## Contents

- **Introduction** 1
- **Key Points** 4
- **Key summary metrics** 11
- **1. The UK in context** 13
- **2. Comparative international pricing** 91
- **3. Television and audio-visual** 127
- **4. Radio and audio** 165
- **5. Internet and web-based content** 183
- **6. Telecoms and networks** 213
- **7. Post** 279
- **Appendix A – Consumer research methodology** 299
- **Appendix B – Comparative international pricing methodology** 303
- **Glossary and Table of Figures** 327
Introduction

Purpose of this report

This is the seventh year that Ofcom has published comparative international data on the communications sector. The aim of the report is to benchmark the UK communications sector against a range of comparator countries in order to assess how the UK is performing in an international context.

The report compares the availability, take-up and use of services in the UK and 16 comparator countries - France, Germany, Italy, the US, Canada, Japan, Australia, Spain, the Netherlands, Sweden, Ireland, Poland, Brazil, Russia, India and China, although we focus on a smaller subset of comparator countries for some of our analysis.

We are publishing this report as part of our commitment to continuously research markets and to remain at the forefront of consumer, industry and technological understanding, as we outlined in our 2012/13 Annual Plan. This report complements other research published by Ofcom and forms part of the Communications Market Report series, which includes the UK Communications Market Report and specific reports for Northern Ireland, Scotland and Wales (all published in July 2012).

This report is intended to be used in a number of ways: to benchmark the UK’s communications sector, 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, better enabling us to understand how our actions and priorities can influence outcomes for citizens and consumers, and for communications markets generally.

The information set out in this report does not represent any proposal or conclusion by Ofcom in respect of the current or future definition of markets and/or the assessment of licence applications or significant market power or dominant market position for the purposes of the Communications Act 2003, the Competition Act 1998 or other relevant legislation.

Data and methodologies

This report draws on a combination of consumer 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.

Consultancy firm IDATE provided data that are drawn on mainly for the TV and audio-visual and Telecoms and Networks chapters. IDATE has attempted to verify sources and provide market estimates where data are incomplete. Telecoms pricing consultancy Teligen built a bespoke model to enable our analysis of comparative international pricing, and populated it with specifically-sourced tariff data (collected in July 2012).

Among others, we would like to thank the following for their contributions to the data presented in this report: Analysys Mason, comScore, IMRG, Eurostat, Eurodata TV Worldwide, The European Commission, Forrester Research, IDATE, Kantar Media, Mediamétrie, The Nielsen Company, PricewaterhouseCoopers, The Reuters Institute, Teligen, US Census Bureau, the World Advertising Research Centre and Zenith Optimedia.

2 http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr12/
The consumer research undertaken by Ofcom for this report was conducted online with 9,152 consumers in nine countries: the UK, Germany, France, Italy, Spain, the US, Japan, China and Australia. 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 2012, which included face-to-face and telephone interviews. Further information on our online market research methodology is presented in Appendix A, and a perspective on the results of our market research in China can be found in the UK in Context chapter.

Comparisons between data in this report and in 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. We have highlighted incomparability in a number of key instances in this report.

This report is wide in scope, and because of the reliance on third-party data we cannot always fully guarantee the accuracy of data. We have carried out comprehensive checks as far as is reasonably possible and have acted to ensure that the data in this report are comprehensive and the most accurate currently available.

Data in this report generally cover the 2011 calendar year, although other data – notably from Ofcom’s consumer research – are more recent. We show trends using a five-year historical time series wherever possible.

All currency conversions use the average market exchange rate across 2011, as provided by the International Monetary Fund (IMF).\(^3\) We have opted to convert data from every 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 (more detail can be found in Appendix B). All figures in this report are nominal unless otherwise stated.

Comments and feedback on this report are very much encouraged and welcomed at market.intelligence@ofcom.org.uk.

Structure of the report

The report is divided into six chapters:

- **The UK in context (page 13)** provides a broad overview by looking at comparative international communications markets from an industry and a consumer perspective, with an overview of the main regulatory developments in the past year. We also present findings from our new consumer research, focusing on the ways in which consumers are changing the way they communicate and consumers’ preferred methods of communicating with different groups of people; how consumers followed the recent Olympic and Paralympic Games, and an international perspective on news consumption.

- **Comparative international pricing (page 91)** compares the typical prices people pay across our main comparator countries, for a range of different ‘baskets’ of communications services.

---

\(^3\) [http://www.imf.org/external/index.htm](http://www.imf.org/external/index.htm)
• **Television and audio-visual (page 127)** considers developments in broadcast and audio-visual services, and includes analysis of the industries and consumer experience among our comparator countries. This section also examines patterns of digital television take-up, including the adoption of high-definition television services, digital video recorders, 3DTV and internet-connected televisions; as well as consumption of TV online.

• **Radio and audio (page 165)** compares and summarises key data, including revenue figures, for the radio and audio markets across the UK and our comparator countries. We also include some of the findings from our consumer research on the take-up of digital radio sets and the use of audio services online and via mobile devices.

• **Internet and web-based content (page 183)** examines the impact of the internet across our key comparator countries. This section takes a high-level look at aspects of internet use, in terms of platforms and devices, as well as content and consumption.

• **Telecoms and networks (page 213)** examines the major trends in the telecommunications markets from an industry and operator perspective in our comparator countries. We also consider the availability and use of telecoms services in the 17 comparator countries. We provide an overview of the industry as a whole, and individual markets in more depth, including analysis of fixed voice, mobile voice and data services, and fixed-broadband services.

• **Post (page 279)** considers key data for the postal services markets in the UK and our comparator countries, including trends in addressed mail volume and revenue. We also examine consumer trends in sending and receiving mail, and consumers’ perceived reliance on post as a method of communicating.

We also include a list of key points for each of the chapters, which serve as a summary of the main findings.
Key points: the UK in context

- **Global communications sector revenues** – the total of the telecoms, TV, post and radio sectors - grew in 2011 by 3.7%, reaching £1,322bn. Telecoms sectors generated the largest absolute rise in revenues in 2011, up by £31bn to £936bn. In terms of percentage growth, television revenues grew fastest among the communications industries, by 6.6% in 2011 to £258bn.

- **Global advertising expenditure** grew by 3.8% in 2011 to £298bn, the highest total spend since 2007. While expenditure on internet advertising grew at a compound annual rate of 16.0% between 2007 and 2011, to £48bn, the compound annual growth rate of newspaper advertising was -6.9% falling to £60bn, while for magazines it was -6.8%, falling to £28bn.

- **In the television and radio sectors**, subscriptions generated the largest and fastest-growing proportion of total revenues in 2011. Television subscription revenues grew by 10.5% in 2011 to £133bn and at a compound annual rate of 9.0% between 2007 and 2011. Radio subscription revenues grew by 12.5% in 2011 to £2bn and at a compound annual rate of 8.5% between 2007 and 2011.

- **The number of fixed-line voice connections** remains relatively resilient in the UK, with more fixed-line voice connections per 100 people than in the other markets covered. Although this number fell between 2006 and 2011 in all of the countries which we surveyed, the fall in the UK was among the smallest.

- **Tablet take-up is highest in Spain and Australia (it is 24% in both)**. Italy and the US have the next-highest claimed ownership (23% and 20%) while in the UK take-up is 19%.

- **In nearly all comparator countries**, consumers say they have reduced face-to-face communication and fixed telephone calls with friends and family. In all eight countries, use of post declined. In contrast, preferences for online communications increased, particularly in the UK and Italy, which showed large increases in the use of email and social networking.

- **In every comparator country**, a higher proportion of respondents watched the London 2012 Olympic and Paralympic Games at least weekly on scheduled television than by using any other medium. The UK contained the highest proportion of respondents who watched the Games on scheduled TV at least once a week (89%). In every comparator country except Italy, the most-cited reasons for watching the Games on scheduled TV were its convenience or quality.

- **There are significant differences between comparator countries in the type of platform consumers use to find news on an ‘at least weekly’ basis.** Weekly news consumption on the internet among people who access any online news is highest in the US (86% of respondents), while in Germany the most common way of consuming news at least weekly is on TV (87%).
Key points: comparative international pricing

- Prices in the UK compared favourably to those in the other five countries covered by our price benchmarking work. All five of the lowest ‘weighted average’ single-service basket prices and four of the five lowest possible basket prices were found in the UK.4

- Low basket prices in the UK were largely due to mobile prices being the lowest among our six countries. The UK also benefits from comparatively low fixed voice, fixed broadband and mobile broadband prices.

- France also performed well, having the lowest ‘best-offer’ including multi-play price for our ‘connected family’ household, and the second lowest ‘weighted average’ prices for all five households. The ‘connected family’ ‘best-offer’ price in France was significantly cheaper than in the UK as a result of the availability of a low-cost quad-play bundle of fixed voice, fixed broadband, mobile and pay-TV services.

- There is some evidence that UK communications service prices are increasing, in nominal terms at least. In the year to July 2012 the weighted average cost of four of our five baskets increased in the UK in nominal terms, while in France (where weighted average prices were next lowest) the cost of all five fell.

- In the UK, the main driver behind increasing weighted average basket prices was increases in mobile prices. The weighted average cost of more than half of the mobile connections increased in the year to July 2012 in the UK, with these increases ranging from 5% to 31% in nominal terms.

- Consumers in most of our comparator countries were able to make cost savings by purchasing fixed broadband services as part of a bundle. The potential savings available by bundling the services required by the three baskets which included a fixed broadband connection ranged from 5% to 40%.

- HD premium pay-TV services were the main area where the UK did not perform well. This was partly due to Sky bundling a large number of channels in its premium pay-TV package and charging its satellite TV customers an additional £10 a month to let them access premium channels in HD.

- In the UK, the difference between the ‘weighted average’ and the ‘best offer’ pricing of the single services for our five baskets was among the lowest across our six countries. ‘Best offer’ prices in the UK were, on average, 19% lower than the ‘weighted average’ for our five baskets - only in Spain was this figure lower, at 18%.

---

4 ‘Weighted average’ basket price refers to the sum of the weighted average single service price of each service included in the basket, these averages being calculated as the average of the lowest price tariffs offered by the three largest operators which provide the service in each country, weighted by the market share of each service provider.
**Key points: TV and audio-visual**

- **Global TV revenues increased in 2011, by 6.7% year on year, to £258bn.** Global subscription revenues show little sign of slowing down and increased for the fourth consecutive year, from £95bn in 2007 to £133bn in 2011 – a compound annual growth rate of 9%. The global recovery in net advertising revenues seen in 2010 has been sustained in 2011, with revenues increasing by 3.5% (or £3bn) to £105bn year on year.

- **The combined revenues of Europe and Canada had the lowest year-on-year growth of all the regions in our analysis, increasing 2.0% in 2011 to £58bn.** In contrast, the BRIC countries’ joint revenues rose by 14% (or £4bn) to £34bn. The UK experienced moderate growth in television revenues in 2011, increasing by 2.7% or £0.3bn.

- **By the end of 2011, the vast majority of homes had digital television in the UK, France and Spain.** In the UK, 99% of TV homes had access to digital TV at the end of 2011, a figure surpassed only by Spain where, following the completion of switchover, access to DTV stands at 100%. Digital switchover in the UK was completed in 2012. In France, penetration of digital TV stood at 97% in 2011.

- **In the UK, satellite TV (including Freesat) was the largest platform (44% of TV homes) while terrestrial TV was the main platform in 38% of TV homes.** Digital satellite was also the most popular platform in Germany, Ireland, Poland and Brazil. While digital satellite may not be the top technology choice in many countries, it is often the second most popular platform, taking second place in ten of the 17 countries in our report.

- **Value-added services such as digital video recorders and high definition TV continue to grow in the UK.** Of the nine countries surveyed, the UK recorded the greatest uptake in DVRs (39%) in 2011, followed by the US (32%) and Australia (29%). The UK also has one of the highest proportions of TV homes with high definition – at 41%, higher than France (18%), Germany (28%) and Japan (31%), but behind the US (49%).

- **People in the UK and France have the highest ownership of connected TVs among the countries included in our research.** In both the UK and France, 15% of respondents claimed to have a television that connects to the internet.

- **UK consumers are most likely to access TV content over the internet, compared to other countries in our research.** Almost a quarter (23%) of UK internet users claimed to do this every week – driven by the popularity in the UK of internet TV catch-up services from the free-to-air broadcasters, such as BBC iPlayer, 4oD and ITV Player. The US ranked second, where 17% of internet users claim to access TV content over the web on a weekly basis.

- **The UK has the third highest level of scheduled linear TV viewing, of the comparator countries, at four hours per person per day.** Despite the increase in online TV, scheduled linear television remains popular, with minutes of viewing per person increasing among most comparator countries. Only Italy (253 minutes per person per day) and the US (293 minutes) watch more television than the UK.
Key points: radio and audio

- Broadcast radio revenues among the 17 comparator countries analysed in this report reached £25.4bn in 2011, up by 1.6% year on year. The largest absolute increase was experienced by operators in the US, where revenues rose by £115m, followed by the Chinese market which grew by £89m. UK radio revenue rose £39m in 2011.

- Among the countries that we surveyed, digital radio take-up is highest in the UK. Thirty-one per cent of consumers in the UK own and personally use a digital radio set, compared to 16% in Italy and 12% in Spain.

- Radio revenue worldwide rose slightly (1.7%) in 2011 and now stands at £29.5bn. Of the total, advertising accounted for 68% (£20.0bn), public funding for just over a quarter (26% or £7.7bn), and subscriber revenue contributed the remaining 6% (£1.8bn).

- The fastest-growing markets are the BRIC countries. India saw the highest rate of growth at 24.7%, followed by Brazil (12.2%), Russia (11.7%) and China (10.0%). Since 2007, the value of the radio market in India has almost doubled.

- Radio markets in Sweden, the US and Germany generate the greatest revenues per head of population. The radio market in Sweden generated the highest revenues per head of population, of all our comparator countries (£38.30). The US was in second place, generating £36.60 of revenue per head of population. In the UK, the comparable figure was £18.50.

- Our consumer research found that radio listening is a popular activity among internet users in the countries which we surveyed, with the exception of Japan and China. The research found that 69% of UK adults who are connected to the internet claim to listen to radio on a weekly basis, on a par with Australia but slightly behind the other European countries surveyed. Across all of the countries surveyed, consumers are still more likely to listen to the radio on a regular basis than consume audio content on a portable media player or hi-fi.

- As a news source, radio is used most for news about a region or locality. It is most popular among people in Germany, where 10% claimed it as their main source for local/regional news, and ranks second in Australia, where 7% made the same claim. In the UK, the comparable figure is 4%.

- Using the MP3 function was the most popular audio purpose which mobile phones were used for in 2011. In China, over half (53%) of online respondents used their phone for this purpose, followed by 32% of consumers in Spain. Almost three in ten (28%) people in the UK used their phone to listen to MP3s.
Key points: internet and web-based content

- **Spend on laptop and desktop internet advertising is highest in the UK.** The UK had the greatest spend per head of £76 on wired internet advertising in 2011, followed by Australia with £73 and both the US and Sweden with spend per head of £63.

- **US mobile internet advertising spend grew 2.5-fold, to level with Japan.** In 2011 the largest market for mobile internet advertising was Japan, with revenue totalling just more than £1bn. US spend was marginally lower, growing from £400m to £955m.

- **UK internet users access the web on their laptop more than those in any other country.** Fifty-one per cent of internet users in the UK use their laptop computer to access the internet. In contrast, France had the largest proportion of internet users (51%) who access the internet most frequently on their desktop computer, while the UK had the least (37%).

- **Twelve per cent of UK internet users claim to access the internet most through smartphones, tablets and other connected devices.** 16.4% of internet traffic is generated from these devices in the UK, more than in any other of our European comparator countries. Ireland had the second highest proportion (11.5%), while and Poland had the lowest (2.2%).

- **Australians spend more than 6.5 hours online on a laptop or desktop computer each week.** This is an hour more than internet users in the UK, where desktop and laptop online time is declining, and three hours more than in Italy, where online time is lowest, but increasing.

- **The most searched-for term on the web is ‘facebook’.** In all of our comparator countries except Japan, Russia and China, ‘facebook’ was the most searched-for term on Google in the year to August 2012, up from ten countries in the year to August 2011. However, Facebook was not without influence in Japan, where ‘facebook’ was the fastest-rising search term in the year to August 2012.

- **Consumers in the UK spent more than £1000 per person on internet shopping in 2011, more than in any other of our comparator nations.** In 2011, the value per head of business-to-consumer e-commerce was £1083 in the UK, up by 14% from £950 in 2010. Australia and Sweden had the greatest values after the UK, growing 26% to £842 and 12% to £747 respectively.

- **More than one in five smartphone owners in the UK and Germany have accessed online shopping websites using their mobile handset.** Among the five largest European economies, the UK had the highest proportion (23.1%) of smartphone users visiting retailers’ websites on the mobile web, closely followed by Germany (22.6%).

- **One in six smartphone owners in the UK access news on their handset almost every day.** Among smartphone owners in the five largest European economies, those in the UK access news through websites or apps on their handset more frequently than any other nation.
Key points: telecoms and networks

- **The UK consumed the most mobile data per connection.** 424MB of data was downloaded per mobile connection in 2011: more than in any of the other comparator countries.

- **The UK is one of the leaders in text messaging among our comparator countries.** The average person sent 199 SMS messages per month in 2011, up 17% compared with 2010. Young women are leading the increase, which is fuelled by consumers apparently switching from voice to SMS for convenience and ease.

- **Fixed voice revenues fell in all our comparator countries in 2011.** Across all 17 comparator countries, fixed voice revenues fell by an average of 7.3% in 2011, a slight increase on the 7.1% average in 2010. Fixed voice revenues fell by 5.2% in the UK during the year, a higher rate that the 3.3% average in the five years to 2011.

- **Fixed voice call volumes fell in all of the comparator countries for which figures were available in 2011, except France.** Growth in the fixed voice market in France was largely a result of high take-up of managed VoIP services. In the UK, fixed voice call volumes fell by 10.0% in 2011, the fourth largest decline among our comparator countries.

- **Five per cent of UK broadband connections were superfast at the end of 2011.** The proportion of connections classed as being superfast (i.e. with a headline speed of 30Mbit/s or more) ranged from 0% (to the nearest percentage point) in Ireland to 22% in the Netherlands at the end of 2011. Poland and the UK had the lowest fixed broadband revenue per person in 2011.

- **The Netherlands had the highest number of fixed broadband connections per 100 households in 2011.** The number of fixed broadband connections per 100 households ranged from just six in India to 92 in the Netherlands among our 17 comparator countries in 2011. In the UK there were 77 fixed broadband connections per 100 households at the end of the year.

- **Mobile voice call volumes fell by 1.1% in the UK between 2010 and 2011; from 125 billion minutes to 124 billion; the first annual fall.** Japan was the only other country to witness a decline in 2011, with mobile voice volumes falling from 147 billion minutes to 145 billion.

- **In the UK, 36% of respondents who owned internet-capable devices used smartphones to access the internet in 2012, second in Europe only to Spain, where 43% did so.** Respondents were least likely to use smartphones to go online in France (where 27% did so) and Germany (30%).

- **Australia saw the fastest growth in mobile broadband penetration between 2008 and 2011, rising by 18.6 connections per 100 people to 25.1.** In Spain there was almost no growth in mobile broadband connections between 2010 and 2011, the figure remained at 7.2 connections per 100 people. Mobile broadband primarily includes dongle connections and excludes smartphones and other mobile handsets.
Key points: post

- **Across all of our comparator countries as a whole, mail revenue fell by 1.5% in 2011**, ranging from a 16.1% contraction in Poland to 9.4% growth in Brazil. Revenues grew in only four of 17 of the countries analysed in our report; the UK (3.1%), Brazil (9.4%), Russia (8.8%) and India (6.6%).

- **Across our 17 comparator countries, mail volume has fallen by 18% since 2006.** Taken as a whole, volumes have fallen from 355 billion to 288 billion items. The UK, Italy and Spain have seen the largest declines, with mail volumes in each falling by 25% from 2006 to 2011.

- **More consumers in the UK claim to receive large parcels than in the other countries which we surveyed.** Thirty-four per cent of UK consumers claimed to have received a large parcel in the past month, higher than in any other country surveyed. Forty-six per cent of UK consumers claimed to have received a small parcel, second only to France (53%). As well as having the highest proportion of consumers receiving parcels, the value of e-commerce per head of population in 2011 in the UK is higher than in any of the other countries surveyed.

- **For sending a standard-sized letter, the UK is among the cheapest in Europe.** But for sending small letters, the UK and Japan are the most expensive countries; this is 63p in Japan and 60p in the UK.

- **Our consumer research shows that consumers in China send the highest average number of items each month (8.3).** Consumers in Spain and the US sent the next-highest average number of items (6.7 and 6.2 respectively). The comparable figure for the UK was 5.2.

- **Consumers in the US and France are more likely to pay bills by post than any other country surveyed.** In the US, 58% of consumers claimed that they had sent payment through the post in the past month. In France, 47% of consumers said they had done this. The comparable figure for the UK was 22%.

- **More consumers in the UK send greetings cards, invitations and postcards than in other countries.** Thirty-seven per cent of respondents in the UK claimed to have sent this type of mail in the past month. Australia ranked second (34%), with the fewest consumers claiming to send this type of mail in France (17%).

- **Consumers in France receive twice as much mail as those in the UK.** The average number of items received in a week by consumers in France was 14.9, higher than in any other country surveyed. Those in the US claimed to receive 9.6 items in a week. The comparable figure for the UK was 7.1.

- **Seventy-four per cent of consumers in France consider themselves ‘very reliant’ or ‘fairly reliant’ on post as a way of communicating, higher than in any other country.** In the UK, 51% of consumers considered themselves to be reliant on post. The lowest perceived reliance on post was in Japan, where only 14% of respondents considered themselves reliant.
## Key summary metrics

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>CAN</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>NED</th>
<th>SWE</th>
<th>IRL</th>
<th>POL</th>
<th>BRA</th>
<th>RUS</th>
<th>IND</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV revenue industry (£bn)</td>
<td>11.3</td>
<td>10.2</td>
<td>11.6</td>
<td>7.8</td>
<td>100</td>
<td>4.4</td>
<td>31.1</td>
<td>5.3</td>
<td>4.8</td>
<td>2.6</td>
<td>1.8</td>
<td>0.9</td>
<td>2.4</td>
<td>12.4</td>
<td>3.6</td>
<td>5.5</td>
<td>12.4</td>
</tr>
<tr>
<td>Revenue per capita (£)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Largest TV platform</td>
<td>Dsat</td>
<td>DTT</td>
<td>Dsat</td>
<td>DTT</td>
<td>DCab</td>
<td>DCab</td>
<td>DCab</td>
<td>DTT</td>
<td>DTT</td>
<td>DTT</td>
<td>DTT</td>
<td>DTT</td>
<td>ACab</td>
<td>ACab</td>
<td>DCab</td>
<td>ACab</td>
<td>ACab</td>
</tr>
<tr>
<td>Largest TV platform (%) of homes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV viewing (mins/day)²</td>
<td>242</td>
<td>227</td>
<td>225</td>
<td>253</td>
<td>293</td>
<td>240</td>
<td>n/a</td>
<td>189</td>
<td>239</td>
<td>191</td>
<td>162</td>
<td>205</td>
<td>242</td>
<td>225</td>
<td>n/a</td>
<td>220</td>
<td>119</td>
</tr>
<tr>
<td>Pay TV take-up (%)</td>
<td>99</td>
<td>97</td>
<td>66</td>
<td>93</td>
<td>89</td>
<td>87</td>
<td>77</td>
<td>83</td>
<td>100</td>
<td>77</td>
<td>90</td>
<td>62</td>
<td>69</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Total industry revenue (£bn)</td>
<td>1.2</td>
<td>1.5</td>
<td>2.9</td>
<td>0.5</td>
<td>11.5</td>
<td>1.2</td>
<td>2.8</td>
<td>0.6</td>
<td>0.5</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Change in revenue (%, YOY)</td>
<td>3.5</td>
<td>1.2</td>
<td>-0.5</td>
<td>-3</td>
<td>-3</td>
<td>1.0</td>
<td>-0.2</td>
<td>1.3</td>
<td>-3.8</td>
<td>0.9</td>
<td>1.5</td>
<td>-7.7</td>
<td>-4.7</td>
<td>12.2</td>
<td>11.7</td>
<td>24.7</td>
<td>10.0</td>
</tr>
<tr>
<td>Revenue per capita (£)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% income from public licence fee</td>
<td>60.8</td>
<td>55.5</td>
<td>79.4</td>
<td>18.2</td>
<td>n/a</td>
<td>n/a</td>
<td>65.3</td>
<td>n/a</td>
<td>n/a</td>
<td>28.9</td>
<td>80.7</td>
<td>25.9</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Online universe (m)</td>
<td>41.3</td>
<td>44.1</td>
<td>48.3</td>
<td>29.6</td>
<td>199.3</td>
<td>n/a</td>
<td>59.9</td>
<td>13.8</td>
<td>21.8</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Fixed broadband connections per 100 HH</td>
<td>77</td>
<td>81</td>
<td>70</td>
<td>54</td>
<td>76</td>
<td>86</td>
<td>67</td>
<td>66</td>
<td>93</td>
<td>63</td>
<td>71</td>
<td>42</td>
<td>28</td>
<td>44</td>
<td>6</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Internet access via a mobile phone (%)</td>
<td>38</td>
<td>30</td>
<td>31</td>
<td>37</td>
<td>33</td>
<td>n/a</td>
<td>43</td>
<td>32</td>
<td>46</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>70</td>
</tr>
<tr>
<td>Telecoms service revenues (£bn)</td>
<td>27.3</td>
<td>31.2</td>
<td>35.6</td>
<td>23.7</td>
<td>186.0</td>
<td>21.4</td>
<td>90.3</td>
<td>17.2</td>
<td>19.2</td>
<td>9.0</td>
<td>4.5</td>
<td>2.2</td>
<td>5.6</td>
<td>35.6</td>
<td>18.7</td>
<td>10.7</td>
<td>71.4</td>
</tr>
<tr>
<td>Telecoms revenues per capita (£)</td>
<td>436</td>
<td>476</td>
<td>437</td>
<td>389</td>
<td>598</td>
<td>629</td>
<td>708</td>
<td>790</td>
<td>411</td>
<td>534</td>
<td>499</td>
<td>471</td>
<td>145</td>
<td>180</td>
<td>134</td>
<td>5</td>
<td>53</td>
</tr>
<tr>
<td>Fixed lines per 100 population</td>
<td>53.0</td>
<td>28.4</td>
<td>52.2</td>
<td>27.4</td>
<td>45.8</td>
<td>53.5</td>
<td>32.9</td>
<td>48.5</td>
<td>42.1</td>
<td>27.2</td>
<td>58.4</td>
<td>37.8</td>
<td>17.8</td>
<td>21.7</td>
<td>31.7</td>
<td>2.7</td>
<td>21.3</td>
</tr>
<tr>
<td>Monthly outgoing fixed-line minutes per capita</td>
<td>154</td>
<td>143</td>
<td>196</td>
<td>112</td>
<td>137</td>
<td>-</td>
<td>54</td>
<td>170</td>
<td>114</td>
<td>106</td>
<td>163</td>
<td>120</td>
<td>32</td>
<td>76</td>
<td>95</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Monthly outbound mobile minutes per capita</td>
<td>130</td>
<td>105</td>
<td>149</td>
<td>159</td>
<td>103</td>
<td>80</td>
<td>98</td>
<td>136</td>
<td>126</td>
<td>121</td>
<td>153</td>
<td>123</td>
<td>131</td>
<td>123</td>
<td>164</td>
<td>75</td>
<td>74</td>
</tr>
<tr>
<td>Fixed broadband connections per 100 population</td>
<td>32.6</td>
<td>34.7</td>
<td>34.3</td>
<td>22.2</td>
<td>28.9</td>
<td>33.1</td>
<td>27.4</td>
<td>25.9</td>
<td>23.6</td>
<td>41.0</td>
<td>32.7</td>
<td>22.9</td>
<td>16.8</td>
<td>8.4</td>
<td>17.1</td>
<td>1.1</td>
<td>11.7</td>
</tr>
<tr>
<td>Mobile broadband connections per 100 population</td>
<td>8.0</td>
<td>4.8</td>
<td>6.6</td>
<td>10.1</td>
<td>47.1</td>
<td>3.5</td>
<td>7.8</td>
<td>25.2</td>
<td>7.2</td>
<td>6.3</td>
<td>21.3</td>
<td>12.7</td>
<td>8.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Domestic addressed mail revenues (£bn)</td>
<td>6.7</td>
<td>6.5</td>
<td>7.6</td>
<td>4.2</td>
<td>38.5</td>
<td>3.7</td>
<td>13.8</td>
<td>1.8</td>
<td>1.7</td>
<td>2.1</td>
<td>1.2</td>
<td>0.5</td>
<td>1.2</td>
<td>4.9</td>
<td>2.2</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Mail revenues per capita (£)</td>
<td>106.6</td>
<td>98.9</td>
<td>93.7</td>
<td>68.2</td>
<td>123.3</td>
<td>108.1</td>
<td>108.5</td>
<td>71.3</td>
<td>36.0</td>
<td>124.7</td>
<td>135.6</td>
<td>98.8</td>
<td>31.3</td>
<td>24.8</td>
<td>15.8</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Domestic mail volumes (billion items)</td>
<td>16.6</td>
<td>14.3</td>
<td>16.3</td>
<td>4.9</td>
<td>165.3</td>
<td>10.0</td>
<td>19.3</td>
<td>4.9</td>
<td>4.1</td>
<td>4.4</td>
<td>2.8</td>
<td>0.6</td>
<td>0.8</td>
<td>8.6</td>
<td>1.1</td>
<td>6.6</td>
<td>7.3</td>
</tr>
<tr>
<td>Standard domestic stamp price (p)</td>
<td>60</td>
<td>87</td>
<td>78</td>
<td>130</td>
<td>28</td>
<td>81</td>
<td>109</td>
<td>77</td>
<td>74</td>
<td>130</td>
<td>115</td>
<td>56</td>
<td>51</td>
<td>63</td>
<td>28</td>
<td>33</td>
<td>12</td>
</tr>
</tbody>
</table>
International Communications
Market Report 2012

1 The UK in context
## Contents

1.1 The UK communications industry in context 15
  1.1.1 Introduction 15
  1.1.2 Putting the global communications industry into context 15
  1.1.3 Communications sector revenues 16

1.2 The UK consumer in context 22
  1.2.1 Introduction 22
  1.2.2 Take-up and use of services and media activities 22

1.3 Changing nature of communications 28
  1.3.1 Key points 28
  1.3.2 Introduction 28
  1.3.3 Preferred methods of communication with friends and family 29
  1.3.4 Frequency of using communication methods with friends and family 31
  1.3.5 Communicating by sending greetings 35
  1.3.6 Communicating with businesses and government 37
  1.3.7 Summary of consumers’ changing communications use 41
  1.3.8 Four dimensions of change 43

1.4 How consumers followed the London 2012 Olympic and Paralympic Games 50
  1.4.1 Key points 50
  1.4.2 Introduction 50
  1.4.3 Following the London 2012 Olympics and Paralympics 51

1.5 News consumption: the international context 61
  1.5.1 Introduction 61
  1.5.2 Digital news consumption – a comparative study 61
  1.5.3 Platforms used as a main source of news 64

1.6 A perspective on China 69
  1.6.1 Introduction 69
  1.6.2 China as a country and a communications market 69
  1.6.3 Our research methodology in China 71
  1.6.4 Our research results in China 71

1.7 International regulatory context and models 76
  1.7.1 Introduction 76
  1.7.2 Key developments in the European regulatory and legislative framework 76
  1.7.3 Helping communications markets work for consumers 77
  1.7.4 Promoting effective and sustainable competition 81
  1.7.5 Providing appropriate assurances to audiences on standards 83
  1.7.6 Promoting the efficient use of public assets 85
  1.7.7 Contributing to, and implementing, public policy defined by Parliament 87
1.1 The UK communications industry in context

1.1.1 Introduction

This chapter of the report provides a broad overview that places the UK communications sector in a global context.

- **The UK communications industry in context** (Section 1.1): We compare the size of the UK communications sector to that in other countries and look at relevant top-line revenues across our comparator countries.

- **The UK consumer in context** (Section 1.2): We compare take-up and use of different services and devices at a broad level across comparator countries.

- **Changing nature of communications** (Section 1.3): We examine consumers’ preferences for different communications services for communicating with different groups of people and look at which communications services consumers are using more, and which they are using less, than two years ago.

- **How consumers followed the London 2012 Olympic and Paralympic Games** (Section 1.4): We summarise key findings from new research into how people used communications services and devices to follow the Games in eight comparator countries.

- **News consumption: the international context** (Section 1.5): We look into digital news consumption, and summarise the key findings from the Reuters Institute *Digital News Report*, and present the findings of Ofcom’s own consumer research which looks at which media platform consumers use as their main source for different types of news.

- **A perspective on China** (Section 1.6): This perspective considers the ICMR 2012 market research data on the communications market in China, bringing together our thinking on some of the reasons for differences in the data between China and other countries, and providing comparisons between China, the UK and the US.

- **International regulatory context and models** (Section 1.7): We highlight recent international developments in communications regulation to provide regulatory context to some of the topics in the report.

1.1.2 Putting the UK communications industry in context

In this section we discuss the revenue and expenditure of the communications sectors in the UK and globally.

Given the complexity and scale of the ‘communications industries’, there are many potential definitions of the ‘communications sector’. These could, for example, include consumer electronics, network equipment, music, the film industry, online, software, games, newspapers, magazine and books, in addition to telecoms and broadcasting.

We focus primarily on the telecoms, television, radio and postal industries, to reflect Ofcom’s regulatory remit.
Key points

- The communications sector's total global revenues in 2011 were £1,322bn, growing by 3.7% (incorporating the telecoms, television, postal and radio sectors). Telecoms industries saw the largest absolute rise in revenues in 2011, which grew by £31bn to £936bn. In terms of percentage growth, television revenues grew fastest among the communications industries, by 6.6% in 2011 to £258bn.

- US telecoms revenues were £186bn in 2011, larger than the revenues of the entire communications sector in any other comparator country. Japan was the second-largest communications market by revenues, generating £138bn in 2011, while China was third largest at £86bn. Communications revenues in the UK were £47bn in 2011.

- Global advertising expenditure grew by 3.8% in 2011 to £298bn, the highest total spend since 2007. While expenditure on internet advertising grew at a compound annual rate of 16.0% between 2007 and 2011 to £48bn, that on newspaper advertising was -6.9%, falling to £60bn, while for magazines it was -6.8%, falling to £28bn.

- In the television and radio sectors, subscriptions generated the largest and fastest-growing proportion of total revenues in 2011. Television subscription revenues grew by 10.5% in 2011 to £133bn and at a compound annual rate of 9.0% between 2007 and 2011. Radio subscription revenues grew by 12.5% in 2011 to £2bn and at a compound annual rate of 8.5% between 2007 and 2011.

1.1.3 Communications sector revenues

The communications sector generated £1,322bn in revenues in 2011, an increase of 3.7% since 2010

Between 2007 and 2011, global communications industries’ revenues grew at a compound annual growth rate (CAGR) of 2.9%. Television, and particularly telecoms, revenues drove this growth. Between 2007 and 2011, the CAGR of telecoms revenues was 2.9% and in 2011 the industry generated £936bn worldwide, £100bn more than in 2007. Nominally, television revenues grew faster during this period, at a CAGR of 5.2%, amounting to £47bn more in 2011 than in 2007. In 2011, television revenues grew by 6.6% and telecoms revenues by 3.5%; in both cases a higher rate than each industry’s compound annual growth over the previous four years.

We have taken postal revenues in our 17 comparator countries into account for the first time in assessing total global communications revenues. Post contributed £98bn to total global revenues of £1,322bn in 2011.

The radio industry, the revenues of which were smallest among these industries in every year between 2007 and 2011, grew by 1.7% in 2011. However, both radio and postal revenues declined between 2007 and 2011. In the countries for which we have data, postal revenues grew at a compound annual rate of -0.9% between 2007 and 2011 and -1.0% in 2011. The compound annual growth rate of radio revenues between 2007 and 2011 was -1.2%.
US telecoms revenues were £186bn, larger than the total communications revenues of any other country.

In 2011, as in 2010, the three largest communications markets in the world by revenues were the US (where revenues totalled £331bn), Japan (£138bn) and China (£86bn). Revenues from US telecoms alone (£186bn) were larger than the combined industries’ revenues in any other country. The US also commanded the largest revenues among our comparator countries in television (£100bn), post (£33bn) and radio (£12bn).

Total UK communications sector revenues were £47bn in 2011, second only to Germany (£58bn) and France (£49bn) among our European comparator countries. The UK’s telecoms revenues (£27bn) were lower than those in Germany and France (£36bn and £31bn respectively). However, the UK television sector’s revenues (£11bn) and radio sector (£6.7bn) were both larger than those in France (£10bn and £6.5bn respectively).
In 2011, communications sector revenues per head were highest in absolute terms in Australia, at £1,135

In 2011, the highest communications sector revenues per head among our comparator countries in absolute terms were in Australia (£1,135), Japan (£1,083) and the US (£1,078). We have also adjusted absolute revenues per capita to take account of comparative price levels (CPL) between the UK and our other comparator countries. When adjusted for CPL, communications sector spending was highest in the US (£1,369), Japan (£917) and Canada (£859). In the UK, communications revenues per head were £741.

In 2011, the UK generated the lowest per-capita telecoms revenues among our European comparator countries (£436) when adjusted for CPL, with the exceptions of Poland (£249), Ireland (£418) and Italy (£433). In the UK, the weighted average prices of best-value stand-alone fixed-line and mobile services were cheapest among five European comparator countries (Figure 2.2 and Figure 2.5). By contrast, UK television per-capita revenues (£180) were highest among the European comparators when adjusted for CPL. Income from subscription fees is the main impetus behind growing UK television revenues per head (Figure 1.4).
Revenues per head in the US for telecoms services (£759), television (£406), radio (£46) and postal revenues (£157) were all highest among our comparator countries when adjusted for CPL.

**Figure 1.3  Communications sector revenues per capita: 2011**

Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook for radio revenues. Broadcaster returns to Ofcom for UK radio revenues. UPU postal statistics database, regulatory reports and postal operators’ annual reports for postal revenues. IDATE / industry data / Ofcom for television and telecoms revenues (telecoms revenues refer to retail revenues). Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used IMF 2011 average exchange rates in converting from local currency to GBP and OECD August 2011 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.

**In 2011, the fastest-growing element of television and radio revenues was subscriptions**

Figure 1.4 displays the proportions of television and radio industry revenues that came from subscriptions, advertising and public licence fees in 2011. Of the £258bn that the television industry generated in 2011, subscription revenues contributed the largest and fastest-growing proportion of total revenues. Television subscription revenues grew at a CAGR of 9.0% to £133bn in the four years to 2011, and grew by 10.5% in 2011. Television advertising
revenues grew at a CAGR of 1.8% between 2007 and 2011, while the rate for television licence fee revenues was 1.4% in the same period. Television licence fee revenues fell by 0.2% between 2010 and 2011, and were flat for radio.

In 2011, the fastest-growing element of total radio revenues was radio subscriptions, which grew by 12.5% in 2011. However, radio subscriptions still contribute a small proportion of total radio revenues: £2bn of £30bn. Radio advertising revenues grew at a compound annual rate of -2.7% to £20bn between 2007 and 2011, although they increased by 1.5% in 2011.

**Figure 1.4** Sources of global revenue for radio and television industries: 2011

| Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook for television and radio revenues. Broadcaster returns to Ofcom for UK radio revenues. UPU postal statistics database, regulatory reports and postal operators’ annual reports for postal revenues. IDATE / industry data / Ofcom for telecoms revenues, which refer to retail revenues. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used IMF 2011 average exchange rates in converting from local currency to GBP.

**Note:** Postal revenues are for our 17 comparator countries only. Net TV advertising revenues for Russia have been calculated by discounting 15% of TV advertising spending to remove agency fees and production costs.

**Global advertising expenditure grew to £298bn in 2011, the highest total spend since 2007**

In 2011, global advertising expenditure grew by 3.8% (£11bn) to £298bn. Expenditure on internet advertising grew fastest among the media depicted on Figure 1.5, at a compound annual rate of 16.0% in the four years to 2011 to £8bn. In the same period the compound annual growth rate of expenditure on newspaper advertising was -6.9% and on magazine advertising was -6.8%, suggesting that the growth of internet expenditure has been primarily at the expense of print advertising.
While radio revenues shrank at a compound annual growth rate of -2.9% between 2007 and 2011, in 2011 they grew by 2.9%. Equally, expenditure on television advertising grew by 4.8% in 2011, a higher rate than the compound annual average rate between 2007 and 2011 (2.5%).

**Figure 1.5  Global advertising expenditure, by medium**

Source: ZenithOptimedia. Interpretation and manipulation of data are solely Ofcom's responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011.
1.2 The UK consumer in context

1.2.1 Introduction

In this section we examine and compare take-up and use of communications devices and services. We focus primarily on the UK but also on the other countries where we carried out consumer research in October 2012 (France, Germany, Italy, the US, Japan, Australia, Spain and China). The key findings are:

- **The number of fixed-line voice connections remains relatively resilient in the UK, with more fixed-line voice connections per 100 people than in the other markets covered.** Although this number fell between 2006 and 2011 in all of the countries which we surveyed, the fall in the UK was among the smallest.

- **The number of mobile connections per 100 people is high in the UK (130).** Of the countries surveyed, only Italy, Germany and Australia have more mobile connections per 100 people.

- **The number of broadband connections per 100 households among the countries which we surveyed is highest in France at 81, with the UK in second place.** With 77 connections per 100 households, the UK is slightly ahead of the US, where three-quarters of households have fixed broadband.

- **Spain has the highest proportion of digital television (DTV) homes per 100 TV households, with the UK in second place.** The UK has the second highest proportion of DTV homes across the countries where we carried out our research, second only to Spain - where 100% of TV households have DTV.

- **Smartphone ownership is high in the UK, at 58%.** The UK leads in digital radio ownership (31%) and DVR ownership (39%).

- **Tablet take-up among internet users is highest in Spain and Australia, both at 24%.** Italy and the US have the next-highest claimed ownership (23% and 20%) with the UK in fifth place at 19%.

- **Watching TV is the most popular communications activity in all the countries surveyed.** Over 90% of all respondents in all the countries claimed to watch TV regularly. The UK and Spain have the highest proportion of consumers who claim to watch TV regularly (95%).

1.2.2 Take-up and use of services and media activities

**Fixed-line voice remains relatively resilient in the UK, with the number of lines per 100 people higher than in the other markets covered**

In all the countries where we carried out our consumer research, the number of fixed-line connections per 100 people fell between 2006 and 2011 (Figure 1.6). The data – compiled by IDATE and Ofcom from industry data – shows that the fall in the UK (four connections per 100 people) was among the smallest in those nine countries. As a result, the number of connections per 100 people was higher in the UK than in the other countries.

Second highest take-up was in Germany (52 lines per hundred people), closely followed by Australia (48) and the US (46). Take-up was lowest in China, where availability of fixed-line connections is low and mobile is the predominant form of telephony. France and Italy also have low take-up of fixed-line connections. In France, consumers are able to choose a
naked DSL service, which enables them to use broadband services (including VoIP) without a fixed-line analogue telephone connection.

The relative resilience of fixed-line take-up in the UK is perhaps due in part to the necessity of having a fixed-line telephone connection in order to receive DSL broadband.

With the exception of Japan and China, the number of mobile connections exceeds the number of people in all the countries surveyed. In all of the countries shown in Figure 1.6, the number of mobile connections per head of population grew between 2006 and 2011, with the largest growth occurring in China. Italy has the highest number of mobile connections (158 per 100 people), reflecting high levels of multiple pre-pay SIM ownership.

Figure 1.6  Fixed-line voice and mobile connections per head: 2011

![Fixed-line and mobile connections per head: 2011](image)

Source: IDATE / industry data / Ofcom

Broadband connections per 100 households among the countries surveyed is highest in France at 81, with the UK in second place at 77

The number of broadband connections per 100 households is highest in France at 81 subscriptions per 100 households. With 77 subscriptions per 100 households, the UK is slightly ahead of the US, where three-quarters of households have fixed broadband, as Figure 1.7 shows.

Among the European countries, the number of broadband connections per 100 households was lowest in Italy (54 connections per 100 households). Looking at all of the countries surveyed, the number of connections per 100 households was lowest in China, as coverage is focused on relatively small geographical areas in the highly-populated cities.
Spain has the highest proportion of digital television (DTV) homes per 100 TV households, with the UK in second place

The UK has the second highest proportion of DTV homes per 100 TV households across the countries where we carried out our research, second only to Spain - where 100% of households with TV have DTV. France was third highest with 97 DTV homes per 100 TV households, followed by Italy (93). The number of DTV homes per 100 households was low in Japan (77), Germany (66) and China (43). (Figure 1.8)

Source: IDATE / industry data / Ofcom
Note: Broadband connections include business connections

For further information on the penetration of specific communications services across all our comparator countries, please see the relevant section of this report.
Tablet take-up among internet users is highest in Spain and Australia, with the UK in fifth place at 19%

As part of our consumer research we asked respondents about their ownership and personal use of a range of devices. This research was carried out online, which means that results are derived from a different sample to other Ofcom consumer research and direct comparisons cannot be made.

For all of the devices listed in Figure 1.9, the UK is frequently among the highest levels of claimed ownership and personal use. The only two devices for which the UK leads in terms of take-up are digital radio sets (31%) and digital video recorders (DVR) (39%), which have relatively low take-up in the other European countries. About a third of consumers (32%) claim to own and personally use DVRs in the US.

Tablet take-up is highest in Spain and Australia, both at 24%. Italy and the US have the next highest claimed ownership (23% and 20% respectively), with the UK in fifth place at 19%.

The reasons for differences in levels of ownership and use of different communications devices and services are multiple and complex, and may relate to cultural factors, differences in affordability and local market structures.

The figure (30%) for ownership and use of smartphones in Japan is the lowest of all our comparator countries. Reasons for this include:

- Early adoption of advanced services: Consumers in Japan have been using email on mobile phones for much longer than consumers in most other countries. Email applications on mobile phones are considered to be the preserve of smartphones in most countries, but phones offering email in Japan are often considered as standard mobile phones in that country. This leads to lower smartphone penetration figures that might otherwise be expected;

- Handsets: many leading handset manufacturers have found it more difficult to win large market share in Japan than in other Asian countries. This may be attributed to the popularity of local manufacturers - leading mobile network operators offer a broad range of handsets from Japan-headquartered manufacturers under original equipment manufacturer and operator brands - and also the different needs of Japan’s consumers compared with other countries, partly linked to the early adoption of mobile technology. Because the type of handsets used are different in Japan, the definition of what constitutes a smartphone tends to differ compared with other countries;

- Different services: Linked to both the above reasons, Japan’s consumers have been used to consuming a different range of services to consumers in other countries, and this has led to different definitions of smartphones. One example of such a service is i-mode, which is widespread in Japan but deployed rarely in other countries. i-mode allows consumers to access the internet and email on their mobile devices.

---


6 Telefonica O2 deployed the service in the UK, but switched it off in 2009 because of a limited range of handsets appropriate for the UK market. See http://service.o2.co.uk/IQ/SRVS/CGI-BIN/WEBCGI.EXE?New,KB=Companion,T=i-mode,question=ref(User):str(RelatedHelp),CASE=9521#
Figure 1.9 Ownership and personal use of devices

Figure 1.9 shows the ownership and personal use of devices in various countries. The chart displays the percentage of respondents owning and using different devices, including mobile phones, smartphones, digital radios, computers, tablets, DVRs, HDTVs, on-demand (VOD) TV services, and TV services that can receive 3D broadcasts.

Source: Ofcom consumer research, September 2012
Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Spain=1001, Australia=1007
Q: Which of the following devices do you own and personally use?

Watching TV is the most popular communications activity in all of the countries surveyed, with 95% of UK consumers claiming to engage in this activity on a weekly basis.

Figure 1.10 charts the levels of regular use of selected communications services (with regular use defined as at least once a week). Our research was conducted among online panellists, who may be more likely than average to use selected communications services, so data should be treated with this caveat in mind.

The UK and Spain have the highest proportion of consumers who claim to watch TV regularly (95%). This is by far the most popular activity in the UK, and 8pp ahead of the 87% who access the internet with a computer or laptop.

Claimed radio listening in the UK is 69% - on a par with Australia but lower than the US and the other European countries surveyed. This figure may be particularly low because our research was conducted among internet users, and it is possible that some radio listeners are non-internet users who were excluded from our research. Claimed radio listening was lowest in Japan, at 37%.

In all countries, consumers receive post more frequently than they send it. We know from other research that this is due to the high proportion of mail which is generated by

---

7 According to the Radio Joint Audience Research Bureau (RAJAR), 90.8% of the UK population listened to radio in an average week in 2011
businesses and sent to consumers, including bills and statements, advertising and the fulfilment of online and other distance shopping.

Among all of the countries surveyed, receiving items of post regularly is lowest in Spain (39%). Industry data also show that online shopping is less popular in this country than elsewhere. Internet retailing is discussed further in the *Internet and web based content* and *Post* chapters of this report.

**Figure 1.10 Regular use of selected communications services / media**

Source: Ofcom consumer research, September 2012
Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Spain=1001, Australia=1007

Q: Which of the following do you regularly do (at least once a week)?
1.3 Changing nature of communications

1.3.1 Key points

Across our comparator countries, consumers are fundamentally changing the way they communicate:

- **Despite the increase in use of internet-based communications, face-to-face remains the preferred way of communicating with friends and family, for all countries except Japan.** The country with the strongest preference for face-to-face communication was the UK, with 48% of survey respondents picking face-to-face as their preferred means of communicating with friends and family.

- **In seven out of eight comparator countries, consumers have reduced face-to-face communication with friends and family.** In contrast, preferences for online communications have increased, particularly in the UK and Italy, which showed large increases in the use of email and social networking.

- **Use of postal services has declined in all eight comparator countries, with the clear majority of consumers indicating that they prefer to send messages over the internet instead.** These trends are strongest in Spain and Italy.

- **Every comparator country saw an increase in the use of email and social networking.** This was most pronounced in Australia, followed by the UK (email) and for the US, followed by Australia (social networking).

- **Use of text-based communications exceeded the use of voice-based communications in all countries except Germany.** This difference was greatest in Japan.

- **Time spent making telephone calls declined the most in the UK**: the volume of fixed and mobile calls made per person was down 6.3% year on year in 2011. In contrast, UK consumers sent nearly 17% more text messages per person than in 2010.

1.3.2 Introduction

The way that consumers are choosing to communicate is changing, although the pace and type of change varies between countries.

In this section, we first (in sections 1.3.3 to 1.3.6) present data on consumers’ preferences for different communications services when communicating with different groups of people – family and friends; businesses and government, and when sending greetings. We also examine the frequency of use of the various methods of communication.

Secondly (in section 1.3.7), we look at which communications services consumers are using more, and which they are using less, compared with two years ago.

Thirdly (in section 1.3.8), we present four dimensions of change: comparing data on:

- face-to-face versus online communications;

- the increasing use of email and social networking as platforms to communicate;

- post versus online communications; and
• phone calls versus text messaging and online communications.

We note that UK consumers are at the forefront of change, evolving their communications consumption from verbal communication to written communication originating on connected devices (such as mobile devices or PCs) more rapidly than most of our comparator countries. They are making fewer telephone calls, sending less post and having fewer face-to-face meetings with friends and family. They are also making greater use of the internet and mobile devices to communicate using email, social networking and text messaging.

We consider a range of industry and consumer metrics, with the latter being gathered by Ofcom’s online research in eight countries (the UK, France, Germany, Italy, the US, Japan, Australia and Spain) in September 2012. In each country approximately 1,000 adults aged 18+ were interviewed. Because the survey was conducted online, results may differ from other consumer research, including Ofcom’s Communications Market Report, which is published each summer.

We present in this section the key figures, with further data and analysis in the relevant sections later in the report.

1.3.3 Preferred methods of communication with friends and family

For most countries, face-to-face remains the preferred way of communicating with friends and family

With the exception of Japan, all countries surveyed have broadly similar preferences for communicating with friends and family. Meeting face-to-face is the preferred means of personal communication with friends and family, despite the rising use of digital communications, and is most popular with consumers in the UK (48%), Australia (47%) and Germany (47%).

The most preferred method of communicating with friends and family in Japan is email (41%), followed by calls on a mobile phone (29%). Fourteen per cent of consumers in Japan prefer to communicate with friends and family face to face.

Just over one in ten (12%) UK consumers prefer to communicate with friends and family by calling on a fixed phone – a lower proportion than in Germany (25%) (where use of landlines dominates, discussed in more detail in the Telecoms and networks chapter of this report), France (22%), Italy (17%), and Spain (17%). The preference for making calls using a fixed line is lower in the UK than in all other countries except Japan. UK consumers also have the joint-lowest preference for contacting friends and family by calling on a mobile phone (7%). This finding comes as the UK has experienced its first fall in mobile call volumes – down 1% year on year in 2011.

In all countries, preference for contacting friends and family by social networking sites, VoIP and instant messaging is low, with less than one in ten preferring these methods.

Respondents were asked the reason for their preferred method of communications. Convenience and immediacy were the top two reasons for consumers’ preference in Japan, while among all other countries the main reason for the preferred choice was the personal nature of face-to-face communications.

---

8 Sample sizes: UK= 1,065; FRA = 1,016; GER= 1,024; ITA= 1,015; USA= 1,010; JPN= 1,004; AUS= 1,007; ESP= 1,001
Figure 1.11  Preferred method of communication with friends and family

Q5a: If you had to pick one method of communicating with friends and family which one would it be?
Source: Ofcom research, 2012
Base: All who make any sort of contact with: friends and family, n: UK =1059; FRA= 1,006; GER= 1,015; ITA= 1,011; USA= 1,004; JPN= 996; AUS= 1,002; ESP= 996
Note: other mentions by 2% or fewer included: post, micro blogging sites, free/paid-for e-cards through a website, picture messaging
1.3.4 Frequency of using communication methods with friends and family

In most countries email is the most-used method for daily communication with friends and family.

Respondents were asked which methods they used at least once a day to communicate with friends and family.

Figure 1.12 shows that with the exception of Italy, in all of the countries surveyed email is the single most popular method of daily communication with friends and family. Consumers in Japan (65%), the US (62%) and Spain (60%) were the most likely to send emails to friends and family on a daily basis, and almost six in ten (57%) UK consumers say that they use email to communicate with friends and family at least once a day.

For consumers in Italy, voice calls on a mobile phone are the most frequently-used method of daily communication with friends and family (61% and 54% respectively). This is unsurprising, given the growth in mobile use this country; between 2006 and 2011, the volume of mobile calls made in Italy has risen by an average annual growth rate of 11.8%.

Daily communication with friends and family via voice calls on a fixed landline or mobile phone is lower in the UK than in many other countries: at 27%, daily voice calls via a landline is lower in the UK than in Germany, France, Italy and Spain, and at 31%, communicating via a voice call on a mobile phone is lower than in all countries except Japan. Landline use in the UK has now been shrinking each year for more than five years, with volumes falling 10% in 2011.

Compared to other countries, daily use of instant messaging is relatively high in China (54%), Spain (48%) and Italy (37%).
Figure 1.12 Methods used at least once a day to communicate with friends and family

Source: Ofcom research, 2012
Q2a: How often do you use x to communicate with friends and family?
Base: Adults who use communication methods aged 16+, n: UK =1,065; FRA= 1,016; GER= 1,024; ITA= 1,015; USA= 1,010; JPN= 1,004; AUS= 1,007; ESP= 1,001

On a weekly basis, email is the most-used method for communicating with friends and family

Figure 1.13 shows that when the timeframe is extended to ‘at least once a week’ email remains the most common way of communicating with friends and family (as with daily communications), in most countries except Italy. Four in five consumers in the UK communicate with friends and family at least once a week by email; only consumers in Italy...
are less likely to do this (76%). With the exception of Japan, voice calls (fixed or mobile) are the next most popular methods followed by text messaging.

