making communications work
for everyone

The International Communications Market 2016

2 Comparative international pricing

Contents

2.1 Comparative international pricing

2.1.1 Overview

In this section we compare UK communications service prices with those in France, Germany, Italy, Spain and a representative state of the US (we use Illinois as it is broadly representative of the US as a whole).

Our methodology, developed with pricing consultancy Teligen, is based on the use of services by five 'typical' households. It uses a pricing model that matches tariffs to these usage requirements. The methodology was developed to address the difficulties in comparing prices resulting from issues such as service bundling, tariff complexity and promotional discounting.

We include an overview of our methodology (which is required in order fully to understand our findings), a summary of those findings by service, followed by analysis on a household-by-household basis. The full methodology is in Appendix A of the *Technical appendix*.[69]

UK prices compare well overall

- The UK ranked second among our six comparator countries in 2016, unchanged since 2015, with only France performing better when looking at a combination of stand-alone, bundled and 'lowest-available' prices.
- Low prices in France were, to a large extent, due to it having the cheapest bundled services among our six countries. Consumers in all countries were able to pay lower prices by bundling services, but savings in the UK were comparatively low.
- Low prices in the UK were largely due to comparatively low-priced mobile phone services, particularly for tariffs that include a high data allowance.
- In addition to low mobile prices, the UK also benefited from the cheapest 'weighted average' and 'lowest-available' dual-play standard broadband and fixed voice bundle prices, among our comparator countries in 2016. However, it compared less well for similar bundles of services that included a superfast broadband connection.
- In general, UK stand-alone and bundle prices increased in nominal terms in 2016,[70] although the UK did benefit from falling prices for higher-use mobile services. There were similar patterns in other countries, although France and Italy benefited from notable declines in dual-play (fixed voice and fixed broadband) bundles, and pay-TV prices.
- The table below ranks our comparator countries in terms of 'weighted average' stand-alone, 'weighted average' bundled, and 'lowest-available' pricing (including bundles) across the five household usage profiles used in our analysis.
- The UK had the second-lowest lowest prices among our comparator countries for all three of these metrics in 2016. France overtook the UK in terms of stand-alone prices during the year, ranking first for all three metrics, and overall.
- While the UK's overall rank was unchanged, there was evidence of weakening performance compared to other comparator countries; the UK's average position

[69] https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international

[70] Prices are reported in nominal terms. OECD data show that the CPI change in the year to July 2016 was in the range ±1% in all of the countries included in this chapter of the report. Analysis shows that adjusting for inflation does not change any country rankings in 2015.

across all of the household usage profiles and pricing metrics used in our analysis fell from ranking 1.8 in 2015 to 2.3 in 2016. In fact, in 2016 the UK's rank dropped on seven occasions compared to 2015, while there was only one instance where it improved.

Figure 2.1 Summary of 'weighted average' and 'lowest-available' pricing: 2016

Overall pricing rank			'Weighted average' stand-alone pricing			'Weighted average' bundles service pricing			'Lowest available' pricing, including bundles		
1	-	France	1	↑	France	1	-	France	1	-	France
2	-	UK	2	↓	UK	2	-	UK	2	-	UK
3	↑	Germany	3	-	Germany	3	-	Italy	3	-	Germany
4	↓	Italy	4	-	Italy	4	-	Germany	4	-	Italy
5	-	Spain	5	-	Spain	5	-	Spain	5	-	Spain
6	-	USA	6	-	USA	6	-	USA	6	-	USA

Source: Ofcom, using data supplied by Teligen

UK prices for stand-alone fixed voice services that can be used with broadband are comparatively expensive

- The total UK 'weighted average' stand-alone fixed voice price of the four landline connections included in our analysis was the second cheapest among our five comparator countries in 2016.[71]
- However, the cheapest option for all four connections was a BT tariff that cannot be used in conjunction with an ADSL or fibre broadband service, and is therefore suitable for only a small proportion of UK households, given that most households with a landline have a fixed broadband connection.
- Excluding this tariff from the analysis results in the UK having the second most expensive total 'weighted average' stand-alone fixed voice price for the four usage profiles used in our analysis.
- The UK was also second most expensive in terms of the total 'lowest available' stand-alone fixed voice prices.
- On a few occasions, the least expensive option for households that did not need fixed broadband connectivity included buying bundled services that included fixed broadband, as these were cheaper than the equivalent stand-alone (solus) voice services.

Prices for higher-use mobile phone connections fell substantially in the UK in 2016

- The total 'weighted average' price of the eight mobile phone connections used in our analysis fell by 38% in the UK in 2016, although this was largely due to a 64% fall in the 'weighted average' price of the highest-use connection that we have included in our analysis. There were notable falls in the price of the highest-use connections in our other comparator countries during the year.

The UK tended to perform better for lower use households

- In terms of the total price of fulfilling our household's usage requirements, the UK tended to perform better for the lower-use households, and better in terms of stand-alone prices than for bundled and 'lowest-available' prices.
- The UK had the lowest 'weighted average'[72] stand-alone price for the late adopter household, and the cheapest 'lowest-available'[73] price for the basic needs household,

[71] BT is the only UK provider whose stand-alone fixed voice services are included in our analysis.

but tended to rank less well for households that required a superfast broadband connection.

- France had the lowest prices for most households and metrics, mainly because it benefits from comparatively cheap mobile, pay-TV and bundled service prices, the latter partly due to the availability of triple-play services delivered over naked-DSL and fibre. The US had the highest price for all three metrics across all five household usage profiles in 2016.

Figure 2.2 Summary of 'weighted average' stand-alone, 'weighted average' bundled, and 'lowest-available' household usage profile pricing: 2016

Weighted average stand-alone service pricing (£ per month)

Household	Rank		Country	Price	Change
Basic needs household	1	↑	GER	43	3
	2	↓	UK	44	6
	3	-	FRA	44	1
	4	↑	ESP	48	-3
	5	↓	ITA	49	2
	6	-	USA	72	-14
late adopter household	1	-	UK	80	6
	2	-	FRA	89	-13
	3	↑	ITA	105	-14
	4	↓	GER	112	-5
	5	-	ESP	162	16
	6	-	USA	224	27
Mobile power-user household	1	↑	FRA	96	-108
	2	↓	UK	122	-71
	3	↑	ITA	185	-92
	4	↓	GER	238	-1
	5	↑	ESP	244	-126
	6	↓	USA	298	-21
Connected family household	1	↑	FRA	178	-8
	2	↓	UK	181	-1
	3	↑	ITA	272	16
	4	↓	GER	281	39
	5	-	ESP	351	31
	6	-	USA	427	46
Sophisticated couple household	1	-	FRA	131	-14
	2	-	UK	143	-5
	3	-	ITA	162	-9
	4	-	GER	208	-4
	5	-	ESP	239	6
	6	-	USA	342	26

Weighted average bundled service pricing (£ per month)

Household	Rank		Country	Price	Change
Basic needs household	1	↑	FRA	33	-4
	2	↓	UK	36	2
	3	-	GER	46	2
	4	-	ITA	51	5
	5	-	ESP	57	-1
	6	-	USA	91	5
late adopter household	1	-	FRA	36	-4
	2	-	UK	57	1
	3	↑	GER	59	-13
	4	↓	ITA	60	-10
	5	-	ESP	93	0
	6	-	USA	148	-18
Mobile power-user household	1	-	n/a	-	-
	2	-	n/a	-	-
	3	-	n/a	-	-
	4	-	n/a	-	-
	5	-	n/a	-	-
	6	-	n/a	-	-
Connected family household	1	-	FRA	128	7
	2	↑	ITA	146	-29
	3	↓	UK	149	8
	4	-	GER	212	31
	5	-	ESP	213	-38
	6	-	USA	335	-11
Sophisticated couple household	1	-	FRA	85	-3
	2	-	ITA	86	-6
	3	-	UK	103	-4
	4	-	GER	155	13
	5	-	ESP	164	-21
	6	-	USA	268	-31

'Lowest available' pricing including bundles (£ per month)

Household	Rank		Country	Price	Change
Basic needs household	1	↑	UK	27	-1
	2	↑	FRA	28	-5
	3	↓	GER	31	3
	4	↑	ESP	37	-5
	5	↓	ITA	37	4
	6	-	USA	43	-1
late adopter household	1	-	FRA	16	-13
	2	↑	GER	45	-11
	3	↓	UK	49	8
	4	-	ITA	54	-3
	5	-	ESP	75	-9
	6	-	USA	101	-51
Mobile power-user household	1	-	FRA	63	-6
	2	-	UK	101	-7
	3	↑	ITA	117	-78
	4	↓	GER	178	-9
	5	-	USA	213	-12
	6	-	ESP	215	-73
Connected family household	1	-	FRA	117	32
	2	↑	ITA	128	-11
	3	↓	UK	142	6
	4	-	GER	155	-12
	5	-	ESP	180	-28
	6	-	USA	322	-8
Sophisticated couple household	1	-	FRA	73	-1
	2	-	ITA	77	-6
	3	↑	GER	101	-23
	4	↓	UK	103	-4
	5	-	ESP	119	-51
	6	-	USA	177	-62

Source: Ofcom, using data supplied by Teligen

[72] This is the average of the lowest price offered by each operator that provides a suitable bundled tariff in each country, weighted by their market shares

[73] This was the lowest price that a consumer can pay for a service/basket of services, including, where appropriate, 'bundled' services.

Promotional discounting can result in significant savings for UK consumers

- A trend that we have identified in UK communications service pricing over recent years is the increasing importance of promotional discounting (i.e. new customers receiving a reduced price for a set amount of time when taking a new service). The analysis in this report includes such promotions, with average monthly prices calculated over each tariff's minimum contractual term.
- Compared to list prices, UK promotional discounts resulted in an average price reduction of 13% in the total 'weighted average' bundled price across the household usage profiles that required fixed telecoms services in 2016. This proportion was similar to those in Italy and France (15% and 14% respectively), while among our other comparator countries the proportion ranged from 6% in Spain to 9% in Germany.
- While the average saving across the relevant baskets was 13% in the UK in 2016, this is an average across the total relevant household's total 'weighted average' bundled prices, including any out-of-bundle service use and services that were not discounted. As such, the proportional discounts on the monthly fees of those services/bundles that did benefit from discounting will be higher.

2.1.2 Methodology

The basic principles of the methodology

We constructed five household usage profiles, and for each of these defined an appropriate basket of communications services. We have made some changes to the household usage profiles used in the analysis in this report in order to reflect changes in the use of communications services, such as increasing the requirements for fixed and mobile data use (and the speed/technology of these connections), as well as reducing the requirement for SMS messaging. The same household usage profiles are used in the analysis of the 2015 and 2016 prices, to enable a like-for-like comparison between years.

Figure 2.3 Summary of household usage profiles used in the analysis[74]

	'Typical' household type	Summary	Fixed voice	Mobile voice	Mobile messaging	Mobile handset data	Fixed line broadband	Mobile broadband	Television
1	Basic needs	A low use household with basic needs	Medium use	Low use	None	None	None	None	Free-to-air with HD
2	Late adopters	A broadband household with basic needs	High use	Low use	Low use	Low use	Low use	None	Basic pay-TV with HD & DVR
3	A mobile 'power user'	A mobile-only household	None	High use	High use	High use 4G	None	High use	Basic pay-TV with sports, HD & DVR
4	Connected family	A family household with multiple needs	Medium use	Medium use	Medium use	Medium use- some 4G	Medium use superfast	None	Premium pay-TV with sports, films HD & DVR
5	Sophisticated couple	An affluent two person household	Low use	Medium use	Medium use	Medium use 4G	High use ≥100Mbit/s	None	Basic pay-TV with films, HD & DVR

Source: Ofcom

We included a wide range of variables within the services in each household usage profile, so that they represent actual use by consumers. For example:

- Fixed voice minutes were distributed by whether they were to fixed or mobile lines, by call distance (local, regional, national and international, including a range of international destinations) and by time of day (day, evening, weekend). Non-geographic calls were excluded from the analysis.

