

Lastly, in 2013, the number of "NEBA" ("new broadband ethernet") wholesale active deployment points was still symbolic, with fewer than 400 connections.

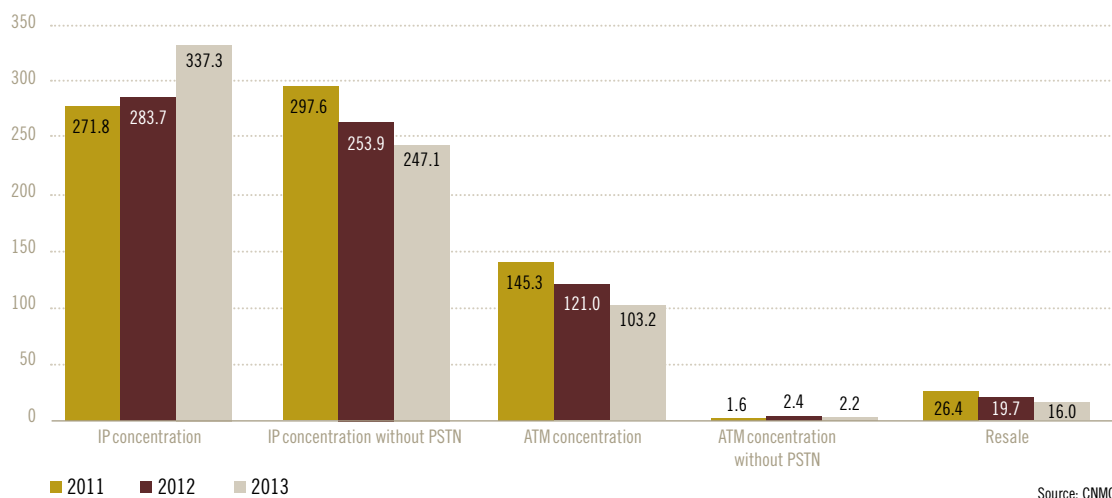
Lines by wholesale broadband access mode (thousands of lines)



The following chart shows a breakdown of lines by the various modes of indirect access. The IP concentration service continued its upward trend of recent years with an 18.9% increase in the number of lines. The

other indirect access methods and the resale service shed a total of 28,000 lines, a figure that represents a 7.2% fall from the previous year.

Lines by indirect access method (thousands)

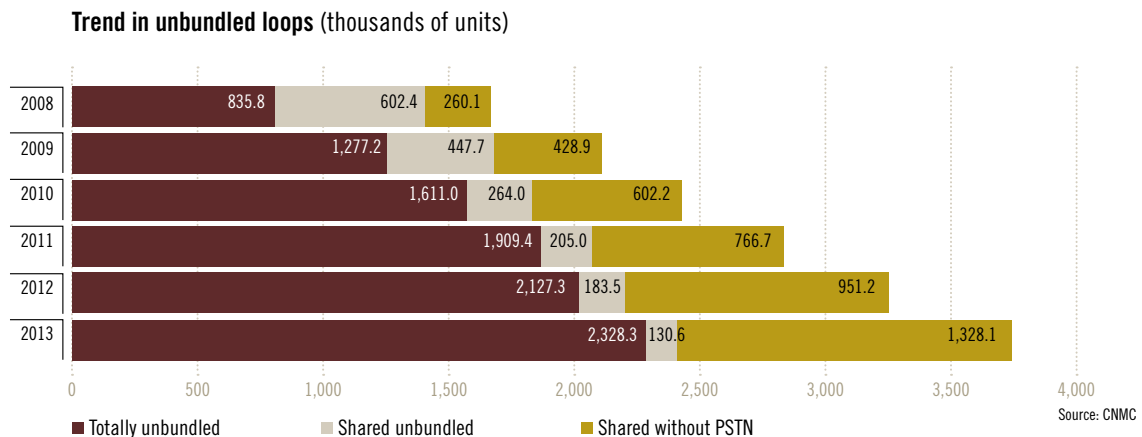


The wholesale local loop unbundling service continued to be the main access mode for the alternative operators in 2013. It should be noted that the Telefónica access network transformation process will involve the gradual replacement of this access mode, which is copper-based, by other alternatives. In any case, due to the obligations placed on markets 4 and 5, a series of requirements must be met before Telefónica can close a local exchange with unbundled access services, among them, respecting a minimum guarantee period of 5 years from the notification to the operators and the CNMC of its desire to cease services at that exchange.

In 2013, there were 3.78 million unbundled loops, which is an increase of 16.1% from 2012, and over half a million new deployment points. These increases were greater than in previous years, reflecting the

significant retail advances of the alternative xDSL operators. The modes with the highest demand were fully unbundled loops and shared loops without PSTN. The stock of shared unbundled loops fell, however, by 29%, continuing the downward trend seen in recent years.

The following chart shows the trend in the volume of unbundled loops broken down by mode. The wholesale shared loop service without PSTN reached 1,328,089 lines (most of them belonging to Orange), an increase of 39.6% on the previous year. The number of fully unbundled loops, which is the mode used by Jazztel and Vodafone, reached 2.32 million, 9.4% more than in the previous year. Lastly, the stock of shared unbundled loops plunged almost 29% to 131,000 loops.



As stated above, the alternative operators continued to invest in connecting to new local exchanges in order to co-locate and thus increase the coverage of the service around the country. Through co-location, these operators rent space in Telefónica's exchanges in order to install the equipment they use to provide services through local loop unbundling.

The following chart shows the trend in the number of local exchanges with a least one co-located operator and the percentage of accessible pairs out

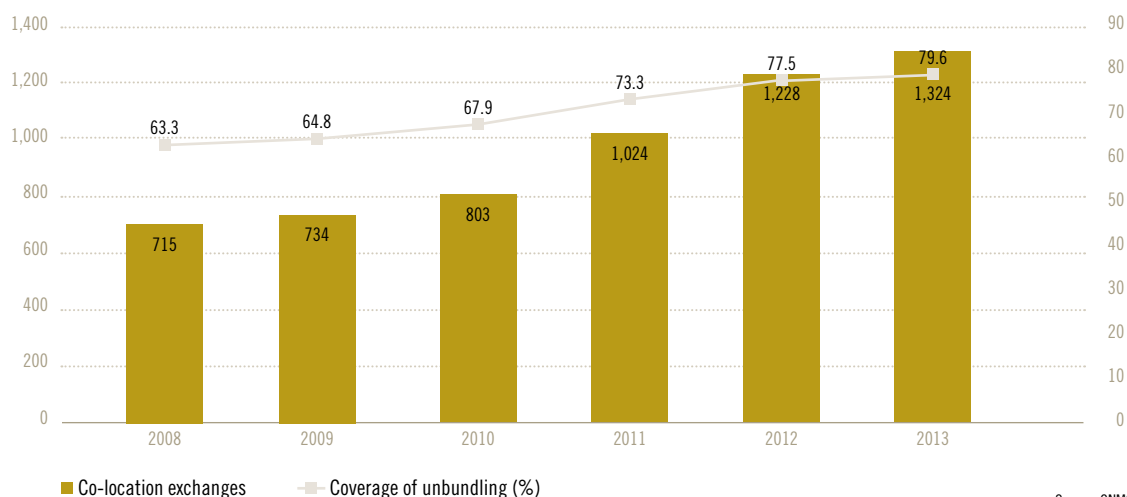
of Telefónica's total stock of copper pairs. Last year, the total number of local exchanges in which an alternative operator was co-located reached 1,324. This figure represented an increase of 96 local exchanges since 2012. The number of connected local exchanges has made it possible to access 11.4 million pairs, for a 79.6% coverage of accessible pairs out of the Telefónica total.

It should be mentioned that the CMT's regulatory actions with regard to revising the pricing of the LLRO

have enabled the alternative operators to reduce connection costs at Telefónica's local exchanges in areas where the operators do not have their own infrastructure, thereby facilitating co-location. The

wholesale terminal lease lines review approved³⁸ in July 2013 lowered current prices by up to 20% depending on the capacity of the leased line.

Trend in co-location exchanges and coverage of local loop unbundling (exchanges and %)



The following map shows the geographical distribution of the exchanges in which at least one operator is co-located. Investment made in connecting new exchanges – to a total of 1,324 – have enabled operators to gain greater presence and coverage throughout the country.

In this manner, in the past year, the exchanges with co-located operators were situated in a total of 1,835

municipalities, compared with 1,719 in 2012, so that the geographical area in which loop operators have the capacity to offer broadband services has grown. It should also be mentioned that a total of 329 municipalities with unbundled loops had a population of under 1,000 inhabitants. The alternative operators have therefore significantly increased their presence in areas with small populations.

Geographical distribution of co-location exchanges



³⁸ Ruling of 18 July 2013 approving the Telefónica de España S.A.U. leased line reference offer and agreeing to notify the European Commission and the Body of European Regulators for Electronic Communications (BEREC) (AEM 2013/237)

Geographical distribution of unbundled loops

The analysis of industry trends at retail level highlighted the advances made by alternative xDSL operators. It also highlighted the extensive use of local loop unbundling to offer services to end consumers. It is also necessary to add the evidence noted in previous sections on the increase in lines and revenue from the wholesale local loop unbundling service and the rise in the number of local exchanges with co-location and the coverage of copper pairs accessible to these operators.

However, the geographical differences in the use of the wholesale unbundling service are notable. This is because the most heavily populated areas, in which a local exchange covers a greater number of potential consumers, have proved to be a more attractive way for alternative operators to achieve a return on their investments.

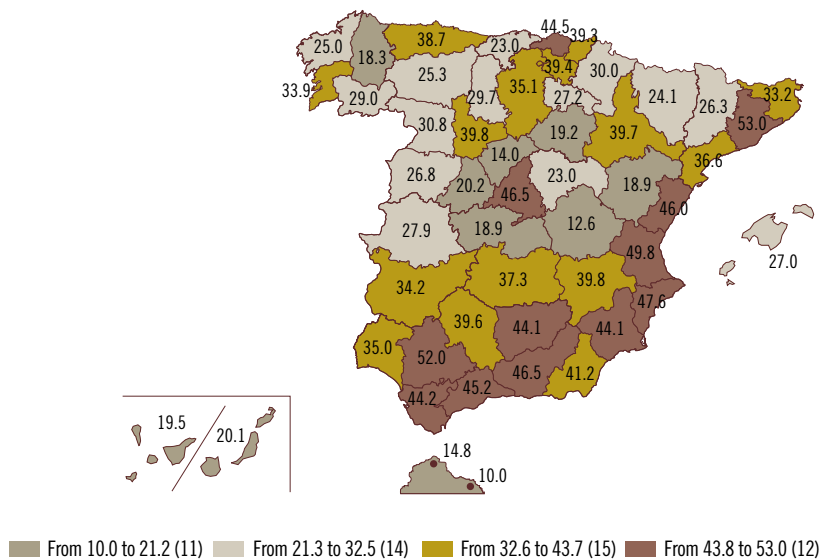
The following map shows the distribution of unbundled loops for xDSL broadband lines in the retail market.

Last year, the number of unbundled loops nationwide per 100 xDSL lines reached 40.6, which was 3.9 more than in 2012. A total of 13 provinces had a higher percentage than the national average. As occurred in previous years, Barcelona and Seville were at the head of the provinces with the greatest penetration, with 53 and 52 unbundled loops per 100 xDSL lines respectively.

Apart from this, it should be noted that in 2013, the autonomous cities of Ceuta and Melilla witnessed the greatest surge in unbundled loops, reaching 14.7 and 10 unbundled loops per 100 xDSL lines, in contrast to the negligible number recorded in the previous year. In addition, the provinces of Las Palmas, Santa Cruz de Tenerife and Huelva also stood out due to their high growth rates (over 9 unbundled loops per 100 xDSL lines).

At the other extreme were the provinces of Teruel, Soria, Cuenca and Ávila, where the penetration of the wholesale service scarcely grew and even decreased in the last three provinces listed.

Penetration of unbundled loops by province³⁹ (loops/100 xDSL lines)



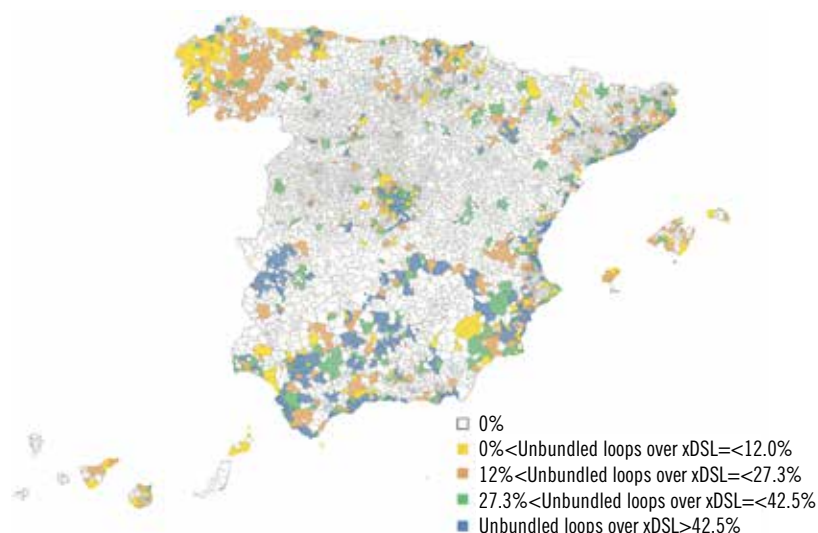
Source: CNMC

³⁹ The intervals were set from the mean \pm standard deviation. The upper and lower extremes are determined by the maximum and minimum values respectively.

The geographical breakdown at municipal level shows that, in spite of the increase in the number of local exchanges where operators are co-located, there are still large areas in which the alternative operators have

no presence through loop unbundling. In contrast, the areas and regions with the highest population density have the highest penetration of unbundled loops.

Penetration of unbundled loops by municipality⁴⁰ (loops/ 100 xDSL lines)



Source: CNMC

2.2.3 Operator circuits leasing and data transmission

Circuit leasing

Wholesale circuit leasing services are rentals between operators to provide a specific transmission capacity between two points. Wholesale circuit leasing is divided into two categories: terminal circuits, which extend to the end customer's premises to connect them to the operator's networks, and trunk circuits, which connect two nodes of the operator's trunk network.

This section includes aggregate data on the trunk lines, terminals and lines used to connect SLO (subscriber loop offer) facilities. The lines that Telefónica de España provides to Telefónica Móviles are also included. Therefore, lines provided on regulated terms

(the majority of terminals plus connections for SLO facilities) and on commercial terms (the majority of trunk lines and those provided by Telefónica to Telefónica Móviles) are included.

Revenues

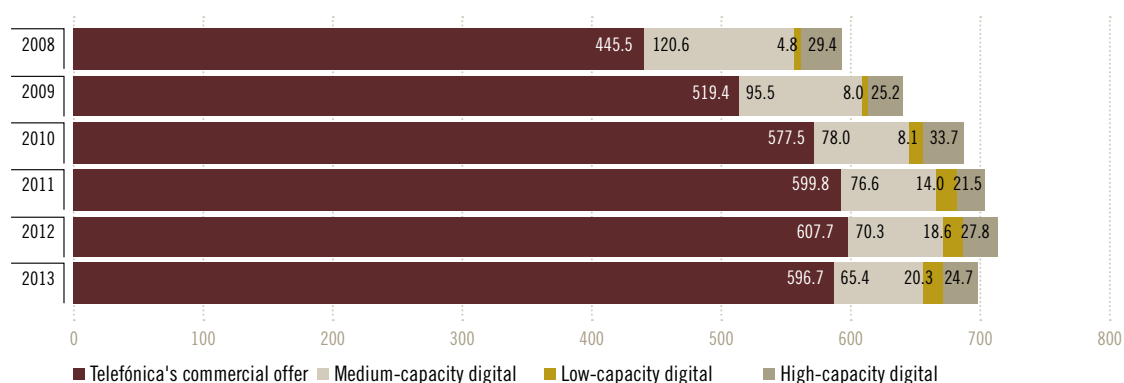
Total revenue from leasing low-, medium- and high-capacity circuits⁴¹, together with Telefónica's carrying capacity, was €707 million, 2.4% more than in the previous year.

The major part of this revenue came from Telefónica's commercial offer of circuit leasing, also known as "carrying capacity". These revenues accounted for 84.4% of the total, representing a decrease of 1.8% compared with 2012. The total for this type of revenue was €596.7 million in 2013. For all other circuits, those that recorded the highest growth by speed were medium-capacity circuits, which rose by 8.8%.

⁴⁰ The intervals were set from the mean \pm standard deviation. The upper and lower extremes are determined by the maximum and minimum values respectively. The data shown correspond to the CMT geographical requirement of June 2013.

⁴¹ The classification of circuit speeds has been updated for the historical data and for 2013.

Revenue from circuits leased to operators⁴² (€ millions)



Number of circuits

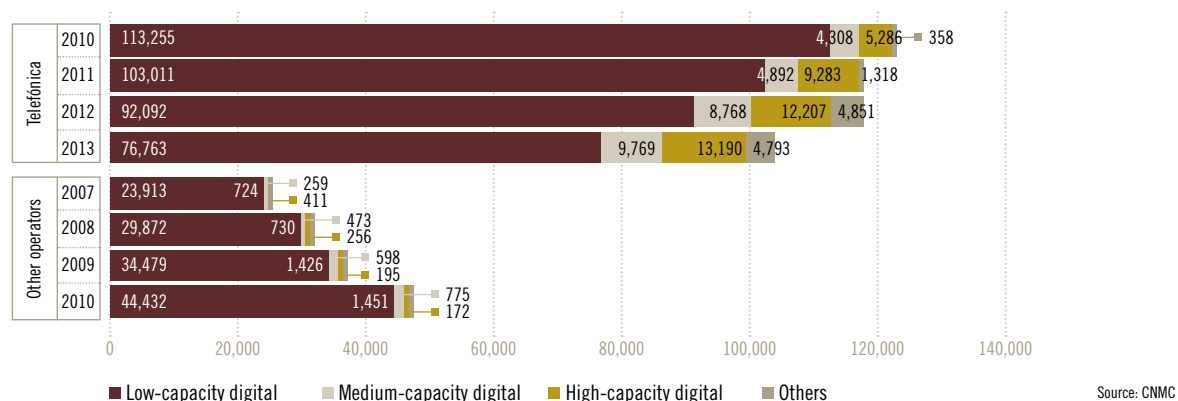
The number of leased circuits remained stable relative to the previous year, showing a slight growth of 2.1%, with a total of 151,345 circuits. Telefónica's circuits represented 69.1% of the total⁴³.

As regards the type of circuit, during 2013, the total number of high-capacity circuits (bitrates of 620 Mb and up) increased by 9.1% to account for 9.2% of the total number of circuits at year-end. Medium-capacity circuits for their part accounted for 7.4% of the total and increased by 10.1% compared with the previous year.

The circuits offered by the other operators increased by 27.6%, with 94.9% of them concentrated at low bitrates of between 64 Kb and 30 Mb.

The high-capacity circuits provided by Telefónica grew by 8.1%, while the greatest growth came from medium-capacity circuits with 11.4%. Low-capacity circuits from the same operator fell by 16.6%. Telefónica's other circuits fell by 1.2%, although they represented only 4.6% of the total number of circuits. Prominent among them were the circuits for interconnection services, with more than 4,900 circuits.

Number of circuits leased to operators by bitrate⁴⁴



⁴² Revenue from other circuits and other revenue are not included.

⁴³ Telefónica's circuits also include the breakdown of circuits with carrying capacity.

⁴⁴ The classification of circuit bitrates has been updated for the historical data and for 2013. Included are the circuits that Telefónica provides to Telefónica Móviles.

It should be pointed out that leased circuits are playing a fundamental role in the increase in coverage of loop services nationwide, especially in medium- and small-sized exchanges. Whereas the alternative operators connect to Telefónica's major exchanges using their own resources, to access smaller exchanges they use the SLO-based back-haul service on leased circuits. With this service, operators can connect SLO facilities to circuits regulated by the RLO (Rental Line Reference Offer). The following table shows the number of co-located local exchanges in which one of the circuit modes available as SLO-based back-haul is available. The total number of local exchanges in April 2014 compared to April 2013 has fallen by 2%.

Circuit speed	Number of stations ⁴⁵
2 Mbps	1
34 Mbps	1
155 Mbps	187
Fast Ethernet (100 Mbps)	177
Gigabit Ethernet (1,000 Mbps)	692

Also, since the last market review, the use of RLO circuits has been permitted for connecting to the mobile operators' base stations. Mobile operators are using this facility to extend their 3G network coverage.

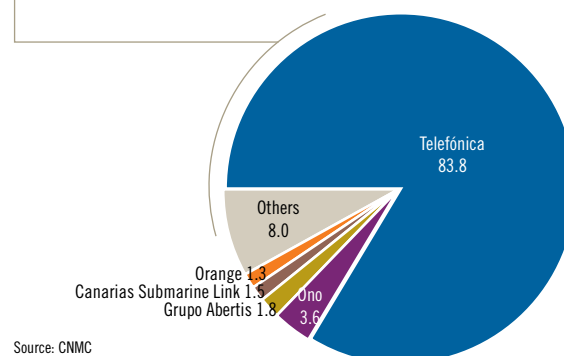
Market shares

Telefónica held on to its lead position in the wholesale circuit market, with 83.8% of total revenues. In fact, in 2013 it increased its market share by half a percentage point compared to 2012.

Ono, Tradia Telecom (part of the Abertis Group) and Canarias Submarine Link were the next biggest operators in the wholesale leased circuit market, but

together only accounted for 6.9% of the market total. The market had a total of 27 operators in 2013.

Market shares by revenue from circuits leased to operators (%)



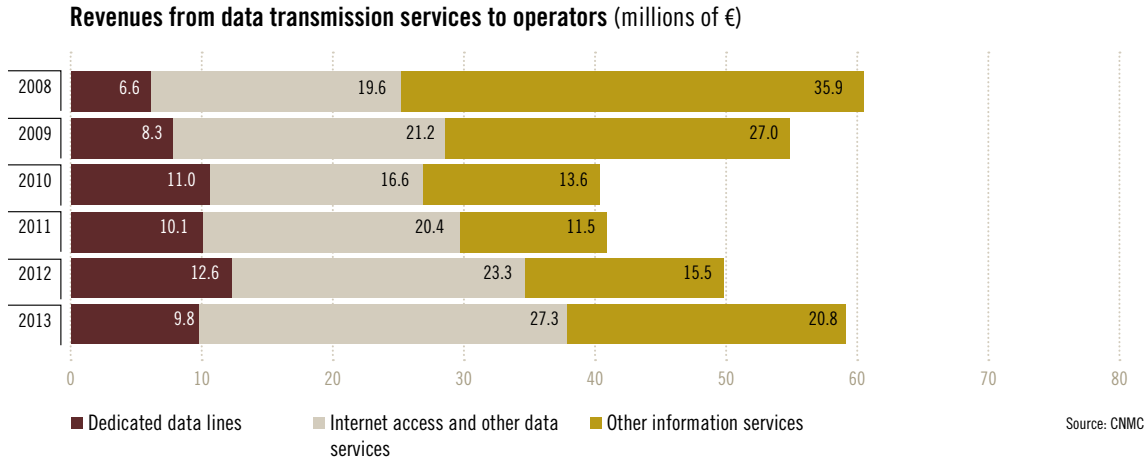
Data transmission

Wholesale data transmission services include dedicated data line services using any type of technology – whether *Frame Relay*, IP, ATM, x.25, VSAT or IDSN networks – and the Internet access services provided to operators.

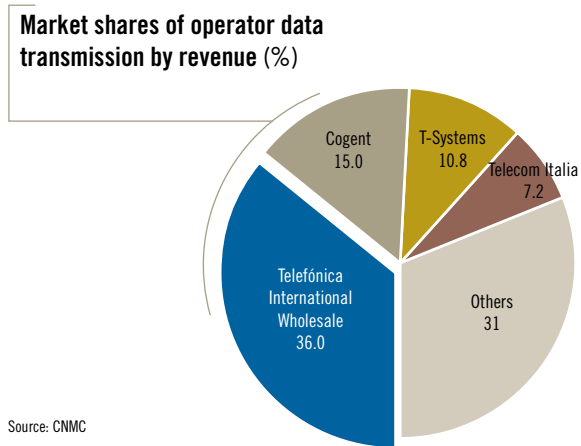
Turnover for data transmission services amounted to €57.9 million, 13.1% more than in the previous year. If the total revenue is broken down by item, it can be seen that with €9.8 million, revenue from dedicated data lines slumped by 22.2% year-on-year, and was the only one of the three types of service to fall.

