

Europe's Digital Progress Report - 2017

Telecoms chapter

SPAIN

1. Competitive environment

Coverage	ES-2015	ES-2016	EU-2016
Fixed broadband coverage (total)	95%	95%	98%
Fixed broadband coverage (rural)	91%	92%	93%
Fixed NGA coverage (total)	77%	81%	76%
Fixed NGA coverage (rural)	24%	28%	40%
4G coverage (average of operators)	79%	86%	84%

Source: Broadband Coverage Study (IHS and Point Topic). Data as of October 2015 and October 2016.

Fixed broadband market

Following the consolidation that started in 2014, competition to provide electronic communication services, especially to residential customers, is currently centred around three large nationwide convergent operators (Telefónica, Vodafone-ONO and Orange-Jazztel). The operators control 85% and 95% of the retail markets for mobile and fixed broadband services respectively. Más Móvil, previously focused on the mobile market, has consolidated its position as the fourth convergent operator through the acquisition of competitors (Yoigo and Pepemobile) and part of Jazztel's FTTH network on the back of the conditions imposed by the European Commission for the merger of Orange and Jazztel. Más Móvil also signed a commercial access agreement to the Orange fixed network. In this context, the incumbent operator Telefónica's market share in the fixed broadband market continued to fall but is still above the EU average.

New entrants' DSL subscriptions by type of access (VDSL excluded)	ES-2015	ES-2016	EU-2016
Own network			0.7%
Full LLU	78.0%	78.3%	75.3%
Shared access	2.1%	2.1%	4.1%
Bitstream	19.8%	19.5%	13.4%
Resale	0.1%	0.1%	6.6%

Source: Communications Committee. Data as of July 2015 and July 2016

Fixed broadband market shares	ES-2015	ES-2016	EU-2016
Incumbent market share in fixed broadband	44.0%	43.4%	40.7%
Technology market shares			
DSL	64.2%	50.6%	66.8%
Cable	18.1%	18.8%	19.1%
FTTH/B	16.9%	29.7%	10.7%
Other	0.8%	0.9%	3.4%

Source: Communications Committee. Data as of July 2015 and July 2016

Charges of Local Loop Unbundling (monthly average total cost in €)	ES-2015	ES-2016	EU-2016
Full LLU	9.4	9.4	9.2
Shared Access	2.3	2.3	2.4

Source: Communications Committee. Data as of October 2015 and October 2016.

The take-up of fibre NEBA is increasing but is still low compared to local loop unbundling (LLU). With 3 million active lines LLU is the main wholesale access for providing broadband services. Nevertheless, demand for LLU fell significantly (by 600,000 active lines) in 2016 as alternative operators are increasingly migrating LLU-based broadband customers to their newly deployed NGA networks.

One of the characteristics of the Spanish broadband market continues to be the strong investment in FTTH networks, driven notably by Telefónica, Orange and Vodafone. According to announcements by the operators, Telefónica expects to cover 25 million building units with FTTH by 2020 while Orange-Jazztel's FTTH network is expected to cover 14 million households by 2019. The publicly disclosed investment plans of Vodafone-ONO run until March 2017, by which time that operator expects to reach 10 million households (FTTH+HFC). By contrast, the coverage of HFC cable networks (upgraded to DOCSIS 3.0 in recent years) remains relatively stable and deployment of FTTN (VDSL) is declining.

In addition, several co-investment agreements (Telefónica/Jazztel, Vodafone/Orange and Orange/Másmóvil) have helped support the deployment of FTTH networks in the last few years. Several commercial wholesale access agreements covering fibre networks were also concluded (Vodafone/Orange and Orange/Másmóvil)¹.

As a result of the above, 81% of Spanish households have access to fast broadband networks capable of providing at least 30 Mbps, although with significant differences between regions and between urban and rural areas. Growth in coverage has been particularly strong in networks supporting access at 100 Mbps or more, which are available to 79.1% of the population (with FTTP covering 62.8% of the population). Again, this percentage drops to 9.7% in rural areas.

