Ofcom
making communications work
for everyone

CMR

THE COMMUNICATIONS MARKET REPORT

Published **16th December 2016**

INTERNATIONAL

About this document

This International Communications Market Report 2016 provides comparative international data on the communications sector. It compares the availability, take-up and use of services in the UK against 17 comparator countries - France, Germany, Italy, the US, Japan, Australia, Spain, the Netherlands, Sweden, Poland, Singapore, South Korea, Brazil, Russia, India, China and Nigeria, although we focus on a smaller subset of comparator countries for some of our analysis (including our own consumer research).

This report is intended to be used in a number of ways: to benchmark the UK's communications sector against those in comparator countries, to learn from market and regulatory developments in other countries, and to provide the context for Ofcom's regulatory initiatives. It also contributes to the richness of the information we draw upon, enabling us to better understand how our actions and priorities can influence outcomes for citizens and consumers, and for communications markets more generally.

This summary document includes the key data points and findings from our consumer research from each chapter, covering: The UK in context; comparative international price benchmarking; telecoms and networks (which this year includes the *Broadband Scorecard*); TV and audio-visual; radio and audio; internet and online content; and post.

Contents

Introduction	1
1.1 The UK consumer in context	3
1.2 The ‘connected’ consumer	6
1.3 News consumption	12
1.4 The UK communications industry in context	18
1.5 International regulatory context	23
1.6 Comparative international pricing	35
1.7 Telecoms and networks	39
1.8 TV and audio-visual	44
1.9 Radio and audio	46
1.10 Internet and online content	48
1.11 Post	50

Introduction

This report provides a summary of the key comparisons regarding the availability, take-up and use of communications services in the UK against 17 comparator countries:

1. France (FRA)
2. Germany (GER)
3. Italy (ITA)
4. The United States of America (USA)
5. Japan (JAP)
6. Australia (AUS)
7. Spain (ESP)
8. Sweden (SWE)
9. The Netherlands (NED)
10. Poland (POL)
11. Singapore (SGP)
12. South Korea (KOR)
13. Brazil (BRA)
14. Russia (RUS)
15. India (IND)
16. China (CHN)
17. Nigeria (NGA)

For some of the analysis, including our own consumer research (which includes countries one to eight in the list above), we focus on a smaller subset of comparator countries. The countries listed were chosen in order to provide international comparability. The European countries allow for comparison with our neighbouring markets, while Brazil, Russia, India and China (the BRIC countries) are recognised as a developing block of countries. Nigeria provides an African context to our reporting. In the *Broadband Scorecard* (which is presented in its own section of the *Telecoms and networks* chapter this year), we now include Portugal (POR) as an additional comparator country, to provide an example of where duct and pole access is taking place.

A number of different data sources have been used to inform our analysis, including: research data commissioned by Ofcom, data already held by Ofcom, and data sourced from desk or custom research, or from third parties, as well as discussions with industry bodies, operators, regulators and commentators. Data in the report generally cover the 2015 calendar year, although other data – notably from Ofcom's consumer research – are more recent.

Comparisons between data in this report and its predecessors will not always be possible, due to changes in definitions and re-statements over time, the methods of collecting data and the availability of new data sources. For reasons of sampling and definitions, some UK data published in this report may not be directly comparable with data published in other Ofcom reports, such as the *UK Communications Market* Report and the *Connected Nations* 2016 report.[1] We have highlighted incomparability in a number of key instances in this report.

The full ICMR report is available here: https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international

[1] https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016

Methodological note

We have detailed below some explanation behind the major data sources used in this report. Other data sources we have used are: Ampere Analysis, Analysys Mason, App Annie Intelligence, comScore, Deloitte, Ecommerce Europe, Eurodata TV Worldwide, Médiamétrie, Populus, the Reuters Institute, the World Advertising Research Centre, Wik-Consult, WorldDAB and YouGov. We would like to thank all of the providers for their contributions to the data presented in this report.

IHS Markit

Consultancy firm IHS provided data that we have drawn on mainly for the *TV and audio-visual*, *Radio* and *Telecoms and networks* chapters. IHS has attempted to verify sources and provide market estimates where data are incomplete.

Teligen

Telecoms pricing consultancy Teligen built a bespoke model to enable our analysis of comparative international pricing, and populated it with specifically-sourced tariff data. This year's report uses data from July 2015 and July 2016.

PricewaterhouseCoopers

We have sourced data from PwC's Global media entertainment outlook 2016 – 2020 for use in the *UK in Context*, *TV and audio-visual*, *Radio* and *Internet and online content* chapters. The data cover global TV revenues, global radio revenues and global advertising expenditure, as well as fixed and mobile internet advertising expenditure. The interpretation and manipulation of data is solely Ofcom's responsibility, and an exchange rate of $1.529 to the GBP, representing the IMF average for 2015, has been applied.

Ofcom consumer research

The consumer research undertaken by Ofcom for this report was conducted online with a minimum of 1,000 respondents in each of the nine countries (weighted to 1,000 per county, 9,000 overall): the UK, France, Germany, Italy, the US, Japan, Australia, Spain and Sweden. Because the research was undertaken online, samples, and therefore results, may differ from other consumer research conducted by Ofcom, including that published in the *Communications Market Report 2016*, which included face-to-face and telephone interviews. Any differences in the results of the research (e.g. year on year) are reported only if they are statistically significant. Further information on our consumer research methodology is presented in Appendix C of the *Technical appendix*.[2]

International Monetary Fund

All currency conversions use the average market exchange rates across 2015, as provided by the International Monetary Fund (IMF).[3] We have opted to convert data from each year at this fixed rate, so that currency fluctuations do not obscure market trends. The exception to this methodology is in the international price benchmarking analysis, where we have used purchasing power parity-adjusted exchange rates (see Appendix A of the *Technical appendix*[4]). All figures in this report are nominal unless otherwise stated.

Links to other Ofcom publications

There are a number of metrics in the ICMR 2016 that are similar to those in the *Connected Nations* 2016 report.[5] The data used in the ICMR differ from those used in *Connected Nations* on a number of counts, such as time period (data presented in the ICMR are generally end-2015 unless otherwise stated, compared to June 2016 for *Connected Nations* data) and definitions (e.g. '4G outdoor premises mobile coverage, any operator' vs. '4G indoor mobile coverage, all operators'). Full clarification and explanations of these similarities are presented in the *Measuring the networks: the methodologies behind Ofcom's research reports.*[6]

[2] https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international
[3] http://www.imf.org/external/index.htm
[4] https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international
[5] https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016
[6] https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016

1.1 The UK consumer in context

Communications services play a crucial role in people's lives

The ability to access and use reliable communications services has become fundamental to the way people work and live in the UK and internationally; as demand for communications grows, the infrastructure that serves them needs to keep pace with their needs.

Those in the UK are among the heaviest users of smartphones

UK smartphone owners spend an average of 66 hours per month browsing online on their phone, higher than in most other comparator countries. People in the UK are more likely to use apps to access specific services 'on-demand' than those in most other comparator countries. For example, use of an app among smartphone/tablet users to order a takeaway or to book a taxi is highest in the UK (33% and 19% respectively). UK smartphone/tablet users are also among the most likely to use an app for making a bank transfer (48%).

The UK is a nation of online shoppers

In the UK six in ten internet users say they shop online at least once week, and four in ten mobile phone users say they use their device to browse shopping websites or apps at least once a week. The growth in online shopping has fuelled the volume of parcels sent by post in recent years, and the relative ease of shopping online has opened up opportunities to buy and sell from people and companies in other countries. Six in ten respondents in the UK say they have knowingly purchased something from another country in the past year. The popularity of going online for consumer activities in the UK is reflected in the nation's per-capita turnover for e-commerce, which stood at £1760 per person in 2015 – the highest of all the comparator countries.

Those in the UK are the most avid users of catch-up services

Technological innovation and increased connectivity has revolutionised how we consume content. As with the use of on-demand apps, people in the UK are also heavy consumers of on-demand audio-visual media content. Six in ten respondents in the UK say they watch catch-up or on-demand TV or films on free-to-access broadcaster services, more than in all the other comparator countries. Sixteen per cent of respondents in the UK said they would miss catch-up TV more than any other type of programming, if it were not available.

The UK leads the way in digital radio

DAB coverage is highest in the UK out of all the comparator countries, at 97% population coverage. Take-up of digital radio sets is also highest in the UK, at 33% in 2016.

Consumption of news online has grown considerably in recent years

Among UK online users, using the internet as a main source for news has increased since 2015, and it is now more popular than TV for some types of news (such as local news and sports news). More than a third (35%) of online news users in the UK now say they use social media for news, and 8% cite it as their main source. Overall, the UK is middle ranking among other countries in terms of the use of social media as the main source of news.

BENCHMARKING THE UK WITH EIGHT COUNTRIES ON MEDIA AND COMMUNICATIONS ICMR 2016

Ofcom consumer research (online interviews conducted by Populus: October 2016)

UNITED KINGDOM ▲ HIGHEST AMONG ALL COUNTRIES

Pop: 64.1m

		Average
61%	watch catch-up or on-demand TV or films from free-to-access broadcaster services	38%
33%	watch TV or films using video-on-demand services through a pay-TV provider	15%
16%	would miss catch up TV more than any other type if they didn't have access to it	7%
42%	say they watch live/ broadcast TV for 'high quality TV programmes'	29% of live TV watchers
33%	have a digital radio set in their home	13%
	Do at least once a week:	
74%	online banking	57%
59%	online shopping	40%
	Done in the last 12 months through an app:	
33%	ordered food from a restaurant/ takeaway	21%
19%	booked a cab/ taxi	12%

FRANCE ▲ HIGHER THAN THE UK

Pop: 66m

89%	have a bundle of media and telecoms services with the same provider	77% of those with >1 service
75%	personally sent business mail in the last month	41% of post senders
56%	use a high-definition (HD) TV set	47%
41%	would miss live TV or films on free-to-access channels more than any other type if they didn't have access to it	22%

GERMANY ▲ HIGHER THAN THE UK

Pop: 80.6m

78%	personally use a landline phone	59%
50%	watch programmes from other countries (not Germany or USA) on SVoD services	29% of VoD users
47%	ever sell things online	37%
21%	consider radio to be their main source for regional/ local news	9%

ITALY ▲ HIGHER THAN THE UK

Pop: 59.8m

91%	personally use a mobile phone	80%
75%	listen to the radio at least once a week	57%
47%	ever watch downloaded rented or purchased video/ films	21%
19%	have an ultra-HD TV set in the home	10%

UNITED STATES ▲ HIGHER THAN THE UK

49%	are very satisfied with their mobile phone service	36%	of mobile owners
40%	subscribe to a video-on-demand (SVoD) service	29%	
42%	are very satisfied with amount of SVoD programming produced in their own country	25%	of VoD users
39%	currently have and use any smart products:	34%	
20%	Car with connected features	12%	
17%	Smartwatch	10%	
17%	Smart sound system	9%	
16%	Home automation	8%	

Pop: 318.9m

JAPAN ▲ HIGHER THAN THE UK

73%	use a computer, mobile or tablet for listening to music on video sharing sites such as YouTube	59%	of device owners
59%	say they watch live TV to watch programmes in the moment - such as news and sport	44%	
58%	watch recorded TV or films	51%	
20%	personally use a handheld games console	9%	

Pop: 127.3m

AUSTRALIA ▲ HIGHER THAN THE UK

63%	have a DVD or blu-ray player in their home	57%	
61%	have a desktop computer in their home	53%	
55%	have an FM radio set in their home	42%	
28%	have mobile broadband internet access (dongle, datacard, etc) in their home	17%	

Pop: 23.1m

SPAIN ▲ HIGHER THAN THE UK

91%	use instant messaging at least once a week	65%	
87%	personally use a smartphone	72%	
76%	have a pay-monthly (contract) mobile phone	52%	
53%	read national newspapers at least once a week	43%	

Pop: 46.8m

SWEDEN ▲ HIGHER THAN THE UK

68%	have 4G on their mobile phone already, or are likely to get it in the next 12 months	59%	of mobile owners
64%	made a bank transfer through an app in the last 12 months	48%	
55%	read local newspapers at least once a week	34%	
15%	have smart home security/ home automation	8%	

Pop 9.6m

1.2 The ‘connected’ consumer

1.2.1 Overview

Advances and improvements in network infrastructure, as well as the convergence of media and communications, have led to an increasingly connected world. This is reflected in the wide availability and take-up of connected mobile devices (e.g. smartphones and tablets). Consumers are at the centre of this connected and converged landscape, and now have access to a range of services giving instant access on any device, at the touch of an app.

The increased availability of apps has transformed the way we order goods and services, manage our financial affairs, and access audio and video entertainment. Services offering the delivery of food (e.g. Deliveroo, Just Eat) and transport (e.g. Uber, Halo) typify apps designed to make people’s lives easier and enable the use of services ‘on-demand’. Many of these services originated in the US and have since been rolled out internationally.

In addition to making themselves connected, consumers can make their households connected. This has given rise to the ‘Internet of Things’ (IoT), a term that relates to devices’ ability to communicate with each other, with little or no human intervention.[7] The scope of the IoT is broad and covers a range of applications across a wide variety of industries. For the purpose of this report, our research focuses on the use of the IoT for domestic and consumer purposes.

This section largely draws on data from our consumer research specifically related to the use of connected devices and services, in the context of on-demand apps and the IoT.

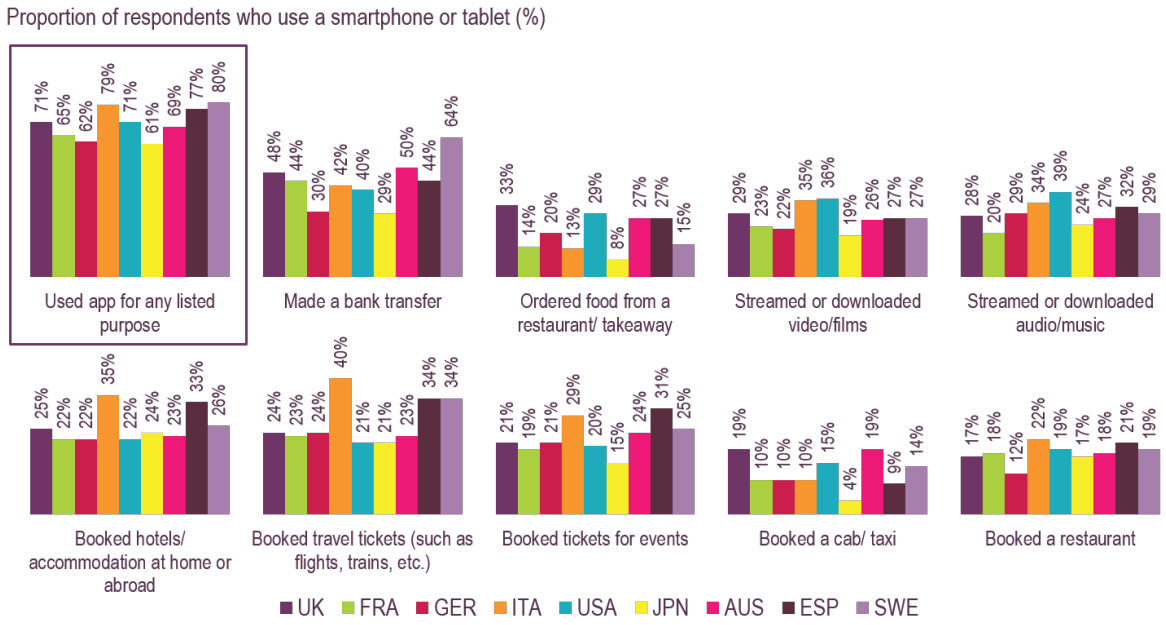
[7] This contrasts with more traditional applications, where a device such as a smartphone or tablet is used by an individual for interpersonal communications or to consume content.

1.2.2 On-demand apps

The most commonly stated use for an on-demand app, across all comparator countries, was to make a bank transfer

Seven in ten smartphone/tablet users in the UK have used an on-demand app in the past 12 months. Use was highest in Sweden and Italy, where four-fifths claimed to have used this type of app. The most frequent type of use across all comparator countries was to make a bank transfer, with half of all UK smartphone/tablet users claiming to have done this. The UK ranked highly for other uses of on-demand apps, such as ordering food from a restaurant or takeaway (33%), and booking a taxi (19%).