- Mobile calls (and messages) were split between fixed line, 'on-net' and 'off-net' mobiles, selected international destinations (for some users), and voicemail.

- Call set-up costs and unit, per-second and per-minute charging were incorporated where relevant, and a function for averaging cost for different of call lengths was used, based on an approach used for price benchmarking by the Organisation for Economic Co-operation and Development (OECD).

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74 Note: More detailed summaries of each household usage profile's usage requirements can be found in Figure 2.12, Figure 2.16, Figure 2.20, Figure 2.23 and Figure 2.27.

- Incoming calls to mobile phones were included, in recognition of the different charging mechanism in the US.
- The broadband components were defined both by minimum headline speed and by minimum data requirements.
- The television element includes the hardware cost but, in a change from previous years, we exclude the TV licence fee (see section 1.1.6 of Appendix A in the *Technical appendix*[75] for more details).
- Because of difficulties in comparing channels and their programmes, four tiers of pay-TV were considered, each of which requires HD content and a DVR:
    - The most basic pay-TV service available that offers channels over and above the channels available on free-to-air TV.
    - A service including basic pay-TV channels over and above those available on free-to-air TV and premium sports content (top-tier football matches or NFL in the US).
    - A service including basic pay-TV channels over and above those available on free-to-air TV and premium film content (first-run Hollywood films).
    - A premium service defined as a top-price entertainment package combined with premium sports and film content.

For the most basic household, terrestrial free-to-air (FTA) TV services were considered, but actual take-up of pay-TV services varies between markets, based on the FTA and pay-TV services that are available. IHS data included in the TV section of this report (Chapter 4) shows that, in 2015, the proportion of households that took pay-TV services ranged from 30% in Spain to 84% in the US among the six countries included in our price comparisons (in the UK it was 62%).

Hardware costs

The cost of broadband modems and routers, digital set-top boxes and DVRs were included in household usage profiles (and amortised over an appropriate period in order to attribute a monthly cost). This was necessary because such equipment is often inseparable from the service price, as operators frequently include subsidised or ‘free’ equipment (for example, a Wi-Fi router), but seek to recoup the cost of these devices from subscriptions and service payments across the life of a contract. For similar reasons, we included connection and/or installation costs.

In a change from previous reports, we have excluded costs relating to mobile handsets from the analysis. The reasoning behind this is that many advanced smartphone devices cost hundreds of pounds, often more than the total cost of the services that are consumed on them over the typical two-year minimum contractual period. As a result, the inclusion of the handset cost can distort the mobile pricing results. By excluding handset cost from the analysis, we hope that it will give a more accurate representation of mobile service pricing. Although a wide range SIM-only tariffs are available in all of the comparator countries, a downside of our revised methodology is that, in most cases, the analysis is based on a minority of the available services (i.e. SIM-only tariffs).

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[75] https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international

Tariff data

In July 2016, details were collected of every tariff and every tariff combination (including bundled services) from the three largest operators by retail market share in each country (and from more than three operators, if this was required to ensure a minimum coverage of 80% of the overall market). Bundled tariffs (i.e. those that incorporate more than one service) were also collected. Only those tariffs which were published on operators' websites were included (i.e. the analysis excludes bespoke tariffs which are only offered to certain customers).

Our model identified the tariffs that offer the lowest price for meeting the requirements of each of the households, with all prices converted to UK currency using purchasing power parity (PPP) adjustment based on OECD comparative price levels and exchange rates as at 1 July 2016.

Analysis

We undertake three types of analysis for each household usage profile:

- **'Weighted average' stand-alone pricing:** This is the average of the lowest stand-alone price for each individual service offered by each operator in each country, weighted by their market shares. Although this provides a useful comparison of the relative costs of communications services, a limitation of this analysis is that an increasing number of providers do not offer stand-alone services.

- **'Weighted average' bundle pricing:** This is the average of the lowest bundled service prices (including separate stand-alone services, where a bundle does not include all of the services required by the household) offered by each operator that provides a suitable bundled tariff in each country, weighted by their fixed broadband market shares. It should be noted that fixed broadband shares are used to weight the results, regardless of whether or not the bundles in question include fixed broadband, and we do not undertake this analysis for the mobile power-user (mobile-only) household usage profile.

- **'Lowest-available' pricing:** This is the lowest price that a consumer can pay for this basket of services, including, where appropriate, 'bundled' services (i.e. buying more than one service in a package, for example a 'triple-play' bundle consisting of fixed voice, broadband and pay TV). This analysis is important in order to provide a true picture of the position of consumers in each market, since they increasingly buy multiple services from single operators.

There are, however, two drawbacks to this type of analysis.

- 'Bundled' service offerings are typically not available to all consumers, as they are often limited to geographic areas where premises are connected either to a cable network or an unbundled telephone exchange.

- Even in areas where these services are available, take-up may be low. Therefore, although the 'lowest-available' price provides insight into the lowest prices available to some customers, it is not as good a reflection of the prices that consumers are actually paying as the 'weighted average' analysis.

Limitations of the analysis

We consider that a basket-based, multi-platform approach is the most useful way to compare international pricing of communications services. However, in addition to the points raised above, there are some other limitations to our methodology, and the following notes and caveats are important in interpreting the analysis below.

- The analysis assumes a rational consumer with full understanding of their usage requirements, who is prepared to shop around and undertake some complex calculations to identify the best value tariff. In reality, many consumers do not act in this way, and few will be on the lowest-cost combination of services for their usage profile.

- In looking only at tariffs available from the largest operators in each country, lower prices that might be available from smaller operators are not included. Nevertheless, we believe that using the prices of the largest operators is appropriate, both because they are the best reflection of the general consumer experience and because their pricing both defines, and is defined by, the competitive environment in which they operate.

- Although we have been as comprehensive as possible, tariffs are often highly complicated and there are some components which we have been unable to incorporate into our model. For example, some benefits are available only to certain types of consumers, such as *BT Basic* in the UK, which offers lower-price line rental to low-income consumers in receipt of certain benefits.

- In order to calculate the 'weighted average', we have used market share calculations based on operators' retail customers. Market share calculations are based on the overall subscriber base, not the subscriber base for the particular tariff (for which figures were not available). In addition, the 'average bundle' pricing calculation uses providers' fixed broadband market shares, regardless of whether or not the bundle includes fixed broadband.

- Pay-TV services are a component of four of the household usage profiles we use in the analysis. However, it has not been possible to compare like-for-like subscriptions, principally because of differences in the composition of basic and premium channels across the six countries. Consequently, quantitative comparison of international TV pricing is arguably less meaningful than for telecoms services. This is also an issue in the pricing of 'triple-play' services, where there is wide variation in the types of TV content.

- For television services, there are only two operators with nationwide coverage and/or significant market share in some countries (or only one, for some premium TV offerings). In these instances, we have identified the cheapest tariff from each of them and calculated a 'weighted average' based on their market shares.

- Some services (e.g. LLU-based fixed telecoms services and some broadband services) are not available nationally, and some providers operate only in certain areas. This is particularly true for services that are available only where local exchanges have been unbundled, and for IPTV, which requires a high-speed broadband connection.

- We have not defined whether the mobile phone component in a household usage profile is pre-pay or post-pay. We believe this enables better international comparison, given the very different pre-pay/ post-pay splits in different countries (for example, over 80% of mobile connections in Italy are pre-pay, but less than 20% in France are pre-pay). However, a consequence of this is that the analysis does not recognise the different characteristics of the services; for example, a pre-pay mobile may be the only option available to consumers with a poor credit rating and may also offer advantages to those whose use varies from month to month.

- Representative pricing in the US as a whole is difficult, due to large regional variations that result from local incumbent telecoms operators and cable operators offering localised prices for fixed-line services. We used tariffs available within the state of Illinois, which we chose because it is broadly representative of the US as a whole in terms of wealth and rural-urban split. Nevertheless, the US pricing data included in this report should not necessarily be viewed as representative of the whole country.

- In order to ensure that the changes we identify within countries have been driven by changes in the market (rather than simply by changes in the currency exchange rate), we have used the same PPP-adjusted exchange rate in 2016 and applied it to 2015 data. This means that there may be some distortions in the relative positions of countries, compared to the positions reported in 2015.

- The prices are reported in nominal terms. OECD data[76] show that the CPI change in the year to July 2016 was in the range ±1% in all six of the countries included in the analysis in this chapter of the report, and adjusting for inflation does not change any country rankings in 2015.

Report structure

We start the analysis by looking at the individual components of our five household usage profiles, in order to compare the relative prices of services across these countries. This is both in terms of the lowest prices available when they are purchased on a stand-alone basis, the 'weighted average' stand-alone cost across the largest operators in each market, and dual-play fixed voice and fixed broadband bundles.

Then we look in more depth at the cost of fulfilling the requirements of each of our household usage profiles in each nation, in terms of 'weighted average' stand-alone prices, 'weighted average' bundle prices and also the 'lowest-available' price.

2.1.3 Pricing, by service

Stand-alone (solus) fixed voice summary

As consumers increasingly buy voice services in a 'bundle' with broadband, fewer standalone fixed voice services are available. In the UK, BT was the only provider included in the pricing database that offered stand-alone (solus) fixed voice services in July 2015 and July 2016, so the UK's 'weighted average' and 'lowest-available' stand-alone prices were identical.[77] This was also the case in France in 2016; Orange was the only provider whose stand-alone landline services were included in the pricing model.

The UK had the second lowest total 'weighted average' stand-alone prices. The lowest overall prices were found in the US, which was the only country where prices fell (by 5%) between 2015 and 2016. Conversely, the UK had the largest increase in the total 'weighted average' stand-alone price during the year, up by 6%.

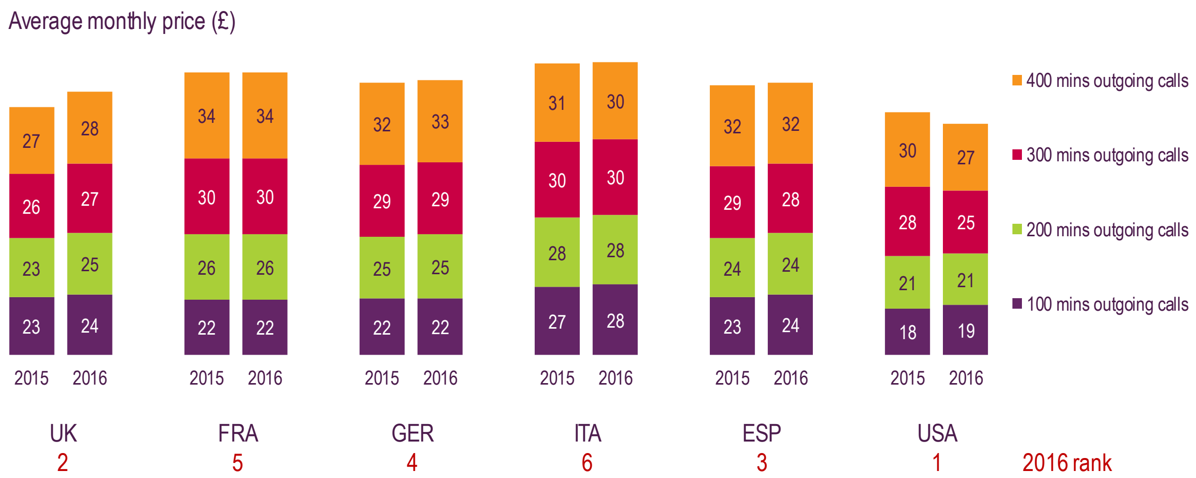
[76] https://data.oecd.org/price/inflation-cpi.htm

[77] Sky and Virgin Media also offer stand-alone fixed voice services, but these are excluded from the analysis as they are not offered for sale on their websites, and there are other UK operators of stand-alone landline services that are not included in the Teligen model.

