

# Introduction

This report 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:

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.<sup>1</sup> We have highlighted incomparability in a number of key instances in this report.

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<sup>1</sup> <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 country, 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*.<sup>2</sup>

### International Monetary Fund

All currency conversions use the average market exchange rates across 2015, as provided by the International Monetary Fund (IMF).<sup>3</sup> 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*).<sup>4</sup> 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.<sup>5</sup> 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*.<sup>6</sup>

<sup>2</sup> <https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international>

<sup>3</sup> <http://www.imf.org/external/index.htm>

<sup>4</sup> <https://www.ofcom.org.uk/research-and-data/cmr/cmr16/international>

<sup>5</sup> <https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016>

<sup>6</sup> <https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016>