Another characteristic trend is the increasing importance of bundles, which, as CNMC, the Spanish national regulatory authority (NRA) recognises, requires a broader regulatory analysis. Bundling is the most representative method used by operators to sell electronic communications services. 69.42% of fixed-access lines and 97.29% of broadband access come as part of a bundle. 75.51% of broadband lines include mobile services, while 34.94% of them are sold together with pay TV services. Indeed, following the acquisition of DTS by Telefónica in 2015 (and the resulting commitments), Telefónica has added a TV service to its convergent offers, as have its main competitors (notably Vodafone-ONO, Orange-Jazztel and the regional cable operators). As a result, content has become a key element of competition on the Spanish electronic communications markets and operators are investing very substantial funds to obtain premium content (e.g. broadcasting of national football leagues).

In the convergent market segment, which is the most relevant in Spain, there has been differing price increases in flagship-bundled products over the last 2 years. The main three operators followed the same strategy: price increases were justified with the inclusion of more bandwidth, higher allowances for data and voice traffic and the inclusion of premium TV content. CNMC has expressed concern over this trend. The lowest stand-alone fixed broadband price (12-30 Mbps or above) is €43.05, compared to €21.33 at EU level.² According to the Digital Economy and Society (DESI) 2017 index, Spain's stand-alone fixed

¹ Vodafone has recently announced (March 15 2017) an access agreement with Telefónica in order to gain access to its FTTH network both in regulated and non-regulated areas of Spain, that will substantially increase the number of households that will be available to Vodafone

² Source: Fixed broadband prices in Europe in 2016 (Empirica). Prices expressed in EUR/PPP, VAT included. Data as of autumn 2016.

broadband is one of the most expensive in Europe. However, as explained above this is not entirely representative of the way operators currently sell electronic products in Spain.

Mobile market

Mobile market	ES-2015	ES-2016	EU-2016
Market share of market leader	31%	31%	34%
Market share of second largest operator	27%	28%	28%
Number of MNOs	4	4	-
Number of MVNOs	23	24	-
Market share of MVNO (SIM cards)	10%	10%	-

Source: Communications Committee. Data as of October 2015 and October 2016.

Spain ranks relatively low (20th) in the DESI 4G coverage indicator, but coverage was still slightly above the EU average (86% versus 84%) in 2016. Mobile operators in Spain are allowed to use wholesale leased line products as well as duct access, both at regulated prices. While there is a trend for spectrum to be migrated from 2G and 3G to LTE, Spanish mobile network operators (MNOs) believe that the ability to trial 5G was limited in 2016 as the specifications were still under development. CNMC concludes that the availability of 700 MHz spectrum will be key for the deployment plans and to maximise coverage of 5G networks. However, CNMC has no powers in the area of spectrum. Currently 575 public entities have a general authorisation for Wi-Fi networks. Some small municipalities are deploying Wi-Fi through private operators.

As with fixed markets, Telefónica's market share continued to fall in 2016. As mentioned above, Másmóvil, a fourth convergent player and previously a mobile virtual network operator (MVNO), entered the market as a network operator in 2016 (following acquisition of Yoigo) with the aim of challenging the existing nationwide convergent operators (Telefónica, Vodafone-ONO and Orange-Jazztel) that control 85% of the retail markets for mobile.

There are approximately 30 MVNOs (full MVNOs and also SPs) active in Spain. During 2016, some of the key MVNOs successfully renegotiated their access agreements with MNOs, including Másmóvil, RCable and Telecable. In each of the three cases, the MVNO decided to change its host operator.

CNMC's decision regulating the mobile access and call origination market in Spain (market 15 of the 2003 Commission Recommendation on relevant product and service markets) is still applicable. As a result, wholesale access agreements are negotiated on that basis.³

Mobile broadband prices	ES-2015	ES-2016	EU-2016
Least expensive offer for handset (1 GB + 300 calls basket)	35	39	30
Least expensive offer for tablet and laptop (5 GB basket)	34	28	18

Source: Mobile Broadband Price Study (Van Dijk). Prices expressed in EUR/PPP, VAT included. Data as of February 2015 and February 2016.