More than four in five (82%) respondents in Japan communicate by email (despite the high cost; for more, see the *Telecoms and networks* section of this report) and almost two in three (62%) communicate by mobile. The next most-used weekly communications method in Japan is face to face (43%), and just under a third (31%) make weekly voice calls on a fixed landline.

Consumers in France are more likely than those in other countries to use post on a weekly basis to communicate with friends and family, with one in three (31%) in France doing so, compared to between 14% and 26% of consumers in other countries.

**Figure 1.13** Methods used at least once a week to communicate with friends and family

*Source: Ofcom research, 2012*

Q2a: How often do you use x to communicate with friends and family? (NETT figures)
Base: Adults who use communication methods aged 16+, n: UK =1,065; FRA= 1,016; GER= 1,024; ITA= 1,015; USA= 1,010; JPN= 1,004; AUS= 1,007; ESP= 1,001
Text-based communication is more popular than voice-based communication

Taking all text-based communication and voice-based communications as a whole, we can see that the use of text-based communication has overtaken voice-based communication.

In all the countries surveyed except Germany, where there is no difference, consumers use text-based communications, including text messages, email, micro-blogging, social networking, post and instant messaging, to communicate with friends and family on a weekly basis more than they use voice-based communications such as mobile phones and fixed landline telephones.

Consumers in Japan communicate using voice (fixed landline or mobile phones) much less than those in any other country. Sixty-eight per cent in Japan use voice-based communication weekly, compared to 87% in the UK and at least nine in ten in all other countries.

The use of text-based communications is high across all countries; between 87% and 97% do this across all countries surveyed.

The chart below compares the cumulative weekly use of voice-based communication with text-based communication across the countries surveyed.
1.3.5 Communicating by sending greetings

Non-digital methods of communication are the most used for birthdays and other greetings

Figure 1.15 shows methods of communications used to send greetings on occasions such as birthdays and other life events.

A higher proportion of consumers in the UK use the postal service for sending such greetings than in the other countries surveyed: almost six in ten (57%) people in the UK use the postal service for these occasions, making it the single most popular method of sending such greetings in the UK. This is followed by face-to-face and email (both at 37%).
Post is less important for sending greetings in other countries. While just under half (48%) of consumers in Germany, the US and Australia use the post to send greetings, in the US and Australia, email is equally as popular. In Germany, voice calls on a fixed landline phone are used by the highest proportion of consumers (56%).

In France, Japan and Spain, greetings are sent most by email, and for these countries the use of post is significantly lower in than the other countries surveyed. For sending birthday and other greetings in Japan and Spain, post is used less often than voice calls (fixed or mobile), face-to-face, social networking and text messaging.

**Figure 1.15  Communication methods ever used to send greetings (e.g. birthdays)**

- **Post**: UK = 57%, FRA = 48%, GER = 48%, ITA = 48%, USA = 48%, JPN = 48%, AUS = 48%, ESP = 48%
- **Face to face**: UK = 51%, FRA = 51%, GER = 51%, ITA = 51%, USA = 51%, JPN = 51%, AUS = 51%, ESP = 51%
- **Emails**: UK = 48%, FRA = 48%, GER = 48%, ITA = 48%, USA = 48%, JPN = 48%, AUS = 48%, ESP = 48%
- **Voice calls on fixed landline**: UK = 56%, FRA = 52%, GER = 48%, ITA = 48%, USA = 48%, JPN = 48%, AUS = 48%, ESP = 48%
- **Text messages**: UK = 42%, FRA = 42%, GER = 42%, ITA = 42%, USA = 42%, JPN = 42%, AUS = 42%, ESP = 42%
- **Social networking**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **Voice calls using mobile phone**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **Instant Messaging**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **VoIP (e.g. Skype)**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **Free/paid for e-cards**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **Picture message on mobile phone**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **Micro blogging (e.g. Twitter)**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%
- **Comments on a website/forums**: UK = 39%, FRA = 39%, GER = 39%, ITA = 39%, USA = 39%, JPN = 39%, AUS = 39%, ESP = 39%

**Source**: Ofcom research, 2012
**Q3a**: …which of these methods do you ever use to send greetings for occasions such as birthdays, get well, congratulations etc.
**Base**: All who make any sort of contact with: friends and family, n: UK = 1059; FRA = 1,006; GER = 1,015; ITA = 1,011; USA = 1,004; JPN = 996; AUS = 1,002; ESP = 996
1.3.6 Communicating with businesses and government

Email is widely used for communications with businesses

Figure 1.16 shows that for all countries, the most popular method of interacting with businesses is email. Consumers in Japan are most likely to use email for these communications (74%), followed by consumers in the UK (66%), France (65%) and Australia (64%). Although in Italy email is the most widely-used way of communicating with businesses, at 45%, Italian consumers are less likely than those in other countries to do this. Across all countries, phone calls (either landline or mobile) are the next most widely-used way of communicating with businesses, although consumers in Italy are again less likely than consumers in other countries to communicate with businesses in this way.

Use of the postal service for business communications is strongest in the UK (25%) and Germany (26%).

Compared to other countries, consumers in Italy have relatively high usage of newer technologies, such as instant messaging and VoIP, when communicating with businesses.
Figure 1.16  Communications methods ever used to communicate with businesses and services

<table>
<thead>
<tr>
<th>Method</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emails</td>
<td>66%</td>
<td>56%</td>
<td>65%</td>
<td>63%</td>
<td>58%</td>
<td>54%</td>
<td>56%</td>
<td>56%</td>
</tr>
<tr>
<td>Voice calls on fixed landline</td>
<td>49%</td>
<td>37%</td>
<td>37%</td>
<td>47%</td>
<td>49%</td>
<td>47%</td>
<td>49%</td>
<td>47%</td>
</tr>
<tr>
<td>Voice calls on mobile phone</td>
<td>31%</td>
<td>26%</td>
<td>29%</td>
<td>30%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
</tr>
<tr>
<td>Post</td>
<td>41%</td>
<td>41%</td>
<td>41%</td>
<td>41%</td>
<td>41%</td>
<td>41%</td>
<td>41%</td>
<td>41%</td>
</tr>
<tr>
<td>Face to face</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Social networking</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Comments on a website/forums</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Text messages</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Instant Messaging</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>VoIP (e.g. Skype)</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Micro blogging (e.g. Twitter)</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Ofcom research, 2012
Q3a: …which of these methods do you ever use to communicate with business about goods and services
Base: All who make any sort of contact with: friends and family, n: UK =1059; FRA= 1,006; GER= 1,015; ITA= 1,011; USA= 1,004; JPN= 996; AUS= 1,002; ESP= 996

Email and voice calls on a fixed landline are widely used for communications with governments and organisations

In the UK, Germany and Australia, both email and voice calls on a fixed landline are the most widely-used methods of communicating with the government and organisations, with
around half of all consumers in all three countries using these methods. In the UK, the use of fixed lines rather than mobiles to contact organisations may be partly due to pricing: UK organisations often use ‘Special Services numbers’ (such as 0845 and 0870) that are sometimes more expensive to call on mobile tariffs.

Email is the most frequently-used method of communicating with government and organisations in France (45%), Italy (38%), the US (34%) and Spain (48%), followed by voice calls on a fixed line. In Japan, voice calls on a fixed landline are the most widely-used method (38%).

With the exception of Italy, less than one in ten consumers in each country communicate with government organisations by social networking or VoIP.
Figure 1.17 Communications methods ever used to communicate with government and organisations

Source: Ofcom research, 2012
Q3a: …which of these methods do you ever use to communicate with government organisations about formal matters (e.g. councils, tax, public services).
Base: All who make any sort of contact with: friends and family, n: UK =1059; FRA= 1,006; GER= 1,015; ITA= 1,011; USA= 1,004; JPN= 996; AUS= 1,002; ESP= 996
1.3.7 Summary of consumers’ changing communications use

This section examines which communications services are being used more, and which are being used less, compared with two years ago. The data (see Figure 1.18 and Figure 1.19) are from Ofcom’s consumer research.

Post, face-to-face and landline calls have diminished in use over the past two years

Consumers in all countries except Germany claim to have significantly decreased their use of more ‘traditional’ communications methods: post, face-to-face and landline telephony in the past two years. Germany stands out for its consumption of post and telecoms services: in 2011; its post volumes declined only slowly, and a large number of consumers in Germany continued to take fixed-line telecoms services, resulting in the highest volume of landline calls per head of all the 17 comparator countries featured in this report. These metrics are discussed in more detail in the Telecoms chapter.

For all countries, the largest decrease was in the use of the postal service, with claimed use declining by between -30% (France) and -1% (Germany). Face to face communications have declined by between -12% (Japan) and -3% (France) and landline communication has declined by between -22% (Japan) and –6% (USA).

In contrast, consumers in Germany claim to have increased their use of face-to-face and landline communication by about a quarter (24% and 25% respectively) over the past two years.
Figure 1.18  Net claimed changes in communications methods used: past two years – negative changes

Across all the countries we surveyed, the use of digital methods of communication has increased. In the UK the largest increases in communications methods used in the past two years were in the use of email (39% net claimed increase), followed by social networking sites (+27%) and text messaging (+20%).

A similar trend can be seen in other markets, with email experiencing the greatest growth over the past two years in every country except the US (where there was equal growth in social networking). Almost three in ten (28%) consumers in Spain claim to have increased their use of instant messaging over the past two years.
Figure 1.19 Net claimed changes in communications methods used in past two years – positive changes

Source: Ofcom consumer research, September 2012.

Question: Which, if any, of these methods do you use to communicate MORE than you did two years ago? And which of them do you use to communicate LESS than you did two years ago? Note: the net change figures give the percentage of respondents who selected MORE minus the percentage of respondents who selected LESS.

1.3.8 Four dimensions of change

Section 1.3.7 examined the increased and decreased use of specific communications services. But looking at each service in isolation does not reveal the full picture of how
consumers’ communications use is changing. To do this, we can present the data to show the apparent substitution of some services for others. We examine four trends that have become apparent:

- Face-to-face communication has declined in favour of online communications
- Email and social networking are key elements of increased internet use
- Use of post has declined amid a strong preference for communicating online
- Growth in the volume of phone calls was low or negative, while text and online messaging was popular
- We now consider each of these trends, or dimensions, in turn.

**Dimension one: face-to-face communication declines in favour of the internet**

In seven of our eight comparator countries, more consumers reduced their face-to-face contact with their friends and family, than increased it, over the past two years.

This reduction in face-to-face contact was largest in Japan, followed by the US, with a net reduction (the difference between those who said face-to-face contact had decreased and those who said it had increased) of 12% and 10% respectively. In the UK, the net reduction was 7%; the third highest. Only in Germany did face-to-face contact increase over the past two years.

We also asked consumers their preference for sending a message online instead of meeting face-to-face. The options for sending a message online included social networking and email. Between 15% and 26% of respondents in each country said that they preferred to send a message online, rather than meet face-to-face. Japan was the country most likely to reject face-to-face contact in favour of sending a message online, followed by the US and the UK (see Figure 1.20).
Figure 1.20  Change in preference levels: face-to-face communication vs. sending a message online

<table>
<thead>
<tr>
<th>Country</th>
<th>Net Increase in Face-to-face Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN</td>
<td>-15</td>
</tr>
<tr>
<td>USA</td>
<td>-10</td>
</tr>
<tr>
<td>UK</td>
<td>-5</td>
</tr>
<tr>
<td>ITA</td>
<td>0</td>
</tr>
<tr>
<td>AUS</td>
<td>5</td>
</tr>
<tr>
<td>FRA</td>
<td>10</td>
</tr>
<tr>
<td>ESP</td>
<td>15</td>
</tr>
<tr>
<td>GER</td>
<td>20</td>
</tr>
<tr>
<td>AUS</td>
<td>25</td>
</tr>
<tr>
<td>ESP</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Ofcom consumer research, September 2012.

Question (x-axis). Which, if any, of these methods do you use to communicate MORE than you did two years ago? And which of them do you use to communicate LESS than you did two years ago? Note: the net increase is the percentage of respondents who selected MORE minus the percentage of respondents who selected LESS.

Statement (y-axis): I would rather send someone a message online than meeting them face-to-face. Note: figures show the percentage of respondents who said the statement 'applied' or 'totally applied' to them.

Dimension two: email and social networking increased markedly

We also found net increases in the use of both email and social networking in every comparator country; that is, an increase in the number of respondents who said they used the service more than two years ago, minus the number of respondents who said they used the service less than two years ago. In Australia, the UK and Italy, the net increase was around 40% for email. In the US, Australia, Italy, the UK and Spain, the net increase for social networking exceeded 25% (see Figure 1.21).
Dimension three: use of post declined amid strong preference for communicating online

Across the eight comparator countries, use of postal services declined. There also appeared to be a considerable preference for sending messages by email or over the internet rather than by post. These trends appear to be particularly strong in Spain and Italy (see Figure 1.22).

According to industry data, mail volumes declined by 18% between 2006 and 2011 across our comparator countries. The largest declines were in Spain (25.4%), Italy (25.1%), the UK (24.5%) and Poland (23.7%). However, the majority of mail volumes comprise commercial mail, so these figures are not necessarily a reflection of consumers’ changing use of post. More details can be found in the Post chapter of this report.

Ofcom’s market research sheds more light on consumers’ use of post. In all countries, more consumers said they used post less than they did two years ago, than said they used post more than two years ago. The difference was highest in France, where 30% more respondents said they used post less than said they used post more than two years ago. Australia (26%) also had a large difference. In marked contrast, Germany showed just a 1% difference. This may be partly because stamp prices – particularly for smaller letters – are relatively inexpensive in Germany.
The research aimed to try to identify the extent to which postal services are being replaced by internet-based alternatives. It asked respondents if they preferred to send messages via email (or over the internet), rather than sending post. In all countries, over half of the respondents said the statement applied, or totally applied, to them. This preference to send messages over the internet rather than by post was strongest in Italy (where 75% said the statement applied, or totally applied) and Spain (74%). For the UK, the figure was 64%.

**Figure 1.22** Change in preference levels: using post vs. sending messages online

Source: Ofcom consumer research, September 2012.

Question (x-axis). Which, if any, of these methods do you use to communicate MORE than you did two years ago? And which of them do you use to communicate LESS than you did two years ago?

Note: the net increase is the percentage of respondents who selected MORE minus the percentage of respondents who selected LESS.

Statement (y-axis): I prefer to send a message via email or over the internet rather than post a letter.

Note: figures show the percentage of respondents who said the statement ‘applied’ or ‘totally applied’ to them.

**Dimension four: text messaging increased, while the volume of phone calls fell in the majority of countries**

In contrast to the preceding charts, which are based on findings from Ofcom’s consumer research, this section is based on industry data provided by IDATE, and covers 11 of the 17 comparator countries in the *International Communications Market Report*.

These data show that, in 2011, the UK spent 6.3% fewer minutes per head making phone calls (total fixed and mobile) than in 2010. This was the largest decrease of all the comparator countries. The volume of minutes declined in five other countries (the US, Spain, the Netherlands, Sweden and Ireland) and increased in five countries (the largest increase was in Poland, with a 6.4% increase).
It is likely that some of these voice calls have been replaced by text messaging, and some by internet-based communications, including email and social networking. However, the rate of substitution varies between countries.

In the UK, the rate of substitution appears to be one of the highest of our comparator countries: as well as having the largest decline in the volume of voice calls per person, the number of text messages sent per head in the UK increased sharply (up by 16.6% between 2010 and 2011). This is illustrated in Figure 1.23; the UK is positioned clearly in the upper-left quadrant, indicating that many UK consumers are text messaging in preference to making phone calls. This change may have been driven by the fact that most UK mobile tariffs now include a large number of bundled text messages.

There are only two other countries – Sweden and the US - where voice volumes have fallen but text message volumes have risen, although both changes were lower in magnitude than for the UK. In five countries, the volume of both voice and SMS increased in 2011. However, in these countries – such as France with a 1.1% increase in voice and a 41.3% increase in SMS – there may nevertheless have been some substitution of SMS for voice calls.

![Figure 1.23 Change in voice minutes per head vs. change in SMS messages sent per head, year-on-year change in 2011](source)

Source: IDATE/Ofcom/operators. Shows the total number of minutes made from fixed-line and mobile phones. Figures for USA and Canada include incoming mobile calls.

Returning to Ofcom’s market research, there is some evidence of the extent to which consumers prefer to send text messages rather than make phone calls. The ease of use with which they can do this – particularly with smartphones – appears to be a major driver. In the UK, nearly half of the respondents (48%) said the statement that they: ‘send SMSs instead
of making phone calls because it is easier’ applied, or totally applied, to them. This was the highest figure of the comparator countries.

UK consumers also appeared to be among the most keen to contact their friends and family online instead of calling them: 49% said that the statement that they: ‘make fewer telephone calls because they contact people online’ applied, or totally applied, to them. Only in Spain (57%) and Italy (52%) were the figures higher (see Figure 1.24). Methods of contacting friends and family online include email and social networking.

The decline in voice volumes is discussed in more detail in the *Telecoms and networks* chapter.

**Figure 1.24** Percentage who expressed preference for communicating by SMS and online messaging instead of phone calls

Source: Ofcom consumer research September 2012

Statement (x-axis): I send SMS (text messages) instead of making phone calls because it’s easier

Statement (y-axis): I make fewer telephone calls because I can just contact people online.

Note: figures show the percentage of respondents who said the statement ‘applied’ or ‘totally applied’ to them.
1.4 How consumers followed the London 2012 Olympic and Paralympic Games

1.4.1 Key points

- A higher proportion of respondents watched or listened to coverage of the London 2012 Olympic and Paralympic Games (‘the Games’) several times a day in the UK (28%) than in any other comparator country. Twenty-six per cent did so in Japan. The US had the largest proportion of respondents who did not follow the Games at all (29%).

- In every comparator country, a higher proportion of respondents watched the Games at least weekly on scheduled television than on any other medium. The UK had the highest proportion of respondents who watched the Games on scheduled TV at least once a week (89%).

- The most-cited reasons for watching the Games on scheduled TV were its convenience or quality, in every comparator country except Italy, where respondents cited the low cost of watching TV most often (32%). In the UK, a higher proportion of respondents than in any other comparator country cited the quality of pictures and the viewing experience of scheduled TV as the reason they chose to watch it.

- The availability of coverage at any time of day was the most-cited reason for watching the Games on a PC, in every comparator country. In the UK, Italy and Spain the availability of coverage at any time of day was also the most-cited reason for watching the Games on catch-up / recorded TV.

1.4.2 Introduction

The 2012 Olympic and Paralympic Games were held in London (and other UK venues) between July and September 2012. The 26-sport event offered 8.8 million tickets for those attending in person, but the number of people who followed the Games remotely using a TV, PC, tablet, mobile phone or print publications dwarfed this figure. The International Olympic Committee estimated that the potential audience of the Games was 4.8 billion people in more than 200 countries.9

Using data from online consumer research in eight countries, the aim of this section is to examine: on which devices consumers followed the Games remotely, why they made those choices, and how often they followed the Games. The consumer research was conducted by Populus on behalf of Ofcom in September 2012, using an online base of 9152 respondents.10 Because the research was carried out online, the results are based on a different sample to that used in other Ofcom consumer research, and should not therefore be compared. And the fact that the respondents were all internet users may mean that the results overstate the use of some devices used to follow the Games. The research followed Ofcom and Kantar Media’s survey of how UK respondents expected to consume Games coverage, which took place in May 2012.11

---

10 Sample sizes: UK = 1,065, Japan = 1,004, Germany = 1,024, France = 1,016, Italy = 1,015, Spain = 1,001, USA = 1,010, Australia = 1,007.
Our research found that the Games was a truly international viewing experience: at least 70% of respondents watched it at least once in every comparator country. It also showed that scheduled TV was the most popular means of watching the Games in every comparator country, and that the most-cited reasons for doing so were convenience and the quality of the coverage.

This section also incorporates research into the Games’ TV scheduled audience in the UK to contextualise the scale of national television audiences.

1.4.3 Following the London 2012 Olympics and Paralympics

More than 51 million UK viewers watched coverage of the Olympic Games, and 32 million watched coverage of the Paralympic Games, on TV

London 2012 achieved the highest UK viewership of any Olympic Games, with over 51 million viewers watching at least 15 continuous minutes of Olympics coverage. This was 20% more people aged 4+ than watched the Beijing Games and 14% more than the Athens Games. At 31 million people, the Paralympics attracted 141% more UK viewers than the Beijing Games and 193% more than the Athens Games.12

**Figure 1.25  Viewers of more than 15 consecutive minutes of the Games on scheduled TV: 2004, 2008 and 2012**

![Bar chart showing viewership for Athens 2004, Beijing 2008, and London 2012 Olympics and Paralympics.](chart)


Both the opening and closing ceremonies for the Olympic Games 2012 attracted peak audiences of around 27 million viewers

The opening and closing ceremonies of the Olympic Games achieved the largest audiences, each peaking at around 27 million viewers. The closing ceremony attracted 35% more viewers than the next-highest audience in 2012: the men’s 100m final, at 19.8 million viewers.

---

All of the top five half-hour slots for number of UK viewers outperformed the top five slots of the last two Games. The smallest audience of the 2012 top five (the men's 200m final) had 35% more viewers than the highest audience in 2004 (the men's 4x100 relay).

Large audiences also watched the Games on scheduled TV in other comparator countries: 8.7 million watched the opening ceremony in France and 7.6 million in Germany.¹³

Figure 1.26  Top five Olympic Games half-hour slots, by average audience


UK respondents watched the Games more frequently than they predicted they would

UK respondents caught up with coverage of the Games more frequently than they predicted they would. In May 2012, just 7% of people thought they would watch the Games several times every day.¹⁴ In our research conducted in September, four times as many respondents (28%) stated that they had done so. Whereas 39% predicted they would watch the Games at least once a day before they began, 56% reported doing so afterwards. As people watched the Games more often than they had predicted, the proportion of people who watched coverage on ‘most days’ during the duration of the Games (12%) was considerably lower than the proportion who predicted that they would watch ‘most days’ (20%).

However, the proportion of people who predicted that they would not follow the Olympics at all, on television, radio or online (18%), in May 2012 was comparable to the proportion who reported having never watched the Games in September. This indicates that the same proportion of respondents who anticipated that they would follow the Games did follow the Games – but they did so more often than they expected.

¹³ Eurodata TV Worldwide / Médiametrie / GfK.
¹⁴ Ibid.
Figure 1.27  Anticipated and reported frequency of following coverage of the Games using television, radio or online in the UK

<table>
<thead>
<tr>
<th>Percentage of respondents</th>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK anticipated viewing</td>
<td>7%</td>
<td>11%</td>
<td>21%</td>
<td>20%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>UK reported viewing</td>
<td>28%</td>
<td>20%</td>
<td>8%</td>
<td>12%</td>
<td>6%</td>
<td>7%</td>
</tr>
</tbody>
</table>

- Lots of times a day
- A couple of times a day
- Every day
- Most days
- Once a week
- Less often
- Never
- Don't know

Sources: Ofcom consumer research, May 2012
Q7 Approximately how often do you think you will access coverage of the Olympic or Paralympic Games, either through watching television coverage, listening to radio coverage or accessing coverage online? Base: All respondents (n = 1803). Respondents aged 16+.
Ofcom consumer research, September 2012
Q.G3 Approximately how often did you follow coverage of the Olympic and/or Paralympic Games, either through watching television coverage, listening to radio coverage or accessing coverage online via any of your devices? Base: All respondents (n = 1065). Respondents aged 18+.

Viewers in the UK and Japan followed coverage of the Games most frequently

Of the countries we surveyed, respondents in the UK and Japan followed coverage of the Games most frequently. In the UK, 28% of respondents watched or listened to it several times every day, and 26% did so in Japan. In both countries, 56% of respondents watched or listened at least once a day. Many respondents also watched or listened to coverage several times every day in Italy (19%) and Spain (18%).

Respondents were least likely to watch or listen to any Games coverage in the US (where 29% did not follow it), and in Germany (25%), France (24%) and Australia (23%). Japan and Italy had the smallest proportions of respondents who did not follow the Games at all (14%).
Figure 1.28  Frequency of following coverage of the Games using television, radio or online

<table>
<thead>
<tr>
<th>Percentage of respondents</th>
<th>% that watched at least once a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td></td>
</tr>
<tr>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>19%</td>
<td>56%</td>
</tr>
<tr>
<td>FRA</td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td>35%</td>
</tr>
<tr>
<td>GER</td>
<td></td>
</tr>
<tr>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>35%</td>
</tr>
<tr>
<td>ITA</td>
<td></td>
</tr>
<tr>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>14%</td>
<td>46%</td>
</tr>
<tr>
<td>USA</td>
<td></td>
</tr>
<tr>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>29%</td>
<td>34%</td>
</tr>
<tr>
<td>JPN</td>
<td></td>
</tr>
<tr>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>14%</td>
<td>56%</td>
</tr>
<tr>
<td>AUS</td>
<td></td>
</tr>
<tr>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>23%</td>
<td>35%</td>
</tr>
<tr>
<td>ESP</td>
<td></td>
</tr>
<tr>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>16%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Source: Ofcom consumer research, September 2012
Q.G3 Approximately how often did you follow coverage of the Olympic and/or Paralympic Games, either through watching television coverage, listening to radio coverage or accessing coverage online via any of your devices?
Base: All respondents (n = 9152)

Scheduled TV was the most common means by which people watched the Games in every comparator country

In all of our comparator countries, over 60% of respondents used scheduled TV more than any other device to watch the Games, with the exception of France (48%). We explore the reasons why people chose to watch the coverage on scheduled television in Figure 1.31.

- In France, 20% of respondents watched the Games on catch-up or recorded TV. IPTV penetration, including catch-up and recorded TV services, is higher in France than in any other of our comparator countries (Figure 3.7). In the UK, just 6% of respondents watched the Games primarily using catch-up or recorded TV, although the UK has the highest DVR penetration among the comparator countries for which we have data (Figure 3.10). The PC was the most common means of watching the Games for 9% of UK respondents, a smaller proportion than in any other comparator country except Australia.
• Germany had the highest proportions of respondents who followed the Games primarily through radio coverage (9%) and newspapers and magazine (6%) among our comparator countries.

**Figure 1.29  Most common means of accessing Olympics / Paralympics coverage**

<table>
<thead>
<tr>
<th>Percentage of respondents</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled TV</td>
<td>74%</td>
<td>76%</td>
<td>68%</td>
<td>63%</td>
<td>67%</td>
<td>75%</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td>PC</td>
<td>13%</td>
<td>10%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Catch up / recorded TV</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Newspapers / magazine</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Radio</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Tablet computer</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Source: Ofcom market research, September 2012*

Q.G5 which one method of accessing Olympics and/or Paralympics coverage did you use the most?  
Base: All respondents who watched any Olympic or Paralympic coverage (n = 7405)

**More people watched the Games on scheduled TV at least once a week in the UK than in any other comparator country**

In the UK, 89% of people who followed Games coverage did so using scheduled TV at least once a week – a higher proportion than in any other comparator country. In Japan, 87% watched the Games on scheduled TV at least once a week and 84% did so in Spain. Respondents in France were least likely to have watched the Games on scheduled television at least once a week (73%).

A higher proportion of respondents used a tablet at least once a week to watch the Games in Spain (20%) than in any other comparator country. With Spain, the UK had the largest proportion of respondents who watched them at least weekly on a mobile (29%). The highest proportion of respondents who used catch-up or recorded TV to watch the Games at least once a week was in France (69%).
Newspapers and magazines were the second most popular way of keeping up to date with the Games in Japan (where 66% read them weekly), followed by Spain (66%), the UK (59%), Germany (56%), Italy (55%) and Australia (55%). Respondents were less likely to have used newspapers and magazines to follow the Games in the US (46%) and in France (50%).

**Figure 1.30 Use of devices at least once a week to watch the Games**

<table>
<thead>
<tr>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
<tr>
<td>% used scheduled TV at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
<tr>
<td>% used a PC at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
<tr>
<td>% used catch up / recorded TV at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
<tr>
<td>% used newspapers / magazines at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
<tr>
<td>% used radio at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
<tr>
<td>% used a mobile at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
<tr>
<td>% used a tablet at least once a week</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRA</td>
</tr>
<tr>
<td>GER</td>
</tr>
<tr>
<td>ITA</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>JPN</td>
</tr>
<tr>
<td>AUS</td>
</tr>
<tr>
<td>ESP</td>
</tr>
</tbody>
</table>

Source: Ofcom consumer research, September 2012
Q. G5 which one method of accessing Olympics and/or Paralympics coverage did you use the most?
Base: All respondents who watched any Olympic or Paralympic coverage (n = 7454)

**The most-cited reasons for watching coverage of the Games on scheduled TV were convenience or quality, in every comparator country except Italy**

Respondents who followed the Games on scheduled TV were asked why they did so. Above all, these viewers cited the convenience of watching coverage on scheduled TV: 56% of respondents did so in Australia, 53% in Japan, 51% in the UK and 50% in Germany and the US. As scheduled TV incorporates both live coverage and highlights, audiences could watch
the Games at an hour suitable to their time zone. However, in Italy just 15% of viewers considered its convenience a reason to watch it.

In the UK, 48% of respondents cited the quality of scheduled TV’s pictures, and the viewing experience, as the reason they chose to watch it, as did 41% of viewers in France, 39% in the US and 36% in Germany and Australia. Audiences may have valued the quality of scheduled TV pictures for watching a shared, live event like the Games.

Italy was the only country where the low cost of watching scheduled TV was the most-cited reason for choosing its coverage (by 32% of respondents). In Spain, 33% of respondents stated that the low cost of scheduled TV was a reason why they followed the Games in this way, although 35% also stated that it was the most convenient method of watching the Games.

Figure 1.31  Reason for choosing to watch the Games on scheduled television

Source: Ofcom market research, September 2012
Q.G6 Why did you choose to follow the Games using this method? Through scheduled television
Base: All respondents who watched any Olympic or Paralympic coverage using this method (n = 6925)
The availability of Games coverage at any time of day was the most-cited reason for watching it on a PC in every comparator country

Over 40% of people who watched the Games on a PC in the US (45%), the UK (41%), Japan (41%) and Australia (41%) did so because this coverage was available to them at any time of day. The significant time zone differences between the UK and the US, Japan and Australia help to explain the importance of availability. However, as a comparable number of respondents in the UK mentioned the same factor, the convenience of watching coverage at any time of day seems to have been valuable even within the Games’ time zone.

The convenience of watching coverage on a PC was the second most-cited factor for doing so in Japan (36%), France (33%) and the UK (28%). A large proportion of people also cited this reason in Australia (31%) and the US (29%). The convenience of watching on a PC might extend from the availability of highlights on IPTV at any time of day, as explored above, although it also suggests that PC viewers considered this coverage a viable alternative to that on other devices.

**Figure 1.32  Reason for choosing to watch the Games on a PC**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was cheaper than other forms</td>
<td></td>
</tr>
<tr>
<td>There was more choice/options of things to watch</td>
<td></td>
</tr>
<tr>
<td>It offered the best quality pictures/viewing experience</td>
<td></td>
</tr>
<tr>
<td>It was easier to locate the highlights</td>
<td></td>
</tr>
<tr>
<td>It was the most convenient method</td>
<td></td>
</tr>
<tr>
<td>It was immediate</td>
<td></td>
</tr>
<tr>
<td>It was available at any time of day</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ofcom market research, September 2012
Q:G6 Why did you choose to follow the Games using this method? Through scheduled television
Base: All respondents who watched any Olympic or Paralympic coverage using this method (n = 6925)
A larger proportion of respondents watched the Games on catch-up TV because it was available at any time of day in the UK than in any other comparator country

In the UK, 36% of those who watched the Games on catch-up or recorded TV did so because it was available at any time of day, a higher proportion than in any other comparator country. They did so despite the fact that the Games were taking place within their time zone.

In France, 69% of respondents watched the Games on catch-up or recorded TV at least weekly (Figure 1.30). The predominant reason for doing so was its convenience, cited by 32% of those who followed the Games using catch-up or recorded TV. IPTV penetration on primary TV sets is higher in France than in any other comparator country (Figure 3.7), perhaps helping to explain this, although the ability to re-watch events easily may also have contributed.

In Australia, Japan and the US, convenience was the overriding reason why respondents used catch-up or recorded TV, cited by 40% in Australia, 39% in Japan and 35% in the US.
Figure 1.33  Reason for choosing to watch the Games on catch-up / recorded TV

Source: Ofcom market research, September 2012
Q.G6 Why did you choose to follow the Games using this method? Through catch-up/recorded TV
Base: All respondents who watched any Olympic or Paralympic coverage using this method (n = 4069)
1.5 News consumption: the international context

1.5.1 Introduction

This section looks into the consumption of news. The first part of this section focuses on digital news consumption, and presents a summary of the key findings from the Reuters Institute Digital News Report, which was published in July 2012. The second part presents the findings of Ofcom's consumer research and looks at which platform consumers use as their main source for different types of news. The key findings include:

- **There are significant differences in the type of platform consumers use for news on an ‘at least weekly’ basis.** Weekly consumption of news on the internet among online users of news in four comparator countries is highest in the US (86% of respondents). In Germany, consumption of news by TV is highest (87% of respondents).

- **Users of news online in the US are the most likely to comment on a news story on a social network, and most likely to engage in a one-to-one online conversation about a news story.** Twenty-seven per cent of respondents claimed the former, and 30% the latter. Online users of news in the UK are far less likely to engage in the same way, with 14% of respondents claiming that they comment on a news stories on social networks.

- **Consumers with the internet are more likely to use TV as their main source of national news.** When asked about their main source for national news, the platform named most often across our comparator countries was TV, followed by the internet. In the UK, almost half (48%) selected TV as their main source of national news. Respondents in France were more likely to state that they used TV as their main source of national news; here, almost six in ten (58%) selected TV as their main source of national news and 26% selected the internet.

- **In the UK, France, the US and Japan, TV is the main source of local news with more than four in ten (between 41 and 46%) selecting TV in those countries.** In Italy and Spain the main source for local news is the internet, while in Germany, newspapers and magazines are used more than any other platform for this purpose.

1.5.2 Digital news consumption – a comparative study

This section provides a summary of key findings from the Reuters Institute Digital News report, published in July 2012. Ofcom, along with the BBC, City University, and YouGov, provided support for the project. The research provides comparisons between the UK, the US, France, Germany and Denmark. For reasons of consistency, this summary focuses on the first four countries only.

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 survey was completed by an online panel of 2173 UK news users for YouGov in April 2012. YouGov also conducted online surveys in France (1011), Germany (970), the US (814) and Denmark (1002). In this section, we refer to these people as “online users of news”, which means they have online access, and said that they had used any form of (offline or online) news in the previous month. For further methodological details please see http://reutersinstitute.politics.ox.ac.uk/fileadmin/documents/Publications/Other_publications/Digital_Report_Methodology.pdf.

Interest in news

Figure 1.34 sets out the relative levels of interest that online users of news have in various types of news. In the UK, the sample are more likely to say they are interested in entertainment and celebrity news, and sports news, than the other countries, and are distinctly less likely to nominate news about politics. That said, the UK is more likely than the other comparator countries listed here to be interested in general domestic news.

Respondents in Germany are more likely to be interested in news about their region, as might be expected, given the Länder system of government, and in international news. Respondents in France are less interested than the other countries in local news, and more interested in cultural news. Respondents in the US are least likely to be interested in international news, or general domestic news, or news about their region, although they are far more likely than those in the UK to be interested in political news.

### Figure 1.34 Levels of interest in types of news

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic news</td>
<td>74%</td>
<td>66%</td>
<td>61%</td>
<td>53%</td>
</tr>
<tr>
<td>International news</td>
<td>48%</td>
<td>54%</td>
<td>64%</td>
<td>44%</td>
</tr>
<tr>
<td>Local news about my town or city</td>
<td>50%</td>
<td>36%</td>
<td>50%</td>
<td>56%</td>
</tr>
<tr>
<td>News about my region</td>
<td>42%</td>
<td>46%</td>
<td>62%</td>
<td>28%</td>
</tr>
<tr>
<td>Business and financial news</td>
<td>19%</td>
<td>11%</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>News about the economy</td>
<td>42%</td>
<td>33%</td>
<td>34%</td>
<td>52%</td>
</tr>
<tr>
<td>Entertainment and celebrity news</td>
<td>21%</td>
<td>14%</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Health and education news</td>
<td>27%</td>
<td>27%</td>
<td>26%</td>
<td>27%</td>
</tr>
<tr>
<td>Arts and culture news</td>
<td>10%</td>
<td>19%</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Sports News</td>
<td>37%</td>
<td>24%</td>
<td>33%</td>
<td>24%</td>
</tr>
<tr>
<td>News about country politics</td>
<td>37%</td>
<td>57%</td>
<td>55%</td>
<td>63%</td>
</tr>
<tr>
<td>Science and Technology</td>
<td>23%</td>
<td>21%</td>
<td>28%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: Reuters Institute / YouGov online research April 2012
Q: Which of the following types of news is most important to you? Choose up to five.
Base: UK (n=2173) FRA(n=1011) GER (n=970) USA (n=814)

Weekly access to news by platform

Across the countries in the sample, there are clear differences between the platforms preferred for news among the sample of weekly consumers of news online. In the UK, online (82%) followed by TV (76%) are most popular media for online news users, with just over half saying they access print news, and just under half accessing radio news, in any given week. The differential between TV (69%) and online (86%) is greater in the US. But online users of news in Germany are less likely to access online news (61%), and more
likely to use print (68%) and radio (68%) sources. Germany also has the most respondents saying they watch TV (87%); confirming that traditional sources of news are more prevalent.

**Figure 1.35  Weekly access to news, by platform**

<table>
<thead>
<tr>
<th>Platform</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>76%</td>
<td>80%</td>
<td>87%</td>
<td>69%</td>
</tr>
<tr>
<td>Online</td>
<td>82%</td>
<td>54%</td>
<td>61%</td>
<td>86%</td>
</tr>
<tr>
<td>Print</td>
<td>54%</td>
<td>45%</td>
<td>42%</td>
<td>45%</td>
</tr>
<tr>
<td>Radio</td>
<td>45%</td>
<td>45%</td>
<td>68%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Source: Reuters Institute / YouGov online research April 2012
Q: Which of the following news sources have you used in the last week?
Base: UK (n=2173) FRA (n=1011) GER (n=970) USA (n=814)

**Types of online news used**

There are also differences by country in the types of online news that are consumed. As Figure 1.36 shows, in the UK broadcasters’ websites are far more likely to be used for online news than are other types of website. In the US and Germany, there is a more even split between press sites, TV sites, and other news sources, although levels of use in Germany are lower than in the US. In France, newspaper websites are the most likely to be used, and TV news sites much less so.

**Figure 1.36  Online news source, by type**

<table>
<thead>
<tr>
<th>Source Type</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Websites of broadcasters</td>
<td>56%</td>
<td>38%</td>
<td>43%</td>
<td>46%</td>
</tr>
<tr>
<td>Websites of newspapers</td>
<td>38%</td>
<td>29%</td>
<td>36%</td>
<td>50%</td>
</tr>
<tr>
<td>Other news sources</td>
<td>29%</td>
<td>18%</td>
<td>25%</td>
<td>26%</td>
</tr>
<tr>
<td>Social media and blogs</td>
<td>18%</td>
<td>20%</td>
<td>30%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: Reuters Institute / YouGov online research April 2012
Q: Which of the following have you used to access the news in the last week?
Base: UK (n=2173) FRA (n=1011) GER (n=970) USA (n=814)

**Types of online source used**

When asked about the types of news provider used in the past week, respondents in the UK are less likely than those in the other countries to turn to new players/aggregators, as Figure 1.37 shows. Respondents in the US are twice as likely as those in the UK to use social media for news, and also more likely more likely than respondents in other countries to use new players or aggregators.
Figure 1.37  Traditional brands compared to aggregators and social media

Source: Reuters Institute / YouGov online research April 2012
Q: Which of the following news sources have you used in the last week?
Base: UK (n=2173) FRA (n=1011) GER (n=970) USA (n=814)

Types of digital participation

Figure 1.38 sets out various ways in which it is possible to engage online. It shows that the UK and Germany are least engaged, in various ways. Around one in five say they vote in online polls during an average week, compared to around two in five in the US and France. Respondents in the US are far more likely than those in the other countries to carry out these types of activities regularly, although levels of participation in France are also high in relation to the UK and Germany. Around one in seven (14%) of respondents in the UK say they comment on a news story on social networks, and one in ten comment on a news story on a website, in a typical week.

Overall, 69% of US online news users say they participate in any of these ways on a weekly basis, compared to 60% in France, 42% in the UK and 41% in Germany.

Figure 1.38  Types of digital participation

<table>
<thead>
<tr>
<th>Types of digital participation</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote in an online poll</td>
<td>19%</td>
<td>40%</td>
<td>18%</td>
<td>41%</td>
</tr>
<tr>
<td>Comment on a news story on Social Networks</td>
<td>14%</td>
<td>21%</td>
<td>12%</td>
<td>27%</td>
</tr>
<tr>
<td>Engage in a one-to-one conversation about a news story (e.g. social media, instant messenger)</td>
<td>13%</td>
<td>15%</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td>Comment about a news story on a website</td>
<td>10%</td>
<td>16%</td>
<td>9%</td>
<td>25%</td>
</tr>
<tr>
<td>Post or send a news-related picture or video to a Social Network site</td>
<td>5%</td>
<td>11%</td>
<td>5%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: Reuters Institute / YouGov online research April 2012
Q: During an average week in which of the following ways do you share or participate in news coverage?
Base: UK (n=2173) France (n=1011) Germany (n=970) USA (n=814) Denmark (n=1002)

1.5.3 Platforms used as a main source of news

The following analysis uses data from Ofcom’s own consumer research. Respondents were asked which platform they used as their main source for different types of news: national, international, sports, and celebrity news. The platforms comprised TV, the internet, the radio, newspapers and magazines and ‘getting news from other people’.
The survey was undertaken online, with at least 1000 respondents in each nation. Because the research was carried out online, results use a different sample to other Ofcom consumer research and direct comparisons cannot be made. The research methodology is discussed in detail in Appendix A.

Online consumers in the UK are less likely to use the internet as a main source of national news than those in Italy and Spain

Across all the countries analysed, TV is the main source of most types of news except celebrity news/gossip, where respondents are more likely to use the internet as their main source. The report shows a similar pattern across countries, and consumption habits are similar in a number of areas, particularly related to TV and internet.

Although the most-cited main sources of news for online users generally are TV and the internet, across the countries in the sample there are subtle differences in consumption patterns.

When asked about their main source for national news, the platform named most often was TV, followed by the internet. In the UK, almost half (48%) selected TV as their main source of national news. Respondents in France were more likely to state that they used TV as their main source of national news, where almost six in ten (58%) selected TV as their main source and 26% selected the internet.

A similar picture emerges in Australia, where 53% mainly access national news on TV and 31% via the internet. This contrasts with Italy where the internet is more likely to be used as a main source of national news, with 48% of respondents using this platform, compared to 40% naming TV.

**Figure 1.39 Platforms used as a main source of news: national news**

In the UK, France, Germany and Australia, TV is the main source of international news. The internet is the main source in Italy

This pattern is the same for accessing international news. In the UK, 51% of consumers use the TV as their main source of international news and just over a third (36%) use the internet. Online consumers in the UK are more likely than those in France and Germany to
access international news on the internet, whereas French and German online consumers are more likely to watch TV for this type of news.

In Italy, the internet is more widely used than any other medium as a main source of international news, with 57% of respondents stating that they do this. The comparable figure for the UK is 36%. TV is used less as a main source of international news in Italy, with only 38% naming TV as a main source of international news compared to 51% in the UK.

Fourteen per cent in Japan said that they are not interested in accessing international news stories.

Radio and newspapers and magazines are not widely used as a main source for international news by respondents in any of the countries analysed.

Figure 1.40 Platforms used as a main source of news: international news

Source: Ofcom research, September 2012

Q: Which if any of these is your main source for the following? News about the world
Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010,
Japan=1004, Australia=1007, Spain=1001

In the UK, France, the US and Japan, TV is the main source of local news

The picture changes when online users are asked about their main sources of information about their locality or region. TV and internet remain main sources of news for most, but more people also use newspapers and magazines as a main source of local news.

In the UK, France, the US and Japan, TV is the main source of local news, with more than four in ten (between 41% and 46%) selecting TV in those countries. In Italy and Spain the main source for local news is the internet, while in Germany, newspapers and magazines are used more than any other platform for this purpose. Thirty-five per cent of respondents in Germany claimed that they read newspapers and magazines for this, far more than the one in four (25%) who used the internet and the 23% who used the TV as their main source of local news. Respondents in Germany were also more likely to use radio as a main source of local news, with 10% claiming that they do this, more than in any of the other countries analysed.

Another country where newspapers and magazines are widely used is Australia. Just over a quarter (26%) of consumers in Australia (compared to 14% in the UK) use newspapers and
magazines as a main source of regional and local news. This is slightly more than the 23% who use the internet for this purpose in Australia.

**Figure 1.41 Platforms used as a main source of news: regional / local news**

![Platform usage chart]

Source: Ofcom research, September 2012

Q: Which if any of these is your main source for the following? Regional/local news
Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Australia=1007, Spain=1001

A third of respondents in the UK are not interested in sports news

Respondents were asked about their main source of sports news. They were also asked about their main sources of celebrity news.

As with other types of news, TV and internet remain the main sources. However, a large proportion of people across most countries reported that they are not interested in these types of news. Perhaps most surprising are the 32% in UK and 34% in France who reported that they are not interested in accessing sports news, and almost three in ten in Germany, the US and Australia who are not interested.

In the UK a third (34%) use the internet as their main source of sports news (the figure is 40% in Italy).
A third of respondents in the UK use the internet as their main source of gossip/celebrity news

As with sports news, significant proportions of respondents did not express any interest in accessing celebrity news and gossip. Between 33% - 45% in all the countries had no interest in accessing celebrity news.

Sixteen per cent in the UK access celebrity news on the internet and 7% do so by reading newspapers and magazines. Forty-two per cent are not interested.
1.6 A perspective on China

1.6.1 Introduction

For the International Communications Market Report, Ofcom commissioned online research to identify consumer consumption and attitudes in nine countries: the UK, France, Germany, Italy, the US, Japan, Australia, Spain and China. Some of the data from China contained notable differences compared with the other eight countries. In the TV and audio-visual, Radio and audio; Internet and web-based content, Telecoms and networks and Post chapters of this report, we explain those differences in the context of the respective communications sector.

The UK in Context chapter of the ICMR is different in that it presents cross-sector themes. Furthermore, in the metrics covered by this chapter there were a greater proportion of cases of outlying data on China. To try to explain these differences and reduce repetition within the chapter, we have produced this perspective on China. The aim of the perspective is to bring together our thinking on some of the reasons for the differences in the China data, with four graphs (one from each topic in the UK in Context chapter). In these graphs, we compare China with the US, the largest communications market, and with the UK.

The differences can be summarised as being of two types, with each covered below:

- Differences in sampling in China, compared with other markets, itself partly a result of demographic, economic and infrastructure reasons (section 1.6.2 and section 1.6.3)
- Differences in consumer behaviour, lifestyle and attitudes (section 1.6.4)

1.6.2 China as a country and a communications market

Demographic and economic factors

China is the world’s most populous country, with 1.3 billion people. The population of China is therefore very diverse – there are 56 recognised ethnic groups and 14 main languages, with many more dialects spoken. China is large and geographically diverse, with 31 provinces, autonomous regions and municipalities.

Economic and social development varies greatly across the country, with the eastern provinces (including the cities of Beijing, Shanghai, Tianjin, Guangzhou and Shenzhen) accounting for a greater share of employment (48.5%) and gross domestic product (53.1%) than the central, western and north-eastern provinces, which have smaller centres of population. Half of China’s population live in rural areas.

Household income also varies by region. PPP-adjusted GDP per capita is $8,400 (£5,300) for China as a whole, but this covers a large disparity. Annual income is around 2.5 times higher for citizens in urban areas than rural areas, and China is ranked 27th highest out of

---

16 http://data.worldbank.org/indicator/SP.POP.TOTL
17 http://www.china.org.cn/e-white/20050301/index.htm
19 National Bureau of Statistics of China, China Statistical Yearbook 2011,
20 GDP, or gross domestic product, measure the value of products and services produced by a country in a given year, and is a measure of the income of a country. Adjusted for purchasing power parity. https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html
136 countries using the Gini index\textsuperscript{21}, compared with the US in 42\textsuperscript{nd} and the UK in 91\textsuperscript{st}. A higher ranking equates to a more unequal distribution of income. Across the country as a whole, more than one in eight citizens (13.4\%) are below the poverty line\textsuperscript{22}.

**Service availability and take-up**

The divide between richer and poorer citizens is partly reflected in the availability of communications services. In areas of lower income, there is less incentive for operators to invest in communications infrastructure. This lack of infrastructure is often compounded by the fact that areas of lower income - such as some mountainous and desert-like Western provinces - are often more rural and therefore more expensive to provide the communications service to. This acts as a further inhibitor to infrastructure investment.

Fixed network infrastructure in China therefore varies considerably by region. In the large cities, the major operators (including China Telecom, China Unicom and China Mobile) are rolling out fibre-optic broadband. However, the majority of broadband connections are much slower, and are based on DSL\textsuperscript{23}. In some rural regions, broadband is not available to all citizens.

Many of China’s citizens do not own a PC and less than two in five citizens access the internet at all\textsuperscript{24}. At the end of 2011, there were just 136 million rural internet users, suggesting that 82\% of the rural population in China do not use the internet. Figures from the China Internet Network Information Centre state that rural internet users make up only 26.5\% of the online population, despite making up the majority of citizens by number\textsuperscript{25}.

Correspondingly, China’s take-up of broadband is low: there are only 39 fixed broadband connections for every 100 households in China (compared to 76 connections per 100 households in the US and 77 connections per 100 households in the UK).

Low broadband take-up in China is in some cases due to a lack of a phone line – this varies across China. In some western and central provinces, there are fewer than 70 telephone connections per 100 people (both fixed and mobile), while the equivalent number for China as a whole is 86\textsuperscript{26}.

It is worth noting that China’s consumers are particularly mobile-centric, compared to other countries. 291 million mobile handsets\textsuperscript{27} were shipped in China in 2011, and there were 986 million mobile connections in China at the end of that year, a compound annual growth rate of 17.3\% for the period 2006-2011. Ninety-seven per cent of phone calls by volume originate from a mobile\textsuperscript{28} in China. This contrasts heavily with the more fixed-oriented nature of the UK, where 52\% of phone calls by volume originate from a mobile.

\textsuperscript{21} https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html
\textsuperscript{22} https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html
\textsuperscript{23} Digital subscriber line.
\textsuperscript{24} Computer Network Information Center, July 2012
\textsuperscript{25} China Internet Network Information Centre, *Statistical Report on Internet Development in China*
\textsuperscript{27} Data from IHS.
\textsuperscript{28} Includes incoming mobile calls. This is discussed in more detail in the *Telecoms and Networks* chapter.
1.6.3 Our research methodology in China

Because of the large and diverse population, conducting survey research in China is extremely challenging and our research results have some limitations. For example, our questionnaire was translated into Chinese Mandarin, so approximately 30% of the population (those who do not speak Mandarin) are likely to have been excluded.

We conducted research in China among internet users only. When making comparisons with findings in other nations it is important to note that, because internet penetration is relatively low in China, comparisons with other nations should not be treated as like-for-like.

Internet users in China are predominantly urban-based with higher incomes and are likely to be early adopters of technology. Eighty-nine per cent of our consumer research base in China were under 45 years of age. Unlike the data collected from other nations, the respondents in our sample in China are not ‘typical’ of the wider population.

Because of this, some of the findings from China appear quite different from the other nations we have researched, as highlighted in the examples below.

1.6.4 Our research results in China

We now consider four charts – one from each of the sections in the Market in Context chapter that contain consumer research – to illustrate some of the differences between the consumer research in China, the UK and the US.

Example one: device ownership

Figure 1.44 shows that the proportion of smartphone (81%), laptop (78%) and tablet computer (41%) owners are all higher in China than in the UK or the US. However, given that internet penetration in the UK and the US is higher than in China, if the data were re-based on all consumers, it would show that take-up levels of these devices in China were substantially lower (if we assume that ownership of these devices among those who do not have an internet connection is negligible).

The consumer research may reflect a voracious appetite for the latest consumer devices among the young, urban, wealthier segments of China’s population. China is now the second largest market by revenue for Apple – the manufacturer of the iPhone smartphone and the iPad tablet. The installed base of connected TVs in China has also increased rapidly – up 678% year on year, albeit from a small base.

---

29 More details on our consumer research, including demographics, can be found in the report annexes.
30 http://www.thecim.org/3857/?=7-reasons-cantonese-dying-mandarin-king/
33 IHS data
Figure 1.44  Take-up of communications devices among internet owners in the UK, the US and China

Source: Ofcom consumer research, September 2012
Base: All respondents UK=1065, USA=1010, CHN=1010
Q: Which of the following devices do you own and personally use?

Example two: preferred method of communication

Figure 1.45 shows that in China, voice calls on a mobile phone are the most popular method for communicating with friends and family. This contrasts with the UK and the US, where face-to-face communication is more popular.

This difference might be partly explained by cultural differences and preferences. But another likely explanation is the age of our respondents. Younger respondents had a greater preference for mobile telephony across the countries in which we conducted consumer research. Furthermore, mobile coverage is higher in urban areas (where China’s internet users more commonly live), which might encourage mobile phone use.
Example three: coverage of the London 2012 Olympic and Paralympic Games

The research data displayed in Figure 1.46 suggests that consumers in China primarily used PCs to access coverage of the Olympic and Paralympic Games. Less than a quarter of China’s respondents claimed that scheduled television was the medium that they used the most.

Again, the differences between our comparator country samples seem to provide an explanation for the disparities between consumption of the Games in China and elsewhere. In our survey sample from China, there is likely to be a high concentration of consumers who are both early adopters of the internet and more enthusiastic about using newer technologies, such as mobile phones (as 11% did) and tablet computers (3%) to follow the Games.

However, time of day may also affect viewing habits of live global events like the Olympic Games: in China, many of the events happened during the night, local time, so consuming content online the following morning may have been preferable for some consumers than watching live coverage.
Figure 1.46 Most common means of accessing Olympics / Paralympics coverage

Percentage of respondents

Source: Ofcom market research, September 2012
Q.G5 which one method of accessing Olympics and/or Paralympics coverage did you use the most?
Base: All respondents who watched any Olympic or Paralympic coverage (n = 7405)

Example four: consumption of news by platform

A similar observation can be made about the claimed main source of news in China (Figure 1.47). According to our consumer research, the internet seems to be a more important source in China than it is in the UK or the US, and television appears to be less important. Again, this could be related to the make-up of the sample, with a higher proportion of younger people and technology enthusiasts likely to be present in the sample. There is also some evidence34 of a greater preference to consume news online in China: four of the top five news websites in China are online-only entities, rather than newspapers, broadcasters or news agencies that have diversified online. In the US, three online-only entities appear in the top five news websites, and only one in the top five in the UK. Reflecting the fact that most UK respondents to our survey said that TV was their main source of news, the BBC is the most-used news website in the UK.

---

34 International Online News Consumption, Communications Chambers, January 2012
Figure 1.47  Claimed main sources of news, by platform

Source: Ofcom, consumer research, September 2012
Base: All respondents, UK=1065, USA=1010, CHN=1010
Q: Which, if any, is your main source of news for the following information?