BT's *Home Phone Saver 2019* service (which is a voice tariff, only available to consumers buying a standalone service, and offers line rental and inclusive UK geographic calls for £21.99 a month, with the price held until 2019) was the cheapest UK tariff for all four of our households' connections (with an additional *Friends & Family International* call add-on for the two higher-use connections). In all cases, this tariff was cheaper than comparable services that can be used with an ADSL or fibre broadband connection, including line rental saver tariffs. Excluding *Home Phone Saver 2019* from the analysis resulted in the UK having the second-highest total 'weighted average' stand-alone price for these four connections among our countries in 2016 (after France), and a 10% increase in this total during the year.

To a large extent, increasing UK fixed voice prices over recent years have been the result of line rental price increases. For example, in the year to July 2016, BT's standard monthly charge for its most basic landline service (*Unlimited Weekend Plan*, which includes bundled weekend calls to landlines) increased by 12% to £18.99. There were similar percentage increases in the price of T-Home's basic *Call Start* service in Germany and AT&T's *Primary Residential Line* service in the US during the year (11% and 12% respectively). Prices were unchanged for Orange's *Principal* service in France, Telecom Italia's *Voce* service in Italy and Movistar's *Linea Individual* service in Spain.

Figure 2.4 'Weighted average' solus fixed-voice pricing: 2015 and 2016



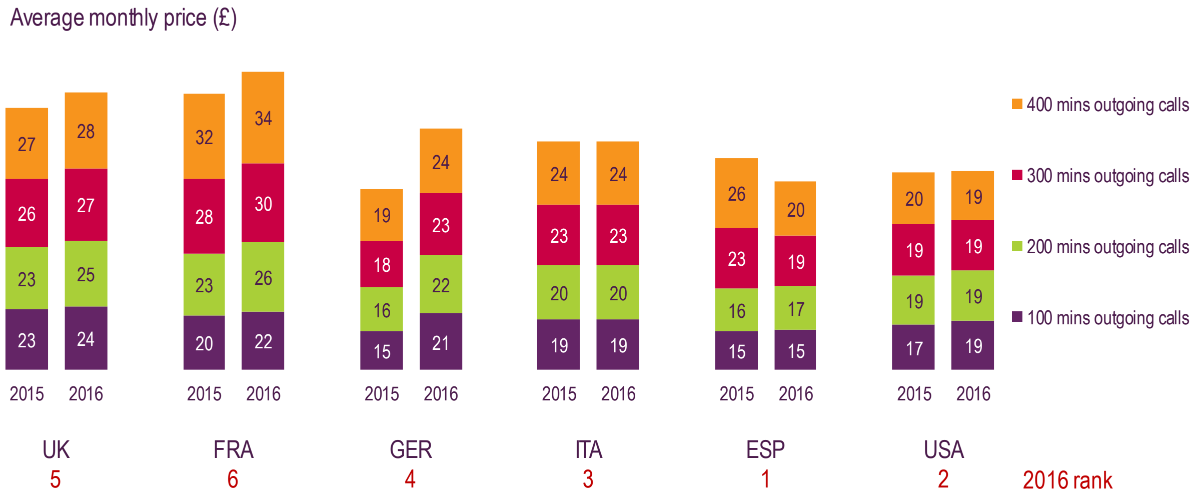
Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of cheapest tariff from each operator by market share in each country; July 2015 and July 2016; PPP adjusted

The cheapest total 'lowest-available' price for the four fixed voice connections required by our household usage profiles was in Spain in 2016. The UK had the second-highest total 'lowest-available' price for these connections in 2016, after France.

The largest increase in total 'lowest-available' stand-alone fixed voice service prices for the four households was in Germany, where the total price increased by 33% during the year. This was largely because Kabel Deutschland's tariffs, which had been the lowest prices option for three of the four households in 2015, were withdrawn following Kabel Deutschland's acquisition by Vodafone. In the UK the total 'lowest-available' price increased by 6% during the year, the third largest increase after Germany and France (8%).

The UK continued to have the second most expensive total 'lowest available' stand-alone price for these four connections in 2016 when *Home Phone Saver 2019* was excluded from the analysis.

Figure 2.5 'Lowest-available' solus fixed-voice pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: July 2015 and July 2016 data; PPP adjusted

2.1.4 Stand-alone mobile summary

Our five household usage profiles include eight mobile phone connections which vary in terms of usage requirements and the distribution of call and messaging volumes (e.g. the proportion of calls which are to national mobiles, to national geographic numbers and to international numbers).

Figure 2.6 Summary of mobile connections used in the analysis

	Outbound voice minutes per month	Outbound SMS per month	Data use per month	4G required
Connection 1	50	None	None	No
Connection 2	50	25	100MB	No
Connection 3	150	100	500MB	No
Connection 4	250	50	1GB	No
Connection 5	200	200	2GB	Yes
Connection 6	300	150	3GB	Yes
Connection 7	100	250	5GB	Yes
Connection 8	1,000	300	15GB	Yes

Source: Ofcom

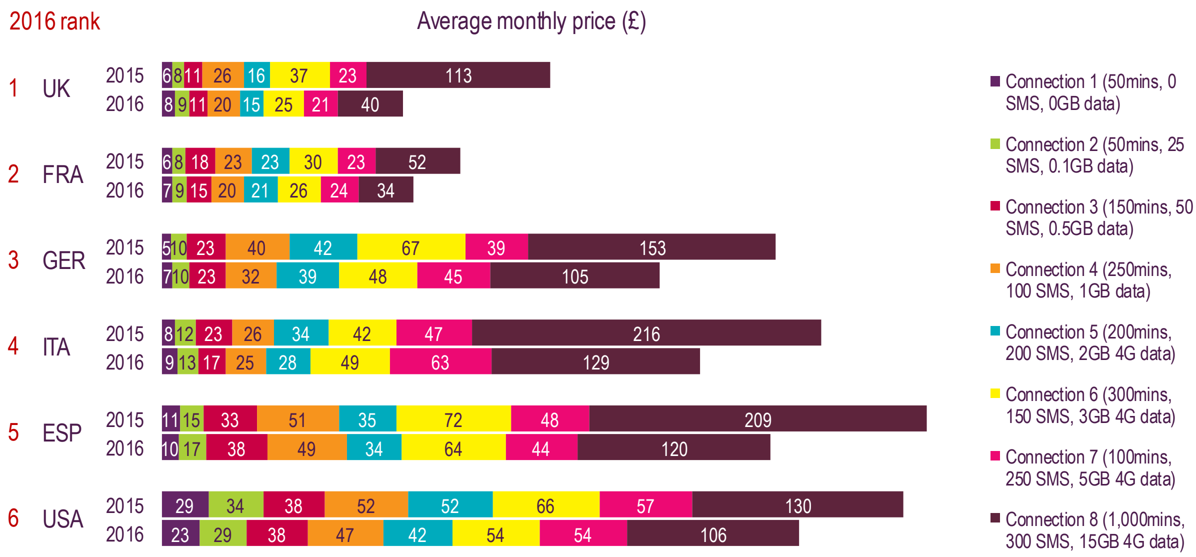
Our analysis shows that, overall, the UK had the lowest 'weighted average' price for the eight mobile connections used in our analysis in 2016, due to a 38% fall in the total price during the year.

This fall was mainly due to a 64% decline in the 'weighted average' price of the highest usage connection (Connection 8) which requires 1,000 minutes of outgoing calls, 300 SMS messages and 15GB of 4G data per month. This reflects that very high data allowances are becoming more common, whereas previously they were niche (and expensive) tariffs aimed at a small segment of users. 'Weighted average' prices fell for six of the eight connections used in the analysis in the UK during the year; for the two lowest-use connections (Connections 1 and 2) they increased (by 37% and 14% respectively).

The total 'weighted average' price for all eight connections fell in all six of our countries in 2016, again largely due to falling prices for the highest-use connection, due to the increasing availability of SIM-only tariffs that include larger bundled data allowances. Despite these declines, the 'weighted average' price of Connection 8 remained high in most countries in 2016; the UK and France were the only comparator countries in which this was less than £100 per month.

In most of our comparator countries, there were price increases for the lower-use mobile phone connections that are included in our analysis. The US was the only country where the total 'weighted average' price of Connections 1 and 2 fell in 2016, and among our other comparator countries, the 'weighted average' price increase for these two connections ranged from 5% in France to 24% in the UK. In the UK, these increases were largely due to operators increasingly focusing on post-pay tariffs, and data rather than voice use.

Figure 2.7 'Weighted average' stand-alone mobile pricing: 2015 and 2016



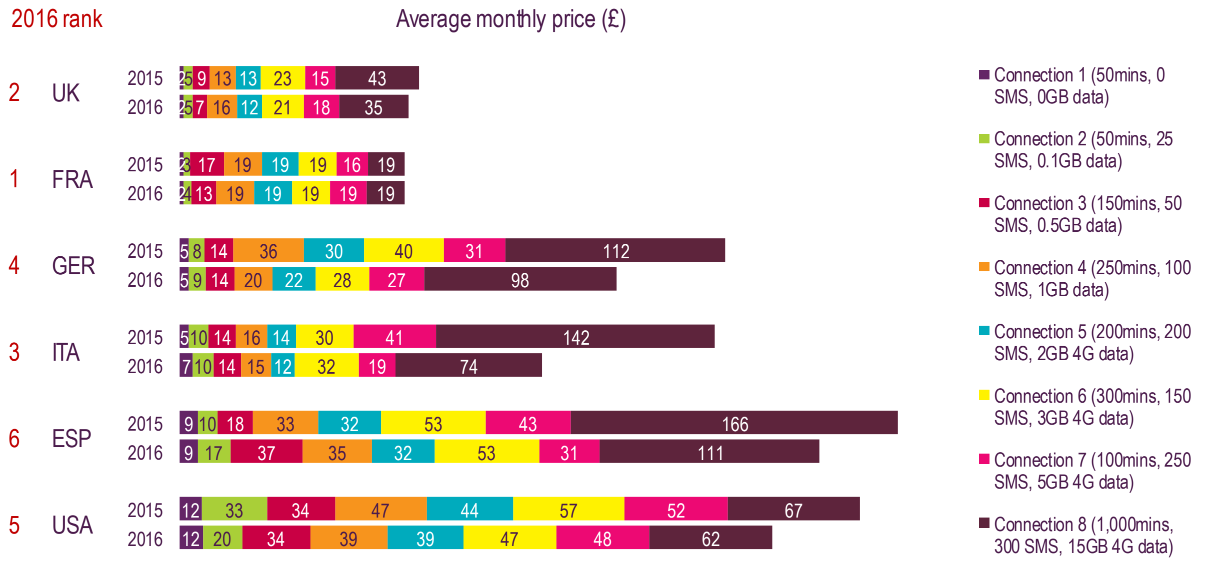
Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value tariff from each of the largest operators by market share in each country; July 2015 and July 2016; PPP adjusted.

The total 'lowest-available' price of our eight connections fell in all of our six countries in 2016, with France having the cheapest total price during the year. The largest fall in the total 'lowest-available price' for the eight connections during the year was a 32% decrease in Italy, which was, to a large extent, the result of a £68 per month (48%) fall in the 'lowest-available' price of the highest-use connection (Connection 8).

In the UK, which had the second-cheapest total 'lowest-available' price for all eight connections in 2016, the total price fell by 5% during the year, due to falling 'lowest-available' prices for three of our eight connections. The total post-pay UK 'lowest-available' price for our eight connections also fell by 5% during the year, while the total pre-pay 'lowest-available' price fell by 30%. Despite the higher rate of decline in pre-pay prices during the year, the total pre-pay 'lowest-available' price in 2016 was 7% more expensive than the total 'lowest-available' post-pay price.