Internet access and other services rose by 18.1%, to total €27.3 million. Lastly, the revenue from other information services led the increase, growing by 34.7% year-on-year and with €5.4 million more turnover. Its value in 2013 was €20.8 million.

⁴⁵ Data updated to April 2014.



The market shares by revenue from data transmission placed Telefónica Wholesale Services as the market leader, with a 36% share, followed by Cogent, with 15% of the market value. The rise of T-Systems, with 10.8% of the total revenue from data transmission services must be singled out, since the previous year it had been in 11th position by value. The three of them together they captured 61.8% of the total revenue for data transmission. They were followed by Telecom Italia, with 7.2%.



2.3 Retail mobile communications

Revenue from circuit leasing fell 20.1%, to €7,576.9 million. This decrease was due to a number of factors, including the negative economic environment, the decrease in the use of certain services (SMS messaging), and a substantial drop in the final prices for certain services. However, the mobile service operators partially compensated for this result with the revenue from expanding the mobile broadband service, which rose by 19.7% to €3,312.1 million.

The mobile telephony base, which excludes lines linked to machines and data-only services, declined by 1% in 2013, to 50.2 million lines, making its penetration 107.3 mobile lines per 100 inhabitants.

The vitality of the market was due, on the one hand, to the smaller operators, such as Yoigo and the mobile virtual network operators (MVNO), and, on the other, to consumers, who, faced with an economic crisis, proved highly sensitive to cost, switching operators in huge numbers and thereby setting a new all-time record for the number of mobile portability transfers made. Effective portability reached 6.8 million in 2013.

Revenues from wholesale services, which the operators provide to each other, shrank by 23.5% in 2013, continuing the downward trend of recent years. However, the increase in wholesale traffic should be noted. It grew by 14.2%, driven mainly by increased demand for mobile communication network access from third-party operators, mostly MVNOs.

2.3.1 Mobile telephony

In 2013, revenue from mobile telephony final services – which include voice and text – was €7,576.9 million, a 20.1% drop from the volume posted in the previous year. All the services that make up mobile telephony (voice, messaging and value-added services) saw their revenue fall, although the voice traffic handled rose slightly, by 1.4%. SMS and MMS messaging reported a significant decrease in their traffic for yet another year.

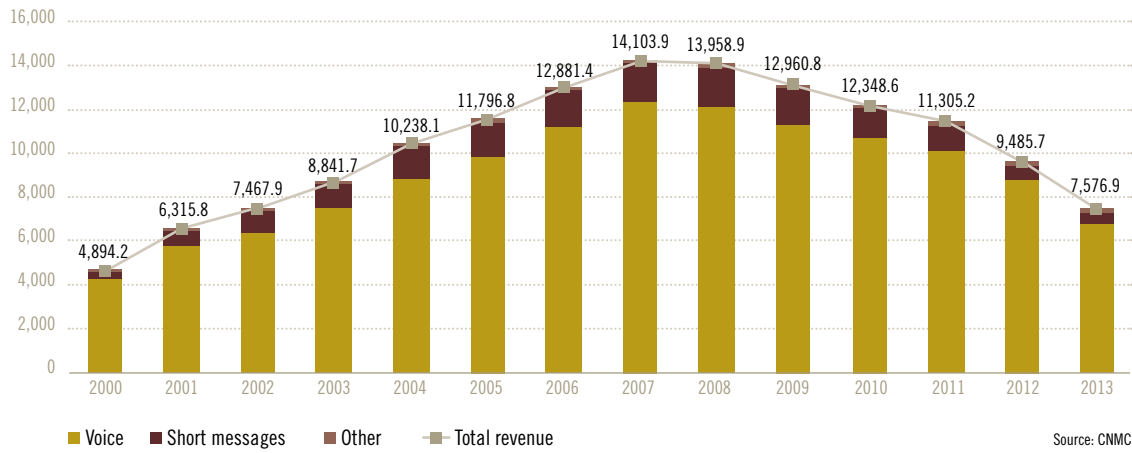
The demand for lines also continued the downward trend seen in previous years; in 2013 it fell by 1%. The decrease affected both the residential and business segments. However, it was the demand from business, with a 332,000 drop in the number of lines, that suffered the greater reduction in the mobile telephony base. In the residential segment, the number of lines in service fell by 173,000 over the year.

Consumers made intensive use of portability to switch operators. The main beneficiaries in this process were Yoigo and the mobile virtual network operators (MVNOs), which increased their market share to 19.7% of all active lines.

Revenue

Revenue from both voice services and SMS and MMS messaging fell substantially, by 19.8% and 33% respectively.

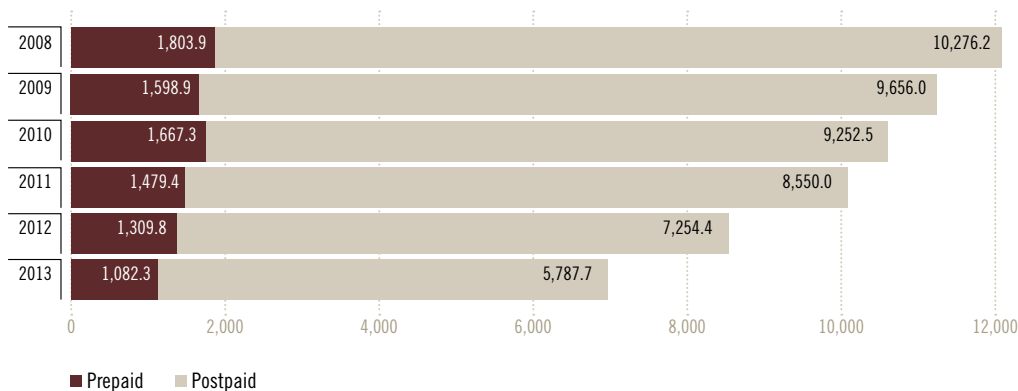
Trend in revenue from final services⁴⁶ (€ millions)



The drop in revenue from voice traffic occurred both in the prepaid and postpaid categories, although it was the latter that fell more, by 20.2%. Also, revenue from subscription payments and monthly fees rose to constitute 49.2% of the total revenue from voice traffic services, as opposed to the 31.9% posted in 2012. This result confirms the mass marketing in

recent years of flat-rate tariffs and, in particular, of offers that bundle mobile voice and Internet services. It should be noted that revenue from customers' commitment to a minimum monthly consumption has also been included in the subscription and monthly fees category. Revenue from this item amounted to €203.8 million in 2013.

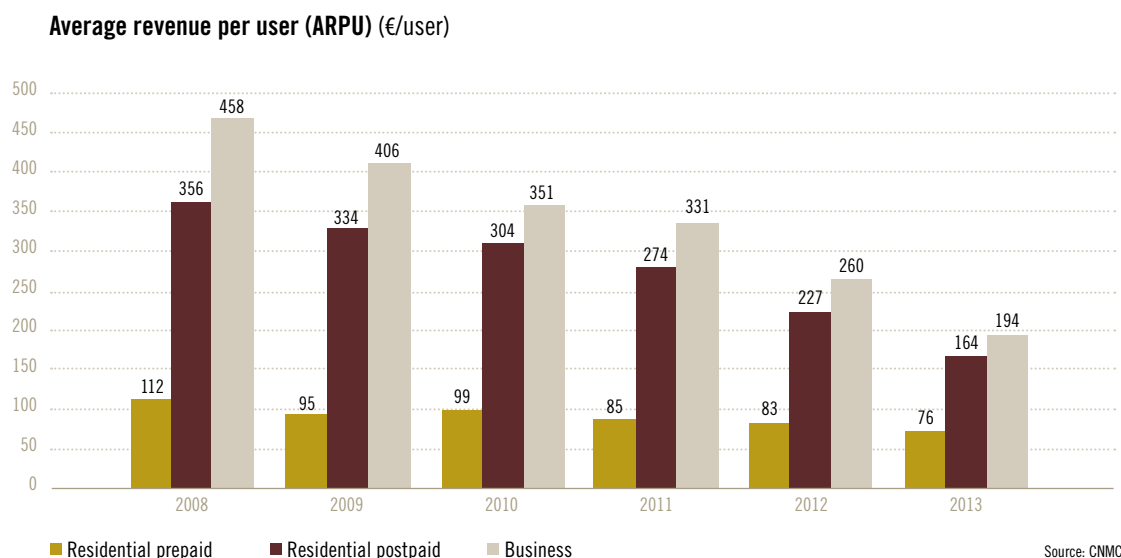
Trend in voice traffic revenue (€ millions)



⁴⁶ The final services analysed include voice (which in turn includes revenue from voice traffic, registration and subscriber charges), short messages and other services (with the exception of less important services such as the TETRA private mobile radio system, the SPICA network and telemetry and remote control systems).

The average revenue per user (ARPU) of the mobile operators has weakened in recent years. The prepaid residential segment saw its ARPU shrink by 9.1% relative to 2012, to an average revenue of €76 per line per year. In the business segment, where

subscriptions are postpaid, there was a decline of 25.2%. Lastly, the residential postpaid segment had the greatest decrease in average revenue per user, posting a drop of 27.6%.

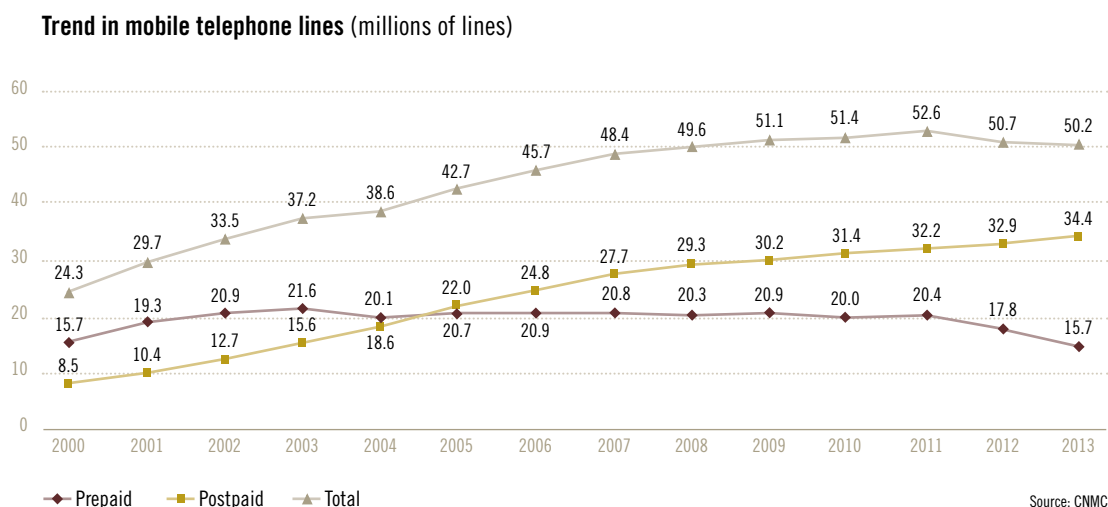


Lines

The mobile telephony base, excluding data-only lines and those associated with machines, stood at 50.2 million lines, representing a year-on-year loss of approximately 506,000 lines. Although the postpaid segment posted an increase of 4.7%, this could not compensate for the 11.6% fall in the prepaid

segment. Machine-associated lines – lines used for telemetry and remote control systems – reached 3.1 million, an increase of 11.3% from the previous year.

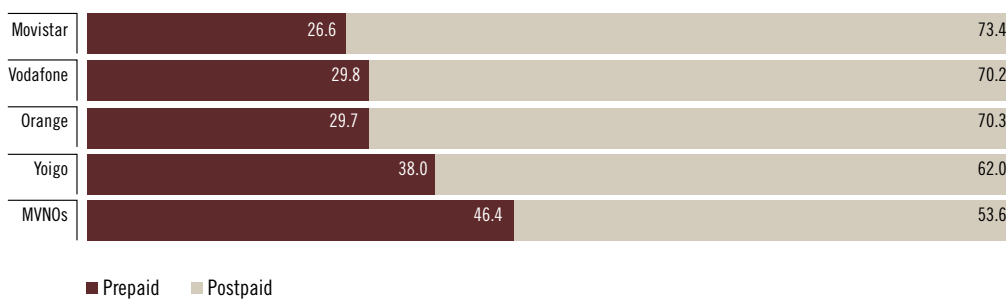
Mobile telephone lines reached a penetration rate of 107.3 lines per 100 inhabitants, i.e., a decline of 0.9 percentage points in one year.



The following graph shows the mobile line base by operator and subscription type - prepaid or postpaid. It can be seen that there is a significant correlation between an operator's market share and the number of subscribing customers in its total portfolio. Thus the majority of customers of the operators with the biggest market shares, Movistar and Vodafone, are

concentrated in the postpaid category. This proportion falls as the operator's market share decreases. It is therefore important to note that postpaid lines bring in a higher revenue per line. In the residential segment, for example, bills for postpaid lines are 2.2 times higher than for prepaid lines.

Total users by contract type (%)



Source: CNMC

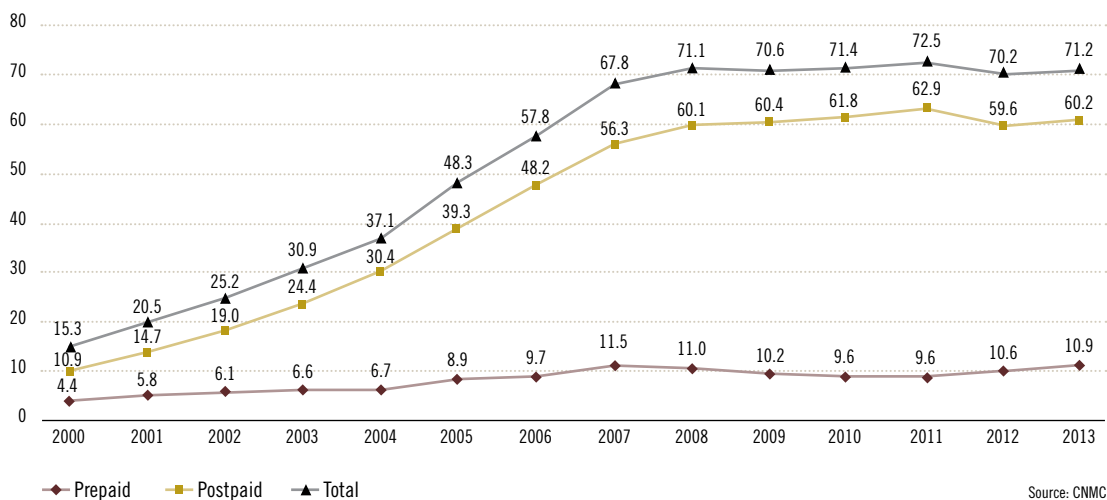
Traffic

Voice calls

In 2013, voice traffic increased by a mere 1.4%, thereby correcting the result of the previous year,

which posted the first ever drop in traffic. This rise was seen in both market segments. The postpaid category posted a year-on-year growth in traffic of 1.2% while the prepaid category rose by 2.8%.

Trend in mobile communication networks (billions of minutes)



Source: CNMC

The traffic that grew most was to fixed telephone networks, mainly due to the proliferation of flat-rate tariffs with destinations that include termination on networks of this type.

Traffic between mobile communications networks grew by a mere 0.5%, although traffic flowing over the same network (*on-net* traffic) fell by 5.3%, while traffic between different mobile communications networks (*off-net* traffic) rose by 8.3%. This trend has been ongoing in recent years and is probably the result of gradually declining market concentration, as well as price convergence for these two destinations.

As regards international communications, international roaming fell by 4.9%, while international calls increased by 2.7%.

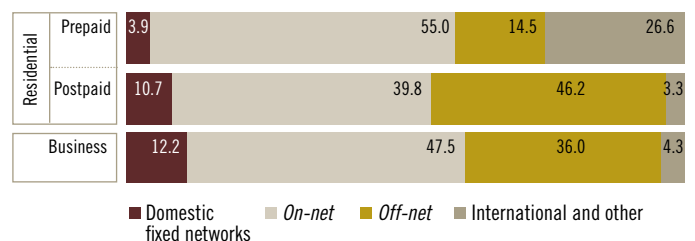
The rise in total mobile voice consumption did not lead to an increase in the consumption per mobile telephone line in all cases. A breakdown of traffic consumption by line and type of contract shows that the postpaid segment fell by 3.4% while the prepaid segment grew by 16.3%.

The separation of traffic into the various market segments showed clearly different consumption

patterns. The prepaid segment had a substantially higher percentage of international call traffic than the other segments, while, in contrast, the business segment had a higher proportion of calls to fixed networks.

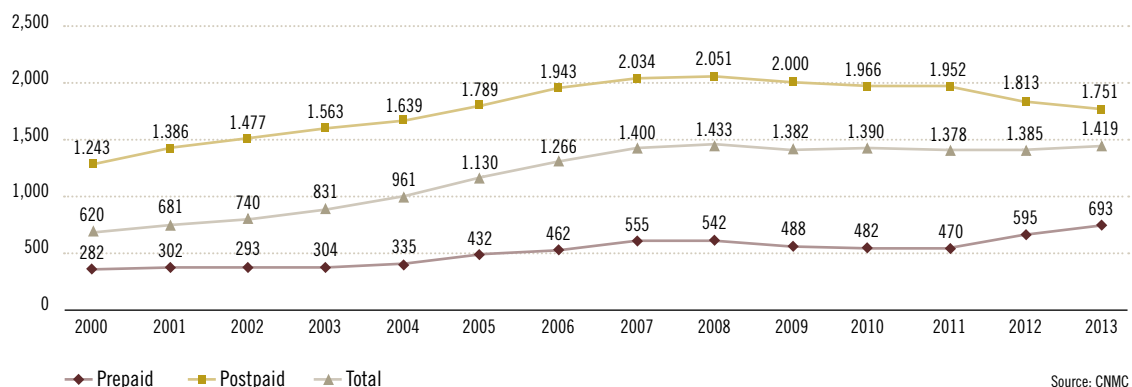
With regard to special rate – or network intelligence – services, in 2013 a total of €230 million was billed for providing these services. The following graph shows

Traffic distribution (%)



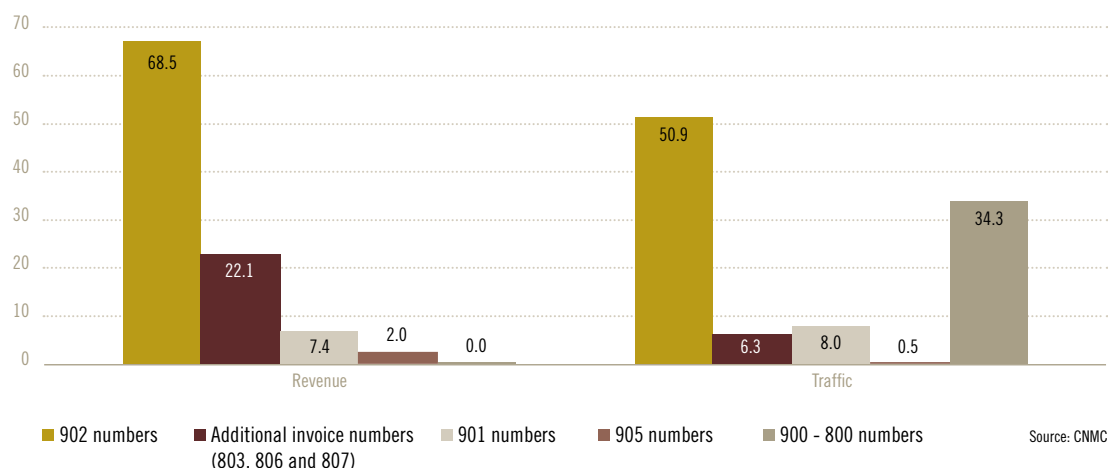
the weighting, in terms of both revenue and traffic, of the different intelligent network services by the number to which each one is linked.

Minutes per user per year by contract type⁴⁷ (minutes/user)



⁴⁷ The concept "Total" reflects average consumption per market user and takes account of the relative weight of each segment (prepaid and postpaid).

Breakdown of the different special tariff services (%)



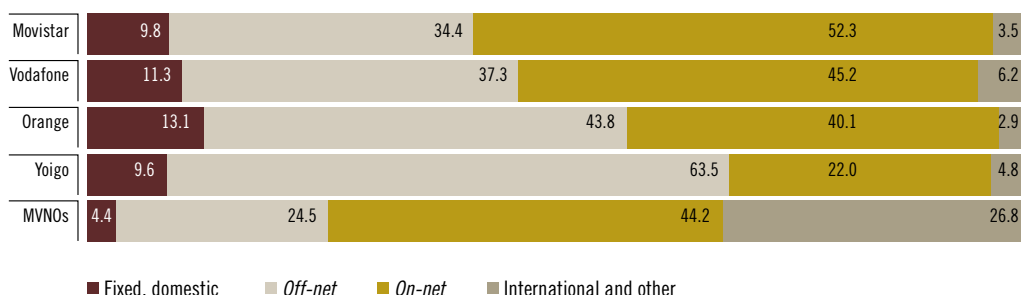
902 numbers were the service with the highest revenue and traffic volume. This is the service where the user making the call pays the full cost. In terms of revenue volume, the services corresponding to 803, 806 and 807 numbers ranked second, third and fourth. These numbers cover a range of services, including leisure, entertainment and adult content. The next most important were the 901 number services, the main characteristic of which is that payment is divided between the person making the call and the person receiving it. After this, in terms of revenue volume, came 905 numbers, which are intended for handling mass calls. The 900-800 number services came in last place in terms of total revenue volume, due to the fact that they are free to end users. In terms of traffic, however, they accounted for 34.3% of the total.

An analysis of the traffic generated by the customers of each operator shows clear differences among them. The operators with the biggest market shares generated voice traffic which mainly terminated on their own network. In contrast, for operators with

smaller market shares, most of their traffic terminated on other operators' networks (*off-net* calls). This result is logical, given that the greater the market share, the greater the probability that an operator's customer will communicate with another of the same company's customers. The exception was the *on-net* traffic of some MVNOs, which was much higher than expected. This is mainly due to the fact that some of these operators offer their customers the possibility of completely free *on-net* calls, exponentially increasing the traffic between destinations of this type.

The large share of international call traffic obtained by the MVNOs was also noteworthy. This phenomenon is largely due to the numerous MVNOs that specialise in this type of service, such as Lycamobile, Lebara Móvil, Orbitel, Happy Móvil and Hits Mobile, among others. The international traffic volume is so high among these operators that some even exceeded the total international traffic reported by Movistar, the operator with the biggest share of the mobile telephony market.

Breakdown of traffic by destination (%)

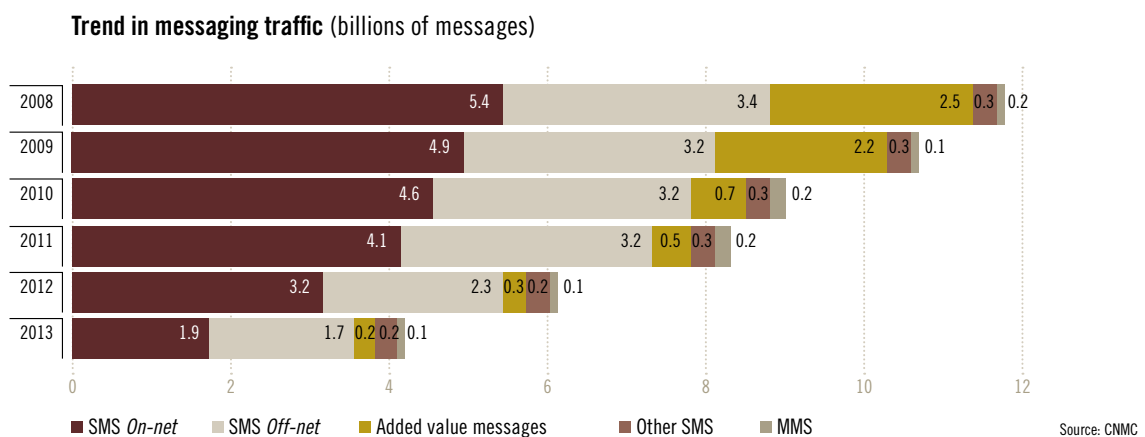


Messaging

Mobile communications based on short messages (SMS and MMS) have recorded very substantial reductions in traffic in recent years. In 2013, SMS subscriber message traffic - excluding added-value SMS services - fell by 34.5%. This was the fifth consecutive year in which there was a drop in traffic for this service. The decrease was even greater in the outgoing SMS messaging service between subscribers

with the same operator (on-net messages), with a year-on-year fall of 40.3%.

The number of MMS messages was 54.9 million. This figure shows that demand for this service is far below that for the SMS service, which totalled 3,574 million messages in the same period. Based on these figures, as far as the Spanish market is concerned, one MMS was sent for every 65 SMS messages.