Proportion of respondents (%)
1.7 International regulatory context and models

1.7.1 Introduction

This section provides regulatory context to the analysis of the international communications market elsewhere in the report. In particular it covers the background of the EU communications framework and the Digital Agenda, the new EU roaming regulation, recent national and EU initiatives on net neutrality, the establishment of the European Regulators’ Group for Post, next generation access, assurances to audiences on audio-visual standards, online protection of minors and radio spectrum policy. It does not aim to be a comprehensive examination of regulatory frameworks across the comparator countries, but presents an overview of the main regulatory and policy developments internationally over the past year.

1.7.2 Key developments in the European regulatory and legislative framework

The EU electronic communications framework

The EU electronic communications framework applies to all electronic communications networks and services, retail and wholesale, as well as associated facilities and services. It aims to ensure effective competition and consumer protection as well as constituting the basis for a consistent regulatory environment across the communications markets of all 27 member states.

The framework was revised in 2009 to ensure that it continues to serve the best interests of consumers and industry, and it reflects the major developments of this fast-changing sector, such as growth in VoIP and take-up of television services via broadband. The revised framework aims at enabling citizens to benefit from better and cheaper communication services, and to achieve this, the revised EU rules aim:

- to strengthen consumer rights, giving consumers more choice by reinforcing competition between telecoms operators;
- to promote investment into new communication infrastructures, in particular by freeing radio spectrum for wireless broadband services; and
- to make communication networks more reliable and more secure, especially in case of viruses and other cyber-attacks.

The majority of member states, including the UK, transposed the revised framework by the 25 May 2011 deadline.

The Commission continues to monitor the timely and correct implementation of the EU rules and is monitoring member states’ progress towards achieving the targets set out in the Digital Agenda.

The Digital Agenda is one of the seven flagship initiatives proposed by the European Commission in its Europe 2020 Communication (the successor to the Lisbon strategy) which outlines Europe’s general economic strategy for 2010 to 2020.

It sets out the main policies for the information and communication technologies (ICT) sector between 2010 and 2015, and seeks in particular to promote investments in high-speed broadband networks, to create an online single market, to ensure online trust, security and
net neutrality as well as to stimulate the development of innovative services and applications. It consists of 101 action points, including more than thirty legal proposals.

The four priority objectives of the Digital Agenda relevant to the telecommunications, audio-visual media and e-commerce sectors are:

- to guarantee universal availability of broadband and foster Next Generation Access Network (NGA) deployment;
- to create a true single digital market;
- To ensure public trust in networks and services; and
- To ensure interoperability.

To implement the Digital Agenda and monitor its progress, the Commission has set up a 'Digital Agenda governance cycle'. This foresees an internal coordination mechanism within the Commission, in cooperation with member states; the annual publication of a scorecard in May each year, including socio-economic developments based on key performance indicators, selected for their relevance to the main policy goals; and an update on all the identified policy goals. An annual Digital Assembly takes place in June each year and brings together member states, EU Institutions and stakeholders, to assess progress and emerging challenges.

The overall structure of national regulatory authorities (NRAs), regional frameworks and authorities in the report remains broadly unchanged from last year.

1.7.3 Helping communications markets work for consumers

International mobile roaming

In the European Union, the Council and Parliament reached agreement in May 2012 on the 2012 EU Roaming Regulation that took effect from 1 July 2012 when the previous regulation expired, following the presentation of initial proposals by the Commission in June 2011.

The new Regulation extended the anti-bill shock and transparency mechanisms to EU roamers travelling beyond the EU’s borders, and introduced retail caps for data for the first time. It also established a downward trajectory for retail and wholesale caps until 2014, a requirement for the future decoupling of roaming from domestic services, from 1 July 2014, and provisions to allow for local data breakout (LBO), so as to enable data alone to be the subject of a separate contract with an alternative provider while roaming.

In particular:

- the new wholesale caps for voice, SMS and data took full account of the latest BEREC\textsuperscript{35} data for estimated maximum wholesale costs in 2014, communicated to the legislators at the end of February 2012;

- the new retail caps established a downward glide-path with headline reductions in caps from 35 euro cents (currently) to 19 euro cents for voice (calls made), from 11 euro cents to 6 euro cents for SMS, and from 70 euro cents to 20 euro cents per MB of data, all by 1 July 2014; this glide path will result, even at the caps, in substantial reductions in roaming tariffs for consumers - until now, prices have stayed close to the caps;

\textsuperscript{35} The Body of European Regulators for Electronic Communications
• the Regulation does not specify what technical solution(s) should be used for separating domestic and roaming services; it provides specifically for the possibility of roamers solely accessing local data services when abroad, while retaining their domestic provider for voice and SMS (“local data breakout” or LBO);

• the Regulation will be applied through Implementing Acts by the Commission, complemented by subsequent BEREC guidelines on the recommended technical solution(s) to separate roaming from domestic services;

• there are clear provisions for wholesale access, which include specific criteria for an access reference offer, to be published by 1 January 2013, conditions for responding to access requests and provisions for NRA intervention should the reference offer be judged inadequate;

• the timescale for review of the Regulation by 2016 allows sufficient time to make an initial assessment of the success of the technical solution(s) to facilitate competition through decoupling roaming from domestic services, and in bringing down roaming prices to be close to domestic tariffs.

The new Regulation required the Body of European Regulators for Electronic Communications (BEREC) to produce and publish guidance on wholesale roaming access, including the content of the reference offer that was published on 27 September 2012, and to publish guidelines on the implementation of decoupling measures to separate roaming from domestic mobile services.

There were other notable international developments on mobile roaming in 2012:

In January 2012, the International Telecommunications Union (ITU) published a draft recommendation which proposed measures to empower consumers to benefit from efficient competition and regulation, so that they have the information and transparency to take appropriate actions; to identify measures for improving the way the market works; and proposals for regulatory actions, which might include measures to lower rates.

In February 2012, the Organisation for Economic Cooperation and Development (OECD) released a recommendation on international mobile roaming charges which says that promoting transparent information on roaming prices would protect consumers and businesses, and that a financial limit for data roaming services would also help. The OECD considered it essential to remove barriers that prevent mobile virtual network operators (MVNOs) from having access to wholesale mobile services on local conditions and on fair and reasonable terms. If such measures were not effective, the OECD concluded that governments should consider price regulation for roaming services, including at wholesale level through bilateral or multilateral wholesale agreements, with mutually-established price caps.

In August 2012, the Australian and New Zealand governments released a draft report following a joint investigation into trans-Tasman mobile roaming charges. The report found that government action was required to enable prices for international roaming between New Zealand and Australia to continue to fall. The report puts forward a number of options to address the problem, including regulation, requiring operators to enable roamers to use a local phone number without having to swap SIM cards, and price caps.

36 OECD, Recommendation of the Council on International Roaming Services, 16 February 2012
37 New Zealand Ministry of Business, Innovation and Employment & Australian Government Department of Broadband, Communications and the Digital Economy, Trans-Tasman roaming, August 2012
Traffic management and net neutrality

The ‘net neutrality’ debate (whether, and where, there should be a principle of non-discrimination of internet traffic across networks) has continued to occupy regulators across the world, with focus particularly on questions of discrimination and transparency. Guidelines and rules have been adopted in various countries in recent years - the Canadian and Norwegian regulators both set out guidance in 2009, the US Federal Communications Commission adopted open internet rules in December 2010 and the Singapore regulator, the IDA, published a net neutrality policy framework in 2011.

This is an ongoing debate and it was again a dominant issue in Europe in 2012. The revised EU Regulatory Framework identified net neutrality as a policy objective, in that end-users should be able to access and distribute information or run applications and services of their choice. Transposition of the revisions into national laws in 2011 introduced requirements for greater transparency and gave NRAs a discretionary power to impose “a minimum quality of service on the internet”.

Net neutrality was a major priority for BEREC in 2012, with a number of activities undertaken to foster a harmonised understanding and approach to net neutrality and the new Framework powers, while leaving NRAs to use their knowledge of their own markets to intervene appropriately at the national level. Following its December 2011 transparency guidelines, BEREC’s 2012 activities encompassed:

- guidelines on minimum quality of service requirements;
- a conceptual framework to understand differentiation practices and competition issues;
- a report into IP interconnection and net neutrality; and
- a joint investigation into traffic management practices, which found that a majority of ISPs offer internet access services with no application-specific restrictions, but that there are specific practices, such as blocking or throttling of peer-to-peer traffic or VoIP, which could create concerns for end-users.

In response to these outputs, the European Commission announced that it would draw up further EU guidance to address a lack of effective consumer choice, with a focus on switching, and on transparency around traffic management and broadband speeds. The guidance is expected in early 2013, following a July 2012 public consultation.

There have also been developments at the national level. The French regulator, ARCEP, published a report detailing actions it has taken to ensure that net neutrality is upheld, and urging caution against any overly-prescriptive new laws which would be difficult to implement in a fast-moving market. The report also sought new powers for ARCEP to enable it to carry out independent measurements of the quality of internet access services.

In the UK, Ofcom set out in November 2011 the steps it expects ISPs to take to ensure transparency for consumers about how internet traffic is being managed on their networks.

---

38 IDA, Decision issued by the Info-Communications Development Authority of Singapore: Net Neutrality, 16 June 2011
39 All of the documents which outline BEREC’s activities are available on the BEREC website, [http://berec.europa.eu/](http://berec.europa.eu/) [accessed 30 November 2012]
40 European Commision, On-line public consultation on "specific aspects of transparency, traffic management and switching in an Open Internet", July 2012
International postal activities

The Commission Decision of 10 August 2010 established the European Regulators’ Group for Post (ERGP), enabling the creation of a body of regulatory knowledge and advice for use by NRAs or by the Commission. This Decision established four tasks for the ERGP:

- To advise and assist the Commission in consolidating the internal market for postal services.
- To advise and assist the Commission on any matter related to postal services within its competence.
- To advise and assist the Commission in the development of the internal market for postal services and on the consistent application in all member states of the regulatory framework for postal services.
- To consult, in agreement with the Commission, extensively and at an early stage, on its expert work with market participants, consumers and end-users in an open and transparent manner.

Over the past two years, subgroups of the ERGP have worked on the following topics:

- The allocation of postal operator costs.
- The Universal Service net cost calculation and evaluation of a reference scenario.
- End user satisfaction and monitoring of postal markets.
- Cross border services.
- Access to the postal network and to elements of postal infrastructure.

So far, the Group has produced final reports on quality of service and end-user satisfaction, on indicators for postal markets, on common cost allocation and on the net cost of USO calculation and the evaluation of a reference scenario.

As well as the recently-formed ERGP, a number of other international bodies are active in the postal sector. The Universal Postal Union (UPU), a UN body, is the primary forum for cooperation between member states concerning postal services, with a particular focus on operational standards and remuneration of delivery costs for international mail through the terminal dues system. The UPU has 189 member countries and aims to ensure a network of up-to-date products and services, fulfilling an advisory and liaison role and giving technical assistance where needed.

In 2012, the UPU held its 24th Congress in Doha, Qatar, at which the Doha four-year Postal Strategy was adopted, elections were held and decisions were taken on the terminal dues arrangements for remuneration of the delivery of cross-border mail in developed and developing countries.

The Committee of European Postal Regulators (CERP) brings together representatives from the regulatory authorities from 64 states, including EU Member States, candidate countries, the EEA and other eastern European countries. It has two working groups, one dealing with postal policy and the other working on UPU issues.
1.7.4 Promoting effective and sustainable competition

Next-generation access networks

Telecoms operators in Europe, Asia and the US continue to face a common challenge of upgrading networks to make use of more efficient technologies, including fibre, and migrating from traditional transmission standards designed in the world of the public switched telephony network (PSTN) to standards used to route data via internet protocol (IP). Many operators have now migrated their backbone to next generation networks (NGNs) by overlaying and upgrading their legacy backbone PSTN networks with a single IP-based network. Developments in regions such as Latin America, Africa and the Arab States, have been slower but are following a similar trend. The introduction of next generation access (NGA)\(^{41}\), typically although not universally based on fibre-optic technology, has been more uneven.

In Europe, Asia and the US, there is a broad consensus that the accelerated roll-out of NGA networks is a desirable goal, but there are a variety of approaches to reaching that goal.

In the EU, NGA policy is underpinned by the European Commission's ambitious Digital Agenda targets - by 2020, every EU citizen should have access to 30 Mbps, and 50% should have access to 100 Mbps. In 2012, the Commission has continued to look at how to encourage increased NGA investment, setting out its thoughts on increasing regulatory consistency and certainty for the sector, particularly focusing on areas such as NGA costing methodologies and non-discrimination. Accordingly, the Commission's policy approach stresses the importance of alternative operators being treated on the same terms as the incumbents. As well as focusing on wholesale pricing regulation, the Commission is looking at non-discrimination obligations, such as the time it takes to repair faults on the network, and other qualitative elements of the delivery of wholesale broadband. The Commission aims to provide further guidance in these two areas in the form of a recommendation which will complement the 2010 NGA Recommendation (to be adopted in the first half of 2013).\(^{42}\)

BEREC agrees that regulatory certainty and consistency are crucial in order to foster a competitive environment for long-term investment in NGA. As well as providing advice to the Commission, BEREC is currently in the process of reviewing its broadband common positions (CPs)\(^{43}\), originally adopted in 2006/2007, to reflect both technological (such as the roll-out of NGA networks) and regulatory developments (including revisions to the European framework in 2009). The draft revised CPs will be finalised in December 2012 following a public consultation.

In order to promote increased NGA investment, governments around the world have also looked at various funding mechanisms. In Europe, public funding of NGA has been provided by regional and local authorities to cover specific regions. These schemes have had to be carefully tailored to satisfy European state aid rules, and are therefore generally based on arguments around market failure and digital inclusion.

---

41 NGA can be understood as new physical infrastructure relying on new access network technologies enabling a significant improvement in the broadband experience for end-users, through combinations of: higher bandwidths; more equal upstream and downstream bandwidths; and more reliable, higher quality services


43 Common positions are a type of legal act which lay down the EU's approach to specific issues of a geographic character or concerning specific subjects. Member states must then adapt their national policies to the common positions.
• The Commission’s state aid guidelines for broadband networks expired in September 2012 and the Commission consulted in June 2012 on proposed revisions to take better account of technical development in NGA and increased volumes of state aid to the telecoms sector. The new rules aim to facilitate the public funding of telecoms networks, in exchange for tighter constraints on beneficiaries and the greater involvement of NRAs.44

• In addition to state aid funding, the Commission has proposed €9.2bn to stimulate investment in fast and very fast broadband networks, and pan-European digital services, through the Connected Europe Facility (CEF) initiative.45 This initiative may stimulate further investment in broadband in two or three years’ time once the proportion of funds to be allocated for this purpose has been decided. Potentially, the new investment will touch 45 million households and over 100 million Europeans, and could therefore play a key role in helping Europe reach its fast and very fast internet targets.

With regard to approaches being taken in other parts of the world, many governments have published national broadband plans, as detailed in the 2011 OECD report on National Broadband Plans.46 Most of these include targets related to levels of geographic coverage, adoption, and minimum or average transmission speeds.

In Australia, Brazil, Luxembourg, New Zealand, Singapore and South Africa, the government has created a new state-owned operator in order to participate directly in the construction of broadband networks. Singapore aims to be one of the first to deliver a metropolitan fibre network to the home, with speeds of up to 1GB by the end of 2012, and is likely to be the first country in the world with nationwide NGN coverage by early 2013.

Some countries, such as Chile and Norway, have used public-private partnerships (PPPs) as an appropriate vehicle for interventions. Most OECD countries, however, have chosen not to become involved in the direct supply of telecommunications, preferring to set the regulatory framework and to provide targeted economic support through a variety of forms of public investment.

Australia and New Zealand have both reconsidered their legal and regulatory frameworks in order to meet their NGA goals. The Australian Parliament passed the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act in November 2010, to facilitate the achievement of its national broadband network (NBN) project. Construction of the NBN began in 2010, with completion of the FTTP roll-out planned by June 2021, along with completion of the fixed wireless and satellite roll-out by 2015. In New Zealand, a number of measures have been introduced by the government and by the Commerce Commission to support the deployment of fibre to the premises, including the continuing use of operational separation.

The Japanese and South Korean governments have developed national strategies for the provision of high speed broadband, involving nationwide NGA roll-out. These involve a mixture of incentives for operators, including some public support such as seed funding and soft loans. They have also encouraged infrastructure-based competition, which has been particularly successful in South Korea, where there are now three competing providers of broadband internet with nationwide NGN / NGA networks. However, other circumstances

44 European Commission, EU Guidelines for the application of state aid rules in relation to the rapid deployment of broadband networks (Draft), 1 June 2012
45 http://ec.europa.eu/information_society/newsroom/cf/item-detail-dae.cfm?item_id=7430
and characteristics of the Japanese and South Korean markets have proved very favourable to NGA roll-out, including population density and favourable planning rules.

1.7.5 Providing appropriate assurances to audiences on standards

In Europe, the Audiovisual Media Services (AVMS) Directive is the common framework for the regulation of television and video-on-demand (VOD) content (but not for radio). The Directive sets out common minimum rules for television content, with a focus 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).

Regulators in Europe continue to work on implementation at national level, and to co-operate regionally in a number of fora, for example at the European Platform of Regulatory Authorities (EPRA). EPRA meets twice a year to consider key issues for content regulators; for example, the scope of the AVMS Directive in relation to VOD, and how regulators determine jurisdiction in cases where services are received in one country but regulated elsewhere (in the EU or beyond).

In Europe and elsewhere in the world, the two key challenges for public authorities in terms of content regulation are the online protection of children and the convergence between traditional broadcast content and content delivered over the internet (connected TV).

Connected TV and convergence

A connected TV is a television that is broadband-enabled to allow viewers to access internet content. It may offer a closed environment, allowing users to access certain internet applications only, or an open environment, allowing users to access the whole internet.

Connected TV and convergence have been high on the policy agenda in Europe throughout 2012. The advent of connected TV raises many questions for regulators because, in this environment, different types of content are subject to different regulatory regimes, but the consumer may no longer distinguish between them. In this context, questions arise about the best way to protect consumers, both from potentially harmful content, and in terms of their data security, and how to regulate material originating from outside national jurisdictions. Broadcasters, meanwhile, focus on issues such as ensuring non-discriminatory access to infrastructure, technical standards, and new forms of advertising and content funding.

At the start of the year, the European Commission announced that it would publish a policy paper on connected TV, which is expected to be consultative and ask a number of questions covering areas such as: viewer expectations and audience protection, European works, competition between players, scope and jurisdiction, copyright and network capacity. The paper is due to be published in December 2012.

France, Germany and the UK have been very active throughout the year in assessing the development of the connected TV market, and considering how best to address the above challenges.

In the UK, Ofcom has commissioned in-depth research into the connected TV market to understand how it is developing and what regulatory challenges it may pose in the future, and the topic remains high on the agenda for policy development.

---

47 Ofcom CMR 2012 definition: Connected TV includes a number of developing technologies that use a broadband connection to deliver catch-up, on-demand and over-the-top content, as well as applications and interactive features, to television screens.
In France, the government asked five experts to analyse the challenges raised by connected TV, which resulted in a report published in December 2011, presenting connected TV as a source of innovation that could change the cultural and economic landscape in a significant and unpredictable manner. As proposed in the report, the French audiovisual regulator, CSA, set up in February 2012 a committee comprising representatives of public authorities and industry, which will report on key connected-TV issues at the end of 2012.

Beyond Europe, one of the most interesting developments this year has been the publication of the Convergence Review in Australia.\(^48\) The review proposed radical reform of Australian content and broadcast regulation, including abolishing the broadcast licence system and focusing regulation on media concentration, promoting Australian-originated content and content standards regulation, and introducing a cross-platform classification system.

There are signs that several other countries are also turning their attention towards convergence and its impact on regulation, such as the US, Singapore, South Korea and Canada.

**Online protection of minors**

In recent years, child online protection\(^49\) has moved higher up the international policy-making and regulatory agenda. There is an emerging debate about self-regulatory models, media literacy,\(^50\) and the role that various participants in the internet value chain should be asked to play in preventing access to harmful activities, and in creating a safer and better online offering for children. The discussions are increasingly linked to the questions around the convergence of broadcast and online content technologies, a notable example being a report published in 2012 by the CSA in France, on the protection of minors in a converged environment, proposing the creation of a single authority across all media, and promoting the use of age-based rating systems, parental control tools, and media education and awareness.

The European Commission continues to pursue approaches to protecting children online though a number of measures, including initiatives such as the Safer Internet Programme. In May 2012, the Commission published a Communication setting out a European Strategy for a Better Internet for Children, containing eight key policies and outlining the steps that the Commission, Industry and member states should take to help achieve them.\(^51\)

In parallel, the ‘Coalition to make the Internet a better place for kids’, made up of industry stakeholders, established working groups to deliver five objectives: simple and robust reporting tools for users; age-appropriate privacy settings; wider use of content classification; wider availability and use of parental controls; and effective take-down of child abuse material. The Coalition published its first progress report at the end of July 2012.\(^52\)

Meanwhile, the ITU continues to implement its Child Online Protection initiative, which was launched in 2008. In its latest phase, the ITU has set up a group (SG17) to investigate the

---

\(^{48}\) Australian Government Department of Broadband, Communications and the Digital Economy, **Convergence Review**, 30 March 2012

\(^{49}\) 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 broadcast-like services online and not all video and content services online.

\(^{50}\) Ofcom defines media literacy as: “the ability to access, understand and create communications in a variety of contexts”.

\(^{51}\) European Commission, **European Strategy for a Better Internet for Children**, 2 May 2012

\(^{52}\) Report of mid-term review meeting of the CEO coalition to make the internet a better place for kids, July 2012
possibility of developing international telecommunications standards to protect children from online threats.

Media literacy

Focus in 2012 in the US has moved towards privacy, with the FTC proposing amendments to the Children’s Online Privacy Protection Rules, to significantly tighten the regulations on what data can be collected on children.53

In Australia the regulator ACMA has won multiple awards this year for its Cybersmart Tagged online training resource for teenagers. Cybersmart is an online training and education resource for parents and children.

In the UK in October 2012 Ofcom published new research on children and parents’ media use and attitudes online, as part of its media literacy research programme.54

Online parental controls

the UK: In June 2012 Ofcom submitted evidence into children and parents’ media use and attitudes online to the Department of Education in response to its Consultation on Parental Controls.

Germany: Providers of content that is potentially harmful to minors are subject to protection obligations under the German regulations, which can be met by providing parental controls. In February 2012, KJM, the co-regulator for the protection of minors, approved two such filters: systems provided by Jusprog and Deutsche Telekom.

Italy: In 2012, the Italian NRA, AGCOM, adopted interpretative guidelines on the application of a co-regulatory code on parental controls, clarifying the application of the film rating system and the access control mechanisms for linear and non-linear services offered by pay-TV channels. The code requires opt-out controls using a PIN, and information to be provided about the controls and content classifications. In October, the AGCOM Council set up a new technical board to define the technical requirements for the protection of minors on VOD services.

France: Having adopted an age classification system for VOD content in December 2010, with associated scheduling restrictions and signing, the CSA strengthened these rules in 2012, outlining additional locking requirements for access to programmes prohibited to under-18s.

Preventing access to child abuse images

The European Parliament adopted in late 2011 the Directive on Sexual Exploitation of Children, which contains one provision whereby Member States can take measures to block access to websites with child abuse content, subject to safeguards.

1.7.6 Promoting the efficient use of public assets

The use of spectrum, in delivering critical services across a diverse range of users and consumers, continues to increase. The pressures on this finite resource are ever more apparent in today’s information-hungry society. As the use of spectrum does not recognise international borders, there exists a formal framework of co-operation between countries. This minimises cross-border interference between an increasing range of wireless

53 Federal Register, Vol. 77, No. 151, 6 August 2012
54 Ofcom, Children and parents: media use and attitudes report, 23 October 2012
applications, including mobile telephony, broadcasting, maritime and civil aviation. This can help countries achieve seamless use of wireless services at a European, or even global, level. In addition, the harmonisation of spectrum can help to create economies of scale which translate to lower prices for citizens and consumers.

Three key international structures co-ordinate spectrum at the European and international levels:

- the European Union, supported by the Radio Spectrum Committee\(^{55}\) and the Radio Spectrum Policy Group\(^{56}\);
- the CEPT/ECC\(^{57}\), which has a broader membership (than the EU) with 48 member states; and
- the International Telecommunications Union (ITU)\(^{58}\), which defines the global framework for spectrum use in the Radio Regulations. This is a UN treaty, revised approximately every four years at the World Radiocommunications Conference\(^ {59}\) (WRC).

In 2012 there were two major developments in global and European spectrum policy.

**Radio Spectrum Policy Programme**

At the European level, an important piece of spectrum policy was implemented; the Radio Spectrum Policy Programme (RSPP) was formally adopted in March. This is the result of at least two years of negotiation between EU member states, the European Commission, the European Council of Ministers and the European Parliament, and it sets out some fundamental spectrum policy objectives across all 27 EU member states. It calls for concrete actions to meet the objectives of EU policies; for example, contributing to the functioning of the internal market for wireless technologies and services. A number of these RSPP actions will contribute to the goal set out in the European Commission’s Digital Agenda programme of high-speed broadband for all by 2020. Delivery of wireless broadband will also form an important part of that programme.

More immediate actions detailed within the RSPP are for member states to authorise the use of the following frequency bands, by specific dates, all of which have been allocated for high-speed electronic communication services in the EU. These bands will be critical for the delivery of wireless/mobile broadband across member states:

- Harmonised bands at 900/1800 MHz, 2.5-2.69 GHz, 3.4-3.8 GHz, by the end of 2012; and the 800 MHz band, by 1 January 2013, except in case of individual derogation obtained before that date.

Additional specific actions, by 2015, by the Commission and through consultation with member states, include:

- ensuring that at least 1200 MHz of harmonised spectrum be identified for wireless data traffic by mid 2013 at the latest, defining the details for the EU’s radio spectrum

---


\(^{56}\) [http://rspg.groups.eu.int/](http://rspg.groups.eu.int/)

\(^{57}\) [http://www.cept.org/ecc](http://www.cept.org/ecc)

\(^{58}\) [http://www.itu.int/ITU-R/](http://www.itu.int/ITU-R/)

inventory to allow for an analysis of the efficiency of spectrum use, particularly in the 400 MHz to 6 GHz range;

- the wider adoption of spectrum trading throughout the EU;
- harmonised spectrum for the development of the internal market for wireless safety services and civil protection;
- spectrum access opportunities for wireless innovation, through the use of spectrum sharing;
- the use of wireless innovations so that Europe can contribute to a low-carbon society; and
- finding appropriate spectrum for wireless microphones and cameras (PMSE).

**World Radiocommunications Conference (WRC)**

Between January and February, a record number of more than 3000 participants, representing over 150 countries, participated at WRC-12\(^6\). Participants focused on a wide range of spectrum harmonisation decisions, including:

- discussions on future proposals for broadcasting and mobile services in the 700 MHz band;
- agreement on a new item to address the spectrum requirements for mobile broadband;
- streamlining satellite regulations to clarify the international rules;
- spectrum identified for the safe operation of unmanned aircraft systems;
- protection of the new European global navigation system (GALILEO); and
- a new allocation for the amateur service.

The UK, which was aligned to the European common positions (ECPs) on all of the items under discussion, signed the Final Acts of the Conference. This indicated the UK’s agreement with the decisions taken.

CEPT continues its programme of work on a wide range of spectrum areas. This will include responding to specific tasks, that it will be mandated to undertake, to assist in the delivery of the actions detailed in the RSPP. Finally, CEPT has recently started a programme of work to deliver its European common positions for the next WRC, which is scheduled for late 2015.

**1.7.7 Contributing to, and implementing, public policy defined by Parliament**

**Online copyright infringement**

The creation and distribution of online content and the associated regulatory challenges are at the forefront of debates on content regulation in many countries. Tackling online copyright infringement is a particularly major challenge.


Ofcom is not responsible for the content of external websites.
At the EU level, the European Commission has various initiatives in this area. In May 2011, it published a comprehensive IPR Strategy, which outlined plans to create a single market for intellectual property through a series of measures to be taken forward over the next few years. The Strategy included a number of proposals related to online copyright infringement, the key one being a potential review of the IPR Enforcement Directive (IPRED). The Commission is currently preparing a questionnaire to consult stakeholders on the issue, which is part of an evidence-gathering process, on the basis of which it will decide whether or not to review the Directive.

In addition, the Commission and the European Parliament are pursuing a number of other initiatives in the field of intellectual property. A proposed ‘orphan works Directive’, which imposes new copyright rules for works by ‘missing’ authors, was approved by the EU Parliament in June and will come into force, provided that it is approved by the Council of Europe, with a vote expected soon. The Commission also unveiled a proposed new Directive on collective rights management in July.

At a multilateral level, the Anti-Counterfeiting Trade Agreement (ACTA) has been signed by Australia, Canada, Japan, Morocco, New Zealand, Singapore, South Korea and the US. Although the EU signed the treaty, it was subsequently rejected by the EU Parliament, meaning that it cannot come into force in the EU. At the time of writing, Japan, the treaty’s depository nation, was the only country to have ratified it. For ACTA to become a valid international agreement, six more ratification documents need to be deposited to the Japanese government.

In parallel, a number of national legislative and non-legislative initiatives have focused on online copyright infringement.

**UK**: the Digital Economy Act (DEA) 2010 requires Ofcom to make an ‘Initial Obligations’ Code to regulate the process by which ISPs will notify subscribers when somebody using their IP address appears to have infringed copyright. In June and July 2012, Ofcom consulted both on the draft Code and the implementation of the government’s Costs Sharing Order, which requires Ofcom to set fees payable to ISPs and Ofcom by rights holders who wish to take advantage of the notification scheme. Following any resulting changes, the draft Code will go to Brussels for a review under the Technical Standards Directive, before being laid before Parliament alongside the costs sharing order in 2013.

**France**: two 2009 laws establish a ‘graduated response’ programme targeting online copyright infringement, administered and enforced by an independent public body, HADOPI (High Authority for the Dissemination of Works and the Protection of Rights on the Internet). HADOPI is currently being reviewed as part of a wide public consultation project which will result in a package of measures known as “act II of the French cultural exception”, which will aim to complement copyright enforcement with measures to improve the online market for legal cultural offerings.

---

61 European Commission, *A Single Market for Intellectual Property Rights: Boosting creativity and innovation to provide economic growth, high quality jobs and first class products and services in Europe*, 24 May 2011
63 Ofcom, *Online Infringement of Copyright: Implementation of the Online Infringement of Copyright (Initial Obligations) (Sharing of Costs) Order 2012*, 26 June 2012
64 Law promoting the dissemination and protection of creations on the internet (‘HADOPI I’) June 2009 and Law on the criminal protection of literary and artistic property on the internet (‘HADOPI II’), Sept. 2009
Italy: A proposed administrative regulation to protect online copyright, drafted by communications regulator AGCOM, was put on hold in May, as the authority is awaiting government clarification of its competence to legislate in this area.

Spain: the March 2011 Sustainable Economy Law created an Intellectual Property Commission within the Ministry of Culture. The IP Commission is empowered to order the suspension of a website or the withdrawal of infringing website content, as well as to conduct dispute resolution between ISPs, rights-holders and broadcasters. It was formally established in March 2012 and has begun the process of assessing complaints from rights holders. The first cases referred to the courts by the IP commission are currently under way, with resolutions expected in the near future.

United States: There have been a number of recent attempts to introduce new legislation. The most notable were the Protect IP Act (PIPA) and the Stop Online Piracy Act (SOPA), which were proposed in May and October 2011 respectively. Both draft pieces of legislation were ultimately rejected by Congress, and attempts to reform copyright enforcement legislation were not expected to resume until after November’s presidential election. In a separate voluntary initiative, copyright owners and six ISPs have agreed a ‘six strikes’ graduated response scheme.

New Zealand: the Copyright (Infringing File Sharing) Amendment Act, which provides for a ‘three strikes’ graduated response scheme, came into effect in September 2011. The Copyright Tribunal, to which rights holders can submit complaints against users who continue to infringe after receiving three notices, has recently launched its first three cases.

South Korea: Changes to the Korean Copyright Law in 2009 introduced a three-strikes-based notice and take-down scheme that targets commercial websites offering unauthorised content as well as individuals who egregiously upload infringing content to these sites.

Canada: Bill C-11, or The Copyright Modernisation Act, which adds new rights and exemptions to the Canadian Copyright Act, received royal assent in June 2012.
2 Comparative international pricing
Contents

2.1 Comparative international pricing 93
  2.1.1 Introduction 93
  2.1.2 Methodology 94
  2.1.3 Analysis by service 99
  2.1.4 Basket analysis 109
  2.1.5 Conclusion 122
2.1 Comparative international pricing

2.1.1 Introduction

In this section of the report we benchmark the UK against other countries in terms of the metric which is most important to the largest number of consumers when choosing communications services: price.

Tariff complexity, the wide range of usage profiles within countries, variations in ‘average’ use between countries, increasing service bundling and variations in installation and hardware costs make it extremely difficult to provide meaningful price comparisons, so, to attempt to address these issues, we have developed a methodology for comparing prices which is based on consumption across ‘typical’ household types.

This methodology considers issues including the impact of hardware subsidies and multi-service discounts, and compares prices in the UK, France, Germany, Italy, Spain and the US (where we have used Illinois as a representative state).

Within this section of the report, we provide an overview of the methodological principles (essential to understanding the basis of the findings), and a summary of findings, followed by a basket-by-basket analysis. Appendix B details our methodology.

The key findings of this section include:

- Prices in the UK compared favourably to those in the other five countries covered by our price benchmarking work. All five of the lowest ‘weighted average’ single-service basket prices and four of the lowest possible basket prices were found in the UK.65

- Low basket prices in the UK were largely due to mobile prices being the lowest among our six countries. The UK also benefits from comparatively low fixed voice, fixed broadband and mobile broadband prices.

- France also performed well, having the lowest ‘best-offer’ including multi-play price for our ‘connected family’ household, and the second lowest ‘weighted average’ prices for all five households. The connected family ‘best-offer’ price in France was significantly cheaper than in the UK as a result of the availability of a low-cost quad-play bundle of fixed voice, fixed broadband, mobile and pay-TV services.

- There is some evidence that UK communications service prices are increasing, in nominal terms at least. In the year to July 2012 the weighted average cost of four of our five baskets increased in the UK in nominal terms. In France (where weighted average prices were next lowest) the cost of all five fell.

- In the UK, the main driver behind increasing weighted average basket prices was increases in mobile prices. The weighted average cost of more than half of the mobile connections increased in the year to July 2012 in the UK, with these increases ranging from 5% to 31% in nominal terms.

---

65 ‘Weighted average’ basket price refers to the sum of the weighted average single service price of each service included in the basket, these averages being calculated as the average of the lowest price tariffs offered by the three largest operators which provide the service in each country, weighted by the market share of each service provider.
Consumers in most of our comparator countries were able to make cost savings by purchasing fixed broadband services as part of a bundle. The potential savings available by bundling the services required by the three baskets that included a fixed broadband connection ranged from 5% to 40%.

HD premium pay-TV services were the main area where the UK did not perform well. This was partly due to Sky bundling a large number of channels in its premium pay-TV package and charging its satellite TV customers an additional £10 a month to let them access premium channels in HD.

In the UK, the difference between the ‘weighted average’ and the ‘best offer’ pricing of the single services for our five baskets was among the lowest across our six countries. ‘Best offer’ prices in the UK were, on average, 19% lower than the ‘weighted average’ for our five baskets - only in Spain was this figure lower, at 18%.

2.1.2 Methodology

Full details of the methodology are provided in Appendix B, but the basic principles are as follows:

We constructed five household types, which taken together may be seen as representative of the population across our countries, and for each household we defined a basket of communications services (fixed-line voice and broadband, mobile voice, messaging and broadband and TV) appropriate for each household type (Figure 2.1). The overall average use across the five baskets has been adjusted so that it closely matches the average use across the six countries. This is in order to address the potential biases associated with our baskets being more closely aligned with the usage profiles of some countries than others.

Figure 2.1  Summary of households and baskets used in the analysis

<table>
<thead>
<tr>
<th>‘Typical household type’</th>
<th>Fixed voice</th>
<th>Mobile voice</th>
<th>Mobile messaging</th>
<th>Fixed line broadband</th>
<th>Mobile broadband</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>A low use household with basic needs</td>
<td>Low</td>
<td>Low</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Basic</td>
</tr>
<tr>
<td>A broadband household with basic needs</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>n/a</td>
<td>Basic</td>
</tr>
<tr>
<td>A mobile ‘power user’</td>
<td>n/a</td>
<td>High</td>
<td>High</td>
<td>n/a</td>
<td>High</td>
<td>Pay-TV</td>
</tr>
<tr>
<td>A family household with multiple needs</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>Medium</td>
<td>n/a</td>
<td>Pay-TV with recorder</td>
</tr>
<tr>
<td>An affluent two person household</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
<td>High use superfast</td>
<td>Medium</td>
<td>HD premium pay-TV with recorder</td>
</tr>
</tbody>
</table>

Source: Ofcom

We included a wide range of components within the baskets to make them as accurate as possible a representation of the real prices consumers pay. For example:

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

- In addition, mobile calls (and messaging) were split between ‘on-net’ and ‘off-net’, and voicemail was included.
• Call set-up costs and per-minute charging were incorporated, and a range of call lengths were used (distributed around an average based on figures from 30 OECD countries).

• Incoming calls to mobile phones were included in recognition of the different charging mechanism in the US.

• The broadband components were defined both by minimum headline speed and by minimum data requirements.

• The television element included the licence fee and hardware cost. Because of difficulties in comparing channels and their programmes, two tiers of pay-TV were considered: the most basic pay service available over and above the channels available on free-to-air TV; and a premium service defined by high-definition channels and a top price film/entertainment package combined with the best package of top-tier football matches.

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

In July 2012, details of every tariff and every tariff combination (including bundled services) from the largest three operators in each country by retail market share were collected (and from more than three operators, if this was required to ensure that a minimum of 80% of the overall market was represented). Multi-play tariffs (i.e. those which incorporate more than one service) were also collected. Only those tariffs which were published on the websites of the operators were included (i.e. excluding bespoke tariffs which are offered only to certain customers).

Across the six countries, the tariff data included consisted of:

• 616 fixed voice tariffs;
• 230 fixed broadband tariffs;
• 4,091 mobile tariffs;
• 386 mobile broadband tariffs;
• 307 television tariffs; and
• 2,280 multi-play bundle tariff options.

Our model identified the tariffs that offer the lowest price for meeting the requirements of each of the household baskets.

All prices have been converted to UK currency using a purchasing power parity (PPP) adjustment based on OECD comparative price levels and exchange rates as at 1 July 2012.
Analysis

We provide two types of analysis for each basket:

‘Average single service’ pricing: the price of each individual service, as defined by the average of the lowest price tariffs offered by the three largest operators which provide the service in each country, and are weighted by the market share of the service provider, in order to ensure fair representation. We assume that consumers are only able to obtain stand-alone services, and although this provides a useful comparison of the relative costs of communications services, a limitation of this analysis is that an increasing number of providers do not offer stand-alone services.

‘Best-offer’ pricing: the lowest price that a consumer could pay for this basket of services, including, where appropriate, by purchasing ‘bundled’ services. Our view is that this type of analysis is essential in order to provide a true picture of the position of consumers in each market, since they increasingly buy multiple services from single operators. There are, however, two limitations to this type of analysis. First, ‘bundled’ service offerings are typically not available to all consumers as they are generally geographically constrained to areas where premises are connected either to a cable network or to an unbundled telephone exchange. Second, even in areas where these services are available, take-up may be low. Therefore, although the ‘best offer’ provides insight into the lowest prices available to some customers, it is not as good a reflection of the prices that consumers are actually paying as the weighted average analysis.

Limitations

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

• The analysis assumes a rational consumer who has a full understanding of his or her usage requirements and is prepared to shop around and undertake some often quite complex calculations to identify the tariff which offers the best value. In reality, few consumers act in this way and will actually be on the lowest-cost combination of services for their usage profile, but we believe the assumption is necessary in order to provide effective international comparisons.

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

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

• In order to calculate the weighted average, we have used market share calculations based on operators’ retail customers. It should be noted that market share calculations are based on the overall subscriber base, not the subscriber base for the particular tariff (for which figures were not available).
• Pay-TV services are a component of three of the baskets we examine. However, it has not been possible to compare like-for-like subscriptions principally because of differences in the composition of basic and premium channels across the six countries. As a consequence, quantitative comparison of international TV pricing is arguably less meaningful than for telecoms services. This is also an issue in the pricing of ‘triple-play’ services, where there is wide variation in the types of TV content.

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

• To avoid 'skewing' the average single-service pricing analysis, tariffs which are over 100% higher than those offered by the lowest price provider are excluded from the weighted average (the aim here is to exclude tariffs which are clearly not targeted at the usage profile we are analysing). This rule is slightly different to that applied in the 2011 report, when tariffs which were over 100% higher than those offered by the other two providers feeding into our weighted average analysis were excluded.

• Some services are not available nationwide. This is particularly true for services which are available only where local exchanges have been unbundled, and for IPTV, which requires a high-speed broadband connection, but is also true for cable TV and all types of broadband.

• We do not define whether the mobile phone component in a basket is pre-pay or post-pay. We believe this enables better international comparison, given the very different pre-pay/post-pay splits in different countries (for example, over 80% of Italian mobile connections are pre-pay, while over 80% of US mobile connections are post-pay). However, a consequence of this is that the analysis does not recognise the different characteristics of the services; for example, a pre-pay mobile may be the only option available to consumers with a poor credit rating and may also offer advantages to those who vary their use month by month.

• Representative pricing in the US as a whole is difficult, due to large regional variations as a result of local incumbent telecoms operators and cable operators offering localised prices for fixed-line services. We use only those tariffs available within the state of Illinois, chosen because it is broadly representative of the US as a whole in terms of its relative wealth and rural-urban split (it incorporates the city of Chicago as well as large agricultural regions). Nevertheless, US pricing should not be viewed as representative of the whole country.

• In order to ensure that the changes we identify within countries have been driven by changes in the market rather than simply by changes in the currency exchange rate, we have used the same PPP-adjusted exchange rate in 2012 and applied it to 2011 data. This means that there may be some distortions in the relative positions of countries compared to the findings in 2011. The prices quoted are in nominal terms.

Report structure

We start the analysis in this section of the report by looking at the individual components of our five baskets in order to compare the relative prices of services across these countries, both in terms of the lowest prices available when they are purchased on a stand-alone basis, and the ‘weighted average’ single-service cost across the largest operators in each market.
Then we look in more depth at the cost of fulfilling the requirements of each of our baskets in terms of the ‘weighted average’ cost across the three largest providers in each nation, and also the ‘best prices’ available when ‘multi-play’ bundles are included.
2.1.3 Analysis by service

Fixed voice summary

Figure 2.2 and Figure 2.3 look at the costs of the fixed-line voice components of those baskets which include a fixed-line phone, based on the price of stand-alone services (i.e. those not purchased with other services as part of a bundle).

In 2012 the UK had the lowest weighted average of the best-value tariffs from the three largest operators among our comparator countries, for all four baskets which include fixed voice services (Figure 2.2). One reason for this is the availability of line-rental pre-payment tariffs, which were offered by two of the providers feeding into the UK weighted average in July 2012 (BT and TalkTalk) and enable customers to make savings of up to £5 a month on their line rental by paying a year upfront rather than a monthly fee.\(^{66}\) Were pre-payment tariffs not available in the UK, the weighted average cost of fulfilling the fixed-line requirements of each of the four baskets which included the service would have been £3-£4 a month higher in 2012 (and the total weighted cost of the fixed elements of our baskets would have remained the lowest among our comparator countries).

In addition, Virgin Media’s tariffs did not feed into the ‘weighted average’ calculations for Baskets 2 and 4 (as its lowest possible prices were more than twice those available from either BT or TalkTalk), and the exclusion of these from the calculation had a downward effect of the weighted averages for these baskets.

A feature of many fixed-line tariffs is that basic line rental usually includes some inclusive calls, and many consumers can reduce their spend by purchasing ‘add-ons’ to basic line rental, which provide additional calls for certain call types, or reduced call rates in return for a fixed monthly payment. All three UK operators featuring in this analysis follow a similar strategy, with basic line rental prices starting at around £14 a month and a range of ‘add-ons’ being available to customers. This means that a wide range of tariffs are available to UK consumers, which increases tariff complexity and in turn may make it more difficult for consumers to select the cheapest service for their usage profile.

There is evidence that fixed voice prices are increasing. France was the only comparator country where the average single service price of the fixed voice element of all four baskets fell in the year to July 2012, while the weighted average cost of fulfilling the fixed voice requirements of all four baskets increased in Germany, Italy and Spain. The most marked increases were in Germany and Italy, and in Germany the ‘best offer’ prices for Baskets 2, 4 and 5 all more than doubled. These baskets include a fixed broadband connection, and in 2011 the ‘weighted average’ price for the fixed voice component of these baskets were based on VoIP-based services offered by Freenet, which required a fixed broadband connection that could be purchased from any ISP. Freenet withdrew these services in the year to July 2012, resulting in significant increases in the prices for these three baskets in 2012. In Italy, the single-service fixed voice cost increased by an average of 22%, largely due to Telecom Italia’s tariffs being more expensive in 2012 than its 2011 equivalents.

In the UK, the weighted average cost of Baskets 2 and 4 fell in the year to July 2012 and the total weighted average cost of fulfilling all four baskets fell by 1%. The key driver behind these falls was the omission of Virgin Media’s lowest cost tariffs from the weighted average calculation, as outlined previously, although the introduction of TalkTalk’s line rental pre-payment tariff was also a contributing factor.

\(^{66}\) Provided they remain customers for the full term of the contract. Should they end the contract early relevant contract terms often seek to allow the provider’s retention of the whole of the upfront (pre-) payment. The savings to customers do not take into account any amount that may be foregone on early termination nor any other matter relating to contract terms and termination.
While weighted average analysis is to a large degree a reflection of incumbent pricing (as fixed line incumbent providers generally had the largest market share in the countries included in our analysis), ‘best offer’ analysis highlights the lowest-cost stand-alone tariff, which in the past has frequently been offered by an alt-net provider as it tries to gain market share. However, this is not the case in some of our comparator countries: in 2012 T-Home in Germany had the ‘best offer’ stand-alone tariffs for all four of our fixed-line baskets, and in the UK BT had two of the four ‘best offer’ basket prices (with TalkTalk having the ‘best offer’ prices for the other two).

Again, our analysis indicates increases in fixed-line voice pricing, with the total ‘best offer’ cost of fulfilling the fixed voice requirements of the four baskets that include the service having increased in all of our comparator countries except France (where it fell by an average of 5%) and the US (where it was unchanged) in 2012 (Figure 2.3). In France the ‘best offer’ tariffs were the same in 2012 as they had been in 2011 for Baskets 1, 2, and 4, and falling prices were as a result of SFR offering six months of reduced line rental on its Ligne Fixe 5h vers fixes, mobiles et international and Ligne Fixe illimite vers fixes et international tariffs (the lowest-cost offers for Baskets 2 and 4’s usage) and the cost of fulfilling Basket 5 falling as France Telecom introduced a new tariff (Optimale 2h fixe et mobiles) which included two hours of calls to fixed lines and mobiles (the previous best-offer tariff for this basket was also provided by France Telecom and although it had lower line rental, the two hours of inclusive calls excluded calls to mobiles, resulting in higher out-of-bundle call costs).

The increase in overall ‘best offer’ pricing in Germany in 2012 (as a result of Freenet withdrawing its VoIP-based services, as mentioned previously) meant that the UK had the lowest stand-alone ‘best offer’ prices for our four baskets, despite the best offer price of all four having increased in 2012 (the average increase being 8%). These increases were as a result of BT introducing price increases during the year, and came despite TalkTalk launching line rental pre-payment tariffs, which meant it had the lowest stand-alone ‘best offer’ prices for two of the baskets.

As in the UK, the ‘best offer’ cost of all four baskets increased in Italy in 2012, and again the average increase was by 8%, while in Spain the ‘best-offer’ price fell for all four baskets apart from Basket 1 (the lowest-use basket) for which Vodafone had the ‘best offer’ tariff in
2011 and 2015. Both Vodafone services had the same line rental and call costs; however, in 2011 there was a promotion offering six months half-price line rental.

**Figure 2.3** Comparative single-service ‘best offer’ fixed-line voice pricing

<table>
<thead>
<tr>
<th>Year</th>
<th>Basket 1</th>
<th>Basket 2</th>
<th>Basket 3</th>
<th>Basket 4</th>
<th>Basket 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>16</td>
<td>27</td>
<td>32</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>2012</td>
<td>17</td>
<td>25</td>
<td>30</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>2011</td>
<td>23</td>
<td>27</td>
<td>36</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>2012</td>
<td>23</td>
<td>30</td>
<td>30</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: Ofcom using data supplied by Teligen

Note: Lowest tariff available for the fixed-line voice component of each basket from any of the three largest operators by market share in each country, July 2011 and July 2012; PPP adjusted.

**Mobile summary**

Across the five household types which we include in our analysis, there are nine mobile phone connections, ranging from high use and an advanced handset, typical of a pay-monthly smartphone user in the UK, to low use and a basic handset typical of a pay-as-you-go subscriber in the UK. The nine connections are summarised in Figure 2.4 below, and also vary in terms of the distribution of call and messaging volumes (e.g. proportion of calls which are to national mobiles, to national geographic numbers or to international numbers); full details are provided in the basket analysis later in this section.

**Figure 2.4** Summary of mobile connections

<table>
<thead>
<tr>
<th>Connection</th>
<th>Handset</th>
<th>Outbound voice minutes per month</th>
<th>Outbound SMS per month</th>
<th>Data use per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Household 1 handsets 1 &amp; 2</td>
<td>Basic</td>
<td>55</td>
<td>n/a</td>
</tr>
<tr>
<td>2</td>
<td>Household 2 handsets 1 &amp; 2</td>
<td>Basic</td>
<td>55</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Household 4 handset 4</td>
<td>Basic</td>
<td>55</td>
<td>65</td>
</tr>
<tr>
<td>4</td>
<td>Household 4 handset 3</td>
<td>Basic</td>
<td>55</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>Household 4 handset 2</td>
<td>Intermediate</td>
<td>169</td>
<td>160</td>
</tr>
<tr>
<td>6</td>
<td>Household 5 handset 2</td>
<td>Intermediate</td>
<td>188</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>Household 4 handset 1</td>
<td>Advanced</td>
<td>280</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>Household 5 handset 1</td>
<td>Advanced</td>
<td>376</td>
<td>80</td>
</tr>
<tr>
<td>9</td>
<td>Household 3 handset 1</td>
<td>Advanced</td>
<td>516</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: Ofcom
As was the case in 2011, our analysis found that UK mobile prices were the lowest among our six comparator countries in 2012, and the UK offered the lowest ‘weighted average’ prices for all nine of the connections included within our baskets in 2012 (Figure 2.5). However, the weighted average cost of the two lowest-use connections (Connections 1 and 2) and the three highest-use connections (Connections 7, 8 and 9) all increased in the UK in the year to July 2012, and the total weighted cost of all nine connections increased by 10% during the year (the US was the only other comparator country where there was a similar increase, although it was lower, at 4%).

Weighted average mobile prices in the US were the highest among our countries for eight of the nine connections included in our analysis, partly because mobile users in the US are charged for incoming as well as outgoing mobile calls. This means that mobile post-paid contracts are usually relatively expensive as they include large numbers of call minutes (for incoming and outgoing use) and US mobile usage is typically higher than in Europe. In addition, minimum pre-pay top-ups in the US are high-value (for example $50), and credit often expires after a month, making pre-pay services less attractive to consumers in the US than to those in other countries.

After the UK, France had the second lowest weighted average mobile pricing across our nine connections in 2012 (as it had in 2011). However, unlike the UK, the weighted average cost of all nine connections fell during the year, with the total cost of fulfilling all nine connections declining by 25%. This was partly due to the launch of a fourth mobile network in France in January 2012, Free Mobile, which has sought to gain market share by offering low-priced services. Although Free Mobile’s market share was not sufficient for it to feature in our analysis, the service’s launch has had a downward effect on mobile price levels in France. A result of declining prices in France was that whereas in 2011 the total UK weighted average cost of the nine connections was 39% lower in the UK than it was in France in 2011, this difference was just 10% in 2012.

Germany was the only comparator country other than France where the weighted average price of all nine connections fell in the year to July 2012, and although the fall in the total weighted average cost of fulfilling the requirements of all nine connections was lower than that in France (at 21%) it was sufficient to lead to the total weighted average cost in Germany falling below that in Spain (where it declined by 8%) during the year. The weighted average cost of four of the connections increased in Spain in the year to July 2012, as did the weighted average cost of four of the connections in Italy, and in both cases these increases tended to be among the lower-use connections, and the weighted average cost of the three highest-use connections fell. This may be related to operator strategies to migrate customers from pre-pay to post-pay tariffs, as the proportion of mobile connections which were post-pay increased in both countries during 2011 (see Section 6.2.5) and cuts in mobile termination rates may also be driving operators to increase the cost of pre-pay mobile connections.

‘SIM-only’ tariffs (whereby customers do not receive a new handset when signing up to a mobile contract, but are supplied with a SIM card which they can use in a handset they already own) have become increasingly popular over the last few years, as mobile providers are able to pass the lower cost associated with not having to subsidise handsets onto consumers in the form of lower charges. In the UK almost half (44%) of the tariffs feeding into the UK average best-pricing analysis of our connections in July 2012 were SIM-only contracts, up from 30% in July 2011 (it should be noted that where a tariff is SIM-only our model factors in the cost of buying a handset separately). France (48%) and Italy (47%) were the only comparator countries which had a higher proportion of SIM-only monthly contract tariffs feeding into the July 2012 analysis. Similarly, the proportion of operator best-price offers feeding into the UK connection analysis that were pay-as-you-go fell from 33% to 19% in the year to July 2012, (the second lowest proportion after France at 15%).
proportion of best-price offers feeding into average of our nine connections in the UK which were monthly contracts provided with a handset was unchanged at 37%, suggesting that operators are incentivising consumers to switch from pre-pay tariffs to SIM-only monthly contract services.

Figure 2.5 Comparative single-service ‘weighted average’ mobile pricing

The pattern of the lowest prices available for the usage profiles used in our analysis closely resembled that of the ‘weighted average’ analysis, with the UK having the lowest cost for all nine connections (Figure 2.6). France had the second lowest best-offer prices for all of the connections except Connections 1 and 9, where Germany and Italy respectively were cheaper.

In the UK, T-Mobile had the lowest prices for five of our connections, while Vodafone had the lowest prices for the three highest-use connections and Orange the lowest price for Connection 1, the lowest-use connection (note that even lower prices may be available from smaller operators that were not included in our analysis). O2, the mobile brand with the highest connection share in the UK, did not provide any of the best-offer prices for our nine connections in 2012. In a number of our comparator countries there was evidence that one provider’s prices were generally lower than the other operators included in our analysis: in the US and France, AT&T and Orange respectively each offered seven of the nine best-offer tariffs for our connections, while in Germany O2 offered six.

Source: Ofcom using data supplied by Teligen
Note: Weighted average of best-value tariff from each of the three largest operators by market share in each country; July 2011 and July 2012; PPP adjusted
Fixed-line broadband summary

Comparisons of single-service fixed broadband prices should be treated with a degree of caution as fixed broadband is often bought in a bundle of communications services from the same supplier. In fact, most of the fixed broadband services included in our analysis were ‘bundled’ tariffs which included at least one other service, in all of our comparator countries, and many ISPs no longer offer stand-alone fixed broadband services. In addition, most fixed broadband services also require a fixed-line voice service, although this is not generally the case for cable broadband and ‘naked DSL’ (a DSL broadband service provided without the requirement for a fixed voice line) which is available from some operators in France, Italy, Germany and the US.