The UK ‘lowest-available’ prices for the two lowest-use connections (Connections 1 and 2) were unchanged in 2016, while there were increases in the ‘lowest-available’ prices for Connections 4, 5 and 7. Virgin Mobile, EE and Three each offered two of the eight UK ‘lowest-available’ tariffs for our connections in 2016.

Figure 2.8 ‘Lowest-available’ stand-alone mobile pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: July 2015 and July 2016 data; PPP adjusted.

2.1.5 Dual-play fixed-line and fixed broadband bundle summary

It is difficult to compare fixed broadband prices, as in all our comparator countries, fixed broadband is typically bought alongside a fixed voice service. Therefore, we do not look at stand-alone fixed broadband services in this report. Instead, we compare the prices available for a ‘dual-play’ bundle of broadband and voice services using a basket than includes a minimal number outgoing voice calls.[78]

There are some instances in this analysis where the ‘weighted average’ price of higher speed and usage services is lower than that of those with lower speeds and usage, notably in France in 2016. In most cases, this relates to those providers which offer the various service tiers used in our analysis in each country, and their comparative prices.

For example, while there were three ISPs included in the pricing model which offered services that fulfilled the requirement of the ≥10Mbit/s, 25GB connection in France in 2016, only one, SFR, offered dual-play services that suited the needs of the ≥30Mbit/s and ≥100Mbit/s service combinations. In fact, SFR’s discounted *Offre Box THD SFR by Numericable* service, which included an ‘up to’ 100Mbit/s fixed broadband connection, was its lowest-priced option for all three service combinations. As this cost less than its competitors’ cheapest services for the ≥10Mbit/s service, the two higher-use connections have a lower ‘weighted’ average price.

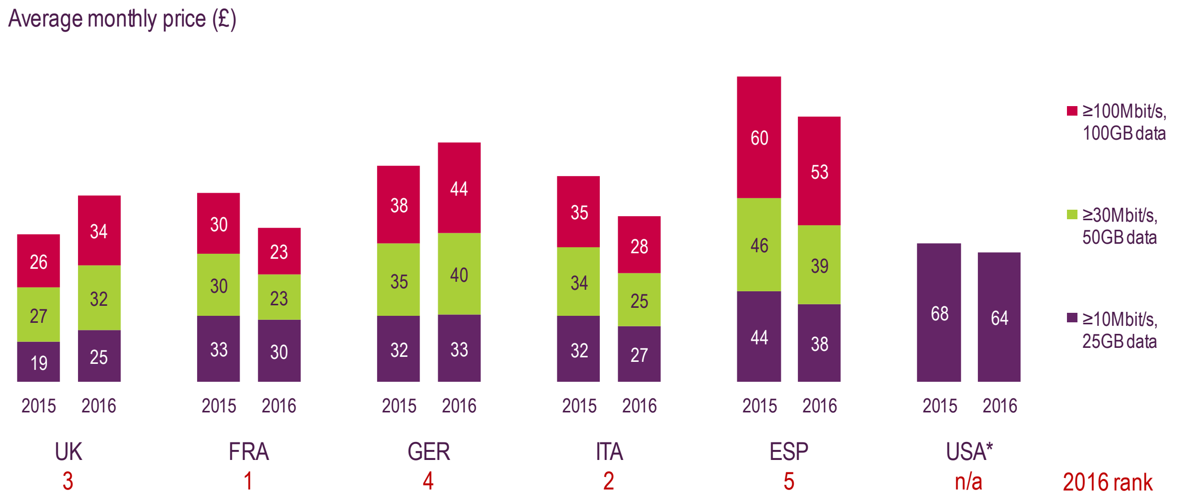
[78] It is not possible to run the Teligen pricing model without the inclusion of any outgoing fixed voice call minutes, where a household requires fixed voice services, so we have included a requirement for one outgoing one-minute weekend call to a local destination.

The UK had the third-cheapest total 'weighted average' stand-alone prices for the three dual-play service types included in the analysis in 2016, after France and Italy. The highest prices were in Spain (comparable totals were not available for the US as no dual-play services offering headline speeds of 'up to' 30Mbit/s or higher were available in either 2015 or 2016).

The total weighted average price of the three service combinations increased by 27% in the UK in 2016, the largest increase among our comparator countries. The biggest increase was in the average price of the ≥100Mbit/s and 100GB of data service. This was because Virgin Media (the only UK ISP included in the pricing model that offered services at this speed) increased the standard price of its *Broadband 100MB + Phone Size M (LRS)* service by 12%, and reduced the duration of the £10 per month promotional discount (which was available in both 2015 and 2016) from one year to nine months.

For the two lower-speed connections, the increasing 'weighted average' prices were due to two factors. First, the increasing average standard prices for almost all the cheapest tariffs for these connections that were offered by the ISPs included in the pricing model. Second, changing market shares and a reduction in the depth of the discounts available in 2016, which was not fully offset by the longer average duration of these discounts. Germany was the only other comparator country in which the total 'weighted average' price increased in 2016, while the largest decline was in Italy, where it fell by 20%.

Figure 2.9 'Weighted average' fixed broadband and fixed-line bundle pricing: 2015 and 2016



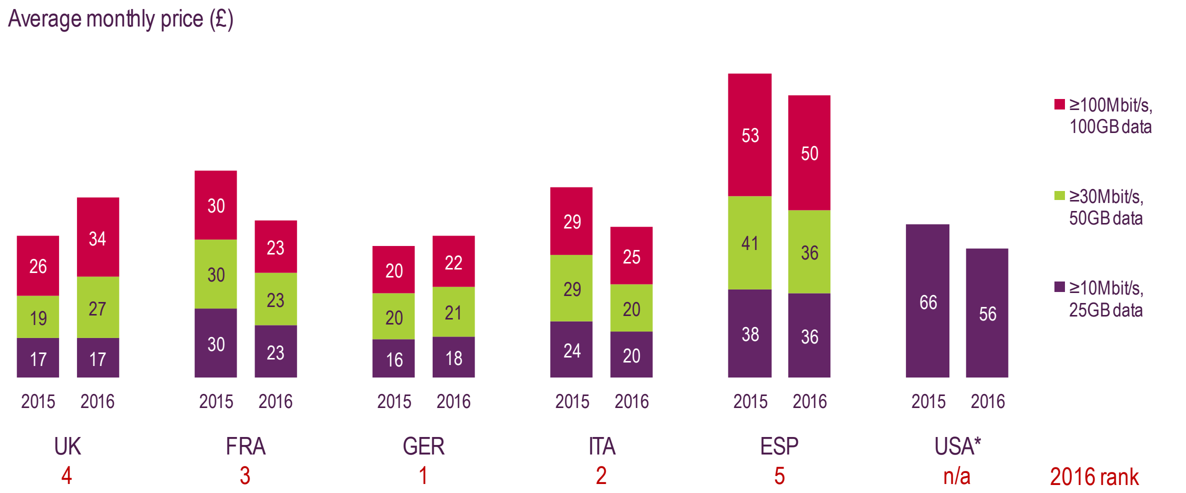
Source: Ofcom, using data supplied by Teligen
*Notes: July 2015 and July 2016; PPP adjusted; *No suitable dual-play services for the two higher speed/ use services were offered by any of the providers included in the pricing model in the US.*

There was a similar increase in the total 'lowest-available' price of the three dual-play services included in the analysis in the UK in 2016, up by 26%. Again, this was the largest increase among our comparator countries, and was mainly due to Virgin Media (which offered the 'lowest-available' prices for the two higher-use services in 2015) increasing its prices. It was also a reflection of the promotional tariffs that were available in July 2015 and July 2016. Overall, the UK was the second most expensive among our comparator countries in 2016; prices were lowest in Germany and highest in Spain (again, in the US there were no suitable dual-play services for the two highest-use connections).

The 'lowest-available' price for the standard broadband dual-play bundle (a ≥10Mbit/s service with 25GB of use per month) ranged from £17 per month in the UK to £56 per month in the US. Similarly, the 'lowest-available' price for the ≥30Mbit/s dual-play bundle (which requires 50GB of use) ranged from £23 per month in France to £36 in Spain, and that of the ≥100Mbit/s, 100GB connection from £23 in France to £50 in Spain.

The UK had the highest price premium of the ≥30Mbit/s, 50GB basket over the ≥10Mbit/s, 25GB basket, at £10 per month, while there was no such premium in France and Spain, and in Germany and Italy it was less than £4 and £1 respectively. Similarly, while there was no price premium for the 100Mbit/s and 100GB of data per month basket over the ≥30Mbit/s, 50GB basket in France, it ranged from £1 a month in Germany to £14 a month in Spain (in the UK it was £8, the second highest amount among the comparator countries for which data were available).

Figure 2.10 'Lowest-available' fixed broadband and fixed-line bundle pricing: 2015 and 2016



Source: Ofcom, using data supplied by Teligen
*Notes: July 2015 and July 2016; PPP adjusted; *No suitable dual-play services for the two higher speed/use services were offered by any of the providers included in the pricing model in the US.*

2.1.6 Stand-alone pay-TV summary

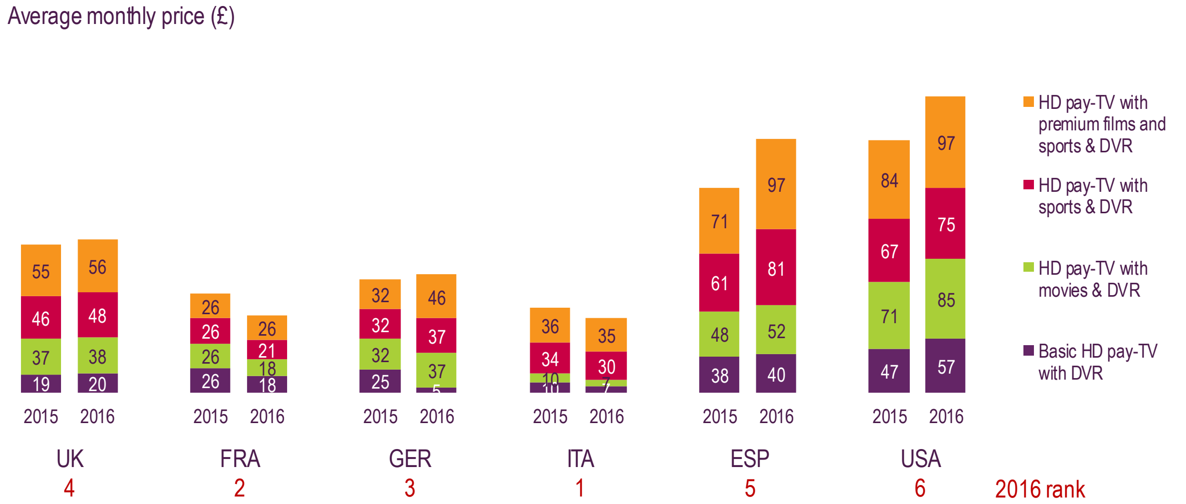
It is difficult to compare TV packages, as a result of differences in the number and types of channels provided by different services. For example, the UK's cheapest premium pay-TV service with first-run Hollywood films and top-league football in 2016 (Sky's *Original Bundle + Sky Sports & Movies with Sky+ HD Box*) included 290 channels (including 20 premium channels), more than three times as many as the cheapest comparable service in France, Canalsat's *Seriés Cinema par TNT w Multisports* tariff.

In a change from previous years, our analysis excludes TV licence fees. The reasoning behind this is that while there is no TV licence in Spain and the US, there are other mechanisms by which public service broadcasting content is funded. This makes it difficult to ascertain the total cost of ownership of pay-TV services in these countries, and we have therefore excluded the cost of the TV licence from our analysis to allow a like-for-like comparison of TV service pricing.

Italy had the cheapest total 'lowest-available' stand-alone price for the four pay-TV services included in the analysis in 2016, while the highest prices were found in the US.