³ However in February 2017, CNMC notified its plans to the European Commission to de-regulate the mobile access and call origination market. On 15 of March 2017 the EC communicated CNMC that it had reviewed this notifications and had no comments (See Case ES/2017/1965).

Stand-alone mobile broadband prices for handset offers have substantially increased in the past year, and are significantly above the EU average. The prices for tablets and laptops, a product that is not widely sold on the Spanish market, are also above the EU average.

2. Supporting measures for deployment and investment in high-speed networks

a. Spectrum

Harmonised band	MHz spectrum assigned ⁴	% of the harmonised band assigned
700 MHz	0	0%
800 MHz	60	100%
900 MHz	70	100%
1500 MHz	0	0%
1800 MHz	150	100%
2000 MHz paired	120	100 %
2600 MHz	190	100%
3400-3600 MHz	160	80%
3600-3800 MHz	0	0%

In Spain 69% of the spectrum harmonised at EU level for wireless broadband has been assigned. This percentage is mainly due to delays in finalising the assignment procedure for the 700 MHz, 1500 MHz and 3600-3800 MHz bands. In 2016, several frequency blocks with regional coverage in the 2.6 GHz band, and one block of 2x20 MHz with national coverage in the 3.5 GHz band, were awarded by auction.

The Ministry of Energy, Tourism and the Digital Agenda, which has all spectrum-related powers in Spain, reports that no decision has been taken yet on the 700 MHz band. This is because Spain is currently involved in bilateral negotiations with its neighbouring countries (France, Portugal, Morocco, Algeria, UK and Andorra) for the revision of the GE06 agreement. The sub-700 MHz band is to continue being assigned for use by digital terrestrial television services and PMSE equipment. According to the Ministry, the first likely 5G band is the 3400-3800 MHz band, and there are ongoing analyses of the current uses of the 24.25-27.5 GHz band.

b. EU and national investments in broadband

The Ministry of Energy, Tourism and the Digital Agenda has exclusive powers in the telecommunications field. As set out in the plan for telecommunications and very high-speed networks implementing the digital agenda for Spain, the Ministry grants financial support, essentially in the form of grants, for the roll-out of high speed (at least 30 Mbps) and very

⁴ Including guard bands.

high speed (at least 100 Mbps) networks in areas where similar infrastructures are not available or planned in the near future. The financial support is granted through the 'Programme for the extension of next-generation broadband networks' (*Programa de Extensión de la Banda Ancha de Nueva Generación*, PEBA-NGA). PEBA-NGA covers the whole country, but funding amounts and conditions such as the intensity of aid are set according to the specific conditions of each region. Some regions have set up complementary aid schemes.

Projects funded from 2013 to 2016 by the national scheme are expected to provide coverage to 2 million households, mainly through FTTH deployment, with public expenditure of €120 million⁵.

c. State of transposition of the Broadband Cost Reduction Directive

Spain finally fully transposed the Broadband Cost Reduction Directive (2014/61/EU) in September 2016 when the Spanish Government adopted Royal Decree 330/2016 on measures to reduce the cost of deploying high-speed electronic communications networks. Royal Decree 330/2016 also sets in greater detail the policy instruments that were already laid down under the Spanish Telecommunications Law (Law 9/2014) regarding access by telecommunications operators to the physical infrastructure of network operators such as other telecommunications operators, utilities (e.g. gas, electricity, water companies) or transport companies, as well as to the physical infrastructure of public administrations.

Both sets of norms give CNMC the power to solve disputes that may arise between telecommunications operators and network operators or public authorities over access to their physical infrastructure, including disputes on the economic conditions governing access.