The surge in the use of mobile broadband on voice terminals is contributing to the replacement of traditional SMS messages by new instant messaging services such as WhatsApp, Telegram and others. The use of these *over-the-top* or OTT services explains, at least in part, the decline in the volume of messages sent. According to data from the CNMC-Red.es Household Panel, the percentage of individuals stating that they had sent or received SMS through a traditional operator fell from 12.9% in the third quarter of 2012 to 7.4% in the same period of 2013. In contrast, the percentage of individuals with a mobile phone who stated that they chatted daily on their mobiles using some OTT application reached 43.6% in the third quarter of 2013.

Competition

In 2013, users were very active in choosing the most competitive mobile service offers. One result of this activity was that portability reached a new record level, with an average of 564,000 numbers being ported per month.

In addition, there was widespread marketing of rates that bundled several services; i.e. tariffs including the consumption of a limited quantity both of voice-call minutes and data traffic. In practice, this tariff structure led in most cases to a reduction in the unit price per minute actually consumed.

These factors were reflected in market shares: while the two main market operators posted a combined net loss of 2,839,394 lines, the other operators increased

their mobile line base. Yoigo and all the mobile virtual network operators (MVNOs) gained a total of 1,860,292 lines. Orange was the only incumbent operator with a net increase in lines (472,692 lines). It should be noted that most of Orange's gains were due to the purchase in December 2012 of Simyo, an MVNO previously owned by KPN España.

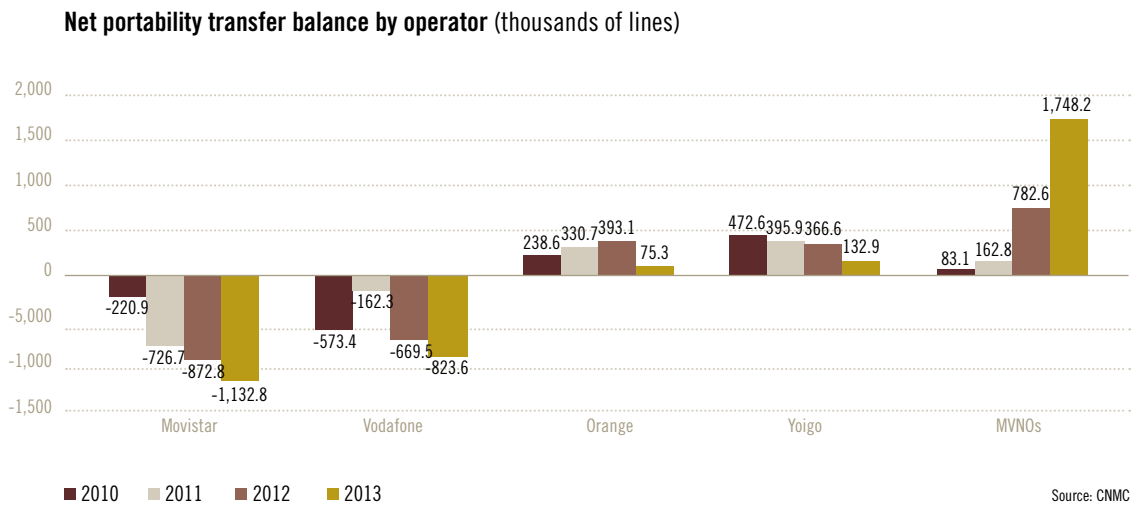
Portability

One of the most effective mechanisms for creating competitive conditions in the mobile telephony market is portability, i.e. consumers' ability to switch operators while keeping their number. In Spain, the portability process is free of charge for the end user and, since June 2012, the time for this process to take place has averaged one day.

This regulation reduces the costs for users who change their brand and in 2013 its use was much

more extensive than in previous years: 6.8 million numbers were ported. This figure was the highest number of effective portability transfers made in one year since its implementation in June 2000: 13.5% of mobile lines changed operator in 2013 while keeping their original number.

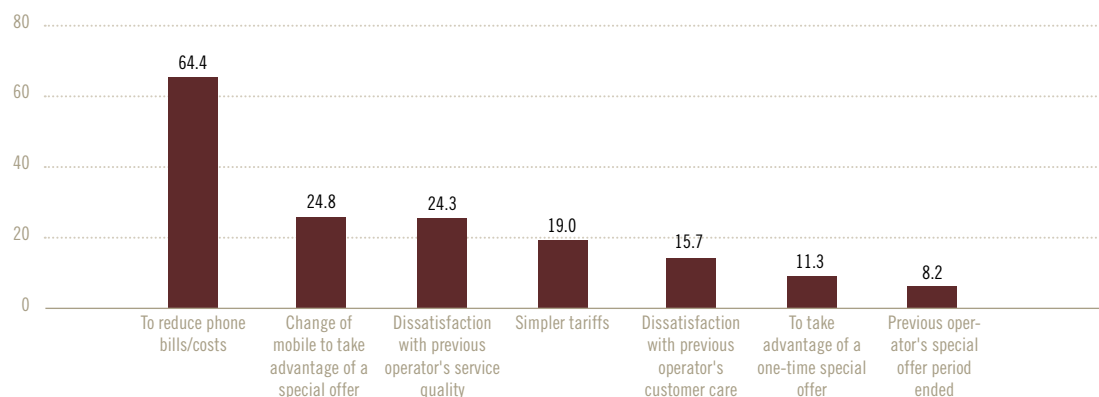
From a breakdown of the net portability flows by operator, it is clear that consumers opted for operators with smaller market shares. The following graph shows that the two major market operators, Movistar and Vodafone, posted a negative net portability balance of 1,956,418 numbers. The MVNOs as a whole, on the other hand, had the best results, with a net gain of 1.75 million lines in 2013. It should be mentioned that among the MVNOs, the operators with the best results were those offering an integrated telecommunications service, such as Ono and Jazztel.



The following graph shows the reasons given by users for changing operator, according to data from the CNMC-Red.es Household Panel. It is noticeable that

two thirds of users were seeking to lower their bills and that almost a quarter said that they wanted to change their mobile to take advantage of a special offer.

Main reasons why consumers switch operators (%)



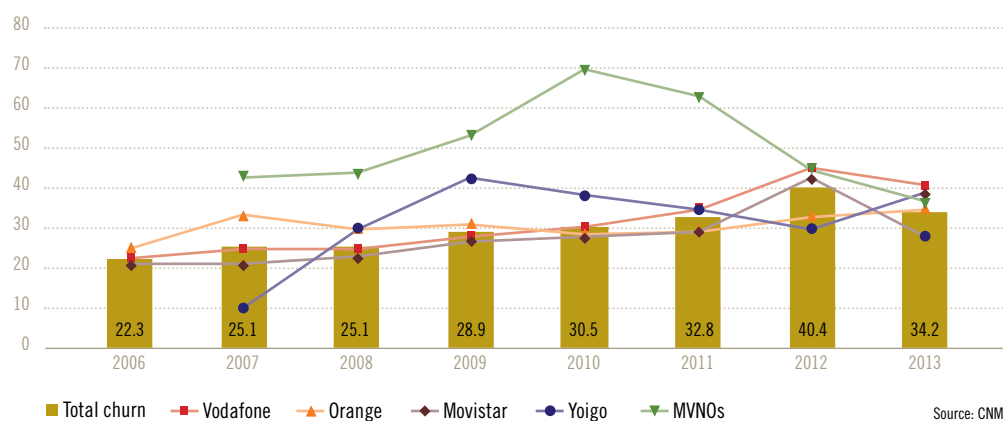
Source: CNMC-Red.es Household Panel

Churn rate

The customer rotation or churn rate links the number of lines unsubscribed from one operator with the average of total lines that this operator has had on the market in the last two years⁴⁸. This rate is used to estimate the degree of customer loyalty to their mobile telephone operator. The overall churn rate for the market was 34.2% at year-end.

Taking the operators individually, it was found that while the two main market operators, Movistar and Vodafone, managed to reduce their churn rate, Orange and Yoigo saw theirs increase slightly. The MVNOs, on the other hand, had a very substantial decline in their churn rate, due mainly to the very substantial increase in their customer base.

Churn rate (%)



Source: CNMC

⁴⁸ $Churn\ rate_{it} = \frac{\text{no. of lines unsubscribed}_{it}}{\frac{\text{line base}_{it} + \text{line base}_{it-1}}{2}}$, where subscript i refers to the operator and subscript t to the period (year)

Trends in revenue by unit and service

Average revenue from voice services

The mobile telephone service is characterised by offering a great variety of rates, many of which are not linear; i.e. the operators do not bill by units of time. The price of a user's calls can therefore depend on an hourly rate, or the destination, or it can be affected by all kinds of volume discounts, vouchers or flat-rate or semi-flat-rate tariffs. Because of this variety and complexity, it is difficult to summarise the price of calls in a single indicator, although the ratio of average revenue per minute tends to be used as an approximation⁴⁹, i.e. dividing the total revenue from voice traffic by the total number of minutes consumed by users.

2013 was the ninth consecutive year in which the average revenue from all voice services⁵⁰ fell significantly from the level in the preceding year; in 2013, there was a 20.9% reduction, making the average revenue for a call originating on a mobile network 9.7 cents a minute. Over the past ten years, the total fall-off in average call revenue has been over 55%.

Without doubt, this substantial fall in average revenue is related to a set of factors occurring in recent years. Firstly, the regulation governing the termination charge – the service that allows an operator to terminate a call on an external telecommunications network – has been a key element in explaining the downward trend in domestic prices. The CNMC, which replaced the CMT in 2013, like other EU national regulatory authorities (NRAs), has been regulating termination prices along a downward glide path since 2001. Thus in July 2013, the rate for this service was set at 1.09 cents a minute.

Secondly, in 2006 the CMT introduced the obligation to provide access to existing networks for mobile communications. This obligation paved the way for

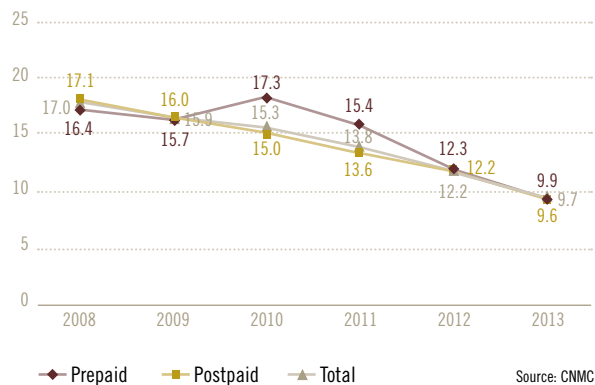
new players to enter the market: the MVNOs. As of December 2013 there were a total of 24 active MVNOs in the mobile telephony market.

A third factor that explains this continuing drop in average revenue, or average price per minute, is the mass marketing of flat-rate or semi-flat-rate tariffs. In most cases, tariffs of this kind include the traffic for several bundled services, which generally include the consumption of a limited quantity of both minutes and data traffic. In practice, this tariff structure leads in most cases to a reduction in the unit price per minute actually consumed.

In recent years, these measures, some of them regulatory, have had obvious effects on the market: increased competition due to the greater number of players making offers, and, as a result, a yearly reduction in the level of market concentration and lower pricing levels for final services.

As was the case in previous years, average revenues for the two market segments (prepaid and postpaid) were very similar: 9.9 cents per minute for prepaid and 9.6 cents per minute for postpaid.

Trend in average revenue per minute
(€ cents/minute)

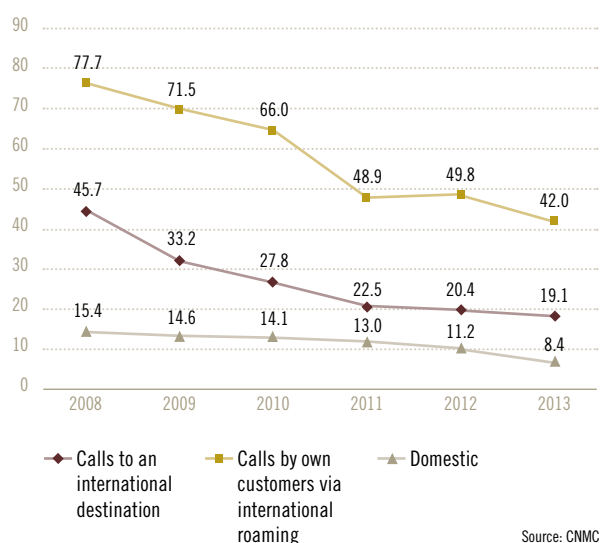


⁴⁹ In this section we have opted to use average revenue per minute and average revenue per message - unit revenue - as approximate measures of final market prices.

⁵⁰ The "voice services" concept includes domestic calls (to mobile or fixed networks), international calls, network intelligence and international roaming services.

The following graph shows the trends in the average revenue for the most popular services: mobile calls with a domestic or international destination, and the calls made by the operators' own customers when they are abroad, in other words international roaming.

Trend in average revenue per minute by traffic type
(€ cents/minute)



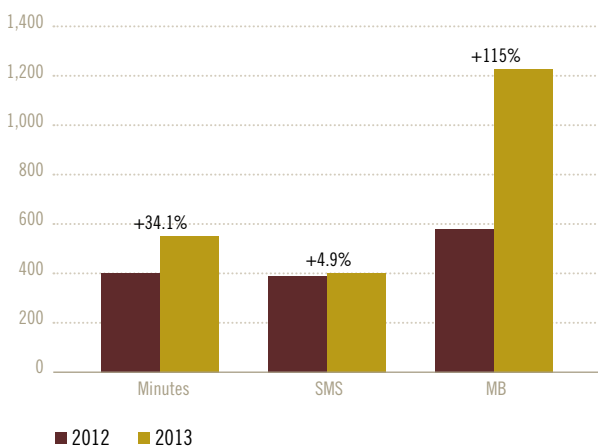
In recent years, the pricing of the three services has fallen very considerably, although the calls that have fallen most in price are those to domestic fixed and mobile networks, for which average revenue per minute shrank by 25.3% in just one year.

The rates offered by the operators also changed during 2013. Firstly, throughout the year there was a proliferation of offers of bundled services combining mobile voice and broadband, which also offered higher traffic volumes, either in minutes of voice or data. In 2013, the most representative dual play packages were offering on average 1.2 GB of data, just over 500 minutes of voice and 400 SMS a month at an average cost of €19. From a comparison of the rates in Spain between 2012 and 2013⁵¹, it was found that in all the most representative offers the voice minutes included in dual play packages increased by 34.1% over the year, the average permitted volume of data

rose by 115% and the SMS consumption included in the flat-rate part of the package was also up, by 4.9%. These improvements in bundled offers basically mean a reduction in the effective pricing for end consumers, who can consume a greater volume of services with the same level of expenditure.

Secondly, quadruple play packages appeared in force,

Average traffic volume by service included in mobile service bundled rates



combining voice and broadband over both fixed and mobile networks in a single commercial offer. By year-end, there were more than 5.1 million subscriptions to quadruple play packages. A multitude of offers of this type appeared, offering different permitted volumes of mobile traffic. These offers included two additional services, mobile voice and broadband, for a very low additional charge, as compared with the more traditional dual play packages, with fixed voice and broadband over a fixed network.

Another trend identified during the year was that of price reductions by the major operators. These operators were traditionally characterised by offering more expensive mobile services but during the year they introduced some offers that were as cheap as those of their rivals, so that, in 2013, the best rates from both groups were very similar and the differences in minimum cost to the consumer depending on

⁵¹ "Informe de seguimiento de las ofertas comerciales de servicios de comunicaciones móviles entre 2012 y 2013"
(Monitoring report on commercial offers for mobile communication services, 2012 to 2013), CNMC, June 2014.

the operator were not as great as they had been in 2012. The reaction of operators such as Movistar and Vodafone to the relentless loss of customers in previous years led to a significant adjustment in their rates, which has benefited consumers.

As far as international communication services are concerned, calls to international destinations and calls made through international roaming also followed a downward path. Average revenue from calls to international destinations was down 6.3% while international roaming fell even further, by 15.7%. The downward trend in the average revenue from international calls over recent years can be largely explained by the emergence, from 2007 on,

of numerous MVNOs specialising in international call services at very competitive prices.

As far as international roaming services are concerned, the falling prices seen over recent years are mainly due to the EC regulation passed in June 2007 (Regulation 717/2007), establishing a declining glide path for prices of voice roaming services within the European Community. These regulations have been regularly updated in order to gradually extend the number of regulated services. In fact, in June 2012, a new regulation was passed which extended the regulation of these services until 2016. Regulations governing roaming within the EU for the coming years are shown in the following table.

Retail market

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

Wholesale market

	July 2012-June 2013	July 2013-June 2014	July 2014 onwards
Voice call originating on a domestic network (€/minute)	0.14	0.10	0.05
SMS originating on a domestic network (€/minute)	0.03	0.02	0.02
Data traffic over a domestic network (€/MB)	0.25	0.15	0.05

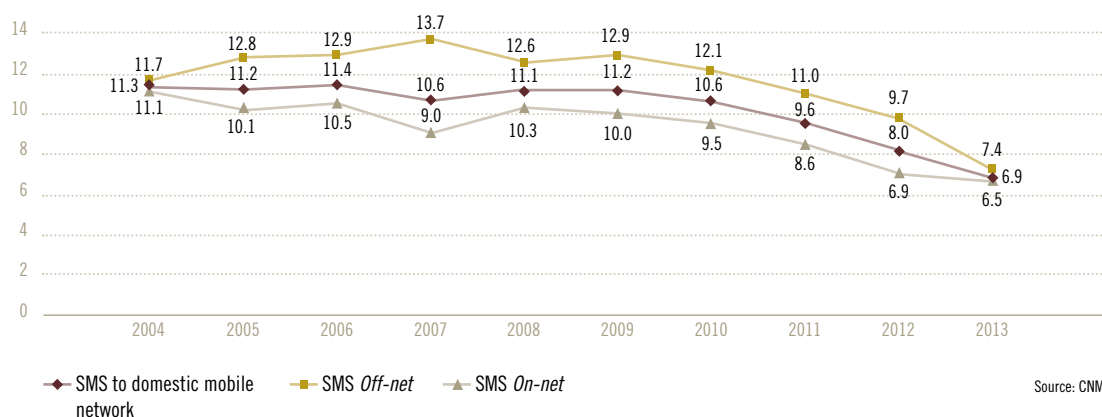
One of the main new features of these regulations was the introduction of a structural measure to encourage new offers in the roaming market: the possibility of selling a roaming service in the EU separately from other services. It provides that any operator, with or without its own network, may sell its voice and/or data roaming services separately, in any EU country.

Average revenues from messaging services

Lastly, average domestic SMS service revenue fell for the fourth consecutive year, by 14% on 2012 to stand

at 6.9 cents per SMS sent. This is the first time the average price of sending an SMS has ever fallen below 7 cents, in line with the downward trend observed in recent years. This fall was also accompanied by a very significant drop in the total number of SMS recorded (down 34.5%), no doubt due to the substitution effect of certain OTT instant messaging applications such as WhatsApp and Line. Also, a growing number of rates for bundled services include SMS messages in their monthly charge. This trend has no doubt had an effect on the average price for these services.

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

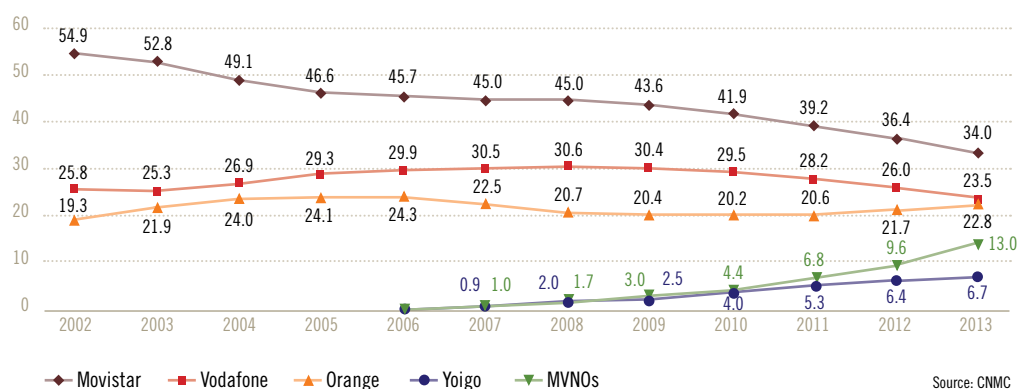


Market shares

In 2013, the two main operators saw their market share in terms of the number of lines fall, while the other operators (Orange, Yoigo and the MVNOs⁵²) increased theirs. These figures confirmed the trend

observed in recent years. Yoigo and the MVNOs achieved a combined market share of 19.7%, while Orange slightly increased its share, mainly due to purchasing the mobile virtual network operator Simyo.

Evolution of market share by active lines (%)

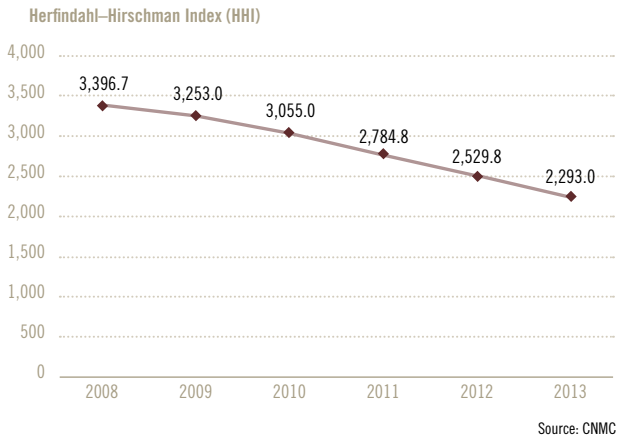


When analysing levels of market concentration, it is necessary to consider the existence of business groups with several brands and subsidiaries. The Herfindahl-Hirschman Index accordingly groups operators together based on the business group to

which they belong. The results show that in 2013, market concentration maintained its downward trend ($HHI = 2,293$) and came in below that registered for 2012 ($HHI = 2,529.8$).

⁵² Tuenti and Simyo have been excluded from the combined market share of the MVNOs since they are owned by Movistar and Orange respectively.

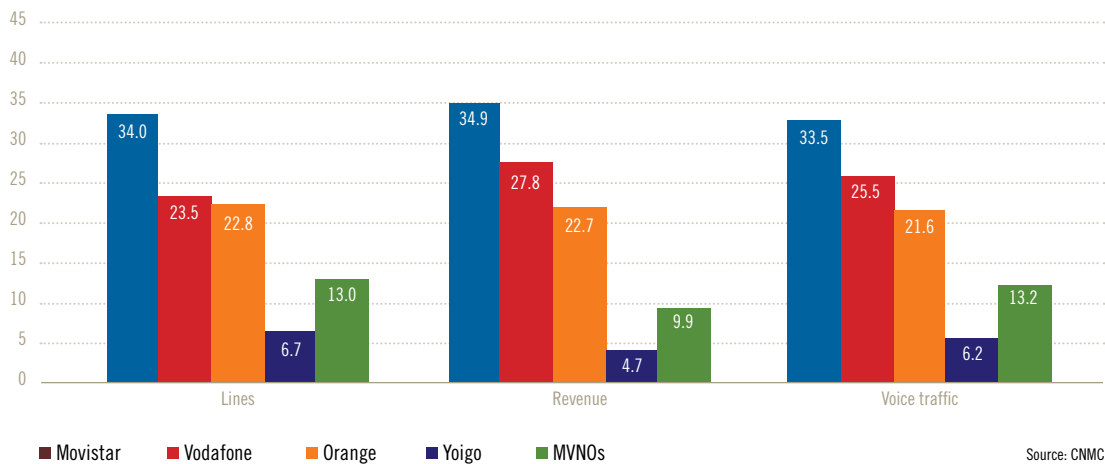
Trend in market concentration index (HHI)



However, events such as the purchase of Simyo – one of the most dynamic MVNOs in the market – or the bid for ONO by Vodafone, announced in March 2014, foreshadow greater market concentration in the near future.

As can be seen in the following graph, operators' shares in traffic and revenue showed significant differences depending on the mobile customer base. In particular, market shares by revenue and by traffic indicate a greater degree of market concentration in favour of the main operators. The main reason for this was that these operators' customers made greater use of the different mobile telephone services and, as a result, the operators posted proportionally greater volumes of both revenue and traffic. Yoigo and the MVNOs, on the other hand, had less of a presence in terms of revenues than they did in lines.