Overall, the UK had the third most-expensive total 'lowest-available' retail stand-alone prices for the four pay-TV services included in our analysis, following a 3% increase during the year. The price changes in the total ‘lowest-available’ price among the other comparator countries ranged from a 22% fall in France to a 24% increase in Spain. Virgin Media provided the UK’s ‘lowest-available’ price for the most basic pay-TV service, with HD and a DVR, with its *More TV with TiVo 500GB service*, while Sky offered the lowest prices for the other three services, an all cases its *Original Bundle with Sky+ HD* service with *Sky Sports* and *Sky Movies* add-ons, as required by the household.

Figure 2.11 ‘Lowest-available’ stand-alone pay-TV pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: Basic pay-TV is defined as the minimum price required to purchase a pay-TV package which includes channels not available over free-to-air TV. Premium TV is defined as the best package of top-league football (NFL in the US) and a top price film/ entertainment package; the lowest tariff available for the pay-TV component of each household usage profile from any of the largest operators by market share in each country, July 2015 and July 2016; PPP adjusted.

2.1.7 Analysis of household usage profile prices

Having provided an overview of findings on a stand-alone basis, we now look at the prices of baskets of communications services, which are designed to be representative of five household types.

Household 1: a low-use household with basic needs

Our first basket contains a usage pattern typical of a retired low-income couple who have a fixed line from which they make five hours of calls a month. Both have a mobile phone from which they make 50 minutes of calls per month, but they do not send any SMS messages or use any mobile data services. They watch free-to-air multichannel digital television, which is available in all of our comparator countries.

Figure 2.12 Composition of the 'basic needs' household

Fixed-line voice	Fixed broadband	Mobile	Mobile broadband	Television
300 call minutes	None	**Connection 1** 50 call minutes **Connection 2** 50 call minutes	None	Free-to-air

Source: Ofcom

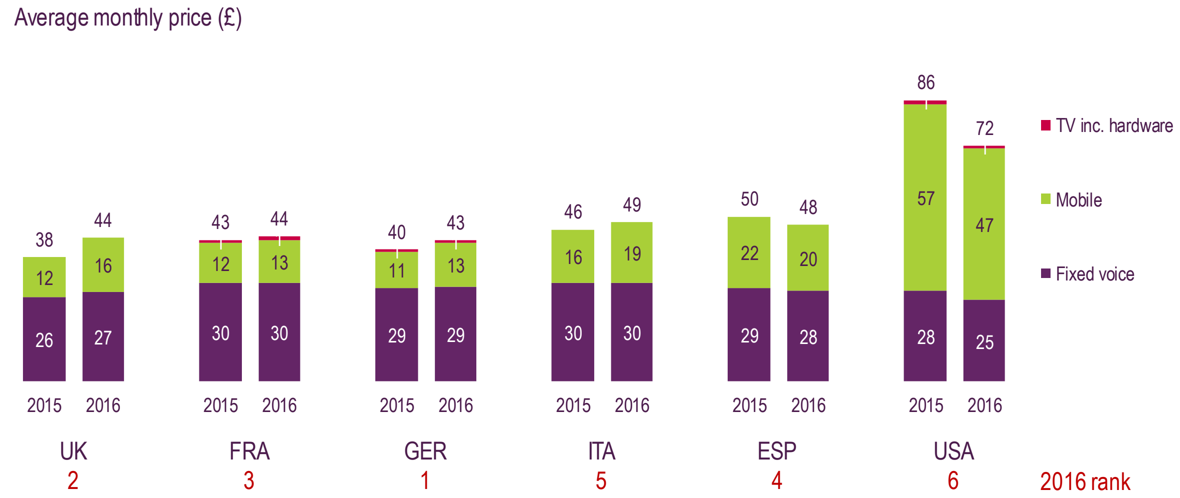
Weighted 'average stand-alone' prices

The lowest 'weighted average' cost of fulfilling the requirements of the *basic needs* household in 2016 was in Germany at £43 a month. The UK 'weighted average' stand-alone price was £44 per month, the second lowest among our comparator countries and a 16% increase compared to 2015.

The 'weighted average' price of the fixed voice element of this household's basket ranged from £25 per month in the US to £30 per month in Italy and France, among our comparator countries in 2016 (the UK had the second-lowest stand-alone fixed voice price for the basket, at £26 per month). The only service contributing to the UK 'weighted average' was BT's *Home Phone Saver 2019* service (which cannot be used in conjunction with an ADSL or fibre broadband service, with an optional *Friends & Family International* call add-on.

The UK had the third cheapest 'weighted average' cost of fulfilling this household's mobile requirements in 2016, despite a 37% increase in the 'weighted average' mobile price for this household during the year. This increase was mainly due to EE withdrawing a pre-pay mobile service that had been the lowest-priced option in 2015, resulting in a service that cost more than twice as much being its lowest priced tariff for this household's required use.

Figure 2.13 The basic needs household: 'weighted average' stand-alone pricing: 2015 and 2016

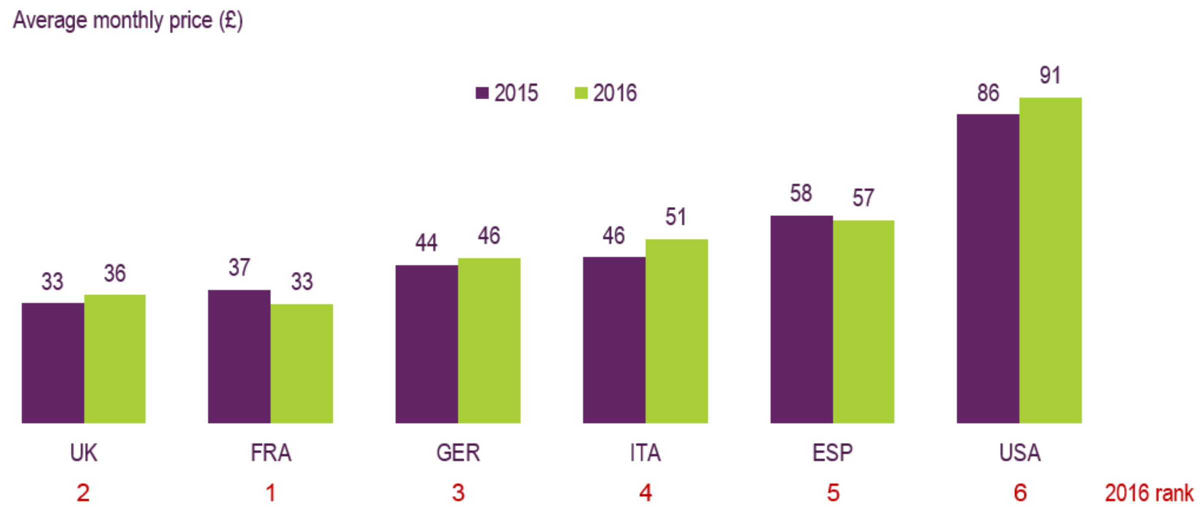


Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value stand-alone tariff from each operator by market share in each country; July 2015 and July 2016; PPP adjusted

Weighted 'average bundle' prices

The UK had the second lowest 'weighted average' bundled service price for the *basic needs* household in 2016, at £36 per month. The lowest price was in France (£33 per month) and the highest in the US, at £91. The change in the average bundled price for the *basic needs* household usage profile in 2016 ranged from an 11% decrease in France to an 11% increase in Italy. In the UK, the average increased by 7% during the year, the second largest increase among our countries. The UK and France were the only countries where the 'weighted average' bundled price for this household was lower than the 'weighted average' stand-alone price.

Figure 2.14 The basic needs household: 'weighted average' bundled service pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value bundled tariff from each operator by market share in each country; July 2015 and July 2016; PPP adjusted

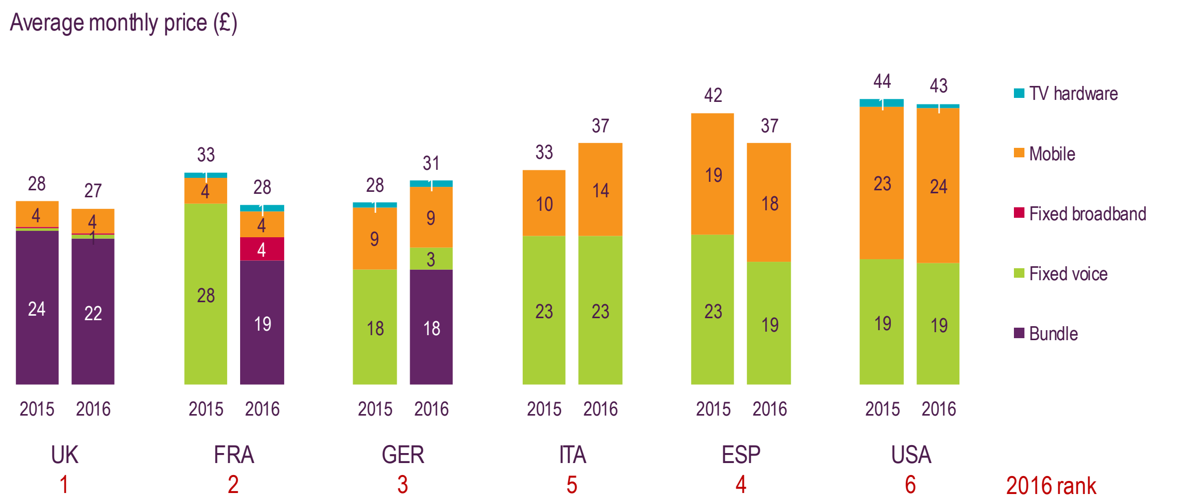
'Lowest-available' pricing

'Lowest-available' pricing analysis shows the lowest possible cost of fulfilling the household's usage requirements, using the tariffs of the largest providers in each country, including both stand-alone and bundled tariffs.

The UK had the cheapest 'lowest-available' price to fulfil the requirements of the *basic needs* household in 2016, at £27 a month. This was £1 a month (4%) less than in 2015. The UK was one of three comparator countries where the 'lowest-available' priced option included a fixed broadband connection in 2016, despite the household basket not requiring one. As was the case in France and Germany, it was cheaper to buy a dual-play fixed voice and fixed broadband bundle in the UK, than to buy a stand-alone fixed voice service which fulfilled the household's usage requirements; in the UK this was Sky's *Broadband Unlimited + Talk Anytime Extra* dual-play fixed voice and ADSL broadband service.

In both 2015 and 2016, the cheapest option for the household's two low-use mobiles in the UK was Three's pay-as-you-go *SIM Only 321* tariff. This was only marginally more expensive than the cheapest option in France in 2016, Free's *Mobile EUR 2* service.

Figure 2.15 The basic needs household: 'lowest-available' pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2015 and July 2016; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service.

Household 2: a broadband household with basic needs

The second basket is representative of a couple of 'late adopters' who are fairly heavy users of the fixed-line phone, have a basic fixed broadband connection, and who both have a mobile phone that they use occasionally for voice and SMS.