In our single-service price comparisons we have excluded the cost of telephone line rental even if this is required, and have instead included it in the fixed voice element of the baskets in question (see Section 2.1.3). The inclusion of line rental in this analysis would increase the cost of fixed broadband services in those countries which do not have significant naked DSL availability (including the UK). The fixed broadband connections used in our analysis are defined by the headline ‘up to’ speed of the connection, and require speeds of 4Mbit/s, 8Mbit/s and 30Mbit/s for Baskets 2, 4 and 5 respectively. However, none of the ISPs included in our analysis in Italy offer services with a headline speed of 30Mbit/s or more (as is required for Basket 5), and for that reason figures for Basket 5 Italy include ‘up to’ 20Mbit/s services, and are therefore not comparable to those in our other countries.

The lowest overall average stand-alone fixed broadband prices were found in the UK in July 2012, where the weighted single-service cost of the fixed broadband element of all three of the baskets that include this service fell in 2012 (Figure 2.7). For Basket 2, this fall was the result of BT lowering the price of its BT Broadband Option 1 service, and Sky withdrawing its stand-alone fixed broadband service (meaning that it was replaced by a lower-cost service in our average calculation) during the year. For Basket 4 it was due to a fall in the cost of fulfilling the basket’s requirements using BT services, and the substitution of Sky’s withdrawn stand-alone ADSL service with a lower-cost O2 service (taking a three-month rental-free promotion into account) in the weighted average calculation. As Virgin Media’s basic cable broadband service increased in cost, it too was removed from the calculation (as it cost more than twice as much as the O2 service, partly because it is a true stand-alone service that does not require a fixed line).
The weighted average cost of the broadband element of Basket 5, which includes a superfast connection (i.e. one with an advertised connection speed of 30Mbit/s or more), fell in the UK as a result of BT reducing the price of its BT Infinity Option 1 service and offering three months’ half-price rental to new users, and because Virgin Media upgraded its basic cable service to offer ‘up to’ 30Mbit/s, meaning that a lower-cost service fulfilled the basket’s connection requirements.

France and Germany were the only comparator countries where the combined weighted average single-service cost of the fixed broadband elements of our baskets increased in the year to July 2012. In France this was as a result of Orange increasing the price of its Decouverte Internet 8 Megamax service (which fed into the 2011 and 2012 weighted averages for Baskets 2 and 4) by €5 a month to €21 a month. The weighted average single service prices increased for all three baskets of fixed broadband use in Germany. However, this was because the averages were pulled upwards by the inclusion of T-Home’s DSL6000 and DSL16000 services (which had been excluded from the weighted averages of Baskets 2 and 4 in 2011 as their monthly fee was more than twice that of the lowest-cost offering). The cost of the superfast connection in Basket 5 increased in Germany because Unity Media no longer offered a promotional discount on its basic superfast service (which had a faster connection speed and lower monthly fee than in 2011) and because of the inclusion of a new 32Mbit/s Kabel BW service in the weighted average.

In Spain, the weighted single-service cost of fulfilling the three baskets of fixed broadband services fell by an average of 13% in 2012, and all of the services contributing to the average for each basket had a lower cost than the 2011 weighted average. The weighted average single-service cost of the fixed broadband element of all three baskets fell in the US in 2012. For Baskets 2 and 4 this was as a result of AT&T launching lower-priced promotions for new ADSL subscribers, while for Basket 5 it was as a result of Comcast and RCN introducing superfast services with lower headline speeds and monthly fees.

**Figure 2.7 Comparative single-service ‘weighted average’ fixed-line broadband pricing**

<table>
<thead>
<tr>
<th>Monthly cost (£)</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>120</th>
<th>140</th>
<th>160</th>
<th>180</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK 2011</td>
<td>24</td>
<td>19</td>
<td>34</td>
<td>31</td>
<td>19</td>
<td>21</td>
<td>46</td>
<td>33</td>
<td>62</td>
<td>48</td>
</tr>
<tr>
<td>UK 2012</td>
<td>17</td>
<td>18</td>
<td>20</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td>48</td>
<td>25</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>FRA 2011</td>
<td>19</td>
<td>18</td>
<td>20</td>
<td>29</td>
<td>31</td>
<td>46</td>
<td>48</td>
<td>47</td>
<td>105</td>
<td>64</td>
</tr>
<tr>
<td>FRA 2012</td>
<td>18</td>
<td>31</td>
<td>19</td>
<td>30</td>
<td>30</td>
<td>44</td>
<td>44</td>
<td>30</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>GER 2011</td>
<td>24</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td>25</td>
<td>28</td>
<td>105</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GER 2012</td>
<td>19</td>
<td>20</td>
<td>30</td>
<td>30</td>
<td>28</td>
<td>105</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITA* 2011</td>
<td>24</td>
<td>19</td>
<td>21</td>
<td>46</td>
<td>33</td>
<td>62</td>
<td>48</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITA* 2012</td>
<td>18</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td>25</td>
<td>28</td>
<td>105</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESP 2011</td>
<td>24</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td>25</td>
<td>28</td>
<td>105</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESP 2012</td>
<td>19</td>
<td>20</td>
<td>30</td>
<td>30</td>
<td>28</td>
<td>105</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA 2011</td>
<td>24</td>
<td>19</td>
<td>21</td>
<td>46</td>
<td>33</td>
<td>62</td>
<td>48</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA 2012</td>
<td>18</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td>25</td>
<td>28</td>
<td>105</td>
<td>64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Ofcom using data supplied by Teligen

Note: Weighted average of best-value tariff from each of the three largest operators by market share in each country; July 2011 and July 2012; PPP adjusted; *Basket 5 figures for Italy include ‘up to’ 20Mbit/s services as none of the providers included in our model offered superfast services.

The lowest stand-alone ‘best offer’ prices for the fixed broadband element of the three baskets which included the service were all found in the UK in 2012 (Figure 2.8). The difference between the weighted average prices and best-offer prices gives an indication of the range of prices available in each country, and these varied significantly among our
comparator countries in 2012, ranging from an 8% difference in France (where broadband prices are closely aligned) to 40% in Germany (in the UK the figure was 30%, the second highest difference after Germany).

**Figure 2.8 Comparative single-service ‘best offer’ fixed-line broadband pricing**

<table>
<thead>
<tr>
<th></th>
<th>Basket 2</th>
<th>Basket 4</th>
<th>Basket 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>14</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>2012</td>
<td>12</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>2011</td>
<td>17</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>2012</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>2011</td>
<td>19</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>2012</td>
<td>16</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td>2011</td>
<td>22</td>
<td>25</td>
<td>37</td>
</tr>
<tr>
<td>2012</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>2011</td>
<td>20</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>2012</td>
<td>18</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td>2011</td>
<td>2012</td>
<td>2011</td>
</tr>
<tr>
<td>2011</td>
<td>30</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>2012</td>
<td>30</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Ofcom using data supplied by Teligen

Note: Lowest tariff available for the fixed broadband component of each basket from any of the three largest operators by market share in each country, July 2011 and July 2012; PPP adjusted; *Basket 5 figures for Italy include ‘up to’ 20Mbit/s services as none of the providers included in our model offered superfast services

**Mobile broadband summary**

Two of the five baskets include a mobile broadband connection (using a datacard or ‘dongle’), the first in Basket 3 having high use (5GB of data over 30 days a month) and the second in Basket 5 having medium use (3GB of data over 25 days a month in Basket 5). In order to provide a comparison of the full range of mobile broadband use, we also consider the cost of a low-use connection (1GB of use over ten days a month). Unlike our analysis of fixed broadband services, we do not take the speed of the connection into account when comparing services, and we also do not take account of whether the tariff includes any bundled use of WiFi hotspots. We also only consider the ‘best offer’ service available, as the relatively narrow range of tariffs available in many countries makes it difficult to produce a meaningful ‘weighted average’ analysis.

As was the case in 2011, the lowest single-service prices for mobile broadband services were available in Italy, despite the costs of fulfilling the low- and high-use profiles having increased in the year to July 2012 (Figure 2.9). The UK had the second lowest mobile broadband prices in 2011 (as it had in 2011), but whereas the UK prices increased for all three usage profiles in 2011, all three fell in 2012. The largest proportional decrease was a 14% fall in the price for the low-usage profile (as a result of 3UK reducing the price of the dongle required to use its Pay as you Go + 12GB service), while the cost of the medium- and high-use connections fell as a result of T-Mobile introducing its Mobile Broadband Pay Monthly 10GB service, which had a monthly fee of £15.

Lower mobile broadband prices in Italy and the UK are partly a result of the mobile broadband markets in these nations being relatively mature, with mobile broadband having become a mass-market service in both countries by early 2008, and all mobile network operators and some MVNOs offering mobile broadband services. In addition, new entrant operator 3 offers services in both countries and has used lower prices to gain market share, in doing so prompting the existing mobile providers to offer similar low-priced options.
While the total ‘best offer’ cost of fulfilling the three usage profiles fell in the UK, France, Germany and the US in the year to July 2012, it increased by 64% in Spain. This was due to Movistar (which had provided the ‘best offer’ tariffs for all three profiles in 2011) increasing the price of its stand-alone service offering 2GB of data per month, and replacing its 5GB service with a more expensive one offering double the data allowance. As a result, in 2011 the ‘best offer’ tariffs for our usage profiles were provided by Vodafone, and all three were more expensive than Movistar’s had been in 2011.

**Figure 2.9 Comparative ‘best offer’ single-service mobile broadband pricing**

![Comparative ‘best offer’ single-service mobile broadband pricing chart]

*Source: Ofcom using data supplied by Teligen*

*Note: Weighted average of best-value tariff from each of the three largest operators by market share in each country, July 2011 and July 2012; PPP adjusted*

**Pay-TV summary**

Wide variations in the numbers and types of channels provided by different television packages make it difficult to provide like-for-like comparisons for these services. However, we consider that it is important to include TV services in our analysis, given the wide take-up of bundled services that include a TV component (often as triple-play with fixed voice and fixed broadband services) and sometimes as quad-play tarifs which include mobile telephony services.

In our analysis we have used the following definitions:

- **basic pay-TV** is the lowest subscription required to receive channels additional to those that are available on free-to-view television; and
- **premium pay-TV** is the subscription required to receive HD channels and the best package of both top-flight football (NFL in the US) and a top-price film/entertainment package.

Our analysis includes TV licence fees, which were highest in Germany and the UK (there is no licence fee in Spain and the US, where public funding for broadcast services is raised by alternative means). As with mobile broadband services, we consider only single service ‘best offer’ TV service pricing in this section, as the relatively low number of services available in each country makes it difficult to produce meaningful weighted single-service pricing analysis.

The lowest single-service ‘best offer’ price for a basic ‘entry-level’ pay-TV service was found in the UK in 2012, and was Virgin Media’s TV Size M+ with V HD, as it had been in 2011.
The cost of the service (which offered 75 basic channels in July 2012) was lower than in 2011, as an increase in the service’s monthly charge was offset by a promotion halving the monthly fee for six months. As in 2011, the lowest-cost basic pay-TV service in France was a satellite service provided by CanalSat; however, price increases and the lack of a promotional offer in 2012 meant that the lowest-cost service available (Canal+ par ADSL) was considerably more expensive than CanalSat 3 stars, the lowest-cost service in 2011, although it included 200 basic channels and ten premium channels, rather than the 18 basic and five premium channels included in the 2011 best-offer tariff.

The cost of the lowest-price stand-alone TV services also increased in Italy and Spain in the year to July 2012. In Italy, the lowest-cost basic pay-TV services were provided by Mediaset in both 2011 and 2012. However, Mediaset’s lowest-cost package in 2012 (Mediaset Premium Cinema) had a less generous promotional offer and a higher monthly fee than in 2011, despite providing fewer channels than the 2011 best-offer service, although it did include HD channels which the latter did not. In Spain, the increase was due to Digital Plus increasing the monthly fee of its Canal+ Liga (Basic Package) satellite service.

In Germany the lowest-price offer was Unity Media’s DigitalTV Basic cable service, offering 70 basic channels and no premium channels, while in the US the best offer was Comcast’s Basic Cable service (as in 2011) offering 30 basic channels and no premium channels for an unchanged monthly fee of $25.49.

It is more difficult to compare premium pay-TV packages, due to the variations in content in these packages; the apparent changes in the prices in France, Italy and Spain in the year to July 2012 are likely to be a result of channel line-up changes rather than genuine movements in price. This basket includes a requirement for a recorder and high definition (HD) channels, and whereas HD is now standard with premium-channel packages in most countries, it costs an additional £10.25 a month for UK users of Sky’s satellite service. This service had the single-service ‘best-offer’ HD premium pay-TV with recorder service (Sky World + HD Mix) in both 2011 and 2012 (the cost of this service was slightly lower in 2012 than in 2011, as a price increase during the year was offset by the introduction of an offer providing a reduced monthly fee for six months).

Figure 2.10 Comparative single-service TV pricing

Source: Ofcom using data supplied by Teligen
Note: Basic pay-TV is defined as the minimum price required to purchase a pay-TV package which includes channels not available over free-to-air TV; premium TV is defined as the best package of top-league football (NFL in the US and a top price film/entertainment package); lowest tariff available for the pay-TV component of each basket from any of the three largest operators by market share in each country, July 2011 and July 2012; PPP adjusted
Having provided an overview of findings on a single-service basis, we now detail the relative total prices for baskets of communications services, representative of five household types.

### 2.1.4 Basket analysis

**Basket 1: a low-use household with basic needs**

Our first basket contains a usage pattern typical of a retired low-income couple who have a fixed line from which they make almost four hours of calls a month (the majority of which are local, although they occasionally make calls to mobiles and do not make any international calls). They each have a mobile phone which they use to make just under an hour of calls each per month (they do not send any SMS messages or use any data services). They watch free-to-air multichannel digital television, which is available in all of our comparator countries.

#### Figure 2.11 Composition of Basket 1

<table>
<thead>
<tr>
<th>Fixed-line voice</th>
<th>Fixed broadband</th>
<th>Mobile</th>
<th>Mobile broadband</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>223 call minutes</td>
<td>n/a</td>
<td>Connection 1 55 call minutes</td>
<td>n/a</td>
<td>Free-to-air</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Connection 2 55 call minutes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Ofcom*

The cheapest weighted average cost of fulfilling the requirements of Basket 1 in July 2012 was in the UK, at £50 a month, a £2 per month increase compared to July 2011.

The weighted average single service pricing is a weighted average of the best-value tariffs from the three largest operators in each country and, for fixed voice services, is to a large degree a reflection of the incumbent’s prices, as these providers tend to have the largest market share (in all of our comparator countries except the US the incumbent provider had a market share of over 50%). Using weighted average pricing, the lowest prices for fulfilling the fixed-voice component of Basket 1 were in the UK at £19 per month, while there was little variation in prices outside the UK, ranging from £23 in France to £29 in Italy (Figure 2.12).

The £1 a month increase in the weighted average price in the UK was due to BT and Virgin Media increasing their prices during the year, and came despite TalkTalk’s introduction of a line rental pre-payment tariff which allowed its customers to save money by paying a year’s line rental in advance. The largest monthly increase was in Italy, where it was due to the lowest cost of fulfilling the basket’s fixed voice requirement, using Telecom Italia’s tariffs, increasing from £25 to £30 per month during the year.

The UK and the US were the only comparator countries where the cost of fulfilling the mobile requirements of the basket (two basic handsets with low voice use and no SMS or data) increased in the year to July 2012. In the UK this was largely due to Orange increasing the price of a call add-on to its Raccoon PAYG service, which gives 100 minutes of calls, from £5 a month in 2011 to £7.50 a month, while in the US it was due to Verizon increasing out-of-bundle call charges on its Daily Access Plan $0.99 pre-pay tariff. The largest fall in fulfilling the mobile element of the basket was in Germany, where it fell from £35 a month to £20 a month as a result of T-Mobile and O2 introducing new tariffs: for T-Mobile it was a pay-monthly tariff offering 100 minutes of calls for €9.95 (rather than 120 minutes for €24.95 as in 2011), while for O2 it was a pre-pay tariff with lower call charges than those available in 2011.
As Basket 1 includes only free-to-air TV services, the main driver of the cost of the TV component of the basket is the TV licence fee (although not in Spain and the US where there is no licence fee). In fact, as the basket does not include pay-TV services, the only other TV cost is that related to equipment purchase and installation (we include the cost of a set-top box/decoder, but not the cost of the television). There was significant variation in the cost of the television licence across the six countries, with the TV licence being most expensive in Germany and the UK, while the equipment cost was highest in Germany, where the lowest-cost free-to-air service was a satellite service, which had high up-front costs as it required a satellite decoder and dish, along with installation.

**Figure 2.12 Basket 1: ‘weighted average’ single-service pricing**

Ofcom using data supplied by Teligen

*Note: Weighted average of best-value tariff from each of the three largest operators by market share in each country; July 2011 and July 2012; PPP adjusted*

Best-offer pricing analysis shows the lowest possible monthly cost of fulfilling the basket’s usage requirements, using the tariffs of the largest providers in each country, including bundled services. The difference between the weighted average and the best-offer prices of each service in the bundle gives an indication of the range of prices available in each country; these were relatively small for the fixed voice and mobile elements of the basket, suggesting that tariffs for the service are closely aligned in each country (Figure 2.13).

The cheapest best-offer cost of fulfilling the requirements of Basket 1 in July 2012 was in the UK, at £45 a month. This was £6 a month more than in 2011, with £5 of this increase being due to the previously-mentioned increase in the cost of Orange’s 100 minute pre-pay call add-on.

In Germany, the best-offer option to fulfil the basket’s fixed-line use included a bundled fixed broadband connection, even though this was not a requirement of the basket (this was not the situation in Italy in 2012, although it had been in 2011). The cost of the television component of the basket remains the same in the best-offer analysis, as it includes free-to-air television, where the only costs are the licence fee, hardware and installation.

Overall, the biggest difference between the ‘weighted average’ and the ‘best-offer’ price available from the three largest operators was in the US in 2012, where the lowest-cost combination of services needed to fulfil the requirements of the basket was 22% less than the weighted average best-cost price (in the UK it was 10% less). By contrast, there was relatively little variation between the ‘weighted average’ and the best-offer prices in France, with the best-offer price being just 5% cheaper than the weighted average, indicating that
there was little difference between the mobile and fixed voice tariffs available from the largest operators.

**Figure 2.13 Basket 1: comparative ‘best offer’ pricing**

Source: Ofcom using data supplied by Teligen

Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2011 and July 2012; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service.

**Basket 2: A broadband household with basic needs**

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

**Figure 2.14 Composition of Basket 2**

Source: Ofcom

The cheapest weighted average cost of fulfilling the requirements of Basket 2 in July 2012 was in the UK, at £68 a month, £2 a month less than in 2011. Germany was the only country where the total weighted average price of the basket increased during the year (up by 8%), while the largest decline in the weighted average price of the basket was a 7% fall in Italy.

The fixed-line voice requirement of this basket mainly consists of calls to fixed-line phones within the same country, made during the daytime, meaning that the basket favours packages which include these call types within the monthly fee. This was the case with the tariffs, feeding into the UK weighted average price, which was the lowest among the countries in our analysis, at £20 a month, a £1 a month fall since July 2011 as a result of the exclusion of Virgin Media’s lowest cost service from the calculation (as it was more than twice the lowest available from BT and TalkTalk) and TalkTalk introducing a line rental pre-payment tariff. The bundling of calls with line rental in the UK meant that the weighted
average fixed voice cost for Basket 2 was only 1% higher than for Basket 1, despite this basket including almost twice as many outgoing call minutes (in all of the other comparator countries except Spain the weighted average fixed-line voice cost of Basket 2 were more than 30% higher than for Basket 1). Germany had the largest increase in the weighted average cost of the fixed voice element of the basket, at almost 150%. This was because the lowest-cost option for this basket (and Baskets 4 and 5) in 2011 was a Freenet VoIP service which was withdrawn in the year to July 2012.

The lowest weighted average single-service costs for the mobile elements of the basket (two handsets with low voice and SMS use) were in the UK and France (at £20 and £23 a month respectively), while the largest fall in the weighted average cost of the mobile requirement of the basket was in Germany, where it fell by £8 a month (23%) to £27 a month as a result of all three providers feeding into the weighted average (Vodafone, T-Mobile and O2) introducing lower-cost tariffs. The highest weighted average mobile costs were in the US, at £62 a month, for the reasons stated in Section 2.1.3.

The UK had the lowest weighted average price for the fixed broadband element of Basket 2 in July 2012 at £16 a month, £1 a month less than in 2011 for two reasons: BT reduced the price of its ADSL service (and introduced an offer giving three months free rental) and Sky withdrew its stand-alone fixed broadband service, meaning that a lower–cost (discounted) O2 service fed into the weighted average. Virgin Media increased the price of its stand-alone basic cable broadband service during the year, although in 2012 this was an ‘up to’ 30Mbit/s connection (rather than ‘up to’ 10Mbit/s as in 2011). The largest increase in the weighted average cost of the fixed broadband element of the basket, in the year to July 2012, was in France (where it increased by 15% to £20 a month). This was as a result of Orange increasing the monthly fee of its Decouverte Internet 8 Megamax with Livebox service from €16 to €21 during the year.

This basket contains the same basic free-to-air digital television service as Basket 1.

**Figure 2.15  Basket 2: ‘weighted average’ single-service pricing**

![Graph showing monthly cost (£) for various services in different countries]

**Source:** Ofcom using data supplied by Teligen

**Note:** Weighted average of best-value tariff from each of the three largest operators by market share in each country; July 2011 and July 2012; PPP adjusted

The cheapest best-offer cost of fulfilling the requirements of Basket 2 in July 2012 was in the UK at £53 a month, £1 a month less than was the case in July 2011.

In all of our comparator countries the lowest prices available for Basket 2 involved buying fixed broadband services as part of a bundle. In Italy the best-offer price included buying a
Wind (Infostrada) bundle of fixed voice, fixed broadband and mobile services (Super Tutto Incluso L), while in all of our other comparator countries it involved buying a double-play bundle of fixed voice and fixed broadband services (Figure 2.16). In the UK the monthly cost of the combined fixed voice and broadband service (including line rental) was £23 in 2012, £2 a month less than in 2011, as the introduction of a line rental pre-payment tariff made TalkTalk’s Essentials (with Line Rental Saver) + 100 Mobile Minutes Boost service the lowest-cost option. The monthly cost of this bundle was £6 a month (21%) less than the lowest possible cost of buying the bundle using stand-alone services. The greatest difference between the cost of fulfilling the basket’s fixed voice and fixed broadband requirements using stand-alone and bundled services was in Germany, where bundled services provided by Kabel BW were £27 a month (52%) cheaper than the lowest-cost combination of stand-alone products.

The basic fixed broadband requirements of this basket (a connection with an ‘up to’ speed of at least 4Mbit/s headline speed and 5GB of data use) meant that most of the fixed broadband services in our six countries were sufficient to fulfil these requirements. In the US the fixed broadband connections in the ‘best-offer’ service combination were provided using FTTx, while in Germany they were provided over a cable network. In the UK, France, Italy and Spain the broadband connections were provided using ADSL, meaning that the actual speeds received by consumers are likely to be significantly different to those advertised; the performance of ADSL connections is highly dependent on the length and quality of the copper telephone line between the local telephone exchange and the customer premises.

The lowest best-offer prices for the mobile services required by this basket were found in the UK (£18 a month using T-Mobile’s Pay Monthly 7 service) and France (£20 a month using Orange’s Forfait M6 Mobile bloque 1h SIM service), while the highest cost was in the US (£48 a month using AT&T’s 10c/Minute Plan + 200 Messages tariff) for the same reasons as those detailed for Basket 1.

Figure 2.16  Basket 2: comparative ‘best offer’ pricing

<table>
<thead>
<tr>
<th>Service Type</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV hardware</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>TV licence</td>
<td>54</td>
<td>53</td>
</tr>
<tr>
<td>Pay TV</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>Fixed broadband</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Mobile</td>
<td>66</td>
<td>65</td>
</tr>
<tr>
<td>Fixed voice</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>Fixed voice, broadband and mobile access</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Fixed voice &amp; broadband access</td>
<td>71</td>
<td>71</td>
</tr>
</tbody>
</table>

Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2011 and July 2012; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service

Basket 3: A mobile ‘power user’

The third basket represents a single-person household typical of a young professional person who lives alone. This person lives in a mobile-only household and is a heavy user of...
both a mobile phone and of mobile broadband (using a mobile ‘dongle’ to connect to the internet on a laptop computer).

The ‘weighted average’ basket analysis in this report includes the ‘best offer’ single service cost of the mobile broadband element of the baskets, as the relatively narrow range of tariffs available from operators in many countries makes it difficult to produce a meaningful ‘weighted average’ figure.

**Figure 2.17 Composition of Basket 3**

<table>
<thead>
<tr>
<th>Fixed-line voice</th>
<th>Fixed broadband</th>
<th>Mobile</th>
<th>Mobile broadband</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a</td>
<td>n/a</td>
<td>516 call minutes</td>
<td>5GB over 30 days per month</td>
<td>Basic pay-TV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 SMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1GB data</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Ofcom*

The cheapest weighted average cost of fulfilling the requirements of Basket 3 in July 2012 was in the UK at £100 a month, unchanged from 2011; a £1-a-month increase in the mobile handset element of the basket was offset by a fall in the cost of the mobile broadband element.

There were larger variations between countries in the total cost of this basket than for any other basket, ranging from £100 in the UK to £212 in Germany, driven primarily by large variations in the cost of the mobile phone element, which was the largest component of the total weighted average basket cost in all of our comparator countries (Figure 2.18). The UK offered significantly lower mobile handset prices than any of the other five countries included in the analysis for the high usage required by this basket, with the weighted average (£55 a month) being 23% lower than in the next least-expensive country (France, at £68 a month). Mobile phone prices in the US compared more favourably for this basket than for the lower-use connections (where it was most expensive); again, because US contract tariffs typically include a large ‘bucket’ of (incoming and outgoing) minutes. However, the US remained the third most expensive country after Germany and Spain, in part because of comparatively high data charges.

Prices for the mobile handset element of this basket fell by the greatest amount (£17 a month), in France in the year to July 2012 (a 20% fall), as all three providers with services feeding into the weighted average (Orange, SFR and Bouygues Telecom) introduced new tariffs which made fulfilling the basket’s mobile handset requirements cheaper. The weighted average monthly cost of the basket’s mobile handset use fell by £16 a month (18%) to £73 in Italy, as the cost of using TIM’s tariffs to fulfil the basket’s requirements fell by 26% in the year to July 2012, and because of the introduction of a new SIM-only tariff (*All Inclusive Smart SIM only + Noi Tutti*) by Wind. This meant that the lowest-cost option to fulfil the basket’s requirements fell from among Wind’s tariffs fell, and as a result was less than half that of Vodafone’s lowest-cost option, meaning that the latter fell out of the weighted average cost calculation, having a further downward effect on the average.

There were also large variations in the cost of mobile broadband prices between the countries, with prices for this high-usage connection (5GB over 30 days during the month) being lowest in Italy, at £13 a month, and highest in the US, at £41. Low prices in Italy (and the UK where they were second-lowest at £15 a month) indicate that the competitive dynamics that are delivering lower prices for mobile phone tariffs are also reflected in mobile broadband. The only comparator country where the cost of the mobile broadband element of the basket increased in the year to July 2012 was Spain, where it grew by £16 a month (75%) as a result of Movistar withdrawing its *Tarifa MIT 35* service (which had offered 5GB.
of data for €17.50 in 2011) making a more expensive Vodafone service (*Internet Movil 5GB at €35 a month with 50% off for the first three months*) the lowest-cost option for this usage profile.

Basket 3 also includes a basic ‘entry-level’ pay-TV service, which is defined as the lowest subscription required to receive channels in addition to those available on free-to-view television. Because of the variation in numbers and types of channels, and quality of programming, like-for-like comparison is more problematic than for telecoms services, but lowest prices were available in the UK, Spain and France (see Section 2.1.3 above for a discussion of TV pricing, including ‘entry-level’ pay-TV services).

**Figure 2.18 Basket 3: ‘weighted average’ single-service pricing**

| Source: Ofcom using data supplied by Teligen |
| Note: Weighted average of best-value tariff from each of the three largest operators by market share in each country; July 2011 and July 2012; PPP adjusted; the figure for mobile broadband is the best-offer single service cost |

The cheapest best-offer cost of fulfilling the requirements of Basket 3 in July 2012 was in the UK at £84 a month, £3 a month less than in July 2011.

In none of our comparator countries did the best-offer combination of services to fulfil the requirements of Basket 3 involve buying bundled services, in effect meaning that Figure 2.19 compares the single service best-offer tariffs discussed previously in this section of the report. There was less variation between the weighted average best price and the best-offer combination than was the case for the other baskets, because Basket 3 includes a relatively low number of services and because we have used ‘best offer’ single service broadband prices in the ‘weighted average’ analysis (for the reasons outlined previously).
Basket 4: A family household with multiple needs

Basket 4 represents a family of two parents and two teenage children, each with their own mobile handset but with different mobile usage profiles, with the adults using more voice and the children more messaging. However, they are also heavy users of the fixed-line phone and the internet, requiring a minimum headline connection speed of ‘up to’ 8Mbit/s, and subscribe to entry-level pay-TV services with a DVR.

Figure 2.20 Composition of Basket 4

Source: Ofcom

The UK had the lowest weighted average prices for this basket at £145 a month, while the highest prices were found in the US at £314 a month.

Variations in cost between countries were primarily driven by the mobile phone costs, which accounted for over half of the total basket cost in all of our comparator countries in 2012, except France and Italy (Figure 2.21).
This basket has the highest fixed voice call use, at almost 600 minutes a month, and the UK had the lowest weighted average fixed voice cost among our countries in 2012, at £21 a month. This was due to the exclusion of Virgin Media’s lowest cost service from the calculation (as it was more than twice the lowest available), the availability of line rental pre-payment tariffs in the UK, and because the tariffs feeding into the UK weighted average included additional bolt-ons, which enabled savings on various elements of the basket’s use, such as the cost of calls to mobile phones and international destinations. The highest cost of the fixed-line element of the basket was in Italy at £48 a month, £10 a month higher than it had been in 2011, largely due to Telecom Italia (with 52% market share) introducing significant increases to its out-of-bundle call charges.

In most countries, while the lowest fixed voice prices tended to be offered by alt-net providers, the ‘weighted average’ was to a large extent a reflection of the ‘best value’ tariffs available from the incumbent in each country (which had a market share of over 50% in every country except the US). For Basket 4 the lowest price available from the UK incumbent, BT (which included its Line Rental Saver pre-payment option), was 36% less than the next lowest-cost option from an incumbent, which was offered by Movistar in Spain. The lowest-cost option from any provider was from TalkTalk in the UK, at £20 a month, and again, this included a line rental pre-payment option.

This basket includes four mobile phones, one with relatively high voice use, low SMS use and 300MB of data, one with average voice use and high SMS use, and two with low voice use and average SMS use. The lowest total ‘weighted average’ price for all four of the connections included in the basket was found in the UK, at £79 a month, while the highest overall weighted average cost of fulfilling the mobile requirements of the basket was in the US, where it was over two-and-a-half times that in the UK, at £204. Most of the tariffs (20 out of 34) feeding into the weighted average prices for the two connections with the lowest use (Connections 3 and 4) were pre-pay, while eight of the 14 pay-monthly tariffs feeding into the averages for these connections were SIM-only deals. Conversely, just five of the 35 tariffs feeding into the weighted averages for the two higher-use connections included in the basket (Connections 5 and 7) were pre-pay, with the remaining 30 being post-pay contracts (10 of which were SIM-only).

The lowest fixed broadband prices for this basket were found in the UK and France (at £15 and £20 a month respectively) and in both countries the weighted average costs (and the three tariffs feeding into them) were exactly the same as for Basket 2, despite the higher speed and larger data-use requirements. This reflects the fact that most broadband tariffs in these countries offer a headline speed of at least 8Mbit/s and include at least the 15GB data usage sufficient to satisfy the fixed broadband elements of this basket. Weighted average monthly fixed broadband prices were highest in Spain (£44) and Germany (£35) among our comparator countries in July 2012.

The television element in this basket is the same as that in Basket 3 (basic pay-TV), but this basket also requires a digital video recorder (DVR). In all of our countries the inclusion of a DVR in the TV element of the basket led to an increase in the weighted average cost of the service, and this ranged from £1 a month in the UK to £12 a month in Spain (these differences being driven by whether the pay-TV services included in the weighted average of the TV element of Basket 3 provided a DVR as standard).
Figure 2.21 Basket 4: ‘weighted average’ single service pricing

Source: Ofcom using data supplied by Teligen

Note: Weighted average of best-value tariff from each of the three largest operators by market share in each country; July 2011 and July 2012; PPP adjusted

The cheapest best-offer cost of fulfilling the requirements of Basket 4 in July 2012 was in France, at £94 a month. The UK had the second-lowest best-offer price, at £112 a month; £9 a month less than it cost in July 2011.

As was the case with Basket 2, there were substantial savings to be made by buying the services required by Basket 4 as part of a bundle, and among our six countries the difference between the best-offer price and the lowest cost of fulfilling the basket’s requirements using stand-alone services ranged from £6 a month (5%) in the UK to £80 a month (40%) in Italy (Figure 2.22). The least expensive way of fulfilling Basket 4’s requirements in France (where the lowest overall prices were available) involved purchasing a Bouygues Telecom quad-play bundle of fixed voice, fixed broadband, mobile and pay-TV services, which had a monthly fee of €59.80 discounted to €51.80 for a year.

In Germany and Spain the lowest-cost option included buying a triple-play bundle of fixed voice, fixed broadband and pay-TV, while in Italy it involved purchasing a triple-play bundle of fixed voice, fixed broadband and mobile services. The lowest-cost options in the UK and the US included a fixed line and broadband double-play offer, and stand-alone pay-TV and mobile services (in the UK the bundle was TalkTalk’s Essentials with Line Rental Saver service, with bolt-ons giving inclusive anytime calls, inclusive calls to 36 international destinations and 100 minutes of calls to mobiles).

While the basic requirements of the pay-TV element of Basket 4 are the same as for Basket 3, it is notable that many of the bundled tariffs provide services in excess of the least expensive available on a stand-alone basis. For example, the quad-play offer in France included 108 basic channels and 12 premium channels, compared to 18 basic channels and five premium channels for the lowest-price stand-alone service, and the triple-play service in Spain included 83 basic channels, compared to 40 basic channels and two premium channels for the lowest-price stand-alone service.
Figure 2.22  Basket 4: comparative ‘best-offer’ pricing including multi-play tariffs

[Graph showing monthly costs in £ for various services in different years for different countries.

Source: Ofcom using data supplied by Teligen
Note: Lowest tariff available for each service type from any of the largest operators by market share in each country, July 2011 and July 2012; PPP adjusted; where a service is included in a bundle any additional usage charges are recorded separately against the relevant service.

Basket 5: An affluent two-person household with high use of mobile, internet and HD premium TV

Basket 5 is typical of an affluent young couple of high-end users who have low price sensitivity. They both have mobiles and are fairly high users of mobile voice and data services and, to a lesser extent, SMS. They have a fixed line with relatively low use, are heavy internet users with a superfast broadband connection (i.e. with a headline speed of 30Mbit/s or more), have a premium television package for watching HD sport and the latest films, and also a digital video recorder (DVR).

Figure 2.23  Composition of Basket 5

<table>
<thead>
<tr>
<th>Fixed-line voice</th>
<th>Fixed broadband</th>
<th>Mobile</th>
<th>Mobile broadband</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>246 call minutes</td>
<td>10GB per month minimum 30Mbit/s connection</td>
<td>Connection 1 376 call minutes 80 SMS 300MB data</td>
<td>3GB over 25 days per month</td>
<td>HD pay-TV with recorder, movies and football</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Connection 2 188 call minutes 20 SMS 100MB data</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Ofcom

As previously mentioned, it should be noted that the ‘weighted average’ basket analysis in this report includes the ‘best offer’ single-service cost of the mobile broadband element of the baskets, as the relatively narrow range of tariffs available from operators in many countries make it difficult to produce meaningful ‘weighted average’ figures.

The UK offered the lowest ‘weighted average’ pricing for Basket 5, at £200 a month, with prices for all services being the lowest in our comparator countries except for mobile broadband (where it was the second cheapest) and pay-TV (Figure 2.24). However, the UK was the only country where the weighted average price of the basket increased in 2012, and
the decline in the weighted average cost of the basket was highest in France in 2012, at 17%.

Prices for the fixed-voice component of Basket 5 were similar to those for Basket 1 in 2012, as levels of use were similar (at 246 and 223 outgoing call minutes per month respectively). The additional calls in Basket 5 (coupled with slightly different call patterns) meant that in all countries the cost of the fixed-line component of Basket 5 was higher than that of Basket 1, with the difference ranging from £2 a month in Germany and France to £7 in Italy, and the overall cost of Basket 5’s fixed-voice element ranged from £23 in the UK to £37 in Italy. France was the only country where the cost of the fixed-voice element of the basket fell in the year to July 2012 (it increased by 4% in the UK, the largest proportional increase among our six comparator countries).

The lowest average weighted cost of satisfying the mobile requirements of the basket (the first with 376 minutes of outgoing calls, 80 SMS and 300MB of mobile data use, and the second with 188 outgoing call minutes, 20 SMS messages and lower mobile data use at 100MB) was also in the UK in 2012, at £71 a month. As was the case in 2011, in 2012 the UK had the lowest weighted average prices for both connections, with the second lowest prices for each being found in France. However, the difference between the two sets of prices was much smaller in 2012: for the higher-use connection UK weighted average prices were 6% lower than those in France, while for the lower-use connection they were 8% lower; in 2011 these figures had been 49% and 31% respectively.

For the lower-use connection this was because the weighted average in France fell by £7 in the year to July 2012, while it fell by less than £1 in the UK; however, while the weighted average cost of the higher-use connection fell by £22 in France over the period, it increased by £12 in the UK, mainly due to the lowest-cost options, using O2 and T-Mobile’s tariffs, being significantly more expensive than those that were available in 2011. Weighted average prices for Basket 5’s mobile component were highest in the US, where the cost of fulfilling each of the basket’s connections was the highest among our countries. As discussed in Section 2.1.3 above, mobile services are comparatively expensive in the US as a result of the called-party-pays interconnection regime.

Basket 5 requires a fixed broadband connection with a minimum headline download speed of ‘up to’ 30Mbit/s (compared to 4Mbit/s for Basket 2 and 8Mbit/s for Basket 4) and 10GB of usage. None of the ISPs in Italy included in our analysis offered a service which fulfilled this requirement, so the fixed broadband element of Basket 5 in Italy includes lower-speed (‘up to’ 20Mbit/s) services. This means that the fixed broadband (and therefore total) prices for this basket in Italy are not directly comparable to those in our other countries. As was the case with the fixed broadband elements of Baskets 1 and 2, the weighted average cost of the broadband connection required by Basket 5 was lowest in the UK.

The medium-use mobile broadband connection included in this basket requires 3GB of data and use over 25 days a month. The lowest cost of providing this service was in Italy at £9 a month, while it was second lowest in the UK at £15 a month, unchanged from 2011.

Basket 5 also includes an HD premium pay-TV component. Among our comparator countries the most expensive weighted average costs for the package, including top-league football and a top price film/entertainment package required by the basket, were in the US (£84 a month rental), Spain (£65) and the UK (£62 a month). The pricing of the pay-TV element of this basket is largely a result of the way in which channels are bundled: in the UK and Spain the football and film content needed to fulfil the basket’s requirements comes bundled with large amounts of additional programming, whereas in Germany (where the TV rental was £34 a month) consumers can purchase the top matches within a monthly football ‘bundle’, and in Italy (£43 a month) the total number of matches available for viewing within a
package is relatively low. Prices in the UK are also inflated by the basket’s HD programming requirement; in all other countries HD is standard within premium packages, whereas in the UK, Sky, the largest pay-TV provider by market share, charges a £10 a month premium for HD services.

Comparisons with the US are hard to make as NFL viewing packages are wrapped up in many different ways and offered through a combination of pay-per-view and subscription.

**Figure 2.24 Basket 5: ‘weighted average’ single-service pricing**

The lowest best-offer pricing for Basket 5 was in the UK at £164 a month, £4 a month less than in 2011.

The UK and Germany were the only countries where the lowest-cost combination of services that fulfilled Basket 5’s requirements included a triple-play of fixed voice, fixed broadband and pay-TV. In the US the cheapest option was to purchase stand-alone services, while in Italy and Spain it was a double-play package of fixed line and fixed broadband plus the additional purchase of stand-alone pay-TV and mobile services. In France the lowest-cost option involved purchasing a quad-play of fixed voice, fixed broadband, pay-TV and mobile services in both 2011 and 2012; however, as the pay-TV offering included with these bundles was not sufficient to fulfil the basket’s requirements, it was also necessary to purchase a separate stand-alone HD premium pay-TV service. France had the lowest and second-lowest best-offer prices for Basket 5 in 2011 and 2012 respectively; despite the fact that this meant that the lowest-cost option in France included two separate pay-TV services.

The largest savings, compared to purchasing services on a stand-alone basis, were found in Germany, where the cost of the cheapest bundle of services was 15% (£36 a month) less than the cheapest combination of stand-alone services. In the UK this saving was £8 a month (5%). The steepest fall in the best-offer prices for Basket 5 in the year to July 2012 was in Germany, where the best-offer price fell by 24% (£62 a month) with the largest fall in cost (£49) being in the mobile element of the basket, as a result of mobile prices declining across all of the providers included in our analysis (mobile prices in Germany were the highest of all our countries in 2011).
2.1.5 Conclusion

Figure 2.26 summarises the pricing of each of our baskets across our six comparator countries. From this we are able to draw some general conclusions about the pricing of communications services in each country:

Prices in the UK compared favourably to those in the other five countries covered by our price benchmarking work. All five of the lowest ‘weighted average’ single-service prices and four of the lowest ‘best-offer’ (including multi-play) basket prices were found in the UK. France also performed well, having the lowest ‘best-offer’ (including multi-play) price for Basket 4 and the second lowest ‘weighted average’ prices for all five baskets. The Basket 4 ‘best-offer’ price in France was significantly (16%) cheaper than the UK, as a result of the availability of a low-cost quad-play bundle of fixed voice, fixed broadband, mobile and pay-TV services.

Low basket prices in the UK were largely due to the ‘weighted average’ and ‘best-offer’ mobile prices in the UK being the lowest among our six countries for all nine mobile connections included in the analysis (all five of the baskets include a mobile telephony element). In addition, the UK also benefited from low fixed voice and fixed broadband prices (having the lowest ‘weighted average’ and ‘best-offer’ prices for all of the connections used in our baskets) as well as low mobile broadband prices (it had the second lowest ‘best-offer’ costs for mobile broadband services, after Italy).

HD premium pay-TV services (including a recorder) were the main area where the UK did not perform well, with UK single-service prices being the third highest after the US and Spain (the lowest price for the service was found in Germany). As stated previously, it is difficult to produce like-for-like comparisons of these services, as the number of channels and the content which each package includes varies considerably, and it should be noted that Sky’s premium TV packages include more bundled channels than the football and films packages offered by pay-TV providers in other countries. This is due to Sky bundling a large number of channels in its premium pay-TV package, and because it charges its satellite TV customers an additional £10 a month to let them access premium channels in HD.
There is some evidence that UK communications services prices are increasing, in nominal terms at least. Figure 2.27 shows that in the year to July 2012 the weighted average cost of four of our five baskets increased in the UK, while in France (where weighted average prices were next lowest) the cost of all five fell. In the UK, the main driver behind rising weighted average basket prices were increases in mobile prices: the weighted average cost of more than half of the mobile connections increased in the year to July 2012, with these increases ranging from 5% to 31% in nominal terms.

Source: Ofcom using data supplied by Teligen
Figure 2.27 Change in ‘weighted average’ single service basket pricing, 2012

<table>
<thead>
<tr>
<th>Basket</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>ESP</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basket1</td>
<td>3.5%</td>
<td>-5.5%</td>
<td>-14.1%</td>
<td>3.2%</td>
<td>-3.2%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Basket2</td>
<td>-2.6%</td>
<td>-6.1%</td>
<td>7.7%</td>
<td>-7.2%</td>
<td>-2.9%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Basket3</td>
<td>0.3%</td>
<td>-14.3%</td>
<td>-1.7%</td>
<td>-8.7%</td>
<td>2.8%</td>
<td>-7.1%</td>
</tr>
<tr>
<td>Basket4</td>
<td>0.4%</td>
<td>-19.4%</td>
<td>-10.0%</td>
<td>-2.9%</td>
<td>-4.9%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Basket5</td>
<td>2.3%</td>
<td>-17.4%</td>
<td>-10.0%</td>
<td>-8.3%</td>
<td>-1.6%</td>
<td>-13.2%</td>
</tr>
</tbody>
</table>

Source: Ofcom using data supplied by Teligen

Figure 2.28 shows the percentage change in the single-service cost of the individual components of our baskets in the year to July 2012. This shows that there was a general downward trend in the price of these services across our countries during the period, with pay-TV being the only service for which prices increased in the majority of countries (the UK and France were the only nations where the total weighted average cost of the three pay-TV services required by our baskets fell in 2012). The UK was one of three of our countries (along with France and the US) where the total weighted average cost of the fixed voice elements of our baskets fell during the year, although the key driver of the UK fall was exclusion of Virgin Media’s lowest cost services from the ‘weighted average’ calculation for two of the baskets of use. The UK and the US were the only countries where the total weighted average cost of the nine mobile connections included in our analysis increased. France and Germany were the only nations where the total weighted average cost of the fixed broadband component of our baskets increased in 2012, and Spain was the only country where best-offer stand-alone mobile broadband prices increased during the year.

Figure 2.28 Change in the single service pricing of basket components: 2012

<table>
<thead>
<tr>
<th>Component</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>ESP</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed voice</td>
<td>-0.7%</td>
<td>-2.1%</td>
<td>90.6%</td>
<td>22.4%</td>
<td>1.9%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Mobile</td>
<td>10.4%</td>
<td>-25.2%</td>
<td>-20.5%</td>
<td>-9.7%</td>
<td>-7.6%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Fixed broadband</td>
<td>-16.7%</td>
<td>4.3%</td>
<td>10.4%</td>
<td>-30.5%</td>
<td>-13.5%</td>
<td>-29.0%</td>
</tr>
<tr>
<td>Mobile broadband</td>
<td>-4.2%</td>
<td>-23.4%</td>
<td>-5.3%</td>
<td>-3.7%</td>
<td>75.0%</td>
<td>-20.4%</td>
</tr>
<tr>
<td>Pay TV</td>
<td>-5.6%</td>
<td>-1.3%</td>
<td>13.9%</td>
<td>12.3%</td>
<td>5.3%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Source: Ofcom using data supplied by Teligen

Notes: Fixed voice, fixed broadband and pay-TV figures are the change in the total weighted average cost of fulfilling our basket’s requirements for those services; pay-TV figures include the licence fee; mobile figures are the change in the total weighted average cost of fulfilling the requirements of the nine mobile connections included in our baskets; mobile broadband figures are the change in the total single service ‘best offer’ cost of fulfilling the requirements of the baskets which include the service.

Fixed broadband services are frequently bought in conjunction with other communications services, and consumers in most of our comparator countries were able to make cost savings by purchasing the services required by the three baskets that included a fixed broadband connection as part of a bundle, rather than by purchasing the lowest-price single service combination. However, the potential savings available by bundling the services required for Baskets 2, 4 and 5 (which include a fixed-line broadband connection) varied
from country to country (Figure 2.29). In the UK, the savings that consumers get from purchasing these baskets of services in a bundle ranged from 5% for Baskets 4 and 5 to 10% for Basket 2, while among the other comparator countries it ranged from a 5% saving for Basket 5 in Spain to a 40% saving for Basket 4 in Italy.

Across all of the countries covered in this section of the report, Basket 5 in the US was the only one of our baskets which included a fixed broadband connection for which there were no savings to be made by buying a bundle of services.

Figure 2.29 Difference between best stand-alone service and best-offer prices including bundles

In the UK, the difference between the ‘weighted average’ and the ‘best offer’ pricing of the single services for our five baskets was among the lowest across our six countries, with ‘best offer’ prices being, on average, 19% lower than the ‘weighted average’ for our five baskets (only in Spain was this figure lower, at 18%). This indicates that while there is a comparatively narrow range of prices offered by operators in the UK, most consumers will be able to save money by shopping around for the provider and tariff that best suits their needs (Figure 2.30). By way of comparison, the largest difference between weighted average and best-offer basket pricing was in Italy, at 34%. In the UK, the single-service offerings with the widest range of prices were for mobile connections.

Figure 2.30 Difference between ‘weighted average’ and ‘best-offer’ pricing

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>ESP</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basket 1</td>
<td>-10%</td>
<td>-5%</td>
<td>-9%</td>
<td>-19%</td>
<td>-18%</td>
<td>-22%</td>
</tr>
<tr>
<td>Basket 2</td>
<td>-21%</td>
<td>-22%</td>
<td>-39%</td>
<td>-39%</td>
<td>-35%</td>
<td>-30%</td>
</tr>
<tr>
<td>Basket 3</td>
<td>-16%</td>
<td>-11%</td>
<td>-13%</td>
<td>-21%</td>
<td>-3%</td>
<td>-14%</td>
</tr>
<tr>
<td>Basket 4</td>
<td>-23%</td>
<td>-47%</td>
<td>-29%</td>
<td>-51%</td>
<td>-30%</td>
<td>-29%</td>
</tr>
<tr>
<td>Basket 5</td>
<td>-18%</td>
<td>-19%</td>
<td>-19%</td>
<td>-25%</td>
<td>-8%</td>
<td>-17%</td>
</tr>
</tbody>
</table>

Source: Ofcom using data supplied by Teligen
3 Television and audio-visual
3.1 Market developments in the TV and audio-visual markets

3.1.1 Industry metrics and summary

The TV and audio-visual chapter focuses on three topics – key market developments in the sector, industry revenue, and trends among TV and audio-visual consumers. It includes a global overview and country-level analysis of the 17 comparator countries.

- **Key Market Developments** details some of the major TV and audio-visual industry trends during the past year, covering analysis of global revenue, take-up of digital television and technology developments.

- The **TV and audio-visual industries** section focuses on key revenue trends in comparator countries, including financial results for major pay-TV and free-to-air broadcasters.

- The **TV and audio-visual consumer** section examines patterns of digital television take-up, including the adoption of high-definition television services and digital video recorders. This section also examines how viewers in different countries consume broadcast television channels and TV online.