Market share 2013 (%)



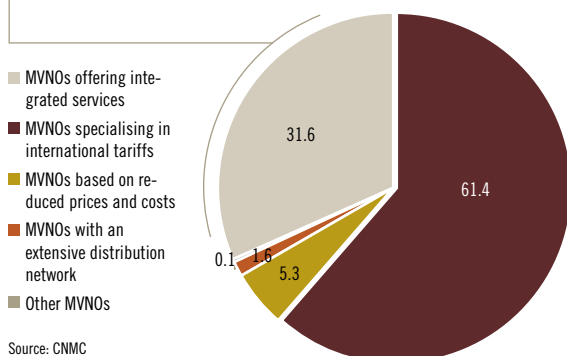
In 2013, total revenue of MVNOs from sales of services to the end market amounted to €726 million. This figure represented a year-on-year growth of 16.9%. This strong growth was due not to any one strategy pursued by the various MVNOs, but on the contrary to their having very different strategies, which can be classified as follows: 1) operators specialising in competitive international rates; 2) operators with

one integrated mobile offer which includes other fixed network services; 3) operators with extensive distribution networks over which they can offer mobile services to a large number of customers; and 4) operators whose main marketing ploy is offering very competitive domestic mobile rates by eliminating supplementary services, bringing them significant cost savings.

As can be seen in the following graph, operators with competitive international tariffs had the greatest percentage of the total revenue for all MVNOs. This result stems from the great dynamism displayed by this type of operator. One sign of this dynamism is that, even though they had a low market share, some of these operators had an international call volume that was greater than that reported by the main mobile operators.

In spite of the dominance of the MVNOs that focus on offering competitive international rates, it should be noted that there was a 52% increase in the final revenue posted by all the MVNOs specialising in an integrated telecommunications service. This remarkable increase has meant that the weighting of these operators in the total revenue for all MVNOs has grown by more than 7 percentage points in one single year.

Market share of MVNOs by business strategy (%)



2.3.2 Mobile broadband

In 2013, a total of 31.4 million users accessed the Internet over mobile communication networks, 26.7% more than in 2012. As for turnover, in line with previous years, this was the only telecommunications service to experience significant revenue growth, with an increase of 19.7% on the previous year and a turnover of €3,312.1 million.

It should be pointed out that there are various mobile internet access options: 1) Connection from a mobile device exclusively used for data traffic, such as datacards, USB modems, e-books, notebooks, tablets, etc. and 2) connection from a mobile phone that also offers voice, SMS and Internet access services, among others. The latter category also includes smartphones.

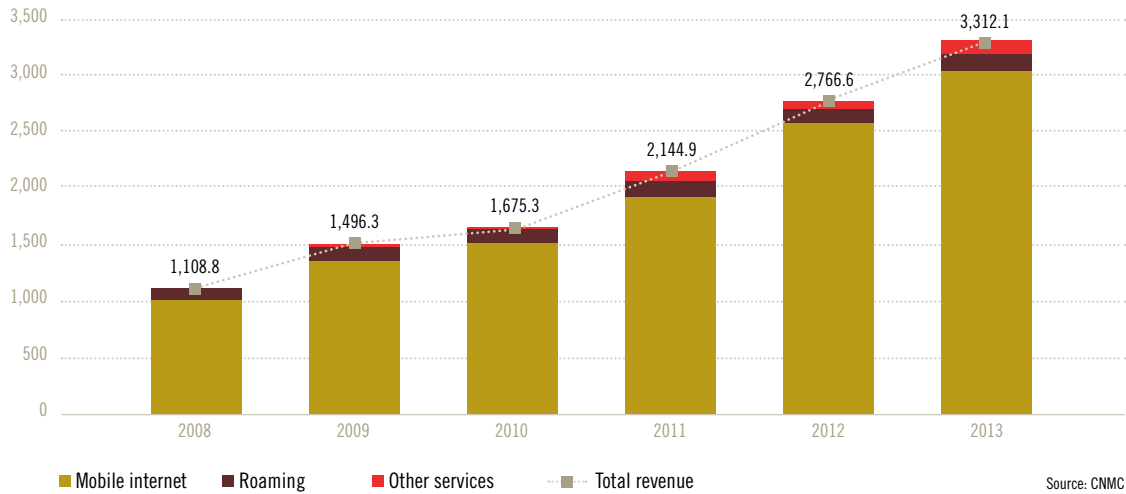
Of the total number of active mobile Internet users, 29.4 million connected using their mobile phone. In contrast, the exclusive data line base - mainly USB modems and tablets - stood at 2 million, a significant drop of 22.2% from the previous year. This result shows that users with such devices, mainly tablets, have chosen to connect to the Internet using wi-fi networks. Users who connected their terminals to mobile phone networks were in a minority.

Lastly, it should be noted that 2013 was the year in which 4G or Long Term Evolution (LTE) technology appeared in Spain, a fact that will no doubt have a significant effect on the degree of penetration and use of these services among the public.

Revenue

In 2013, turnover from all mobile broadband services was €3,312.1 million, a rise of 19.7% from the figure for 2012.

Trend in revenue from mobile broadband (€ millions)

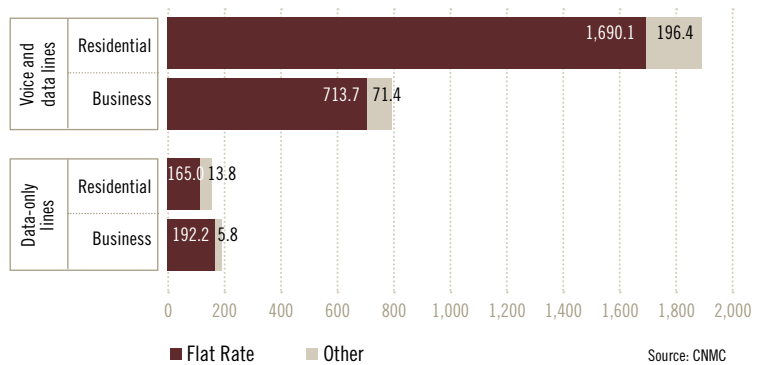


The previous graph shows that when this revenue is broken down into the various services, domestic Internet connection carried the most weight in the market, 92%. In second place comes Internet connection via international roaming, with 4% of the total revenue. Lastly, there are the supplementary services, which currently have only a minor weight – just 3.9% of revenue – but will in the future have significant growth capacity. These services include, for example, downloading content or other transactions that use m-commerce apps.

The following is a breakdown of total revenue by type of device used to access the mobile internet service. The concept of "voice and data lines" refers to mobile phones, while "data-only lines" refers to tablets and USB modems.

It can be seen that most of the revenue came from the residential segment, with 67.7% of the total revenue posted, while the business segment generated only 32.3% of the revenue.

Mobile Internet revenue by type of device and segment (€ millions)



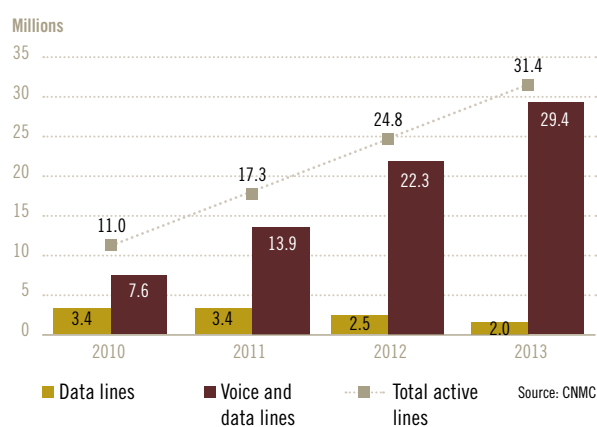
The mobile broadband service has undergone exponential growth in the revenue from flat-rate tariffs. In fact, 90.6% of total revenues came from such tariffs. In contrast, the revenue from connection-based billing has fallen considerably in recent years, to the point where this type of billing is practically non-existent for data-only lines.

Lines⁵³

In 2013, 31.4 million users connected actively to mobile Internet, representing a service penetration of 67.1 lines per 100 inhabitants. The following graph shows the trend since 2010 and the breakdown by type of device used to access the Internet.

29.4 million lines linked to voice and data, i.e. mobile phones and smartphones, actively connected to the

Evolution of active mobile broadband lines (millions of lines)



Internet. This figure represents an increase of 32.2% relative to the number of active lines in 2012.

With regard to data-only lines, mainly tablets and USB modems, in 2013 there were two million lines actively connected to mobile Internet services, 22.2% down on the volume for 2012.

As regards the proliferation of flat-rate tariffs on the market, the mobile operators reported that 26.5 million of the 31.4 million active mobile Internet lines were linked to a flat-rate data tariff. Of this total, 18.4 million had rates that bundled data traffic with other telecommunications services – in the majority of cases the mobile voice calling service. These results

show that in just one year, the number of users with a subscription to a bundled mobile Internet service increased by over 10 million.

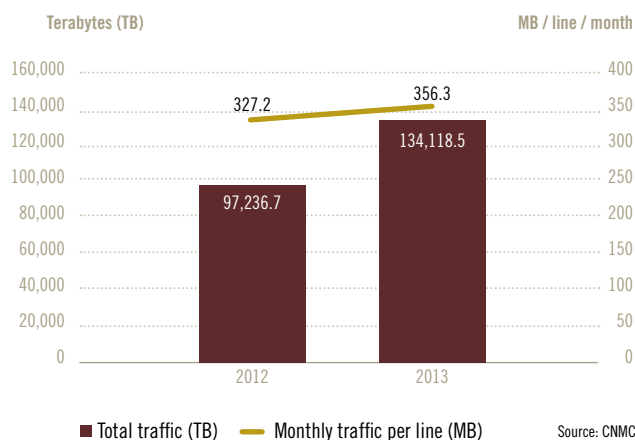
The combined marketing of voice and data services is no doubt inspired by the dual play packages offered on fixed networks. In this sector, the bundling of Internet and voice calls has been a very common practice for some years.

Traffic

The increase in subscribers to mobile Internet services, whether over a data line or voice and data line, led to a significant increase in data traffic recorded. This type of service registered total traffic of 134,118.5 terabytes, 37.9% up on the previous year.

This strong growth in total traffic had an impact on the monthly traffic by line. In 2013, active mobile Internet lines averaged 356.3 MB of traffic per month, 8.9% more than in 2012.

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

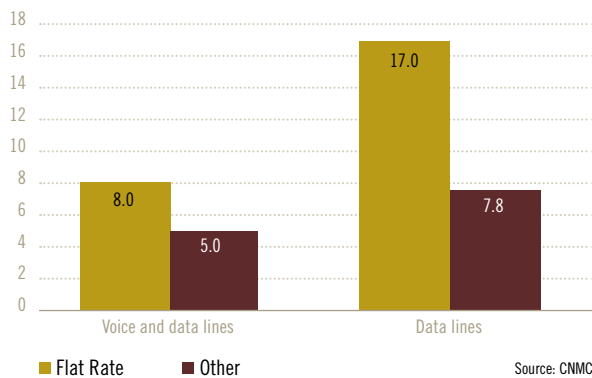


⁵³ When calculating the volume of active lines associated with this type of service, all lines associated with a tariff with a regular fixed payment (for example, payment of a flat-rate tariff) have been included, as well as lines on a data tariff not subject to a regular fixed payment but which have accessed the Internet over the past ninety days.

Prices

The data outlined above shows that voice and data lines are the areas with the greatest growth over recent years, both in terms of the number of active lines and the revenue obtained. However, the data analysed shows that more average revenue per user (ARPU) is obtained from data-only lines than from voice and data lines. This is because the customers who contract a data-only line make greater use of these services and consequently need to contract a tariff that allows a greater volume of data traffic.

Average revenue per user (ARPU) (€/line)

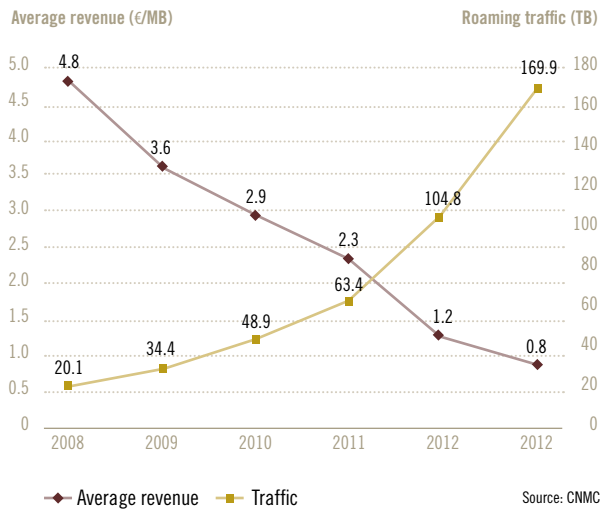


With regard to traffic from international data roaming, the following graph shows a clear downward trend in average revenue per megabyte, the variable used as an approximation of the pricing level for this service. Thus since 2008 average revenue has fallen by 85.3%, to €0.8 per megabyte (MB). This price includes roaming data services provided in countries inside and outside the EU.

In 2012, the EC passed a new regulation covering international roaming services. Among other new items that the operators had to offer, as of July 2012, the regulation set a cap of 70 cents per megabyte on roaming data traffic within the European Community. This price followed the downward glide path set for

prices in the coming years, to 20 cents in July 2014. The establishment of this cap has been the main cause of the repeated price reductions for these services.

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



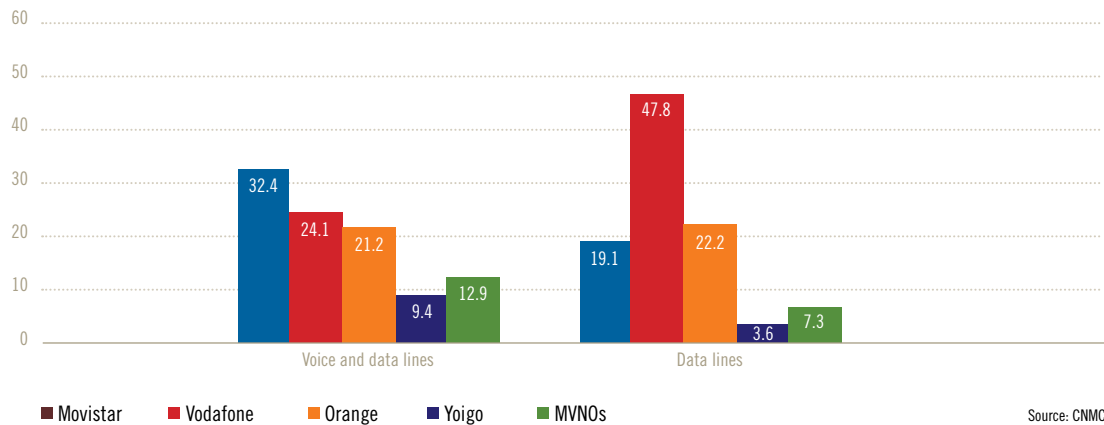
Market shares

The following graph shows the market shares of the various operators for mobile Internet services, both in terms of voice and data devices (mobile phones) and data-only lines (USB modems).

Firstly, the market shares by mobile Internet line show levels of concentration similar to those for mobile telephony. The new operators, Yoigo and the MVNOs, had 20.2% of mobile broadband lines.

If the market shares are analysed based on total revenue, it can be seen that Movistar was the market leader, with 38.7% of total revenues. Vodafone held 27.5% of the market, followed by Orange with 22.4%. The new operators, Yoigo and the MVNOs, had 11.4% of total revenues from mobile broadband.

2013 market shares by lines (%)



2.4 Wholesale mobile communications

The wholesale mobile telephony market is made up of a number of services offering third-party access to a mobile communications network and interconnecting all networks, fixed and mobile. The most important interconnection services are the following: domestic termination, i.e., the service that makes it possible to terminate a mobile communication that originates on a network other than the destination network; international roaming, used by customers of foreign operators who, even if their operator does not have its own infrastructure in this country, can continue to use mobile services via access to another operator's domestic network; the international termination service, which enables calls from abroad to terminate on a domestic mobile communications network; and the access service for third-party operators who do not have their own infrastructure.

Revenues from these wholesale services dropped by 23.5%, while total traffic grew by 14.3%, basically due to the increase in recent years of traffic linked to the MVNO mobile communications network access service.

Revenue

In 2013, total revenues of the wholesale market were €1,547.1 million, a figure which, as mentioned above, represented a year-on-year decrease of 23.5% and the seventh consecutive year in which billing fell. In absolute terms, taking wholesale revenues of 2006 as the base, 2013 revenues were down by 63.5%.

The domestic mobile traffic termination service – the most important wholesale service in terms of volume – showed a drop in revenue of 42.9% compared with the previous year. The main reason for this drop was the regulatory intervention of the CNMC, which has set a downward glide path for pricing in recent years ending in a final price of 1.09 cents a minute from July 2013. The average price of call termination on an external network was thus 2 cents a minute in 2013.

Revenue from the international roaming service also fell 22.7%. These results confirm the downward trend that started in June 2007, when an EC regulation came into force setting international roaming service retail and wholesale prices within the European Union.

However, within the wholesale market, there were services that were expanding in 2013. This was the case for the third-party operator mobile communications network access service, mainly involving MVNOs: billing for this service rose by 59.7% and the total turnover was €433.3 million, making these services second in importance in the mobile interconnection market.

In 2006, an obligation to afford access had been imposed by the former CMT, which led to the appearance and expansion of numerous MVNOs in the mobile telephone market. In 2013, the Spanish market had 24 active MVNOs, representing a market

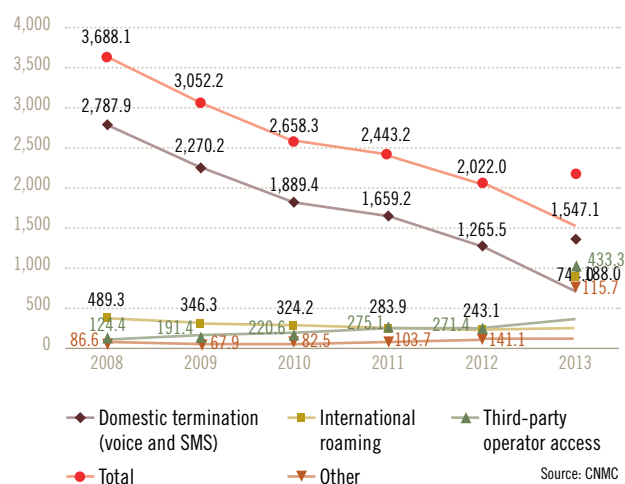
share of 13% of the total number of mobile phone lines.

Breakdown of mobile virtual network operators by host operator

Movistar	Vodafone	Orange
Full MVNOs		
Ono	Euskaltel	Jazztel
Digi Mobil	TeleCable	Simyo
FonYou	R	
	Lycamobile	
MVNOs offering services		
Tuenti	Lebara ⁵⁵	Carrefouronline
	Pepephone	Día Móvil
	Hits Mobile	Happy Móvil
	BT ⁵⁶	Moreminutes
	Eroski Móvil ⁵⁷	You Mobile
		MÁSmovil
		LCR Telecom
		Aire Networks
		Procono

Source: CNMC

Evolution of wholesale revenue (€ millions)

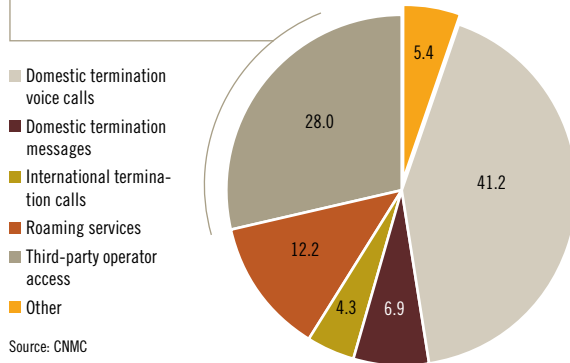


In spite of the drop in revenue, in 2013 the domestic termination voice call service once again had the greatest share of total revenues in the wholesale market. This service accounted for 41.2% of wholesale revenue. Third-party operator access came in a strong second, with 28% of the market total.

⁵⁴ In estimating the market shares of the MVNOs as a group, the data for Tuenti and Simyo have been excluded, since they are owned by Movistar and Orange respectively. In calculating the market shares of the various operators, the turnover of these two MVNOs has been added to the figures reported by the network operators that own them.

^{55, 56, 57} Eroski Móvil, BT and Lebara access Vodafone's network by means of an agreement signed with the MVNO Vodafone Enabler, part of the Vodafone group.

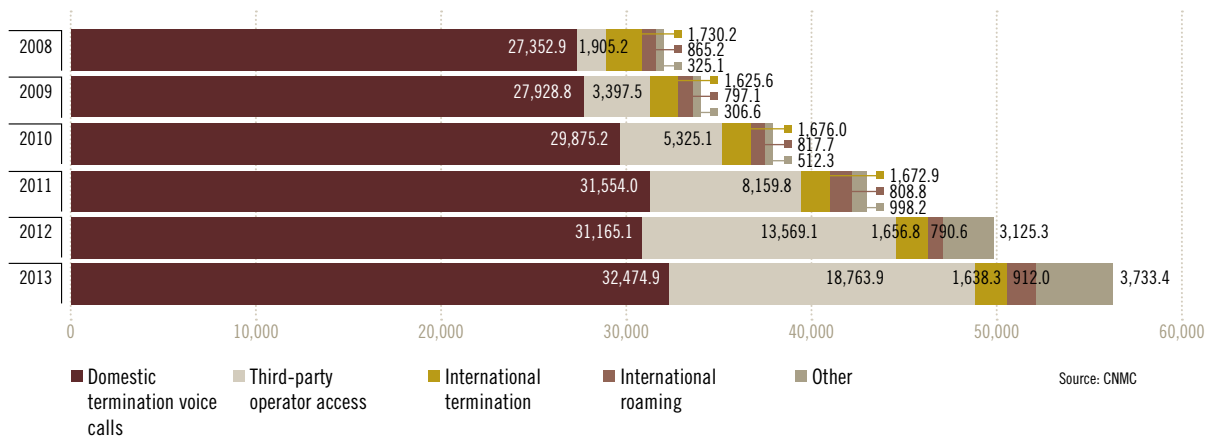
Revenue by connection service (%)



Traffic

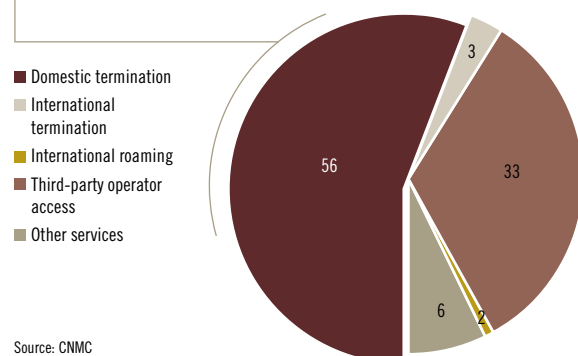
The traffic volume for the wholesale market posted positive year-on-year figures, contrary to what was seen in the revenue section. The total traffic volume was 57,522.5 million minutes, an increase of 14.2% compared with 2012. This result shows, as argued in the previous section, that the downturn in wholesale revenue was due to price reductions – most of which were subject to regulation – and not to any decrease in traffic.

Breakdown of wholesale service traffic (millions of minutes)



If the total traffic is broken down into the service provided, it can be seen that it was domestic termination that produced the greatest volume of traffic, 56% of the total. In second place came the third-party operator access service, which had an annual growth rate of 38.3%, the highest for wholesale services. The use of international roaming – i.e. customers of foreign operators able to use mobile services over a domestic network – grew by 15.4%, reversing the trend of the past three years.

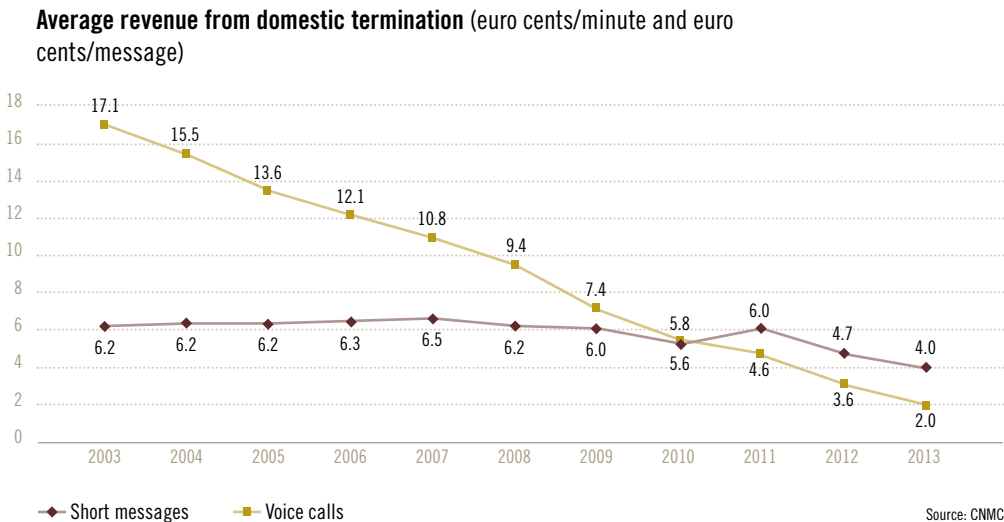
Breakdown of traffic volume by wholesale service (%)



Trends in pricing

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

The following graph shows that in 2013, average revenue from call termination originating on an external network was down 45.2% to 1.96 cents a minute. The price for terminating a short message was 4 cents.