Figure 2.16 Composition of the late adopter household

Fixed-line voice	Fixed broadband	Mobile	Mobile broadband	Television
400 call minutes	Minimum 10Mbit/s headline speed 25GB data	**Connection 1** 50 call minutes 25 SMS 100MB data **Connection 2** 50 call minutes 25 SMS 100MB data	None	HD pay-TV with a DVR

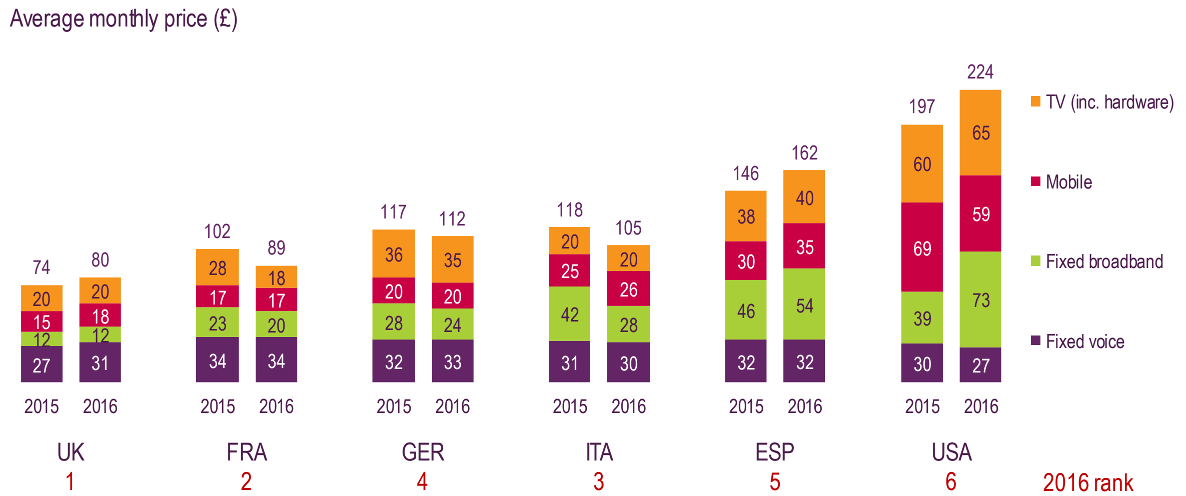
Source: Ofcom

Weighted 'average stand-alone' prices

The lowest 'weighted average' stand-alone price of fulfilling the usage requirements of the *late adopter* household was in the UK in 2016 at £80 a month, a £6 per month (8%) increase compared to 2015.

The UK was one of three comparator countries where the 'weighted average' stand-alone price of the *late adopter* household increased in 2016, along with Spain and the US. In the UK, this increase was mainly due to increasing fixed voice and mobile prices, although there were also small increases in the price of the household's fixed broadband and TV use during the year. Among the other comparator countries, the change in the total 'weighted average' stand-alone price of the household ranged from a 12% drop in France and Italy to a 13% increase in the US.

Figure 2.17 The late adopter household: 'weighted average' stand-alone pricing: 2015 and 2016

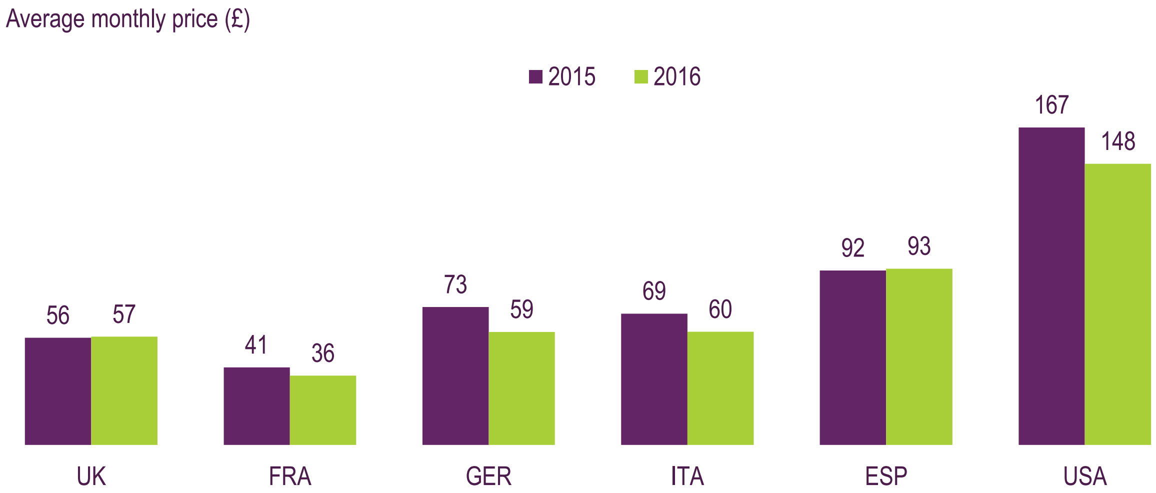


Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value tariff from each of the largest operators by market share in each country; July 2015 and July 2016; PPP adjusted

Weighted 'average bundle' prices

As was the case with the *basic needs* household, the UK had the second-lowest 'weighted average' bundled price for the *late adopter* household in 2016, after France. Along with Spain, the UK was one of two of our comparator countries in which the *late adopter* household's 'weighted average' bundle price increased in 2016, up by £1 per month (2%) to £57. The total 'weighted average' bundle price for the *late adopter* household's usage requirements was lower than the total 'weighted average' stand-alone price in all of our comparator countries in 2016. This suggests that it is cheaper in general to buy bundled than stand-alone services for this household's usage profile, and the average savings, when bundling, range from 29% in the UK to 59% in France.

Figure 2.18 The late adopter household: 'weighted average' bundled service pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value bundled tariff from each operator by market share in each country; July 2015 and July 2016; PPP adjusted

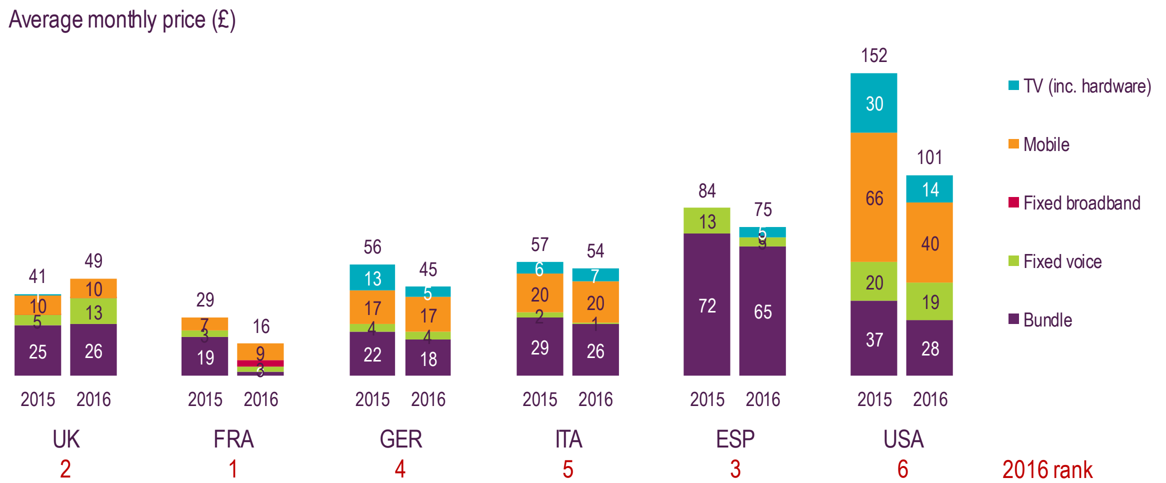
'Lowest-available' pricing

The cheapest 'lowest-available' price required to fulfil the *late adopter* household's usage requirements was in France in 2016, at £16 a month. The UK had the third-cheapest 'lowest-available' price for this household in 2016, at £49 per month, an £8 per month (19%) increase compared to 2015.

France also had the largest proportional fall in the 'lowest-available' price for the *late adopter* household in 2016, because the Bouygues Telecom triple-play service, *Offre Bbox en zone dégroupée,* which was included in the 'lowest-available' service combination, was discounted from €19.99 to €1.99 for the whole of the service's 12-month minimum term. This contributed to the total 'lowest-available' price in France falling by 46% in 2016 (the UK was the only comparator country where it increased during the year).

In all of our comparator countries, the 'lowest-available' priced combination of services involved buying more than one service from the same provider. In the UK, this was an EE triple-play service, *Broadband & Anytime + Mobile Calls + International Extra (LRS) + EE TV,* which had a promotional discount of £5 a month on its standard monthly fee (£31) throughout its 18-month minimum term.

Figure 2.19 The late adopter household: 'lowest-available' pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2015 and July 2016; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service

Household 3: a mobile 'power user'

The third basket represents a single-person household typical of a young professional person who lives alone. This person lives in a mobile-only household and is a heavy user of both a mobile phone and of mobile broadband (using a mobile 'dongle' to connect to the internet). They have an HD pay-TV service with premium sport content (i.e. top league football or NFL in the US).

We do not include a 'weighted average' bundled service price for the *mobile power-user* household, because it is not as relevant as it is for the other household usage profiles, due to the limited bundling of mobile phone and mobile broadband services.

Figure 2.20 Composition of the mobile power-user household

Fixed-line voice	Fixed broadband	Mobile	Mobile broadband	Television
None	None	1,000 call minutes 200 SMS 15GB 4G data	15GB over 30 days per month	HD pay-TV with premium sports and a DVR

Source: Ofcom

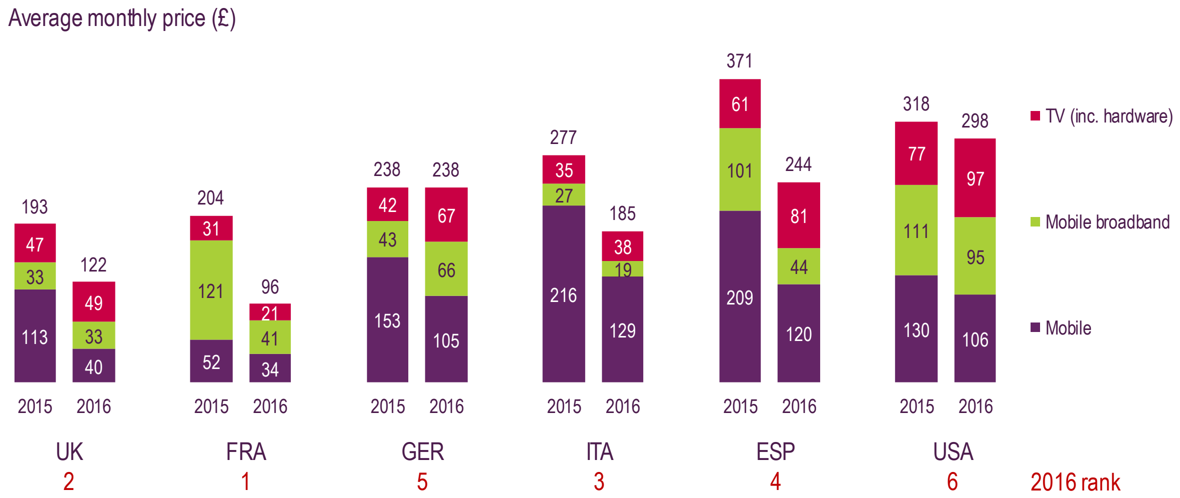
Weighted 'average stand-alone' prices

The cheapest 'weighted average' stand-alone cost of fulfilling the requirements of the *mobile power-user* household was in France in 2016, at £96 a month. The UK had the second-lowest 'weighted average' stand-alone price for this household in 2016, at £122 per month; a £71 per month (37%) fall compared to 2015, which was due to a decline in the price of the mobile phone element of the basket.

In all comparator countries, there was a notable fall in the 'weighted average' price of the high-use mobile phone connection required by the household; these ranged from an 18% decline in the US to a 64% drop in the UK, the result of the introduction of tariffs with higher data allowances (this connection requires 15GB of 4G data per month). Declining mobile prices resulted in a fall in the total 'weighted average' cost of the basket in all of our comparator countries except Germany, where the decline in mobile was offset by increasing 'weighted average' prices for the household's mobile broadband connection and basic pay-TV with premium sports package, and where, therefore, the total 'weighted average' price was unchanged. The UK was the only other comparator country where the 'weighted average' mobile broadband price increased during the year, albeit by just 1%.

The *mobile power-user* household includes a basic pay-TV service (defined as the lowest subscription required to receive channels that are not available on free-to-view television) along with premium sport channels. Because of the variation in numbers and types of channels, and the quality of programming, like-for-like comparison is more problematic than for telecoms services. However, the lowest 'weighted average' pay-TV price for the household was in France at £21 per month, while it was highest in the US at £97 per month (in the UK it was £49, the third lowest average among our comparator countries).