Figure 1.1 Claimed use of on-demand apps: 2016



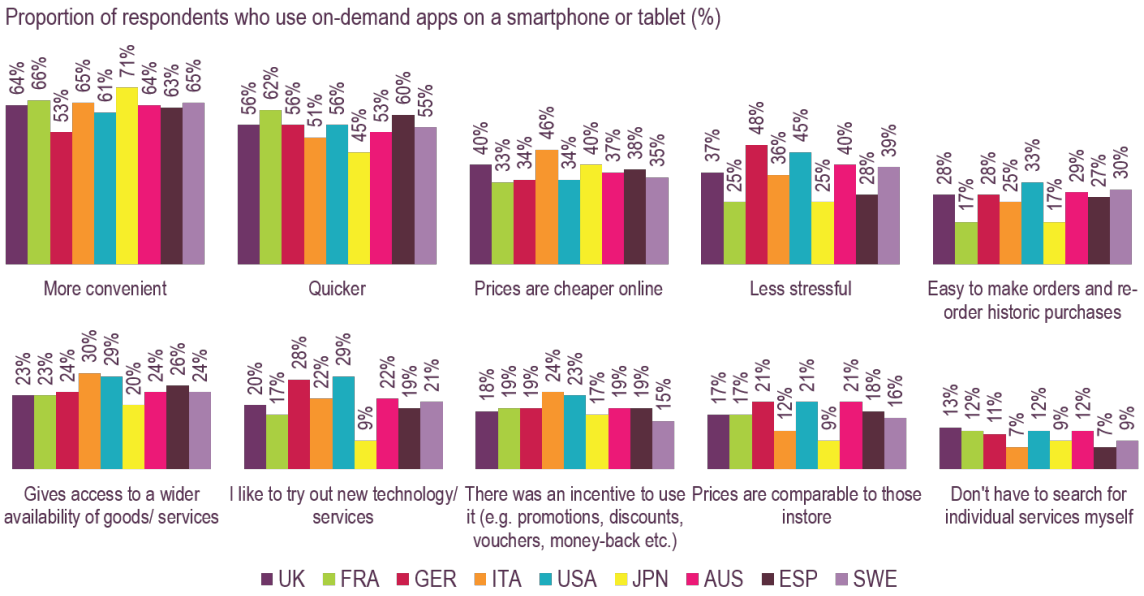
Source: Ofcom consumer research, October 2016
Base: All respondents who personally use a smartphone or tablet UK=790, FRA=830, GER=830, ITA=952, USA=764, JPN=786, AUS=842, ESP=911, SWE=843
Q10a Nowadays there are many a
pps for smartphones or tablets that can be used to buy and consume services from companies. Which of these have you done through apps the last 12 months?

One of the main reasons for using on-demand apps is convenience

The main reasons given for using on-demand apps were convenience and speed; in the UK, these reasons were given by 64% and 56% of users respectively. Furthermore, nearly four in ten (37%) on-demand app users in the UK claimed that using an app was less stressful, a reason that was particularly important for users in Germany (48%) and the US (45%).

Cheaper prices were also a factor for use of on-demand apps; four in ten users in the UK said that they used them because prices were cheaper online.

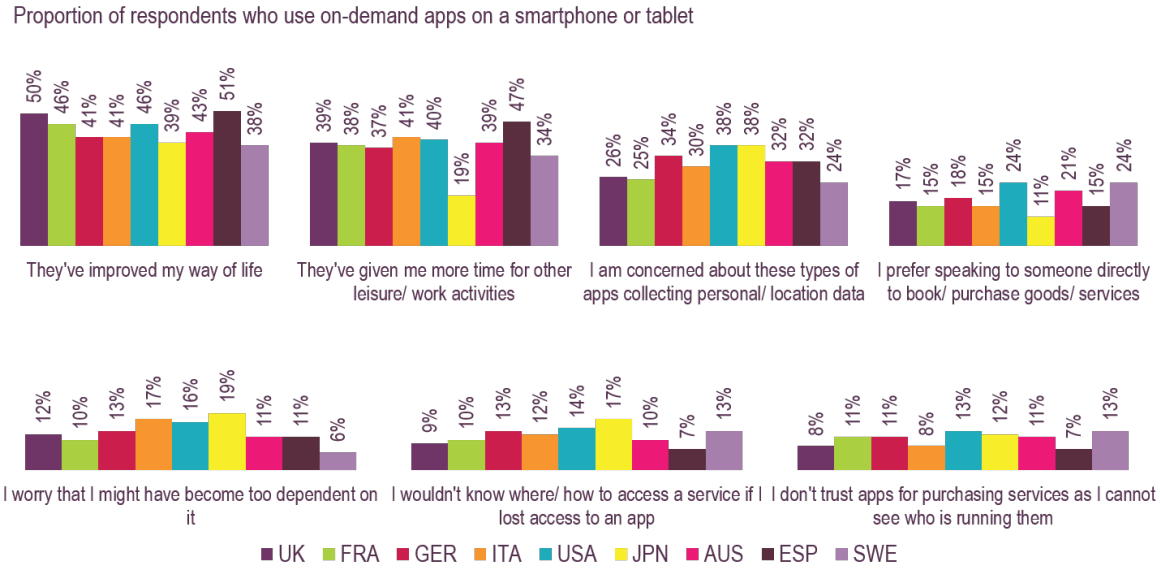
Figure 1.2 Reasons for using on-demand apps: 2016



Source: Ofcom consumer research, October 2016
Base: All respondents who personally use on-demand apps on a smartphone or tablet
UK=575, FRA=549, GER=524, ITA=759, USA=551, JPN=482, AUS=609, ESP=724, SWE=666
Q10b For which of the following reasons do you order services via these types of apps?

Half of all UK on-demand app users felt that the use of apps had improved their way of life, and four in ten (39%) said that the use of apps had given them more time for other leisure or work activities. Those in the UK (along with those in Sweden and France) were the least concerned about apps collecting personal data, whereas those in Japan, Germany and US expressed the most concern.

Figure 1.3 Attitudes towards on-demand apps: 2016



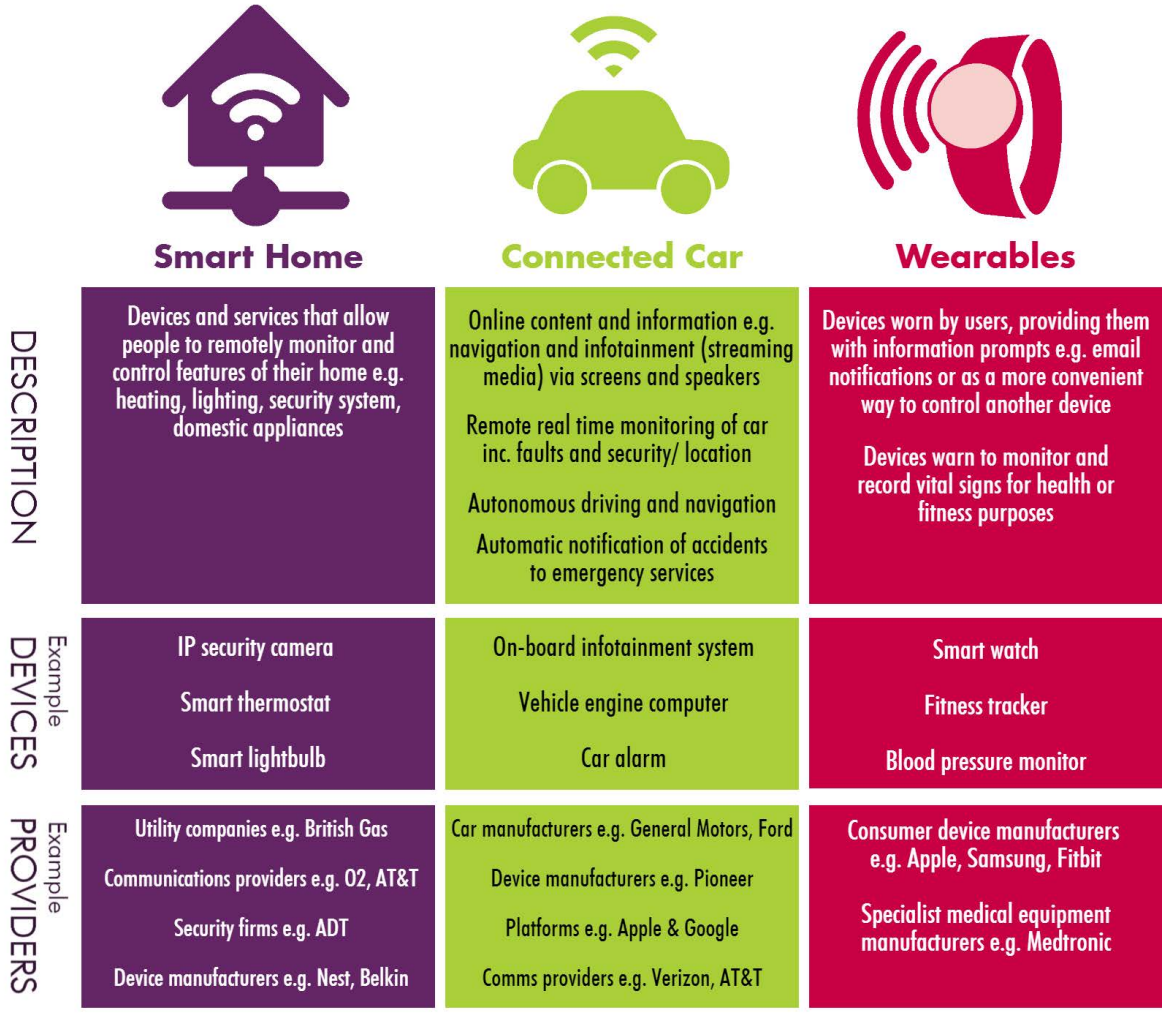
Source: Ofcom consumer research, October 2016
Base: All respondents who personally use on-demand apps on a smartphone or tablet
UK=575, FRA=549, GER=524, ITA=759, USA=551, JPN=482, AUS=609, ESP=724, SWE=666
Q10c Which of the following statements about the use of apps for purchasing or consuming services apply to you personally?

1.2.3 Consumer engagement with the 'Internet of Things'

Increases in processing power, and the availability of wireless networks, have expanded the scope of the IoT, as well as the number of IoT applications (often referred to as 'smart' products/services) that have been brought to market or are in development.

Here, we focus on use of the IoT for domestic applications and consumer purposes, such as systems for home monitoring and connected car features. Below are some examples of domestic IoT applications that are currently available.

Figure 1.4 Examples of domestic IoT applications

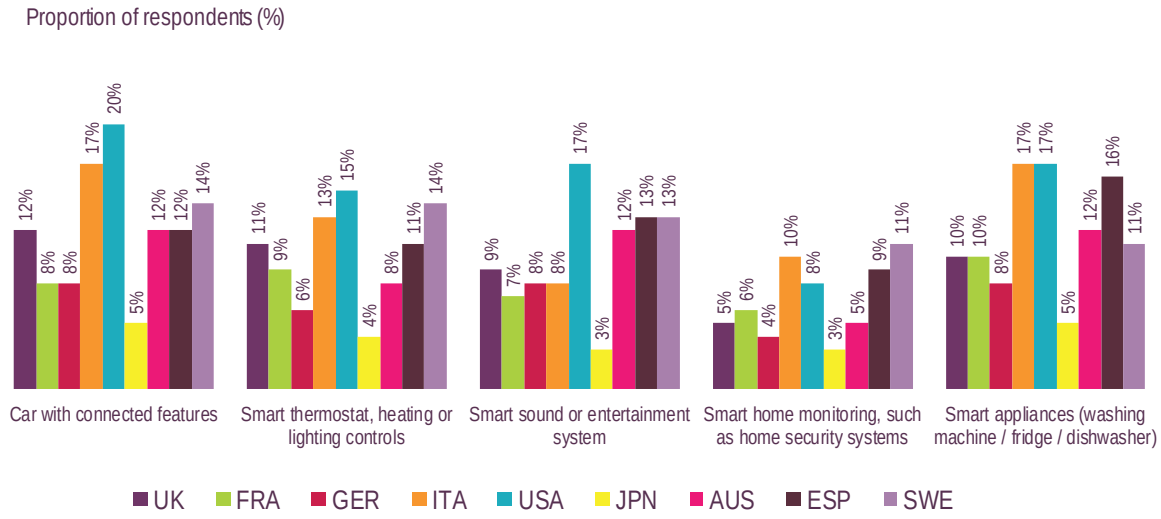


Source: Ofcom desk research

A small minority of respondents say they have access to 'smart home' or connected car devices

In the UK, 12% of internet users claimed[8] that they used a car with connected features, while 11% said they already used smart thermostat, heating or lighting controls. Similarly, one in ten respondents in the UK said they used a smart appliance such as a washing machine, fridge or dishwasher. Claimed personal use of all types of connected devices/ services we asked about was highest in the US.

Figure 1.5 Use of domestic IoT applications: 2016



Source: Ofcom consumer research, October 2016. Base: All respondents UK=1000, FRA=1008, GER=1010, ITA=1032, USA=1016, JPN=1011, AUS=1007, ESP=1016, SWE=1000
Q.10d Connected or smart products can use the internet to perform actions automatically, or remotely access the product via an internet connection. For each of the devices and services shown below, please can you indicate whether you use it already

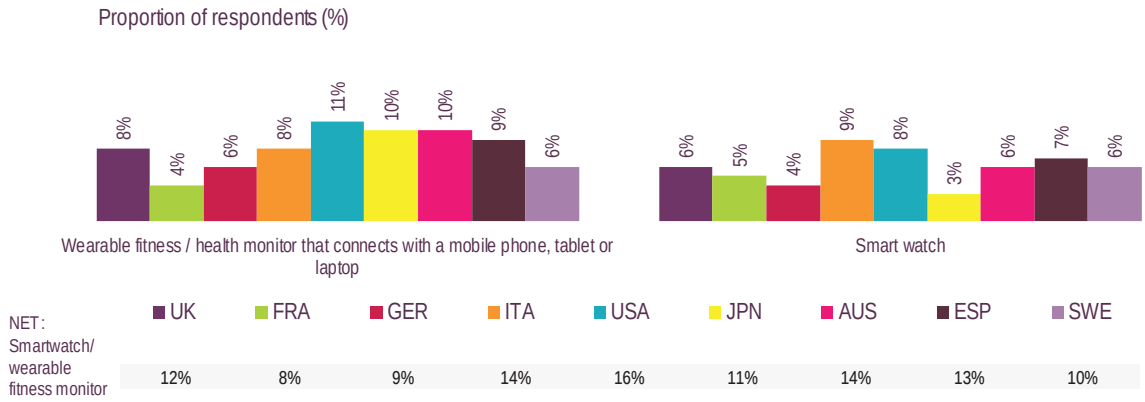
One in ten respondents in the UK claim to use a smart watch or fitness monitor

Smart watches offer the ability to receive notifications / messages from the user's smartphone and control some of the phone's functions. Some smart watches such as the Apple Watch and those running Android Wear allow third-party apps to extend the device's functionality. Fitness trackers generally focus on a narrower set of functions related to the recording (and streaming to a smartphone) of vital signs such as pulse, and measures of activity (e.g. number of footsteps). However, the distinction between smart watches and some fitness trackers is blurred - some smart watches include a fitness tracking functionality and not all smart watches allow additional functionality to be added via third-party apps.

In the UK, 12% of respondents said they used a smart watch or a wearable health / fitness monitor, higher than in France (8%) and Germany (9%), but lower than in the US (16%).

[8] As this is claimed behaviour, it may be higher than actual incidences for a number of reasons. Firstly, as connectivity is increasingly embedded into a range of everyday objects as part of their standard functionality, it becomes more difficult to distinguish between connected and unconnected devices (especially if they do not have an associated consumer app). This may make it harder for respondents to accurately identify their use of IoT services and products. Secondly, as many connected devices and services are relatively recent to the market, they are more likely to be used by technically-aware early adopters, who may be more likely than the population as a whole to be members of online research panels.

Figure 1.6 Use of fitness monitors and smart watches: 2016



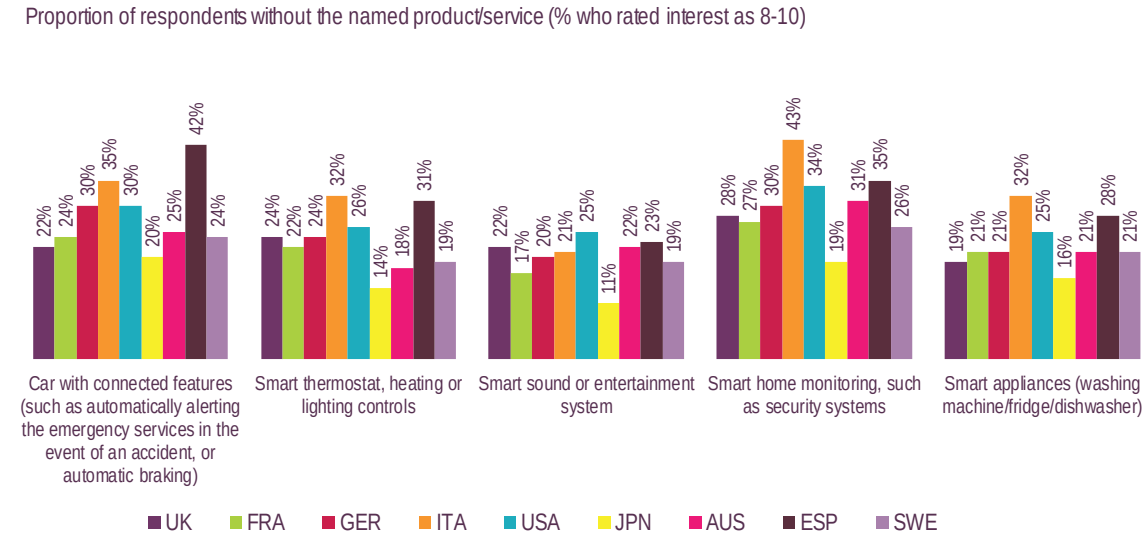
Source: Ofcom consumer research, October 2016 Base: All respondents UK=1000, FRA=1008, GER=1010, ITA=1032, USA=1016, JPN=1011, AUS=1007, ESP=1016, SWE=1000
Q.4a Which devices do you PERSONALLY use either at home or elsewhere?