**Figure 3.1 TV industry metrics**

```
<table>
<thead>
<tr>
<th>Country</th>
<th>TV revenue (£bn)</th>
<th>Revs change (% YOY)</th>
<th>Revenue per cap (£)</th>
<th>Advertisement</th>
<th>Subscription</th>
<th>From public funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>11.3</td>
<td>2.7</td>
<td>180</td>
<td>56</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>FRA</td>
<td>10.2</td>
<td>2.6</td>
<td>155</td>
<td>46</td>
<td>76</td>
<td>43</td>
</tr>
<tr>
<td>GER</td>
<td>11.6</td>
<td>2.7</td>
<td>142</td>
<td>43</td>
<td>48</td>
<td>51</td>
</tr>
<tr>
<td>ITA</td>
<td>7.8</td>
<td>-2.7</td>
<td>127</td>
<td>63</td>
<td>40</td>
<td>24</td>
</tr>
<tr>
<td>USA</td>
<td>100</td>
<td>2.8</td>
<td>6.5</td>
<td>115</td>
<td>204</td>
<td>24</td>
</tr>
<tr>
<td>CAN</td>
<td>4.4</td>
<td>4.4</td>
<td>-4.9</td>
<td>36</td>
<td>91</td>
<td>18</td>
</tr>
<tr>
<td>JPN</td>
<td>31.1</td>
<td>-4.9</td>
<td>5.7</td>
<td>111</td>
<td>95</td>
<td>11</td>
</tr>
<tr>
<td>ESP</td>
<td>5.3</td>
<td>5.4</td>
<td>5.1</td>
<td>115</td>
<td>27</td>
<td>91</td>
</tr>
<tr>
<td>AUS</td>
<td>4.8</td>
<td>5.1</td>
<td>1.6</td>
<td>49</td>
<td>66</td>
<td>27</td>
</tr>
<tr>
<td>NED</td>
<td>2.6</td>
<td>10.4</td>
<td>12.7</td>
<td>61</td>
<td>96</td>
<td>41</td>
</tr>
<tr>
<td>IRL</td>
<td>1.8</td>
<td>1.8</td>
<td>14.0</td>
<td>37</td>
<td>111</td>
<td>41</td>
</tr>
<tr>
<td>RUS</td>
<td>0.9</td>
<td>5.4</td>
<td>12.4</td>
<td>20</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>BRD</td>
<td>12.4</td>
<td>12.4</td>
<td>14.4</td>
<td>20</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>CHN</td>
<td>3.6</td>
<td>14.2</td>
<td>5.5</td>
<td>102</td>
<td>26</td>
<td>6</td>
</tr>
</tbody>
</table>

*TV licence fee:¹

<table>
<thead>
<tr>
<th>Country</th>
<th>TV licence fee (£)</th>
<th>DSO date</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>146</td>
<td>2012</td>
</tr>
<tr>
<td>FRA</td>
<td>107</td>
<td>2011</td>
</tr>
<tr>
<td>GER</td>
<td>187</td>
<td>2008</td>
</tr>
<tr>
<td>ITA</td>
<td>97</td>
<td>2011</td>
</tr>
<tr>
<td>USA</td>
<td>n/a</td>
<td>2011</td>
</tr>
<tr>
<td>CAN</td>
<td>n/a</td>
<td>2011</td>
</tr>
<tr>
<td>JPN</td>
<td>n/a</td>
<td>2011</td>
</tr>
<tr>
<td>ESP</td>
<td>18</td>
<td>2013</td>
</tr>
<tr>
<td>AUS</td>
<td>91</td>
<td>2010</td>
</tr>
<tr>
<td>NED</td>
<td>199</td>
<td>2006</td>
</tr>
<tr>
<td>IRL</td>
<td>139</td>
<td>2007</td>
</tr>
<tr>
<td>RUS</td>
<td>42</td>
<td>2012</td>
</tr>
<tr>
<td>BRD</td>
<td>199</td>
<td>2012</td>
</tr>
<tr>
<td>CHN</td>
<td>139</td>
<td>2012</td>
</tr>
</tbody>
</table>

*No.1 channel share (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>DTV take-up (%)</th>
<th>Pay TV take-up (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>99</td>
<td>55</td>
</tr>
<tr>
<td>FRA</td>
<td>97</td>
<td>62</td>
</tr>
<tr>
<td>GER</td>
<td>66</td>
<td>64</td>
</tr>
<tr>
<td>ITA</td>
<td>93</td>
<td>35</td>
</tr>
<tr>
<td>USA</td>
<td>89</td>
<td>89</td>
</tr>
<tr>
<td>CAN</td>
<td>87</td>
<td>93</td>
</tr>
<tr>
<td>JPN</td>
<td>87</td>
<td>63</td>
</tr>
<tr>
<td>ESP</td>
<td>83</td>
<td>34</td>
</tr>
<tr>
<td>AUS</td>
<td>100</td>
<td>27</td>
</tr>
<tr>
<td>NED</td>
<td>77</td>
<td>99</td>
</tr>
<tr>
<td>IRL</td>
<td>77</td>
<td>76</td>
</tr>
<tr>
<td>RUS</td>
<td>62</td>
<td>78</td>
</tr>
<tr>
<td>BRD</td>
<td>69</td>
<td>23</td>
</tr>
<tr>
<td>CHN</td>
<td>77</td>
<td>64</td>
</tr>
</tbody>
</table>

*Source: IDATE / industry data / Ofcom / Mediametrie, Eurodata TV Worldwide. Figures have been converted to GBP using IMF 2011 average exchange rates.¹The Japanese licence fee costs £117 in terrestrial households or £200 to receive a larger number of channels via satellite.²Refers to average TV viewing per head, per day.
Some of the key market developments seen during the past year include:

- **Global TV revenues increased in 2011, by 6.7% year on year, to £258bn.** Despite the challenging economic conditions, global TV revenues have increased by 5.2% on a compound annual basis over the four-year period since 2007.

- **Global subscription revenues show little sign of slowing down and increased for the fourth year in a row,** from £95bn in 2007 to £133bn in 2011 – a compound annual growth rate of 9%. At £133bn, income generated from subscription fees represented over half (52%) of the total global TV revenue of £258bn in 2011. In 2010 and 2007 subscription income as a proportion of total revenue was lower, at 50% and 45% respectively.

- **The global recovery in net advertising revenues seen in 2010 has been sustained in 2011,** with revenues increasing 3.5% (or £3bn) to £105bn year on year. Advertising income as a proportion of global TV revenue has declined over the past four years (from 46% in 2007 to 41% in 2011) while income from TV subscriptions has seen a corresponding increase over the same time period.

- **By the end of 2011, the vast majority of homes had digital television in the UK, France and Spain.** In the UK, 99% of TV homes had access to DTV at the end of 2011, a figure surpassed only by Spain where, following the completion of switchover, access to DTV stands at 100%. In France, penetration of digital TV stood at 97% in 2011.

- **Over a quarter (28%) of primary TV sets receive an IPTV service in France, where this constitutes a mainstream alternative to DTV.** In most other countries, including the UK, IPTV penetration is much lower, due in part to the challenges of gaining a foothold in the face of a range of well-established competing digital platforms.

- **The UK also has one of the highest proportions of TV homes with high definition among the countries included in our research - at 41%, higher than France (18%), Germany (28%) and Japan (31%), but behind the US (49%).**

- **People in the UK and France have the highest ownership of connected TVs among the countries included in our research.** In both the UK and France, 15% of respondents claimed to have a television that connects to the internet, providing access to features such as catch-up services, social networking, customised electronic programming guides (EPG) and gaming.

- **Digital video recorders are widely available in the UK, with 39% of people in our research claiming to own a DVR device.** Of the nine countries surveyed, the UK records the greatest uptake, followed by the US (32%), Australia (29%) and China (27%).

- **UK consumers are more likely to access TV content over the internet than those in other countries in our research.** Almost a quarter (23%) of UK internet users claimed to do this every week – driven by the popularity in the UK of internet TV catch-up services from the free-to-air broadcasters, such as BBC iPlayer, 4oD and ITV Player.
3.1.2 Global TV revenues increased in 2011, driven by strong growth in subscription income

Ofcom estimates that global TV revenues increased in 2011, by 6.7% year on year, to £258bn. Despite the challenging economic conditions, global TV revenues have increased on average by 5.2% per annum over the four-year period since 2007.

Our analysis of global television revenues incorporates the three main components of net advertising revenue, TV licence fees and subscriptions - it excludes revenues generated from pay-per-view (PPV), video on demand (VOD) and over the top/streaming (OTT) services. However, data from PwC’s Global Media and Entertainment Outlook: 2012-2016 indicates that global income for these services combined has increased by 21.4% on a compound annual basis over the past four years, from £2.2bn in 2007 to £5.8bn in 2011, as they have become an increasingly intrinsic part of many pay-TV offerings. However, the amount of income generated by these services is still significantly below the three main components of TV revenue.

**Figure 3.2 Global TV revenues**

Source: Ofcom analysis based on data taken from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. IDATE / industry data / Ofcom for US and UK revenues. Notes: Net TV advertising revenues for Russia have been calculated by discounting 15% of TV advertising spending to remove agency fees and production costs. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011.

The 6.7% increase in global television revenues, to £258bn in 2011, was driven primarily by continued growth in subscription income, combined with a sustained recovery in advertising revenues.

Despite difficult trading conditions, global subscription revenues showed little sign of slowing down and increased for the fourth year in a row, from £121bn in 2010 to £133bn in 2011 – a year-on-year increase of 10.5%. At £133bn, income generated from subscription fees represented over half (52%) of the total global TV revenue of £258bn in 2011; in 2010 and 2007 subscription income as a proportion of total revenue was lower, at 50% and 45% respectively.

Following a decline in 2009, global net television revenues (NAR) bounced back in 2010, with an 11.8% increase to £102bn. This recovery has been sustained in 2011, with revenues increasing by 3.5% (or £3bn) to £105bn.
Public funding, usually sourced from TV licence fees or government grants, remained unchanged in 2011 at £20bn. Revenue from this source has also been relatively stable over the four-year period, growing on an average compound basis by 1.4% per year from £19bn in 2007.

**Figure 3.3** TV industry revenues, by source

![Figure 3.3 TV industry revenues, by source](image)

Source: Ofcom analysis based on data taken from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. IDATE / industry data / Ofcom for US and UK revenues. Notes: Net TV advertising revenues for Russia have been calculated by discounting 15% of TV advertising spending to remove agency fees and production costs. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011.

### 3.1.3 Digital take-up slows down as more countries reach switchover

In 2011, take-up of digital television (DTV) slowed overall. In only a few comparator countries (all approaching scheduled switchover from analogue) did the proportion of primary TV sets receiving DTV increase more quickly in 2011 than in 2010. Levels of DTV conversion fell into three broad categories:

- **Almost complete digital conversion.** In Spain (100%), the UK (99%) and France (97%), all or nearly all main TV sets received DTV in 2011. Since Spain’s switchover in 2010, the remaining 2% of analogue households have converted to receive DTV. In the UK, almost all households received DTV in their homes at the end of 2011.

- **DTV available in 60% to 80% of homes.** In the Netherlands (77%), Japan (77%), Brazil (69%), Sweden (67%), Germany (66%) and Poland (62%) the majority of households receive DTV. In many of these countries terrestrial broadcasting is less popular than in markets like the UK and Spain, and DTV faces greater competition from competitors such as analogue cable.

- **Analogue platform predominating.** In developing TV markets like China (DTV take-up at 43%), Russia (40%) and India (40%), the majority of primary TV sets are currently analogue. Switchover is scheduled for 2013 in India and 2015 in China and Russia, so higher rates of switchover are likely in coming years.

The rate of switchover to digital slowed in the growing number of comparator countries where conversion was almost complete. Year-on-year growth in the proportion of TV
households receiving DTV on primary sets was 2pp in Spain and 3pp in France in 2011, whereas it was 14pp in both in 2010. In Ireland both DTV penetration (90%) and percentage increase in converted households (8pp) were high, but the increase was lower than it had been between 2009 and 2010 (18pp).

By contrast, in Australia the pace of digital conversion quickened in 2011 (11pp year-on-year growth), despite high levels of digital penetration (83%). With switchover scheduled for 2013, Australia is likely to maintain high rates of conversion in the near future. Poland was the only other non-BRIC country where households converted to DTV more quickly than in previous years, although from a lower base of DTV households.

Among countries where 60% to 80% of households receive DTV (Germany, the Netherlands, Sweden and Brazil), the speed at which households adopted DTV slowed in 2011. In Brazil the proportion of DTV households increased by 20pp in 2009-2010, but by 10pp in 2011 (still the fastest rate of change in this category of countries). In Germany the decline in the speed of digital adoption was particularly pronounced: the proportion of digital households grew by 4pp in 2011, in comparison with a 12pp increase in 2010.

Figure 3.4 Take-up of digital and analogue television: 2011

Source: IDATE / industry data / Ofcom.

Since 2006, eight countries have completed digital terrestrial switchover. France, Canada and Japan reached switchover in 2011, as did the Netherlands, Sweden, Germany, the US and Spain in previous years. However, 23% of TV households in Japan did not receive DTV on their primary set, nor did large minorities of households in the Netherlands, Sweden and Germany. The popularity of analogue cable in these countries may be slowing the conversion to digital.

There are a number of terrestrial switchover initiatives across several TV markets, scheduled for completion in 2012 and 2013. Whereas digital conversion in the UK was largely complete in 2011, ready for switchover in 2012, in India, where the scheduled deadline for completion is 2014, it stood at just 40%. China and Russia are scheduled to switch in 2015.
In India, Russia and China, growth in the proportion of DTV homes accelerated slightly in 2011. In all three it stood at 9pp, whereas in 2010 the increase had been 8pp. In 2011 households in BRIC countries converted fastest among all the comparator countries other than Australia, despite the deceleration of the speed of conversion in Brazil. However, the proportion of homes in Russia, India and China receiving DTV is still comparatively low, with 60% of primary TV sets remaining analogue. Russia and China are not scheduled to complete switchover until 2015, the latest deadlines set by any of the comparator countries.

Over a quarter of homes in France now have access to an IPTV service

Internet protocol television (IPTV) is the term used for television and/or video signals that are delivered to subscribers or viewers using internet protocol (IP) technology, and is typically used in the context of streamed linear and on-demand content.

In 2011, IPTV developed further as a competitor to digital platform technologies, encouraged by the marketing of triple-play bundled services in countries with high-bandwidth infrastructure. In France, where well over a quarter of primary TV sets (28%) can receive an IPTV service, it constitutes a mainstream alternative to DTV. IPTV has penetrated the
market more quickly here than in any other comparator country, benefiting from early introduction, competition between providers on price and the low availability of cable services.

Take-up of IPTV services exceeded 4% in seven of the comparator countries, reaching 5% in Canada (it was under 1% in the UK). In Sweden and the Netherlands, the proportion of main sets connected to IPTV exceeded 10% for the first time (11% in both). Uptake increased particularly quickly in the Netherlands, where just 5% of main sets could access IPTV a year earlier. This was a faster rate of growth than that seen in any other comparator country, including France. In the Netherlands, where IPTV increased by 6 percentage points in 2011, IPTV subscriptions including catch-up TV, video on demand and HD quality are available at a cost comparable to that for basic digital cable, which is not available across the whole country.

**Figure 3.7**  IPTV take-up on main TV sets in countries where take-up exceeded 4% in 2011

![IPTV take-up on main TV sets in countries where take-up exceeded 4% in 2011](chart)

**Source**: IDATE / industry data / Ofcom. Notes: The chart only shows countries where IPTV take-up exceeded 4% of television homes in 2011.

### 3.1.4 Continued growth in value-added services on DTV

The transition to digital television continues in the countries covered in this report, with eight countries now complete and three more countries switching over in 2012. As digital TV becomes the norm, operators are turning to value-added services such as high definition television (HDTV), digital video recorders (DVR) and on-demand services, in order to ensure their propositions remain distinctive.

The UK has one of the highest proportions of TV homes with high definition among the countries included in our research. At 41%, take-up of HDTV in the UK is higher than France (18%), Germany (28%) and Japan (31%), but behind the US (49%).
Figure 3.8 Take up of High Definition TV

Among European nations, DTT is now the most popular way of receiving high definition content in the home, accounting for 16.4 million homes. Satellite was the second most popular platform, with a further 15.6 million households; digital cable and IPTV commanded a further 11.2 million between them.

In the US, cable was the most popular platform for HD services (accounting for 24.6 million homes), followed by satellite and DTT. In Japan, cable's contribution to the total number of HD homes remained very small in 2011, at 0.6 million homes. Of the 23 million HD homes in Japan, 11.9 million are accounted for by the satellite platform, with DTT making up a further 10.8 million.

Source: Ofcom Consumer Research October 2012
Base: Total sample size UK=1065, France=1016, Germany=1024, Italy=1015, US=1010, Japan=1004, Australia=1007, Spain=1001, China=1010
Q: Which of the following devices do you own and personally use?
**Digital video recorders are available in nearly four in ten homes across the UK**

Digital video recorders (that enable TV programmes to be recorded, paused and rewound) are now widely available in the UK, with 39% of adults aged 18+ claiming to own a DVR device. Of the nine countries that we surveyed, people in the UK were the most likely to say they had a DVR at home. In the US, Australia and China, more than one in four people say they own a DVR (32%, 29% and 27% respectively). Italy and France had the lowest take-up at 19% and 18% penetration respectively.

**Figure 3.10  Claimed DVR take-up**

Source: Ofcom consumer research October 2012
Base: Total sample size: UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Australia=1007, Spain=1001, China=1010, Q: Which of the following devices do you own and personally use?
Take-up of connected TVs beginning to gather momentum

With the exception of China, people in the UK and France have the highest ownership of connected TVs, among the countries included in our research. In both cases, 15% of respondents claimed to have a television that connects to the internet, providing access to features such as catch-up services, social networking, customised electronic programming guides (EPG) and gaming.

Twenty-eight per cent of respondents in China claim to have a connected TV set. As broadband penetration in China is much lower than in the other countries, the respondents responding to our internet-based research are more likely to be early adopters of new technology.

Our research indicates that connected TVs have proved more popular with consumers than televisions with 3D capability (with or without special glasses), with claimed ownership of the former consistently higher than the latter in every country in our research. However, many connected TVs come with built-in 3D capabilities, so the actual penetration of 3DTV may be higher than indicated below.

Figure 3.11  Claimed take-up of connected televisions and 3D-ready TVs

Source: Ofcom consumer research October 2012. Base: Total sample size UK=1065, France=1016, Germany=1024, Italy=1015, US=1010, Japan=1004, Australia=1007, Spain=1001, China=1010. Q: Which of the following devices do you own and personally use?
Three key factors for connected TV

For connected TV take-up to continue to grow, three areas need to develop: connectivity, content and functionality. In terms of **connectivity**, connected TVs will deliver high-definition video alongside the benefits of web functionality in a TV broadcast environment. This is akin to marrying the interconnectivity of short-form video services like YouTube and Dailymotion with the quality of existing broadcast coverage and HD. In terms of **content**, programmes which invite engagement and drive viewing will become more widely available across various platforms. So far, examples of content enhancers on Smart TVs are catch-up and social applications. Finally, **extra functionality** will provide additional services and enable new modes of content discovery. For example, the EPG will become more contextual (suggesting appropriate content based on the user’s observed behaviour), and the connected TV will communicate with other devices, including second screens and their applications.

3.1.5 UK consumers most likely to use online TV services

Figure 3.12 shows the proportion of **internet users** who use their home internet connection to watch TV online. With the exception of China (where broadband penetration is much lower than in the other countries in our research), UK consumers are the most likely to access TV content over the internet. Almost a quarter (23%) of internet users claimed to do this **every week** – a figure which increases to 42% when asked whether they had **ever** accessed TV content over the web.

This is probably driven by the popularity in the UK of internet TV catch-up services from the free-to-air broadcasters, such as BBC iPlayer, 4oD and ITV Player. According to data from the BBC, BBC iPlayer continues to grow in popularity, with 151 million requests for TV programmes in August 2012 (driven by high demand for Olympics coverage), up from 115 million in 2010 and 91 million in August 2009.

Figure 3.12 Accessing TV content over the internet

*Proportion of respondents that access online TV (%)*

<table>
<thead>
<tr>
<th>Country</th>
<th>Ever (%)</th>
<th>Weekly (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>42%</td>
<td>23%</td>
</tr>
<tr>
<td>FRA</td>
<td>31%</td>
<td>13%</td>
</tr>
<tr>
<td>GER</td>
<td>19%</td>
<td>9%</td>
</tr>
<tr>
<td>ITA</td>
<td>26%</td>
<td>12%</td>
</tr>
<tr>
<td>USA</td>
<td>31%</td>
<td>17%</td>
</tr>
<tr>
<td>JPN</td>
<td>27%</td>
<td>3%</td>
</tr>
<tr>
<td>AUS</td>
<td>34%</td>
<td>12%</td>
</tr>
<tr>
<td>ESP</td>
<td>16%</td>
<td>44%</td>
</tr>
<tr>
<td>CHI</td>
<td></td>
<td>68%</td>
</tr>
</tbody>
</table>

*Source: Ofcom consumer research October 2012. Base: Total sample size UK=1065, France=1016, Germany=1024, Italy=1015, US=1010, Japan=1004, Australia=1007, Spain=1001, China=1010*

Q. **Which of the following activities do you use your home internet connection for?**

In the UK, internet users aged 18-24 are the most likely to access TV content online (31% claiming to do so), while 45-54 year olds are the least likely (19%). This pattern is generally
consistent across the countries surveyed, although in some countries, such as the US, 25-35 year olds have a higher propensity than 18-24 year olds to watch TV over the internet.

**Figure 3.13  Accessing TV content over the internet, by age**

Proportion of respondents accessing online TV weekly(%)

![Chart showing the proportion of respondents accessing online TV weekly by age and country.](image)

Source: Ofcom consumer research October 2012. Base: UK=1065, France=1016, Germany=1024, Italy=1015, US=1010, Japan=1004, Australia=1007, Spain=1001, China=1010. Q: Which, if any, of the following activities do you use your home internet connection for?

Figure 3.14 shows the proportion of internet users who watch TV content online (on a weekly basis) and own a connected TV. In all countries, the research indicates that consumers who own a connected TV are more likely to watch TV via the web. In the UK, 39% of respondents who own a connected TV watch content online on a weekly basis, compared to 23% of all respondents in our survey. For further detail on connected TVs see Figure 3.11.

**Figure 3.14  Accessing TV content over the internet, by connected TV ownership**

Proportion of respondents that access online TV (%)

![Chart showing the proportion of respondents accessing online TV by connected TV ownership and country.](image)

Source: Ofcom consumer research October 2012. Base: Total sample size UK=1065, France=1016, Germany=1024, Italy=1015, US=1010, Japan=1004, Australia=1007, Spain=1001, China=1010. Q: Which of the following activities do you use your home internet connection for?
3.2 The TV and audio-visual industries

3.2.1 Summary

This section focuses on the TV and audio-visual industries, looking at the key revenue trends among our comparator countries, and the financial results of major pay-TV and free-to-air broadcasters.

- **Revenues among the 17 countries analysed by Ofcom increased by 5.8% in 2011 to £228bn.** Growth was driven largely by the BRIC countries – Brazil, Russia, India and China – whose joint revenues increased by 14% (or £4bn) in 2011 to £34bn – the largest year-on-year growth of all the regions in our analysis.

- **The combined revenues of Europe and Canada experienced the lowest year-on-year growth of all the regions in our analysis,** increasing by 2.0% in 2011 to £58bn.

- **The UK experienced moderate growth in television revenues in 2011,** up by 2.7% or £0.3bn, while revenues for Spain and Italy both declined. Spain experienced the largest year-on-year decline, falling 4.9% in 2011 to £4.8bn, while Italy fell by 2.7% to £7.8bn.

- **Among the major European television markets of Germany, the UK and France, pay-TV was the fastest-growing source of revenue** over the five-year period between 2006 and 2011. The TV advertising market remained relatively flat over the corresponding period, for each country, driven by difficult trading conditions during the economic downturn.

- **Pay-TV companies continue to outperform their free-to-air counterparts, with revenues up for all but one operator in our analysis.** BSkyB in the UK reported one of the largest increases in revenue, up 17.3% to £6.2bn, a figure surpassed only by Sky Deutschland’s performance (in Germany) where income rose by 18.1% on 2010 to £1.0bn.

- **Pay-TV operators continue to drive up average revenue per user (ARPU) as more subscribers trade up to premium products** such as digital video recorders (DVRs) and high-definition TV. Over the past five years, ARPU for the UK pay-TV market has increased by £35 (10.7%); from £327 in 2006 to £362 in 2011.

3.2.2 Television revenues among comparator countries

**Global television revenues driven by strong growth in BRIC countries in 2011**

Revenues among the 17 countries analysed by Ofcom increased by 5.8% in 2011, to £229bn. As in 2010, the BRIC countries – Brazil, Russia, India and China – experienced the largest year-on-year growth, with their joint revenues increasing by nearly a fifth (14.0%) in 2011, up £4bn to £34bn. This growth was driven by both rising TV advertising and subscription income.

The gap between the BRIC countries (accounting for the smallest proportion of revenue among the 17 countries in our report) and the combined revenues of Japan and Australia (the second smallest) has diminished over the past five years, with the two regions now almost equal in terms of TV revenue. While the combined revenues of Japan and Australia increased by 3.0% in 2011 to £36bn, compound annual growth over the five-year period was relatively small, at just 1.4%.
The combined revenues of Europe and Canada\textsuperscript{67} experienced the lowest year-on-year growth of all the regions in our analysis, increasing by only 2.0\% in 2011, to £58bn. In contrast, the US, which is the largest television market globally, increased by 6.5\% in 2011, up £6bn to £100bn. Over the five-year period since 2006, US television revenues have increased on average by 5.7\% per annum, compared to 2.9\% for Europe and Canada combined.

\textbf{Figure 3.15 TV industry revenues among comparator countries}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure315.png}
\caption{TV industry revenues among comparator countries}
\end{figure}

\textit{Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Revenues include advertising, subscriptions and sources of public funding only. Europe includes the European countries in this analysis – UK, France, Germany, Italy, Spain, Netherlands, Sweden, Republic of Ireland and Poland. BRIC is Brazil, Russia, India and China.}

Compared to the other eight European countries in our analysis, the UK experienced moderate growth in television revenues in 2011, increasing by 2.7\% (£0.3bn). However, at £11.3bn, the UK remains on a par with Germany (at £11.6bn) as the two largest TV markets in Europe in terms of monetary value in 2011.

Spain and Italy both recorded declines in television revenue in 2011. Spain experienced the largest year-on-year decline, falling 4.9\% in 2011 to £4.8bn, while Italy declined by 2.7\% to £7.8bn. Over the five-year period since 2006, TV revenues for Spain declined by 0.1\%, compared to growth of 1.7\% for Italy over the same time period.

\textsuperscript{67} Canada categorised with Europe, not the US, due to the market being similar in scale to European economies.
Figure 3.16 TV industry revenues among European countries and Canada

TV revenues increased in 2011 for all four BRIC countries. Russia saw the highest proportional growth in revenue, up by almost a fifth (16.6%) to £3.6bn. China and Brazil also recorded significant growth, up 14.4% year on year and 12.7% respectively, making them by far the largest television markets among the BRIC countries in terms of revenue, at £12.4bn.
Figure 3.17  Total TV industry revenues among BRIC countries

<table>
<thead>
<tr>
<th>Year</th>
<th>BRA</th>
<th>RUS</th>
<th>IND</th>
<th>CHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>£1.2</td>
<td>£2.3</td>
<td>£5.5</td>
<td>£2.6</td>
</tr>
<tr>
<td>2005</td>
<td>£1.6</td>
<td>£2.5</td>
<td>£6.1</td>
<td>£2.6</td>
</tr>
<tr>
<td>2006</td>
<td>£2.1</td>
<td>£2.6</td>
<td>£6.9</td>
<td>£3.0</td>
</tr>
<tr>
<td>2007</td>
<td>£2.8</td>
<td>£3.0</td>
<td>£7.4</td>
<td>£3.5</td>
</tr>
<tr>
<td>2008</td>
<td>£3.1</td>
<td>£2.6</td>
<td>£8.3</td>
<td>£4.2</td>
</tr>
<tr>
<td>2009</td>
<td>£3.6</td>
<td>£3.1</td>
<td>£9.0</td>
<td>£4.8</td>
</tr>
<tr>
<td>2010</td>
<td>£3.6</td>
<td>£3.1</td>
<td>£10.9</td>
<td>£5.5</td>
</tr>
<tr>
<td>2011</td>
<td>£4.2</td>
<td>£3.6</td>
<td>£12.4</td>
<td>£5.5</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Revenues include advertising, subscriptions and sources of public funding only. BRIC is Brazil, Russia, India and China.

Figure 3.18 illustrates the changing composition of TV industry revenues, by country, between 2006 and 2011.

Among the major European television markets of Germany, the UK and France, pay-TV was the fastest-growing source of revenue over the five-year period between 2006 and 2011 and represents the largest source of TV income for these countries.

Spain is the only country out of the 17 included in our analysis not to have experienced growth in TV revenues between 2006 and 2011. As part of the current austerity cuts, the Spanish government has reduced the state subsidy provided to the national public audio-visual company, Corporación RTVE.

The US and Japan, the two largest countries by revenue (£100bn and £31.1bn respectively), are included at the bottom of the chart to accommodate the higher scale. The US experienced relatively flat TV advertising revenues over the five-year period, with the vast majority of growth coming from pay-TV subscriptions (up from £40.5bn in 2006 to £63.7bn in 2011), resulting in an increase in total revenues over the period of almost £25bn to £100bn in 2011. In contrast, total TV revenue for Japan remained relatively constant over the five-year period, at around £30bn.

The television markets of the BRIC countries all recorded increases in total revenue between 2006 and 2011, driven by an increase in both net advertising revenue and subscriptions. However, the BRIC countries are notable for a lack of public funding, with only Brazil and India having any public funds attributed to TV in 2011 – although the value of public funding in these countries was minimal, at £0.2bn.
3.2.3 TV revenue per head among comparator countries

Revenue per head in the UK increased by almost 4% in 2011 to £180

Per head, revenue in the US continued to lead the 17 comparator countries, generating £320 per head in 2011, an increase of 16.6% - the largest year-on-year increase of the 17 comparator countries. This is some way ahead of the second highest, Japan, which increased by 6.8% since 2010 to £244 per head.

Among the major European markets, Spain and Italy both recorded declines in per-capita revenues in 2011 – with Spain down 5.8% to £102 and Italy down 4.1% to £155. In contrast the UK, France and Germany all recorded increases, with Germany up 4.5%, France up 3.2% and the UK up 3.7% to £180 per head.
Despite posting significant increases in overall television revenues year on year, TV income per capita for the BRIC countries remains well below the other comparator countries in our analysis, driven by larger populations and lower penetration of digital TV. For example, India has the lowest TV revenue per head of all 17 countries, at just £5 per person.

**Figure 3.19  TV revenue per head, by source: 2011**

![Graph showing TV revenue per head by source for different countries in 2011.]

Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Revenues include advertising, subscriptions and sources of public funding only; figures inside the bars represent industry revenue per head by source.

**Subscription income continues to drive growth in TV revenue per head**

Figure 3.20 details the changes, by country, in revenue per head, split by the three component parts. For the majority of countries, including the UK, increases in revenue per head in 2011 were driven primarily by growth in income generated from subscription fees. In the UK, £3.02 (82%) of the total year-on-year increase of £3.70 was attributable to subscription fees. The US saw the largest increase in subscription revenue per capita, up £15.17, while Italy was the only country to record a decline in subscription revenue per capita, down £1.81 in 2011.

For the majority of countries, advertising revenues per head have remained relatively flat, or in some instances declined in 2011. In the UK, advertising revenues per head remained relatively stable, increasing a marginal 15p, while in Spain and Ireland, advertising revenues per head declined, by £4.93 and £3.57 respectively.

Only a few countries experienced significant growth in public funding per head in 2011, with the most notable being the Netherlands, where public funding increased by £2 per head against the previous year.
Figure 3.20 Changes in components of TV revenues per head: 2010 to 2011

Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Revenues include advertising, subscriptions and sources of public funding only; the bars represent changes in industry revenue per head, by source.

3.2.4 TV licence fees most common in Europe

Public funding, in the form of TV licence fees paid for by viewers, remains an important element of TV finance in most of the major European markets included in this analysis. Figure 3.21 illustrates the cost of a TV licence fee in each of the comparator countries where it is available.

As in 2010, the cost of the UK’s licence fee in 2011 was the fourth most expensive, at £146 (no change since 2010), behind Germany (£187), Sweden (£199) and Japan (£200 for a satellite TV licence).

Figure 3.21 Cost of a TV licence fee

Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011; Prices as at end 2011. Note: The Japanese licence fee costs £117 in terrestrial households or £200 (rounded) to receive a larger number of channels via satellite.
3.2.5 Revenues up marginally for most free-to-air broadcasters

Figure 3.22 shows the reported revenues for selected free-to-view TV operators. Although the majority of free-to-view broadcasters experienced increases in revenue in 2011, growth remains restricted compared to pre-recession figures, as the advertising market remains challenging and public funding is either flat or declining.

In the UK, the proportion of income allocated to TV by the BBC increased by 2.2% in 2011 to £2.7bn, while ITV reported an increase in revenue of 3.7% to £2.1bn.

**Figure 3.22** Latest reported revenues for selected free-to-view TV operators: 2011

<table>
<thead>
<tr>
<th>Territory</th>
<th>Revenues (£bn)</th>
<th>YoY change</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHK (JPN)</td>
<td>£5.3bn</td>
<td>1.3%</td>
</tr>
<tr>
<td>RTL (EUR)</td>
<td>£5.0bn</td>
<td>4.2%</td>
</tr>
<tr>
<td>Fuji (JPN)</td>
<td>£3.1bn</td>
<td>2.0%</td>
</tr>
<tr>
<td>BBC Mediaset (UK)</td>
<td>£2.7bn</td>
<td>2.2%</td>
</tr>
<tr>
<td>FT (FRA)</td>
<td>£2.6bn</td>
<td>-5.3%</td>
</tr>
<tr>
<td>P7S1 (ITA)</td>
<td>£2.6bn</td>
<td>-2.9%</td>
</tr>
<tr>
<td>RAI (ITA)</td>
<td>£2.4bn</td>
<td>6.0%</td>
</tr>
<tr>
<td>IT (IT)</td>
<td>£2.3bn</td>
<td>-1.4%</td>
</tr>
<tr>
<td>TF1 (FR)</td>
<td>£2.1bn</td>
<td>3.7%</td>
</tr>
<tr>
<td>RTVE (ESP)</td>
<td>£1.8bn</td>
<td>12.2%</td>
</tr>
<tr>
<td>ABC (AUS)</td>
<td>£1.0bn</td>
<td>5.2%</td>
</tr>
<tr>
<td>PBS (USA)</td>
<td>£0.7bn</td>
<td>3.4%</td>
</tr>
<tr>
<td>USA</td>
<td>£0.3bn</td>
<td>-16.8%</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011; Comparisons should be regarded as indicative only due to the possibility of differences in financial reporting between broadcasters. RTL figure includes its key European markets; Mediaset includes Italian FTA and pay-TV business (year ending Dec 31). BBC represents its income allocated to TV; RAI figures include licence fee (split between radio and TV unknown), TV advertising and sponsorship; ProSieben, group revenues (years ended Dec 31); France Televisions is licence fee and advertising; TF1 includes French channels (years ended Dec 31); PBS and the ABC are total revenue to year ending June 30; Fuji TV is broadcasting and production, year ending March 31; RTVE is advertising and public funding (as of year ending Dec 31).

3.2.6 Pay-TV revenues up despite difficult trading conditions

Revenues for pay-TV broadcasters increased in 2011 for all but one of the operators in our analysis. BSkyB, in the UK, reported one of the largest increases in revenue, up 17.3% to £6.2bn (this also includes revenues from its telecommunications services), and was surpassed only by Sky Deutschland in Germany, whose revenue increased 18.1% on 2010 to £1.0bn. Virgin Media in the UK also recorded a rise in revenue, up 3.2% to £3.9bn in 2011.

Revenues for the main pay-TV operators in the US grew year on year, despite increased competition from online TV companies such as Netflix, which reported around 23.9 million domestic streaming subscribers at the end of June 2012. Revenues for Comcast in the US increased by 13.3% to 13.5bn in 2011, although this figure excludes revenues from the integration of NBC Universal; when NBC is included the combined revenue rises to £25.6bn. Revenues for Direct TV and Dish in the US increased to £13.6bn (up 7.9%) and £8.8bn (up 11.1%) respectively in 2011.
Pay-TV ARPU up in the UK as consumers take more products and services

Average revenue per user (ARPU) can provide insights into the relative performance of different pay-TV operators by country.

In the majority of countries in our analysis, including the UK, pay-TV operators have increased ARPU over the five-year period since 2006. The UK was among the countries with higher ARPU, at £362 at the end of 2011, from £327 since 2006. Figures from BSkyB, the UK’s largest pay-TV operator, for the financial year ending June 2012, indicate that on average Sky customers take 2.7 products each, up from 2.5 products the previous year. In addition, almost a third of Sky customers (32%) are triple-play customers – bundling TV, broadband and fixed-line services into a single package.

The US and Australia continue to be the highest-ranking markets in terms of ARPU, as pay-TV operators continue to encourage consumers to purchase more value-added services, such as high definition and PVR services. ARPU in the US at the end of 2011 stood at £621 (up from £421 in 2006), while in Australia the equivalent figure was £750 (up from £647 in 2006).

In line with the year-on-year reductions in revenue, highlighted earlier in this section (see Figure 3.16) pay-TV operators in Spain and Italy both experienced declines in ARPU between 2006 and 2011, with those in Italy declining the most: from £432 in 2006 to £284 in 2011. Average revenue per user for Spain declined by £21 over the five-year period, to £285 in 2011.
Figure 3.24  Pay-TV ARPU, by country: 2006-2011

Source: IDATE / industry data / Ofcom. Notes: Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. ARPU is average revenue per user, representing the average revenue generated per pay-TV subscriber.
3.3 The TV and audio-visual consumers

3.3.1 Summary

This is the final chapter of the audio-visual section. In Section 3.3.2 we examine patterns of digital television take-up, before considering the adoption of high definition television, digital video recorders and connected televisions (Section 3.3.3). Section 3.3.4 analyses the number of pay-TV homes in each country, before examining how viewers in different countries consume broadcast television (Section 3.3.5).

- By the end of 2011, the majority of homes had digital television in the UK, France and Spain. DTV take-up reached 100% in Spain, 97% in France and 99% in the UK, where the digital switchover programme was completed in October 2012.

- In the UK, satellite TV (including Freesat) was the largest platform (44% of TV homes) while terrestrial TV was the main platform in 38% of TV homes. Digital satellite was also the most popular platform in Germany, Ireland, Poland and Brazil. While digital satellite may not be the top technology choice in many countries, it is often the second most popular platform, taking second place in ten of the 17 countries in our report.

- Homes in BRIC countries experienced the biggest reductions in analogue terrestrial take-up, while simultaneously seeing the biggest increases in digital satellite take-up.

- The UK also has one of the highest proportions of TV homes with high definition among the countries included in our research – at 41%, higher than France (18%), Germany (28%) and Japan (31%), but behind the US (49%).

- Digital video recorders (DVRs) and connected TVs continue to grow in popularity in UK TV households, with the highest levels of take-up of all the countries included in our research. In 2011, 39% of UK TV homes had a DVR, while 15% claimed to own a connected TV.

- Over half (55%) of TV homes in the UK had a pay-TV service in 2011. By country, pay-TV take-up at the end of 2011 was highest in the Netherlands (99%), India (94%), Canada (93%), Sweden (92%) and the US (89%). Growth in pay-TV take-up was most substantial in Brazil (up by 22% on a compound annual growth basis since 2006) and stood at 23% of TV households in 2011.

- The UK has the third highest level of scheduled linear TV viewing, of the comparator countries, at four hours per person per day. Despite the increase in online TV, scheduled linear television remains popular, with minutes of viewing per person increasing among most comparator countries. Only Italy (253 minutes per person per day) and the US (293 minutes) watch more television than the UK.

3.3.2 Digital television take-up on main sets

The majority of homes in the UK, France and Spain have digital television

Figure 3.25 and Figure 3.26 illustrate the growing take-up of digital television across the 17 comparator countries; for ease of interpretation, the countries are illustrated in two charts

---

Note that the UK digital television figures in this report are compiled using a different source to Ofcom’s CMR report, as a result the two sets of data are not directly comparable. Data in Ofcom’s
Homes in Spain benefited from 100% take-up on main sets, as the digital switchover (DSO) programme was completed in 2010. In the UK, take-up had reached 99% by the end of 2011 as DSO entered the final stages; set for completion in October 2012. The Republic of Ireland, where penetration reached 90%, is also set for DSO completion by the end of 2012. In France, where terrestrial switchover was completed in November 2011, 97% of homes had digital television. In the US, where the analogue terrestrial signal was switched off in 2009, digital television take-up reached 89% in 2011.

At the opposite end of the spectrum, digital television take-up in China, Russia and India remained well below the average of 75% among comparator countries for 2011, at 43%, 40% and 40% respectively. But in each case the rates of DTV adoption ran well ahead of the comparator country averages. Year-on-year increases averaged 32% and the rate of growth over the five-year period averaged 57% in China, Russia and India.

In Japan year-on-year DTV growth was comparatively slow despite DTV take-up of 77%. This might be explained by the comparatively slow migration to digital among analogue cable viewers.

**Figure 3.25  Take-up of digital television – top nine comparator countries**

Source: IDATE / industry data / Ofcom

CMR is based on BARB’s Establishment Survey, whereas this report is based on data from IDATE – a single source is used for this report to enable comparisons across comparator countries.
Cable is the most popular television platform in the majority of comparator countries

Taking both analogue and digital technologies together, cable was the most popular television platform for eight of the 17 comparator countries, comprising the US, Canada, Japan, the Netherlands, Sweden, Russia, India and China.

For the first time in the UK, satellite TV (including Freesat) was the largest platform (44%) as terrestrial TV fell to second place at 38%. Digital satellite TV was also the most popular platform in Germany, Ireland, Poland and Brazil. While digital satellite may not be the top technology choice in many countries, it is often the second most popular platform, taking second place in ten of the 17 countries analysed in our report.

Digital terrestrial was the most popular platform in four countries, including France, Italy, Australia and Spain.
Splitting the platforms into their analogue and digital components, the digital terrestrial television platform continued to be the largest by market share in Spain (69% of main sets) and Australia (49%). It was also a substantial player in the UK (with a 38% share), ranking second to satellite (44%). Digital satellite was the leading platform in the Republic of Ireland with a 53% market share, the highest proportional take-up of the platform across the comparator countries.

Despite the progress made in many countries in migrating homes to digital television platforms, analogue technologies are still widely used. The analogue cable network is still popular in India, and is the largest platform across the comparator countries with a 58% share of main television sets, followed by Sweden at 33% and Russia at 34%.
Figure 3.29 sets out changes in the percentage point take-up of the different television platforms. The red/green tint provides an indication of the relative change in each platform’s take-up, when compared to the other changes set out in the table.

The association of analogue technologies with ‘red’ tints makes clear the degree of migration away from analogue to digital technologies.

By country, the most substantial change in take-up in 2011 was experienced by homes in Australia, where analogue terrestrial saw its market share fall by 11pp. Digital terrestrial was the main beneficiary, picking up a 9pp share, while IPTV take-up rose by 2pp. The progressive upgrade of cable infrastructure to digital during 2011 was reflected in the substantial reduction of analogue cable take-up in a number of countries including Canada (-8pp), the Netherlands (-9pp), Sweden (-4pp), Ireland (-6pp) and Poland (-5pp), as digital cable take-up for these countries increased at a similar rate.

The BRIC countries (Brazil, Russia, India and China) experienced the biggest falls in analogue terrestrial take-up, while seeing corresponding increases in digital satellite take-up.

Elsewhere, the analogue market lost share in Germany, where analogue cable take-up fell by 4pp while analogue satellite fell by 3pp.

Figure 3.29  Year-on-year changes in platform take-up (pp), by country and technical platform

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>CAN</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>NED</th>
<th>SWE</th>
<th>IRE</th>
<th>POL</th>
<th>BRA</th>
<th>RUS</th>
<th>IND</th>
<th>CHI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Digital terrestrial</strong></td>
<td>-1</td>
<td>-1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>-1</td>
<td>-1</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Digital satellite</strong></td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td><strong>Digital cable</strong></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>IPTV</strong></td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>-1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total digital</strong></td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>9</td>
<td>4</td>
<td>11</td>
<td>2</td>
<td>11</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>Analogue terrestrial</strong></td>
<td>-1</td>
<td>-2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-1</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-1</td>
<td>-2</td>
<td>16</td>
<td>-9</td>
<td>-7</td>
<td>-6</td>
</tr>
<tr>
<td><strong>Analogue satellite</strong></td>
<td>0</td>
<td>-1</td>
<td>-3</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Analogue cable</strong></td>
<td>0</td>
<td>-1</td>
<td>-4</td>
<td>-2</td>
<td>0</td>
<td>-2</td>
<td>-2</td>
<td>0</td>
<td>0</td>
<td>-4</td>
<td>-4</td>
<td>-4</td>
<td>-6</td>
<td>-5</td>
<td>0</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td><strong>Total analogue</strong></td>
<td>-1</td>
<td>-3</td>
<td>-6</td>
<td>-1</td>
<td>-2</td>
<td>-2</td>
<td>-4</td>
<td>-4</td>
<td>-2</td>
<td>-2</td>
<td>-4</td>
<td>-8</td>
<td>-7</td>
<td>0</td>
<td>0</td>
<td>-1</td>
<td>-3</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom

3.3.3 Take-up of HDTV services, digital video recorders and connected TVs

Take-up of high-definition television services continues to grow globally. The UK also has one of the highest proportions of TV homes with high definition among the countries included in our research. At 41%, HDTV in the UK is higher than France (18%), Germany (28%) and Japan (31%), but behind the US (49%).
In the US, pay-TV providers provide the highest number of HD channels of all our comparator countries. The cable platform in the US now offers 202 channels as opposed to 177 channels on satellite and 170 via IPTV.

In the UK, Germany and Japan, the majority of HD channels are provided by satellite. France has a different profile, with 43 HD channels provided by IPTV operators and 25 HD channels on satellite.

Source: IDATE / industry data / Ofcom.
DVRs, connected TVs and 3D-ready TVs continue to grow in popularity

A range of other digital technologies are available to TV households, alongside high definition television.

Digital video recorders (allowing viewers to pause and rewind live television and to store content), were available in 39% of UK homes in 2011 – the highest take-up of all the countries included in our research. In the US and Australia, DVRs were installed in 32% and 29% of homes respectively. The country with the lowest take-up in 2011 was France, with 18% penetration.

France and the UK reported the highest take-up of connected televisions, with 15% of respondents in our research claiming to own one. In Germany and Italy the comparable figures were 10% and 9%. In China, take-up of connected televisions reached 28% in 2011. However, internet penetration is much lower in China (around 38%, and centred in the cities) and those responding to our survey are therefore more likely to be early adopters of new technology and not a true representation of China’s 1.3 billion inhabitants.

In Europe, 13% of people in Italy reported having a 3D-ready TV set at home. In the UK and France, 3D television has reached 8% and 9% respectively. However, many connected TVs come with built-in 3D capabilities, so the actual penetration of 3DTVs may be higher than indicated below.

Thus far, only pay-TV operators seem to be backing initiatives to create sustained 3D content, and carrying platforms. The long-term appeal of dedicated 3D channels is open to question; in France, the Canal+ Group, the French film and television distributor, closed down its permanent 3D television channel in January 2012.

The four main categories of connected TV

There are four main - and divergent - models in the UK. Each model has been adopted by a range of competitors and all are intended to deliver a similar set of interactive, broadcast and video services to customers.

The traditional platform model, usually using set-top boxes (STBs) and subscriptions, is used by companies including Sky, Virgin, BT Vision and YouView. This model uses existing libraries of long-form content.

Electronics manufacturers such as Samsung, LG and Sony offer stand-alone connected TVs that directly connect to the internet via home broadband.

Dedicated IPTV companies like Boxee, Vudu, Roku and Sainsbury/Rovi provide on-demand and streaming services via an internet-connected device.

Finally, OS players like Apple, Google and Microsoft also hope to offer TV services and establish a cross-device eco-system using their ‘walled-garden’ software and systems which restrict non-approved applications and content.
3.3.4 Pay-TV take-up

The popularity of pay TV across comparator countries is influenced by a range of factors, including (i) the availability of free-to-view channels; (ii) the exclusive rights that pay-TV operators may have to particular programmes or types of content; and (iii) the presence of publicly-funded television channels.

At least three patterns of pay-TV adoption have emerged among the comparator countries:

- **High and stable levels of take-up.** In North America, consumers have always been willing to pay for access to additional television channels, and take-up remained at 89% in 2011 – stable year on year, and up by 3pp since 2006.

- **Moderate and stable penetration.** Among European comparator countries, take-up of pay-TV has increased by 7pp since 2006, although the proportion paying for additional channels remained at around 58% of all homes in 2011. Within this figure, take-up varies substantially between the comparator European nations (see Figure 3.33).

- **Low adoption levels, but rising.** In the developing economies of BRIC, pay-TV continues to grow in popularity (although it varies substantially by country, see Figure 3.33). Take-up of pay-TV rose by 6pp year on year, and by 22pp since 2006.
In 2011, the majority of homes in 13 of the 17 comparator countries paid for additional television channels.

By country, pay-TV take-up at the end of 2011 was highest in the Netherlands (99%), India (94%), Canada (93%), Sweden (92%) and the US (89%). However, the characteristics of pay-TV services differ from country to country. In the US and Canada, pay-TV services are similar to those in the UK (providing access to a large number of additional TV channels in exchange for payment). By contrast, the pay-TV fee for some cable packages in the Netherlands and Sweden is more akin to an 'access charge'; in return for which consumers receive a limited number of television channels.

In Italy, Australia, Spain and Brazil, the free-to-view television model remains more popular than pay-TV.

Source: IDATE / industry data / Ofcom. Note: ‘Europe’ in this context means those European countries within our comparator set. ‘Total’ in this context means the 17 countries in this report’s comparator set.
Over the five-year time period, the most substantial increase in the take-up of pay-TV were in Brazil (where the five-year annualised average growth rate stood at 22%). In the UK, pay-TV take-up rose on average by 4%, from 11.6 million homes in 2006 to 14 million in 2011.
### Figure 3.35  Pay-TV take-up in 2006 and 2011, millions of homes

<table>
<thead>
<tr>
<th>Country</th>
<th>2011</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>14.0</td>
<td>11.6</td>
</tr>
<tr>
<td>FRA</td>
<td>16.8</td>
<td>12.6</td>
</tr>
<tr>
<td>GER</td>
<td>25.5</td>
<td>25.0</td>
</tr>
<tr>
<td>ITA</td>
<td>11.9</td>
<td>8.6</td>
</tr>
<tr>
<td>CAN</td>
<td>10.5</td>
<td>9.0</td>
</tr>
<tr>
<td>JPN</td>
<td>24.4</td>
<td>23.3</td>
</tr>
<tr>
<td>AUS</td>
<td>2.8</td>
<td>2.0</td>
</tr>
<tr>
<td>ESP</td>
<td>4.4</td>
<td>3.7</td>
</tr>
<tr>
<td>NED</td>
<td>7.0</td>
<td>7.2</td>
</tr>
<tr>
<td>SWE</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>IRE</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>POL</td>
<td>11.2</td>
<td>6.5</td>
</tr>
</tbody>
</table>

### 3.3.5 Consumption of broadcast television services

**Viewers in the UK tend to consume more TV than those in many comparator countries**

Linear television remains popular among viewers across all the comparator countries, with minutes of viewing per head per day increasing in most countries. The biggest increase in minutes of TV viewing per head was for France; up by 7.1% to 227 minutes per day. With no change in viewing minutes (242 minutes per person per day) the UK has the third highest level of TV viewing of all the comparator countries (joint third with Poland).

Only Italy and the US watch more linear television than the UK. Viewing per head in the US continued to increase, rising by 3.5% to 293 minutes a day in 2011, and in Italy, viewing also increased, growing by 2.8% to 253 minutes per day in 2011. Viewing in almost all other

---

*Source: IDATE / industry data / Ofcom*
European countries grew, with the exception of Sweden, where it decreased by 2.4%. This reinforces Sweden’s position as the country whose viewers consume the fewest minutes of television of all our European comparator countries, at 162 minutes per person.

Among the BRIC countries, China experienced the largest year-on-year growth, with its viewers now watching 163 minutes of TV per day per head, an increase of 3.1%. Viewing in Brazil also grew - increasing 1.4% to 225 minutes per head.

**Figure 3.36  Daily TV viewing, per head: 2010-2011**

![Chart showing daily TV viewing per head for various countries.](chart)

*Source: Médiamétrie, Eurodata TV Worldwide. The figure for Canada relates to the viewing in non-Quebec households.*

As the number of television channels available to viewers increases, patterns of consumption are changing. Audiences have become more diverse and dispersed among the increased channel choice, resulting in audience shares for the most popular channels eroding over time. Figure 3.41 illustrates this phenomenon: Brazil, with the fewest channels available to mass audiences, has the highest concentration of TV audience, and the top-rated channel, Globo, commands 40% share of viewing. Brazil’s top five channels capture 77% of the country’s TV audience. The US is at the opposite end of the spectrum. With over 500 channels in high definition and many more in standard definition, the top channel, CBS, has just 7% of viewer hours. Together, the top five channels account for slightly more than a quarter (27%) of the US television audience.

The UK falls somewhere between these two extremes; the top 5 channels account for slightly more than half (54%) of all viewers. **BBC One** is the most-watched channel, with **ITV1**, **Channel 4**, **BBC Two** and **Channel 5** following, in that order.

The general trend in almost all the markets is a sustained reduction in the collective share of the top five channels, as audiences turn to new channels and new ways of watching content. The biggest reductions have been experienced by TV channels in Australia, where the top five channels shown in the major cities now account for less than half (49%) of audiences. Three years ago, the top five channels in Australia had 75% of share.
Channels drawing on public funding experience declining share, in the main, during 2011

Viewing of publicly-funded channels is most popular in the UK, where it accounts for 44% of audience share (although down by 4pp year on year). The largest increase in viewing share to publicly-funded channels (3pp) was experienced by Canada, where the French-language television network, SRC, saw its audience share rise substantially. The largest declines outside the UK were in Spain (with a 4pp fall to 32%), the Netherlands (down 3pp to 34%) and Poland (down 3pp to 37%).
Multi-channel viewing homes continued to grow in 2011

Terrestrial channels still command the majority of share of viewing for some countries. In the UK, the terrestrial channels BBC One, BBC Two, ITV1, Channel 4 and Channel 5 together command a share of 54% - down by one percentage point during 2011. In France, the collective share of TF1, France 2, France 3, France 5, Canal+ and M6 together was down to 65%, a three percentage point decrease on their 2011 share.

Source: Médiamétrie, Eurodata TV Worldwide. The figure for Canada relates to the viewing in non-Quebec households.

Figure 3.39  Terrestrial versus multichannel share

Source: Médiamétrie, Eurodata TV Worldwide. The figure for Canada relates to the viewing in non-Quebec households.
International Communications Market Report 2012

4 Radio and audio
Contents

4.1 Radio and audio 167
   4.1.1 Industry metrics and summary 167
   4.1.2 Broadcast radio revenues among comparator countries up 1.6% in 2011 167
   4.1.3 Take-up of digital radio sets is highest in the UK 170

4.2 The radio industry 173
   4.2.1 Introduction 173
   4.2.2 Global radio revenue 173
   4.2.3 Revenues among comparator countries 174

4.3 The audio consumer 178
   4.3.1 Introduction 178
   4.3.2 Regular listening to radio and other audio content 178
   4.3.3 Consumers prefer to use the internet to download audio content rather than listen to the radio online 179
   4.3.4 The role of radio as a main source of news 181
4.1 Radio and audio

4.1.1 Industry metrics and summary

This chapter includes a global overview and country-level analysis of radio and audio markets in the 17 comparator countries. It focuses on three main areas:

- Revenue trends and patterns of audio consumption during 2011
- Revenue trends among comparator countries
- How people across the 17 comparator countries consume audio content, including ownership and use of analogue and digital radio sets

Figure 4.1 Key radio market indicators: 2011

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>CAN</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>NED</th>
<th>SWE</th>
<th>IRL</th>
<th>POL</th>
<th>BRA</th>
<th>RUS</th>
<th>IND</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total industry revenue (£bn)</strong></td>
<td>1.2</td>
<td>1.5</td>
<td>2.9</td>
<td>0.5</td>
<td>11.5</td>
<td>1.2</td>
<td>2.8</td>
<td>0.6</td>
<td>0.5</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Revenue change (% YOY)</strong></td>
<td>+3.5</td>
<td>+1.2</td>
<td>-0.5</td>
<td>-3</td>
<td>+1.0</td>
<td>+6.8</td>
<td>-0.2</td>
<td>+1.3</td>
<td>-3.8</td>
<td>+0.9</td>
<td>+1.5</td>
<td>-7.7</td>
<td>-4.7</td>
<td>+12.2</td>
<td>+11.7</td>
<td>+24.7</td>
<td>+10.0</td>
</tr>
<tr>
<td><strong>Revenues per capita (£)</strong></td>
<td>18.5</td>
<td>22.4</td>
<td>36.5</td>
<td>8.2</td>
<td>36.6</td>
<td>33.8</td>
<td>22.1</td>
<td>29.6</td>
<td>9.8</td>
<td>16.8</td>
<td>38.3</td>
<td>25.6</td>
<td>4.3</td>
<td>2.2</td>
<td>1.7</td>
<td>0.2</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>% income from public licence fee</strong></td>
<td>60.8</td>
<td>55.5</td>
<td>79.4</td>
<td>18.2</td>
<td>n/a</td>
<td>n/a</td>
<td>65.3</td>
<td>n/a</td>
<td>n/a</td>
<td>28.9</td>
<td>80.7</td>
<td>25.9</td>
<td>30.8</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Sources: Ofcom, Pricewaterhouse Coopers. All figures are nominal.

The key market developments during the year include:

**Broadcast radio revenues among the 17 comparator countries analysed in this report reached £25.4bn in 2011**, up by 1.6% year on year. The largest absolute increase was experienced by operators in the US, where revenues rose by £115m, followed by the Chinese market which grew by £89m. UK radio revenue rose by £39m in 2011.

**Among the countries that we surveyed, digital radio take-up is highest in the UK.** Thirty-one per cent of consumers in the UK own and personally use a digital radio set, compared to 16% in Italy and 12% in Spain.

4.1.2 Broadcast radio revenues among comparator countries up 1.6% in 2011

Radio revenue has grown for the second consecutive year

Broadcast radio revenue among the 17 comparator countries analysed in this report reached £25.4bn in 2011, up 1.6% from 2010, as Figure 4.2 shows. This is the second consecutive year of growth following a year-on-year increase of 5% in broadcast radio revenues in 2010. However, there are substantial changes in revenue by country, due to countries’ differing funding patterns and dynamics.
Figure 4.2  Total radio revenues for the 17 comparator countries: 2007-2011

Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Note that the UK radio industry figure is sourced from broadcaster returns made to Ofcom.

As Figure 4.3 shows, seven of the 17 countries reported substantial increases in radio revenue between 2010 and 2011. The largest absolute increase was experienced by operators in the US, where there was growth from satellite radio subscriptions while advertising revenues remained broadly stable. The Canadian market also grew as a result of an increase in satellite radio subscription revenues. The four BRIC countries, where radio revenue is generated exclusively by advertising, all reported an increase in revenues. The largest decline was in Spain, where radio revenues fell by £18m.

Figure 4.3  Changes in radio revenue, by country: 2010 and 2011

Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Note that the UK radio industry figure is sourced from broadcaster returns made to Ofcom.

Revenue growth is driven by gains in advertising and subscription revenues