Royal Decree 330/2016 also confers new dispute resolution powers on CNMC regarding conflicts that may arise in the context of coordination of civil engineering works, in line with Directive 2014/61/EU.

3. Regulatory function

The following issues can be pointed out.

CNMC is still exercising in practice some powers that the Law transferred to the Ministry (registry, assignment of numbering resources, end-user database management). Royal Decree 462/2015 continues to confer on CNMC the role of assessing the access and price conditions set in State aid measures laid down by any public administration. However, the CNMC report is now addressed to the Ministry, which is in charge of preparing the binding assessment of the overall compatibility of the proposed measures with State Aid rules.

The Ministry has kept its powers on net neutrality monitoring (except for dispute resolution faculties) and imposition of symmetrical obligations in buildings.⁶

Moreover, Spain is the only country in the EU that excludes an administratively capable NRA from all spectrum-related competences, which are held by the Ministry. The independent

⁵ By Ministerial Order dated 22 March 2017, this programme has been extended up to 2020.

⁶ A Government Royal Decree on symmetrical obligations is under preparation (pending final approval), that will develop further the measures that had been previously adopted in this regard by CNMC in a 2009 Decision - whereby it required all operators to provide access to in-house fibre cabling-;

NRA, which has the expertise for market analysis and competition, has a very marginal role in this area.⁷

The new implementing regulations expected for 2017 could again have consequences on the NRA's functions. In 2016, discussions started on a possible spin-off of the competition authority from the regulatory authority (CNMC currently groups together all sector regulators and the competition authority). Discussions included a new selection procedure for CNMC board members to improve the board's independence and the possible transfer of powers from the Ministry to the national regulator⁸. The President of CNMC has publicly expressed concern regarding the final outcome of this reform, especially its potential impact on the future independence of the regulator.

At present, *ex ante* regulation is imposed in nine markets in Spain: the five markets from the 2014 Recommendation, and also (a) call origination on fixed network (from the 2007 Recommendation) and three regulated markets from the 2003 Recommendation (trunk segments of leased lines, access and call origination on mobile network and broadcasting transmission services).

In addition to the co-investment and co-deployment agreements mentioned above, Spain's strong growth in the deployment of fibre networks (FTTP) has been supported from a regulatory perspective by the NRA's decision to mandate in 2008 access to the ducts of the incumbent operator Telefónica and to impose in 2009 a symmetrical obligation upon all operators to provide access to in-house fibre cabling.

As reported in the 2016 Europe's Digital Progress Report for Spain, in the last review of Spain's broadband markets, CNMC included fibre access networks as part of the relevant product market. Cable (which belongs only to market 3b) continues to be outside of the market since, according to CNMC, it does not pose a strong direct or indirect constraint at wholesale level.

Telefónica was designated as significant market power (SMP) operator. CNMC proposed to impose on Telefónica remedies that varied by: infrastructure (copper versus NGA networks); geographical areas with different levels of competition; business and (consumer) mass-market customers.

Telefónica will have to offer virtual access to its fibre network for 60-70% of Spain's population, and bitstream access over copper and fibre with no speed cap for the business market across Spain.

As for fibre, CNMC imposed an obligation for virtual local unbundled access that was differentiated on a geographical basis. Telefónica was obliged to provide virtual access to fibre (known as 'local NEBA') on the whole territory of Spain, with the exception of the 66 'ultrafast broadband (UFB) municipalities', where the wholesale services for access to civil infrastructure and terminal segments (in-house wiring) were deemed sufficient to address potential market failures. The local NEBA would be developed on the basis of the existing fibre-based NEBA service and would not be price-regulated but instead subject to an economic replicability test.

⁷ In fact, the new Royal Decree on Spectrum (Royal Decree no. 123/2017, dated 24 of February) has cut out the traditional CNMC's advisory role in the definition of the terms and conditions in new spectrum bidding processes.

⁸ The Spanish Government started an online public consultation on the reform in February 2017.