The prices applied to the voice termination service by the various operators are considered to be essential for the proper development of the mobile telephony market. For this reason, this service is regulated by all the European NRAs. In 2012, the CMT analysed the call termination market on individual mobile networks. All the network operators (NOs) and full MVNOs were identified as being operators with significant

market power. The CMT therefore imposed a series of obligations on these operators, as it had already done with previous analyses. The most important new development was a new downward glide path in the pricing for call termination. A target price of 1.09 euro cents per minute was set, to be met by the operators with significant market power as of July 2013.

Call termination price (euro cents/minute)				
	From 16 April 2012 to 15 October 2012	From 16 October 2012 to 29 February 2013	From 1 March 2013 to 30 June 2013	From 1 July 2013 onwards
Movistar, Vodafone and Orange	3.42	3.16	2.76	1.09
Yoigo	4.07	3.36	2.86	1.09

Source: CNMC

The previous graph shows a significant reduction in the average revenue from the short message termination service since 2012. This is the third consecutive fall in price and is no doubt related to the impact that instant messaging apps have had on traditional messaging

services. Mobile phone operators may have modified their connection contracts in order to reduce message termination costs, in an attempt to prevent this service's losing out further to OTT apps. Another factor behind the fall in connection prices is the ex

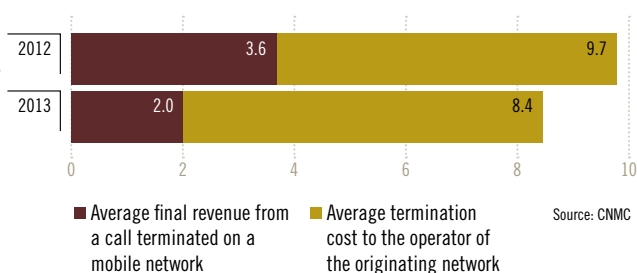
officio instigation in 2010 by the National Competition Commission (now incorporated in the CNMC) of disciplinary proceedings (S/0248/10) against the three main mobile network operators for carrying out restrictive practices hindering competition in the short message termination service. In the ruling on these proceedings, it was found that these operators had infringed Article 2 of the Defence of Competition Act and Article 102 of the Treaty on the Functioning of the European Union and, consequently, it was ruled that these operators should be sanctioned with a fine of €120 million.

It should be noted that, despite this downward trend, terminating a message on another operator's network still cost twice as much as one minute of conversation.

It is also interesting to analyse average revenue for calls to a mobile network together with the termination cost to be paid by the operator. The call termination cost, which was 2 cents per minute, represented 23.8% of the average revenue obtained from a voice call terminated on a mobile network, for which the average revenue per minute was 8.4 cents. It should be pointed out that in recent years, the retention ratio has increased substantially; in other words, the weight of the termination cost to be borne by operators for terminating a call on an external network has fallen in comparison with the final price that these operators apply to customers for this service. In absolute values,

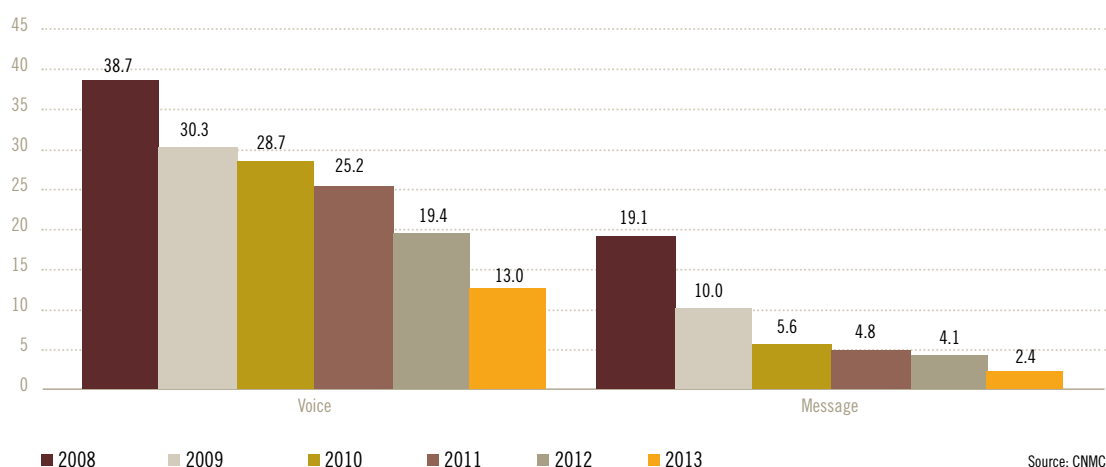
the difference between the final price of a call to a mobile network and the cost of terminating this call on an external network has remained constant in recent years. In 2013, this difference was 6.4 cents, very similar to the figure for 2012.

Retention ratio for a call to a mobile communications network (euro cents/minute)



As regards wholesale roaming services, when they are provided between EU operators, they are governed by Regulation 531/2012 of the European Parliament and of the Council. The following graph shows the effect that this regulation has had on average roaming revenue. The average revenue per minute of a call fell by 33% relative to the previous year. In 2013, the average revenue per minute was thus 66% less than in 2008. Average revenue for the international messaging roaming service registered an extraordinary YoY drop of 41.4%, to an average 2.4 euro cents per message.

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



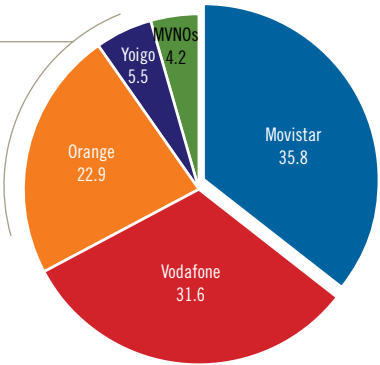
Market shares

In the wholesale market, the degree of revenue concentration is traditionally greater than in the retail market. This is due to the fact that a percentage of MVNOs do not have their own infrastructures and, as a result, their connection traffic is concentrated on the networks of the three largest operators, which receive financial compensation in exchange.

As a result, Movistar (35.8%), Vodafone (31.6%) and Orange (22.9%) took in most of the revenue for the market. However, the rise in the market shares of the new operators, Yoigo and the MVNOs, led to their having a greater weight in the allocation of wholesale revenue. Yoigo had 5.5% of the total revenue generated by this market, and the full MVNOs, those that handle termination traffic for the calls received, had 4.2% of the total.

Domestic termination voice traffic was distributed among the operators in a similar manner to the mobile user base. Movistar handled 31.4% of domestic termination traffic, followed by Vodafone, with 26.1%.

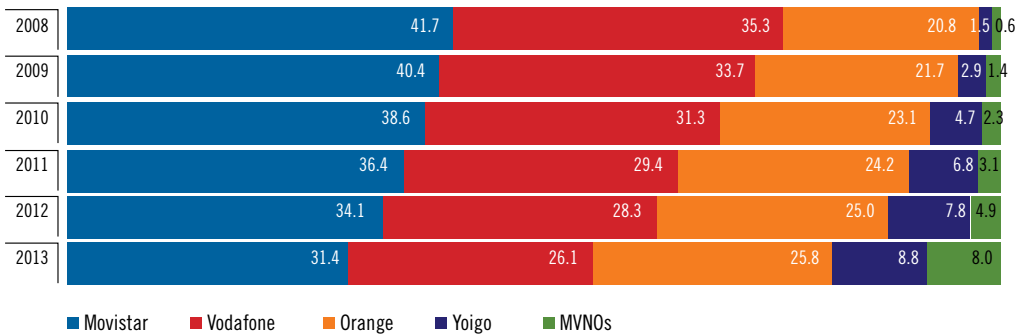
Market share of
wholesale revenue (%)



Source: CNMC

There is a parallel between the evolution of the final market, which showed a drop in Movistar's and Vodafone's market shares, and that of the wholesale market, in which these operators' percentage share also fell. Orange, Yoigo and the MVNOs increased their final market share. As a result, their share of the domestic termination service also grew.

Market share of domestic termination traffic (%)



Source: CNMC

2.5. Audiovisual Industry

In October 2013, Spain's National Authority for Markets and Competition (Spanish initials, CNMC) started operating. It is the institution that has assumed all the regulatory and supervisory functions assigned in Law 7/2010, the Audiovisual Communications Act, to the independent regulatory body for the audiovisual industry. A regulator was thus finally set up for the audiovisual industry in Spain, which had been one of the few EU countries without an institution of this kind.

A series of significant events took place in 2013 with regard to the evolution of this market. In particular, it was the first year in which it was possible to assess the effects of the mergers between Telecinco and Cuatro, which created the Mediaset España group, and between Antena 3 and La Sexta, which created the Atresmedia group. These movements in the free-to-air television industry meant that in 2013 a large portion of advertising revenue – in fact, over 88% – was shared almost equally between these two big groups, Mediaset España and Atresmedia, which also captured 57.7% of the audience. There was thus much greater concentration in the advertising business than in audience figures.

In 2013, advertising revenue, the main source of financing for free-to-air television, fell once again. Since 2010 when the public network stopped broadcasting commercials, much of the advertising revenue has gone to the private operators. However, the economic crisis and the appearance of new on-line media have been reducing advertising expenditure, and 2013 saw the lowest figure for fifteen years. The fall in advertising revenue in recent years has also been accompanied by audience fragmentation.

The RTVE financing model has proved insufficient. The public television stations of the various autonomous "communities" (regions) have also suffered considerable budget cuts. Canal 9 definitively closed the service in Valencia and the audience figures for regional television as a whole fell substantially.

In short, free-to-air television, for which the main source of revenue is advertising, billed €1,579 million in 2013, substantially less than the €1.715 million posted by pay-TV.

Meanwhile the traditional telecommunications operators are increasingly placing their bets on the pay-TV market. Whereas in 2004, only the cable operators were competing for this market with the one satellite operator, with a customer base of just over one million subscribers, ten years later the cable operators and IPTV providers now have more than two million subscribers, or 50% of the total.

Also, in 2013 the success of bundled offers of fixed and mobile services meant that television was a key factor for these operators when formulating their quintuple play bundles, which add pay-TV to fixed and mobile voice and broadband. This new way of marketing pay-TV allowed the IPTV operators to increase their customer base during the year, while the other platforms continued the downward trend of recent years and, as a result, the total number of subscribers at the end of 2013 was less than four million.

The importance of content for the major telecommunications operators is growing as the roll-out of their new generation (NGA) networks enabling very high speed data transmission progresses. This growing interest can be seen in the most important acquisitions recently proposed in Spain. Vodafone is acquiring Spain's main cable operator, Ono, which has a pay-TV customer base of 790,000, and Telefónica proposes to acquire Canal+, the main pay-TV service provider with 1.6 million subscribers, a transaction yet to be considered by the CNMC. This trend towards a greater presence and a broader offering of content by operators traditionally dedicated to telecommunications has also been observed in recent years in the rest of the EU.

The appearance of new players in the audiovisual content distribution market, such as the *over-the-top* or OTT operators, which offer content over the Internet with very varied business models that differ from those of the traditional operators, combined with a change in consumption habits on the part of viewers, has led both free-to-air and pay-TV operators to launch new ways to access their content. Online multimedia platforms such as *Mitele* from Mediaset, *Atres Player* from Atresmedia and *Yomvi* from Canal+ let viewers choose which content they wish to watch, when and on what device, using the Internet as another distribution medium.

Free-to-air TV

As well as the trends seen in 2013 that have already been mentioned, in the last five years, the free-to-air television market has undergone significant changes. The most important has been the migration to the DTTV environment, which culminated on 3 April 2010. The change of technological environment led to an increase in the number of channels and TV offerings and in turn to growing audience fragmentation.

In the regulatory sphere, the reorganisation of the regulations for the industry should be noted, starting with the General Audiovisual Communications Act of March 2010⁵⁸ and the implementing regulations, the disappearance of advertising from RTVE, the state-owned public broadcaster, pursuant to the 2009 Funding Act⁵⁹ and the 2012 Act which made the methods of managing "autonomous community" (regional) public service audiovisual communications more flexible⁶⁰. One very important event was the coming into operation of the audiovisual industry's independent regulator, an institution that was already provided for in the 2010 Act but did not start operating until October 2013.

The onset of the economic crisis in 2008 should be added to the above-mentioned changes as in recent years it has had a marked impact on dwindling

advertising expenditure, and public budget cuts, which have led to a decrease in the revenues of the various television operators, both public and private.

In 2014, the smallest nationwide television operators, Grupo Vocento (Net TV) and Unidad Editorial (Veo), stopped broadcasting on their own channels, opting to transfer their spectrum capacity to third-party operators.

In addition, the market has witnessed two big mergers: the 2011 merger of Gestevisión Telecinco with the Cuatro channels (Grupo Prisa), resulting in the appearance of the Mediaset España group, and the 2012 merger of Antena 3 with the La Sexta channels, which became Grupo Atresmedia. These two transactions led to high audience and, in particular, high revenue concentration in the free-to-air television segment: 57.7% of audiences and 88.3% of the advertising revenues of free-to-air television were concentrated in these two groups at the end of 2013.

Other changes occurring in recent months and affecting the DTTV channels available to the public were related on the one hand to the closing down at the beginning of 2014 of nine DTTV channels that had been allocated in 2010. This closure was the result of a ruling handed down by the Supreme Court⁶¹ in December 2013. In addition, there was the definitive closure, for economic reasons, of Valencia's Autonomous Community television (Entitat Pública de Radiotelevisió Valenciana), which ended broadcasting on its three TV channels and its radio services in November.

Lastly, looking to the future, the traditional television operators are facing a boom in new ways of consuming audiovisual content, with the emergence of the Internet as a distribution channel and the appearance of new players like the *over-the-top* operators with their new business models. Technological changes and improvements enable content to be consumed when on the move, in high definition and at the time

⁵⁸ Act 7/2010 of 31 March, the General Audiovisual Communications Act.

⁵⁹ Act 8/2009 of 28 August, the RTVE Corporation Financing Act.

⁶⁰ Act no. 6/2012 of 1 August, amending the General Audiovisual Communication Act 7/2010 of 31 March on General Audiovisual Communication, to make the management of regional audiovisual communications services more flexible.

⁶¹ The Supreme Court declared null and void the Council of Ministers' Decision of July 2010 awarding an entire multiplex to Antena 3, Gestevisión Telecinco, Sogecable, Veo TV, NET TV and La Sexta, for non-compliance with the law.

the user decides. Consumption patterns are changing, especially in the younger generations, who are the TV viewers of the future. All the main free-to-air and pay television operators have launched offers including content over the Internet. Among them, RTVE stands out for the extent and integration of its television and radio services into an offer that includes historical archives.

Pay-TV

In Spain, the penetration rate of pay-TV services is relatively low (21.2%⁶²) compared with neighbouring countries. There are many factors behind this figure, including the varied range of thematic channels targeted to specific audiences that are available as free-to air.

The crisis, although it has affected this segment less than the free-to-air segment, has also had repercussions, as it has lowered, and even reversed, the growth in the number of subscribers registered in previous years and in total revenue.

A trend has also been noted towards greater operator concentration. Firstly, the purchase of Ono by Vodafone will mean that Ono's Pay-TV subscribers, who numbered 790,000 at the end of 2013, will form part of the Vodafone customer base. Recently, Vodafone also acquired the main cable operators in Germany and the United Kingdom.

Secondly, when this report was drafted, Telefónica was proposing to purchase the satellite pay-TV company Canal+, in which it already has a 22% holding. This transaction would lead to significant concentration in the pay-TV market, since the number of subscribers for these two operators would be 2.4 million, 60% of the total for Spain, not counting mobile television services. Subject to approval by the CNMC, Telefónica has also reached an agreement with Mediaset to purchase the latter's holding in Canal+, which it has held since acquiring Cuatro TV.

As in previous years, pay-TV offers were concentrated around the four main market operators, which, in descending order of number of customers, were: Canal+, Ono, Movistar TV and Gol Televisión. Each of these operators offers its service over a different technology (or access mode): satellite, cable, IPTV and pay-DTTV.

Users are attracted by some of the telecommunications companies' pay-TV offers as they can add television services to their other telecommunications services for a relatively low additional cost. These bundled offers have been growing in recent months, so that telecommunications service subscriptions could also have a knock-on effect on television service subscriptions. In fact, over 50% of pay-TV subscribers have contracted pay-TV together with one or more other telecommunications services.

As in the free-to-air television segment, the operators have been introducing into their pay-TV services new solutions based on technological improvements for viewing audiovisual content. In recent years, the traditional operators have been offering services such as YOMVI from Canal+, which allow viewers to watch pay-TV from any location with broadband access and on any device. In the coming years, new competitors can be expected to enter the market, not with their own network and infrastructure, but using OTT services; in other words, companies offering audiovisual content over the Internet.

Radio

The radio broadcasting market has also been affected by the crisis of recent years, posting lower commercial revenue, especially advertising revenue, and, for the public operators, lower subsidies. In 2013, total turnover was €318 million, a record low for the last ten years.

There was also concentration in the radio segment last year, when COPE and Vocento took over joint

⁶² "Consumos y gastos de los hogares españoles en los servicios de comunicaciones electrónicas; segundo semestre de 2013 (Consumption and expenditure of Spanish households on electronic communications services, 2H2013), CNMC, 2014.

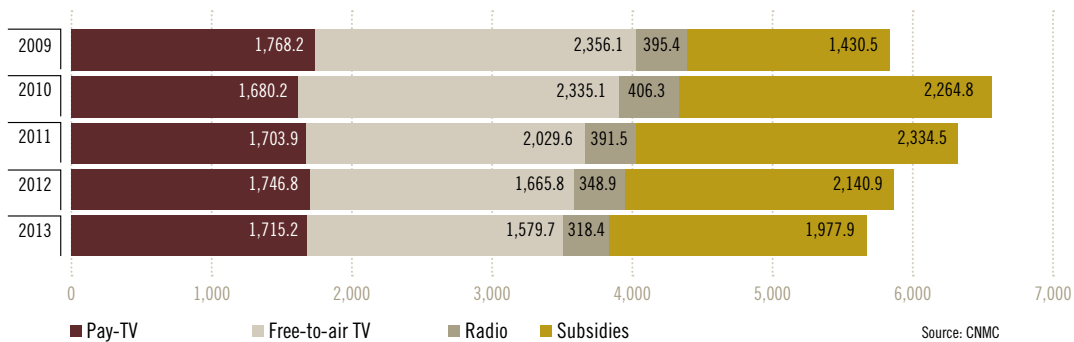
control of the Punto Radio stations. The fourth biggest operator, Radio Publi, also disappeared from the market, leaving it with three main operators: the SER, COPE and Onda Cero networks and the public operator RNE.

2.5.1 Figures for the Industry

Revenue for the industry

The audiovisual services market had a turnover in 2013 of €3,613.3 million, not including subsidies, down 3.9% on the previous year. If the subsidies received by the operators from the various public administrations are added to this amount, the industry took in €5,591.2 million, with the year-on-year drop increasing to 5.3%. The crisis has affected this industry, which is heavily dependent on advertising revenue, bringing its total commercial revenue for 2013 down to the lowest level in the last ten years.

Audiovisual industry revenue, including subsidies (€ millions)

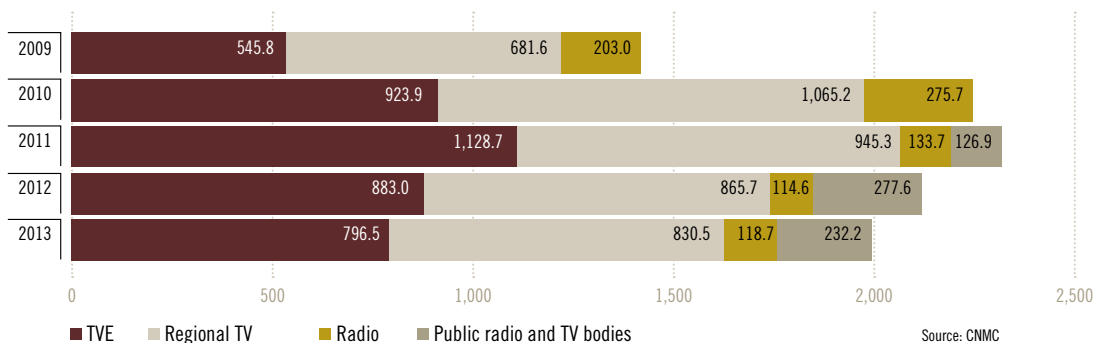


Subsidies

The subsidies received by the public operators from the state and the Autonomous Communities totalled €1,977.9 million, showing a year-on-year decrease

of 7.6%. These subsidies were divided into €1,627 million for television and €350.9 million for radio, after suffering annual decreases of 7% and 10.5%, respectively.

Breakdown of subsidies in the audiovisual industry (€ millions)⁶³



⁶³ In 2009, Act 8/2009, the RTVE Corporation Financing Act was passed, removing advertising from the Corporation's broadcasts. Since then, Spanish public radio and television has been financed exclusively by public funds (there is also residual income from the marketing of products and cultural or sporting sponsorship). The subsidies received by the RTVE corporation came from the General State Budget, a percentage of the public radio frequency reservation fee and telecommunications operator fees, as well as television licensee companies.

Revenue of the different business areas

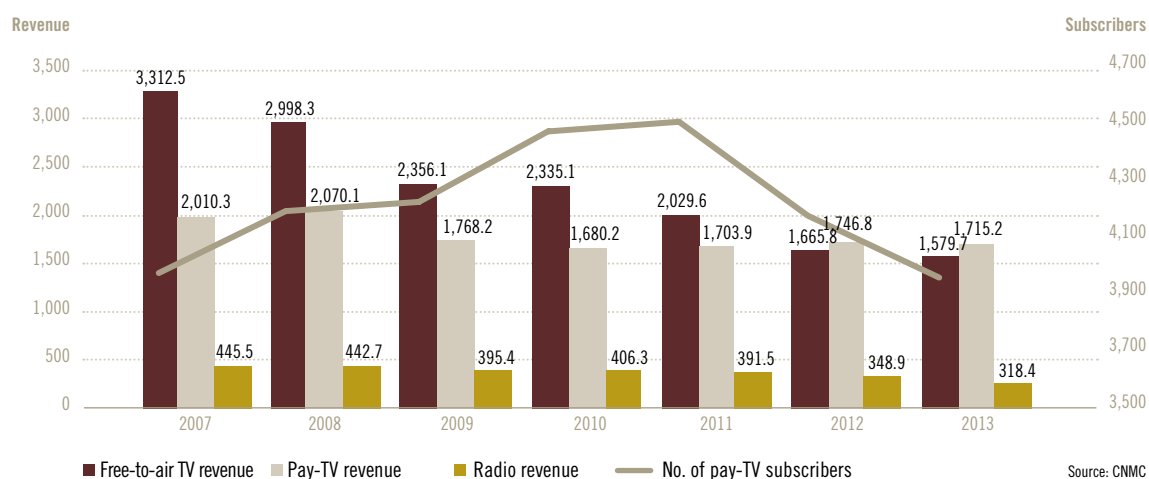
For the second consecutive year, the revenue obtained by the pay-TV segment surpassed that of free-to-air television, changing the historical trend, in which free-to-air television always had more revenue than pay-TV. This change was due to the drop in revenue for free-to-air television, which, with an overall turnover of €1,579.7 million (5.2% down on 2012) posted the lowest figure since 2000. However, it can be seen that the rate of decline in free-to-air television revenues has slowed considerably compared with 2011 and

2012, which showed declines of 13.1% and 17.9% respectively.

In 2013, pay-TV services were the area with the highest turnover, with net revenues of €1,715.2 million, 1.8% down on the previous year. This figure showed a correlation with the number of subscribers, which also dropped by 238,000 from the end of 2012⁶⁴.

As shown in the graph, after rising for four years, the number of subscribers fell in each of the last two years, and at the end of 2013 it was practically at the same level as at the end of 2007.

Revenue by business area and number of subscribers (€ millions and thousands of subscribers)



The third and final main business area within the field of audiovisual services, radio, also experienced a drop in advertising revenue, which stood at €318.4 million, down by 8.7%. Once again, the main cause of this downturn was reduced advertising expenditure in the media. As occurred with free-to-air television, this decrease was less than the one reported in 2012, when revenue fell by 10.9%.