Figure 2.21 The mobile power-user household: 'weighted average' stand-alone pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value tariff from each of the largest operators by market share in each country; July 2015 and July 2016; PPP adjusted.

Weighted 'average bundle' prices

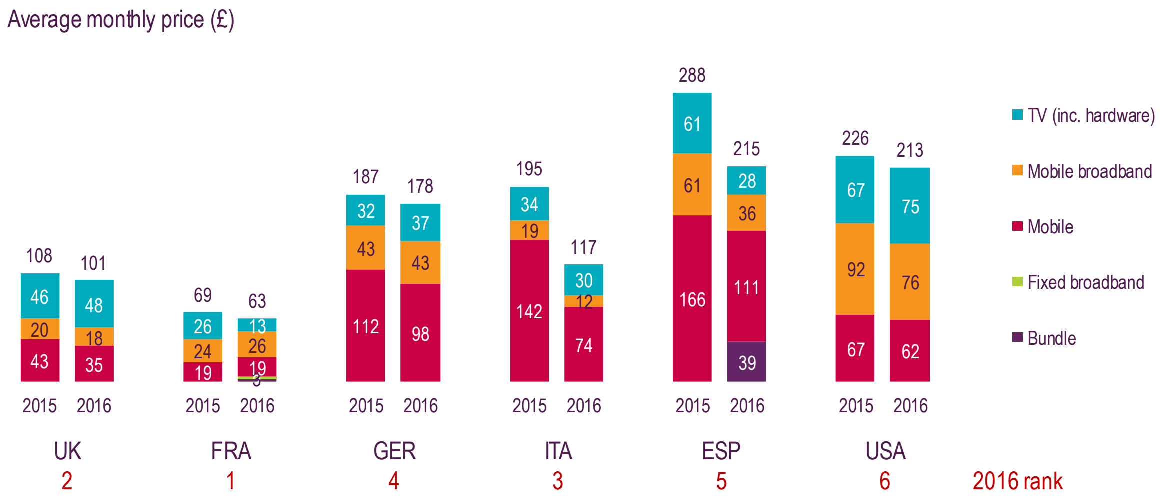
The services required by the *mobile power-user* household are not frequently offered as part of a bundle, so analysis of 'weighted average' bundle prices is not useful for this usage profile.

'Lowest-available' pricing

The cheapest 'lowest-available' price for fulfilling the requirements of the *mobile power-user* household in 2016 was in France at £63 per month, £6 a month (9%) less than in 2015. This was due to the availability of a heavily discounted Bouygues Telecom triple-play service (*Offre Bbox en zone dégroupée w BOUQUET beIN SPORTS),* which was discounted from €19.99 per month to €1.99 per month for its entire 12-month minimum term.

The UK had the second-cheapest 'lowest available' price for this household, at £101 per month, a £7 per month (7%) fall compared to 2015, which was mainly due to a fall in the lowest price available for the household's high-use mobile phone connection. In most countries, there is low availability of bundles of mobile phone, mobile broadband and/or pay-TV services offering significant bundle discounts. France and Spain were the only other countries where the lowest-priced combination of services to fulfil the *mobile power-user* household's requirements involved buying bundled services and, in both cases, these also included fixed voice and fixed broadband services that were not required by the household's usage profile.

Figure 2.22 The mobile power-user household 'lowest-available' pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2015 and July 2016; PPP adjusted

Household 4: a family household with multiple needs

The *connected family* household represents usage levels typical of a family of two parents and two teenage children, each with their own mobile handset but with different mobile usage profiles, with the adults using more voice and the children more messaging and data. They are heavy users of the fixed-line phone and the internet, requiring a minimum headline connection speed of 'up to' 30Mbit/s, and they subscribe to a premium television package for watching HD sport and the latest films, and a digital video recorder (DVR).

Figure 2.23 Composition of the connected family household

Fixed-line voice	Fixed broadband	Mobile	Mobile broadband	Television
200 call minutes	Minimum 30Mbit/s headline speed 50GB data	**Connection 1** 250 call minutes 50 SMS 1GB data **Connection 2** 150 call minutes 100 SMS 500MB data **Connection 3** 100 call minutes 250 SMS 5GB data **Connection 4** 100 call minutes 250 SMS 5GB 4G data	None	HD pay-TV with premium sports & films and a DVR

Source: Ofcom

Weighted ‘average stand-alone’ prices

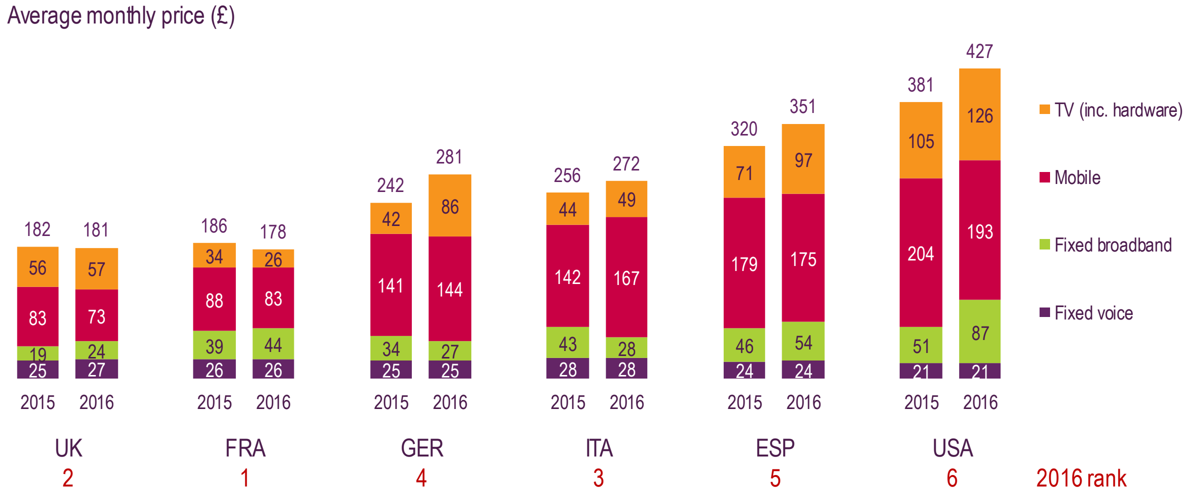
The UK had the second-lowest ‘weighted average’ stand-alone price for this household in 2016, at £181 a month. This was a £1 a month (1%) fall compared to 2015. The lowest ‘weighted average’ price for the household was found in France, at £178 per month.

The main reason for variations in the total ‘weighted average’ price among our comparator countries was the cost of the household’s four mobile phone connections. The mobile phone element’s proportion of the *connected family* household’s usage ranged from 40% in the UK to 61% in Italy. The UK had the lowest total ‘weighted average’ price for the household’s four mobile phone connections in 2016, at £72 per month, a £10 per month (12%) fall compared to 2015.

The lowest ‘weighted average’ price for the *connected family* household’s fixed broadband connection, which requires a headline speed of at least 30Mbit/s, and 50GB of use per month, was also found in the UK in 2016, at £24 a month. This was £5 a month (25%) more than it had been in 2015, due to BT increasing the price of its *Unlimited BT Infinity 1* service and reducing the level of promotional discount that was available to new customers (although the headline speed of the service increased from ‘up to’ 38Mbit/s to ‘up to’ 52Mbit/s during the year). The ‘weighted average’ price of fulfilling the 200 outgoing minutes of fixed voice calls required by the household was £27 per month in the UK in 2016, a £2 a month (10%) increase since 2015 and the second-highest ‘weighted average’ price after Italy (£28 per month).

The television element of this basket requires an HD pay-TV service with premium sports, films and a DVR, for which the UK had the third-lowest price, after France and Italy, in 2016 at £57 per month. This was £2 per month (3%) more than in 2015.

Figure 2.24 The connected family household: ‘weighted average’ stand-alone pricing: 2015 and 2016



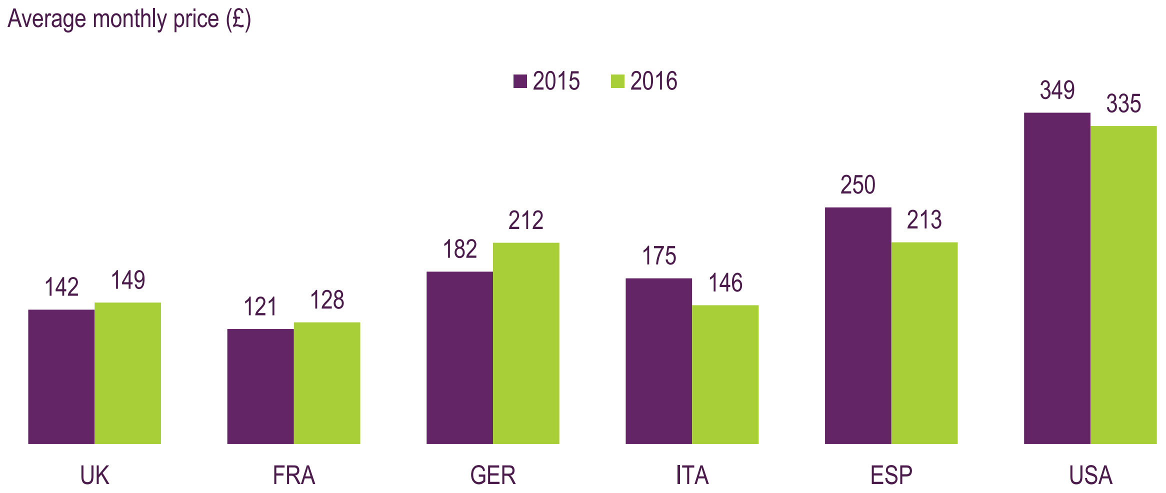
Source: Ofcom using data supplied by Teligen
Note: ‘Weighted average’ of best-value tariff from each of the largest operators by market share in each country; July 2015 and July 2016; PPP adjusted

Weighted ‘average bundle’ prices

The UK had the third-lowest ‘weighted average’ bundled price for the *connected family* household in 2016, at £149 per month; £8 per month (6%) higher than in 2015. The change in the ‘weighted average’ bundled price among our other comparator countries ranged from a 3% fall in the US to a 17% increase in Germany.

The total ‘weighted average’ stand-alone price of the *connected family* household’s use was higher than the total ‘weighted average’ bundle price in all of our comparator countries in 2016, suggesting that, in general, it is cheaper to buy bundled rather than stand-alone services for this usage profile. The average savings that were available when bundling ranged from 17% in the UK to 46% in Italy.

Figure 2.25 The connected family household: ‘weighted average’ bundled service pricing: 2015 and 2016



Ofcom using data supplied by Teligen
Note: ‘Weighted average’ of best-value bundled tariff from each operator by market share in each country; July 2015 and July 2016; PPP adjusted

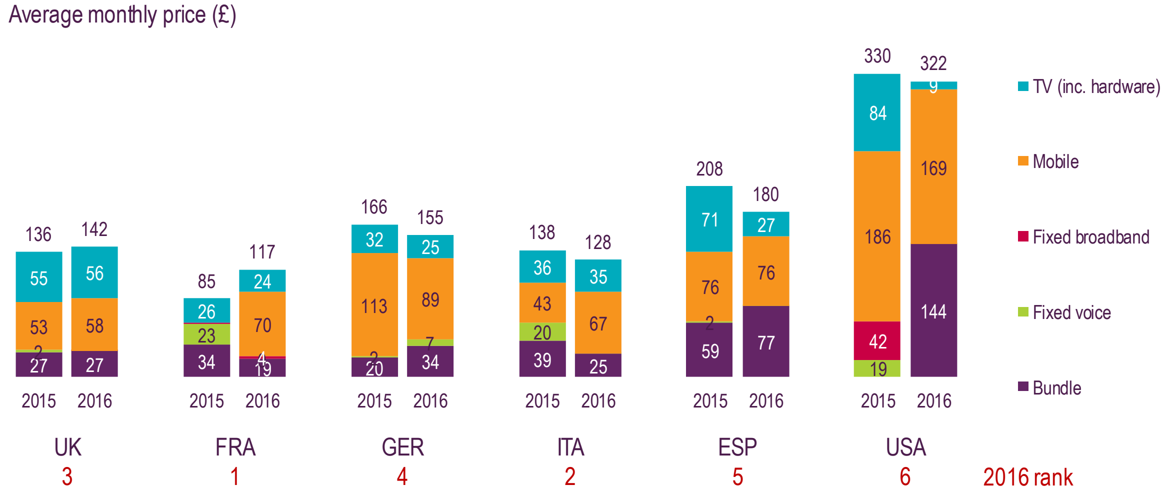
‘Lowest-available’ pricing

The ‘lowest-available’ price for the *connected family* household’s requirements was in France in 2016, at £117 per month. The UK had the third-cheapest ‘lowest-available’ price for the household at £142 per month, £6 per month (4%) lower than in 2015.