CNMC has used an innovative approach to determine the areas in which fibre regulation is needed. The Commission asked CNMC to closely monitor the markets and ensure that the outcome of the proposed methodology accurately reflects the actual level of competition. However, the Commission broadly accepts the approach both to the differentiation of areas and to the imposition of fibre access, with pricing flexibility, outside the municipalities most exposed to infrastructure competition. Remedies for markets 3a, 3b and 4 were notified in November 2016 to the Commission. After requesting information, the Commission decided not to issue any comments on the proposal.⁹

Until local NEBA is available to third parties, Telefónica must provide a fibre-based bitstream service (known as ‘fibre NEBA’) with no bandwidth limitation. Local NEBA will be technically available for a 12-month period from the adoption of the final decision by the CNMC setting the reference offer. CNMC has notably proposed to ask Telefónica to include multicast functionality in the reference offer once its technical features have been set. CNMC considers multicast functionality necessary to ensure the technical and economical replicability of Telefónica’s retail offers in the context of ‘equivalence of input’. This is especially significant given increasing competition on the basis of converged offers in the Spanish market, as mentioned above. However, implementation will need a prior lab-testing phase to be conducted in collaboration with all the operators, with the supervision of CNMC.

The CNMC approved in September 2016 the first IP interconnection reference offer for termination services in Telefónica’s network. For both fixed and mobile termination rates, Spain has applied a pure BU-LRIC cost model, in accordance with the 2009 Recommendation on Termination Rates. The current mobile termination rate is €0.00109 per minute for all mobile operators, while the fixed termination rate is €0.0817 per minute for all fixed operators. An updated version of the BU-LRIC cost model for mobile networks has already been made available for consultation in 2016.

Recommendations on NGA networks and non-discrimination have been largely taken into account in the decision on markets 3a, 3b and 4. The methodology is expected to be notified to the Commission in 2017.

4. Consumer issues

The Ministry of Energy, Tourism and the Digital Agenda, which has the main powers regarding consumer issues, reports that the main sources of consumer complaints in 2016 were pricing and billing, withdrawal from contracts, delays in service provision and non-content contracts. Some 11,442 complaints were received in the first half of 2016, 32% fewer than in the same period in 2015.

Portability

Number portability		ES-2015	ES-2016
Fixed	Number of transactions [1]	1,282,167	1,291,560
	Transactions as a % of total numbers [1]	6.8%	6.8%
	Maximum wholesale price [2]	3	3
	Maximum time under regulation (number of working days) [2]	1	1

⁹[https://circabc.europa.eu/sd/a/0d582ae8-7c2e-4387-9ff1-75a18d2d52b0/ES-2016-1951-1952-1953 %20Adopted_EN.pdf](https://circabc.europa.eu/sd/a/0d582ae8-7c2e-4387-9ff1-75a18d2d52b0/ES-2016-1951-1952-1953%20Adopted_EN.pdf).

Mobile	Number of transactions [1]	4,195,565	4,194,358
	Transactions as a % of total numbers [1]	7.7%	7.6%
	Maximum wholesale price [2]	-	-
	Maximum time under regulation (number of working days) [2]	1	1

[1] Source: Communications Committee. Data as of January to September 2015 and January to September 2016.

[2] Source: Communications Committee. Data as of October 2015 and October 2016.

In 2016, CNMC opened a procedure to improve the mobile number portability cancellation process and establish equivalent measures to those already imposed in 2015 for fixed number portability. The measures relate in particular to the information and guarantees that operators must fulfil to honour the user's rights to cancel the porting request. In December 2016 a new revision of fixed number portability specifications was launched to improve the provision of several porting processes.

Roaming

From 30 April 2016, the Roaming Regulation (EU) No 531/2012, as amended in 2015, provided for a default reduced transition retail price ('Roam Like At Home+', or 'RLAH+').