A quarter of those in the UK without a smart home thermostat, heating or lighting controls said there were very interested in owning them

Italy (32%) and Spain (31%) had the highest proportion of respondents who indicated that they were very interested in owning these types of devices in the future; this compared to 24% in the UK.

Those in Italy were also the most interested in smart home monitoring (43%), while Spain had the highest future interest in a car with connected features (42%). These compared to 28% and 22% respectively in the UK.

Figure 1.7 Interest in ownership of domestic IoT applications: 2016



Source: Ofcom consumer research, 2016, Base: All those without the specified device (varies by type) - Car with connected features UK=874, FRA=924, GER=930, ITA=849, USA=808, JPN=962, AUS=874, ESP=887, SWE=869
Q.10di On a scale of 1-10, where 10 is extremely interested and 1 is not at all interested, how interested are you in owning the following types of products yourself? NET 8-10

1.3 News consumption

1.3.1 Overview

Consumption of news online has grown considerably in recent years. Among UK online users, using the internet as a main source for news has increased since 2015, and it is now more popular than TV across some types of news.

Drilling down into how people are using news online, according to Reuters Institute data, more than a third (35%) of online news users in the UK now say they use social media for news, and 8% say this is their main source. Overall, the UK is middle-ranked among other countries in terms of the use of social media as a main source of news.

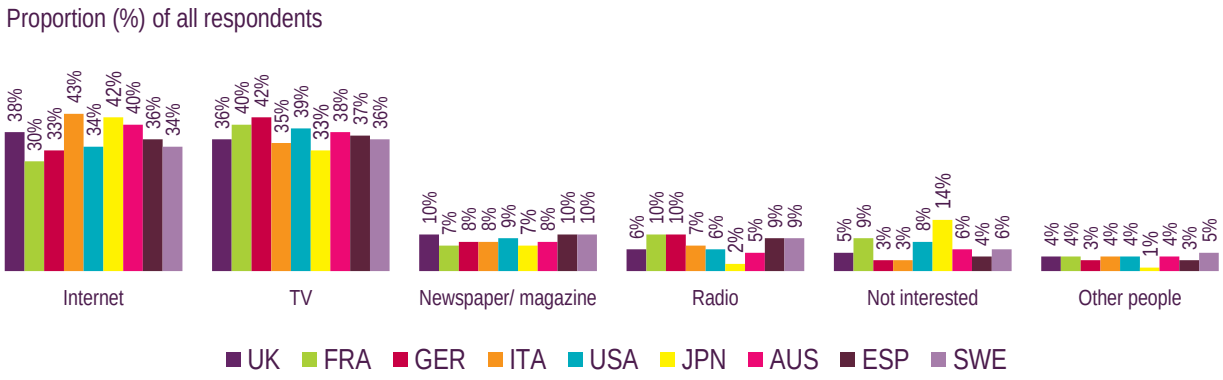
The UK is also middle-ranked among other countries in relation to the extent to which people trust news organisations and journalists; 42% of online news users in the UK say they trust news organisations, while 29% say they trust journalists. However, Ofcom's consumer research shows that two-thirds of UK respondents have a 'media-savvy' approach to search engines, agreeing that some websites listed on a search engine return page will be accurate and some will not. One in five think that if a website has been listed by a search engine, it must be true, and a further one in ten don't think about it and just use the sites they like the look of. Respondents in Japan are more media-savvy about this issue; 70% agree that some results are accurate and some are not, while those in Spain are less so (55%).

1.3.2 Sources used for types of news

The internet has continued to increase in importance as the main source of certain types of news in the UK

Across all our comparator countries, the internet and TV were the top two platforms cited by online respondents[9] as their main source for news about the world. In the UK, the internet was specified by 38% of respondents, similar to TV at 36%.

Figure 1.8 Main sources of news about the world: 2016



Source: Ofcom consumer research, October 2016
Base: All respondents, UK=1000, FRA=1008, GER=1010, ITA=1032, USA=1016, JPN=1011, AUS=1007, ESP=1016, SWE=1000
Q.11 Which, if any, is your main source for the following information? News about the world

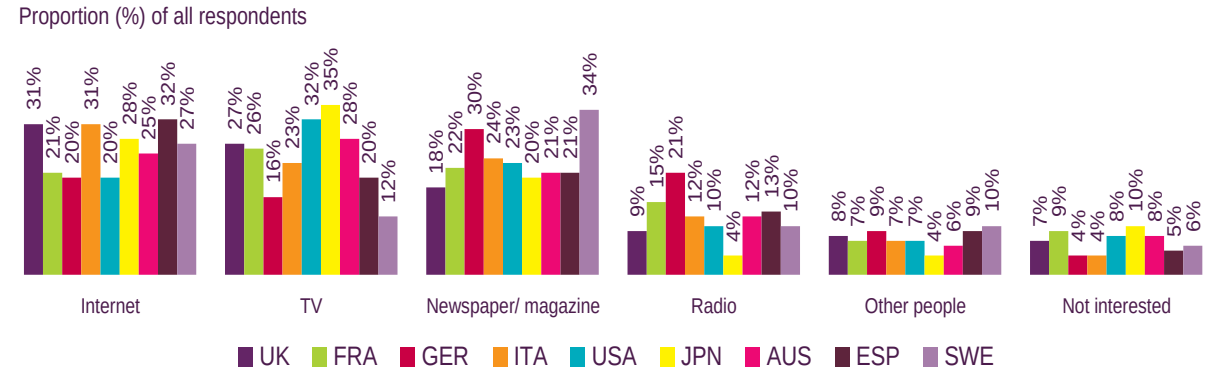
[9] Note that these UK figures differ from those in Ofcom's *News Consumption Report*. Reasons for this include differing methodologies - this survey is based on online users while the news survey is asked of all UK adults.

The internet is the main source of local or regional news for UK respondents

The UK was one of four comparator countries in which online users were more likely to nominate the internet as their main source of local and regional news than any other source. In the UK, the number of respondents choosing the internet has increased from 26% to 31% since 2015; it has overtaken television as the most popular medium for this purpose.

Newspapers and magazines continue to be more popular than radio as a main source of local and regional news. However, the figure in the UK is comparatively low, at 18%, compared to 34% in Sweden and 30% in Germany; in both these countries newspapers/magazines ranked higher than TV and internet for local/regional news.

Figure 1.9 Main sources of regional / local news: 2016

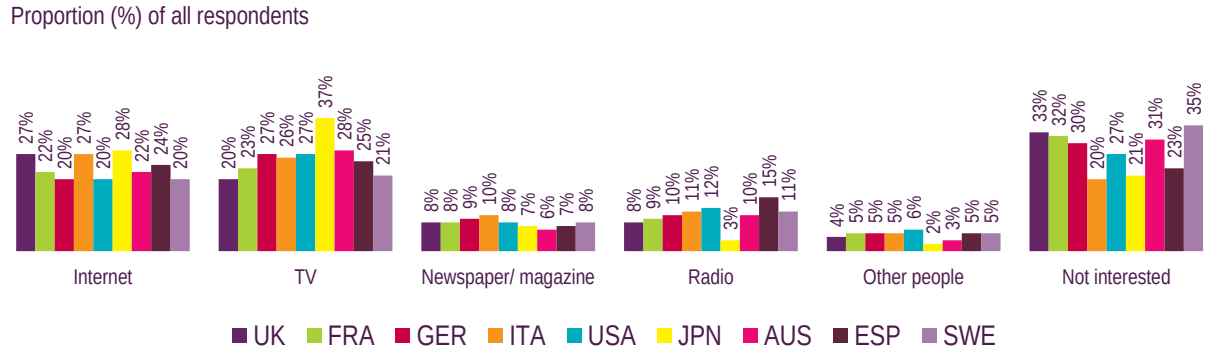


Source: Ofcom consumer research, October 2016
Base: All respondents, UK=1000, FRA=1008, GER=1010, ITA=1032, USA=1016, JPN=1011, AUS=1007, ESP=1016, SWE=1000
Q.11 Which, if any, is your main source for the following information? Regional / local news

The internet is the main source for sports news in the UK

The internet and TV were the most-cited platforms for sports news in the majority of our comparator countries. In the UK, people were more likely to nominate the internet than TV for this.

Figure 1.10 Main sources of sports news: 2016

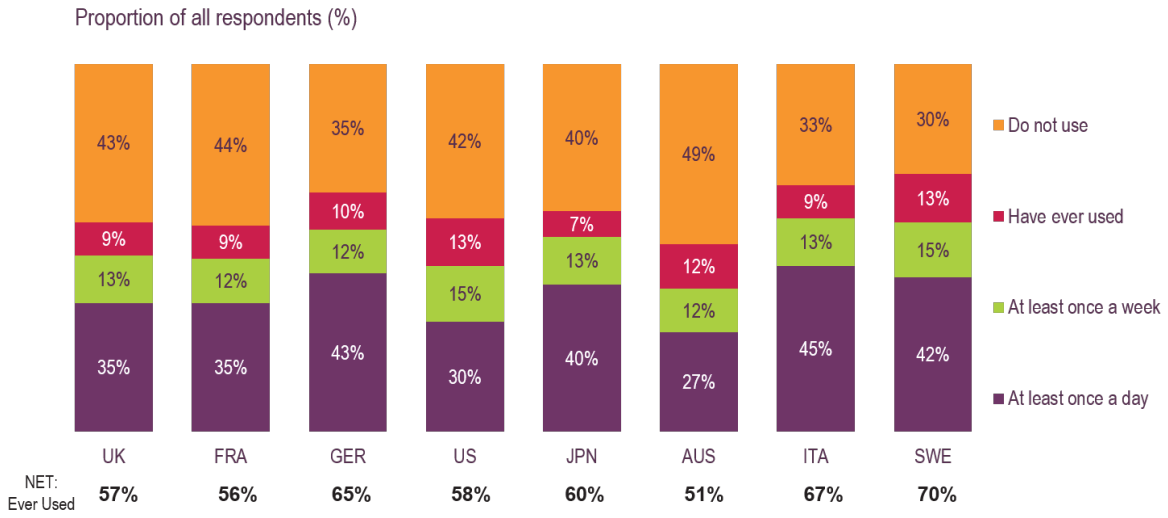


Source: Ofcom consumer research, October 2016
Base: All respondents, UK=1000, FRA=1008, GER=1010, ITA=1032, USA=1016, JPN=1011, AUS=1007, ESP=1016, SWE=1000
Q.11 Which, if any, is your main source for the following information? Sports news

More than a third of internet users use their mobile phone to read the news at least once a day in the UK

People are increasingly using their smartphone to access online content. According to Deloitte research, 35% of users in the UK claimed to read the news on their smartphone at least once a day, ranking the UK in the middle of comparator countries. Italy had the highest proportion of users who used their device to read the news at least once a day (45%). In all of our comparator countries, more than half of smartphone users say they have ever read the news on their phone, with the UK at 57%, in line with France and the US.

Figure 1.11 Use of mobile phone to read the news: 2016



Source: Deloitte Global Mobile Consumer Survey 2016
Base: All adults 18-75 who have a smartphone, UK=3251, FRA=1547, GER=1588, ITA=1707, USA=1530, JPN=1021, AUS=1681, SWE=1758
Q61_04 Activities use mobile phone to do – Read the news
Note: Figures have been rounded

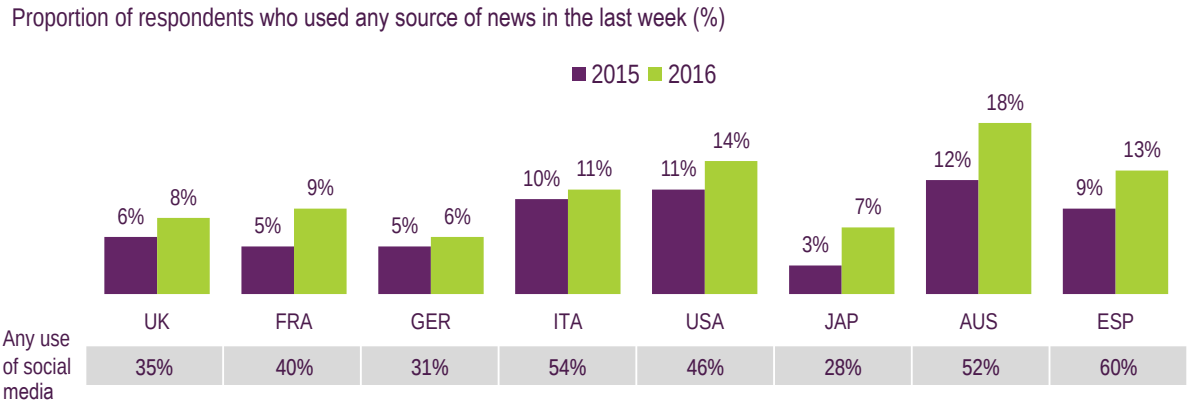
We now focus on findings from the Reuters Institute *Digital News Report*, published in June 2016.[10]

People in Australia, the US and Spain are the most likely to nominate social media as their main source of news

More than a third (35%) of online news users in the UK now say they use social media for news, and 8% say it is their main source. In Australia, one in five respondents say that social media is their main news source, up from 12% in 2015, representing year-on-year growth of 50%.

[10] Ofcom, along with a variety of partners, provides support for this project. The research provides comparisons about news consumption between 26 countries. For the ICMR, we have chosen to use data comparing the UK, France, Germany, Italy, the US, Japan, Australia, Spain, and Sweden. The report shows how news is perceived quite differently across countries, and how consumption habits differ considerably in a number of areas, particularly in relation to social media. The report is available at: http://www.digitalnewsreport.org/. In the UK, the survey was completed by an online panel of 2024 news users for YouGov in January/February 2016. For methodological details please see http://www.digitalnewsreport.org/survey/2016/survey-methodology-2016/

Figure 1.12 Use of social media as main source for news: 2016



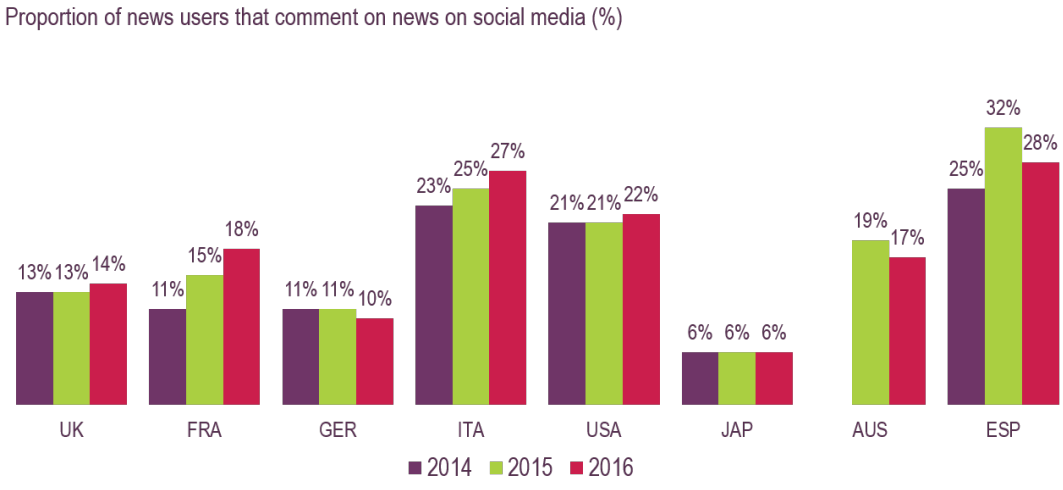
Source: Reuters Institute / YouGov research, Jan/Feb 2016
Base: All in each country who used a source of news in the last week (between around 1500 and 2000 in each country)
Q4: You say you've used these sources of news in the last week. Which would you say is your MAIN source of news?

Levels of interaction with news on social media vary by country

There are various ways in which people use social media for their news consumption. Some look at other people's comments; others click on links to videos or articles sent to them, either by friends or by news organisations; some look at 'what's trending' lists.

Around one in six online news users in the UK say that they comment on news using social media; those in Spain, Italy and the US are more likely to do this. Online users in Germany and Japan are the least likely to comment.

Figure 1.13 Commenting on news on social media, by country: 2014 - 2016



Source: Reuters Institute / YouGov research, Jan/Feb 2016
Base: Total sample (about 1500 to 2000 in each country)
Q13: During an average week, in which, if any, of the following ways do you share or participate in news coverage?