Industry revenue by item

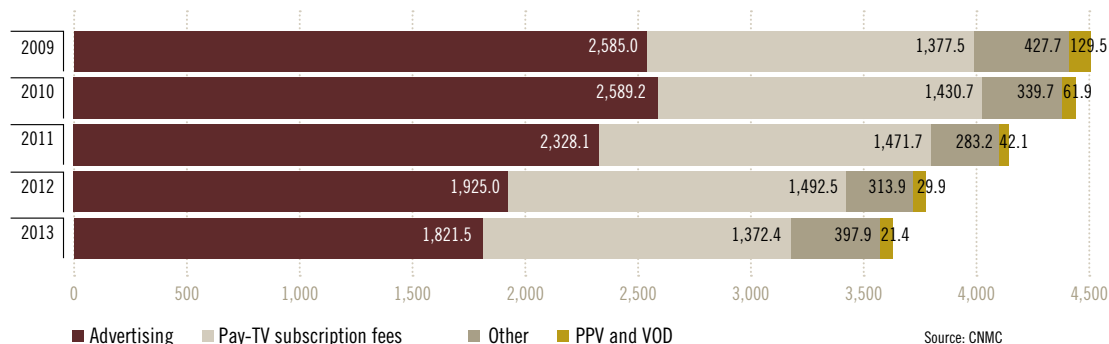
The two most important items were advertising revenue, which is particularly important for free-to-air television and radio, and subscriber revenue, which is the core of the pay operators' business. In 2013, both items were down on the previous year.

⁶⁴ Subscribers to mobile television are not included.

Advertising revenue⁶⁵, which accounts for 50.4% of the total turnover for the industry, was €1,821.5 million, 5.4% less than in 2012. Subscriber revenue, which includes subscriptions and the sale and rental

of equipment, was €1,372.4 million. This figure represented a year-on-year downturn of 8% and 38% in the total turnover for the industry.

Breakdown of audiovisual industry commercial revenue (€ millions)

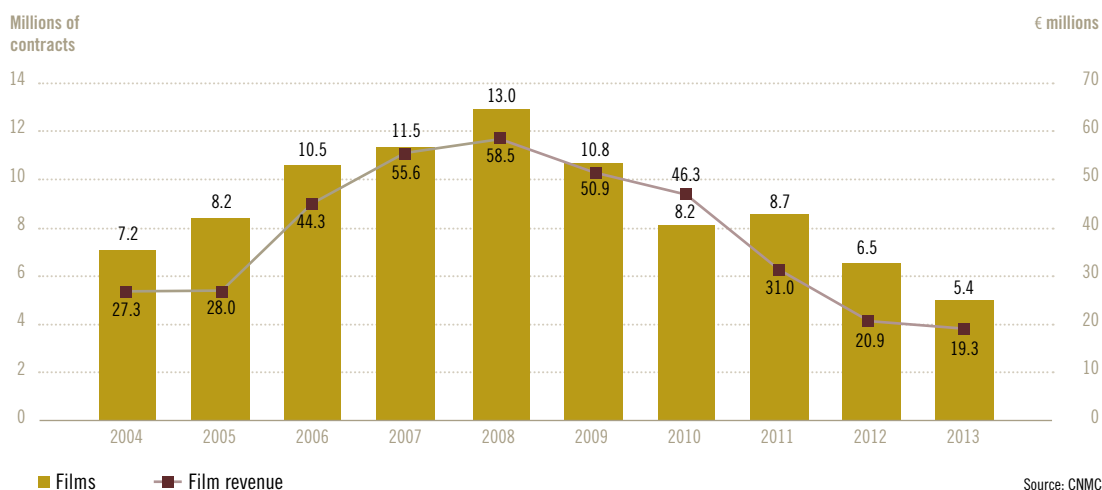


Lastly, revenues from pay-per-view and video on demand, which had been falling since 2009, plummeted 28.5% in 2013, to just €21.4 million. Out of this figure, €19.3 million came from film rentals and the rest, €2.1 million, from other rentals, including concerts, television series and sporting events.

This revenue source, which had traditionally been very important, has been declining since the appearance

in 2009 of *premium* sports channels (Gol Televisión, Canal+Liga, etc.) which, for a monthly fee, allow access to the major football competitions. Before this date, these events, which arouse great public interest and have high audience ratings, had been marketed through the pay-per-view formula. Since 2009 they have been marketed through specific channels.

Number of films rented and revenue from pay-TV (millions of rentals and € millions)



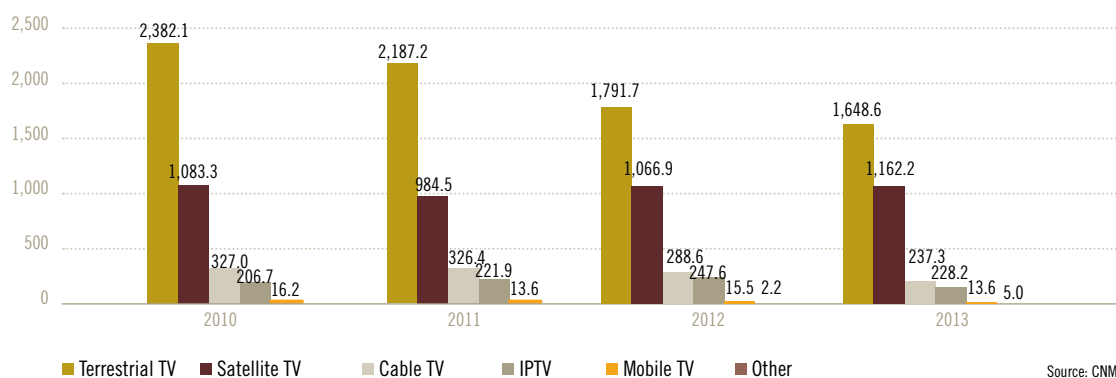
⁶⁵ Included are advertising, sponsorship, telesales, telepromotions and other advertising revenue.

Industry revenue by technology

A breakdown on the revenue for the industry by transmission medium shows a greater revenue volume came from DTTV, which mostly corresponds to free-to-air broadcasting, although there are also channels operating under the subscription payment model. DTTV revenue, which fell by 8% year on year, was €1,648.6 million in 2013, which represented 50% of the total turnover for television services in Spain.

The second technology was satellite television, which had revenues of €1,162.2 million. This year-on-year rise of 8.9% was linked to the increase in revenue from Canal+ subscribers on other platforms, since this operator has agreements that enable it to market its channels through other pay operators⁶⁶. The total number of satellite television subscribers fell by 99,000 during the year and revenue from subscribers was also down by 4.3%.

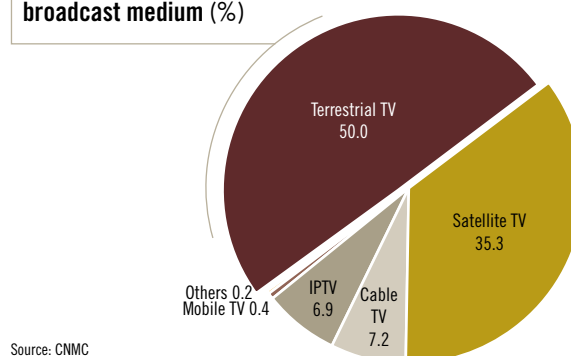
Commercial television revenue per broadcast medium⁶⁷ (€ millions)



Lastly, the other technological platforms that are used to provide pay-TV services accounted for the remaining 14.7% of the market. These can be broken down into cable (€237.3 million), IPTV (€228.2 million) and mobile television (€13.6 million). These three platforms saw downturns in their turnover compared with 2012 of 17.8%, 7.9% and 12.3% respectively.

With regard to audiovisual content delivered by mobile telephone, it should be noted that these services are being offered over 3G/4G networks and their consumption is not equivalent to household television but rather to consumption by individuals over mobile telephones and devices (*smartphones*, tablets, etc.)

Distribution of commercial television revenue by broadcast medium (%)



⁶⁶ Canal+ has agreements with third-party operators (Telefónica, Ono, Orange, Euskaltel, etc.) to distribute its channels as premium content channels on these operators' television platforms.

⁶⁷ The section "other" includes revenue from online TV services and WebTV offered by radio and pay-TV operators.

2.5.2 The free-to-air television segment

In 2013, the free-to-air television segment remained immersed in the restructuring and reorganisation process that started with the digitisation of television signals and migration to DTTV.

In recent years, technological change has led to an increase in the number of service providers and the number of channels that each of them broadcasts, which has promoted a greater and broader offering of television viewing. This change in the market offering has also meant that there has been ongoing fragmentation of the audience and that advertising revenues have to support more market players.

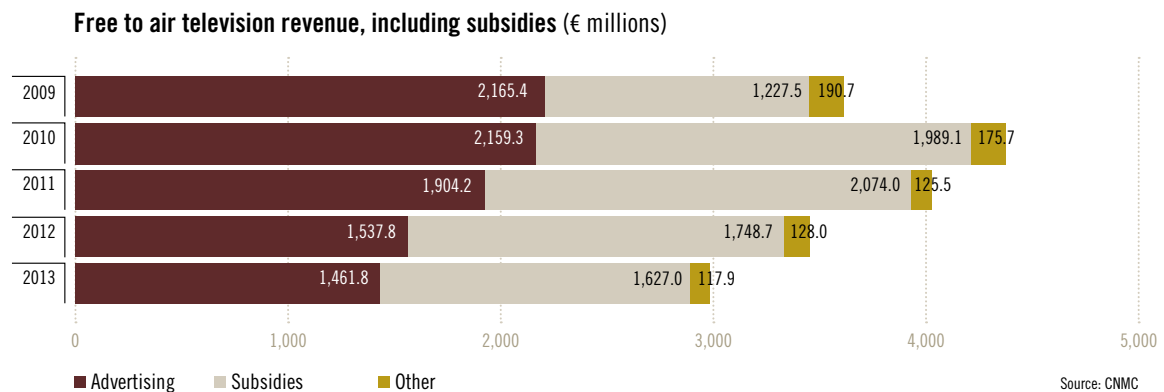
Significant changes have occurred in the industry in the last four years. Firstly, in 2009, RTVE stopped broadcasting commercials, which freed up part of the advertising business for the other operators. Also, in the past two years, two important operator mergers took place, between Telecinco and Cuatro, and Antena 3 and La Sexta, which led to a highly polarised scenario, with two large groups capturing most of the advertising revenue (88.3%) and the audience. Facing these two big operators, there is a large group of much smaller operators, who together receive only 11.7% of advertising revenues and 42.2% of the nationwide audience (this audience figure includes RTVE, which has 16.7%).

Free-to-air television earned a total of €1,461.8 million from advertising, sponsorship and telesales. Of this total, 91.9% went to private television stations and €118.1 million to Autonomous Community public television for the sale of advertising space. The concentration found in the advertising business is even more obvious if only the part that is taken in by private operators is broken down, as their financing comes very largely from advertising. Out of a total of €1,343.7 million received from advertising by all the private television stations, 96% went to just two operators, Atresmedia and Mediaset España.

In addition, the economic crisis has had an impact on operators' revenue, causing a drop in free-to-air television advertising expenditure of 47.4% between 2008 and 2013. However, it is true that the rate of fall seems to have slowed down in the last year, as in 2012, free-to-air television advertising fell by 19.2% but in 2013 by just 4.9%.

Free-to-air television revenue amounted to €3,206.7 million, which can be broken down into €1,579.7 million of commercial turnover and €1,627 million of public television subsidies.

Out of the €1,579.7 million for commercial turnover, €1,461.8 came from advertising, sponsorship, telesales product placement, telepromotions and other advertising revenue. The remaining €117.9 million came from other items.

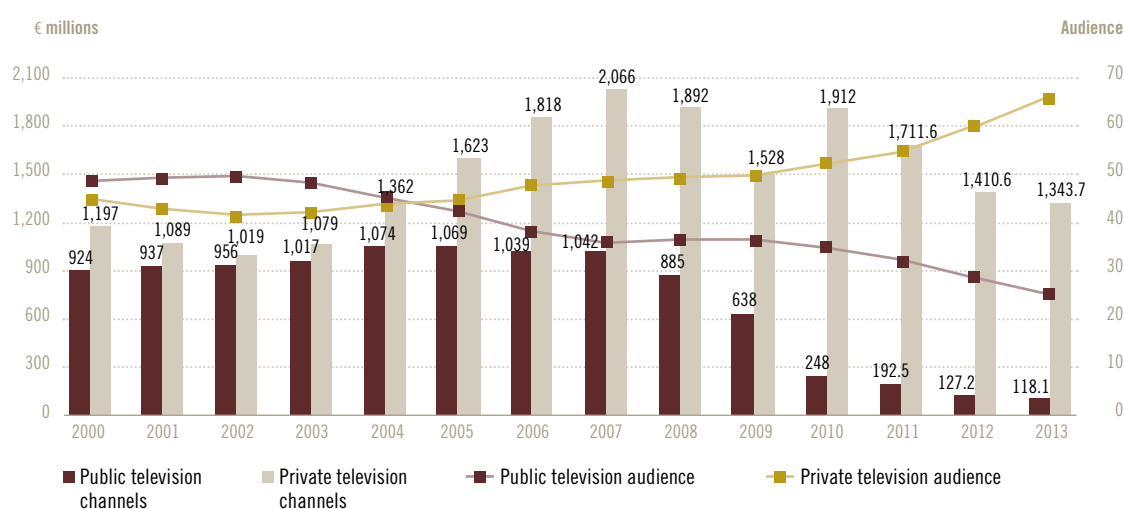


Advertising revenue by operator group

The most noticeable feature was how advertising revenue shrank for most operators, although the downward pace seems to have slowed down considerably in 2013. Specifically, private television operators, with a revenue of €1,343.7 million,

generated €66.9 million less from advertising than in 2012. Public television, on the other hand, invoiced €118.1 million, or a loss of 9.1 million. Year on year, these figures represent a decrease of 4.7% for private television and 7.2% for public television.

Advertising revenue and ratings by operator group (€ millions and percentage)⁶⁸



Source: Prepared by the author with data from the CMT and Kantar Media.

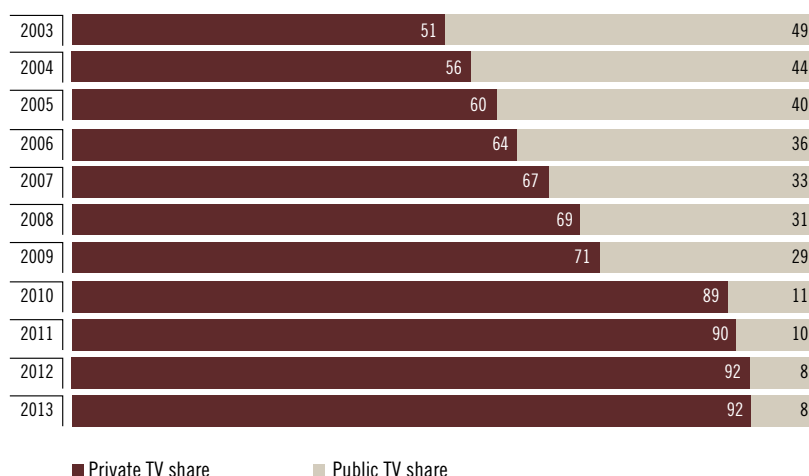
With regard to their share of advertising revenue, in 2013, private television claimed 91.9% of the advertising for the free-to-air television segment, while public television had 8.1%. Out of this 91.9%, 88.3% went to the two big groups that were the result of the recent mergers. The following graph shows the evolution of the relative weight of the two types of operator in advertising revenues and the gradual loss of specific weight of the public operators.

By scope of activity, the television market in Spain has been left, after the mergers, with five nationwide

operators (one public and four private) and a group of Autonomous Community and local broadcasters. Of the four private operators, two had very small market shares, especially with regard to capturing advertising revenues - less than 4% of the total posted by private television. When revenue is broken down by geographical area, the nationwide operators captured 92.2% of advertising expenditure, with €1.348,1 million, and the Autonomous Community and local networks 7.8%, or €113.7 million.

⁶⁸ Only DTTV channel audiences are included. Not including pay-TV advertising revenue, which in 2013 amounted to €41.9 million.

Evolution of advertising market share by operator group⁶⁹ (€ millions)



Source: CNMC

Advertising revenue by operator

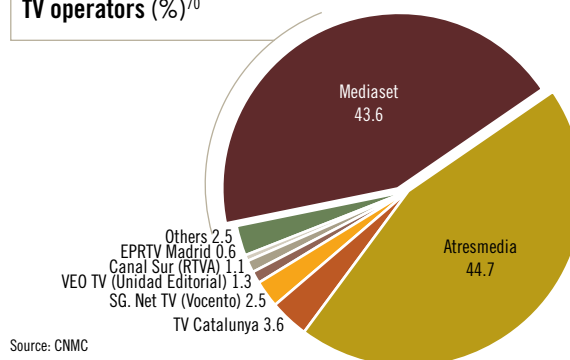
Atresmedia was the operator with the highest advertising revenue, with €654 million, posting a slight downturn of 1.8%, compared with the revenues of Antena 3 and La Sexta group of channels in 2012. In second place came Mediaset, which had been the operator with the highest revenues in 2012. After posting a year-on-year decrease of 7.1%, this operator took in €637.3 million.

These two operators are the largest in the market and together they captured 88.3% of the total advertising revenue for the medium, which indicates a high degree of concentration. Although this concentration also holds true for audience ratings, it was significantly less, at 57.7%, since RTVE had a share of the audience, albeit not of the advertising.

The remaining 11.7% of advertising expenditure was shared among the other market players. The other

two nationwide private operators, Net TV and Veo TV, together accounted for 3.8% of total revenue, with €36.3 million for Net TV and €19.6 million for Veo TV, which meant a drop of 8% and 15% respectively from their figures for 2012.

Advertising revenue
of the main free-to-air
TV operators (%)⁷⁰



⁶⁹ Corporación de Radiotelevisión Española (RTVE) stopped advertising in 2009

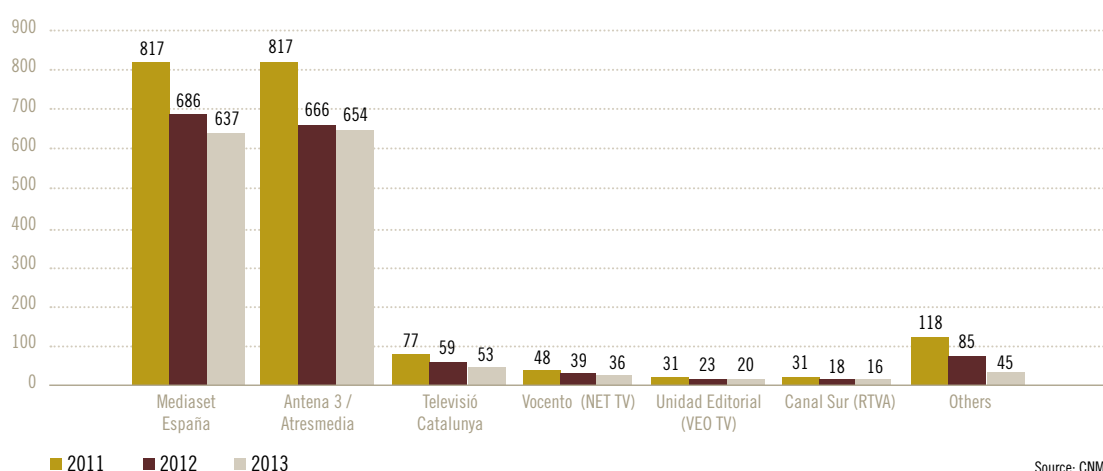
⁷⁰ Includes only advertising revenue of free-to-air television operators and excludes €41.9 million of advertising revenue obtained by all pay-TV operators. The revenues correspond to all the free-to-air channels operating over broadband for each operator, regardless of whether the channels are operated directly or indirectly. Private and local Autonomous Community television stations are not included.

In 2013, the Autonomous Community public operator group was composed of 14 active operators with 27 channels. This group received €109.3 million in advertising revenues, €15.9 million or 12.8% less than in 2012.

This group included Catalonia's Autonomous Community public television, the third biggest market

operator by advertising revenue, behind Atresmedia and Mediaset, with revenues of €53.2 million (10% down on 2012), placing it ahead of the third and fourth largest nationwide private operators in terms of revenue generated. The sixth largest operator in the market, behind Veo TV was the Andalusia Autonomous Community public operator Canal Sur, with €16.2 million (down 11%).

Advertising revenue of the main free-to-air operators⁷¹ (€ millions)



Audiences by operator

Advertising revenue demonstrated a positive correlation with the audience level for each channel. The three television groups with the largest audiences were, in first place, Mediaset, which ended the year with an audience share of 29%. Although this group took first place in terms of viewers, it came second in revenue. It was closely followed by Grupo Atresmedia, with an audience share of 28.7%, and in third place, due to a gradual loss of viewers in recent years, was RTVE.

DTTV market share (%)

Operator	Share of advertising revenues*	Audience share
Mediaset	43.6%	29.0%
Atresmedia	44.7%	28.7%
RTVE	-	16.7%
G. Vocento (Net TV)	2.5%	4.4%
Unidad Editorial (Veo)	0.8%	3.8%

* Calculated on free-to-air television advertising revenue.

Source: CNMC and Kantar Media

It can thus be seen that advertising revenue was very highly concentrated in the two big private groups, Mediaset and Atresmedia, which took 88% of all television advertising and 96% if only private television is considered. At the same time, the distribution

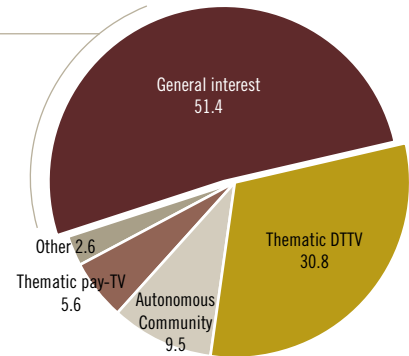
⁷¹ The revenues correspond to the group of channels operating free-to-air via broadband for each group, regardless of whether the channels are operated directly or indirectly.

of audience shares among the operators was less asymmetrical, with a concentration of 57.7% in the two biggest groups mentioned above, if RTVE is also included in the calculation. The asymmetry between the two biggest private groups compared with the rest of the operators is even greater when the relationship between audiences and advertising investment is analysed.

Audiences by type of channel

In 2013, the audience fragmentation that began with the move to DTTV and the appearance of new television offerings with more channels continued to increase. Throughout the year, the decline in average audience numbers and the audience share of the traditional channels (those that existed before the migration to DTTV) continued, with a shift to the channels that joined the market later. These latter channels are called "thematic" as they broadcast

DTTV audience share by
type of channel(%)

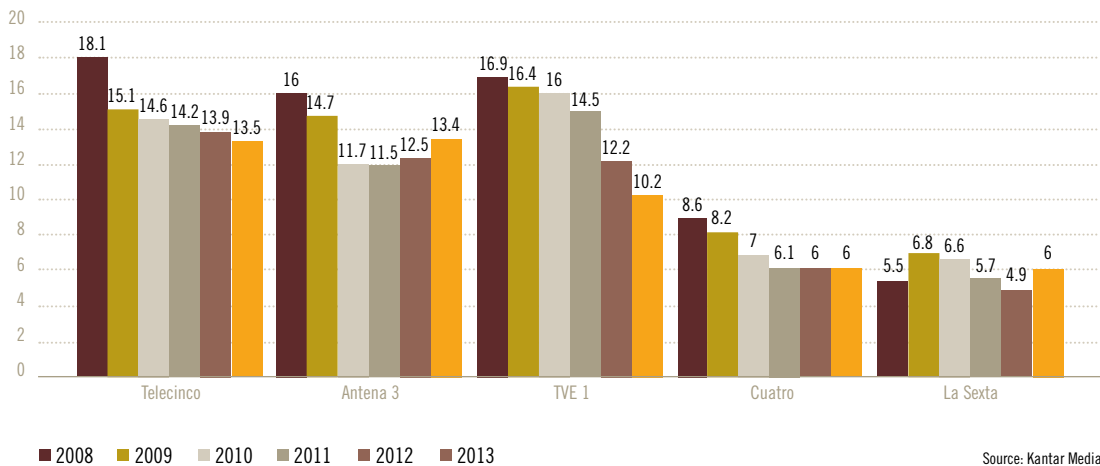


Source: Kantar Media

specific, differentiated content that is targeted at a particular niche viewing public.

In general, the traditional generalist channels saw their audiences shrink from the previous year's level, except for Antena 3 and La Sexta, which, after merging, found their audience shares rising.