In all of our comparator countries, the cheapest price to fulfil the *connected family* household’s requirements included purchasing a bundle of services. The ‘lowest-available’ priced combination of services for the *connected family* household in the UK included a Sky triple-play bundle (*Broadband Fibre Unlimited + Talk Anytime Extra plus Original Bundle + Sky Sports & Movies with Sky+ HD Box)* plus separately purchased mobile services.

In France, the total ‘lowest-available’ price increased by £32 per month (37%), the largest increase among our comparator countries during the year. This was due to SFR withdrawing its *Forfait Power Illimites + 40GB SIM Fiber* service during the year, leaving a more expensive combination of services, including an SFR triple-play bundle of fixed voice, fixed broadband, and pay-TV services (*Offre Box THD Starter SFR by Numericable Online + beIN Sport + PASS CINÉMA*) as the lowest-priced option.

Figure 2.26 The connected family household: 'lowest-available' pricing: 2015 and 2016



Source: Ofcom using data supplied by Teligen
Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2015 and July 2016; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service

Household 5: an affluent two-person household

The *sophisticated couple* household is typical of an affluent young couple of high-end users. They both have 4G mobiles and are fairly heavy users of mobile voice and data services and, to a lesser extent, SMS. They have a fixed line with relatively low use, are heavy internet users with a broadband connection with a headline speed of 100Mbit/s or more), and an HD pay-TV service with premium film content (i.e. first-run Hollywood films) and a DVR.

Figure 2.27 Composition of the sophisticated couple household

Fixed-line voice	Fixed broadband	Mobile	Mobile broadband	Television
100 call minutes	Minimum 100Mbit/s headline speed 100GB data	**Connection 1** 300 call minutes 150 SMS 3GB 4G data **Connection 2** 200 call minutes 200 SMS 2GB 4G data	None	HD pay-TV with premium films and a DVR

Source: Ofcom

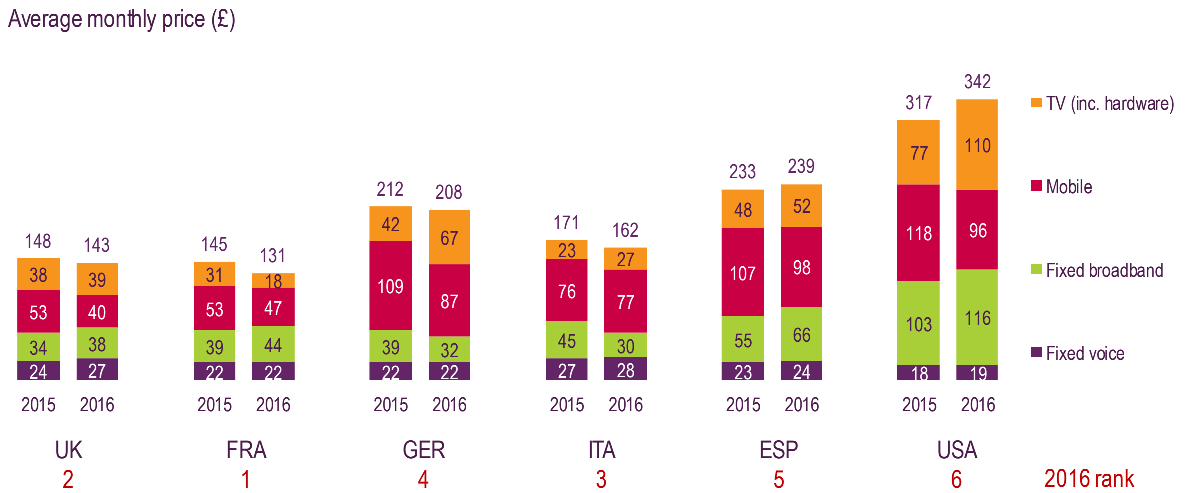
Weighted 'average stand-alone' prices

France had the lowest 'weighted average' stand-alone price for the *sophisticated couple* household in 2016, at £131 a month (Figure 2.24). The UK had the second-lowest 'weighted average' stand-alone price for this household, at £143 a month, a £5 a month (3%) fall compared to 2015.

The *sophisticated couple* household had the lowest fixed voice use of all the household usage profiles, with 100 minutes of outgoing calls per month. The UK had the second-highest 'weighted average' stand-alone price for this usage profile, at £27 a month, a £2 per month (10%) increase compared to 2015, but the lowest 'weighted average' stand-alone cost of satisfying this household's mobile requirements in 2016, at £40 a month. This was £13 per month (24%) less than in 2015, mainly due to a fall in the average price for the household's higher-use mobile, which resulted from falling prices for O2 and Three's cheapest tariffs for this connection. The UK had the lowest 'weighted average' prices for both of the household's mobile phone connections.

The *sophisticated couple* household requires a fixed broadband connection with 100GB of use and a headline (advertised) download speed of at least 'up to' 100Mbit/s. 'Weighted average' monthly prices for this connection ranged from £30 in Italy to £116 in the US (in the UK it was £38, the third-lowest average among our comparator countries). The *sophisticated couple* household also requires a pay-TV service with premium films, for which the UK also had the third-cheapest 'weighted average' price in 2016, at £39 per month.

Figure 2.28 The sophisticated couple household: 'weighted average' stand-alone pricing: 2015 and 2016



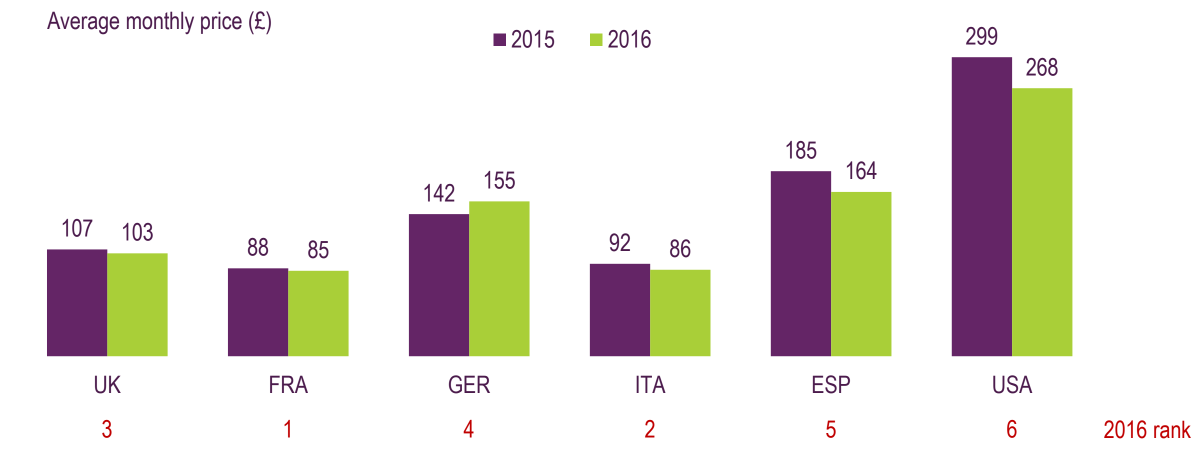
Source: Ofcom using data supplied by Teligen
Note: 'Weighted average' of best-value tariff from each of the largest operators by market share in each country; July 2015 and July 2016; PPP adjusted.

Weighted 'average bundle' prices

France had the lowest 'weighted average' bundled service price for the *sophisticated couple* household in 2016, at £85 per month. The UK had the third-lowest 'weighted average' bundled price for this household in 2016, at £103 per month. This was a £4 per month (4%) fall compared to 2015.

The 'weighted average' bundle price fell in all of our comparator countries in 2016, except Germany, where it increased by 9%. Spain and the US had the largest falls during the year, down by 11% and 10% respectively. The total average bundled service price of this household was lower than the total 'weighted average' stand-alone price in all of our comparator countries except the US in 2016, suggesting that, in most cases, it is cheaper to buy bundled rather than stand-alone services for this usage profile. The average savings that were available when bundling ranged from 22% in the US to 37% in France.

Figure 2.29 The sophisticated couple household: 'weighted average' bundled service pricing: 2015 and 2016



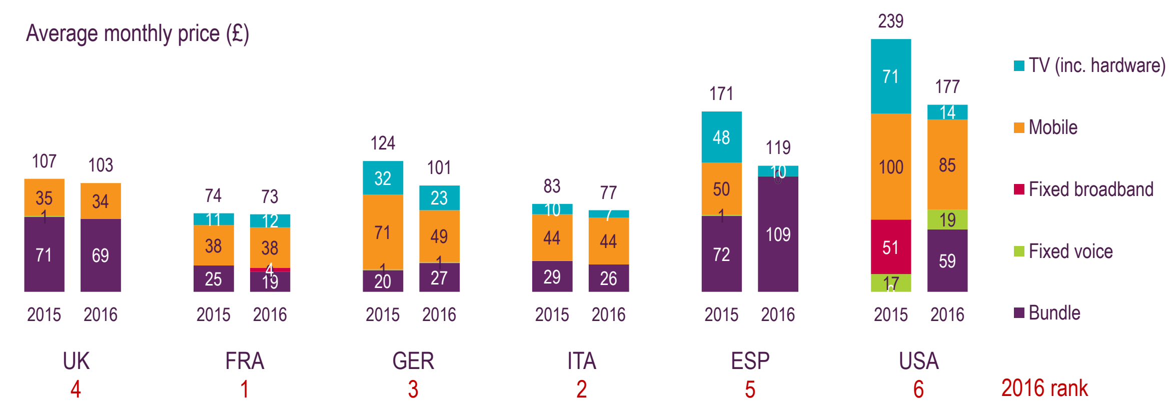
Ofcom, using data supplied by Teligen
Note: 'Weighted average' of best-value bundled tariff from each operator by market share in each country; July 2015 and July 2016; PPP adjusted

'Lowest-available' pricing

The cheapest 'lowest-available' pricing for the *sophisticated couple* household was in France in 2016, at £73 a month, while in the UK it was £103 per month, £4 a month (4%) less than in 2015 and the third most expensive price among our comparator countries. The UK 'lowest-available' price was identical to the 'weighted average' bundled price in the UK, as Virgin Media was the only UK provider included in the Teligen pricing model offering 100Mbit/s fixed broadband.

The 'lowest-available' price for the *sophisticated couple* household included buying bundled services in all of our comparator countries in 2016. In the UK, this included a Virgin Media bundle of fixed voice, fixed broadband and pay-TV services (*Big Kahuna Bundle - Broadband 200MB + TV Size XL with TiVo 500GB + Sky Movies + Phone Size XXL*), along with separately purchased EE and Three mobile phone services.

Figure 2.30 The sophisticated couple household: 'lowest-available' pricing: 2015 and 2016



Source: Ofcom, using data supplied by Teligen
Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2015 and July 2016; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service.