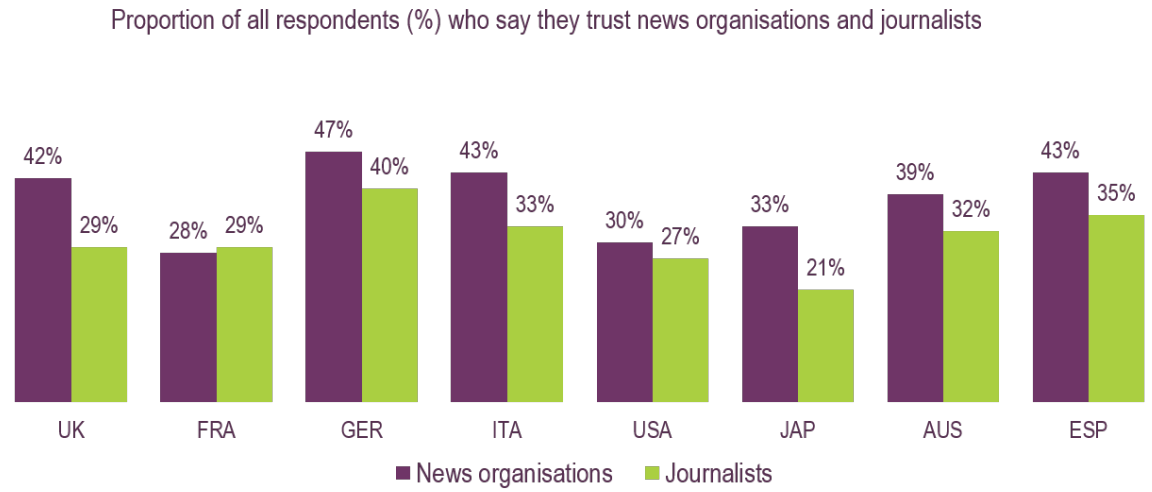
1.3.3 Trust in news organisations

Respondents are more likely to trust news organisations than journalists in all countries except France

Given the increased variety in the types of news source available to people, it is important to consider the relative trust that people say they have in news. Across our comparator countries, people in Germany are the most likely to say they trust news organisations, while those in France are the least likely.

The differential between trust in an organisation and in journalists is greatest in Japan and the UK, where respondents are more likely to trust the organisation than the journalist.

Figure 1.14 Extent of trust towards news organisations and journalists: 2016



Source: Reuters Institute / YouGov research, Jan/Feb 2016
Base: Total sample (between around 1500 and 2000 in each country)
Q6: Thinking about news in general, do you agree or disagree with the following statements? I think you can trust most journalists most of the time. I think you can trust most news organisations most of the time.

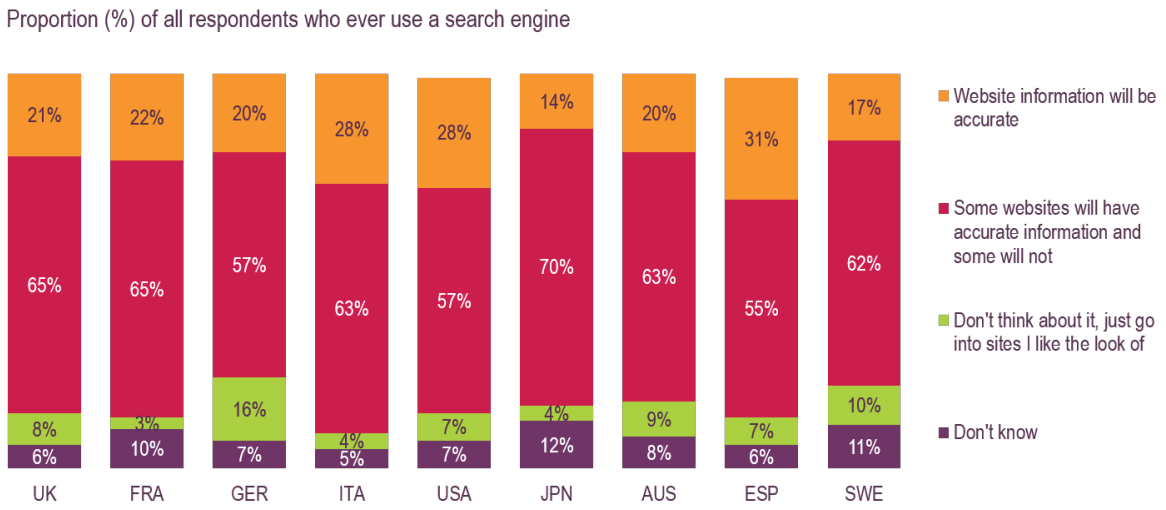
1.3.4 Perceptions of accuracy in search engine results

In the UK, nearly two-thirds of people are aware that not all websites returned by a search engine will contain accurate information

Our consumer research also examined respondents' trust in search engines. This maps the extent to which people say they think that the information provided on search engine results will be accurate.

Sixty-five per cent of respondents in the UK said they understand that some websites will provide accurate information and some may not. The UK was second to Japan as the country in which this was the most common answer. Respondents in Spain, Italy and the US were more likely than those in other comparator countries, including the UK, to think that the information returned by a search engine will be accurate.

Figure 1.15 Perceptions of the accuracy of search engine results pages: 2016



Source: Ofcom consumer research, October 2016
Base: Total sample, UK=1000, FRA=1008, GER=1010, ITA=1032, USA=1016, JPN=1011, AUS=1007, ESP=1016, SWE=1000
Q.11a When you use a search engine to find information, you enter a query in the search box and the search engine will then show some links to websites in the results pages. Which of these is closest to your opinion about the level of accuracy of the information detailed in the websites that appear on the results page?

1.4 The UK communications industry in context

1.4.1 Overview

The communications sector's total global revenue (incorporating the telecoms, television, postal and radio sectors) was £1,166bn in 2015. Telecoms and TV were the largest sectors, contributing £802bn and £263bn respectively.

UK communications sector revenues remained the fifth highest of our comparator countries. In 2015, as in recent years, the three largest communications markets by revenue were the US, China and Japan. Outside the top three, total UK revenue was second only to Germany. The UK generated £758 per head across our communications industries in 2015, which was the highest of the EU5[11]. This figure was £315 lower than the US, which once again had the highest revenue per head of our comparator countries, at £1,073 per person.

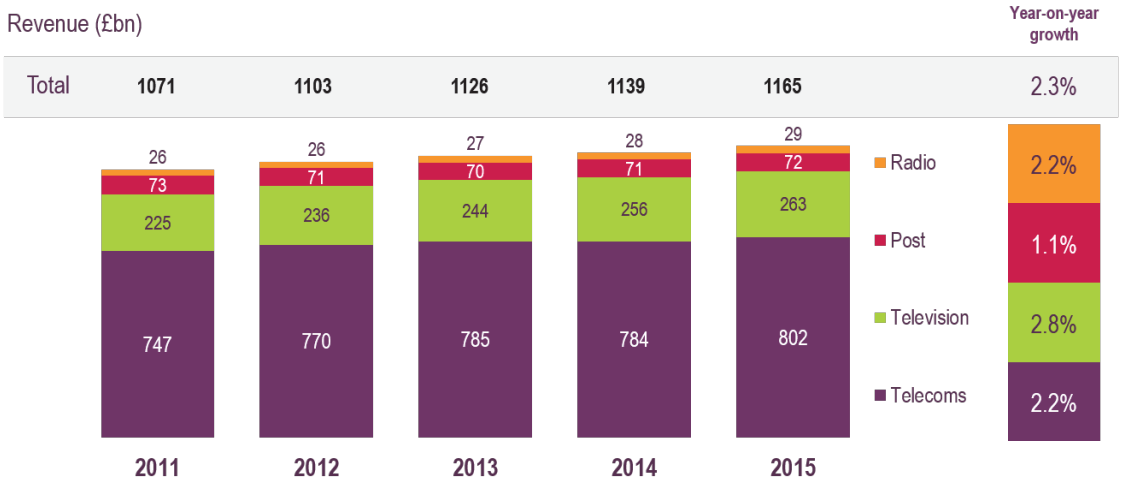
Global advertising expenditure was £308bn in 2015. TV accounted for the largest amount of advertising expenditure, at £106bn, followed by the internet (£102bn).

1.4.2 Communications sector revenues

The communications sector generated £1,165bn in revenue in 2015

Globally, communications services generated £1,165bn in revenue in 2015. As in previous years, telecoms services generated the greatest proportion of global communications revenue, with TV generating the second largest.

Figure 1.16 Global communications revenues: 2011 – 2015



Source: Data derived from various sources: PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook for television and radio revenues (both include advertising, licence fees and subscription services only), WIK Consult / Ofcom estimates for postal revenues which refers to letter mail only. IHS for telecoms revenues, which refer to retail revenues for fixed voice, broadband and mobile services. Interpretation and manipulation of data are solely Ofcom's responsibility. All figures are nominal.
Note: Postal revenues are for our 17 comparator countries and include letters only.

[11] EU5 countries are the UK, France, Germany, Italy and Spain

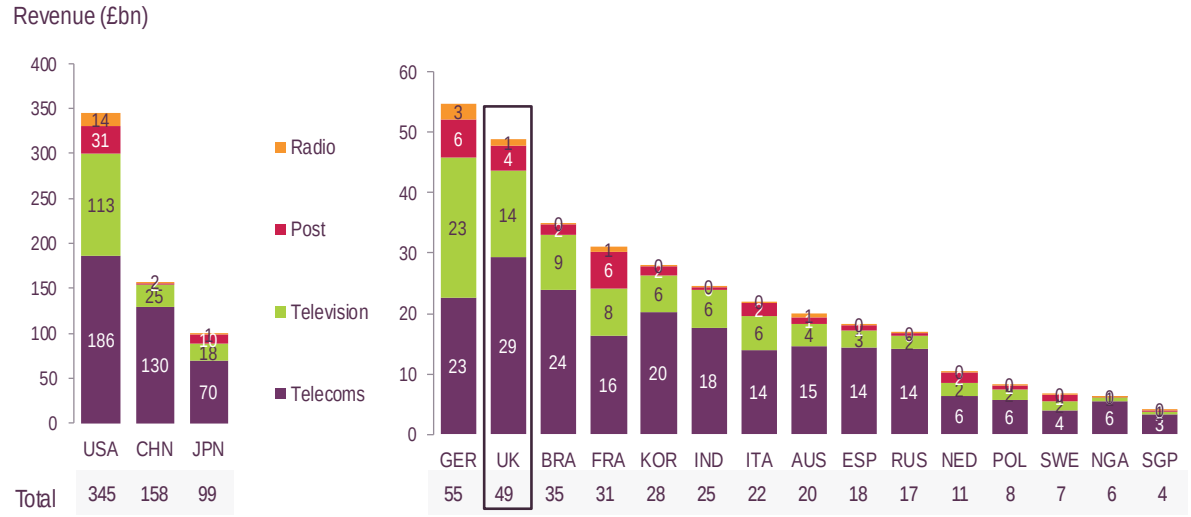
UK telecoms revenues are the fifth highest among all our comparator countries

In 2015, as in recent years, the three largest communications markets by revenue were the US (£345bn), China (£158bn) and Japan (£99bn).

At £186bn, the revenues of the US telecoms industry alone were greater than the combined industries' revenues in any other country. The US also commanded the largest revenue among our comparator countries in radio, post and television.

Total revenue across the four industry sectors in the UK was £49bn in 2015. Aside from the US, China and Japan, this was second only to Germany (£55bn) among the remaining comparator countries. UK telecoms revenues were the largest among our European comparator counties, with Germany second. UK television revenues, at £14bn, were second to Germany at £23bn.

Figure 1.17 Communications sector revenues, by country: 2015

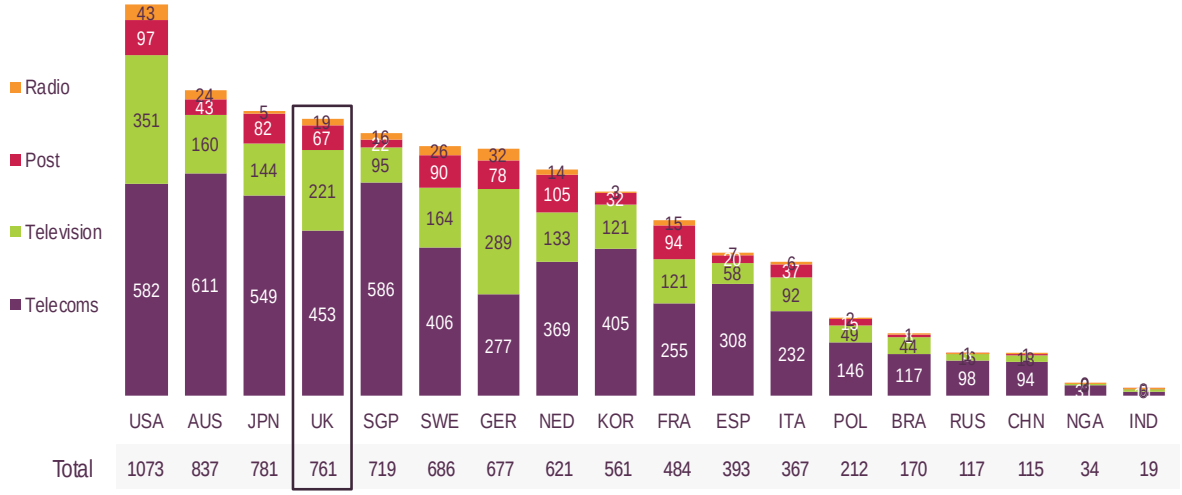


Source: Data derived from various sources: PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook for radio revenues (include advertising, licence fees and satellite subscription services only), WIK Consult / Ofcom estimates for postal revenues (letters only), IHS / industry data / Ofcom for television and telecoms revenues (telecoms revenues refer to retail revenues). Interpretation and manipulation of data are solely Ofcom's responsibility. All figures are nominal.
Note: Postal revenue data are not available for Nigeria.

UK communications revenue per head was the highest of the EU5 countries in 2015

The UK generated £761 in communications service revenue per person in 2015, the highest average spend across the EU5 and fourth among all our comparator countries. This figure was £312 lower than the US, which continued to have the highest revenue per head of our comparator countries, at £1,073 per person.

Figure 1.18 Communications sector revenue per head: 2015

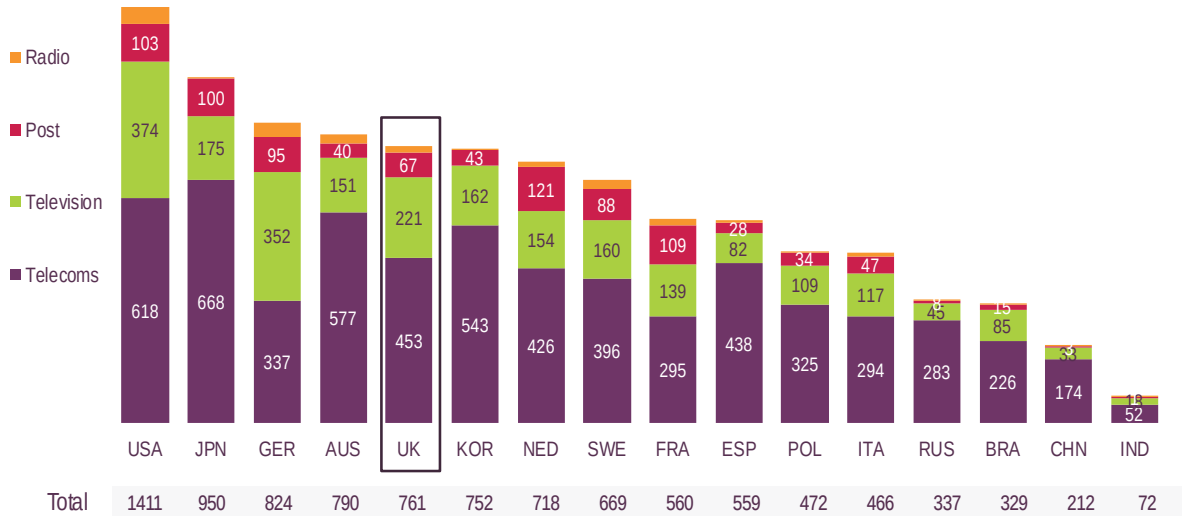


Source: Data derived from various sources: PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook for radio revenues (include advertising, licence fees and satellite subscription services only), WIK Consult / Ofcom estimates for postal revenues (letters only). IHS / industry data / Ofcom for television and telecoms revenues (telecoms revenues refer to retail revenues). Interpretation and manipulation of data are solely Ofcom's responsibility. All figures are nominal.
Note: Postal revenue data are not available for Nigeria.

Figure 1.19 uses OECD purchasing power parity data to adjust absolute revenue per capita, taking account of varying price levels across countries in order to provide a view of revenue in relation to consumer spending power in each country. After adjustment,[12] the revenue per head in the US increases to £1,411. Japan and Germany overtake Australia as the countries with the second and third highest revenues per head countries respectively, dropping the UK down to fifth position.