Evolution of audience share for the five main channels (%)



Source: Kantar Media

Audiences by channel

The three Spanish channels with the biggest audience were Telecinco, which remained in first place with an audience share of 13.5%, Antena 3, which came one decimal point behind with 13.4% and CRTVE's La 1 with 10.2%. For Telecinco and La 1, these figures

were the lowest in recent years. In the middle came La Sexta and Cuatro, both of which had an audience share of 6%, and lastly the other channels, the thematic channels, with shares of less than 3%. In this last group, the channel with the biggest audience was FDF, at 2.9%.

2013 audiences by channel and group (%)

Audiences	2012	2013
Mediaset	28.1	29.0
Telecinco	13.9	13.5
Cuatro	6.0	6.0
FDF	2.9	2.9
Divinity	1.4	1.7
Boing	1.7	1.7
La Siete	1.4	1.2
Energy	0.9	1.2
Nueve		0.7
Atresmedia	25.8	28.8
Antena 3	12.5	13.4
La Sexta	4.9	6.0
Neox	2.6	2.3
Nova	1.6	2.1
Nitro	1.6	1.7
Xplora	0.9	1.7
La Sexta 3	1.6	1.6
Grupo CRTVE	18.9	16.7
La 1	12.2	10.2
La 2	2.5	2.4
Clan TV	2.5	2.4
Teledéporte	0.8	0.9
24H	0.9	0.8

Grupo Vocento (NET TV)	4.4	4.5
Disney Channel	1.6	1.5
Paramount Channel	0.8	1.4
Intereconomía	1.2	0.9
MTV	0.7	0.6
G. U. Editorial (VEOTV)	3.2	3.5
Discovery Max	1.2	1.6
13TV	1.0	1.3
AXN (pay-DTTV channel)	0.3	0.3
Marca TV	1.0	0.6

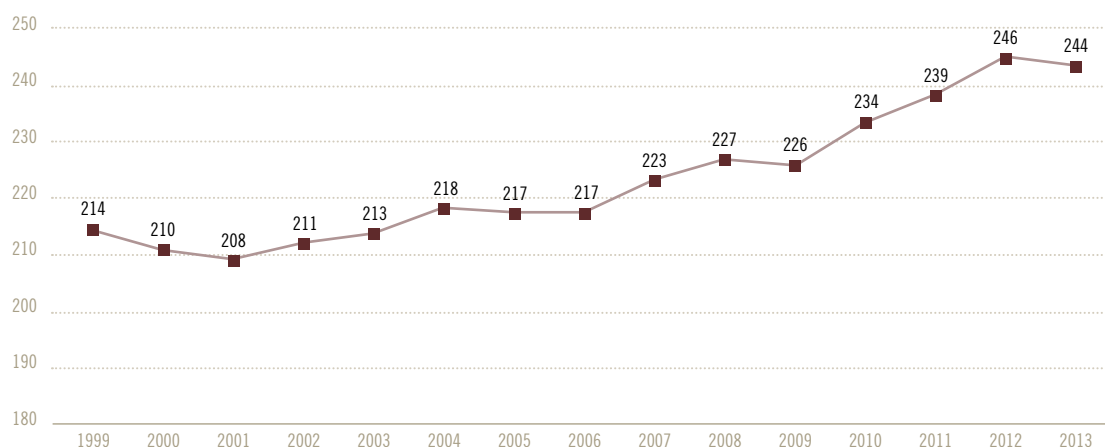
Source: Kantar Media

It is foreseeable that the closure of nine television channels at the beginning of 2014 will lead to a slight lessening in audience fragmentation by freeing up a public that could increase the number of viewers of the other thematic channels to figures over 3% (currently, no thematic channel has an audience share over this figure).

Audiences and TV consumption

With regard to the amount of time that audiences spent watching television in 2013, average television consumption per viewer was 244 minutes per day (four hours and four minutes). This figure was two minutes less than the record for television consumption set in 2012.

Average daily television consumption (minutes)



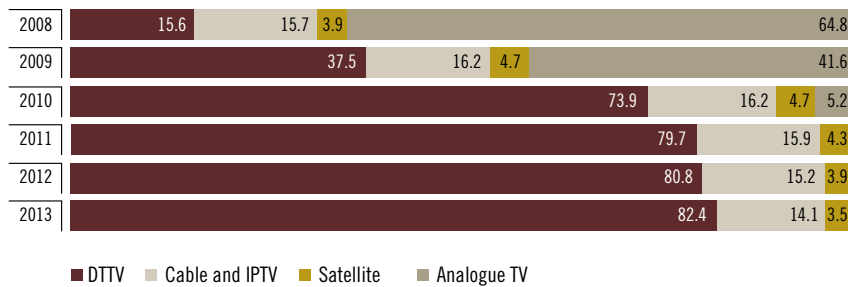
Source: Kantar Media

Audiences by platform

In 2013, television consumption by transmission medium was very similar to the previous year. 82.4% of television viewing time was spent watching free-to-air DTTV services, 14.1% cable television and IPTV

services, and 3.5% satellite television. The only change from the previous year was a slight movement from pay-TV platforms to free-to-air operators. This shift in audience share is in line with the loss of subscribers experienced by pay-TV platforms last year.

Audience by transmission medium (%)



Source: Kantar Media

In recent years, with the increasing penetration of the Internet into households and of *smartphones* into society, the consumption of audiovisual content of all types over the Internet has continued to grow. Just as consumption of minutes of free-to-air television has increased in recent years or remained at high levels, consumption of Internet content in terms of both frequency and number of users, has been constantly increasing. Based on the CNMC-Red.es. Household Panel, in Spain in 2014, 75% of individuals were Internet users and of these 44% accessed the Internet on their *smartphones*. Of the total number of individuals who accessed the Internet, more than one-third had viewed audiovisual content at least once in the past week and of this number, 24.7% had done so from their smartphone and another 19% stated that they had viewed audiovisual content on their tablets. Terminals that permit mobility have had great success in recent years.

It has become necessary to develop more advanced methods for measuring audiences, consumption and the frequency of users' demand for content, regardless

of the means of distribution, in order to compare the levels of demand for the different media.

2.5.3 The pay-TV segment

Pay-TV services are offered by operators for a direct payment of either a subscription to the service, such as, for example, a monthly or annual fee or a single payment for viewing some specific content at a particular time.

In 2013, revenue obtained by the pay-TV operators amounted to €1,715.2 million, a year-on-year fall of 1.8%. The number of subscribers – not taking mobile television services into consideration – fell by 5.7% to end 2013 with 238,000 subscribers fewer than the previous December.

The penetration of pay-TV in Spain is low, compared with neighbouring countries, at 21.2% of households. There are many factors behind this number, among them the varied range of programming available, particularly since migration to DTTV, and the appearance of numerous thematic channels or free-

to air channels aimed at specific segments, such as children. In 2013, two specific factors helped to explain falling demand: firstly, the economic crisis and its impact on households' disposable income, and secondly, the increase in VAT on pay-TV services in the second half of 2012, from the special reduced rate of 8% to the normal rate of 21%.

Revenue by type of technology

The satellite television platform continued to be the largest, with 67.8% of pay-TV revenue, or €1,162.2 million; 8.9% more than in the previous year. It should be noted that this increase was due to the satellite operator's success in selling its premium channels through third-party operator pay-TV services.

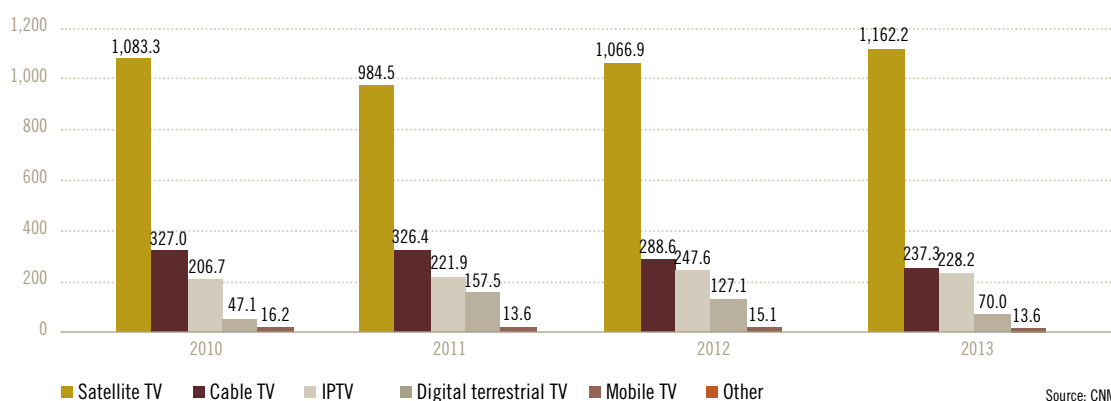
The second most important technology in revenue, although trailing far behind the first, was cable pay-TV with €237.3 million, 17.8% down on 2012. The downturn was related to a decrease of 9.5% in the number of subscribers to the service.

Next, with a turnover very close to that of cable pay-TV services, were IPTV with €228.2 million, 7.9% less than in the previous year, although in this case the number of customers rose by 3.9% because of a commercial promotion offered by Telefónica at the end of the year, offering IPTV television free for a few months if the customer signed up for optical fibre Internet services.

The next technology by revenue volume was pay DTTV, with the Gol Televisión sports channel and the pay-TV channel AXN. These services brought in revenue of €70 million, 45% less than in 2012, with a reduction in the number of subscribers of 18.4%. The downturn was related to changes in the exploitation of football rights, which, in 2013 went primarily to Canal+ channels. AXN has announced that it will end its broadcasts on DTTV at the beginning of 2014.

Lastly, mobile television generated €13.6 million, dropping back 12.3%, in line with the decrease in the number of subscribers to the service in the past year.

Pay-TV revenue per broadcast medium⁷² (€ millions)



Number of subscribers by technology type

By late 2013, there were a total of 3,939,669 subscribers to pay-TV services in Spain⁷³, not including mobile television services. This figure represents a drop in the customer base of 237,934

subscribers from year-end 2012 and a percentage decrease of 5.7%.

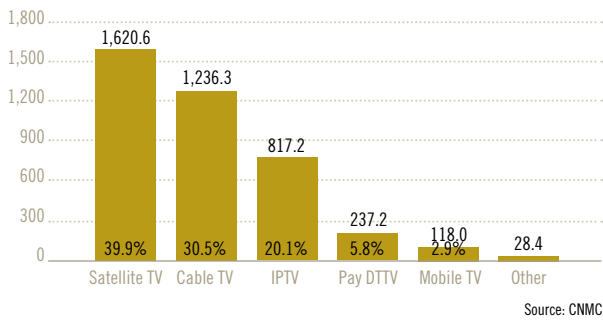
If the number of fixed access and satellite pay-TV subscribers and the number of subscribers to mobile television (a service offered by the mobile

⁷² Revenue from online pay-TV services and from web-based TV offered by pay-TV operators is not included.

⁷³ Television services on mobile terminals are not included.

communications operators over their 3G and 4G networks) are added together, the total comes to

Subscriber distribution by technology⁷⁴ (thousands of subscribers and %)

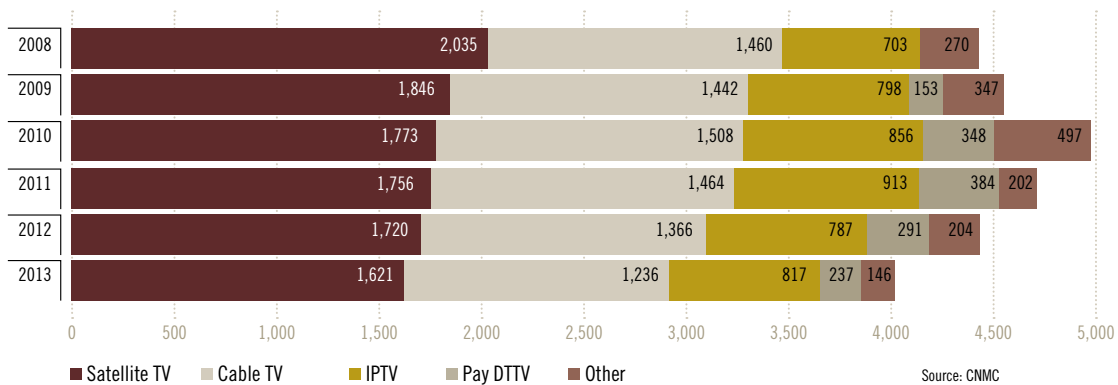


4,057,626 subscribers, 309,777 fewer than in the previous year, a decrease of 7.1%.

The decrease in the number of customers was an overall trend for the pay-TV platforms, with the exception of IPTV, where Telefónica launched a commercial offer at the end of the year, *TV-Mini*, which attracted a noticeable increase in subscribers in the fourth quarter. The Web TV /TV Online services warrant a separate mention as they also increased their customer base, having only recently been launched.

The services that lost the most subscribers were cable television (with 130,024 fewer subscribers), satellite television (with the loss of 99,287 subscribers) and pay DTTV (down by 53,403).

Evolution of the number of pay-TV subscribers by broadcast medium and total number of subscribers⁷⁵ (in thousands and total in millions)



Number of subscribers by operator

One of the characteristics of the Spanish pay-TV market is that the four biggest operators belong to different technological platforms, which helps the market to be relatively well distributed among the different platforms and users to have a variety of options when signing up for a service. The three major pay-TV operators, Canal+, Ono and Telefónica's Movistar TV offer their services by satellite, cable and XDSL (or optical fibre), respectively, and the fourth

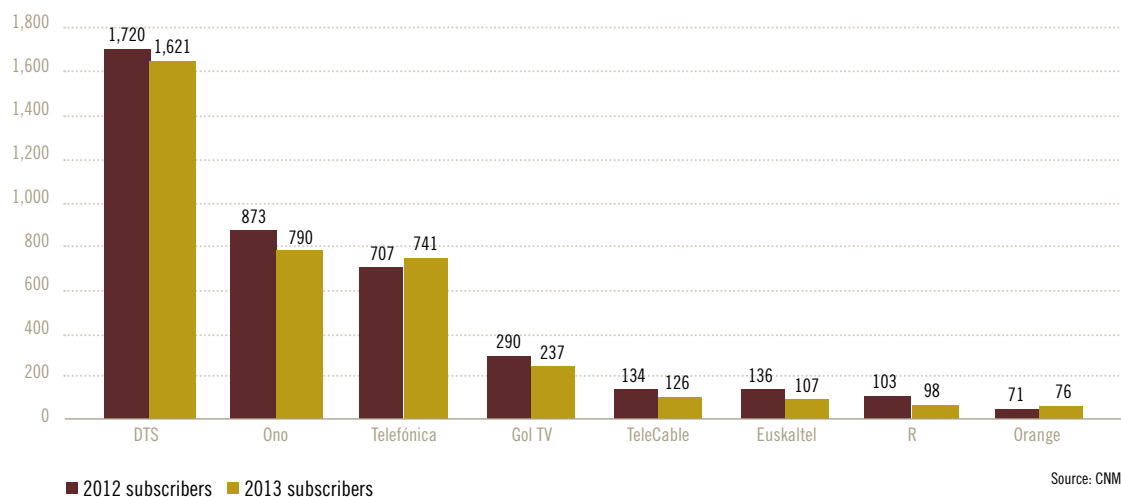
operator, Gol Televisión, which offers pay-football related content, uses DTTV.

One great difference between the above-mentioned operators and their respective distribution media is their ability to offer broadband access at the same time as access to content via the Internet, which is proliferating. Thus while Telefónica and Ono own their own fixed networks and also offer Internet connectivity to their customers – and, in fact, bundles are the most successful subscription method for these operators – Canal + and GolTV do not have this capability.

⁷⁴ The category "other" includes subscribers to online pay-TV and web-TV services.

⁷⁵ The rest includes mobile TV and *online* pay-TV services or *web-TV*.

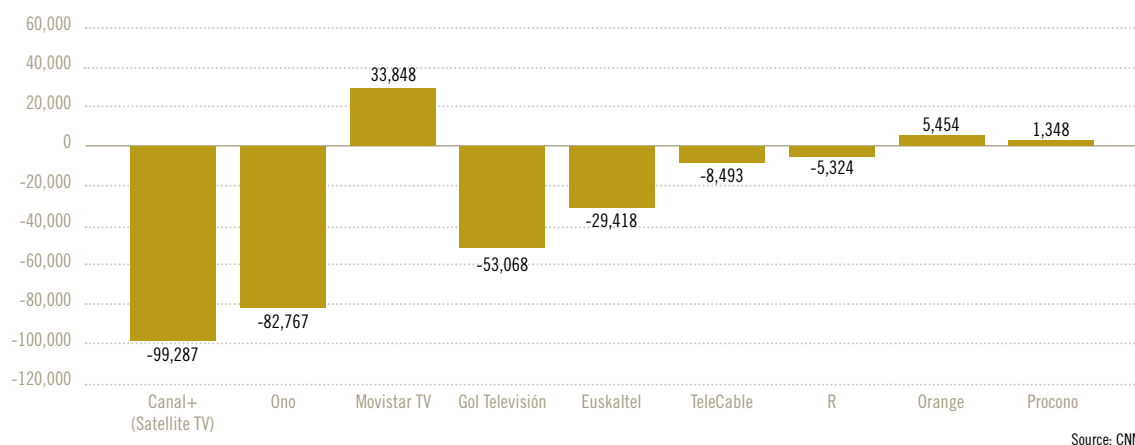
Number of subscribers of the main pay-TV operators^{76, 77} (thousands of subscribers)



During 2013, almost all the operators lost customers, except for Telefónica's pay-TV service, Movistar TV⁷⁸. The other operators, regardless of the technology

used, posted losses in their customer base in 2013, with the exception of Orange and the cable operator Procono, which ended the year with a slight increase.

Net change in number of subscribers, 2012/2013⁷⁹ (thousands of subscribers)



Distribution of revenues by subscriber and pay-TV subscribers by operator

The biggest operator in terms of both revenue and number of subscribers was the satellite TV platform Canal+, with a total of 1.6 million users and total revenues of €1,162.2 million, of which 871 million

came from subscribers. These figures gave it a 62.6% share of subscriber revenues for all pay-TV and 41.9% of subscribers (including satellite TV and Yomvi).

The second largest operator was the cable TV operator Ono, with 790,000 subscribers (approximately half the number of subscribers to satellite TV) and €145

⁷⁶ DTS includes satellite television and YOMVI.

⁷⁷ DTS DISTRIBUIDORA DE TV DIGITAL, S.A. manages Canal+ and Yomvi.

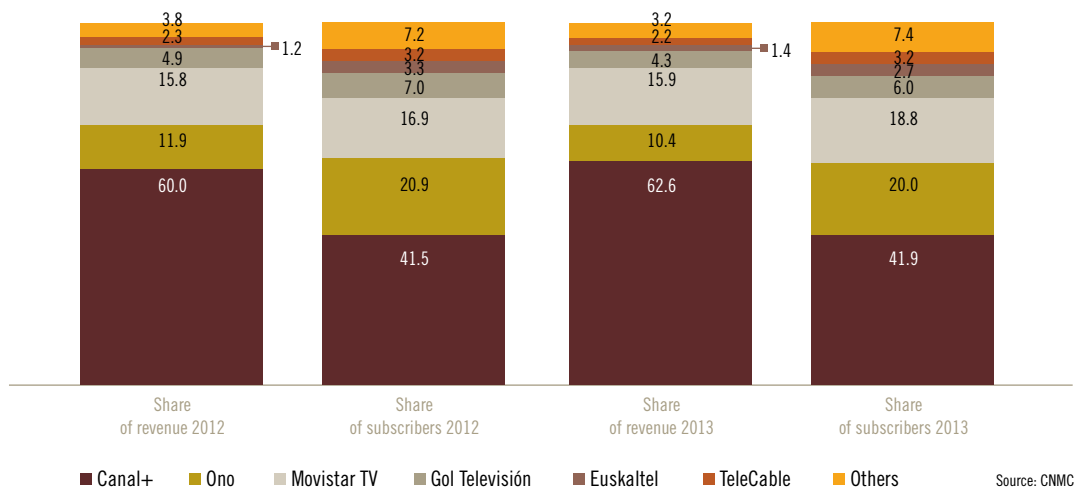
⁷⁸ Movistar TV launched a promotion at the end of the year for free television for a promotional period when subscribing to fibre optic Internet services.

⁷⁹ Mobile TV is not included.

million in subscriber revenues, which in market terms was 20% of the total number of pay-TV subscribers and 10.4% of the revenues. In third place, with similar figures, was Telefónica's Movistar TV, with 741,000 subscribers and €222 million, or 18.8% and 15.9% of the market respectively.

There was a high concentration of revenue and subscribers in the three main market operators, which together had 80.7% of the total number of pay-TV subscribers (3.2 million) and 89% of subscriber revenues for the industry.

Market share by subscriber revenue and number of subscribers⁸⁰ (%)



From a comparison of market shares by revenues and number of subscribers to the service, it is clear that a different strategy was being followed, especially if we compare the Canal+ subscribers, who represent 42% of the total number but 62.6% of revenues, with all the other operators, for whom this ratio is inverted: they all have significantly higher market shares in terms of subscribers than in terms of revenue.

Geographical penetration of pay-TV

The penetration rate of pay-TV on Spain was 8.4 subscribers per 100 inhabitants at the end of 2013. The province that recorded the highest penetration was Asturias, with 16.2 subscribers per 100

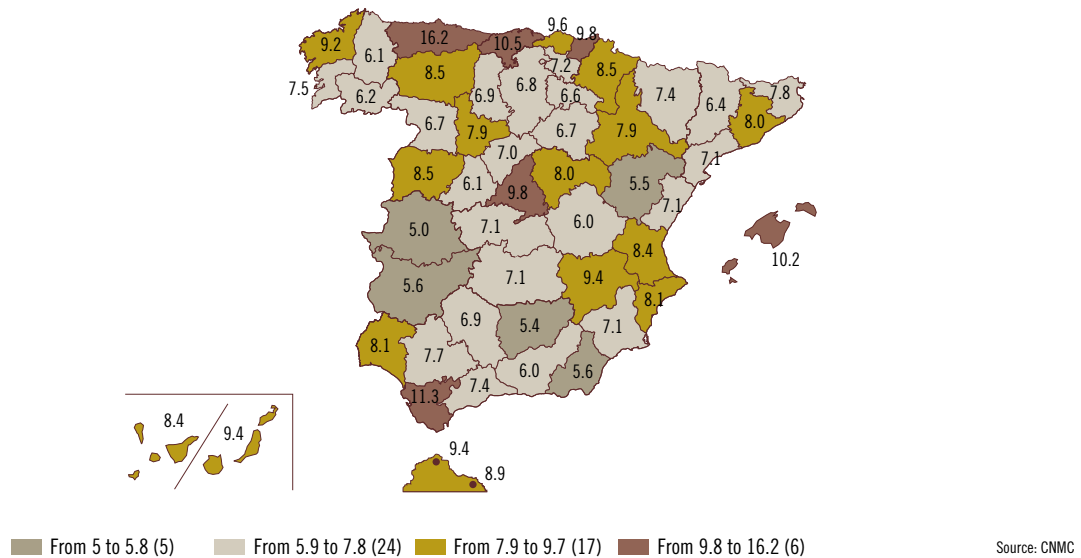
inhabitants, followed by Cadiz (11.3), Cantabria (10.5), the Balearic Islands (10.2) and Madrid and Guipúzcoa, each with 9.8%.

At the opposite extreme were Cáceres, Jaén and Teruel, with pay-TV service penetration rates of 5%, 5.4% and 5.5%, respectively, and then Almería and Badajoz, each with 5.6%.

By technology, satellite pay-TV had the greatest penetration, with 3.5 subscribers per 100 inhabitants at year-end. The second highest penetration rate was for cable television, with a penetration of 2.6%, followed by IP television and pay DTTV with rates of 1.7% and 0.5%, respectively.

⁸⁰ Mobile television subscribers and revenue are not taken into consideration. The data used to create this graph only include revenue from subscribers, not the operator's total revenue, so as not to include the effect of their other activities, such as the sale of their own productions or other income not related to subscribers.

Pay-TV penetration per province⁸¹ (subscribers per 100 inhabitants)



It should be borne in mind that, while satellite TV and pay DTTV are available throughout the country, cable television and IPTV have limited coverage. Consequently there are areas in Spain where satellite TV and pay DTTV are the only pay-TV offers to which there is access.