In the transitional period running until 14 June 2017, the NRA monitors roaming providers' compliance with EU roaming rules, in accordance with Articles 6e and 6f of Regulation (EU) 2015/2120. Based on the findings of this monitoring, the President or the Office of the NRA may order roaming providers to terminate unlawful conduct or a breach of the official resolution and restore the situation that existed previously, if deemed necessary. According to Sections 48-49 of Act C of 2003, CNMC could impose fines on the operator/managers for breaches of a Laws and Regulations governing electronic communications services. There were no issues or complaints reported in 2016.

According to article 18 of Regulation (EU) 512/2012, Member States shall lay down the rules on penalties applicable to infringements of the Regulation, and shall take all measures necessary to ensure that they are implemented. In this regard, the general sanctioning regime provided for in the Spanish Telecommunications Act (Law 9/2014) would also apply to breaches of the Regulation by operators.

Right before the entry into force of the transitional RLAH+ system on 30 April 2016, the average retail Eurotariff price for roaming was €0.187 per minute for outgoing calls and €0.049 per minute for incoming calls (first quarter of 2016). Alternative tariffs were cheaper for outgoing calls (€0.142 versus the EU price cap of €0.19) and more expensive for incoming calls (€0.053 EUR versus €0.049). For text messages, the average price was €0.057 (the price cap being €0.06). For data, the average price per MB in the first quarter of 2016 was €0.178, well above the €0.047 EEA average. In 2016 no issue or complaint was reported by the Spanish authorities.

Transparency

No new transparency instruments were set up in 2016. Apart from tariffs, operators continue to be obliged to publish the levels of quality of service obtained every 3 months. The Secretary of State for Information Society publishes comparative results for the different operators. In Spain there are several independent comparison tools available. These usually include: (i) prices and (ii) quality of services and main features of the offer (number of

minutes or data volume included). Usually operators offer online consumption control, both in prepaid and contract services

Net neutrality

With the adoption in November 2015 of Regulation (EU) 2015/2120, net neutrality is fully harmonised at EU level with directly applicable rules which do not need to be transposed into national law. Some parts of the Spanish *Ley General de Telecomunicaciones* regarding penalties and transparency are directly applicable also in the net neutrality field. Neither CNMC nor the Ministry of Energy, Tourism and the Digital Agenda, which has exclusive powers on net neutrality, reported ongoing issues on net neutrality other than the case-by-case analysis of zero-rating offers to be reported in 2017. No secondary legislation or transfer of powers is currently planned, despite the ongoing debate on reforming the regulator (see above).

Universal service

There were no changes in 2016 to the scope or financing of the universal service, which already includes broadband. During the third and fourth quarters of 2016, the Ministry ran three competitive processes to designate the universal service provider for: (i) the connection to the public telephone network at a fixed location; (ii) directories; and (iii) public pay telephones, but they were declared void. The Ministry opted for a direct designation process maintaining Telefónica as the universal service provider for connection and directories (during 3 years, the first element, and 1 year, the second one) and Telefónica Telecomunicaciones Públicas (TTP) for public pay telephones (during 1 year).

112 and access for disabled end-users to emergency services

In Spain, the autonomous communities are in charge of managing calls to 112. According to the last Communications Committee (COCOM) 112 Implementation Report, calls to the emergency number 112 are answered within 5 seconds, and disabled users can count on alternative means of access including text messages, assisted calls (chat) and fax. Some autonomous communities have started developing specific apps to grant access to disabled end-users. According to the latest E-communications household and telecom single market survey, 72% of the Spanish population know they can use 112 everywhere in the EU.

5. Conclusion

Based on its relatively well deployed fibre networks, Spain is well positioned to deliver further on the aim of ensuring that all Spanish citizens benefit from a future-proofed and innovative digital economy. Within the context of a growing ultrafast broadband technology and the increasing bundling of electronic communications products, the new institutional configuration that is currently being discussed in Spain will be key to tackling the interrelated mobile and fixed broadband pricing issues. Fully achieving the socioeconomic potential of fibre networks and 5G will depend on creating a regulatory and policy environment that can effectively address old problems in the new technological context.