[12] Please see section 1.1.6 of Appendix A, in the *Technical appendix*: https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international

Figure 1.19 Communications revenues per head, adjusted for comparative price levels: 2015



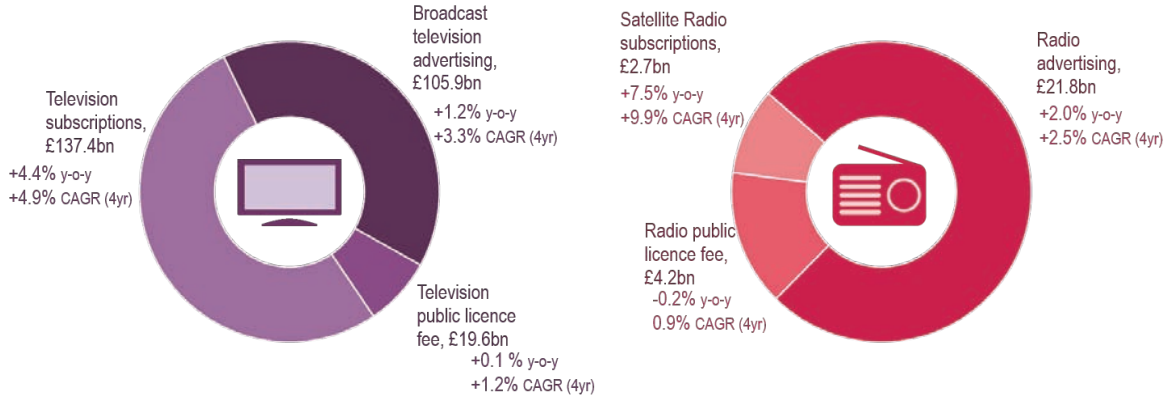
Source: Data derived from various sources: Ofcom analysis based on data from PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook for radio revenues (include advertising, licence fees and satellite subscription services only), Wik Consult / Ofcom estimates for postal revenues (letters only). IHS / industry data / Ofcom for television and telecoms revenues (telecoms revenues refer to retail revenues). Interpretation and manipulation of data are solely Ofcom's responsibility. Figures adjusted using data from http://stats.oecd.org. comparative price levels (CPL) to adjust for purchasing power parity (PPP). CPLs are ratios of PPP for consumption expenditure to exchange rates. They measure differences in price levels between countries by indicating the number of units of a common currency required to buy the same volume of products in each country. All figures are nominal. N.B. Nigeria and Singapore are not shown in the above figure as these two countries are not included in the OECD database.

Subscription revenues continue to grow in the global television industry

Of the £262.9bn that the television industry generated in 2015, subscription revenues contributed the largest proportion of revenue, at £137.4bn. Broadcast television advertising revenue accounted for £105.9bn, with public funding revenue at £19.6bn in 2015.

In the radio industry, satellite subscription revenue stood at £2.7bn in 2015. Revenue from radio advertising was £21.8bn in 2015, with public licence fee revenue at £4.2bn.

Figure 1.20 Sources of global revenue for radio and television industries: 2015

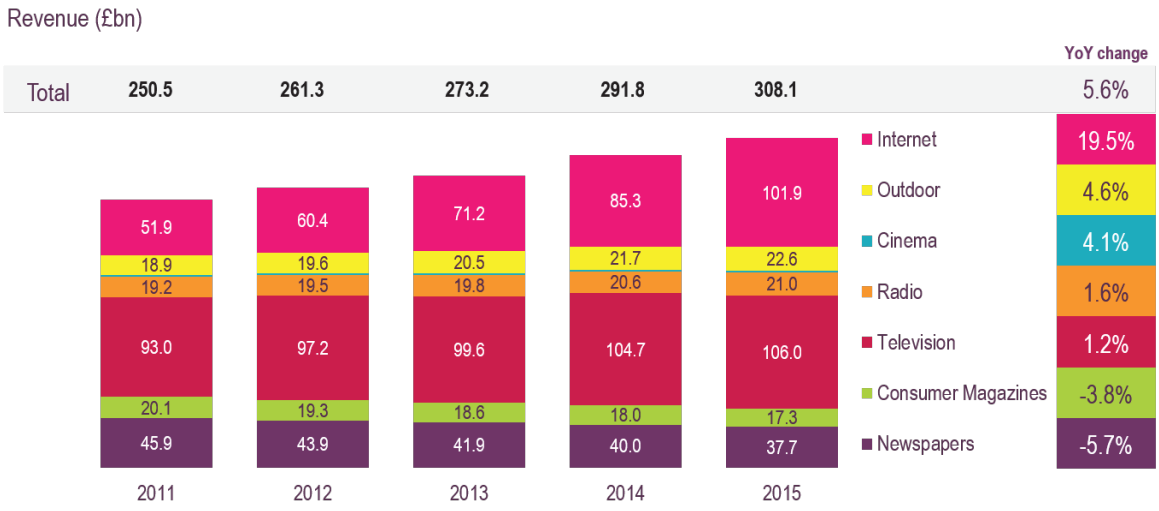


Source: All data derived from PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook. Notes: Ofcom is responsible for all growth calculations displayed. All figures are nominal.

Global advertising expenditure was £308bn in 2015

As in previous years, TV and internet accounted for the largest proportion of this, at £106bn and £102bn respectively.

Figure 1.21 Global advertising expenditure, by medium: 2015



Source: Data derived from PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook. Notes: Ofcom is responsible for all growth calculations displayed. All figures are nominal

1.5 International regulatory context

This section provides an overview of recent and ongoing regulatory developments at EU[13] and international levels in the communications sector. It does not aim to be a comprehensive examination of regulatory frameworks across the comparator countries, but highlights significant developments to provide some context to the analysis in this report.

1.5.1 Significant developments in the telecommunications sector

The EU regulatory framework for electronic communications

In May 2016, the European Commission (EC) published its *Digital Single Market* (DSM) strategy,[14] setting out a vision for achieving an internal market in Europe, in which anyone can access and purchase digital goods and services, regardless of their country of origin.

Comprising 16 actions, the DSM is now well under way and the EC has published a number of legislative initiatives that are expected to be adopted by the European Parliament and Council (28 Member States) in the coming year. A review of the regulatory framework for electronic communications (commonly referred to as the 'Framework', soon to be renamed *the Electronic Communications Code*) is one of these legislative initiatives.

The Framework, originally adopted in 2002,[15] sets the regulatory principles for electronic communications network and service regulation, including the suite of remedies that regulators can impose on operators with significant market power, as well as principles for spectrum authorisation and use. It defines the permitted scope of universal service obligations (USO[16]) and includes sector-specific measures on consumer protection. The Framework was last revised in 2009 and currently comprises five Directives. It applies to all electronic communications networks and services, retail and wholesale, as well as associated facilities and services.

In September 2015, the EC launched its second review of the Framework with a public consultation,[17] and in September 2016 it published legislative proposals (*the Electronic Communications Code*).[18]

The overriding policy focus of the Code is the deployment and take-up of very high-speed networks. While retaining the core tenets of the economic regulation framework that has been in place since 2002, the proposals seek to increase investment incentives (including, in some cases, through lighter-touch regulation).

The scope of the Code is also broader than that of the current Framework, in that it now includes some over the top[19] services, which will become subject to a limited number of new regulatory obligations. The EC is also seeking to simplify and increase the level of harmonisation of consumer protection provisions across the EU, while explicitly enabling

[13] The consequences of the UK's EU referendum vote will be unclear for some time. The UK currently remains a member of the EU and the EU regulatory frameworks continue to apply.
[14] http://ec.europa.eu/priorities/digital-single-market/
[15] http://europa.eu/legislation_summaries/information_society/legislative_framework/l24216a_en.htm
[16] The universal service obligation (USO) is a minimum set of services of specified quality which should be available to all users at an affordable price.
[17] https://ec.europa.eu/digital-agenda/en/news/public-consultation-evaluation-and-review-regulatory-framework-electronic-communications
[18] http://europa.eu/rapid/press-release_IP-16-3008_en.htm
[19] Over-the-top players (OTTs): service providers offering a wide variety of applications and services, including communications services, over the internet.

regulators to apply rules on switching and contract termination to all elements of a retail bundle. In addition, the EC is removing certain services from the scope of the mandatory USO, while recasting the objectives of the USO from one of service availability to one of affordability. Finally, the EC is proposing greater EU-level oversight over national spectrum auctions, and greater coordination in the timing and terms of spectrum awards.

The EC is also proposing a strengthening of the independence of national regulators, and the transformation of the Body of European Regulators for Electronic Communications (BEREC – the network of EU national regulators) into a European agency.[20]

International mobile roaming

The European regulatory framework for international mobile roaming was originally set out in the first *EU Roaming Regulation* (EC 717/2007), and subsequently updated in 2009 and 2012.[21] This has now been superseded by measures agreed as part of the *Connected Continent Regulation*, which entered into force in April 2016 and set out a timeline for the abolition of retail roaming surcharges. The Regulation also introduced new net neutrality rules, covered below.

The new international roaming rules seek to abolish retail roaming surcharges by 15 June 2017 (known as 'roam like at home'), subject to the EC legislating to reduce wholesale roaming price caps by that date (legislative proposals for which were tabled on 15 June 2016). As a preliminary step, a substantial reduction in retail roaming surcharges was applicable from 30 April 2016, when the current maximum retail surcharges were reduced to the level of the current wholesale caps.

From June 2017, operators will be allowed to implement fair-use policies (essentially, limits to 'roam like at home') to prevent the abuse of regulated roaming services, and to retain surcharges up to the retail caps (if they can demonstrate to their National Regulatory Authority (NRA) that they cannot cover the costs of providing roaming). In September 2016, the EC tabled a draft Implementing Act on the application of the fair use policy for 'roam like at home' (based on principles of 'permanent residence' or 'stable links' to a Member State, rather than on time or volume usage limits). The Implementing Act also sets out criteria for the assessment of exceptional applications for exemptions from the requirement to offer 'roam like at home' pricing.

The Implementing Act has to be in place by 15 December 2016, and the accompanying wholesale measures have to come into effect as soon as possible, before the planned introduction of 'roam like at home' on 15 June 2017.

Traffic management and net neutrality

The net neutrality debate – about the extent to which a principle of non-discrimination should apply to internet traffic across networks – has continued to preoccupy national regulators and governments across the world, and particularly in Europe and the US, where new rules have been the subject of extensive discussion during 2016.

---

[20] BEREC is a forum for cooperation, knowledge-exchange and sharing best practices between independent National Regulatory Authorities (NRAs). The European Council, The European Parliament and the EC regularly seek the advice of BEREC on a range of policy issues, while NRAs and the EC are required to take the utmost account of any opinion, recommendation, guidelines, advice or regulatory best practice adopted by BEREC. BEREC's annual Work Programmes can be consulted here: http://berec.europa.eu/eng/about_berec/annual_work_programme/.

[21] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:172:0010:0035:EN:PDF

There is broad global support for the principle that internet service providers (ISPs)[22] should not become gatekeepers to online content, applications and services rather than neutral providers of access to them, to avoid the risk of compromising the continued operation of the internet as an open platform for innovation. However, there is significant disagreement about what exactly this means for ISPs, with strongly held and divided views about practices such as 'zero-rating'.[23]

By late 2016 there was net neutrality legislation or regulation in place in at least six countries outside the EU:

- a 2010 Chilean net neutrality law forbids ISPs from discriminating between content providers or from blocking users from accessing lawful content;
- Singapore's telecoms regulator maintains a ban on blocking access to lawful content (following a 2011 consultation);[24]
- in 2012, provisions in a Peruvian law that enables and promotes broadband investment required ISPs to respect network neutrality;
- Israel introduced a net neutrality requirement for mobile broadband services in 2011, and extended these to fixed-line services in 2014; and
- in Brazil, the 2014 *Civil Rights Framework for the Internet*[25] included net neutrality rules.

In Europe, the *Connected Continent Regulation* introduced rules on net neutrality that came into force on 30 April 2016. The Regulation requires ISPs (fixed and mobile) to treat all traffic equally and establishes a right for all end-users to access and distribute lawful content, applications and services of their choice. It also introduced new transparency requirements for ISPs. Under the Regulation, ISPs may use reasonable traffic management measures, but blocking and throttling are allowed only in a limited number of circumstances, such as preserving network security and managing network congestion. In August 2016, BEREC issued guidelines on the implementation of the rules by NRAs.

In Europe, the *Connected Continent Regulation* introduced rules on net neutrality that came into force on 30 April 2016. The Regulation requires ISPs (fixed and mobile) to treat all traffic equally and establishes a right for all end-users to access and distribute lawful content, applications and services of their choice. It also introduced new transparency requirements for ISPs. Under the Regulation, ISPs may use reasonable traffic management measures, but blocking and throttling are allowed only in a limited number of circumstances, such as preserving network security and managing network congestion. In August 2016, BEREC issued guidelines on the implementation of the rules by NRAs.

[22] Internet service provider (ISP): a company that provides access to the internet.
[23] An online content service is 'zero-rated' on an internet access service when use of the content service does not count against the data cap applying to the internet access service.
[24] https://www.imda.gov.sg/~/media/imda/files/inner/pcdg/consultations/20101111_neteutrality/netneutralityexplanatorymemo.pdf
[25] https://www.publicknowledge.org/documents/marco-civil-english-version

Next-generation access (NGA)[26] and broadband roll-out

The *Digital Agenda* presented by the EC forms one of the seven pillars of the *Europe 2020 Strategy*, which sets objectives for the growth of the European Union by 2020. Among other goals, it sets NGA coverage targets by 2020: download rates of 30 Mbit/s for all European citizens and for at least 50% of European households to be subscribing to internet connections above 100 Mbit/s.

More recently, the EC has extended its thinking beyond 2020 to address longer term broadband needs and has talked of a 'Gigabit society' by 2025: all schools, transport hubs and main providers of public services as well as digitally intensive enterprises should have access to internet connections with download/upload speeds of 1 Gbit/s. In addition, all European households, rural or urban, should have access to networks offering a download speed of at least 100 Mbit/s (which can be upgraded to 1 Gbit/s), and all urban areas, major roads and railways should have uninterrupted 5G wireless broadband coverage.

The EC aims to meet this through initiatives that will incentivise investments and reduce the costs of NGA deployment (e.g. by encouraging co-investment and the sharing of civil infrastructure). Various European countries have defined their own roll-out strategies and begun to implement them. Despite the common goals, the type and speed of NGA rollout varies considerably across European countries.

The recent BEREC report *Challenges and drivers of NGA roll-out and infrastructure competition*[27] highlights a number of factors that impact on a country's NGA deployment (e.g. the model of competition, based to a large degree on the technologies deployed). The report shows that factors which are largely exogenous to NRAs' sector specific regulation have a significant impact on NGA deployment:

- Infrastructure competition (mostly from DOCSIS 3.0 networks deployed by cable operators);
- Demand-side factors (i.e. end-user demand for services that require higher bandwidth and an associated willingness to pay a premium for higher bandwidths); and
- Supply-side factors (i.e. factors which influence the costs or the quality of NGA deployment including public policy initiatives, and the degree of urbanisation).

The type of NGA roll-out is largely shaped by the legacy infrastructure and the existing civil infrastructure, hence revealing strong elements of path-dependency. However, the regulatory approach also has a strong bearing on the degree and type of competition that emerges, and on prices – currently, several NRAs are considering how best to balance the longer-term goal of increased infrastructure competition based on passive infrastructure access, while retaining service-based competition using the active wholesale products of the incumbent.

[26] Next-generation access networks (NGA): New or upgraded access networks that can allow substantial improvements in broadband speeds. This can be based on a number of technologies such as fibre-to-the-cabinet, DOCSIS 3.0 (sometimes known as 'cable') and fibre-to-the-premises, all of which are network technologies that use fibre optic technology to varying degrees.
[27] http://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/6488-berec-report-challenges-and-drivers-of-nga-rollout-and-infrastructure-competition

In the UK, Ofcom published the initial conclusions of its *Digital Communications Review* (DCR) in February 2016[28] which, among other areas of focus, explicitly supported investment and innovation in ultrafast broadband networks such as fibre to the home (FTTH) through pricing and access remedies.

In other European countries, approaches vary to the relative application of passive or active remedies. In France, for example, no active FTTH remedies have been imposed,[29] as the French regulator pursues a policy of incentivising infrastructure competition and the deployment of FTTH.

As the broadband technologies deployed by incumbents evolve from ADSL[30] to FTTx,[31] some NRAs have concluded that passive access to passive optical networks (PONs) is not technologically feasible, and have therefore opted for virtual unbundled local access (VULA) [32] or bitstream remedies. In Germany, the incumbent is required to offer VULA and other managed wholesale remedies such as bitstream access as a condition to implementing vectoring technology.[33]

In Italy, the NRA has insisted that the incumbent and access seekers work together to find a mutually acceptable vectoring solution, while NRAs elsewhere in Europe have allowed incumbents to implement vectoring solutions providing the incumbent offers enhanced bitstream services to access seekers so as to allow competitors to continue to compete when vectoring technology is deployed.