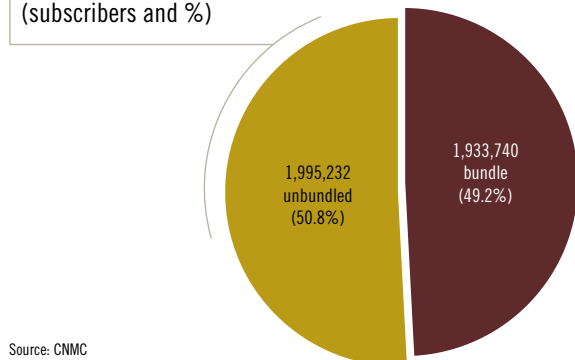
Commercial offers

In the pay-TV market, two types of operators coexist: those that are strictly pay-TV service operators, such as the satellite platform Canal+ and the pay-DTTV channel Gol Televisión, and the telecommunications operators whose main business is not pay television but who, over time and as telecommunications networks have improved, have added pay-TV services to their original telephony and Internet services.

In the case of telecommunications operators, pay-TV services can be contracted in bundles that combine voice, data and television services using fixed and mobile networks and for which the end customer pays for all the services with one bill.

A joint subscription to services is more economical than contracting services separately. The contracting of pay-TV services is therefore closely tied to the contracting of combined offers in double and triple play bundles. Recently, quintuple play bundles began to appear with the launch of Telefónica's *Fusión* offer. Quintuple bundles offer discounts on fixed voice, mobile voice, fixed broadband, mobile broadband and pay-TV if the five services are contracted together.

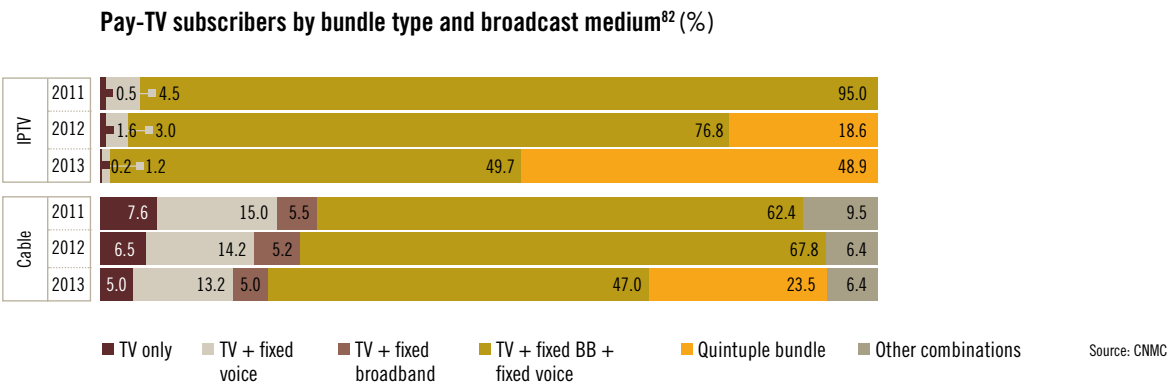
**Subscribers to pay-TV
by contract type**
(subscribers and %)



⁸¹ Mobile television is not included.

Out of the 3,939,669 pay-TV subscribers, somewhat over half – 50.5% – were subscribing to their television service with some other telecommunications service, as a bundle. It is important to highlight the fact that 74.2% of net deregistrations (176,570) were from subscribers who had contracted pay-TV separately, while in the segment that had the service as part of a bundle, customer loss was much lower, with a net loss of 61,364 subscribers, or 25.8% of the net deregistrations for the year.

The most common service combination in 2013 continued to be the triple bundle, which includes pay-TV, fixed telephony and fixed broadband services. For the IPTV operators, Telefónica and Orange, 49.7% of subscribers had chosen this type of bundle when contracting their pay-TV service, a very similar figure to the cable TV platforms, which had 47% of their customers subscribing to pay-TV as part of a triple play package.



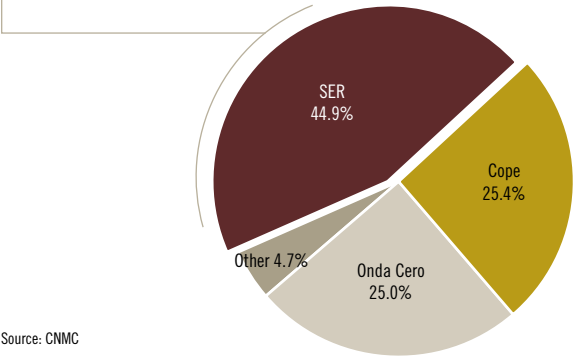
However, the most remarkable figure for 2013 was the notable increase in quintuple bundles, which offer five services in one bill: fixed voice, mobile voice, fixed broadband, mobile broadband and pay-TV. These offers were marketed for the first time in the fourth quarter of 2012 with the launch of the *Fusión* product by Telefónica and, in 2013, Ono, Orange and Euskaltel launched similar offers. By year-end, 48.9% of IP pay-TV subscribers had contracted offers of this type and for the cable operators, which started marketing them later in the year, with Euskaltel starting in the second quarter and Ono in the third, this percentage amounted to 23.5%.

2.5.4 The radio segment

In line with the drop in advertising revenue, the radio industry experienced a downturn of 10.9% in

its commercial revenues in 2013, with total billings of €318.4 million. This figure does not include the

Revenues of the main radio groups (%)



⁸² "Other combinations" includes the following bundles of combined retail services: "TV + fixed voice + mobile voice"; "TV + fixed broadband + fixed voice + mobile voice"; "TV + mobile voice" and "TV + fixed broadband + mobile voice".

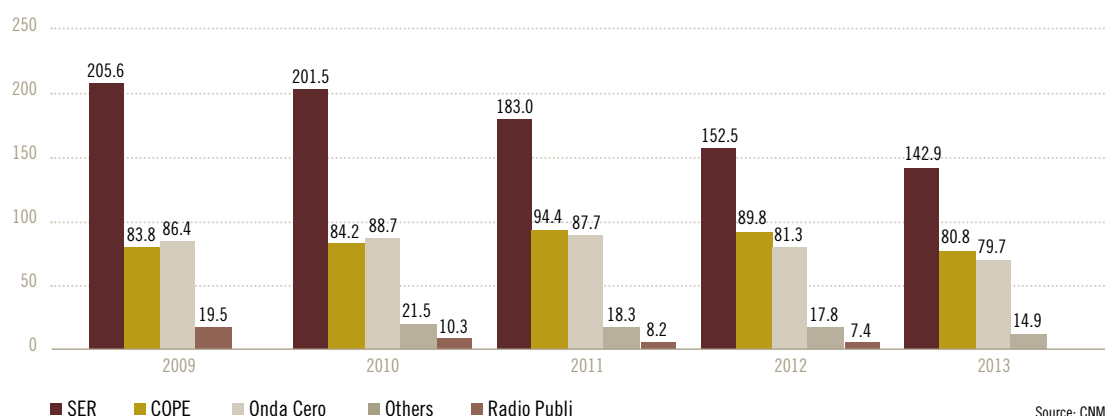
subsidies received by the public operators, which in 2013 amounted to €118.7 million, an increase of 5.1% on 2012. If net turnover and subsidies are added together, total revenue for the radio industry was €437.1 million, a year-on-year drop of 11.8%.

Concentration in the radio market

The structure of the market continued to be very similar to previous years, so that advertising revenue

was highly concentrated in the three big nationwide operators: Sociedad Española de Radiodifusión (SER) belonging to Grupo Prisa, Onda Cero in the Uniprex group and COPE, owned by Radio Popular, which together accounted for 95.3% of the total turnover. At the beginning of the year, the fourth largest operator, Radio Publi, which managed the ABC Punto Radio stations, merged with COPE.

Revenues of the main radio groups (€ millions)



Radio revenue by operator

In terms of revenue, the Cadena SER group continued to lead the industry with a market share of 44.9% and a commercial turnover of €142.9 million. This represented growth of 6.3% on the previous year. Next came the Radio Popular COPE network, which, by

revenue level had the greatest reversal in advertising investment, posting €80.8 million, a drop of 10%. The third largest radio was the Uniprex group's Onda Cero with €79.7 million, 2% down on 2012. Lastly, the other operators together earned €14.9 million, after posting a 16.2% reduction.

2.6. Audiovisual signal transport and transmission services

The audiovisual signal transport and transmission market refers to the network services over which the radio and TV stations send their content to the end public. This market includes, on the one hand, the audiovisual signal transport services that send the audiovisual signal from the production centres (contribution transport⁸³) to the network head-ends and from the network head-ends to the transmitter centres (distribution transport) and, on the other, the signal transmission services that enable the signal to be sent from transmission and retransmission centres to the user's home.

The signal transport activity consists of point-to-point signal transmissions. Any transmission medium can be used (cable, radio-link, satellite, etc.) and any operator that has networks that meet the broadcaster's requirements could potentially provide transport services. This means that there are many telecommunications companies that can provide this services with the network infrastructure and services that they have deployed in Spain, so that there are no barriers to the entry of new operators.

In contrast, the transmission service consists of point-to-multipoint communication, which goes from the transmission centres to the consumers' devices. In the case of DTTV and radio signals, this communication is linked to the use of the radio-electric spectrum. These characteristics mean that the service can only be provided by operators that have a ground network with installations and infrastructure suitable for transmission, which involves large-scale investment and favours the existence of a small number of specialised players offering these services.

In addition, in the case of transmission services, there are other barriers to market entry resulting from the long-term nature of the contracts and impossibility

of replicating some of the infrastructure in the short term. For this reason, in its analyses of the television signal transmission wholesale market, the former CMT concluded that this was an uncompetitive market in which there are structural barriers to the entry of new operators.

The latest analysis was made in 2013⁸⁴. The Ruling defined television signal transmission services as those that include all the technical activities that an operator offers to third party operators so that they can best shape their offer to television companies. These activities consist of providing the public with the audiovisual content offered by the broadcasters through telecommunications services such as the distribution channel. The structure of the market is highly focused around one supplier that operates nationwide, Abertis, coexisting with a variety of small-sized providers operating regionally.

Signal transport and transmission revenue

The audiovisual signal transmission market is a wholesale market, so that its economic evolution is connected to what happens in the downstream markets. Its activities are closely linked to the evolution of the radio and TV broadcasters and when their activity expands, an improvement can be seen in the turnover for these services.

In preceding years, the market went through a period of sustained growth due to the migration to the DTTV environment, which, among other effects, led to the entry of new radio and TV broadcasters, successive expansions of television signal coverage, the appearance of new channels and the maintenance, for a certain period of time, of the simulcasting of analogue and DTTV signals. The audiovisual signal transmission industry reached its highest turnover

⁸³ Contribution services consist of transporting unprocessed and unedited audiovisual signals from any location to production centres for subsequent processing.

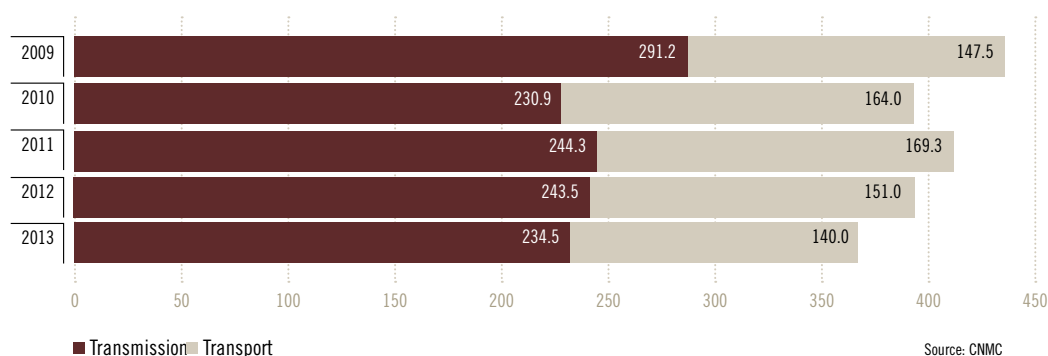
⁸⁴ Ruling approving the definition and analysis of the television signal transmission carrier service wholesale market, designating the operator with significant market power and imposing specific obligations, and agreeing to notify the European Commission and the Body of European Regulators for Electronic Communications (BEREC) (MTZ 2012/1442).

⁸⁵ In 2009, there were simulcasts throughout the year.

in 2009⁸⁵ with €438.8 million. However, in the last two years, as the crisis began to affect its customers, bringing a decrease in revenue, budget cuts and austerity policies that have led to a cost saving process among television operators, the revenue of this industry has been in decline.

In 2012, its revenue fell by 4.6% to €394.5 million and in 2013, a new year-on-year drop of 5.1% was recorded, down to €374.5 million.

Revenue from audiovisual signal transport and transmission services (€ millions)



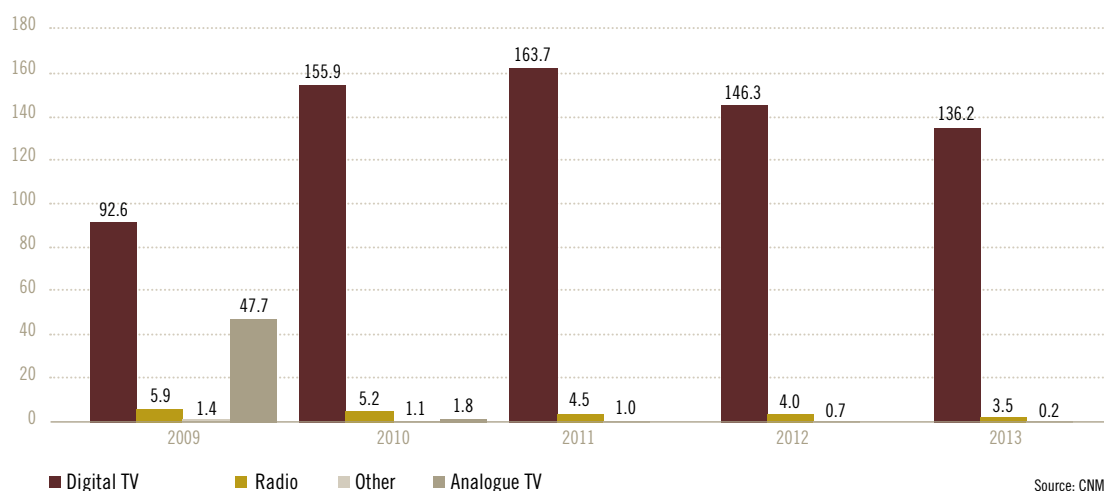
2.6.1 Audiovisual signal transport services

Of the two activities included in this chapter, the one that has suffered the greater downturn has been audiovisual signal transport, where revenue fell by 7.3% year-on-year to €140 million, 37.4% of the total revenue from signal transmission.

Signal transport revenue by type of technology

In a breakdown by signal type, transport revenue for digital television services contributed €136.2 million, down by 6.9%, forming 97.3% of the total revenue, compared with radio signal transport revenue, which fell to €3.5 million, down by 12% from 2012.

Revenue from audiovisual signal transport by technology (€ millions)

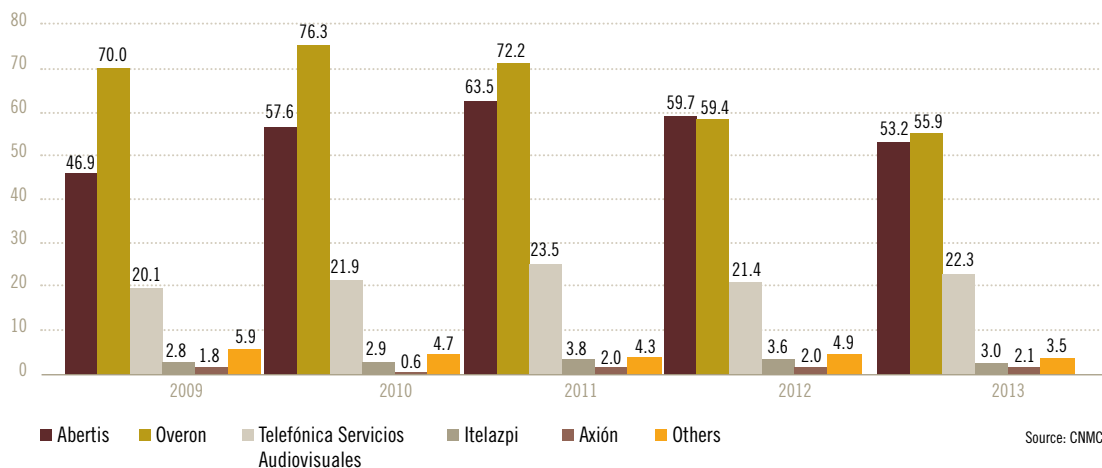


Operator revenue and market share for audiovisual signal transport

Overon⁸⁶ and Abertis⁸⁷ were the largest operators, in terms of both revenue and customers. The former had revenue of €55.9 million, after experiencing a fall of 5.9% in its turnover year-on-year. Even so, this revenue was 39.9% of the total turnover for signal transport.

The second largest operator was Abertis, with €53.2 in revenue, down 10.8% on 2012, and a share of the transport market of 38%. Following on, some distance from the first two, came the third largest nationwide operator, Telefónica Servicios Audiovisuales, with €22.3 million and a year-on-year rise of 4.2%. This operator's turnover was 16% of the total. Last came the other regional operators, who together accounted for the remaining 6.1% of the overall turnover of €88.5 million.

Revenue from audiovisual signal transport by operator (€ millions)



2.6.2 Audiovisual signal transmission services

Television and radio signal transmission are the services most requested by the free-to-air television stations and radio operators in order to take their content to end users. They continued to have the greatest weight in the overall revenue, with 62.6% of the total revenue generated in 2013. However, in line with the changes in the economic environment, revenues of the signal transmission operators fell by 3.7% to €234.5 million.

Transmission revenue by type of technology

The greatest revenue volume came from digital television services, which brought in €189.3 million. Revenue from these services fell 3.1% year-on-year, which was related to the end of broadcasting by some channels and the renegotiation of the charges for the service. Revenue from DTTV transmission constituted 80.7% of the total revenue for audiovisual signal transmission.

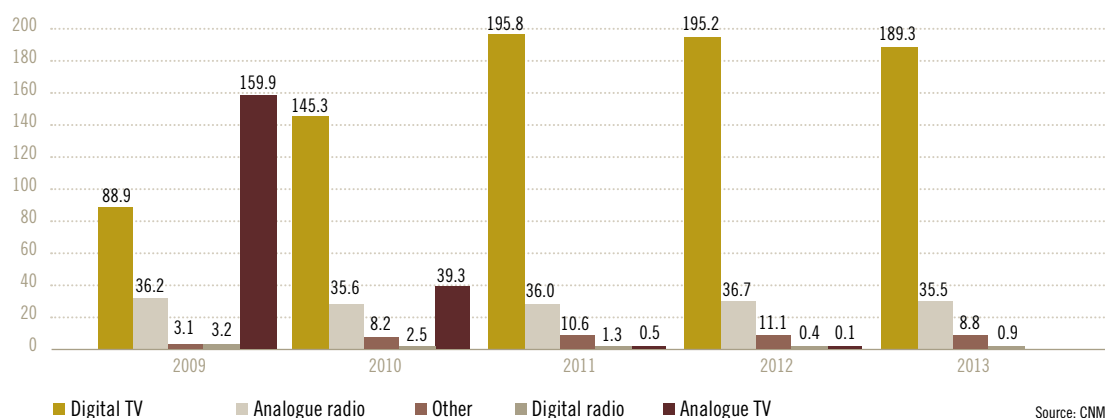
⁸⁶ In June 2013, Abertis sold its 51% share in Overon to Mediapro's Grupo Imagina.

⁸⁷ After taking control of the satellite operator Hispasat, in December 2013, the Abertis group split its activities into two companies: Abertis Telecom Terrestre and Abertis Telecom Satélites.

After this came radio signal transmission, with €36.4 million. This can be divided into €35.5 million for analogue radio services and €0.9 million for digital radio services. These services remained steady

compared with the previous year, slipping only slightly, by 1.9%. Together, radio services represented 15.5% of transmission revenue.

Revenue from audiovisual signal transmission services by technology type (€ millions)

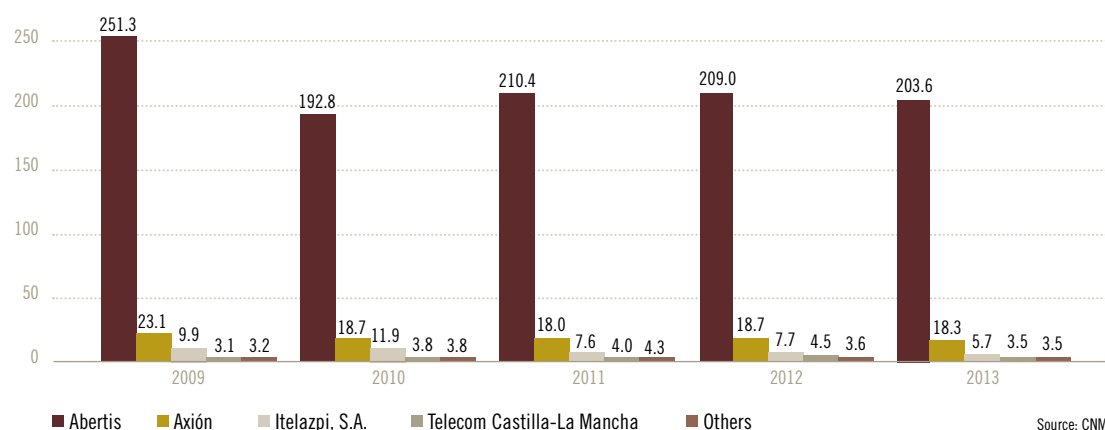


Revenue by operator and market share for audiovisual signal transmission

Revenue of the Abertis group⁸⁸, the largest market operator and the only one with nationwide coverage, was €203.6 million, a decrease of 2.6% from the previous year, but its share of the total revenue

remained at 86.8%. Next on the list, we have the other operators that operate on a regional basis. Worthy of mention here are Axi3n, from Andalusia, with a turnover of €18.3 million (2.3% more than in 2012) and the Basque operator Itelazpi, which billed €5.7 million, 26.3% less than the previous year.

Revenue from audiovisual signal transmission services by operator (€ millions)



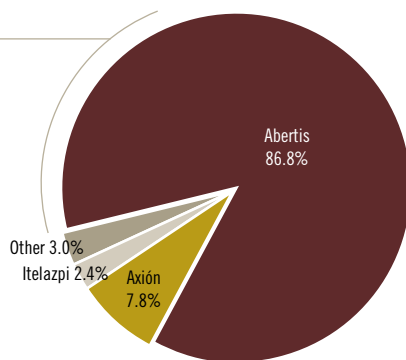
⁸⁸ Abertis' revenue groups together the revenue from its subsidiaries Retevisi3n I, S. A. U. and Tradia Telecom, S. A.

Competition in the market place for audiovisual signal services

The audiovisual signal transmission market is characterised by being a very concentrated market in which there is one nationwide operator coexisting with some small operators who work at the regional level.

This special feature is reflected in the data for the market, in which there is a single operator, Abertis Telecom, which operates nationwide and generates 86.8% of the overall revenue, as compared with the other, regional operators who jointly make up the other 13.2% of the total revenue.

Audiovisual signal transmission
market share by revenue (%)



Source: CNMC

According to the CMT's latest market analysis in 2013, Abertis was the company with the largest television signal transport infrastructure in Spain and was the owner of most of the huts and transmission towers. There are seven Autonomous Communities with an independent television signal transmission operator.

Together they cover 48.3% of the population of Spain, although often these are publicly funded operators that provide services to a particular Autonomous Community and do not offer them to third parties.

Abertis provides services all over the country to five national operators: the public operator CRTVE and the four private operators, Mediaset, Atresmedia, the Vocento group (Net TV) and the Unidad Editorial group (Veo Televisión). In 2013, at the regional level, seven of the thirteen Autonomous Community public television stations had contracted the service from Abertis and six from regional operators⁸⁹.

Regulation of the television signal transmission wholesale market

In May 2013, the CMT concluded the third round⁹⁰ of analysis of the television signal transmission wholesale market. It concluded that Abertis continued to have significant power in the national transmission market, where it has a market share of 100%. The ruling established a series of operator obligations, including:

- The obligation to lease spaces in their broadcasting sites (co-location), which offer 93% national coverage.
- The obligation to offer interconnection to other sites on their network.
- The obligation to publish a reference offer (ORAC).

The regulation imposed by the CMT will only affect the market covering DTTV signal transmission to domestic homes. The Television signal transmissions different to DTTV are not regulated.

⁸⁹ It is worth highlighting the existence of operators, generally publicly funded, who offer their services to regional television channels. This circumstance has meant that those granted television licences in each region contract the operator providing services in the region in question. These operators therefore have a business strategy with a clear focus on the territory covered by the autonomous community.

⁹⁰ The first two reviews were approved by the CMT in their rulings of 2 February 2006 and 21 March 2007, respectively.



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