The majority of the substantial increases in broadcasting radio revenue have been generated by advertising. Figure 4.4 sets out the absolute and proportional growth in advertising revenues in those countries which experienced growth in this sector. As the chart shows, of the 12 countries which experienced growth in advertising revenues, the largest increases were in China (£88.5m), Canada (£51.1m) and Brazil (£46.8m).
The largest absolute increase in revenue was in the US, where satellite radio subscription revenues have grown, as Figure 4.5 shows. In the US, subscription revenues have increased each year, and in 2011 led to growth of 1% in radio revenues. Falling advertising revenue in the US has contributed to a contraction of £2.2bn (or 16%) in broadcast radio revenue since 2007, but in 2011 subscription revenue more than compensated for the decline in advertising revenue. Compared to the US, growth in satellite subscription revenue has been slower in Canada. In 2011, advertising and subscription revenues led to growth of 6.7% in the Canadian market. In comparator countries which have radio markets funded by licence fees and advertising revenues, the UK was the only country to see significant growth.
Satellite radio

Satellite radio works by relaying radio transmissions through one or a number of satellites (or in cities, via ground-based repeater stations) direct to receivers, meaning that transmissions can be broadcast to a wider geographical area than is possible through traditional FM broadcasting.

In the US, Sirius XM, formed from a merger of two satellite radio operators, broadcasts over 135 channels to more than 22 million subscribers. As the service is paid for by subscriptions, many of the channels are commercial-free. Satellite radio subscription revenues in the US and Canada have grown each year since 2006.

Among countries with licence fees, revenue growth is highest in the UK

Figure 4.6 shows changes in revenue in those countries where licence fees contribute to total radio revenue. With the exception of Japan, Ireland and Italy, the commercial sector increased its revenue in all of these countries. The largest absolute increase in advertising revenue, among those countries with licence fees, was in the UK. Alongside an increase in licence fee revenue, the UK’s radio market saw the largest growth among this group of comparator countries. The largest proportional growth in advertising revenue was seen by operators in Poland, where advertising revenues increased by 5.1% (£6m). However, this was not sufficient to offset the £14m loss of licence fee revenue, and the Polish market contracted by 4.7%.

Figure 4.6 Changes in radio revenue among comparator countries with licence fees, by component: 2010-2011

Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Note that the UK radio industry figure is sourced from broadcaster returns made to Ofcom.

4.1.3 Take-up of digital radio sets is highest in the UK

Thirty-one per cent of consumers in the UK own and personally use a digital radio set, far higher than in any other European country

Digital radio set take-up in the UK (31%) is higher than in any of the other countries that we surveyed, as Figure 4.7 shows. The next highest take-up is in China (26%), although, because our research was conducted through an online survey, this is likely to represent the behaviour of early adopters in urban areas (see our research methodology in Appendix A). In mainland China, digital radio is available only in the highly-populated cities of Beijing and Shanghai, and as a result, estimated coverage is low, as Figure 4.8 shows. In the US, 9% of

respondents stated that they owned and personally used a digital radio, while satellite radio take-up in the US was 14%.

Among the European countries, digital radio take-up was next highest in Italy (16%) and Spain (12%). Digital radio is more established in Italy than in the other European countries which we surveyed (with the exception of the UK) and coverage is estimated to be around 60% of the population. In Spain, digital radio services have been on air since 1998 and there are three national multiplexes. Coverage is estimated to be around 20% of the population, although this has been reduced from 52% to assist the planned migration from DAB to DAB+.

### Figure 4.7 Ownership and use of analogue and digital radio sets

<table>
<thead>
<tr>
<th>Service</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any radio</td>
<td>63</td>
<td>65</td>
<td>56</td>
<td>76</td>
<td>73</td>
<td>44</td>
<td>66</td>
<td>76</td>
<td>71</td>
</tr>
<tr>
<td>Digital radio</td>
<td>31</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>9</td>
<td>4</td>
<td>12</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>Internet/WiFi radio</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>11</td>
<td>11</td>
<td>4</td>
<td>8</td>
<td>13</td>
<td>36</td>
</tr>
<tr>
<td>Satellite radio</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>14</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>14</td>
</tr>
</tbody>
</table>

*Source: Ofcom consumer research, September 2012*

*Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Spain=1001, Australia=1007, China=1010*

*Q: Which of the following services/devices do you own and personally use?*

*Note: Radio audience measurement data for the UK from RAJAR shows that 90.8% of the UK population listened to radio in an average week in 2011. The low claimed ownership of ‘any radio’ sets among UK respondents to our survey does not take account of radios in cars, and other devices which are capable of receiving radio although this is not the device’s primary function.*

The relatively low take-up in France and Germany reflects the availability of digital radio in these countries. The introduction of terrestrial digital radio in France was scheduled to start in December 2009, but was postponed. Four trial regional multiplexes are currently broadcasting. In Germany, a national digital radio multiplex was launched in August 2011, broadcasting 14 stations.70 It is likely that take-up of digital radio will increase in these countries as more services become available. The coverage of DAB and similar digital radio broadcasting technologies is outlined in Figure 4.8. Coverage is highest in the UK.

---

Figure 4.8  DAB/DAB+/DMB coverage

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital radio coverage</td>
<td>94%</td>
<td>Note 1</td>
<td>47%</td>
<td>60%</td>
<td>Note 2</td>
<td>Note 3</td>
<td>60%</td>
<td>20%</td>
<td>2%</td>
</tr>
</tbody>
</table>


Note 1 – Trials of four regional digital radio multiplexes are taking place in France. Since April 2011 two multiplexes have been operational in Lyon, covering 85% of the population in this area, and trial services are also on air in Paris, Marseille and Nantes.

Note 2 – Digital radio services are broadcast on the same wavelength as FM services in the US using the IBOC standard, where it is known as ‘HD Radio’. This type of digital radio uses a different technology to that in the UK. Ibiquity, the company who have developed and licensed HD radio, states that 2,055 stations across the US are broadcasting 3,458 services on HD radio. Satellite radio services are available, on subscription, throughout the US.

Note 3 – Digital television and radio services in Japan are broadcast on the ISDB standard, which allows multiple devices to receive signals from the same transmission. Analogue TV broadcasting was switched off in July 2011 and nationwide deployment of digital radio broadcasting will follow.
4.2 The radio industry

4.2.1 Introduction

This section examines the revenues generated by the commercial radio sectors in each comparator country, along with the levels of licence fee funding that are invested in radio services. The main findings include:

- **Radio revenue worldwide rose slightly (by 1.7%) in 2011 and now stands at £29.5bn.** Of the total, advertising accounted for 68% (£20.0bn), public funding for just over a quarter (26% or £7.7bn) and subscriber revenue contributed the remaining 6% (£1.8bn).

- **Among the 17 comparator countries, revenue reached £25.4bn in 2011, 86% of the global total.** With the exception of Germany, Italy, Japan, Spain, Ireland and Poland, all other countries experienced year-on-year increases.

- **The fastest growing markets are the BRIC countries.** India saw the highest rate of growth at 24.7%, followed by Brazil (12.2%), Russia (11.7%) and China (10.0%). Since 2007, the value of the radio market in India has almost doubled.

- **Radio markets in Sweden, the US and Germany generate the greatest revenues per head of population.** The radio market in Sweden generated the highest revenues per head of population, of all our comparator countries (£38.30). The US was in second place, generating £36.60 of revenue per head of population. In the UK, the comparable figure was £18.50.

4.2.2 Global radio revenue

Global radio revenues stood at £29.5bn in 2011

Although global radio revenue rose only slightly (by 1.7%) in 2011, this is the second consecutive year of increase after three years of decline. Advertising revenue continued to make the largest contribution to total revenue, accounting for 68% of industry income. Revenue from licence fees remained stable at £7.7bn, contributing 26% of the total. The largest proportional increase came from satellite radio subscription revenues, which grew 12.5% to stand at £1.8bn in 2011. (Figure 4.9)
4.2.3 Revenues among comparator countries

Revenues in the 17 comparator countries featured in this report rose by 1.6% in 2011, as discussed in section 4.1.2. Eleven of these countries reported rising radio revenue in 2011, with the largest increase coming from the US, which grew by £115m to reach £11.5bn. Although this equates to just a 1% increase, the US accounts for 45% of the total revenue for the comparator countries as a whole. China and Canada also experienced large increases, rising £89m and £73m respectively, as Figure 4.10 shows.

Revenue growth is fastest in the BRIC countries

The proportional changes in revenue, as set out in Figure 4.11, show that the fastest-growing markets are the BRIC countries. India saw the highest rate of growth at 24.7%, and since 2007 the value of the Indian radio market has almost doubled. This growth has been driven by the increase in the number of FM licences granted by the Indian government, a
process which began in the late 1990s and which has been following a three-phase approach. In 2006-07, Phase II saw 245 licences allocated to 38 broadcasters. In Phase III, approved in July 2011, a further 839 licences will be granted and FM radio services will be extended to cover all cities with a population of 100,000 and above.\footnote{G2MI, The Indian Radio Industry: Overview and future prospects, July 2010, http://www.g2mi.com/Indian_Radio_Market_2010.pdf [accessed 02/08/2012] Ministry of Information and Broadcasting, press release dated 7 July 2011, http://pib.nic.in/newsite/erelease.aspx?relid=73074 [accessed 02/08/2012]} The 10.0% growth of radio revenue in China has been driven by an increase in the number of private cars and taxi services in the country, which has led to radio listening becoming more widespread.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{radio_industry_revenue_annual_growth.png}
\caption{Radio industry revenue annual growth: 2010-2011}
\end{figure}

Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Note that the UK radio industry figure is sourced from broadcaster returns made to Ofcom.

Revenue from licence fees contributes 80% of total radio revenues in Sweden and Germany

Of the 17 comparator countries, nine of the radio markets are part-funded by licence fees. With the exception of Japan, all of these countries are within Europe. Licence fees make up the majority of radio revenue in five countries; Sweden, Germany, Japan, the UK and France.

Sweden and Germany have the highest public funding ratio, with 80.7% of revenues in Sweden and 79.4% of revenues in Germany coming from this source. Of the markets which are partly public funded, licence fees contribute the least in Italy (18.2%), Ireland (25.9%) and the Netherlands (28.9%). Sixty per cent of radio revenues in the UK come from licence fees.

The US and Canada are the only markets where subscriber-based satellite radio is available to consumers. This source contributed 14.2% to revenues in the US and 12.8% to revenues in Canada.

Some of the countries in Figure 4.12 may also receive public funding from sources other than a licence fee; for example, government grants or support from other public bodies. The US, Canada, Australia and Spain all have a degree of publicly-funded radio programming. In 2011, 85% of all funds distributed by the US Corporation for Public Broadcasting were grants...
awarded to public broadcasting stations and content producers. Of this, 24% (£60m) was allocated to radio services.\textsuperscript{72}

**Figure 4.12 Proportion of radio revenue, by source**

![Proportion of total revenue](image)

**Source:** Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom's responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Note that the UK radio industry figure is sourced from broadcaster returns made to Ofcom.

**Radio markets in Sweden, the US and Germany generate the greatest revenues per head of population**

The radio markets in the US, Germany and Sweden generated high revenues per capita in 2011. The radio market in Sweden generated the highest revenue per head of population of all of our comparator countries (£38.3). Eighty per cent of this was generated by licence fees, with the remainder coming from advertising revenues. Revenue per head was also high in Germany (£36.5), with a large proportion (79%) of this coming from licence fee revenue. The US was in second place, generating £36.6 of revenue per head of population, with 85% originating from advertising revenue. The remainder was generated from satellite subscription revenues.

Figure 4.13  Radio industry revenues, per head of population: 2011

Source: Ofcom analysis based on data from PricewaterhouseCoopers Global Entertainment and Media Outlook 2012-2016 @ www.pwc.com/outlook. Interpretation and manipulation of data are solely Ofcom’s responsibility. Ofcom has used an exchange rate of $1.604 to the GBP, representing the IMF average for 2011. Note that the UK radio industry figure is sourced from broadcaster returns made to Ofcom. Population data from US Census Bureau (end of year estimates from mid-year values).
4.3 The audio consumer

4.3.1 Introduction

This section examines how people consume audio services in the 17 comparator countries in this report. The main findings include:

Our consumer research found that radio listening is a popular activity among internet users in the countries which we surveyed, with the exception of Japan and China. The research found that 69% of UK adults who are connected to the internet claim to listen to radio on a weekly basis, on a par with Australia but slightly behind the other European countries surveyed. Across all of the countries surveyed, consumers are still more likely to listen to the radio on a regular basis than consume audio content on a portable media player or hi-fi.

Across all of the countries surveyed, consumers are more likely to listen to the radio on a regular basis than consume audio content on a portable media player or hi-fi.

As a news source, radio is used most for news about a region or locality. It is most popular in Germany, where 10% claimed it as their main source for local/regional news, and ranks second in Australia, where 7% made the same claim. In the UK, the comparable figure is 4%.

Using the MP3 function was the most popular audio purpose for which mobile phones were used in 2011. In China, over half (53%) of respondents used their phone for this purpose, followed by 32% of consumers in Spain. Almost three in ten (28%) people in the UK used their phone to listen to MP3s.

Using the internet to download or listen to audio content was most popular in China, where half (51%) of respondents claimed that they had used their home internet connection for this purpose. This figure was lowest in Japan, where less than a quarter (23%) downloaded or listened to audio content using their home internet connection. In the UK, 33% said they had downloaded audio content online; this is in line with the average response rate in the nine countries where the survey was conducted.

4.3.2 Regular listening to radio and other audio content

Radio listening is more popular in Europe, Australia and the US than in Japan and China

The proportion of adults who claim regularly listen to radio (with ‘regular’ defined as at least once a week) was highest in Germany (79%), followed by France (78%), and Italy and Spain (both 76%). In the UK, 69% of respondents to our survey claimed to listen to radio on a weekly basis.73 (Figure 4.14) In Japan and China, claimed radio listening is far lower than in the other countries surveyed. Only 37% of respondents in Japan claimed to listen to radio on a weekly basis. This corresponds with figures reported by the NHK Broadcasting Culture Research Institute, the organisation which measures TV and radio consumption in Japan, which has stated that around 40% of the population in Japan listen to radio.

73 This is lower than the average weekly reach of radio reported by the UK’s radio listening measurement body, RAJAR, which reported that 90.8% of the UK population listened to radio in an average week in 2011. This is due to methodological differences; our research was designed to compare communications use and attitudes between different countries and not provide a definitive measure of the consumption of specific media in any one country.
Figure 4.14 also shows the proportion of adults who regularly consume audio content, either on a portable media player or on a hi-fi or similar music system. Although there are some clear differences between countries in respondents’ claimed use of each device, it is notable that listening to the radio is the most common method of consuming audio in all the countries surveyed.

**Figure 4.14** Proportion of adults who claim regularly to consume audio content

<table>
<thead>
<tr>
<th>Device</th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen to the radio</td>
<td>69</td>
<td>78</td>
<td>79</td>
<td>76</td>
<td>74</td>
<td>37</td>
<td>69</td>
<td>76</td>
<td>44</td>
</tr>
<tr>
<td>Listen to music on a portable</td>
<td>44</td>
<td>36</td>
<td>31</td>
<td>32</td>
<td>45</td>
<td>33</td>
<td>28</td>
<td>34</td>
<td>49</td>
</tr>
<tr>
<td>player</td>
<td>30</td>
<td>33</td>
<td>22</td>
<td>29</td>
<td>21</td>
<td>25</td>
<td>10</td>
<td>32</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Ofcom consumer research, September 2012
Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Spain=1001, Australia=1007, China=1010

Q: Which of the following do you regularly do (at least once a week)?

**4.3.3 Consumers prefer to use the internet to download audio content rather than listen to the radio online**

Across the countries that we surveyed, consumers were more likely to use their home internet connection to download audio content than to listen to radio online. Using the internet to download or listen to audio content was most popular in China, where half (51%) of respondents claimed that they had used their home internet connection for this purpose. This figure was lowest in Japan, where less than a quarter (23%) had downloaded or listened to audio content using their home internet connection. In the UK, 33% said they had downloaded audio content online; this is in line with the average response rate in the nine countries where the survey was conducted. (Figure 4.15)

Listening to the radio over the internet was most popular in Spain (33%), followed by Italy and Germany (27%). In the UK, 24% said they had listened to the radio online; this is in line with the average response rate in the nine countries where the survey was conducted. People in Australia were least likely to claim to listen to the radio online, with only 13% saying that they used their home internet connection for this purpose.
Figure 4.15  Use of home internet connection to consume audio content

![Bar chart showing the percentage of respondents using their home internet connection for different audio purposes across different countries.](chart)

Source: Ofcom consumer research, September 2012
Base: All respondents, UK=1065, France=1016, Germany=1024, Italy=1015, USA=1010, Japan=1004, Spain=1001, Australia=1007, China=1010
Q: Which, if any, of the following activities do you use your home internet connection for?

Using the MP3 function is the most popular way to consume audio content on a mobile handset

Mobile phone handsets often incorporate audio technologies such as analogue radio tuners which offer access to live radio, and MP3 players which support the storage and playback of audio content.

Listening to MP3 tracks was the most popular audio purpose which mobile handsets were used for in 2011. In China, over half (53%) of respondents used their phone for this purpose, followed by 32% of consumers in Spain. Almost three in ten (28%) people in the UK used their phone to listen to MP3s.

In Italy, equal numbers of people used their phones for listening to FM radio and for listening to MP3s – 23% of respondents. This was similar to the situation in Spain, where 30% of people used their mobile handset to listen to FM radio, compared to the 32% who used it to listen to MP3s. Using a phone to listen to FM radio was also highest in Spain; the comparable figure in the UK was 15%.

Listening to podcasts on a mobile handset was the least popular of the three audio functions that our consumer research explored. With the exception of China, there was little variation in its popularity, ranging from 2% in Japan to 5% in several countries. In the UK, 4% of respondents used their mobile handset to listen to podcasts.
### 4.3.4 The role of radio as a main source of news

The proportion of consumers who use radio services as a source of news—world, national or local—varies across countries. In most cases, the extent to which radio is used as a main source of news subsides as the geographical scope expands. The exception is France, where slightly fewer people stated that radio was their main source for local news (5%) than claimed this for national news (6%). In all the other countries surveyed, radio is more popular for local news, with 10% of Germans and 7% of Australians citing it as their main source. Radio as a main source of local news is lowest in China (1%) and Japan (2%).

Fewer people regard radio as their main source for national news. This is highest in France (7%) and Germany (6%). In the UK, 3% of people state that radio is their main source of national news. The proportion of people using the radio as their main source of international news is the same as those using radio for national news in many countries, including the UK.
International Communications
Market Report 2012

5 Internet and web-based content
## Contents

5.1 Key market developments in internet and web-based content 185  
5.1.1 Industry metrics and summary 185  
5.1.2 Internet advertising 186  

5.2 Internet and devices 190  
5.2.1 Introduction 190  
5.2.2 Internet take-up, by platform 191  
5.2.3 Internet-enabled devices 192  
5.2.4 Online audiences 195  
5.2.5 Time spent online 198  

5.3 Web-based content 200  
5.3.1 Introduction 200  
5.3.2 Overview 201  
5.3.3 Search 202  
5.3.4 Social networking 203  
5.3.5 Online video 206  
5.3.6 Online shopping 208  
5.3.7 Online news 210
5.1 Key market developments in internet and web-based content

5.1.1 Industry metrics and summary

Figure 5.1 Internet and web-based content: key international statistics

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>CAN</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>NED</th>
<th>SWE</th>
<th>IRL</th>
<th>POL</th>
<th>BRA</th>
<th>RUS</th>
<th>IND</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online universe (m)*</td>
<td>41.3</td>
<td>44.1</td>
<td>48.3</td>
<td>29.6</td>
<td>199.3</td>
<td>n/a</td>
<td>59.9</td>
<td>13.8</td>
<td>21.8</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Fixed broadband connections per 100 HH†</td>
<td>77</td>
<td>81</td>
<td>70</td>
<td>54</td>
<td>76</td>
<td>86</td>
<td>67</td>
<td>66</td>
<td>65</td>
<td>93</td>
<td>63</td>
<td>71</td>
<td>42</td>
<td>28</td>
<td>44</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td>Cellular broadband connections per 100 population†</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>n/a</td>
<td>4</td>
<td>8</td>
<td>25</td>
<td>7</td>
<td>6</td>
<td>21</td>
<td>13</td>
<td>9</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Internet access via a mobile phone(%)‡</td>
<td>38</td>
<td>30</td>
<td>31</td>
<td>37</td>
<td>33</td>
<td>n/a</td>
<td>43</td>
<td>32</td>
<td>46</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: IDATE / Industry data / Ofcom, Nielsen
*Nielsen, month of August 2012, home and work panel, applications included.
† IDATE / Industry data / Ofcom, 2011.
‡Ofcom international research, October 2012.

The internet is a platform through which consumers can communicate and consume content, and the ability to access the internet is becoming a feature of more and more consumer devices. However, the extent to which internet users have adopted the internet for their communication and content needs, and which devices they use to do so, varies from country to country.

In this chapter we consider the differences between our comparator countries in take-up of the internet, use of internet-enabled devices, and consumption of web-based content. In section 5.2 we examine how people connect to the internet, which devices people use to access the internet, the respective size of countries’ online audiences, how long people spend online, and how adoption of the internet varies by demographic. In section 5.3 we consider what internet users do once they are online, what websites they visit, and how this behaviour varies by demographic and by device.

For the remainder of this section we shall consider the internet advertising markets of our comparator nations. Advertising plays a significant role in online markets, in many cases acting as the sole source of revenue for content creators and websites. We consider the size of internet advertising in relation to other advertising markets, the type of advertising, and the level of spend per head across wired and mobile devices.

In summary, the key findings of this section of the chapter are:

- **A third of all advertising spend in the UK is on the internet.** The share of internet advertising as a proportion of total advertising expenditure was greatest in the UK in 2011, where one in every three pounds spent on advertising is spent on the internet (33%), followed by the Netherlands (29%) and Sweden (27%).
• **Spend on laptop and desktop internet advertising is highest in the UK.** The UK had the greatest spend per head (£76) on wired internet advertising in 2011, followed by Australia with £73 and the US and Sweden with spend per head of £63. UK spend grew by 16% in 2011, more than twice as fast as Australia (7%) which spent the most per head in 2010.

• **US mobile internet advertising spend grew 2.5-fold, to level with Japan.** In 2011 spend on mobile internet advertising was largest in Japan, with revenues totalling just over £1bn. The US had the second largest market by a small margin, with revenues of £995m, while the UK had the fourth largest spend (£196m), after China with £285m.

• **Mobile ad spend per head is £5 more per year in Japan than in the US and UK.** Spend per head on mobile internet advertising remains the highest in Japan at £7.99, despite spend per head more than doubling in the UK (£3.12 per head) and in the US (£3.18 per head).

### 5.1.2 Internet advertising

**A third of all advertising spend in the UK is on the internet**

The share of internet advertising as a proportion of total advertising expenditure was greatest in the UK in 2011, where one in every three pounds spent on advertising is spent on the internet (33%). The Netherlands (29%) and Sweden (27%) had the second and third largest shares respectively, while Ireland (14%) and Italy (13%) had the smallest shares.

Nevertheless, despite having the second smallest share, internet advertising share grew fastest in Ireland, up 51% from 9% in 2010. Growth of internet advertising share was slowest in Japan, both on a year-on-year basis and as an average over the past five years.

![Figure 5.2 Internet share of total advertising expenditure](http://www.warc.com/Pages/ForecastsAndData/NotesandSources.info)

Source: Warc data ([www.warc.com](http://www.warc.com))

*Data prior to 2009 exclude paid-for search advertising. Internet data from 2009 include display, classified, search and email and are not comparable with those of previous years. Further notes on adspend by country available at [http://www.warc.com/Pages/ForecastsAndData/NotesandSources.info](http://www.warc.com/Pages/ForecastsAndData/NotesandSources.info)*
Spend on laptop and desktop internet advertising is highest in the UK

Internet advertising consists of spending by advertisers on paid search, banner/display, classified, video and other online formats such as email and sponsorships. Wired internet advertising is spend on adverts viewed on fixed or ‘wired’ devices, predominantly through web browsers on laptop and desktop computers. Although these devices may now access the internet through a mobile rather than fixed broadband connection, wired advertising remains distinct from mobile advertising, designed to be viewed on a mobile handset.

The UK had the greatest spend per head, £76, on wired internet advertising in 2011 (Figure 5.3), followed by Australia with £73 and the US and Sweden each with £63. UK spend grew by 16% in 2011, more than twice as fast as Australia (7%) which had spent the most per head in 2010.

Wired internet advertising spend was lowest among the BRIC countries, with just £0.11 spent per head in India (not shown). Nevertheless, Russia and China grew the fastest among all nations, up 56% and 48% respectively in 2011.

Figure 5.3 Total wired internet advertising expenditure, per head: 2007-12

Source: PricewaterhouseCoopers Global Entertainment and Media Outlook: 2012-2016
www.pwc.com/outlook, US Census Bureau (YoY estimates from mid-year values)

Revenue share across internet advertising categories remains stable

The share of internet advertising revenue between categories of advertising varies considerably across our comparator countries. The respective strengths of internet classified, display, search and video advertising are likely to be the result of a number of country-specific factors including broadband penetration, broadband speeds, the popularity of social networks and the strength of other media competing for advertising spend.

The balance between advertising categories remained broadly static between 2010 and 2011 across the comparator countries. The greatest change has been in the US market, where search advertising increased its share of revenue by three percentage points to 57%, at the expense of display and classified revenues which declined in share by two percentage points each, to 26% and 10% respectively. In the UK, search (57%) and display (23%) shares of revenue have remained unchanged since 2010, while classified share has declined by two percentage points, to 17%.
A very small but growing proportion of internet advertising revenue is from video display adverts. Online video display advertising can take one of two forms. The first is similar to display advertising on websites, but in the form of an audio-visual advert rather than a static image or series of animated images. The second is similar to traditional spot television advertising, where adverts are shown either before, after, or mid-way through an online video. In 2011, the proportion of internet advertising revenue represented by internet video advertising was highest in the US (7%), followed by Sweden (4%) and Canada (3%), while internet video advertising in the UK doubled to 2% of internet advertising revenue since the previous year.

**Figure 5.4**  Wired internet advertising expenditure, by category

Source: PricewaterhouseCoopers Global Entertainment and Media Outlook: 2012-2016
www.pwc.com/outlook

Note: interpretation and manipulation of data are solely Ofcom’s responsibility.

**US mobile internet advertising spend grows 2.5-fold, to level with Japan...**

In 2011 the largest market for mobile internet advertising was Japan, with revenues totalling just over £1bn. Historically, this reflects Japan’s strong mobile market and early adoption of mobile internet services. The US had the second largest market by a small margin, with revenues of £995m. The UK had the fourth largest spend on mobile internet advertising (£196 million), behind China with £285m).

The expenditure gap between the US and Japan narrowed substantially during 2011, as spend in the US on mobile internet advertising grew by 149%, the fastest among all our comparator countries. Year-on-year growth was the second fastest in the UK, with spend up 136%, and third fastest in China (up 114%).
...but the Japanese still spend almost £5 more per head than the US.

Spend per head on mobile internet advertising remains highest in Japan at £7.99, despite spend per head more than doubling both in the UK (£3.12 per head) and in the US (£3.18 per head). The continued high spend per head in Japan is likely to reflect its high 3G/4G penetration (98% compared to 47% in the UK), and high spend per head on mobile data services (£20.58 compared to £4.66 in the UK). Outside Japan, the rapid growth of mobile internet advertising spend per head is likely to reflect the take-up of smartphones, which provide a more compelling advertising platform than previous mobile handsets.
5.2 Internet and devices

5.2.1 Introduction

As internet take-up has risen over the past decade, so has the number of devices which use it to communicate and deliver content. Internet-enabled devices greatly determine the consumer experience and the range of content, communications and services accessed on the internet. In this section we examine the popularity of these devices before considering internet access as a whole.

- Section 5.2.2 considers the **platforms consumers use to access the internet**, both fixed and mobile.
- Section 5.2.3 examines the take-up of **internet-enabled devices** and how this varies by country.
- Section 5.2.4 explores **online audiences** and how they vary by age and gender.
- Section 5.2.5 looks at the length of **time spent online** on laptop and desktop computers by internet users in a selection of comparator countries.

In summary, the key findings from this section of the chapter are:

- **Early adopter countries retain highest take-up of fixed broadband, but Japan and the US slip.** In 2011, the Netherlands had the highest number of fixed broadband connections per 100 households (93 connections), ahead of second-highest-ranked country, Canada (86 connections). The UK has the fourth highest number of fixed broadband connections per 100 households, rising above Japan and the US; from 51 connections in 2006 to 77 connections per 100 households in 2011.

- **A quarter of Australian households have mobile broadband.** Australia and Sweden had the most mobile broadband connections per 100 households in 2011. Connections per 100 households increased over the year by five connections to 25 in Australia, and by two connections to 21 in Sweden, while connections in the UK remained level at 8 per 100 households.

- **Laptop and desktop computers remain the most-connected devices in households.** Internet users in the UK and Japan were least likely to use a desktop computer (only 49% in the UK, and 48% in Japan), while the proportion of laptop/netbook users was greatest in Italy (71%) and third highest in the UK (67%).

- **Smartphones are the most-connected handheld devices.** The proportion of internet users accessing the mobile web using a smartphone is highest in China (64%), Spain (43%), and the UK (36%). In contrast, a similar proportion of smartphone users (24%) and feature phone users (21%) in Japan access the internet on their handset, reflecting the more advanced nature of feature phone handsets in Japan.

- **Twelve per cent of UK internet users claim to access the internet the most through smartphones, tablets and other connected devices.** 16.4% of internet traffic is generated from these devices in the UK, more than in any of our European comparator countries. Ireland had the second highest proportion (11.5%), while Poland had the lowest (2.2%).
• **Outside Europe, the number of laptop and desktop users online begins to fall.** Our comparator countries were evenly split between those that experienced an increase or a decrease in their active audiences in the past year. France had the greatest increase, up 8.6% in the last year to 44.1 million laptop and desktop internet users, while Australia experienced the greatest decrease (down 9.8% to 13.8 million users).

• **Australians spend more than 6.5 hours online on a laptop or desktop computer each week.** This is an hour more than in the UK, where desktop and laptop online time is declining, and three hours more than in Italy, where time spent online is currently lowest, but rising.

5.2.2 **Internet take-up, by platform**

**Early adopter countries retain highest take-up of fixed broadband, but Japan and the US slip**

In 2011, the Netherlands had 93 fixed broadband connections per 100 households, the highest take-up of fixed broadband among our comparator countries, and seven connections per 100 households more than the second highest-ranked country, Canada (Figure 5.7). Both the Netherlands and Sweden have gained 22 connections per 100 households since 2006, when they had the highest take-up among our comparator countries.

The UK has the fourth highest number of fixed broadband connections per 100 households, rising above Japan and the US, from 51 connections per 100 households in 2006 to 77 in 2011. Germany, Ireland and France also overtook Japan and the US, and were the fastest-growing non-BRIC countries in the five years to 2011.

Take-up of fixed broadband was mixed among the BRIC nations, with connections per 100 households highest in Russia (44) and China (39), while Russia had the largest rise in connections per 100 households among all our comparator countries between 2006 and 2011 (from 6 to 44).

**Figure 5.7 Fixed broadband connections per 100 households**

Source: IDATE / industry data / Ofcom

**A quarter of Australian households have mobile broadband**

Mobile broadband access using a dongle, datacard, or embedded connection in a laptop was highest in Australia and Sweden in 2011. Connections per 100 households increased over the year by five connections to 25 in Australia, and by two connections to 21 in Sweden. The popularity of mobile broadband in Australia and Sweden is likely to be related
to the slower take-up of fixed broadband (as above) and a lower population density than in the rest of our comparator countries.⁷⁴

In the UK take-up of mobile broadband has levelled off and has remained at eight connections per 100 households since 2010. But with the exception of Sweden and Ireland, take-up in the UK remains comparable with the rest of Europe.

**Figure 5.8 Mobile broadband connections per 100 population**

![Graph showing mobile broadband connections per 100 population for various countries.]

Source: IDATE / industry data / Ofcom

### 5.2.3 Internet-enabled devices

**Laptop and desktop computers remain the most-connected devices in households**

Despite the proliferation of devices that can be used to access the internet, across all nations the greatest proportion of internet users still use a laptop/netbook computer (58% to 71% across our comparator countries) and a desktop computer (48% to 65%). Internet users in the UK and Japan were the least likely to use a desktop computer (only 49% in the UK, and 48% in Japan), while the margin between the proportion of desktop users and the proportion of laptop/netbook users was greatest in the UK.

Among the countries surveyed in our research, games consoles were most popular in the US (9%) and the UK (8%) as a means of accessing the internet, while using a smart TV to access the internet was most popular in China (11%). However, the respondents to our consumer research in China are the early adopters of the internet in the Chinese population, and are therefore likely also to be early adopters of niche technologies, in contrast to the respondents in the UK and other non-BRIC countries, where internet take-up is more widespread among the general population (see Figure 5.7).

---

⁷⁴ The Australian government’s National Broadband Network plans to use fixed wireless connections to provide high-speed broadband services to consumers. However, as of December 2011 there were just 3.5 connections for every 1000 households in Australia. Source: NBNCo and Australian Bureau of Statistics.
Smartphones are the most-connected handheld devices

Internet users in China are the most likely to access the internet using a tablet, smartphone or portable media player. This is likely to be for the reasons outlined above, so we shall consider internet access on handheld devices in the remainder of our comparator countries, excluding China.

There is a similar level of adoption (13-15%) of tablet computers to access the internet in the majority of our remaining comparator countries. Germany has the lowest incidence of access; here, just under half as many internet users (6%) access the internet using tablets.

The proportion of internet users accessing the mobile web using a smartphone is highest in Spain (43%) and the UK (36%), and lowest in Japan. This is likely to be a reflection of the high ownership of smartphones among internet users in Spain (63%) in contrast to Japan (30%). However, similar proportions of internet users access the internet using a smartphone (24%) as a feature phone (21%) in Japan. This reflects the advanced capabilities of feature phones in Japan, where internet and email were accessible on mobile phones before the more recent spread of smartphones in the rest of our comparator countries (e.g. DoCoMo’s i-mode has been a popular way to access the mobile web in Japan since its launch in 1999\(^7\))

Using an eBook reader to access the internet is most popular in the US (7% of internet users). Although e-reader adoption is comparable in the US and the UK (20% and 19% respectively), it is likely that the advanced features of devices available only in the US such as Amazon’s Kindle Fire, have encouraged internet access on eBook readers there. However, while the Kindle brand is most often associated with eBook readers, the Kindle Fire arguably has more features in common with a tablet than with other eBook readers.

---

In the UK internet users access the web on their laptops more than in any other country

A higher proportion of internet users in the UK use their laptop to access the internet (51%) than in any of our comparator countries, while the US had the smallest proportion of internet users that did so (36%). In contrast, France had the largest proportion of internet users (51%) who access the internet most frequently on their desktop, while the UK had the lowest (37%). Around one in ten internet users in China (10%), Spain (9%) and the US (9%) access the internet most frequently using their smartphone, compared to around one in twenty in France (4%), Germany (4%), Japan (6%) and the UK (6%).
UK internet users generate the most traffic in Europe from devices other than desktop and laptop computers

Twelve per cent of UK internet users claim to access the internet most frequently through smartphones, tablets and other connected devices (Figure 5.11), and a greater proportion of website traffic is generated from these devices in the UK than in any other of our European comparator countries. Figure 5.12 shows that 16.4% of website traffic in the UK came from mobile, tablet and other connected devices, compared to Ireland (11.5%) with the second highest proportion, and Poland (2.2%), which generated the lowest proportion of website traffic from these devices.

Figure 5.12  Proportion of website traffic using mobile, tablet, and other connected devices

Source: comScore Device Essentials, June 2012

5.2.4 Online audiences

Outside Europe, the number of laptop and desktop users online begins to fall.

Based on data collected by internet measurement company Nielsen, the total number of users going online at least once, using a laptop or desktop computer, across our eight comparator countries was 458 million in August 2012, down by 1 million on the same time last year.

Our comparator countries were evenly split between those that experienced an active audience increase and decrease in the past year. France experienced the greatest increase, up 8.6% in the past year to 44.1 million laptop and desktop internet users, followed by Italy (up 5%), the UK (up 4.6%) and Germany (up 3.6%). Between August 2011 and August 2012 active internet audiences on a laptop or desktop computer decreased the most in Australia (down by 9.8% to 13.8 million users), followed by Japan (down 5.5%), the US (down 2%), and Spain (down 1.4%).
The US is the only country to have more women than men online using laptops and desktops

Between August 2011 and August 2012 the share of online audiences using a laptop or desktop computer shifted to an even split between genders in the UK and Australia. France maintained its 50:50 ratio between genders for the second year running, while the US is the only comparator country for which we have data that has more women (53%) online than men (47%). Japan, Germany, and Spain continue to have more male internet users than female users using a laptop or desktop, although Spain shifted closer to equity, by 1%, in the past year.

The US has the highest proportion of internet users aged 2 to 17

The share of the online audience represented by internet users aged 2-17, using a laptop or desktop computer, is greatest in the US (16%), followed closely by France (15%). The share of the online audience represented by laptop or desktop users aged 65 and older is greatest in Australia (12%), where there was a seven percentage point drop in the share of laptop and desktop users aged 2-17 in the year to August 2012. The UK was the only comparator
country in Figure 5.16 where the comparative share of online audience between these age groups remained static over this period.

**Figure 5.15** Unique online audience on a laptop or desktop computer, by age: August 2011 and August 2012

In most countries male internet users are older than their female counterparts

Figure 5.16 shows that, as in Figure 5.14, the US defies the general gender split trend among our comparator countries. Among the online audiences aged 65 and older there are more men than women in all comparator countries, except in the US where there are marginally more women (12% vs 11%). Among the online audiences aged 2-34 there are more women than men in all comparator countries except the US, where there are more men (43% vs 39%).

**Figure 5.16** Unique online audience on a laptop or desktop computer, by age and gender: August 2012
5.2.5 Time spent online

Time spent online on a laptop or desktop computer has peaked in many countries...

Internet users in Australia spend more time online than those in any of the other comparator countries shown in Figure 5.17. Laptop and desktop users in Australia spent more than 6.5 hours online per week in August 2012, 49 minutes more than at the same point in 2011.

Australian internet users are bucking the wider trend among our comparator countries, where time spent online by laptop or desktop users has either fallen (as in the US, the UK, Germany and Spain), or grown slowly (as in Japan, France and Italy). The US has experienced the greatest decline, with time spent online by laptop or desktop users falling 9.4% to 323 minutes per week, followed by the UK, with a 3.1% fall to just over 5.5 hours per week.

However, the change in time spent online by laptop and desktop users is probably a shift in the balance of two factors affecting the consumption habits of internet audiences. The first is the proliferation of internet-connected devices, and in particular the rapid adoption of the smartphone, which is substituting time spent on laptop and desktop computers. The second is the take-up of the internet among older consumers, who tend to spend less time online, but are more likely to use laptops or desktop computers than other connected devices. The proliferation of connected devices is likely to cause time online to fall (Figure 5.17), while take-up among older consumers could push up or down the average time spent online.

Figure 5.17 Average number of minutes spent online on a laptop or desktop computer per week

![Figure 5.17](image)

Source: Nielsen, August 2012, home and work panels, applications included.
Note: 2010 data unavailable for Japan.

…but time online is falling slower than time offline on laptops and desktops

Figure 5.18 shows the time spent online as a proportion of total time spent using a laptop or desktop computer. The UK, Germany and the US experienced a decline in time spent online on a laptop or desktop computer (Figure 5.17), although, as a proportion of total time spent using these devices, time online remained constant between August 2011 and August 2012. This reflects the decline in use of laptop and desktop computers for all activities in these countries, and not just for accessing the internet. Nevertheless, in Spain, time online has declined in both absolute and relative terms, perhaps as a reflection of consumers’ use of other connected devices, and smartphones in particular (see section 5.2.3).
Figure 5.18  Time spent online and offline each week on a laptop or desktop computer

Source: Nielsen, August 2012, home and work panels, applications included.
Note: Data series labels show proportions of total minutes for each year. Data from 2010 from Japan is unavailable.
5.3 Web-based content

5.3.1 Introduction

In this section of the chapter we consider the content that internet users consume, and the activities they conduct online.

- Section 5.3.2 gives an overview of the most popular online brands across eight of our comparator countries.
- Section 5.3.3 considers the popularity of global search engines, and what consumers are searching for online.
- Section 5.3.4 examines social networking, the popularity of different networks, and the use of fixed and mobile platforms for social networking.
- Section 5.3.5 is concerned with online video, in particular, video-sharing sites.
- Section 5.3.6 addresses the value of online shopping by country and consumers propensity to pay for digital content.
- Section 5.3.7 considers the importance of the internet as a source of news, and access of it on mobile platforms.

In summary, the key findings from this section of the chapter are:

- **A small number of internet brands have broad appeal across our comparator countries.** Despite the diversity of language and culture across comparator countries, a search engine is the most popular brand in all eight countries, and Facebook the second most popular brand in seven countries.

- **Competitive for search varies by country.** Google is the most popular search engine in all countries except Japan, but the degree to which it leads Yahoo! and Bing is not consistent across countries.

- **The most searched-for term on the web is ‘facebook’.** In all our comparator countries except Japan, Russia and China, ‘facebook’ was the most searched-for term on Google in the year to August 2012, up from ten in 17 countries in the year to August 2011. And even in Japan, ‘facebook’ was the fastest-rising search term in the year to August 2012.

- **Mobile social networking takes off in English-speaking countries.** While social networking on a home internet connection appears static among most of our comparator countries, social networking on a mobile phone or smartphone has risen to around four in ten users in the US, the UK and Australia.

- **YouTube is the most popular online video site for laptop and desktop users, but faces local competition.** YouTube is the most popular online video site across eight of our comparator countries, but in France and Japan it faces competition from local sites Dailymotion and Nico Nico Douga.

- **Consumers in the UK spent more than £1000 per head on internet shopping in 2011, more than any other of our comparator nations.** In 2011, the value per head of business-to-consumer e-commerce was £1083 in the UK, up 14% from £950.
in 2010. Australia and Sweden were next largest, growing 26% to £842 and 12% to £747 respectively.

- **More than one in five smartphone owners in the UK and Germany have accessed online shopping websites using their handset.** Among the five largest European economies, the UK had the highest proportion (23.1%) of smartphone users visiting retailers’ websites on the mobile web, closely followed by Germany (22.6%).

- **One in six smartphone owners in the UK access news on their handset almost every day.** Among smartphone owners in the five largest European economies, those in the UK access news through websites or apps on their handset more frequently than in any other nation.

### 5.3.2 Overview

A small number of key internet brands have broad appeal across our comparator countries

Despite the diversity of languages and cultures across the comparator countries (Figure 5.19), there are many common websites and categories of website in the countries’ top tens. Search engines are key brands on the web, with five different brands appearing across our comparator countries’ top tens. Google remains the most-visited website in all our comparator countries except Japan, where it is second place to rival search engine Yahoo!. Microsoft’s Bing is also absent from Japan’s top ten, but sits between third and eighth place among the remaining countries.

Facebook has risen to become the second most-visited website in all countries except Japan, while YouTube appears in the top half of the table for all countries, confirming that both social networking and online video are key web services for our comparator countries. Online shopping brands are also prevalent, both international companies such as eBay and Amazon, and domestic e-commerce websites such as France’s *Le Bon Coin* classified listings, or Japan’s *Rakuten* retail marketplace.

### Figure 5.19 Top ten website brands, by country

<table>
<thead>
<tr>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Google</td>
<td>Google</td>
<td>Google</td>
<td>Google</td>
<td>Google</td>
<td>Yahoo!</td>
<td>Google</td>
</tr>
<tr>
<td>2</td>
<td>Facebook</td>
<td>Facebook</td>
<td>Facebook</td>
<td>Facebook</td>
<td>Facebook</td>
<td>Google</td>
<td>Facebook</td>
</tr>
<tr>
<td>3</td>
<td>MSN/Windows/Bing</td>
<td>MSN/Windows/Bing</td>
<td>YouTube</td>
<td>YouTube</td>
<td>Yahoo!</td>
<td>MSN/Windows/Bing</td>
<td>MSN/Windows/Bing</td>
</tr>
<tr>
<td>4</td>
<td>YouTube</td>
<td>YouTube</td>
<td>Microsoft</td>
<td>MSN/Windows/Bing</td>
<td>MSN/Windows/Bing</td>
<td>YouTube</td>
<td>YouTube</td>
</tr>
<tr>
<td>5</td>
<td>BBC</td>
<td>BBC</td>
<td>Amazon</td>
<td>Virgilio</td>
<td>YouTube</td>
<td>Rakuten</td>
<td>Microsoft</td>
</tr>
<tr>
<td>6</td>
<td>Yahoo!</td>
<td>Orange</td>
<td>eBay</td>
<td>Microsoft</td>
<td>Microsoft</td>
<td>Wikipedia</td>
<td>Yahoo!</td>
</tr>
<tr>
<td>8</td>
<td>eBay</td>
<td>Leboncoin.fr</td>
<td>MSN/Windows/Bing</td>
<td>Libero</td>
<td>Amazon</td>
<td>Microsoft</td>
<td>eBay</td>
</tr>
<tr>
<td>9</td>
<td>Microsoft</td>
<td>Yahoo!</td>
<td>T-Online</td>
<td>Wikipedia</td>
<td>Ask Search Network</td>
<td>Livedoor</td>
<td>Apple</td>
</tr>
<tr>
<td>10</td>
<td>Wikipedia</td>
<td>Free</td>
<td>gutefrage.net</td>
<td>Blogger</td>
<td>Wikipedia</td>
<td>Goo</td>
<td>Blogger</td>
</tr>
</tbody>
</table>

Source: **Nielsen, August 2012.**

Note: Coloured font indicates brand appears more than once. Includes all internet applications. ‘+’ or ‘-’ and a number denotes change in rank since 2011 ICMR publication, ‘-’ only denotes no change, and ‘N’ denotes a new entrant to the top 10. Australia rankings available for 2012 only.
5.3.3 Search

Competition for search varies by country

In seven of the eight comparator countries for which we have data, Google is the search engine with the greatest reach among active internet users (Figure 5.20). Google had the highest active reach in Spain, where 90% of internet users visited the search engine in August 2012, and the lowest active reach in Japan (61%), where Yahoo! (85% active reach) is the most popular search engine.

The degree to which rival search engines compete with Google varies across our comparator countries. In our European comparator countries and in Australia, Microsoft’s Bing search engine is second to Google and Yahoo! is third, while in the US, Yahoo! is second to Google and Bing is third. The popularity of each search engine is closest in the US, where all three companies are based, and where the number of internet users is greatest (see section 5.2.4).

![Figure 5.20](image)

Source: Nielsen, Search Brands per Country, August 2012, home and work panel, including applications.

The most searched for term on the web is ‘facebook’

In 14 of our 17 comparator countries (all except Japan, Russia and China), ‘facebook’ was the most searched-for term on Google in the year to August 2012, up from ten countries in the year to August 2011. However, Facebook was not without influence in Japan, where ‘facebook’ was the fastest-rising search term between August 2011 and August 2012.

TV-related search queries are prevalent among the fastest-rising search terms in a number of countries in the year to August 2012. In France Bref is a successful TV series; in Italy Belén Rodríguez is the popular presenter of a number of Italian variety television shows including Italia’s Got Talent; and in Brazil and India the fastest-rising search terms ‘bb12’ and ‘sunny leone’ are references to the reality TV show Big Brother in each country. In contrast, Google users in Spain and Australia primarily searched for terms relating to current affairs and popular music respectively. These search terms demonstrate the influence that other media can have on internet users and the web content that they consume.
5.3.4 Social networking

Twitter is almost as popular as Facebook in Japan

The most popular social network across all of the comparator countries for which we have data is Facebook. Facebook was most popular in Italy, where 71% of active internet users visited the website in August 2012, and least popular in Japan (28%) where social networking has historically had a much slower take-up (see Figure 5.23) and where Twitter (22%) is more popular than in other countries. A report by Forrester suggests Japanese internet users prefer anonymity, and social networking sites such as Twitter, within which users can interact under a pseudonym or ‘handle’, have been more successful at attracting users as a consequence.76

In the UK, two-thirds (67%) of active internet users visited Facebook on a laptop or desktop computer. One in six (17%) visited Twitter at least once in the month, almost twice the active reach of smallest rival Google+ (9%). This analysis provides an indication of the relative success of international social networks among our comparator countries, but does exclude domestic social networks such as Tuenti in Spain (the third most searched-for term on Google in Spain) which may be more popular than international social networks among internet users in particular countries.

---

Social networking on a home internet connection remains level

The proportion of internet users who visit social networks using their home internet connection has remained broadly level across all our comparator countries for which we have trend data, with the exception of Japan (where it has increased). Spanish internet users were most likely to access social networks in this way, with three-quarters (75%) visiting social networks at home, compared to just half of Japanese users (49%), who accessed social networks the least. Nevertheless, the popularity of social networking in Japan is growing, with one more social networker in every six internet users than in 2010.

Two-thirds of over 55s in Spain use their home connection for social networking

Social networking on a home internet connection is most popular among younger age groups across all our comparator countries except China, where social networking appears to be popular among a similar proportion of each age group. This is probably a reflection of China’s emerging internet population, for whom the appeal of social networking is reasonably uniform, as opposed to a reflection of the popularity of social networking of China’s population as a whole.
Spain has the highest proportion of older internet users who use their home internet connection for social networking, with just 10 percentage points between the proportion of Spain’s youngest internet users and oldest internet users who visit social networking sites. Half of the UK’s internet users (50%) aged 55 or older are social networkers at home, while the activity is most popular among 18 to 24 year-olds (71%).

Figure 5.24  Use of home internet connection to visit social networking sites, by age

Source: Ofcom consumer research October 2012.
Base: All respondents ages 18+ (UK=1065, FRA=1016, GER=1024, ITA=1015, USA=1010, JPN=1004, AUS=1007, ESP=1001, CHN=1010)
Q8: Which, if any, of the following activities do you use your home internet connection for?

Mobile social networking takes off in English-speaking countries and Japan

While social networking on a home internet connection appears static among most of our comparator countries (Figure 5.23 above), social networking on a mobile phone or smartphone is increasing in appeal. Mobile social networking was most popular in Spain, US, the UK and Australia, where four in ten internet users claimed to do this on their handset. Furthermore, in the the UK, US and Australia there were statistically significant increases in the proportion of internet users doing this between 2011 and 2012. The popularity of mobile social networking is likely to be a reflection of the high take-up of smartphones in these countries (see Section 5.2.3).

While internet users in Japan have been slower than those in the rest of our comparator countries to take up social networking on a home internet connection, take-up on a mobile phone has grown to exceed levels in France, Germany and Italy. This could be the result of Japanese internet users’ familiarity with using a mobile phone for other forms of internet-based communication and content consumption. According to comScore, 51% of Japanese mobile phone users have used a browser on their handset, compared to just 43% in France, 38% in Germany, and 40% in Italy.

77 http://www.comscore.com/Press_Events/Press_Releases/2012/8/Japan_Smartphone_Surge
78 http://www.comscore.com/Press_Events/Press_Releases/2012/9/QR_Code_Usage_Among_Europ ean_Smartphone_Owners_Doubles_Over_Past_Year
Six in ten of the UK’s young adults use their mobile for social networking

Using their handset for social networking is most popular among 18 to 24 year-old mobile phone owners in the UK (62%) and least popular among Japanese mobile owners aged 55 and over. Compared to social networking on a home connection, there is a much greater difference between younger and older age groups in the use of mobile phones for social networking. Even in China, where social networking has a broad appeal across all age groups, 44% of 18 to 24 year olds used their handset for social networking, compared to a third (33%) of those aged 55 and over.

5.3.5 Online video

Reach of online video websites remains flat in the UK but rises across Europe

The popularity of online video websites is broadly similar across all of the comparator countries for which we have data. Online video sites have the greatest reach in France, where 68% of laptop and desktop internet users accessed at least one site of type in August 2012, and the smallest reach in Germany, where just 56% did the same (Figure 5.27).
Between 2011 and 2012, the proportion of laptop and desktop internet users accessing online video websites in the UK and the US remained static, at 63% and 65% respectively. In the remainder of the comparator countries active reach increased, with the exception of Japan where fewer laptop and desktop internet users visited online videos sites between August 2011 and August 2012 than in the previous year.

**Figure 5.27  Active reach of online video websites on laptop and desktop computers**

Source: Nielsen, August 2012 and August 2011, home and work panel, applications included

YouTube is the most popular online video site for laptop and desktop users, but faces local competition

It is clear from our analysis of the most popular online brands (Section 5.3.2) and the most searched-for terms (Section 5.3.3) that YouTube has broad appeal among our comparator countries. Figure 5.28 shows that YouTube is the most popular online video site in each of the comparator countries for which we have data. It is most popular in Spain, where 63% of laptop and desktop internet users access it at least once a month, compared to just half of users in Germany, where YouTube is least popular.

YouTube faces the greatest competition for online video users in France, where one in five (20%) laptop and desktop internet users visit rival Dailymotion. Dailymotion is a French video-sharing website, started in Paris, and has gained particular traction among French internet users as a result of partnerships with Canal+ (the French pay-TV operator) and investment by the incumbent telecoms operator (France Telecom).

YouTube appears to have greater competition in the UK and Japan, where the BBC iPlayer catch-up television service, and Niwango’s Nico Nico Douga video-sharing site, have an active reach among 15% and 18% respectively of laptop and desktop internet users. However, it is unlikely that YouTube and BBC iPlayer compete directly with each other for viewers in the UK, since the former offers predominantly short-form user-generated video clips, while the latter provides long-form professional video programming. Nevertheless, even where domestic markets provide alternative destinations for online video (regardless of form), none are currently able to reach the majority of consumers, as YouTube does.