Communications providers around the world are also looking to upgrade their networks to make use of more efficient technologies such as fibre, and are migrating from traditional transmission standards to standards used to route data via internet protocol (IP)34 . Many communication providers in Europe, the US and Asia have migrated their backbone to next generation core networks (NGNs)35 by overlaying and upgrading their legacy backbone

[28] https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/policy/digital-comms-review/conclusions-strategic-review-digital-Communications

[29] However, there are active VDSL (Very high bit rate digital subscriber line) remedies. Digital subscriber line (DSL) refers to a family of technologies generally referred to as DSL, or xDSL, capable of transforming ordinary phone lines (also known as 'twisted copper pairs') into high-speed digital lines.

[30] Asymmetric digital subscriber line (ADSL): A digital technology that allows the use of a standard telephone line to provide high-speed data communications. It allows higher speeds in one direction (towards the customer) than the other.

[31] Fibre-to-the-x (FTTx): This comprises the many variants of fibre optic access infrastructure. These include fibre to the home (FTTH), fibre to the premises (FTTP), fibre to the building (FTTB), fibre to the node (FTTN), and fibre to the cabinet (FTTC).

[32] VULA is an enhanced bitstream solution that allows access seekers to deliver services over the incumbent's NGA access network with a degree of control that is similar to that achieved when taking over the physical line to the customer.

[33] Vectoring enhances the achievable speeds of VDSL to close to its theoretical potential by cancelling out cross-interference on lines, but it does not lend itself easily to a multi-operator solution.

[34] Internet protocol (IP): The packet data protocol used for routing and carrying messages across the internet and similar networks.

[35] Next-generation core networks (NGN): internet protocol-based core networks which can support a variety of existing and new services, typically replacing multiple, single service legacy networks.

public switched telecommunications networks (PSTN)36 with a single IP-based network. Many are now also starting to migrate their access lines to IP.[37]

Governments and regulatory agencies have also examined policies of imposing structural remedies to enhance the deployment of high-speed broadband networks. For example, in Australia, Brazil, New Zealand, Singapore and South Africa, governments have created new state-owned operators in order to participate directly in the construction of broadband networks.

The trade-off that governments and regulatory agencies often have to contend with is the desire to 'future-proof' investments and accelerate the transition to a 'gigabit society' by adopting a FTTP policy, balanced with the need to spread the large investment required over a longer period by adopting a multi-technology approach.

In October 2016, the EC published a study (*Costing the new potential connectivity needs*) which examined six different connectivity options (based on the choice of technology and extent of coverage in place by 2025) and the associated deployments costs for each scenario. The costs across the EU ranged from €55bn to €249bn for extending the access network to the majority of residential premises (80-100% coverage).[38]

1.5.2 Significant developments in the area of content regulation and the protection of audiences

The EU content regulatory framework

In Europe, the *Audiovisual Media Services Directive* (AVMSD)[39] is the common framework for the regulation of television and video-on-demand (VoD) content. Last reviewed in 2007, the AVMSD sets out common minimum rules for television content, focusing on the protection of minors, incitement to hatred, advertising, and the promotion of European works. It also ensures that pan-European broadcasters have to comply only with a single set of rules: those of the country in which they are established (the country-of-origin principle).

Following a public consultation in 2015[40] on the fitness of the rules, the EC published a legislative proposal to update the AVMSD in May 2016, including:

- extending the scope of the Directive to cover certain internet-delivered services (via the regulation of 'video-sharing platforms' (VSPs) such as YouTube, in relation to harmful content and hate speech);
- relaxing the rules on commercial communications; harmonising rules on protecting minors;
- extending the right of Member States to charge levies on on-demand revenues to fund content investment; and

[36] Public switched telephone network (PSTN): The network that manages circuit-switched fixed-line telephone systems.
[37] In Europe, 19 countries have already finished their migration to IP in access lines, some as the result of a move to NGN in the access layer. Developments in regions such as Latin America, Africa and the Arab States have been slower but are following a similar trend.
[38] http://bookshop.europa.eu/en/costing-the-new-potential-connectivity-needs-pbKK0116744/?CatalogCategoryID=CXoKABst5TsAAAEjepEY4e5L
[39] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:095:0001:0024:EN:PDF
[40] https://ec.europa.eu/digital-agenda/en/news/public-consultation-directive-201013eu-audiovisual-media-services-avmsd-media-framework-21st

- introducing detailed requirements for ensuring the independence of NRAs.

In the meantime, and in part feeding into the AVMSD review process, national regulators in Europe continue to work on implementation at the national level, and to co-operate in a number of regulatory bodies. One of them is the European Regulators Group for Audiovisual Media Services (ERGA),[41] a group of EU audiovisual regulators, set up to advise the EC on the application of the AVMSD.[42]

National regulators in Europe also cooperate on a wider basis through the European Platform of Regulatory Authorities (EPRA),[43] an independent group of regulators from 46 countries, which meets twice a year to share best practice.

Content protection and controls in an online environment

Child online protection44 (and the wider protection of audiences online) has in recent years moved up the international political agenda. As the existing EU content framework, the AVMSD, applies content regulation to only a limited number of online services, new models of cooperation and participation are emerging, featuring combinations of co- and self-regulation and media literacy initiatives.[45]

Notably, in the UK, all of the country's mobile operators and the four largest fixed-line ISPs offer network-level content filtering services on a voluntary basis. Since the announcement of the provision of filtering by fixed providers, Ofcom has published a series of reports on the protection of children online.[46] In addition, Ofcom publishes regular media literacy and viewer research data, to aid understanding and identify areas of concern, including a report on audience understanding and expectations of protection measures and standards across different media.[47]

The trend for self-regulatory initiatives continued during 2016, notably with Facebook, Twitter, YouTube and Microsoft agreeing a voluntary code of conduct with the EC covering a commitment to act to combat the spread of illegal hate speech online in Europe.[48] Such increased attention to the role that the internet is seen to play in the dissemination of

---

[41] http://ec.europa.eu/digital-agenda/en/audiovisual-regulators

[42] In 2015 ERGA conducted work on regulatory independence, the scope of the AVMSD, territorial jurisdiction and the protection of minors. In 2016, ERGA continued its work notably on the protection of minors, and on 5 October 2016 adopted an opinion on the proposal to amend the AVMSD. See https://ec.europa.eu/digital-single-market/en/news/erga-opinion-avmsd-proposal

[43] http://www.epra.org/

[44] The term 'child online protection' in this case relates to the protection of minors (traditionally meaning, in regulatory terms, broadcast content-related rules for the protection of young viewers) in the online space. In many countries, the broadcast related rules for minors are only applicable to tv-like services online and not all video and content services online.

[45] Ofcom defines media literacy as: "the ability to access, understand and create communications in a variety of contexts".

[46]. The internet safety reports, see: https://www.ofcom.org.uk/__data/assets/pdf_file/0019/27190/internet-safety-measures.pdf; https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/internet-policy/internet-safety-2; https://www.ofcom.org.uk/__data/assets/pdf_file/0016/31732/third_internet_safety_report.pdf. Ofcom published a fourth internet safety report in December 2015, providing an update on the ISPs' filtering, including the extension of the offer to existing customers and reporting on our 2015 media literacy research.

[47] https://www.ofcom.org.uk/research-and-data/tv-radio-and-on-demand/tv-research/protecting-audiences-online-world

[48] http://europa.eu/rapid/press-release_IP-16-1937_en.htm

extremism and radicalisation is also reflected in the EU Directive of December 2015 on combating terrorism.[49]

Other significant self-regulatory initiatives include the collaborative programme run since 2014 between the British Board of Film Classification (BBFC), the Netherlands' regulator NICAM and others, on You Rate It, a tool to enable members of the public to age-rate user-generated video content online across different territories and platforms.

Statutory and co-regulatory arrangements are typical across the EU in relation to those online services which are covered by the AVMSD (VoD services which are established in a Member State of the EU). These include obligations on regulated providers to restrict minors' access to 'stronger' material, such as sexually explicit programmes, through access control mechanisms. France operates a statutory age classification system for VoD content, with associated scheduling restrictions and information requirements. In the UK, there are obligations on providers of stronger material to verify the ages of viewers before allowing access.

In some cases, the statutory framework is complemented by self-regulatory bodies: in Italy, the Committee for Media and Minors oversees the provision of access control mechanisms under a code, with AGCOM, the NRA, as a statutory back-stop.

The EC's proposals for the revision of the AVMSD extend EU regulation dealing with the protection of minors to video-sharing platforms (VSPs) – of which YouTube is the most prominent example. The Directive seems to propose VSP obligations very similar to the current practices of YouTube: content deemed to be inappropriate is flagged by users and subsequently reviewed by YouTube against its own standards framework. However, under the proposals this would be overseen and potentially enforced by NRAs. The details of any such VSP regulation will be the subject of further discussion and negotiation during 2017.

Media pluralism and ownership rules

Media pluralism remained high on the European agenda, after a debate and an EC consultation on media pluralism and freedom, including the role of NRAs, sparked by an earlier report from a high-level group (HLG)[50] of experts for the EC.

The debate has focused on whether there is a greater need for harmonisation of rules on media pluralism at the European level. On the basis of one of the HLG's recommendations, and as an attempt to gather further data, a number of EU countries conducted pilot studies in 2014 and 2015, using the media pluralism monitor tool developed in 2009, which is a set of indicators to measure 'threats' to pluralism. The study has been extended to all Member States and the full results should be published shortly.

In parallel, the Council of Europe (CoE) has created a Committee of Experts on Media Pluralism and Transparency of Media Ownership (MSI-MED), whose task is to analyse best practices in the CoE's Member States and prepare standard-setting proposals around ensuring a pluralist media landscape, diversity in media content and transparency in media ownership.[51]

On 1 March 2016 Australia announced a proposed package of changes to its media ownership laws. This included the repeal of the 75% reach rule (which prevents the creation

[49] http://ec.europa.eu/dgs/home-affairs/what-we-do/policies/european-agenda-security/legislative-documents/docs/20151202_directive_on_combatting_terrorism_en.pdf
[50] http://ec.europa.eu/digital-agenda/en/high-level-group-media-freedom-and-pluralism
[51] http://www.coe.int/en/web/freedom-expression/committee-of-experts-on-media-pluralism-and-transparency-of-media-ownership-msi-med-

of national television networks by banning networks from broadcasting to more than 75% of the population), and the '2/3' cross-media ownership rule (which restricts media companies from controlling more than two out of three platforms in any market across newspapers, television and radio).

In the US, the FCC must complete a review of its broadcast ownership rules every four years, and repeal or modify any rules that are no longer in the public interest. It did not complete its 2010 review, announcing that it would combine it with its 2014 review. This review concluded in August 2016, with the FCC retaining existing broadcast ownership rules, including the prohibition on cross-ownership of newspapers and television stations. The FCC also introduced new rules for reporting shared-services agreements (i.e. a broadcaster will be deemed to have an ownership interest in any station where that owner sells 15% or more of its advertising time – a common arrangement in the US, known as the 'sidecar'. This change will have the effect of tightening rules that limit companies to owning just one TV station in small and medium local markets).

1.5.3 Spectrum policy and management – international context

Radio spectrum, a key public asset required for communications services, continues to be used increasingly intensively. As transmissions do not stop at international borders, there exists a formal framework of cooperation between countries to minimise cross-border interference within and between services; to achieve the mobile use of wireless services at global and European levels; and to help create economies of scale that drive the availability of services, and desirable outcomes such as lower prices, for consumers.

Three key international structures coordinate spectrum at the international and European levels:

- The International Telecommunications Union (ITU)[52] which defines the global framework for spectrum use in the Radio Regulations. The Radio Regulations are a UN treaty, revised approximately every four years at World Radiocommunication Conferences (WRC);[53]

- the European Conference of Postal and Telecommunications Administrations (CEPT/ECC)[54] which has a broader membership than the EU, with 48 Member States; and

- in the European Union, the Radio Spectrum Committee (RSC)[55] (comprising EU national governments) and the Radio Spectrum Policy Group (RSPG)[56] (comprising EU national spectrum authorities).

Ofcom acts for the UK in the above fora by virtue of a Government Direction[57] and contributes to the workings of CEPT/ECC, where spectrum harmonisations measures are developed and published.

ITU and the World Radiocommunication Conference (WRC) 2019

The preparatory process for the next WRC, WRC-19, is in its early stages. For Ofcom, the main process involves engagement with the Government, regulators and stakeholders to

[52] http://www.itu.int/ITU-R/
[53] http://www.itu.int/ITU-R/index.asp?category=conferences&rlink=wrc&lang=en
[54] http://www.cept.org/ecc
[55] https://ec.europa.eu/digital-single-market/en/radio-spectrum-committee-rsc
[56] http://rspg-spectrum.eu/
[57] https://www.ofcom.org.uk/about-ofcom/international/spectrum/mou

inform the UK position across all the agenda items on which we engage with our European colleagues in CEPT and on which, through negotiation, leads to the establishment of European common positions (ECPs) on many of the agenda items considered at a WRC. Ofcom will also be engaging in the preparations of other regional groups outside Europe, and will participate in discussions with other administrations around the world.

Ofcom leads for the UK in the development of the UK position for WRC and at the Conference itself. We are in the process of developing initial views on a number of WRC-19 agenda items, including:

- supporting additional allocations for mobile broadband, including 5G, in bands above 24 GHz;
- supporting the consideration of the frequency bands 17-19 GHz and 27.5-29.5 GHz for use by earth stations in motion; and
- supporting the assessment of frequency bands between 5 150 MHz and 5 925 MHz for additional spectrum availability for Wi-Fi and compatible wireless broadband technologies.

Other items that WRC-19 will be considering include: studies related to wireless power transfer (WPT); the regulatory conditions applied to non-geostationary satellite systems in the bands around 37.5 and 51.4 GHz; the allocation status applied to earth exploration satellites in the 450-470 MHz band; and spectrum needs and regulatory provisions for the introduction and use of the global aeronautical distress and safety system (GADSS).[58]

European Conference of Postal and Telecommunications Administrations (CEPT)

The European Conference of Postal and Telecommunications Administrations (CEPT),[59] is a collective of 48 countries across Europe, and includes non-EU countries such as Russia, Turkey, Norway and Switzerland. CEPT's activities include cooperation on commercial, operational, regulatory and technical standardisation issues related to postal, telecommunications and radio spectrum harmonisation.

Within CEPT, the Electronics Communications Committee (ECC) considers and develops policies on electronic communications activities in a European context, taking account of European and international legislation and regulation. The ECC produces spectrum harmonisation measures (concerning spectrum use by all sectors), which are then adopted by CEPT member countries. CEPT is also the recognised regional organisation for the European preparations going into World Radiocommunication Conferences.

The EC takes due account of the work of international organisations, such as CEPT and ITU, where they are seeking the development of technical implementing measures. This normally takes the form of an RSC mandate to CEPT to undertake this technical work and then report to the EC.

[58] A list of all the issues to be considered and decided upon at WRC-19 can be found here: http://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-19-studies.aspx
[59] http://www.cept.org/ecc

Radio Spectrum Committee (RSC)

The RSC[60] is responsible for developing legislative technical decisions to ensure harmonised conditions of use across Europe for the availability and efficient use of radio spectrum. It comprises Member States' representatives and is chaired by the EC. Once legislative harmonisation decisions are passed, they are binding upon the 28 EU Member States.

Part of the Member States' remit within the RSC is to draft and approve mandates to the CEPT. These mandates, on which Member States provide both technical and policy input and direction, normally specify the tasks to be undertaken, including the technical analysis required to establish minimum technical requirements to ensure harmonised conditions for the viable and efficient use of radio spectrum.

Radio Spectrum Policy Group (RSPG)

The RSPG[61] is a high-level advisory group assisting the EC and the European Parliament (at its request) in the development of radio spectrum policy. It comprises representatives of the spectrum management authorities for each Member State (which in some cases are independent regulators, in some the relevant government ministry, and in many cases both) and the EC.

The RSPG's work programme[62] is delivered by a number of working groups and currently covers:

- the spectrum needs of the *Digital Single Market* (including the Framework review);
- intelligent transport systems (ITS);
- the Internet of Things (IoT);
- 5G;
- WRC-19;
- Programme making and special events (PMSE); and
- EU assistance in bilateral coordination ('good offices').

The RSPG has already adopted Opinions under this work programme on the Framework Review consultation[63] and on a European spectrum strategy for 5G.[64] Draft Opinions on ITS and IoT have been published for public consultation.[65]

1.5.4 Significant developments and acitivities in the postal sector

The EC published legislative proposals in September 2016 aimed at ensuring greater transparency in and regulatory oversight over cross-border tariffs, especially for SMEs and users in remote areas. These proposals included:

- a requirement for NRAs to annually assess the affordability of a range of cross-border postal tariffs and the publication by the EC of public listed prices of universal service providers (USPs) in order to increase peer competition and transparency; and

[60] https://ec.europa.eu/digital-single-market/en/radio-spectrum-committee-rsc
[61] http://rspg-spectrum.eu/
[62] http://rspg-spectrum.eu/wp-content/uploads/2013/05/RSPG16-007_rev_sept_2016.pdf
[63] http://rspg-spectrum.eu/wp-content/uploads/2013/05/RSPG16-001-DSM_opinion.pdf
[64] http://rspg-spectrum.eu/wp-content/uploads/2013/05/RPSG16-032-Opinion_5G.pdf
[65] http://rspg-spectrum.eu/public-consultations/

- third-party access to multilateral cross-border agreements between USPs, including a role for regulators in approving an access reference offer and adjudicating on any disputes.

The proposals are currently being considered by the European Parliament and Council.

Meanwhile, the European Regulators' Group for Post (ERGP)[66] has been considering the state of the European postal sector, including noting decreasing letter mail volumes and changing user needs, in particular the growth in e-commerce shopping, and assessing the impacts of such changes on the sustainability of the USO. By the end of 2016, the ERPG will publish reports on a variety of issues, including:

- comparative working methods for considering the efficiency of postal operators;
- current and future postal universal services given changes in postal end-user needs;
- an analysis of service quality, complaint handling and consumer protection in 2015;
- transparency for online sellers and consumers for cross-border parcels delivery; and
- the development of end-to-end competition and access regulation across the EU.

With a wider membership than the ERGP, the Committee of European Postal Regulators (CERP)[67] brings together representatives of the regulatory authorities in 64 states, including EU Member States, EU candidate countries, the EEA and other Eastern European countries. It has two working groups, one dealing with postal policy and the other working on Universal Postal Union (UPU)[68] issues. In 2016, the work of CERP focused on preparations for the Universal Postal Union (UPU) Congress in Istanbul. The Congress agreed on a reformed structure for the organisation and revised terminal dues rates, to be applied between USPs for delivery of each other's letter and parcel items.

.

[66] The ERGP is a network of European postal regulators tasked with sharing best practice and advising its members and the EC. See http://ec.europa.eu/growth/sectors/postal-services/ergp_en. As well as the ERGP, a number of international bodies are active in the postal sector. The Universal Postal Union (UPU), a UN body, is the primary forum for cooperation between UN Member States concerning postal services. See http://www.upu.int

[67] http://www.cept.org/cerp/

[68] http://www.upu.int

1.6 Comparative international pricing

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 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.

[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.

Figure 1.22 Summary of 'weighted average' and 'lowest-available' pricing: 2016

Overall pricing rank		
1	-	France
2	-	UK
3	↑	Germany
4	↓	Italy
5	-	Spain
6	-	USA

'Weighted average' stand-alone pricing		
1	↑	France
2	↓	UK
3	-	Germany
4	-	Italy
5	-	Spain
6	-	USA

'Weighted average' bundles service pricing		
1	-	France
2	-	UK
3	-	Italy
4	-	Germany
5	-	Spain
6	-	USA

'Lowest available' pricing, including bundles		
1	-	France
2	-	UK
3	-	Germany
4	-	Italy
5	-	Spain
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.
[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.

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 1.23 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)						
				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)					
				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)					
				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

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.

1.7 Telecoms and networks

Mobile services made up the greatest proportion of telecoms revenues in most of our comparator countries

Total retail telecoms revenues across our comparator countries were £597bn in 2015, with mobile voice and mobile data services contributing almost two-thirds (64%) of this total. Mobile services made up the greatest proportion of telecoms revenues in most of our comparator countries.

The UK had the highest number of fixed voice connections per 100 people, of all comparator countries

The UK had 62 fixed voice connections per 100 people (including managed VoIP) in 2015, up one connection since 2014. The UK was one of only three comparator countries where fixed voice take-up increased.

The proportion of total fixed voice connections that were managed VoIP increased in all comparator countries

In the UK, managed VoIP connections made up only 16.2% of the total, ranking the UK twelfth among the comparator countries. However, the UK proportion had increased, by 1.7pp, since 2014.

The UK had the second highest average number of monthly fixed voice call minutes per person

In all our comparator countries, the average monthly fixed voice call minutes per person declined in 2015. The UK ranked second among our comparator countries, at 122 minutes per person per month, down 12 minutes per month (8.8%) since 2014.

The UK had the highest average per-capita revenue for fixed voice services

The highest average revenue for fixed voice services (including managed VoIP services) was generated in the UK in 2015, at £11.58 per person per month. It was lowest in China, India and Nigeria, at less than £1 per person in all three countries.

Household penetration of fixed broadband reached 80% in the UK

The household penetration of fixed broadband increased across most of our comparator countries in 2015. In the UK, it reached 80% by end of 2015, an increase of 3 percentage points since 2014, putting the UK fifth among our comparator countries.

Fixed data traffic volumes grew in most of our comparator countries

With the increasing use of high-speed fixed broadband services, fixed data traffic volumes grew in most of our comparator countries in 2015, pushing down the price per unit of fixed broadband data across most markets. However, there were some countries where the prices increased as more consumers migrated to superfast services, which tend to be more expensive than standard broadband. In the UK, fixed data volumes per head reached 27GB per month as the price declined by 7%, to £0.26 per GB in 2015.

Seventy-two per cent of respondents in the UK were satisfied with the reliability of their household fixed broadband services

Overall satisfaction with fixed broadband services was 70% or higher in five out of nine of the comparator countries in which our consumer research took place, with the UK at 76%. The UK ranked highest, along with the US, on satisfaction with the reliability of household fixed broadband services.

The majority of our comparator countries had more mobile connections than people

In the majority of our comparator countries, the number of mobile connections per 100 people was up in 2015; it ranged from 77 in India to 175 in Russia. The UK was ninth of 18 comparator countries, with 131 mobile connections per 100 people.

Most comparator countries saw an increase in the number of average mobile call minutes per person

In the UK, average use increased by 3.3% to 184 minutes per person in 2015, putting the UK ninth among the comparator countries.

The average number of monthly mobile messages per person decreased in most of our comparator countries

This is mainly due to increasing smartphone take-up, as these devices enable consumers to access alternative text-based services, such as email and instant messaging. The UK had the third highest average mobile messaging use among the comparator countries, with 131 messages per person per month.

Eighty-five per cent of respondents in the UK indicated that they were satisfied with their overall mobile service

Overall satisfaction with mobile services was 80% or higher in five out of nine of the comparator countries in which our consumer research took place, with the UK at 85%.

Mobile data consumption increased in all comparator countries

In 2015, mobile data volumes per capita per month increased in all our comparator countries. In the UK, mobile data consumption reached 1.2GB per head per month, with 4G data accounting for over 85% of total volumes, while the price per unit declined by 33% to £6.68, partly because bundled data allowances continued to increase.

Figure 1.24 Key metrics: 2015

	UK	FRA	GER	ITA	USA	JPN	AUS	ESP	NED	SWE	POL	SGP	KOR	BRA	RUS	IND	CHN	NGA
Telecoms service revenues (£bn)	29	16	23	14	186	70	15	14	6	4	6	3	20	24	14	18	130	6
Monthly telecoms revenues per capita (£)	38	21	23	19	48	46	51	26	31	34	12	49	34	10	8	1	8	3
Total fixed voice revenues, incl. managed VoIP (£bn)	9	4	6	4	23	12	3	3	1	1	1	0.5	2	7	4	2	5	0.02
Fixed voice connections per 100 population (incl. managed VoIP)	62	60	46	38	38	44	38	41	41	36	15	36	51	21	25	2	18	0.1
Managed VoIP connections as % of total fixed voice connections	16	67	58	15	49	54	11	31	80	52	27	32	38	17	8	0.4	6	-
Monthly outbound fixed voice call minutes per capita (mins)	122	109	144	68	99	77	101	68	78	85	20	73	92	62	76	4	7	0.1
Total fixed broadband revenues (£bn)	5	2	3	2	38	17	5	3	1	1	1	1	5	6	2	1	40	0.004
Average monthly fixed data volumes per capita (GB)	27	15	12	8	22	38	15	11	19	35	5	21	50	3	5	0.2	4	0.001
Superfast fixed broadband coverage (% of households)	88	41	77	44	88	98	31	77	98	78	53	99	100	54	67	4	48	1
Total mobile revenues (£bn)	15	10	14	9	126	41	7	9	4	2	4	2	13	11	8	15	85	6
Mobile connections per 100 population	131	128	141	155	117	138	130	118	139	164	147	167	117	124	175	77	98	83
Monthly outbound mobile voice call minutes per capita	184	197	118	236	367	159	170	148	138	255	199	220	207	170	321	141	173	70
Mobile broadband connections per 100 people (4G/3G)	110	75	105	108	103	138	125	107	94	126	118	146	117	84	36	11	57	34
Average monthly mobile data volumes per capita (GB)	1.2	0.8	0.6	1.1	2.6	2.4	1.6	0.7	0.6	4.2	1.2	1.9	3.0	0.3	0.3	0.0	0.2	0.1
4G mobile network availability (% of population coverage of at least one operator)	93	80	95	91	98	99	89	81	100	99	100	100	100	48	59	6	87	14
4G as % of all mobile connections	36	27	20	17	50	49	54	26	31	39	14	44	71	10	9	0.2	29	1
4G as % of total mobile data use	85	65	70	47	82	82	75	67	57	57	54	67	97	50	55	8	61	2

Source: IHS / industry data / Ofcom
Note: For the purposes of this table most of the figures have been rounded to the nearest whole number. The superfast fixed broadband coverage in this table differs from the 89% premise coverage for speeds of 'up to' 30Mbit/s or more and 90% for speeds of 'up to' 24Mbit/s or more stated in our Connected Nations 2016 report, which were calculated based on detailed premises-level data inputs provided by UK communications providers and relate to June 2016.
Some of the metrics presented in this chapter differs from those presented in the Connected Nations *2016 report on several counts, such as time periods and definitions.*

1.7.1 Broadband Scorecard

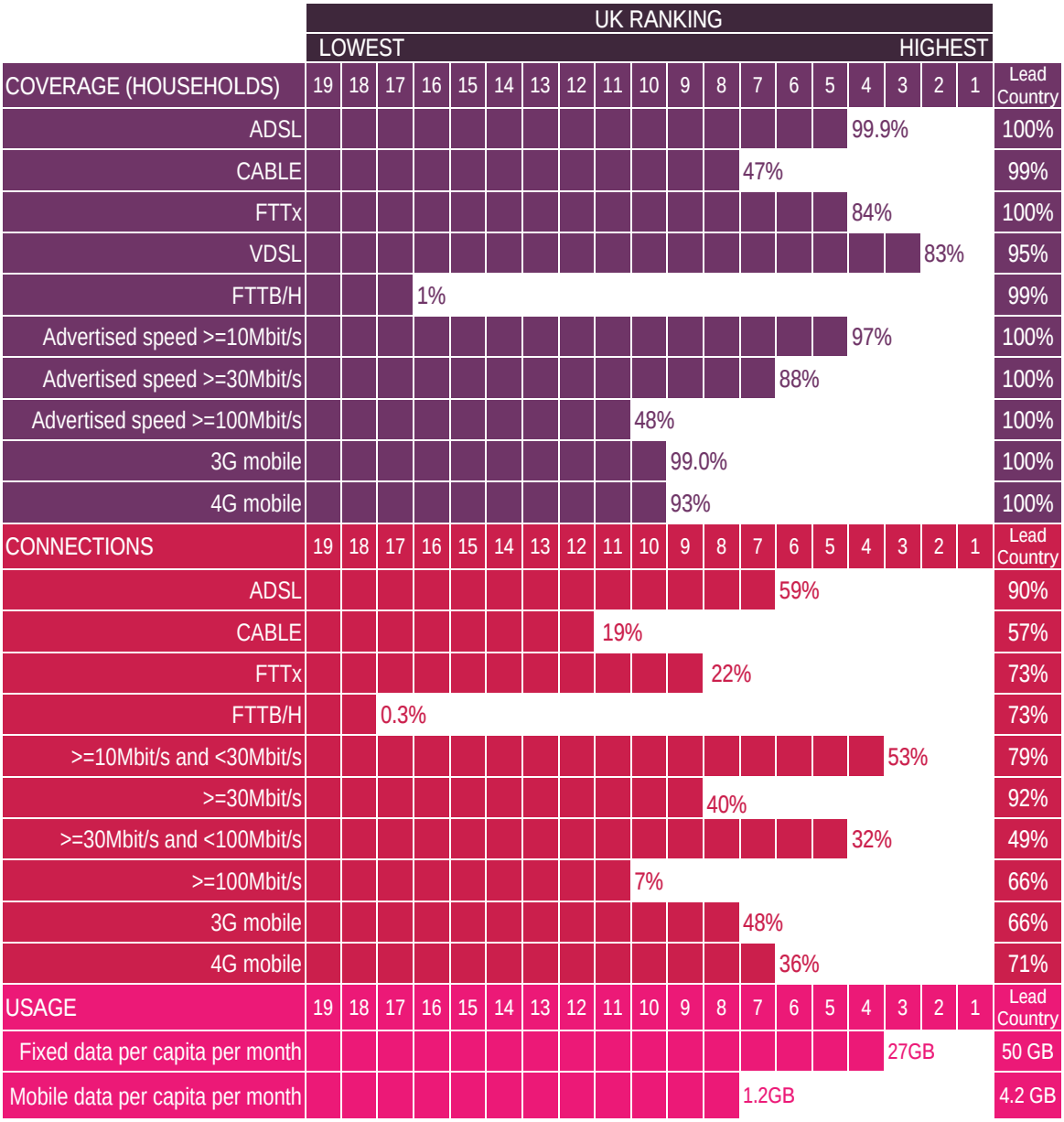
We have benchmarked the UK against 18 other European and global peers using a number of broadband metrics.[74] Our key findings include:

[74] The EU5 and EU28 scorecards are provided as appendices to this report. Both can be found at: https://www.ofcom.org.uk/research-and-data/broadband-research/eu-bbroadand-scorecard

- ADSL fixed broadband services are widely available in most of our comparator countries. Eight countries, including the UK, had ADSL coverage of 99% or more households by the end of 2015, while Nigeria was the only country where ADSL-based services were available to less than half of households.
- Standard fixed broadband services offering advertised speeds of 'up to' 10Mbit/s or more were available to 95% or more of households in eight of our comparator countries, including the UK (97%), at the end of 2015. Singapore, South Korea and Japan had the highest availability of these services.
- The UK compared favourably to most of the comparator countries in terms of the availability of superfast broadband products (those with advertised speeds of 'up to' 30Mbit/s) ranking seventh at 88% of households. South Korea had the highest household superfast product availability at almost 100%, while the Netherlands was highest among our European comparator countries, at 98%.
- The UK performed well on the availability of fibre broadband (FTTx) networks; 84% of households were in areas served by fibre, ranking fifth after the Netherlands, South Korea, Singapore and Japan. South Korea, Japan and Singapore typically tend to lead on deployment of new infrastructure, and rank highly on many metrics.
- The UK, however, is notable for its limited availability of 'full fibre' fibre-to-the-building/fibre-to-the-home (FTTB/H) services, which can offer download speeds of 1Gbit/s or more. These services were available to just over 1% of UK households at the end of 2015, ranking the UK 17th out of 19 countries. In countries such as South Korea, Singapore and Japan, 'full fibre' services were available to more than 95% of homes.
- The comparatively low availability of 'full fibre' services in the UK is partly a result of BT's decision to use VDSL for the last-mile connectivity of most of its fibre broadband network, and the UK's lowest rank (18th) was for the proportion of fixed broadband connections that were 'full fibre'. Japan ranked first on the proportion of 'full fibre' broadband connections (73%) followed by South Korea (71%) and Singapore (60%).
- The proportion of superfast broadband connections with an advertised speed of 'up to' 30Mbit/s or higher increased in all of our comparator countries. In seven comparator countries, more than half of fixed broadband connections were superfast at the end of 2015. In the UK, this proportion was 40%, ranking ninth among our 19 countries. The UK ranked better on connections with advertised speeds ≥30Mbit/s and <100Mbit/s (fifth, at 32%), than on those with advertised speeds ≥100Mbit/s where it was 11th with 7%.[75]
- Eleven comparator countries had 4G mobile population coverage of 90% or more at the end of 2015, while six had 99% or higher coverage. The UK ranked tenth on availability of 4G networks (93%), [76] an increase of 9pp since the end of 2014.

[75] The UK ranks 17/19 on household coverage of ultrafast fixed broadband with advertised speeds of 300Mbit/s or higher (2%) based on figures provided by Analysys Mason as of September 2016.
[76] This represents outdoor population coverage from at least one operator. This differs from the 4G (figure of 72.2%) and 3G (78.1%) coverage stated in our *Connected Nations* 2016 report, which focuses on the percentage of premises that have indoor coverage from all operators.