Consumers in the UK spent more than £1000 per person on internet shopping in 2011

Consumers in the UK spend more online than in any of our comparator countries. In 2011, the value per head of business-to-consumer (B2C) e-commerce was £1083, up 14% from £950 in 2010. Australia and Sweden had the next highest spend, growing 26% to £842 and 12% to £747 respectively. A number of factors are likely to be driving online shopping in the UK, including a high take-up of credit cards, the UK’s history of mail order and catalogue shopping, and the early arrival of e-retail websites like Amazon and eBay.

Of the BRIC countries, Russia, India and China had the highest growth rates of all our comparator countries, but from much lower bases. Brazil continues to lead the BRIC countries in value per head (£66), despite growth slowing from 33% to 19% in 2011.
More than one in five UK smartphone owners visits retailers’ websites on their handset

More than one in five smartphone owners in the UK and Germany have accessed online shopping websites using their mobile handset. According to data from comScore, of the five largest European economies, the UK had the highest proportion (23.1%) of smartphone users visiting retailers’ websites on the mobile web, closely followed by Germany (22.6%).

Recent research published by Ofcom in the UK Communications Market Report 2012 revealed that consumers use their smartphones for a variety of shopping activities, including comparing prices between online and high street shops (25% of smartphone owners in the UK), and researching product features online (19% of smartphone owners in the UK). Therefore, while visits to retailers’ websites have increased through smartphone use, this may not correlate directly to an increase in sales as a consequence.
Internet users in China are six times more likely than those in France to pay regularly for digital content

At least half of the respondents to our research, in each of our comparator countries apart from China, claimed never to pay for digital content online. Digital content includes newspapers, TV programmes, films, e-books, music, and smartphone applications. A third of internet users in China claimed to pay ‘sometimes’ for digital content online, while more respondents claimed to pay regularly for content online (18%) than never to pay (16%).

Of the remaining comparator countries, internet users in the US were the most likely to claim to pay regularly for digital content (11%), and the least likely to claim to never pay for it (50%), while only 3% of French internet users claimed to pay regularly for digital content, and 69% claimed never to pay for it. In the UK, one in four internet users claimed they regularly, or sometimes, paid for digital content.

The incidence of paying for digital content is likely to be affected by proportion of internet users who consume content in a digital form. In China, where the internet population is characteristic of early adopters, consumption of digital content is likely to be quite high, as is the proportion of internet users who claim to pay for it. Furthermore, the supply of free-to-access digital content is also likely to affect how often internet users pay for digital content. Services such as the BBC iPlayer provide content which has already been paid for through a licence fee, but feels free to the consumer at the point of access. Content can also be funded through advertising, as is the free version of the Spotify music streaming service.

Figure 5.31 Frequency of purchasing digital content online

Source: Ofcom consumer research September 2012.
Base: All respondents, UK=1065, FRA=1016, GER=1024, ITA=1015, USA=1010, JPN=1004, AUS=1007, ESP=1001, CHN=1010.

Q14. Which of the following best describes your behaviour with regards to paying for digital content online? Examples of digital content would be newspapers, TV programmes, films, e-books, music tracks, smartphone apps.

5.3.7 Online news

Three-quarters of internet users in China claim that the internet is their main source of national news

The majority of respondents to our consumer research in China claimed that the internet was their primary source for each category of news: world (71%), national (74%), and local (55%). These are the highest figures across the countries in which we conducted consumer research. Italy followed China in all three categories, where the figures were 57% (world),
49% (national), and 47% (local), while respondents in Germany, France, and Australia were the least likely to use the internet as their main source of news.

**Figure 5.32** The internet as a primary source of news

![Proportion of respondents claiming internet was their primary source of world/national/local news (%)](image)

Source: Ofcom consumer research October 2011.
Base: UK=1065, FRA=1016, GER=1024, ITA=1015, USA=1010, AUS=1007, ESP=1001, CHN=1010. Responses are cumulative figures for internet on computer/mobile phone/ smartphone/ tablet

Q11. Which, if any, is your main source for the following information? News about the world; news about your country; news about your region/locality.

**One in six smartphone owners in the UK accesses news on their handset almost every day**

Among smartphone owners in the five largest European economies, those in the UK access news through websites or apps on their handset more frequently than those in any other country. Almost half of smartphone owners in the UK claim to access news at least once a month, compared to 37% in France and 35% in Germany. And around one in six owners (16%) access news on their smartphones daily, compared to just one in ten in France, Germany, Italy and Spain.

**Figure 5.33** Frequency of accessing news websites/apps among smartphone owners

![Smartphone users (%)](image)

Source: comScore MobiLens, 3 Month Average Ending January 2012
Base: Smartphone users aged 13+
International Communications
Market Report 2012

6 Telecoms and networks
Contents

6.1 Telecoms key market developments 215
  6.1.1 Overview 215
  6.1.2 Introduction 215
  6.1.3 Mobile data use continued to grow rapidly in 2011 218
  6.1.4 Continued growth in superfast broadband networks 225
  6.1.5 Use of text messaging continued to increase rapidly in many countries 229

6.2 The telecoms industry 237
  6.2.1 Introduction 237
  6.2.2 Overview 238
  6.2.3 Fixed voice services 244
  6.2.4 Fixed broadband services 250
  6.2.5 Mobile services 255

6.3 The telecoms user 263
  6.3.1 Introduction 263
  6.3.2 Fixed voice services 264
  6.3.3 Fixed broadband services 268
  6.3.4 Mobile services 270
6.1 Telecoms key market developments

6.1.1 Overview

The telecoms section of this report looks at the fixed and mobile voice markets and those for fixed broadband and mobile data services among our 17 comparator countries. As such, the analysis excludes narrowband internet and corporate data services.

The section is split into three parts:

- **Key market developments** – provides an overall context and highlights key developments in international telecoms markets in 2011 and 2012, including headline revenue, subscriber and volume metrics and an analysis of key trends related to superfast broadband, SMS and mobile data.

- **The telecoms industry** – provides a ‘top-down’ approach by looking at the telecoms sector from the point of view of operators, and compares and contrasts trends in revenues and market structures across our comparator countries, before looking specifically at voice and data markets.

- **The telecoms user** – provides a ‘bottom-up’ approach from the point of view of consumers, and looks at the overall take-up of communications services, before focusing specifically on consumers’ experience of fixed-line voice, mobile and broadband use.

6.1.2 Introduction

Internet access has become commonplace across the globe, as increasing numbers of consumers use the internet to access online services. Figures from the United Nations’ International Telecommunications Union (ITU) show that by the end of 2011 2.3 billion people (around a third the world’s population) accessed the internet globally, almost double the 1.2 billion figure recorded in 2006. Over this period growth in internet use was fastest among developing countries, and by 2011 62% of internet users were located in developing countries, an increase from 44% in 2006.79

There was rapid growth in the take-up of fixed broadband services across the 17 countries that feature in our analysis in the five years to 2011, during which time fixed broadband take-up almost doubled to reach 42 connections per 100 homes. Despite significant growth in fixed broadband take-up over recent years, revenues from mobile data services exceeded those from fixed broadband connections for the first time among our 17 countries in 2011.

Just five years after the launch of the Apple iPhone, smartphones have become commonplace in most advanced economies: in October 2012 Everything Everywhere, the UK’s largest mobile network operator, announced that 74% of its post-paid customer base were smartphone users and 92 per cent of new post-paid customers were opting for a smartphone handset.80 While increasing smartphone take-up is a key driver behind growing mobile data use and revenues in developed countries, it is likely that this is not the case globally, as in less affluent countries the cost of these advanced handsets will be prohibitively high for many people.

Developing countries are also more likely to have limited availability of fixed telephony networks, meaning that mobile data services are the only viable option for those wishing to

go online (by 2011 90% of the world’s population had 2G mobile coverage and 45% had 3G coverage). Where this is the case, mobile data services are vital to consumers, and while mobile data users are benefitting from the transition to faster mobile technologies globally (including LTE or 4G), it is consumers, who are dependent on mobile networks for internet access, who stand to gain the most from such upgrades.

Increasing take-up of fixed broadband and mobile voice and data services have contributed to an accelerating decline in the use of traditional fixed telephony services in most of the countries featured in this report. Competition between mobile providers has led to falling call prices in most markets, which in turn has resulted in increasing use of mobile voice services, often at the expense of fixed-originated calls. Additionally, growing take-up of both fixed and mobile data services has led to increasing use of data-based substitutes for traditional voice calls, such as VoIP, SMS, instant messaging services and communication over social media.

In this section we examine three of the key developments which are transforming the global telecoms market, both in terms of industry structures and consumer behaviour:

- **The mobile data explosion.** This analysis describes the growth in mobile data, with key volume, subscriber and revenue statistics, and sheds some light on the transition from large-screen PCs to small screen smartphone mobile data use.

- **Continued growth in superfast broadband networks.** We look at the deployment of superfast technologies across countries, and the extent to which consumers are migrating to these services.

- **Increased use of text messaging.** This key market development section analyses the contrasting levels of use and expenditure related to texting, and examines attitudes towards texting, with data from Ofcom’s consumer research.

Figure 6.1 summarises key telecoms indicators across the 17 comparator countries included in this report.

---


82 LTE, or long term evolution, is a fourth-generation mobile telecommunications standard that brings fast data rates to mobile devices. Other fourth-generation mobile telecommunications standards exist, particularly outside Europe, but in this report we use LTE and 4G interchangeably.
Figure 6.1  Key telecoms indicators: 2011

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>CAN</th>
<th>JPN</th>
<th>AUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecoms service revenues (£bn)</td>
<td>27.3</td>
<td>31.2</td>
<td>35.6</td>
<td>23.7</td>
<td>186.0</td>
<td>21.4</td>
<td>90.3</td>
<td>17.2</td>
</tr>
<tr>
<td>Telecoms revenues per capita (£)</td>
<td>436</td>
<td>476</td>
<td>437</td>
<td>389</td>
<td>598</td>
<td>629</td>
<td>708</td>
<td>790</td>
</tr>
<tr>
<td>Fixed lines per 100 population</td>
<td>53.0</td>
<td>28.4</td>
<td>52.2</td>
<td>27.4</td>
<td>45.8</td>
<td>53.5</td>
<td>32.9</td>
<td>48.5</td>
</tr>
<tr>
<td>Monthly outbound fixed minutes per capita</td>
<td>154</td>
<td>143</td>
<td>196</td>
<td>112</td>
<td>137</td>
<td>-</td>
<td>54</td>
<td>170</td>
</tr>
<tr>
<td>Mobile connections per 100 population</td>
<td>130</td>
<td>105</td>
<td>140</td>
<td>159</td>
<td>103</td>
<td>80</td>
<td>98</td>
<td>136</td>
</tr>
<tr>
<td>Share of mobile post-pay connections</td>
<td>49</td>
<td>71</td>
<td>44</td>
<td>17</td>
<td>85</td>
<td>79</td>
<td>99</td>
<td>49</td>
</tr>
<tr>
<td>3G connections per 100 population</td>
<td>-</td>
<td>42</td>
<td>35</td>
<td>61</td>
<td>57</td>
<td>32</td>
<td>97</td>
<td>83</td>
</tr>
<tr>
<td>Monthly outbound mobile minutes per capita</td>
<td>164</td>
<td>135</td>
<td>109</td>
<td>186</td>
<td>615</td>
<td>344</td>
<td>95</td>
<td>329</td>
</tr>
<tr>
<td>Fixed broadband connections per 100 population</td>
<td>32.6</td>
<td>34.7</td>
<td>34.3</td>
<td>22.2</td>
<td>28.9</td>
<td>33.1</td>
<td>27.4</td>
<td>25.9</td>
</tr>
<tr>
<td>DSL as a proportion of fixed broadband connections</td>
<td>78%</td>
<td>92%</td>
<td>84%</td>
<td>97%</td>
<td>36%</td>
<td>38%</td>
<td>20%</td>
<td>81%</td>
</tr>
<tr>
<td>FTTX as a proportion of fixed broadband connections</td>
<td>0.6%</td>
<td>2.2%</td>
<td>0.5%</td>
<td>2.6%</td>
<td>7.9%</td>
<td>0.2%</td>
<td>58.0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Mobile broadband connections per 100 population</td>
<td>8.0</td>
<td>4.8</td>
<td>6.6</td>
<td>10.1</td>
<td>47.1</td>
<td>3.5</td>
<td>7.8</td>
<td>25.2</td>
</tr>
<tr>
<td>VoIP subscriptions per 100 population</td>
<td>6.6</td>
<td>31.4</td>
<td>11.4</td>
<td>14.3</td>
<td>11.5</td>
<td>12.9</td>
<td>21.8</td>
<td>22.0</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom
Note: Fixed voice figures for CAN and USA exclude local calls; fixed lines cover only exchange lines and exclude "pure" VoIP accesses; USA, CAN and CHN mobile use includes both outbound and inbound calls; 3G includes W-CDMA and CDMA20000 1xEV-DO but not CDMA2000; Revenues for Brazil, Russia, India and China exclude fixed broadband
6.1.3 Mobile data use continued to grow rapidly in 2011

In the European Union, Sweden had the highest proportion of mobile data users

In 2011, several metrics indicated high use of mobile data services by a large number of users. Much of this use was driven by the prevalence of smartphones, which, compared to feature phones, make accessing the internet from a mobile device much quicker and more effective.

At the end of 2011, the highest proportion of mobile data users\(^{83}\) was in Sweden, with 97.5 per 100 people. Sweden was followed – at some distance – by Spain, the UK and Ireland (65 per 100, 64 per 100 and 60 per 100 respectively, see Figure 6.2).

The high proportion of mobile data users in Sweden may be partly due to the early roll-out of LTE in that country, which has led to a widespread availability of fast mobile networks. There were no commercial LTE networks at the end of 2011 in Spain, the UK or Ireland.

Italy, Germany and France are the three nations with the lowest proportion of mobile data users – at between 31 mobile data users per 100 population and 39 per 100, these are all below the EU average of 43%. By the end of 2011, Germany had commercially-launched LTE networks from at least one operator, though the commercial launch of its first network occurred in 2010 – the year after commercial launch in Sweden. The fact that Germany is near the bottom of the list is perhaps not surprising: although Germany has a reasonably high penetration of mobile subscribers (there are 1.40 mobile connections per head of the population) there is a low volume of use (just 80 minutes of voice minutes per mobile connection in 2011 – the lowest of our comparator countries).

Mobile broadband subscribers

As well as having the highest proportion of mobile data users, Sweden also has the highest proportion of mobile broadband subscribers\(^{84}\), with one in five of its population connecting their PC or tablet to the internet via a cellular network.

Ireland is again near the top of the table – it is in second place with 13.2 mobile broadband subscribers per 100 population. This is likely to be partly due to Ireland’s National Broadband Scheme, a project co-funded by the Irish government and the European Union to roll out 3G mobile broadband to large parts of the country. This increased availability may have acted as a stimulus for demand.

Italy is in third place with ten mobile broadband subscribers per 100 population; the country offers many mobile broadband tariffs that are charged according to time spent online – an approach which is highly unusual elsewhere. Advocates of this approach argue that per-hour pricing stimulates demand more than per-megabyte pricing because subscribers find it difficult to understand the size of a megabyte. In most other countries, the volume of data is the main unit that subscribers are billed by.

The UK is fifth of the nine EU comparator countries for mobile broadband penetration, with one mobile broadband connection per 12 citizens. Growth in penetration levels in the UK has

\(^{83}\) In this section, the term 'mobile data users' is the European Commission definition (that it calls 'mobile broadband'), and is the total of: the number of subscribers who use their handset to access mobile data services, the number of mobile broadband subscribers (as defined by Ofcom, among others) and the number of data subscriptions that are bought separately to voice. The European Commission publishes the total for each Member State.

\(^{84}\) Mobile broadband refers to users accessing the internet via a cellular network from a tablet or PC, and excludes mobile handset use.
slowed: the number of active subscribers increased by just 4.9% in 2011, compared with the number of subscribers who use a mobile handset to access the internet, which increased in 2011 from 32% to 39% of the population.

Ofcom’s consumer research\(^8\) shows that mobile broadband in the UK has not reached high levels of penetration in all market segments. It is particularly low among older citizens (just 3% of those aged 65-74 and 1% of those aged over 75 use mobile broadband). Mobile broadband penetration may also be low due to the lack of LTE connectivity and the much higher speeds and reliability of fixed broadband. Conversely, the high penetration of fixed broadband may have acted to limit subscriptions to mobile broadband services.

Figure 6.2 Mobile broadband subscribers and mobile data users, per 100 people: 2011

Source: European Commission Digital Agenda Scoreboard. ‘Mobile broadband subscribers’ refers to connections made over a mobile network by a PC or tablet with a dongle or with an embedded SIM. ‘Mobile data users’ includes mobile broadband subscribers and is the total of the three bulleted items in the footnote above.

\(^8\) Ofcom Communications Market Report 2012
UK downloaded more data per connection than the other comparator countries

The volume of mobile data consumed continued to increase rapidly in 2011, driven by the increased take-up of smartphones. For example, in the UK the number of smartphone data users increased by 9.9 million in 2011, according to Ofcom’s figures.  

An often-quoted source of information on the volume of mobile data traffic is Cisco Systems' Visual Networking Index (VNI). Cisco’s VNI bases its figures for mobile traffic on a broad range of sources from analyst companies to consultancies and telecommunications suppliers.

The VNI showed that the quantity of data consumed per UK mobile connection increased by 58% in December 2011 to 424MB per connection per month (Figure 6.3).

This increase meant that the UK became the highest consumer of mobile data among our comparator countries, pushing Japan into second place with 392MB per connection per month. The global figure was 92MB per connection per month in December 2011.

Drivers that have propelled the UK to the top of the table may include the availability of tariffs offering unlimited mobile data or a large data allowance. The ongoing large-scale conversion of subscribers from feature phones to smartphones during 2011 is also likely to have contributed to this growth. Because smartphones have larger screens that make it quicker to use online services and applications, an increasing penetration of smartphones tends to go hand-in-hand with increased data use.

Subscribers who sign up to contract tariffs are more likely to use a smartphone, and the proportion of subscribers on contract tariffs increased by 3.5 percentage points (to 49%) in the UK in 2011. Contract tariffs in the UK often include a data allowance, which has encouraged mobile data use.

The deployment of faster mobile networks may also be a driver for higher mobile data use, but there appears to be little correlation between the headline speed of a mobile network and the data consumed. All four UK mobile network operators have deployed 3.5G services, with theoretical downstream speeds of 42Mbit/s available in some areas. This compares to much faster headline speeds of around 100Mbit/s or more for LTE (4G), although the five countries (the US, Germany, Japan, Australia and Canada) where commercial LTE networks had been deployed by the end of 2011 did not necessarily have the highest, or fastest growing, levels of data consumption.

---


88 Average mobile data volumes reported by Cisco Systems for the UK are higher than figures published by Ofcom, due to different definitions. Ofcom’s Infrastructure Report 2012 shows that UK cellular data throughput per active SIM was 246MB for a 30-day period from mid-June 2012. This figure should not be compared to the 2011 Infrastructure Report, which reported data throughput per active 3G SIM. See http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/infrastructure-report-2012/

89 Theoretical, or headline speeds, are the top speed achievable on that network. In reality, consumers will experience far slower speeds, due a range of factors, including the number of other users in the cell and distance from the base station. Therefore comparing headline speeds between countries is unlikely to offer much insight into the actual speeds experienced by users.
For example, the country with the largest number of LTE subscribers, the US, consumed only the sixth highest amount of mobile data per connection in December 2011 among our comparator countries, with the third highest year-on-year growth rate.

Germany’s mobile data consumption was lower, placing it in ninth place for data consumed per connection and eighth in terms of growth in 2011.

France and China had the fastest year-on-year growth rates in 2011, with 224% and 189% respectively. Annual growth in Japan slowed to 12% in 2011. Global growth was 133%.

Figure 6.3 Mobile traffic volume per connection: 2009-2011

Source: Cisco Systems’ Visual Networking Index. 2009 and 2010 data as provided to Ofcom by Cisco Systems in November 2011; 2011 data as published on the Cisco VNI microsite, October 2012. Data are for December of the year stated.

Mobile broadband traffic growth slowed in 2011

It became clear in 2011 that the growth in mobile traffic was being driven by the uptake of smartphones, rather than mobile broadband devices90. Mobile broadband was the driver behind rapid mobile traffic growth when these devices became commercially available in the second half of the last decade.

90 Mobile broadband devices commonly include dongles, mobile WiFi devices (which connect to the internet via a cellular network and the user via WiFi) and tablet PCs with embedded SIMs. Mobile broadband is used to connect PCs and tablets to the internet.
However, in 2011, in contrast to double-digit and triple-digit growth in mobile traffic, mobile broadband growth was much slower. According to Analysys Mason, the volume of traffic consumed per mobile broadband SIM increased by 9% in Western Europe in 2011, to 1.80GB. The UK experienced slower growth than Western Europe: up 5% in 2011 to 2.25GB per mobile broadband SIM (see Figure 6.4).

These increases are markedly slower than for mobile broadband in previous years: from 2007-2010 the UK achieved a compound annual growth rate (CAGR) of 108% from 2007-2010, and Western Europe a CAGR of 50% over the same period. Subscribers in some countries are now consuming less mobile broadband data per connection. According to Analysys Mason, in 2011 four of the eight Western European comparator countries saw a decline in traffic per mobile broadband SIM. Use in Germany (the largest nation in Western Europe) declined by 0.17GB per month to 1.04GB in 2011.

The reduction in growth is likely to be due to the fact that many consumers now access mobile data services from handsets, which are not included in the mobile broadband figures. Some users are tethering their handset to their PC, using the handset’s data connection as an alternative to using a mobile broadband connection.

Slowing mobile broadband traffic growth may also be a sign that the mobile broadband market is well past early adopter stage and nearing maturity, with most consumers who are interested in the service aware of the technology and services available. Many mobile broadband subscribers may now be using mobile broadband as a complement to a fixed broadband service, rather than a substitute, and some of these may only use the service as a back-up when their fixed broadband service is down.

Figure 6.4 Mobile broadband data use per SIM: 2007-2011


Japan had the highest revenue per user from mobile handset data services

In 2011, the growth in mobile data consumption was reflected in all our comparator countries by increasing handset data revenues. Annual growth in mobile data revenue per user ranged from 8% in Canada to 51% in Poland. High rates of growth were also found in the Netherlands (42%) and Sweden (29%; one of the first countries to roll out LTE (4G) services).

Japan had the highest revenue per user for mobile data services, at £20.58 per month, with mobile subscribers in Canada (despite the low growth rate) spending the second highest
amount, at £11.05 per user per month. Revenue per user in the UK was the third lowest among the comparator countries (greater than Poland and Italy), at just £2.06 per month (Figure 6.5).

From a low base, the UK figure has increased at over 10% compound annual growth rate (CAGR) over the period 2006 to 2011 (and at 18% in 2011).

The increase in Japan was 8% CAGR between 2006 and 2011: perhaps a reflection of the length of time mobile data services have been available in that country, and a reflection of high adoption levels in a relatively mature market.

Of the eight comparator countries for which we have mobile data revenue figures and were covered by the VNI, seven saw mobile data volumes increase faster than mobile handset data revenues, meaning that the price per megabyte of data fell in these countries. Germany was the exception.

Our mobile data revenue figures do not include SMS or mobile broadband revenues, and do not include revenue from bundles that include voice. These figures represent expenditure on stand-alone handset data. The low figure for the UK can be largely explained by the fact that subscription revenues account for a sizeable 44% of mobile retail revenues – with many of these tariffs including data - and because separate data packages have low levels of take-up in the UK.

**Figure 6.5  Mobile data average revenue per user: 2006-2011**

*Source: IDATE/industry data/Ofcom*
LTE revenues and subscriber numbers remained low in our comparator countries, while the US led the pack

By the end of 2011, LTE (4G) services had been commercially launched in seven of our comparator countries: Canada, Germany, Japan, Poland, Sweden, the US and Australia. The percentage of households and businesses covered by these networks varies between nations, and some of these networks are at an early stage of roll-out. Consequently, the percentage of the mobile subscriber base that had taken up LTE services was below 2% in each of the seven countries at the end of 2011, according to data from analyst firm IDATE (Figure 6.6).

The leading country, both in terms of the absolute number of LTE subscribers, and the percentage of subscribers that use LTE services, was the US. Much of this is attributable to the early and quick roll-out by mobile network operator Verizon Wireless. The other six countries with LTE services all have less than 1% of their mobile subscribers on LTE, including Sweden, which launched LTE commercially in 2009.

In line with the low take-up figures, the percentage of revenues that were contributed by LTE subscribers was also below 2% in every comparator country. The US realised the highest LTE revenues in 2011, with 1.51% of total mobile service revenues.

Japan had the highest LTE revenues per LTE subscriber, at £28.93 per month, compared with £22.54 per month for Sweden and £21.18 per month for the US. For the US and Japan, this figure is below mobile ARPU across all services, although this may be because some LTE subscribers spend money separately on 3G services, with their LTE spend being purely on mobile broadband. However, in Sweden, LTE revenues per LTE subscriber exceeded mobile ARPU (£15.38 in 2011): high pricing could explain the low uptake mentioned above.

Other nations, including the UK, saw LTE launches in 2012. In October 2012, Everything Everywhere was the first MNO to launch LTE commercially in the UK, with the other three MNOs expected to launch commercial services in 2013 following the auction of radio spectrum.

LTE revenues are dependent, among other variables, on the level of availability, so should be treated with some caution in comparing nations.

**Figure 6.6 Percentage of revenues and subscribers attributable to LTE: 2011**

Source: IDATE. Subscriber figures are for the end of 2011. Revenue figures are for the whole of 2011.
6.1.4 Continued growth in superfast broadband networks

Fixed broadband services are available to nearly all consumers in the majority of our comparator countries. As a result, government and operators are switching their focus onto superfast broadband services, which are defined as those with a headline speed of 30Mbit/s or more. Most of our comparator countries have set targets for achieving higher levels of superfast broadband availability and/or take-up over the coming years. For EU member states, the European Commission has set a target that all households should have access to superfast broadband by 2020, with at least half of European households subscribing to services offering speeds higher than 100Mbit/s by the same year.

ADSL broadband over legacy copper telephone networks is unable to deliver superfast broadband. To deliver superfast speeds networks need to be upgraded to an optical fibre-based architecture. We can categorise these superfast capable networks into three broad types:

- Fibre-to-the-home (FTTH) or fibre-to-the-premises (FTTP), where a fibre-optic cable is installed all the way from the telephone exchange to the consumer’s premises. Copper wiring is often used inside the building for the final part of the delivery.

- Fibre-to-the-cabinet (FTTC), where fibre is run from the local exchange to the street cabinet from which VDSL, a fast form of DSL, is used to transmit data to the consumer’s premises over the ‘sub loop’ (the copper wire which runs from the cabinet to the consumer’s premises, typically less than 500 metres long).

- Hybrid fibre/co-axial cable networks (HFC), via a DOCSIS 3.0 upgrade to an existing cable TV (CATV) system. From a network point of view, HFC is similar to FTTC in that it uses a street cabinet with fibre-optic cables on one side and co-axial cable on the consumer premises side. The technology used in HFC networks is often referred to as fibre-to-the-last amplifier (FTTLA).

There were wide variations in the availability of superfast broadband among our European comparator countries in July 2012

Data published by the European Commission show that fixed broadband availability was high in most of our European comparator countries in July 2012, with Poland (where 72% of homes were covered by these services) being the only such country where less than 95% of households were able to access one or more provider’s fixed broadband network (Figure 6.7). Separate figures provided by IDATE show that the population coverage of fixed broadband services was also high in Canada, Japan and the US at the end of 2011 (at 99%, 99% and 98% respectively), and slightly lower in Australia at 91%.

The availability of superfast broadband services (i.e. those with an advertised speed of 30Mbit/s or above) varied significantly among our European comparator countries in July 2012, ranging from 11% in Italy (where cable broadband services are not available) to 100% (to the nearest percentage point) in the Netherlands, where there is high availability of these services; the Netherlands benefits from having a geographically-concentrated population, which makes network deployment relatively cheap. In the UK an estimated 65% of homes were able to receive superfast broadband by July 2012, mainly provided using BT’s FTTC network and Virgin Media’s DOCSIS3.0 cable network.
Japan still leads on availability of broadband networks capable of delivering superfast speeds but others are catching up.

Figure 6.8 shows FTTx and superfast cable broadband availability for 13 of our comparator countries at the end of 2011. Japan has had a significant lead over our other comparator countries, in terms of the availability of networks capable of delivering superfast broadband, for a number of years, with 94% of premises having access to fibre-based broadband in 2011. For the first time in 2011, other countries showed comparable levels of availability to those in Japan. The Netherlands was closest, with 91% of premises having access to a superfast cable broadband connection, whereas in Sweden, Canada and the US, at least 70% of premises were able to access superfast broadband services. In the UK just under half of all homes (46%) could receive superfast cable broadband services at the end of 2011, while a quarter could receive fibre-based superfast services.
Figure 6.8  Availability of FTTx and cable networks: end 2011

Source: Analysys Mason, FTTX rollout and CAPEX in developed economies, forecasts 2012-2017, March 2012 / Ofcom
Note: UK figures are household availability

Take up of superfast broadband connections is still low in many countries

While availability is now significant in many countries, the proportion of broadband subscribers who choose to take up a superfast connection is generally low across our comparator countries. Figure 6.9 shows fixed broadband connections at the end of 2011 split out by headline speed. In the Netherlands and Sweden just over a fifth of broadband connections were superfast at the end of 2011, while Australia is just behind them on 17%. In the rest of our comparator countries less than 10% of broadband connections had headline speeds of 30Mbit/s or higher. The US had the highest proportion of connections with a headline speed of 2Mbit/s or less, at 58%, while in the UK, where this proportion was lowest, just 1% of connections fell into this category.

The UK had the highest proportion of lines with a headline speed above 8Mbit/s, at 72%; this is to a large extent because most BT local exchanges having been upgraded to offer ADSL2+, which has a maximum theoretical speed of 24Mbit/s (although, following changes to UK advertising guidelines which came into force in April 2012, these are most frequently advertised as being ‘up to’ 16Mbit/s). In Italy, just 20% of broadband connections had a headline speed above 8Mbit/s at the end of 2011, the lowest proportion among those countries for which figures were available.

It should be noted that Japan has not been included in this data set, due to lack of appropriate data points. Japan has high take-up of fibre-based broadband connections, with nearly two-thirds of broadband connections fibre-based (see Figure 6.10). It is not possible to infer directly that the headline speed of a broadband connection is above 30Mbit/s just because it is fibre-based, as operators may offer lower speeds over fibre-based connections as part of a wider product and pricing strategy.

Figure 6.9 Proportion of total fixed broadband connections, by headline speed

Source: IDATE / industry data / Ofcom
Note: UK data is for residential connections only as at November 2011

Take-up of fibre-based broadband services is increasing across all our comparator countries but still varies significantly between them

In all of our comparator countries, the proportion of lines that were fibre-based increased between 2010 and 2011. There was a mixed picture in terms of the absolute proportion of fixed broadband connections using a fibre-based technology such as fibre-to-the-cabinet (FTTC), fibre-to-the-home (FTTH) and fibre-to-the-premises (FTTP) at the end of 2011 (Figure 6.10). Fibre broadband take-up was highest in Japan at the end of the year, where 62.7% of fixed broadband connections were fibre-based, up from 58.0% a year previously.

In five of our comparator countries (Canada, Australia, Germany, Ireland and Poland) less that 1% of connections used a fibre technology, and Japan, Sweden and the US were the only countries where more than 5% of broadband connections used fibre (in the UK the figure was 1.9%, up from 0.6% at the end of 2010).
Figure 6.10 Fibre-based connections as a proportion of all fixed broadband connections: 2010 and 2011

6.1.5 Use of text messaging continued to increase rapidly in many countries

UK among leaders in 2011 in SMS growth, which went into reverse for some

Since the sending of the first SMS, or text message, in 199292, the success of SMS has been remarkable, achieving year-on-year growth in most countries. In the UK, the average person sent 200 text messages per month in 2011 - or over six per day - making the UK the third highest sender of text messages per person of 13 comparator countries. In the US, the leader among our comparator countries, the volume of texts sent is higher, at 614 per month per person – or nearly one per hour (although this does include push-to-text messages, so direct comparison with the other countries is not possible). Ireland is the second of the comparator countries, with 218 texts sent per month per person.

However, these figures mask contrasting growth rates (see Figure 6.11). In two of our comparator countries – Spain and the Netherlands – SMS volumes fell in 2011. This is a

92 The first text message was sent in the UK on 3 December 1992. See Mobile Data Association: http://www.text.it/mediacentre/facts_figures.cfm
new phenomenon: these are the only comparator countries to have experienced annual
decreases in SMS volumes.\textsuperscript{93}

In all the other comparator countries for which we have data, volumes increased. In the UK,
France, Germany, the US, Canada and Australia the volume of texts sent increased by over
10% in 2011 – with an increase of 17% for the UK.

**Figure 6.11  Volume of SMS (text messages) sent per person per month: 2006-2011**

![Graph showing SMS volume by country from 2006 to 2011.](image)

Source: IDATE / industry data / Ofcom

Note: USA figures include push-to-text and are not directly comparable to figures for the other
countries.

**Young women are driving the increase in SMS use**

Although these volume figures describe total SMS use, they do not illustrate which segments
of a population send them. We consider this in Figure 6.12, using data from Ofcom’s
consumer research in September 2012.

\textsuperscript{93} In the UK, the volume of SMS messages declined quarter-on-quarter for two consecutive quarters
from the fourth quarter of 2011 to the second quarter of 2012. We do not make further comment on
this in this report because the report focuses on 2011 data. However, these data are published
quarterly by Ofcom and interested readers can find further information at
[http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-
reports/tables/](http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/tables/)
The research found that in every country in which the survey took place, more women than men regularly sent text messages. The research also found that a much higher proportion of people between 18 and 35, than those aged 65 and over, regularly sent texts.

Over half of all women in the UK (52%), Italy (60%) and China (52%) – the three leading countries - send text messages at least once a day. This compares with 35% of men in the UK, 44% in Italy and 47% in China.

Including any frequency of sending text messages, in the UK 93% of women sent texts, compared with 87% of men. The largest gender gap was in France, where 90% of women sent texts, but only 82% of men.

Those sending text messages are typically in the 18-24 and 25-34 age groups, the research showed. Forty-nine per cent of the first age group and 45% of the second send texts every day. This compares with just 18% of over-65s.

However, in the UK, older consumers were more actively engaged in sending text messages than the average for our comparator countries: over a quarter (27%) of UK over-65s sent texts every day.

Even though the US sends more text messages (including push-to-text messages) per person than any other country, just one in six (17%) of over-65s in the country send texts every day.

Ownership of a smartphone appeared to be a key driver for sending texts. Over half (51%) of those who regularly used a smartphone sent texts on a daily basis. This compared with about a third (34%) of those who regularly used a feature phone, suggesting that the large-screen interface usually found with smartphones is encouraging subscribers to text (although another reason may be that the average smartphone user is younger than the average feature phone user). The type of tariff – post-paid or pre-paid – was also a factor in the frequency of texts sent (with post-paid subscribers sending texts more frequently) – but was less significant as a factor than smartphone ownership.

**Figure 6.12** Percentage of respondents who sent texts at least once a day, including splits by female, 18-24 years old and 65 years and older

Source: Ofcom consumer research.
Note: Due to sample sizes, age splits should be treated with caution.
Ease of use drove younger consumers towards texting and away from making phone calls

The same Ofcom research appears to suggest that a high proportion of consumers commonly sent texts because it was easier than making phone calls. Ease of use appeared to be a driver behind falling voice volumes and rising SMS volumes in some countries.

Over half of UK smartphone users (second highest at 56%) said that the statement “I send text messages instead of making phone calls because it’s easier” applied or totally applied to them (see Figure 6.13). The highest proportion was in the US, at 58%. It is perhaps not a coincidence that the US is the largest sender of text messages in our comparator countries, having seen a compound annual growth rate (CAGR) in the volume of texts sent of 58% over the period 2006-2011.

The youngest age group – 18 to 24 year-olds – were more likely to say that the statement applied or totally applied to them: with two-thirds (66%94) of US respondents, 62% of respondents in Italy and 59% of respondents in the UK. Over-65s were far less likely to agree, with 10% in the US, 33% in Italy and 27% in the UK. This apparent difference between age groups in attitudes towards adopting texting instead of phone calls could be because of differences in the familiarity with texting, differing attitudes of peers (discussed below), differing values placed on verbal versus electronic communication and the greater penetration of smartphones among younger consumers.

In all comparator countries, a greater number of women said the statement applied or totally applied to them, including 54%13 of UK women (the highest of all comparator countries) and 51% of women in Italy. The corresponding figures for men were 43% and 39% respectively. This may reflect the higher frequency of text messaging by women.

Across the comparator countries as a whole, respondents with a feature phone – normally older devices on which it typically takes longer to type a text message – felt that the statement was less applicable to them.

94 Sample size is the total base in the country concerned – different to the base of smartphone users cited above. Therefore figures for smartphone users cannot be directly compared with the other statistics cited.
Figure 6.13 Proportion of users who said the statement that they sent texts instead of making phone calls because it was easier ‘applied’ or ‘totally applied’ to them

Source: Ofcom consumer research.
Note: Due to sample sizes, age splits should be treated with caution.

Low price and influence by friends and family drove UK increase in SMS volumes

In trying to understand the reasons for growth in text messaging, Ofcom’s consumer research asked consumers who sent more texts than two years ago why they were texting more.

Across all comparator countries, consumers said the two major factors were ‘convenience’ and (backing up the findings above) because texting was ‘easy’. (see Figure 6.14)

However, there were two categories which UK respondents selected more than respondents in most other countries. The first one indicates that UK mobile phone users are being influenced heavily by their peers: nearly half (48%) of mobile phone subscribers who sent more texts than two years ago said they were doing so because texting "was what their family and friends were using". Only the US (53%) showed a stronger peer impact on the increase in text volumes.

The second category is price. Over one-third (36%) of UK mobile phone subscribers who sent text messages more than they did two years ago said it was because it was ‘cheaper than the alternative’. Only Australia’s consumers offered this reason more (37%). For simplicity, we did not specify in the survey what the alternative might be: however, in the majority of cases it can be assumed to be phone calls – either fixed or mobile.

One key reason why UK respondents felt that text messaging was relatively cheap may be because many UK mobile tariffs – post-paid and pre-paid – include very large bundles of texts within the subscription / top-up price, making texting effectively free. For example, in October 2012 all four UK mobile network operators offered post-paid tariffs including at least 5,000 texts per month.
Figure 6.14 Most frequently-cited reasons for increasing SMS use

<table>
<thead>
<tr>
<th>Top reason</th>
<th>%</th>
<th>Second reason</th>
<th>%</th>
<th>Third reason</th>
<th>%</th>
<th>Fourth reason</th>
<th>%</th>
<th>Fifth reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>Easy</td>
<td>59</td>
<td>Convenient</td>
<td>58</td>
<td>Immediate</td>
<td>56</td>
<td>Friends</td>
<td>48</td>
<td>Cheaper</td>
</tr>
<tr>
<td>FRA</td>
<td>Convenient</td>
<td>56</td>
<td>Immediate</td>
<td>54</td>
<td>Easy</td>
<td>53</td>
<td>Cheaper</td>
<td>36</td>
<td>Friends</td>
</tr>
<tr>
<td>GER</td>
<td>Convenient</td>
<td>55</td>
<td>Easy</td>
<td>50</td>
<td>Friends</td>
<td>31</td>
<td>Cheaper</td>
<td>21</td>
<td>Immediate</td>
</tr>
<tr>
<td>ITA</td>
<td>Immediate</td>
<td>57</td>
<td>Easy</td>
<td>51</td>
<td>Friends</td>
<td>33</td>
<td>Convenient</td>
<td>29</td>
<td>Cheaper</td>
</tr>
<tr>
<td>USA</td>
<td>Convenient</td>
<td>67</td>
<td>Immediate</td>
<td>60</td>
<td>Easy</td>
<td>56</td>
<td>Friends</td>
<td>53</td>
<td>Interactive</td>
</tr>
<tr>
<td>AUS</td>
<td>Convenient</td>
<td>67</td>
<td>Easy</td>
<td>64</td>
<td>Immediate</td>
<td>57</td>
<td>Friends</td>
<td>43</td>
<td>Cheaper</td>
</tr>
<tr>
<td>ESP</td>
<td>Convenient</td>
<td>52</td>
<td>Immediate</td>
<td>49</td>
<td>Easy</td>
<td>45</td>
<td>Friends</td>
<td>27</td>
<td>Cheaper</td>
</tr>
<tr>
<td>CHN</td>
<td>Easy</td>
<td>64</td>
<td>Convenient</td>
<td>61</td>
<td>Immediate</td>
<td>61</td>
<td>Cheaper</td>
<td>35</td>
<td>Interactive</td>
</tr>
</tbody>
</table>

Source: Ofcom consumer research.
Base: all respondents who said they send more text messages than two years ago. Options given were: It's convenient; It's easy to use (in table: “Easy”); It's immediate; It's what my friends and family are using (in table: “Friends”); It's cheaper than the alternative; It's interactive; It's more personal; It's the only method available to me; Other; Don’t know.

The price of text messaging continues to fall

The UK is one of only two countries among our comparator nations that has seen falling SMS revenues and increasing SMS volumes, with the result being falling price paid per SMS. SMS revenues decreased by nearly 4% in 2011 – the third consecutive year of decline - while the number of SMS sent increased by 17%.

The unusual combination of increasing use and falling revenues exists because many UK post-paid and pre-paid tariffs include large quantities of SMS within the price of the bundle. Previously, text messages were usually charged individually at around 10 pence per message, and despite the lower volumes were a large revenue stream for operators.

Figure 6.15 shows that the average revenue per SMS sent by UK subscribers was just 1.6 pence in 2011. This is equivalent to approximately only 11 seconds of an average mobile phone call, providing a strong incentive to text instead of speak.

Canada, the other country with falling SMS revenues and rising SMS volumes, realised just 0.8 pence per SMS in revenue in 2011. These prices marked a compound annual growth rate between 2006 and 2011 of -19% and -30% respectively.

The US realised just 0.4 pence in revenue per SMS in 2011 (having taken into account push-to-text) but because of volume growth it achieved a 13% annual increase in total SMS revenue.

Some caution should be used in comparing the price of SMS in countries other than the UK, because of differing ways of treatment of messaging revenues. For example, some of these countries include MMS (usually low in volume) and premium SMS (low in volume but relatively high in revenue) within one overall messaging revenue figure, whereas other countries do not. For the UK, the figures include premium SMS but not MMS. Caution should also be shown in comparing figures between countries, because the inclusion of SMS messages within bundles is more common in some countries than others: revenue from these bundles is not counted as SMS revenue.
Revenues from SMS showed very different trends across our comparator countries

Spain remained unusual among European countries in that it realised substantial revenues from SMS despite relatively low usage. Unlimited SMS offers are available within some post-paid bundles in Spain, but aside from this operators have managed to gain revenue from SMS by offering add-on SMS-only bundles (for example, at the time of writing Vodafone Spain offered one such bundle for €3 per week). Consequently Spain saw increasing SMS revenue per message in 2011, to 14.5p per message, though total SMS revenues fell as subscribers reduced their usage in a challenging economic environment (Figure 6.16).

In 2011, SMS revenues fell by the highest percentage in the Netherlands, the country where over-the-top messaging pioneer What’s App was founded. Volumes also fell, by over 4% during the year. Spain and the Netherlands are the only two of our comparator countries where the volume of SMS decreased in 2011.

Over-the-top messaging applications are most commonly installed by subscribers on their handsets. These applications use the mobile data connection of the subscriber and are likely to be a substitute for text messaging, yet operators rarely realise any revenue from them. Social networking may be another substitute for SMS.

<table>
<thead>
<tr>
<th>Country</th>
<th>Pence per message</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>1.6</td>
</tr>
<tr>
<td>FRA</td>
<td>2.1</td>
</tr>
<tr>
<td>GER</td>
<td>5.9</td>
</tr>
<tr>
<td>ITA</td>
<td>2.4</td>
</tr>
<tr>
<td>USA</td>
<td>0.4</td>
</tr>
<tr>
<td>CAN</td>
<td>0.8</td>
</tr>
<tr>
<td>AUS</td>
<td>5.3</td>
</tr>
<tr>
<td>ESP</td>
<td>14.5</td>
</tr>
<tr>
<td>NED</td>
<td>5.9</td>
</tr>
<tr>
<td>SWE</td>
<td>1.4</td>
</tr>
<tr>
<td>POL</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom
Note: USA figures include push-to-text and so should not be compared with the other countries.
Figure 6.16  SMS revenues: 2006 to 2011

Source: IDATE / industry data / Ofcom
Note: US figures include push-to-text and so should not be compared to other countries.
6.2 The telecoms industry

6.2.1 Introduction

In this section we consider the major trends in telecommunications markets in the 17 nations covered by this report from an industry and operator perspective. In general, we have looked at trends over the five years to 2011, although we provide year-on-year analysis where trends have changed significantly over the period.

In the first part of this section we provide an overview of the industry as a whole, considering recent trends in revenue growth. We then look at each market individually and in more depth, starting with fixed voice, followed by mobile voice and data services and concluding with an overview of fixed broadband services.

Some of the key points highlighted in this section include:

- **Fixed voice revenues fell in all our comparator countries in 2011.** Across all 17 comparator countries, fixed voice revenues fell by an average of 7.3% in 2011, a slight increase on the 7.1% average in 2010. Fixed voice revenues fell by 5.2% in the UK during the year, a higher rate than the 3.3% average in the five years to 2011.

- **Fixed voice call volumes fell in all of the comparator countries for which figures were available in 2011, except France.** Growth in the fixed voice market in France is largely a result of high take-up of managed VoIP services, often provided as part of a triple-play bundle of fixed broadband and IPTV services. In the UK, fixed voice call volumes fell by 10.0% in 2011, the fourth highest fall among our comparator countries.

- **Mobile voice call volumes fell by 1.1% in the UK between 2010 and 2011, from 125 billion minutes to 124 billion; the first annual fall.** Japan was the only other country to witness a decline in 2011, with mobile voice volumes falling from 147 billion minutes to 145 billion.

- **Fixed broadband accounted for 39% of total fixed telecoms revenues in 2011.** There was a wide range in the proportions of fixed revenues attributed to fixed broadband service among our comparator countries, from 25% in Ireland to 55% in France, while in the UK over a quarter (27%) of fixed revenues were from fixed broadband services.

- **Five per cent of UK broadband connections were superfast at the end of 2011.** The proportion of connections classed as being superfast (i.e. with a headline speed of 30Mbit/s or more) ranged from 0% (to the nearest percentage point) in Ireland to 22% in the Netherlands at the end of 2011. Poland and the UK had the lowest fixed broadband revenue per person in 2011.
6.2.2 Overview

Telecoms revenues increased by 2% across the comparator countries in 2011

Across our 17 comparator countries, retail telecoms revenue grew by £11bn to £610bn in 2011, marking a second consecutive year of growth (Figure 6.17). Mobile services contributed an £18bn increase and fixed broadband a £5bn increase, with fixed voice decreasing by £12bn. Mobile services contributed 61% of retail revenues in 2011, up from 60% in 2010 and 53% in 2006.

Figure 6.17 Total comparator country retail telecoms revenue by sector: 2006 to 2011

Source: IDATE/ industry data / Ofcom. Note: Excludes revenue from narrowband internet and corporate data services and broadband revenues for BRA, RUS, IND and CHN; covers only the 17 countries in the analysis.

The US contributed the largest proportion of telecoms service revenues

The US continued to contribute the largest proportion of telecoms service revenues, with £186bn in 2011. Japan remained the second largest market of our comparator countries, with £90bn, although it faced a compound annual growth rate (CAGR) of -0.9% over the five years from 2006 to 2011.

The Chinese market expanded rapidly, with a CAGR of 5.5% taking its market size to £71bn in 2011. Only the retail revenues of Russia and India increased faster over the five-year period.

The UK is the third largest of our European nations – behind Germany and France - with a 0.2% CAGR decline in its retail revenues to £27bn in 2011 (see Figure 6.18).
Australia’s consumers contributed the highest revenue per head

Australia’s consumers spent the most per head on telecoms services, with an increase of £4 in 2011 to £790: more than Japan (£708 per capita) and Canada (£629 per capita). In the UK, the figure was £436 – lower than France and Germany (see Figure 6.19).

UK service retail revenue per capita has fallen year on year since 2008, outweighing two previous years of growth in 2006 and 2007 and leading to an overall decline for the five-year period. This contrasts with Australia and nine other comparator nations, which have recorded overall increases over the five-year period.

Brazil, Russia, India and China – often called the BRIC nations – registered the highest growth rates in revenue per capita. However, in the case of India, its CAGR of 4.6% comes on the back of very small revenues per capita compared with the rest of our comparator countries; consequently, its contribution to the total revenue of our comparator countries is small. One of the contributing factors towards such low revenue may be the level of competition in India’s mobile market; calls cost on average less than 1p per minute – the lowest of the 17 nations. Other contributors may be the low cost per subscriber (because of the large number of subscribers in one country) and low average incomes, relatively to the other comparator countries.
Mobile data revenues exceeded fixed broadband revenues for the first time

In the past five years, the relationship between voice revenue and data revenue has changed substantially, with voice revenue decreasing and data revenue (the sum of fixed broadband revenue, mobile messaging revenue and mobile data revenue) increasing as a total of all the comparator countries.

However, within the data category\textsuperscript{95}, there are substantial differences in growth rates (see Figure 6.20). As a total across our comparator countries (excluding the BRIC nations for which we do not have relevant data), mobile data has seen the fastest growth rate (CAGR)

\textsuperscript{95} When considering data revenues, it is worth noting that both mobile data and fixed broadband are often sold as part of a bundle. Where mobile data is bundled with a subscription, that revenue is realised as subscription revenue, not mobile data revenue. Mobile data revenue is typically recognised only when data is sold separately to voice. Therefore, if mobile data figures are compared between countries, some caution should be used. Mobile data revenue does not include mobile broadband revenues; i.e. from dongles and datacards. Where fixed broadband is sold in a bundle, the revenue from that bundle may be apportioned using one of a number of methods between fixed broadband and the other service(s) in question, and therefore some caution should be applied in making international comparisons.
of 25.4% between 2006 and 2011 meaning that, for the first time in 2011, mobile data revenues (£82bn) exceeded fixed broadband revenues (£81bn, CAGR of 11.1%).

This growth in mobile data revenue has been driven by a rapid increase in the adoption of smartphones, from which it is much easier and quicker to access the internet.

However, at the country level, in only three of our comparator countries does mobile data revenue exceed fixed broadband revenues – the US, Japan and Australia – but the difference between these countries is substantial. Japan has been an early adopter of high-speed mobile services and the US has the most LTE subscribers of any country in the world – 64% at the end of 2011 according to Telegeography96 – which may explain the considerable mobile data revenues both countries have achieved.

In the UK, mobile data revenues represent only 60% of fixed broadband revenues. However, this is largely a reflection of the fact that mobile data in the UK is often included in a mobile subscription and so is not always reflected directly as revenue.

SMS revenues for the 13 countries increased at a slower CAGR of 8.7% between 2006 and 2011. Although SMS volumes are still growing rapidly in some markets, like the UK, revenues have failed to keep pace as operators have started to offer large bundles of SMS messages as part of subscription packages; this has stimulated use but caused revenue pressure for SMS in many markets. This subject is discussed in greater detail in a key market development (section 6.1.5) in this chapter.

France and the US had the largest increases in fixed broadband revenue between 2006 and 2011, with service providers in the US starting rapidly to roll out fibre-to-the-home and fibre-to-the-cabinet services.

However, much of the revenue growth in fixed broadband in developed countries was realised towards the start of the five-year period when take-up was growing rapidly. Fixed broadband may now be approaching market saturation in many European countries, as the majority of households subscribe to fixed broadband services – limiting revenue growth for the year 2011.

Figure 6.20 Fixed broadband and mobile data revenues - total for the comparator countries: 2006 to 2011

![Graph showing revenue (£bn) for different categories of mobile data and fixed broadband from 2006 to 2011.]

Source: IDATE / industry data / Ofcom. Note: Analysis excludes Brazil, Russia, India and China.

Mobile call volumes exceed fixed call volumes in the majority of our countries

Figure 6.21 shows the proportion of voice call minutes which originate on mobile networks in each of our comparator countries. The countries where the highest proportion of calls originated on mobiles in 2011 were China (97%), the US (82%) and Poland (81%). In China and Poland this is partly due to the limited availability of fixed telephony networks, while the proportion of calls that are mobile-originated will be overstated in China, the US and Canada as the mobile call volumes used in the calculation include incoming call minutes (and in the US because the fixed call volumes exclude local calls, which are typically unmetered).

Germany and France were the only comparator countries where less than half of voice call minutes originated on mobile networks in 2011 (36% of voice call minutes were mobile-originated in Germany in 2011, while the figure was 49% in France). In each country this can largely be attributed to there being a significant differential between average fixed and mobile voice call costs (as is shown in Figure 6.22, the average cost of a mobile minute was more than twice that of a fixed call minute during the year). Mobile-originated call volumes exceeded those from fixed lines for the first time in the UK in 2011, when 52% of voice call minutes originated on mobile phones.

Figure 6.21  Percentage of voice minutes originating on a mobile: 2006 to 2011

Source: IDATE / industry data / Ofcom. Note: USA, Canada and China – incoming calls to mobile included within mobile figures.
Japan had the most expensive voice calls among our comparator countries in 2011

Japan continued to have the highest average fixed and mobile costs per voice call minute among our comparator countries in 2011, at 23.4 pence per minute and 15.8 pence per minute respectively (Figure 6.22). Across the comparator countries for which figures were available, the average revenues per fixed and mobile voice call were 8.2 pence per minute and 2.3 pence per minute. The latter figure is low because two-thirds of all mobile call volumes made among our comparator countries originated in the BRIC countries, where average incomes and call costs are relatively low (by comparison, just 29% of fixed calls originated in the BRIC countries). In the UK, the average cost of a fixed originated voice call minute was 7.7 pence, slightly lower than the average across all of our countries, while the average cost of a mobile voice call was 8.5 pence per minute.

We refer to the percentage difference between the revenue per minute of mobile calls and fixed calls as the mobile price premium, and where the mobile price premium is negative, mobile-originated calls cost, on average, less than those originating on mobile networks. In 2011 the mobile price premium was lowest in China, which has a flourishing mobile sector (the number of mobile subscriptions in China increased by 15% in 2011), while France had the highest mobile price premium in 2010 as a result of the widespread availability of low-cost VoIP-based fixed voice services, which are typically bundled with fixed broadband and IPTV services over naked-DSL or fibre connections, and do not require a traditional fixed line.

Mobile revenue per minute is calculated by dividing total mobile voice revenues (including subscriptions) by the number of minutes; and the fixed cost per minute is calculated by fixed telephony revenue (including line rental) divided by the number of minutes. As voice services are often bundled with other services, the way in which consumers purchase voice services in each nation will affect the revenue-per-minute figures, and these figures are therefore only a proxy of average call costs in each country.
Figure 6.22 Average cost of a fixed and mobile call minute: 2011

<table>
<thead>
<tr>
<th>Pence per minute</th>
<th>Mobile premium 2006</th>