Figure 1.25 Broadband Scorecard: UK's position relative to 18 other comparator countries: 2015



Source: IHS

Notes:

1. *For the purposes of this table most of the figures have been rounded to the nearest whole number.*
2. *Coverage and connections data are for the year-end 2015*
3. *Mobile broadband includes all data connections made via 3G or 4G cellular networks, including those made via mobile handsets and using dedicated mobile data dongles and SIMs.*
4. *In order to provide a comparative benchmark across all 19 countries, 4G (93%) and 3G (99%) mobile coverage encompasses outdoor population coverage from at least one operator. This differs from the 4G (72.2%) and 3G (78.1%) coverage stated in our Connected Nations 2016 report, which focuses on the percentage of premises that have indoor coverage from all operators. The report can be found here: https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016*

1.8 TV and audio-visual

Subscription revenues continued to make up over half of total TV revenue

Global TV revenues from broadcast advertising, channel subscription and public funding including licence fees reached £263bn in 2015. Subscription revenues continue to make up over half of total revenue, at £137bn. TV revenue per capita in the UK was £221 in 2015, the third highest of our comparator countries after Germany (£289) and the US (£351).

South Korea had the highest take-up of pay TV at 99%, compared to the UK which had one of the lowest of our comparator countries at 62%. Just over half of UK television homes received an HD service in 2015 (51%), putting the UK in tenth position among our 18 comparator countries.

Declines in viewing to broadcast TV occurred across many countries

The UK experienced a year-on-year decline in viewing to broadcast TV (-1.9%), with people watching an average of 3 hours 36 minutes of TV each day. Within the UK, time-shifted viewing contributed 29 minutes, or 13%, to total daily viewing. This figure, however, was not enough to counter-balance the overall decline in live viewing.

Many of our comparator countries also experienced a decline in viewing to broadcast TV. This decrease is likely to be partly driven by the increased availability and popularity of over-the-top services, such as Netflix and Amazon Prime Video.

The UK ranked third for online TV and video revenues

The UK ranked third for online TV and video as revenues grew across each of our comparator countries. Although still small relative to the overall TV market, online TV and video revenue in the UK was £1.35bn in 2015. Per capita, the UK generated £20.81 of online TV and video revenue, compared to the US at £29.03.

The UK had the third largest proportion of subscribers to Video on Demand services

Take-up of subscription Video on Demand services delivered via the open internet stood at 30% of UK television households in 2015, compared to 21% in 2014. Recently released films remained the most watched content on services such as Netflix and Amazon Prime Video, cited by 69% of UK subscribers, but original programming made by the service provider is gaining traction as 60% cited this as content they watch.

Figure 1.26 Key metrics: 2015

	UK	FRA	GER	ITA	USA	JPN	AUS	ESP	NED	SWE	POL	SGP	KOR	BRA	RUS	IND	CHN	NGA
TV revenue (£bn)	14.3	7.8	23.3	5.5	113	18.2	3.8	2.7	2.3	1.6	1.9	0.5	6.1	9.1	2.2	6.3	24.8	0.6
Revenue per cap (£)	221	121	289	92	351	144	160	58	133	164	49	95	121	44	16	5	18	3
from advertising	*64*	*37*	*74*	*39*	*133*	*62*	*80*	*32*	*41*	*48*	*17*	*53*	*37*	*20*	*10*	*2*	*9*	*0.1*
from subscription	*99*	*52*	*86*	*34*	*218*	*53*	*52*	*22*	*72*	*81*	*30*	*43*	*77*	*23*	*5*	*3*	*9*	*3*
from public funds	*58*	*32*	*130*	*19*	*0*	*29*	*27*	*4*	*20*	*35*	*2*	*0*	*7*	*1*	*0*	*0*	*0*	*0*
Online TV revenues (£m)	1,347	502	453	271	9,348	632	306	161	228	210	61	13	151	464	147	114	2613	0.06
Largest TV platform	Dsat	IPTV	Dsat	DTT	Dcab	Dcab	DTT	DTT	Dcab	DTT	Dsat	DTT	IPTV	Dsat	Dsat	Dsat	Dcab	Aterr
% of homes (main set)	47	41	44	71	42	56	64	67	47	25	49	36	34	49	39	42	50	53
DTV take-up (%)	100	95	73	100	97	100	100	100	89	75	87	98	79	71	70	78	87	47
Pay TV take-up (%)	62	76	56	32	84	75	35	30	99	82	82	62	99	31	69	90	71	16
OTT SVoD take up (%TV households)	30	7	16	6	67	4	19	7	16	35	6	-	7	6	-	1	4	-
DSO* date	2012	2011	2008	2012	2009	2012	2013	2010	2006	2007	2013	2017	2012	2018	2019	2018	2020	2017
TV viewing (min/day)	216	224	223	254	274	262	196	234	190	154	264	-	193	234	246	-	155	-

Sources: IHS / industry data / Ofcom. Notes: pay-TV take-up refers to the number of TV households that pay for a DTT, satellite, cable or IPTV subscription service. Notes: Online TV revenues refers to advertising, subscription, retail and rental on-demand revenue derived from online services delivering TV and video content. Pay-TV take-up refers to the number of TV households that pay for a DTT, satellite, cable or IPTV subscription service. OTT SVoD refers to subscription services that offer video-on-demand content (VoD) delivered via the internet, or services that offer live streaming to a selection of channels/content as well as VoD content.
For the purposes of this table most figures have been rounded to the nearest whole number.
**DSO = Digital switchover*

1.9 Radio and audio

The UK's radio industry is the fourth largest among our 18 comparator countries

The UK's radio industry generated £1.2bn in 2015, making it the fourth largest radio industry across our 18 comparator countries. At £19.30, the UK had the fifth highest total revenue per head, behind the US, Germany, Sweden and Australia. Overall, the worldwide radio industry generated £28.6bn in 2015, with more than three-quarters of worldwide radio revenue coming from advertising.

The BBC, through the licence fee, contributed 57% to overall UK radio industry revenue in 2015; only in Germany and Sweden did public licence fee money contribute a greater proportion of overall radio revenue in 2015.

At least nine in ten UK households listen to radio

Listening to the radio remained popular in 2015, with 90% or more of households listening at least once a week in the UK, Sweden, Poland, Singapore and China. Digital radio has proved to be particularly successful in the UK, with both coverage and set take-up ranking highest among the comparator countries throughout 2016 (at 97% and 33% respectively).

Consumers listen to audio content via a range of formats

Consumers have greater choice than ever before when they listen to audio content – they are looking beyond the radio set to formats both old and new. Streaming services, such as Spotify and Apple Music, podcasts and physical media like vinyl, continue to be used across our comparator countries.

While listening to the radio was the most popular way of listening to audio content in each of the countries surveyed, our research shows that people are embracing new technology as well as sticking with more traditional listening habits. In the UK, more than one in four respondents said they consumed audio through a portable media player (such as a smartphone) or a physical media player (such as a hi-fi or cassette player), while the weekly use of such devices was claimed by at least one in three people in Italy.

Figure 1.27 Key metrics: 2015

	UK	FRA	GER	ITA	USA	JPN	AUS	ESP	NED	SWE	POL	SGP	KOR	BRA	RUS	IND	CHN	NGA
Total industry revenue (£bn)	1.2	0.9	2.6	0.3	13.9	0.7	0.6	0.3	0.2	0.3	0.1	0.1	0.2	0.3	0.1	0.2	1.5	0.1
Revenue per capita (£)	19.3	14.7	31.7	5.8	43.2	5.4	23.6	7.1	14.4	2.4	15.6	15.6	3.3	1.2	0.9	0.2	1.1	0.3
% income from public license fees	57	41	79	22	-	5	-	-	30	6	-	-	21	-	-	-	-	-
Reach of radio (% households)	90	82	69	85	76	38	62	71	88	95	93	93	-	84	63	-	98	20
Digital radio coverage (% pop)*	97	19	96	75	-	-	65	-	95	-	-	-	-	-	-	-	-	-
Digital radio set take-up (% pop)*	33	8	13	17	8	5	18	10	-	-	-	-	-	-	-	-	-	-
Audio streaming use on a smartphone (% smartphone users)*	26	22	30	30	36	24	26	30	-	-	-	-	-	-	-	-	-	-

*Sources: Ofcom, PwC Global entertainment and media outlook 2016-2020 @ www.pwc.com/outlook, IHS, WorldDAB. Figures for 2015, with the exception of those with an * which are for 2016.*

1.10 Internet and online content

Portable devices were more popular than desktops in all the comparator countries

In the UK, 78% of consumers have access to a laptop and 72% use a smartphone, but only 53% of consumers have desktop computers. Among our comparators, the UK stands relatively high on tablet take-up, at 60%, which is significantly higher than take-up in France, Germany, the US, Japan and Australia. However, the UK is comparatively low on smartphones; take-up is lower than in the majority of countries, with the exception of the US and Japan.

Smartphones stand out as being the device of choice for consumers to use to spend time online, across all the comparator countries. In the US, smartphone users spent 87 hours per month browsing on their smartphones, compared to 34 hours on their laptops or desktops. UK smartphone users spent the second-longest time browsing online, at 66 hours per month.

The UK reported the third highest use of smartphones for shopping online

The wide availability and use of smartphones demonstrates the increased connectivity across the UK and other comparator countries. Consumers in each of our comparator countries use their smartphones for a wide range of activities including banking, streaming, booking cabs and reserving tables at restaurants. The UK reported the third highest use of smartphones for browsing or shopping online, behind Italy and the US.

Online advertising spend grew for all our comparator countries

The popularity of smartphones is reflected in substantial year-on-year increases in mobile advertising spend per head, with the UK maintaining its position in second place (£39.63 in 2015) behind the US (£42.02). In 2015, China had the greatest share of all advertising expenditure on the internet; 53% of all its advertising spend was online, overtaking the UK (48%) and Sweden (48%).

Google and Facebook were among the most-visited online entities among the majority of comparator countries

Turning to the most frequently accessed online content, Google sites are the most-visited online entity, among the majority of comparator countries, on laptops and desktops, with the exception of Japan, where Yahoo is the top online entity. Social networking continues to be popular among consumers; in the UK, 73% use social networking sites at least once a week. In Italy and Spain, more than eight in ten consumers access social networks every week. In the UK, the US, Italy and Spain, Facebook is the second most visited online entity accessed on a smartphone or tablet.

Figure 1.28 Key metrics: 2015 and 2016

	UK	FRA	GER	ITA	USA	JPN	AUS	ESP	NED	SWE	POL	SGP	KOR	BRA	RUS	IND	CHN	NGA
[1]Online Universe (MM) (2016)	41	38	52	25	205	59	16	21	-	-	-	-	-	-	-	-	-	-
[2]Desktop take-up (%)	53	58	63	63	61	51	61	69	-	56	-	-	-	-	-	-	-	-
[2]Laptop take-up (%)	78	79	75	74	69	61	76	70	-	70	-	-	-	-	-	-	-	-
[2]Tablet take-up (%)	60	50	49	63	49	34	56	64	-	57	-	-	-	-	-	-	-	-
[2]Smartphone take-up (%)	72	77	78	89	68	72	78	87	-	81	-	-	-	-	-	-	-	-
[3]Internet share of total Adverting spend (%)	48	33	29	28	35	23	40	24	42	48	30	18	29	22	31	11	53	-
[4]Fixed internet advertising expenditure (£bn)	5.7	3.1	4.2	1.2	25.4	4.4	2.2	0.8	1.1	0.9	0.4	0.2	2.5	0.8	1.0	0.3	13.7	0.02
[4]Fixed internet advertising expenditure per capita (£)	88	48	51	20	79	35	92	17	65	88	12	31	50	4	7	13	10	0.1
[4]Mobile internet advertising expenditure (£m)	2564	433	275	168	13528	938	766	89	10	166	3	23	673	129	130	9	1525	10
[4]Mobile internet advertising expenditure per capita (£)	40	7	3	3	42	7	32	1.93	1	17	0.1	4	13	1	1	0.4	1.1	0.1
[5]B2C e-commerce turnover per capita (£)	1760	730	536	201	1207	590	227	285	688	717	143	-	841	-	104	-	364	-
[6]Use mobile phone to browse shopping websites and apps (%)	54	45	28	56	58	45	52	-	-	47	-	-	-	-	-	-	-	-
[6]Use mobile phone to check bank balance (%)	37	34	25	30	43	16	48	-	-	58	-	-	-	-	-	-	-	-
[2]Weekly or greater access to social networking (%)	73	70	64	82	76	53	74	85	-	74	-	-	-	-	-	-	-	-

*Source: [1]comScore MMX, August 2016, home and work panel, persons 15+; [2]Ofcom consumer research October 2016; [3]2015 Data. Warc data (www.warc.com) Please refer to notes on adspend data for further detail and source information. http://www.warc.com/NotesOnAdspendData *UK excludes certain types of adspend which is not monitored in other markets, enabling a like-for-like comparison [4]2015 data. Ofcom analysis based on data from PwC Global entertainment and media outlook 2016-2020 @ pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom's responsibility. Population figures from Ofcom/IHS. Ofcom have used an exchange rate of $1.529 to the GBP, representing the IMF average for 2015. [5]2015 data. European B2C e-commerce report 2016, Ecommerce Foundation & Ecommerce Europe. Values converted from Euros to British Sterling (£1=€1.38). Interpretation and manipulation of data are solely Ofcom's responsibility. Population figures from Ofcom/IHS [6]Deloitte Global Mobile Consumer Survey 2016. Some figures in table have been rounded. MM = millions*

1.11 Post

Demand for parcels continued to increase in all of our comparator countries

Almost nine in ten people in the UK claimed to have received an item of post in the past week, with 5.9 items on average received, of which 1.8 were parcels. Demand for parcels continued to increase in all of our comparator countries in 2015, except for Japan where it remained broadly stable. Research shows that half of adults in the UK claimed to have received a parcel in the past week, and this was higher (at two-thirds) for weekly online shoppers.

People in the UK are among the most reliant on post as a way of communicating

In per-capita terms, the UK had the fifth highest letter mail volume among the comparator countries. Nevertheless, people in the UK are among the most reliant on post as a way of communicating, with more than half considering themselves to be either 'very' or 'fairly' reliant.

People in the UK are among the most likely to have sent an invitation/greetings card

Seven in ten adults in the UK have sent an item of post in the past month, on average sending around 3.9 items per month. In particular, people in the UK are among the most likely to have sent an invitation/greetings card in this time period; just under a third of those who had sent an item in the past month said they had sent this type of mail.

The UK is among the most expensive countries in which to send a First Class small letter

However, as sending a First Class medium-sized letter in the UK costs the same as sending a small one (64p), this is less expensive than in most other European countries. Similarly, the UK is among the cheapest countries in Europe in which to send a large letter.

Consumers in most countries engage in high levels of online shopping from overseas retailers

Around six in ten people in the UK say they have made a purchase from an overseas retailer in the past year. One of the main problems encountered when making purchases from abroad is the long delivery time; four in ten people in the UK cite this as a problem. Conversely, among those who do not make purchases from overseas retailers, the main reason is that the items they want are available in their home country, therefore there is no need to purchase them overseas.

The UK ranks second among our comparator countries for selling something online

More than half the respondents in the UK claimed to have sold something online, the second highest proportion after Germany. However, 28% of those who had sold something online had never sold anything overseas. For those who had sold online to overseas customers, the higher than expected cost of sending items abroad was the single biggest problem encountered in all comparator countries.

Figure 1.29 Key metrics: 2015

	UK	FRA	GER	ITA	USA	JPN	AUS	ESP	NED	SWE	POL	SGP	KOR	BRA	RUS	IND	CHN
Letter mail volume (billion items)	12	13	16	4	149	18	4	3	3	2	2	1	4	8	3	6	27
Letter mail volume per capita	190	199	195	60	462	142	168	74	184	236	44	112	80	39	20	4	19
Letter mail revenue (£bn)	4.3	6.0	6.3	2.2	31.3	10.4	1.0	0.9	1.8	0.9	0.6	0.1	1.6	1.6	0.4	0.4	1.9
Letter mail revenue per capita (£)	67	94	78	37	97	82	43	20	105	91	15	22	32	8	3	0	1
Parcel volume per capita	31	-	37	5	36	71	-	7	18	10	6	-	36	-	-	-	15
Standard (C5) domestic stamp price (pence)	64	116	105	203	103	76	123	69	159	109	43	29	-	47	58	25	63
Average number of items of post sent per month	3.9	4.9	3.8	3.9	6.3	2.3	3.4	2.6	-	4.4	-	-	-	-	-	-	-
Average number of items received in the last week	5.9	8.0	5.0	4.2	9.8	4.8	4.2	3.2	-	5.2	-	-	-	-	-	-	-
Online shopping from overseas retailers (%)	61	59	53	74	50	34	75	69	-	55	-	-	-	-	-	-	-

Sources: WIK / Ofcom analysis / Ofcom consumer research October 2016
Note: For the purposes of this table the majority of figures have been rounded to the nearest whole number.
The relevant financial year's figures are generally used in this chapter when referring to 2015. In the few cases where data are not available, market estimates based on long-term trends and local insight have been used. The UK figures are based on those published in our Annual Monitoring Report *https://www.ofcom.org.uk/__data/assets/pdf_file/0029/94961/2015-16-Annual-Report.pdf.*