<th>Mobile premium 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fixed</td>
<td>Mobile</td>
</tr>
<tr>
<td>UK</td>
<td>7.7</td>
<td>80%</td>
</tr>
<tr>
<td>FRA</td>
<td>5.5</td>
<td>36%</td>
</tr>
<tr>
<td>GER</td>
<td>5.5</td>
<td>254%</td>
</tr>
<tr>
<td>ITA</td>
<td>6.3</td>
<td>42%</td>
</tr>
<tr>
<td>USA</td>
<td>2.8</td>
<td>-47%</td>
</tr>
<tr>
<td>CAN</td>
<td>5.4</td>
<td>-36%</td>
</tr>
<tr>
<td>JPN</td>
<td>10.0</td>
<td>58%</td>
</tr>
<tr>
<td>AUS</td>
<td>6.8</td>
<td>82%</td>
</tr>
<tr>
<td>ESP</td>
<td>7.1</td>
<td>80%</td>
</tr>
<tr>
<td>NED</td>
<td>10.0</td>
<td>26%</td>
</tr>
<tr>
<td>SWE</td>
<td>7.0</td>
<td>87%</td>
</tr>
<tr>
<td>IRL</td>
<td>6.4</td>
<td>33%</td>
</tr>
<tr>
<td>POL</td>
<td>4.3</td>
<td>60%</td>
</tr>
<tr>
<td>BRA</td>
<td>3.4</td>
<td>179%</td>
</tr>
<tr>
<td>RUS</td>
<td>2.6</td>
<td>n/a</td>
</tr>
<tr>
<td>IND</td>
<td>0.6</td>
<td>n/a</td>
</tr>
<tr>
<td>CHN</td>
<td>0.8</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: IDATE/Ofcom/operators
Note: Fixed voice figures for CAN and USA exclude local calls; fixed averages include NTS calls which were excluded from the 8.3 pence per minute fixed voice call average published in the 2012 UK Communications Market Report; mobile calculation for CAN, US and CHN includes incoming call minutes.

6.2.3 Fixed voice services

Fixed voice revenues fell in all our comparator countries in 2011

Fixed voice revenues fell in all 17 of our comparator countries in 2011, the fastest rates of decline being found in the BRIC countries, with revenues falling by 17.8% in China and 15.3% in India during the year (Figure 6.23). Among the non-BRIC countries, the annual falls in revenue were highest in Poland (13.3%) and France (13.1%). With the exception of France (where falling fixed voice revenues are related to increasing take-up of managed VoIP services), the availability of fixed-voice services is relatively low in all of these countries, and mobile phones are the predominant form of voice telephony.

Across all 17 comparator countries, fixed voice revenues fell by an average of 7.3% in 2011, a slight increase on the 7.1% average in 2010, with the rate of decline in fixed revenues increasing in eight of our 17 comparator countries. Fixed voice revenues fell by 5.2% in the UK during the year, a higher rate that the 3.3% average in the five years to 2011. Russia was the only comparator country where fixed voice revenues increased between 2006 and
2011, growing by an average of 2.9% a year over the period, whereas the steepest average falls in revenues were, again, found in China and India, at 14.1% and 13.9% respectively.

**Figure 6.23  Fixed-line voice retail revenues: 2006 to 2011**

France was the only comparator country where fixed call volumes increased in 2011

Fixed voice call volumes fell in all of the 15 comparator countries for which figures were available in 2011 except France, where they increased by 0.6% to 113 billion minutes during the year (Figure 6.24). The resilience of the fixed voice market in France is largely as result of high take-up of managed VoIP services, often provided as part of a triple-play bundle of fixed broadband and IPTV services over naked DSL. Naked-DSL-based broadband services do not require a standard fixed line, so VoIP over naked-DSL provides a low-cost alternative to voice calls made over traditional fixed networks, as no line rental is paid. It is this which is the primary driver of the 13.1% fall in fixed voice revenues in France in 2011, despite call volumes increasing during the year. In the UK, fixed voice call volumes fell by 10.0% to 116 billion minutes in 2011, this rate of decline being the fourth highest among our countries.

While the use of VoIP services is comparatively low in the UK (see Figure 6.43) the major drivers behind declining fixed call volumes are the low cost of mobile voice and text services and high smartphone take-up, which has contributed to the increasing use of alternative forms of communication such as email and instant messaging. France and the Netherlands (where VoIP use is widespread) were the only comparator countries where fixed call volumes increased in the five years to 2011 (up by 1.8% and 0.4% a year on average,
respectively). Conversely, the highest average annual rate of decline over the period (13.0%) was in Australia, where fixed call volumes halved over the period, largely due to the increasing use of mobile voice services. UK fixed call volumes fell by an average of 5.5% a year between 2006 and 2011, a slower rate than the 7.1% average across the 13 comparator countries for which figures were available.

**Figure 6.24 Fixed-line voice call volumes: 2006 and 2011**

<table>
<thead>
<tr>
<th>Country</th>
<th>2006 (billions)</th>
<th>2011 (billions)</th>
<th>5-year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>154</td>
<td>116</td>
<td>-5.5%</td>
</tr>
<tr>
<td>FRA</td>
<td>103</td>
<td>113</td>
<td>1.8%</td>
</tr>
<tr>
<td>GER</td>
<td>198</td>
<td>191</td>
<td>-0.7%</td>
</tr>
<tr>
<td>ITA</td>
<td>108</td>
<td>92</td>
<td>-5.3%</td>
</tr>
<tr>
<td>USA</td>
<td>72</td>
<td>927</td>
<td>-11.2%</td>
</tr>
<tr>
<td>CAN</td>
<td>0</td>
<td>92</td>
<td>n/a</td>
</tr>
<tr>
<td>JPN</td>
<td>124</td>
<td>83</td>
<td>-7.7%</td>
</tr>
<tr>
<td>AUS</td>
<td>44</td>
<td>89</td>
<td>-13.0%</td>
</tr>
<tr>
<td>ESP</td>
<td>68</td>
<td>64</td>
<td>-1.2%</td>
</tr>
<tr>
<td>NED</td>
<td>21</td>
<td>21</td>
<td>0.4%</td>
</tr>
<tr>
<td>SWE</td>
<td>30</td>
<td>18</td>
<td>-10.1%</td>
</tr>
<tr>
<td>IRL</td>
<td>10</td>
<td>7</td>
<td>-7.9%</td>
</tr>
<tr>
<td>POL</td>
<td>28</td>
<td>15</td>
<td>-12.4%</td>
</tr>
<tr>
<td>BRA</td>
<td>234</td>
<td>181</td>
<td>-5.0%</td>
</tr>
<tr>
<td>RUS</td>
<td>158</td>
<td>173</td>
<td>n/a</td>
</tr>
<tr>
<td>CHN</td>
<td>173</td>
<td>173</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Source: IDATE / industry data / Ofcom*

*Note: Figures for USA and CAN exclude local and VoIP calls. Figures for USA, CHN and CAN include incoming mobile calls.*

**Average call minutes per fixed line were highest in France in 2011**

The number of outgoing voice call minutes per fixed line fell by an average of 3.4% a year, to 304 minutes a month in the five years to 2011, across those comparator countries for which time series data were available (Figure 6.25). France had the highest number of call minutes per fixed line in 2011, at 469 minutes a month, more than nine times higher than the 50 minutes per month recorded in China, where use was lowest. Average call volumes per UK fixed line were 9.7% lower in 2011 than they had been in 2010, at 291 minutes per month; a significant acceleration in the rate of decline in the use of fixed-line connections, which has decreased by an average of 4.7% between 2006 and 2011.

The Netherlands, France, Germany and Italy were the only comparator countries where call volumes per fixed line increased during the five-year period, with the highest average annual
rates of growth being in the Netherlands and France at 12.6% and 12.4% a year respectively (over the same period the average annual fall was highest in Australia at 12.1%). Increasing calls per fixed line in France and the Netherlands are related to rapidly falling fixed-line numbers, as consumers switch to VoIP-over-naked-DSL voice services, which do not require a fixed line. As our call volumes include those made over VoIP connections, the fall in the number of fixed lines has an upward effect on the number of call minutes per line, and additionally VoIP users tend to have higher average use as these services offer low-cost or flat-rate calls.

**Figure 6.25** Monthly outbound minutes per fixed line: 2006 to 2011

Germany was the only country where the incumbent operator’s share of fixed call volumes increased between 2006 and 2011

Deutsche Telekom was the only national incumbent operator whose share of fixed voice call volumes in its home market increased in the five years to 2011, growing by one percentage point to 48% over the period (Figure 6.26). The key drivers behind this were its high share of fixed broadband connections (which is over 40%) and the success of its bundled double-play fixed broadband and VoIP services, which have meant that it has benefitted from increasing VoIP call use. There were significant declines in the proportion of fixed call volumes originating on the incumbent’s network in all of the other comparator countries for which data were available, with these falls ranging from a six percentage point drop in TeliaSonera’s share in Sweden to a 20 percentage point fall in BT’s share in the UK.
The rapid fall in BT’s share of fixed voice call volumes is largely as a result of competition from operators providing services using full local loop unbundling (LLU) and/or wholesale line rental (WLR) wholesale products (full-LLU and WLR lines accounted for over a third of all UK fixed lines at the end of 2011). BT also had the lowest share of fixed call volumes among the national incumbent operators in our comparator countries in 2011, at 39%. This was nine percentage points lower than that in any of the other comparator countries for which we had data (the next lowest being Deutsche Telekom and Telecom Italia’s shares in Germany and Italy respectively, both at 48%), and 22 percentage points lower than Telstra’s 61% share in Australia, the highest among our comparator countries.

Figure 6.26 Incumbent operator’s share of fixed voice call volumes: 2006 and 2011

Brazil and the UK were the only comparator countries where the number of fixed lines increased in 2011

The total number of fixed exchange lines among our comparator countries fell by 4.0% to 767 million in 2011 (Figure 6.27). The number of lines fell in all of these countries except Brazil and the UK, where the number of lines increased by 2.0% and 0.2% respectively. In Brazil this increase is related to increasing wealth in a rapidly-developing economy, growth in the number of households (which increased by 5% in the five years to 2011) and falling call costs as a result of the fixed telephony market being highly competitive, and due to increasing VoIP use. In the UK, the increase in the number of lines is likely to be related to the requirement to have a fixed voice line in order to be able to access DSL-based fixed broadband services, combined with a small increase in the number of households. Among the other comparator countries, the fall in the number of fixed lines was highest in France at 13.0% during 2011, driven by the availability of naked DSL.
Brazil and Russia, where the number of fixed lines grew by averages of 1.9% and 1.2% respectively per year over the period, were the only comparator countries in which the number of fixed lines increased in the five years to 2011. The fastest average annual rate of decline in the number of fixed lines over this period was in the Netherlands, at 11.5%, followed by France where it fell by an average of 10.7% a year. Again, increasing take-up of VoIP services where no fixed voice line connection is required (via either ‘naked’ DSL or fibre), is the main contributor to the rapid decline in both of these countries.

Figure 6.27  Fixed exchange lines: 2006 and 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Fixed Lines 2006 (millions)</th>
<th>Fixed Lines 2011 (millions)</th>
<th>5 year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>34</td>
<td>33</td>
<td>-0.7%</td>
</tr>
<tr>
<td>FRA</td>
<td>19</td>
<td>33</td>
<td>-10.7%</td>
</tr>
<tr>
<td>GER</td>
<td>43</td>
<td>24</td>
<td>-4.8%</td>
</tr>
<tr>
<td>ITA</td>
<td>17</td>
<td>142</td>
<td>-6.8%</td>
</tr>
<tr>
<td>USA</td>
<td>167</td>
<td>167</td>
<td>-3.2%</td>
</tr>
<tr>
<td>CAN</td>
<td>19</td>
<td>19</td>
<td>-1.1%</td>
</tr>
<tr>
<td>JPN</td>
<td>42</td>
<td>64</td>
<td>-8.1%</td>
</tr>
<tr>
<td>AUS</td>
<td>11</td>
<td>11</td>
<td>-1.2%</td>
</tr>
<tr>
<td>ESP</td>
<td>20</td>
<td>20</td>
<td>-0.2%</td>
</tr>
<tr>
<td>NED</td>
<td>8</td>
<td>8</td>
<td>-11.5%</td>
</tr>
<tr>
<td>SWE</td>
<td>5</td>
<td>5</td>
<td>-4.0%</td>
</tr>
<tr>
<td>IRL</td>
<td>2</td>
<td>2</td>
<td>-2.7%</td>
</tr>
<tr>
<td>POL</td>
<td>7</td>
<td>7</td>
<td>-8.8%</td>
</tr>
<tr>
<td>BRA</td>
<td>39</td>
<td>43</td>
<td>1.9%</td>
</tr>
<tr>
<td>RUS</td>
<td>42</td>
<td>42</td>
<td>1.2%</td>
</tr>
<tr>
<td>IND</td>
<td>40</td>
<td>40</td>
<td>-4.1%</td>
</tr>
<tr>
<td>CHN</td>
<td>285</td>
<td>326</td>
<td>-2.7%</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom

VoIP generated 21% of fixed voice revenues in the Netherlands in 2011

Voice over internet protocol (VoIP) services use the internet, rather than a traditional fixed telephony network, to convey voice calls, and typically enable consumers to make calls at lower rates than is possible over a traditional fixed network. There are two types of VoIP:

- **Managed VoIP services** where an ISP also provides a voice service over the broadband connection. The ISP controls the provision of this voice service and the quality of service for end-to-end calls.

- **Unmanaged VoIP services** where a VoIP provider other than the provider of the broadband connection (such as Skype or Vonage) provides the service on an over-the-top (OTT) basis.
VoIP services generated 5% of total fixed voice revenues in the UK in 2011, and although this was more than five times higher than the 1% figure in 2006, it was the joint second lowest proportion among the 13 countries for which data were available, after Germany (Figure 6.28). Low take-up of VoIP services in the UK is partly a result of the price of traditional fixed line services being relatively low, with many call types typically being included within the monthly access charge (see Section 2.1.3 for more details), and is also due to limited offerings of managed VoIP services by UK ISPs. As such, the majority of UK VoIP use is among business customers. The Netherlands was the comparator country where VoIP contributed the largest proportion of voice call revenues (21%) and was also where the increase in the five years to 2011 was greatest, at 17 percentage points.

Figure 6.28  VoIP revenues as a proportion of fixed voice revenues: 2006 and 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>2006</th>
<th>2011</th>
<th>5 year pp change</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>FRA</td>
<td>2</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>GER</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>ITA</td>
<td>1</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>USA</td>
<td>1</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>CAN</td>
<td>0</td>
<td>2</td>
<td>n/a</td>
</tr>
<tr>
<td>JPN</td>
<td>2</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>AUS</td>
<td>0</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>ESP</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>NED</td>
<td>0</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>SWE</td>
<td>3</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>IRL</td>
<td>5</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>POL</td>
<td>5</td>
<td>5</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: IDATE

6.2.4  Fixed broadband services

Annual fixed broadband revenue growth averaged 11% between 2006 and 2011

Fixed broadband revenues increased by an average of 11.1% a year to £81bn among the 13 countries for which we have data between 2006 and 2011 (Figure 6.29). Over the period average annual fixed broadband revenue growth ranged from 3.0% in Sweden to 19.5% in France: in Sweden this was due to falling prices, while in France it was as a result of strong connection growth and increasing revenues per line, partly because our broadband revenues for France include those from services that are included within the monthly access
fee, such as VoIP and IPTV. UK fixed broadband revenues increased by an average of 6.3% a year over the period, the third lowest rate of growth after Sweden and Poland.

Having fallen in 2010, UK fixed broadband revenues had the second highest increase among our comparator countries at 8.9% (after the US where there was a 14.0% increase). This increase was as a result of growth in the number of fixed broadband connections, along with an increase in the average revenue per line as a result of some price increases and increasing take-up of higher-speed services, including superfast services (those with a headlines speed of 30Mbit/s or higher). Conversely, fixed broadband revenues fell in both Poland and Spain during the year (by 3.8% and 1.2% respectively), as a result of falling prices.

Figure 6.29  Fixed broadband revenues: 2006 and 2011

Fixed broadband accounted for 39% of total fixed telecoms revenues in 2011

In 2011 the average proportion of total fixed telecoms service revenues that were generated by fixed broadband services was 39% among the comparator countries for which figures were available, an increase from 22% five years previously (Figure 6.30).\(^7\) There was a wide range in the proportion of fixed revenues attributed to fixed broadband services among

\(^7\) In this calculation the fixed line rental fee (if any) is included as voice revenue, even if it is required by the broadband service.
our comparator countries, from 25% in Ireland to 55% in France, while in the UK over a quarter (27%) of fixed revenues were from broadband services.

The largest increase in the proportion of fixed revenues generated by broadband was in France in the five years to 2011, where it increased by 33 percentage points as a result of strong growth in fixed broadband revenues (which includes those from managed VoIP and IPTV services). Conversely, the lowest increase during the period was eight percentage points in the UK, where the decline in fixed voice revenues was slower, and where falling fixed broadband prices have constrained broadband revenue growth during the period.

Figure 6.30 Fixed broadband as a proportion of total fixed revenues: 2006 and 2011

The highest rates of fixed broadband connection growth were in the BRIC countries between 2006 and 2011

At the end of 2011 there were a total of 464 million fixed broadband connections among our comparator countries, 52 million (12.5%) more than there had been at the end of 2010 and 239 million (106%) more than there were five years previously (Figure 6.31).

Over both the one-year and five-year time periods, the rate of growth in the number of connections was higher in the BRIC countries than in any of our other comparator countries: between 2006 and 2011 the average annual rate of growth in connections in the BRIC countries ranged from 24.1% in Brazil to 49.5% in Russia, while among our non-BRIC
countries the highest average annual rate of growth over the period was in Poland at 20.0%. Similarly, while in 2011 the annual growth rate among the BRIC countries was lowest in Russia, at 21.6%, the highest growth among our non-BRIC comparator countries was (again) in Poland at 7.3%.

The total number of UK fixed broadband connections grew by 6.9% in 2011, the second highest growth rate among our non-BRIC comparator countries after Poland, while the average annual increase between 2006 and 2011 in the UK was 9.5%.

Figure 6.31  Fixed broadband connections: 2006 and 2011

Source: IDATE / industry data / Ofcom
The average market share of the three largest fixed broadband providers across our comparator countries increased in 2011

The combined retail connection market share of the three largest broadband providers in each country (as shown in Figure 6.32) can be used as a measure of market concentration, and across the 13 comparator countries for which figures are available, the average share of the largest three providers increased from 64.1% to 65.2% in the year to December 2011.

In the five years to 2011 the change in the combined connection share of the three largest providers in each country ranged from a 20.9 percentage point fall in Poland to a 16.2 percentage point increase in Ireland. In Poland this was as a result of smaller ISPs gaining market share, mainly at the expense of incumbent Telekomunikacja Polska (which saw its market share of fixed broadband connections fall by 34.5 percentage points to 31.1% over the period), while in Ireland a decline in Eircom’s share of fixed connections was offset by market share increases for the second and third largest providers, UPC and Vodafone Ireland.

In the UK, the share of the three largest providers increased by 4.3 percentage points to 68% between 2006 and 2011 as a result of BT and TalkTalk Group increasing their connection shares, the latter as a result of its acquisition of Tiscali’s UK businesses in 2009. However, the retail connection share of the three largest UK broadband providers (which also includes Virgin Media) has been falling since 2009, to a large extent because pay-TV provider Sky’s LLU-based bundled broadband services have been gaining market share.

The most concentrated broadband market at the end of 2011 was France (where the largest providers (Orange, Free and SFR/Neuf) accounted for 86% of connections), followed by Ireland at 85%. Excluding the US and Canada (where infrastructure-based competition between local incumbent telecoms providers and cable operators makes the share of the largest three operators a less useful measure of competition) the least concentrated broadband market among our comparator countries was in Poland, where the three largest providers’ combined market share was 57%.
Mobile retail revenues grew quickest in China in 2011

Mobile retail revenues in China increased by 12.5% to £62bn in 2011, exceeding the growth rate of all other comparator countries and extending China’s lead over Japan (£53bn) as the second largest mobile market by revenue after the US (Figure 6.33). Revenues grew in India by 8.8% to £9bn and in Brazil by 8.0% to £21bn in 2011. In the US (6.2%), the Netherlands (5.8%) and Australia (4.7%) they grew faster than in Russia (3.5%) and in all other non-BRIC comparator countries in the same period.

While BRIC mobile retail revenues grew faster than those in non-BRIC countries in 2011 (10.1% to 3.1% respectively), growth slowed in the BRIC markets themselves. India’s compound annual growth rate (CAGR) between 2006 and 2011 was 16.7%; it grew by just 8.8% between 2010 and 2011. Russia’s CAGR was 14.8% between 2006 and 2011, but mobile retail revenue grew by only 3.5% in 2011. While this deceleration was not limited to BRIC countries, it was less pronounced elsewhere than in India and Russia. The CAGR of Poland’s revenue was 2.3% between 2006 and 2011, while it grew by 0.6% between 2010 and 2011. Spain saw the greatest decrease in mobile retail revenues in 2011, which fell by 4.1% to £12bn.
Mobile voice call volumes fell by 1.1% in the UK and Japan

In 2011, mobile voice volumes fell by 1.1% in the UK (from 125 billion minutes in 2010 to 124 billion in 2011) and Japan (from 147 billion minutes to 145 billion). In both countries this was the first year they had fallen. The growth of mobile voice volumes elsewhere also slowed in 2011. Growth in 2011 was less than the compound annual growth rate between 2006 and 2011 in all of our comparator countries except France (Figure 6.34). In France, although the growth of volumes in 2011 (2.7%) was greater than the CAGR of volumes between 2006 and 2011 (2.4%), this was the lowest growth rate of all the comparator countries in that five-year period. The growth of mobile messaging (by 22 billion messages in 2011 in the UK) could account for the diminished number of calls made in some markets (Figure 6.11).

While the deceleration in the growth of voice volumes affected BRIC markets as well as non-BRIC, the highest CAGR in call minutes between 2006 and 2011 were in Brazil (38.3%) and Russia (29.5%), as take-up of mobiles continued to grow. Outside BRIC countries, mobile minutes were growing fastest in 2011 in Poland (19.4%), where fixed-line availability is limited, followed by Australia (14.2% outbound and inbound) and Germany (13.4%).
US mobile subscribers sent 2,130 billion more mobile messages in 2011 than 2006

Among our comparator countries, the highest compound annual growth rates in SMS and MMS messaging between 2006 and 2011 were in Canada (79.3%), the US (59.7%, including push-to-text) and France (57.1%). However, the growth of mobile message volumes slowed in many countries in 2011, in comparison with 2010. In terms of absolute volumes, the US sent 248 billion more messages in 2011 than in 2010, but 511 billion more messages in 2010 than in 2009 (Figure 6.35). In percentage terms, this represents 10.5% growth in 2011 compared to 24.2% growth in 2010. In the UK, mobile owners sent 22 billion more messages in 2011 than in 2010, but 24 billion more in 2010 than in 2009.

Spain was the only comparator country where message volumes have declined in the five years to 2006 (by -3.2% each year). SMS is not usually included in pay-monthly tariffs in Spain, and their cost to consumers may account for the low volumes.
In 2011 the number of mobile connections in India approached China’s total

Growth in mobile connections has slowed in recent years as the mobile markets in many of our comparator countries have matured, including even BRIC countries like India. However, increasing numbers of mobile connections per person have contributed to growth in connection rates, as consumers became more likely to own multiple connected devices (Figure 6.36). In BRIC countries, where a smaller proportion of people owned mobiles in 2006 than in Western economies, the compound annual growth of connections (CAGR) was 22.7% between 2006 and 2011.

In non-BRIC countries, the CAGR of connections between 2006 and 2011 was 5.6%. The UK’s mobile connections grew at a CAGR of 3.1% in this period, second lowest after the Netherlands (2%). The comparator country with the highest CAGR in mobile connections between 2006 and 2011 was India (43%), though it had 100 million fewer connections than China in 2011 (894 million to 986 million). India’s growth also slowed in 2011, adding 85 million fewer mobile connections in 2011 than in 2010.
The number of monthly contracts grew in all comparator countries in 2011

In 2011 the number of subscribers with post-pay (monthly) contracts, rather than pre-pay (pay-as-you-go) connections, grew in all of our comparator countries (Figure 6.37). There were more post-pay than pre-pay connections in seven of our 17 comparator countries: France, the US, Canada, Japan, Spain, the Netherlands and Sweden. Where growth in mobile connections is low, operators may aim to increase revenues per user by marketing monthly contracts, which are likely to extract more money from users and discourage churn through minimum term contracts. These countries saw some of the lowest growth rates in mobile connections in 2006-2011 (Figure 6.36), which may have contributed to the predominance of post-pay contracts.

In the five-year period between 2006 and 2011, the proportion of post-pay connections fell in four countries: India (-9.9%), Russia (-8.4%), Germany (-4.0%), and Brazil (-1.1%). In developing markets like India, pre-pay connections may have been more attractive to poorer users taking up connections, who could not commit to monthly contracts or lacked the banking facilities to do so. In Germany, the popularity of pre-pay is perhaps due to its flexibility: the validity of pre-pay subscriptions is not limited and unspent credit must be reimbursed on demand.
In Japan, data accounted for 57% of mobile revenues in 2011

Between 2006 and 2011 the proportion of mobile revenues that came from data services increased by 13 percentage points (pp) among the comparator countries for which we have figures (Figure 6.38). Data services generate a growing proportion of mobile revenues, as consumers use them for a wider range of activities and, in some comparator countries, make fewer minutes of voice calls (Figure 6.48).

Still, Japan was the only one of our comparator countries where data services contributed over half of mobile revenue in 2011 (57%). Data services contributed the lowest proportion of mobile revenue in Poland (4%) among the comparator countries. Whereas data services have long been available in Japan, in Poland mobile revenues per connection are mainly derived from voice (Figure 6.47).

Between 2006 and 2011, the contribution of data services to total mobile revenue grew most in Japan (by 29pp), and also grew by over 20pp in Australia (24pp), Germany (22pp) and the US (21pp) among the countries for which we have figures. By contrast, the smallest increases were in Poland (3pp), the UK (8pp), France (9pp) and Italy (9pp).
Australia saw the fastest increase in mobile broadband penetration between 2008 and 2011

The penetration of mobile broadband (mobile connections to the internet through dongles, datacards and embedded PCs) increased in all our comparator countries for which we have data between 2008 and 2011 (Figure 6.39). It is still a relatively new market, as mobile broadband only became a mainstream proposition in the second half of the last decade. Australia contains the largest number of these mobile broadband connections per 100 people (25.1) and also saw the largest increase in mobile broadband subscriptions between 2008 and 2011, rising by 18.6 per 100 people.

By contrast, Japan saw the smallest increase in mobile broadband subscriptions, by just 0.6 percentage points (pp) between 2008 and 2011. In the UK, the proportion of people with mobile broadband connections rose by 3.9pp to 8.0 between 2008 and 2011, but by 0.3pp in 2011.
Figure 6.39  Mobile broadband penetration: 2008 and 2011

<table>
<thead>
<tr>
<th>Connections per 100 people</th>
<th>3 year percentage point change</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>5.0</td>
</tr>
<tr>
<td>UK</td>
<td>4.1</td>
</tr>
<tr>
<td>FRA</td>
<td>1.5</td>
</tr>
<tr>
<td>GER</td>
<td>1.8</td>
</tr>
<tr>
<td>ITA</td>
<td>2.7</td>
</tr>
<tr>
<td>CAN</td>
<td>8.3</td>
</tr>
<tr>
<td>JPN</td>
<td>3.5</td>
</tr>
<tr>
<td>AUS</td>
<td>6.5</td>
</tr>
<tr>
<td>ESP</td>
<td>2.5</td>
</tr>
<tr>
<td>NED</td>
<td>0.9</td>
</tr>
<tr>
<td>SWE</td>
<td>9.7</td>
</tr>
<tr>
<td>IRL</td>
<td>6.8</td>
</tr>
<tr>
<td>POL</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Source: IDATE / industry data / Ofcom
6.3 The telecoms user

6.3.1 Introduction

This section looks at trends in the availability and use of telecoms services in the comparator countries covered by this report.

The analysis is based on Ofcom figures for the UK telecoms market, collected as part of our regular data collection programme, international data that has been compiled for use in this report, and third-party sources. In addition, we commissioned consumer research, undertaken in September 2012, in the UK and eight of our comparator countries (France, Germany, Italy, the US, Japan, Australia, Spain and China).

The key points highlighted in this section include:

- **Russia was the only comparator country where average fixed telecoms spend per person increased in the five years to 2011.** The increase in Russia (from £32 to £38) was due to growth in the number of fixed lines (in the UK average spend fell by 18% to £142 per person over the period).

- **Among our comparator countries, average fixed line use per person was highest in Germany in 2011, at 196 minutes per month.** By way of contrast, average use was lowest, at just 11 minutes per month, in India (in the UK it was fourth highest at 154 minutes per month). High landline use in Germany may be due to mobile calls being significantly more expensive than fixed calls.

- **Voice over Internet Protocol (VoIP) use is relatively high in France.** Ofcom research conducted in seven comparator countries in Q3 2012 suggests that VoIP use is highest in France, where 29% of respondents said that they used the service. The lowest reported levels of VoIP use were in the US (14%) while in the UK the figure was 17%, in line with that reported in 2011.

- **Poland and the UK had the lowest fixed broadband revenue per person in 2011 at £17.** This is partly attributable to GDP per capita being relatively low in Poland. The UK had the second lowest average broadband spend per person in 2011, at £54, which we think reflects how competition between providers has lowered average revenue per connection.

- **In the UK, 36% of respondents used smartphones to access the internet in 2012, second in Europe only to Spain, where 43% did so.** Respondents were least likely to use smartphones to go online in France (where 27% did so) and Germany (30%).

- **The Netherlands had the highest number of fixed broadband connections per 100 households in 2011.** The number of fixed broadband connections per 100 households ranged from just six in India to 92 in the Netherlands among our 17 comparator countries in 2011. In the UK there were 77 fixed broadband connections per 100 households at the end of the year.

- **Average revenue per mobile connection was highest in Japan and Canada, at over £34 per month in 2011.** The figure fell in 15 of our 17 comparator countries in 2011. The UK figure was £15 per month.
• **Mobile call volume per connection fell by 3.7% in the UK in 2011.** The fastest reduction was in India, at 10.4%, while the figure also fell in six other comparator countries.

• **Satisfaction with voice connections was lowest in Germany and satisfaction with mobile internet connections was lowest in Australia.** The UK was joint-sixth best for the former and seventh for the latter out of nine comparator countries.

6.3.2 **Fixed voice services**

Russia was the only country where average fixed telecoms spend per person increased between 2006 and 2011

The average spend per person on fixed voice services fell in all of our comparator countries except Russia in the five years to 2011 (Figure 6.40). The increase in average fixed voice spend per person in Russia during this time (up from £32 to £38) reflected growth in the number of fixed lines over the period. However, the number of fixed lines in Russia has been in decline since 2009, as have fixed originated call volumes, and average fixed voice revenues per person fell by 6.2% in 2011.

In 2011 the average fixed voice expenditure per person ranged from £2 in India (where there were just three lines per 100 people in 2011, as shown in Figure 6.42) to £209 in Australia. Across all of our comparator countries fixed-line spend per person fell by an average of 8.0% to £41 per person in 2011, with the rate of decline during the year being highest in China (down 18.3%) and lowest in the Netherlands, where it fell by 3.6%. In the UK the average spend per person on fixed voice services fell by 5.8% to £142 in 2011, a faster rate than the 3.9% average fall between 2006 and 2011.
Average fixed line use per person was highest in Germany in 2011

In 2011, the average volume of outgoing calls from fixed lines made per person was highest in Germany (196 minutes per month) and lowest in India (11 minutes per month). As mentioned previously, low average use in India reflects low fixed-line take-up (and availability), while in Germany high landline use may be due to mobile calls being more expensive than fixed calls (as is shown in Section 6.2.2).

France was the only comparator country for which time series data were available where the average volume of fixed-originated voice calls per person increased between 2006 and 2011, growing by 1.2% a year to 143 minutes per person per month. During this time use of flat-rate VoIP services in France increased, which has offset falling traditional voice call volumes. However, this 143-minute figure was unchanged on 2010, suggesting that France may soon follow the rest of our comparator countries, and average fixed-line use per person may start to fall (Figure 6.41).

In the UK the average person made 154 minutes of outgoing fixed voice calls per month in 2011, the fourth highest figure after Germany, Australia (170 minutes per month) and Sweden (163 minutes per month). Average use in the UK was 10.5% lower than the 172 minutes per person per month figure for 2010, and 27% lower than the 211 minute average in 2006.
The UK had the joint second highest number of fixed lines per 100 people at the end of 2011

Figure 6.42 shows the number of fixed voice connections per 100 people among our comparator countries, which in 2011 ranged from three per 100 people in India to 58 per 100 people in Sweden. The largest falls in the number of fixed lines per 100 people in the five years to 2011 were in the Netherlands (down 24 lines per 100 people to 27) and France (down 23 lines per 100 people to 28), these both being countries where there is widespread use of managed VoIP services as a substitute for traditional fixed services and where naked-DSL \(^{98}\) is available, so that a fixed voice line is not required in order to receive fixed broadband services.

In the UK there were 53 fixed lines per 100 people at the end of 2011, four less than five years previously in 2006. The number of lines per 100 people in the UK was, along with Canada, the joint second highest among our comparator nations in 2011, after Sweden.

---

\(^{98}\) A naked DSL connection is a DSL connection which is provided without the requirement for a standard fixed line.
Figure 6.42  Fixed lines per 100 population: 2006 and 2011

Voice over Internet Protocol (VoIP) use highest in France in Q3 2012

Ofcom research conducted in a number of our comparator countries in September 2012 asked broadband users whether they used their internet connection for making telephone calls. Figure 6.43 shows that claimed levels of VoIP use were highest in France (at 29% of respondents) among the seven countries for which comparable figures were available. The lowest reported level of VoIP use was in the US, where 14% said that they used their broadband connection to make phone calls (in the UK the figure was 17%, in line with that reported in 2011).
6.3.3 Fixed broadband services

Poland and the UK had the lowest fixed broadband revenue per person in 2011

Average spend per person on fixed broadband services increased in all but two of the 13 comparator countries for which figures were available in 2011, the exceptions being Spain and Poland, where growth in the number of fixed broadband connections was slower than the rate at which the average cost per connection fell during the year (Figure 6.44). The largest increase in spend per person among our comparator countries in 2011 was in the US, as a result of increasing line numbers (up 6%) and average cost per fixed broadband connection (up 8%).

The largest percentage increase in average broadband expenditure per person in the five years to 2011 was in France, where it grew by 137%. However, the broadband revenue figures for France include those from managed VoIP calls and IPTV offered over the connection, and growth in the take-up of these services is high in France (as shown in Figure 6.43). As a result, per-capita broadband revenue per person is artificially high (compared to other countries), and fixed voice revenue per person low (average fixed voice spend per person fell by 44% in France over the period, the largest fall among our comparator countries). Outside France, the largest increase in average spend per person was in Australia, where it was due solely to increasing take-up, as revenue per connection was unchanged between 2006 and 2012.

Average fixed broadband spend per person was lowest in Poland in 2011 at £17, this being the result of relatively low revenue per connection (£9 per month). This can partly be attributed to GDP per capita being relatively low in Poland, and low fixed broadband take-up at 42 connections per 100 households. The UK had the second lowest average broadband spend per person in 2011, at £54, reflecting the fact that the average revenue per line (£14 per month) is the second lowest among the comparator countries for which we have data. We believe that the low revenue per connection in the UK is the result of the downward pressure on pricing created by competition between cable and DSL platforms and LLU providers. The highest spend per person in 2011 was in Japan, where there is widespread adoption of fibre-based services.
The Netherlands had the highest number of fixed broadband connections per 100 households in 2011

The number of fixed broadband connections per 100 households ranged from just six in India to 92 in the Netherlands among our 17 comparator countries in 2011 (Figure 6.45). (These figures will not equate to household take-up, as the calculation includes some business broadband connections). Fixed broadband take-up in the Netherlands has historically been high, as the Dutch broadband market developed early (broadband provided a way for cable providers to enter the market). In India fixed broadband services tend to be available mainly in urban areas, and there is a large rural population, while affordability is also likely to be a factor. In the UK there were 77 fixed broadband connections per 100 households at the end of 2011, the fourth highest figure after the Netherlands, Canada (with 86 connections per 100 households) and France (81 connections per 100 households).

The number of connections per household increased in every year from 2006 to 2011 in all of our comparator countries except Sweden and Australia, where it fell in 2009 and 2011 in both countries. In both of these countries mobile broadband take-up is high (41 connections per 100 households in Sweden and 64 connections per 100 households in Australia), suggesting that some consumers in these countries may be using mobile broadband as a substitute for fixed broadband services.)
6.3.4 Mobile services

Average revenue per mobile connection was highest in Japan and Canada

Average monthly revenue per mobile connection fell in 15 of our 17 comparator countries in 2011, most steeply in absolute terms in France (from £24 in 2010 to £22 in 2011) and Japan (from £38 in 2010 to £36 in 2011). While revenue per connection is highest among the comparator countries in Japan (£36.55) and Canada (£34.81), average revenue has been falling in Japan, by a compound annual growth rate (CAGR) of -6.5% between 2006 and 2011, whereas revenues grew by a CAGR of 0.4% in Canada in the same period (Figure 6.46).

In 2011, among our comparator countries, revenue per mobile connection increased only in the Netherlands (from £19 to £20) and the US (up by 5 pence at £28). Between 2006 and 2011, CAGR in revenue per mobile connection in India was -21.6%, probably due to increasing ownership of multiple pre-paid SIMs. The second lowest growth rate in this period was in Ireland (-7.4%), perhaps explained in part by the macroeconomic environment. In the UK revenues declined between 2006 and 2011, at a CAGR of -1.9%. In this period, Russia’s revenues per mobile connection increased quickest among our comparator countries (CAGR of 4.4%), followed by Sweden (2.7%).

Source: IDATE / industry data / Ofcom
Figure 6.46  Average monthly revenue per mobile connection

Source: IDATE / industry data / Ofcom
Note: USA, CAN and CHN data includes revenues from incoming calls

Spend per mobile connection on data, including SMS, grew between 2006 and 2011 in every country except Ireland

In 2011, spend on data per mobile connection was highest in Japan (£20.58). Between 2006 and 2011, it grew in every comparator country except Ireland (where it shrunk from £5.61 in 2006 to £5.54 in 2011). It increased most in percentage terms in Japan and the US, growing 28.6 percentage points (pp) and 26.4pp respectively in this period (Figure 6.47). Spend also increased by over 20pp between 2006 and 2011 in Australia (23.9pp), India (23.2pp), Canada (22.3pp), Germany (21.3pp) and Russia (21.1pp). By contrast, the smallest increases in data as a proportion of spend per connection between 2006 and 2011 were in Italy (8.1pp) and the UK (9.2pp).

Voice accounted for a higher proportion of mobile spending in BRIC countries than in non-BRIC. In Brazil voice spend was £6.57 per mobile connection per month in 2011, while data spend was £1.39. The lowest voice spend per connection per month among comparator countries was in India, at £0.26.
### Average monthly voice and data revenue per mobile connection: 2006 and 2011

<table>
<thead>
<tr>
<th>£ per month</th>
<th>5 year percentage point change in data revenue as a proportion of total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>UK</td>
<td>15.3</td>
</tr>
<tr>
<td>FRA</td>
<td>22.8</td>
</tr>
<tr>
<td>GER</td>
<td>15.3</td>
</tr>
<tr>
<td>ITA</td>
<td>10.7</td>
</tr>
<tr>
<td>USA</td>
<td>26.0</td>
</tr>
<tr>
<td>CAN</td>
<td>17.4</td>
</tr>
<tr>
<td>JPN</td>
<td>23.4</td>
</tr>
<tr>
<td>AUS</td>
<td>17.8</td>
</tr>
<tr>
<td>ESP</td>
<td>17.1</td>
</tr>
<tr>
<td>NED</td>
<td>17.0</td>
</tr>
<tr>
<td>SWE</td>
<td>17.3</td>
</tr>
<tr>
<td>IRL</td>
<td>17.8</td>
</tr>
<tr>
<td>POL</td>
<td>10.5</td>
</tr>
<tr>
<td>BRA</td>
<td>17.8</td>
</tr>
<tr>
<td>RUS</td>
<td>5.9</td>
</tr>
<tr>
<td>IND</td>
<td>13.9</td>
</tr>
<tr>
<td>CHN</td>
<td>15.6</td>
</tr>
</tbody>
</table>

**Source:** IDATE / industry data / Ofcom

**Note:** Data includes messaging revenues. CHN, USA and CAN data includes revenues from incoming calls

### Mobile minutes per connection fell by 3.7% in the UK, from 131 minutes in 2010 to 127 in 2011, and by over 10% in India

In 2011 outbound mobile calls per connection fell in eight comparator countries: India (10.4% outbound and inbound), Japan (7.2%), the UK (3.7%), the US (3.3% outbound and inbound), France (2.7%), Sweden (2.4%) Spain (2.3%) and Ireland (1.5%). While US subscribers accounted for a high number of call minutes per connection (614 outbound and inbound), the compound annual growth rate between 2006 and 2011 for their call minutes was -2.0% (Figure 6.48). In countries where the number of mobile connections exceeds the population, like Italy (Figure 6.49), users are more likely to split their minutes across connections, perhaps helping to explain why Italian mobile subscribers used just 119 minutes of calls per connection in 2011.

Between 2006 and 2011, subscribers increased the minutes they spent on mobile calls fastest in Russia (where mobile minutes per connection grew on average by 17.8% each year from 2006 to 2011), Brazil (16.2%) and Poland (10.2%). In this period, mobile minutes per connection declined most in percentage terms in India, from 205 in 2006 to 157 in 2011. Outside BRIC countries, between 2006 and 2011 mobile minutes declined most in France (on average by 3.4% each year), where VoIP uptake is particularly high (Figure 6.43). Mobile
users spent the least time making calls in Germany, where mobile voice services are relatively expensive, making just 80 minutes of calls per connection in 2011.

**Figure 6.48 Voice minutes per month per mobile connection: 2006 to 2011**

In Russia there were 164 mobile connections for every 100 people in 2011

In 2011, the number of mobile connections per 100 people was highest in Russia (163.7), Italy (157.6) and Sweden (153.1) among our comparator countries (Figure 6.49). Russia is one of four comparator countries where the proportion of pre-pay connections rose between 2006 and 2011, to 88% (Figure 6.37). The popularity of pre-pay subscriptions in Russia may help account for its connection density, as subscribers are more likely to obtain multiple SIMs. Mobile penetration in the UK is 129.8 per 100 people.

Mobile penetration is lowest in China (73.6%) and India (74.7%), although connections are growing quickest in India of all our comparator countries (Figure 6.36). Equally, in Canada mobile penetration is lowest among the non-BRIC comparator countries (80.2), while its connection growth rate is highest.

Source: IDATE / industry data / Ofcom

Note: USA, CAN and CHN include incoming calls
3G coverage was lowest in Poland, Germany and the US

Methodological differences in the way operators and regulators measure mobile coverage mean that it is difficult to compare the figures they provide directly. Using the best information available to Ofcom, we present data on the population coverage offered by the operator in each country covering the largest proportion of the population, to the nearest decimal place. The UK’s figures are not directly comparable to those of other countries, not least because they reflect the percentage of premises (homes and businesses) covered by at least one mobile network operator, not the operator with the widest coverage. The way that different countries define signal levels that constitute ‘coverage’ is another factor that means comparisons between countries should be treated with caution.

The chart shows significant variations between several comparator countries in the levels of 3G coverage available from the largest operators (Figure 6.50). Whereas at least 97% of the population had 3G coverage in most of our comparator countries (to the nearest percentage point), 3G availability was lower in Poland (64%), Germany (88%) and the US (93%). By contrast, the availability of 2G services was near-universal (at least 98% to the nearest percentage point) in all of our comparator countries. In the UK, 100% of premises surveyed have 2G coverage and 99% have 3G coverage from at least one operator.
In the UK, 36% of respondents used smartphones to go online in 2012, in Europe second only to Spain

A higher proportion of respondents in China reported using mobiles to access the internet in 2012 than in any other comparator country for which we have data (Figure 6.51). Of these, 64% used a smartphone and 12% used a feature phone. However, as our respondents have internet access, these figures may best reflect behaviour in areas of China where internet penetration is higher, and are not directly comparable with those from other comparator countries. Among the remainder of our comparator countries, the second largest proportion of respondents who used smartphones to go online was in Spain (43%), followed by the UK (36%).

Respondents were least likely to use internet-enabled mobiles to go online in France (where 27% did so) and in Germany (30%). China contained the largest proportion of respondents who used feature phones rather than smartphones to go online (12%).

Source: IDATE / industry data / Ofcom
Note: All figures rounded to nearest one per cent. UK figures show the percentage of premises that are covered by at least one mobile network. Figures for other comparator countries show population coverage by the operator in each country that covers the largest proportion of the population.
Satisfaction with voice signal was lowest in Germany and satisfaction with mobile internet connectivity was lowest in Australia

In 2012, among nine countries surveyed, a higher proportion of respondents in China reported satisfaction with the reliability of the mobile voice signal than in any other comparator country: 92% agreed or strongly agreed that they could make a call when they wanted to. However, as our respondents were internet users, in China this is likely to reflect a skew towards respondents in urban areas, to a greater extent than in other comparator countries. Outside China, satisfaction with voice coverage was highest in Japan: 81% of respondents agreed or strongly agreed that they could make calls when they wanted to (Figure 6.52). A comparable number did so in the US (80%). Respondents in Australia (where 70% agreed or strongly agreed), Germany (69%) the UK (71%) and France (71%) were the least satisfied with voice coverage among the countries for which we have data.

A large proportion of respondents in Spain agreed or strongly agreed that they had mobile internet signal when they needed it (84%), second only to China (93%, a figure that may also reflect urban areas more accurately). Australia recorded the lowest satisfaction with mobile internet connectivity (74%), though this was higher than satisfaction with voice reception. Japan and the US were the only countries where satisfaction with voice coverage was higher than that with mobile internet connectivity. In Spain and Germany there was a 10 percentage point gap between satisfaction with voice and mobile internet.
Figure 6.52 Consumer perceptions of the reliability of mobile voice signal and mobile internet connectivity: 2012

Source: Ofcom consumer research, September 2012

Q.4b Thinking about when you use your mobile phone / smartphone, please select an answer to each of the following: I always have a mobile signal when I want to make a call

Q.4b Thinking about when you use your smartphone, please select an answer to each of the following: I can always connect to the internet when I want to

Base: All respondents who own a smartphone and / or feature phone (n = 8242)
Contents

7.1 Key market developments in post 281
  7.1.1 Introduction 281
  7.1.2 Since 2006, mail volumes across our comparator countries have fallen on average by 18% 282
  7.1.3 More consumers in the UK than in other countries claim to receive parcels 284

7.2 The post industry 286
  7.2.1 Introduction 286
  7.2.2 Global postal revenues 286
  7.2.3 Mail revenues in our comparator countries 286
  7.2.4 Mail volumes in our comparator countries 288
  7.2.5 Stamp price comparison 289

7.3 Post and the residential consumer 292
  7.3.1 Introduction 292
  7.3.2 Items sent 292
  7.3.3 Items received 294
  7.3.4 Reliance on post 296
7.1 Key market developments in post

7.1.1 Introduction

This chapter includes an overview and country-level analysis of the 17 comparator countries. It focuses on three areas:

- The key market developments section examines volume and revenue trends over the past five years.
- The post industry section looks at volume and revenue trends in 2011, and includes a comparison of single-piece stamp prices across our 17 comparator countries.
- The post and the residential consumer section looks at consumer trends in sending and receiving mail, and consumers’ perceived reliance on post as a method of communicating.

Figure 7.1 Industry metrics and summary

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>CAN</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>NED</th>
<th>SWE</th>
<th>IRE</th>
<th>POL</th>
<th>BRA</th>
<th>RUS</th>
<th>IND</th>
<th>CHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic addressed mail revenues (£bn)</td>
<td>6.7</td>
<td>6.5</td>
<td>7.6</td>
<td>4.2</td>
<td>38.5</td>
<td>3.7</td>
<td>13.8</td>
<td>1.6</td>
<td>1.7</td>
<td>2.1</td>
<td>1.2</td>
<td>0.5</td>
<td>1.2</td>
<td>4.9</td>
<td>2.2</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Mail revenues per capita (£)</td>
<td>106.6</td>
<td>98.9</td>
<td>93.7</td>
<td>68.2</td>
<td>123.3</td>
<td>108.1</td>
<td>108.5</td>
<td>71.3</td>
<td>36.0</td>
<td>124.7</td>
<td>135.6</td>
<td>98.8</td>
<td>31.3</td>
<td>24.8</td>
<td>15.8</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Domestic mail volumes (billion items)</td>
<td>16.6</td>
<td>14.3</td>
<td>16.3</td>
<td>4.9</td>
<td>165.3</td>
<td>10.0</td>
<td>19.3</td>
<td>4.9</td>
<td>4.1</td>
<td>4.4</td>
<td>2.8</td>
<td>0.6</td>
<td>0.8</td>
<td>8.6</td>
<td>1.1</td>
<td>6.6</td>
<td>7.3</td>
</tr>
<tr>
<td>Mail volumes per capita</td>
<td>264.0</td>
<td>217.9</td>
<td>200.3</td>
<td>80.7</td>
<td>528.8</td>
<td>291.7</td>
<td>151.3</td>
<td>225.7</td>
<td>86.7</td>
<td>261.2</td>
<td>304.5</td>
<td>121.9</td>
<td>21.4</td>
<td>43.6</td>
<td>7.9</td>
<td>5.5</td>
<td>5.4</td>
</tr>
<tr>
<td>Standard (C5) domestic stamp price (p)</td>
<td>60</td>
<td>87</td>
<td>78</td>
<td>130</td>
<td>28</td>
<td>81</td>
<td>109</td>
<td>77</td>
<td>74</td>
<td>130</td>
<td>115</td>
<td>56</td>
<td>51</td>
<td>63</td>
<td>28</td>
<td>33</td>
<td>12</td>
</tr>
<tr>
<td>Average number of items sent in a month</td>
<td>5.2</td>
<td>4.9</td>
<td>4.8</td>
<td>4.3</td>
<td>6.2</td>
<td>n/a</td>
<td>2.3</td>
<td>3.6</td>
<td>6.7</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>8.3</td>
<td></td>
</tr>
</tbody>
</table>

Sources: UPU postal statistics database, regulatory reports, postal operators’ annual reports, Ofcom analysis; Ofcom research, September 2012

Notes: Standard letter price is based on a C5 envelope, 229x162x5 <=100g; Values converted from the local currency unit to British Sterling (£1 = €1.154 / US$1.604 / CAN$1.587 / ¥127.979 / AUS$1.555 / SEK10.413 / PLN4.751 / BRL2.683 / RUB47.117 / INR74.841 / CNY10.362)

Key points in this section are:

- **Across our 17 comparator countries, mail volume has fallen by 18% since 2006.** Taken as a whole, volumes have fallen from 355 billion to 288 billion items. The UK, Italy and Spain have seen the largest declines, with mail volumes in each falling by 25% from 2006 to 2011.

- **More consumers in the UK claim to receive large parcels than in the other countries which we surveyed.** Thirty-four per cent of UK consumers claimed to have received a large parcel in the past month, higher than in any other country surveyed. Forty-six per cent of UK consumers claimed to have received a small parcel, second only to France (53%). As well as having the highest proportion of consumers receiving parcels, the value of e-commerce per head of population in 2011 in the UK is higher than in any of the other countries surveyed.
7.1.2 Since 2006, mail volumes across our comparator countries have fallen on average by 18%

The UK, Italy and Spain have seen the largest declines, with mail volume in each falling 25% between 2006 and 2011

Taken as a whole, mail volume across our comparator countries fell by 67 billion items between 2006 and 2011 (Figure 7.2). The largest declines occurred in North America, where volumes fell by 51 billion (23%). Among the European countries analysed in this report, volumes declined by 17% to 65 billion items. Volumes in the BRIC countries grew slightly over this period.

Figure 7.2 Total mail volumes in the 17 comparator countries: 2006-2011

Within each market, the largest proportional declines in volume have occurred in Spain, Italy and the UK, where 25% of volumes have been lost since 2006. The largest absolute decline in volumes across all of the comparator countries for this period was in the US, which is also the largest market. The decline between 2006 and 2011 in the US was 49 billion items, which equates to a 23% fall in volume.

The only countries where mail volumes increased over this period were Brazil, Russia and China, with the largest growth (12%) happening in the Russian market.

Figure 7.3 Proportional change in mail volume by country: 2006-2011

Sources: UPU postal statistics database, regulatory reports, postal operators’ annual reports, Ofcom analysis
In terms of the absolute number of items, the fall in the UK was larger than in any of the other European countries analysed in this report. In comparison to 2006, there are 5.4bn fewer addressed items in the UK postal market (Figure 7.4).

**Figure 7.4**  Mail item volume decline in the European comparator countries: 2006-2011

As a whole, mail revenue across our comparator countries fell by 5% since 2006.

The effect of the volume decline on revenue is detailed in Figure 7.5, which sets out the proportional loss of revenue in those countries where revenue has fallen. As the chart shows, the largest decline in revenue, both in absolute and proportional terms, has been experienced in the US market, where £5bn (12%) of revenue has been lost between 2006 and 2011. Over this period, price increases in the UK have helped to reduce the impact of falling volumes on revenue. As a result, mail market revenue in the UK has fallen by only 1.5% (£100mn).

**Figure 7.5**  Fall in revenue: 2006-2011

The countries in which revenue has grown are set out in Figure 7.6. The highest proportional growth was in China, where revenues increased by 86%. The largest actual growth was in Brazil, where revenues increased by £1.3bn. China, Russia and Brazil – the countries with
the largest growth in revenue – are also the only countries where volumes have increased since 2006.

**Figure 7.6  Growth in revenue: 2006-2011**

<table>
<thead>
<tr>
<th>Nominal growth:</th>
<th>£19m</th>
<th>£1,341m</th>
<th>£899m</th>
<th>£100m</th>
<th>£483m</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0.5%</td>
<td>37%</td>
<td>69%</td>
<td>32%</td>
<td>86%</td>
</tr>
<tr>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** UPU postal statistics database, regulatory reports, operators’ annual reports, Ofcom analysis

**Note:** Values converted from the local currency unit to British Sterling (£1 = €1.154 / US$1.604 / CAN$1.587 / ¥127.979 / AUS$1.555 / SEK10.413 / BRL2.683 / RUB47.117 / INR74.841 / CNY10.362)

**7.1.3 More consumers in the UK than in other countries claim to receive parcels**

Thirty-four percent of consumers in the UK claimed to have received at least one large parcel in the past month, higher than in any other country surveyed. This is comparable to Germany, where a third (33%) of consumers had received a large parcel in the past month.

Forty-six per cent of UK consumers said that they had received a small parcel in the past month, second only to France, where 53% claimed to have received a small parcel in the past month. Consumers in Italy were least likely to have received a parcel, with only 17% claiming to have received a small parcel and 13% saying that they had received a large parcel. In all of the countries surveyed, consumers were more likely to have received a small parcel, defined as a parcel that would fit through the letterbox, than a large parcel.
Figure 7.7 Proportion of residential customers who claim to have received a parcel in the past month

Source: Ofcom consumer research, September 2012

Q. Which of these types of items would you say you have personally received through the post in the last month? Please think about items that are addressed to you personally rather than items like leaflets or anything else that may come through your letterbox.

Base: All respondents, UK=1065, FRA=1016, GER=1024, ITA=1015, USA=1010, JPN=1004, AUS=1007, ESP=1001, CHN=1010

The proportion of consumers who claim to have received a parcel in the past month is reflected in the value of the e-retail market in each country, as Figure 7.8 shows. In Italy and Spain, where the lowest proportion of consumers had received a parcel, the value of e-retail per head of population is also low. The value of e-commerce per head of population in 2011 in the UK is higher than in any of the other countries surveyed. As broadband take-up has grown and consumer confidence in online shopping and the delivery of purchased goods has improved, the value of e-commerce has also increased.

Figure 7.8 Value of B2C e-commerce per head: 2007-2011


Notes: Values converted from Euros to British Sterling (£1 = €1.1536). Population figures from US Census Bureau (end of year estimates from mid-year values)
### 7.2 The post industry

#### 7.2.1 Introduction

This section examines volume and revenue trends across the countries analysed in this report. It also presents a comparison of stamp prices for three different formats of letter. The main findings include:

- **Across all of our comparator countries as a whole, mail revenue fell by 1.5% in 2011,** ranging from a 16.1% contraction in Poland to 9.4% growth in Brazil. Revenues grew in only four of the 17 countries analysed in our report; the UK (3.1%), Brazil (9.4%), Russia (8.8%) and India (6.6%).

- **Mail markets in Sweden and the Netherlands generate the greatest revenue per head of population.** The highest revenue per head of population of all of our comparator countries was generated in Sweden (£135.6) and the Netherlands (£124.7). The comparable figure for the UK was £106.6.

- **Volumes continued to fall in 2011, declining by 2.3% across our comparator countries as a whole.** Brazil and India were the only countries where volumes did not fall. The largest decline was in Poland (11.3%), followed by Italy (8.1%) and Spain (7.9%). The comparable figure for the UK was 5.1%.

- **For sending a standard-sized letter, the UK is among the cheapest in Europe. But for sending small letters, the UK and Japan are the most expensive countries; this is 63p in Japan and 60p in the UK.**

#### 7.2.2 Global postal revenues

It is very difficult to come to an authoritative figure of the value of worldwide postal services. However, using data collated in the UPU Postal Statistics Database, we estimate that our 17 comparator countries represent approximately 60-70% of global postal revenues. The large postal market in the US is estimated to account for around 20-25% of global postal revenues.

The data which we have used in our analysis of the postal sector come from a range of sources, including the UPU postal statistics database, publicly-available data from national regulatory authorities, annual reports from monopoly postal providers and third-party reports from sector-specific consultants. Where data from these sources explicitly report fiscal years, we have used calendar year estimates to aid comparability. We have focused our analysis on domestic addressed letter post.

#### 7.2.3 Mail revenues in our comparator countries

**Revenues continued to decline across our comparator countries, falling by 1.5% on average in 2011.**

Across all of our comparator countries, mail revenue fell on average by 1.5% in 2011. Revenues grew in only four of the 17 countries analysed in our report; the UK (3.1%), Brazil (9.4%), Russia (8.8%) and India (6.6%). While increased revenues in the UK are due to price increases, in Brazil, rising volumes have contributed to revenue growth. In Russia, growth in first class and parcel volumes has helped improve revenues.

---

99 The different letter sizes and specifications of the stamp price comparison are set out in section 7.2.5
The proportional changes in revenue and volume are set out in Figure 7.10. The largest falls in revenue were in Poland (16.1%), where the largest decline in volume occurred, and Italy (5.0%), where revenues from publications fell. Unsurprisingly, volume decline is often accompanied by a fall in revenue.

Mail markets in Sweden and the Netherlands generate the greatest revenues per head of population.

The mail markets in Australia, Sweden and the Netherlands generated the highest per-capita revenues in 2011. The highest revenue per head of population of all our comparator countries was generated in Sweden (£135.6) and the Netherlands (£124.7). Per-capita revenues were also high in the US (£123.3). The comparable figure for the UK was £106.6.
7.2.4 Mail volumes in our comparator countries

Volumes continued to fall in 2011, declining on average by 2.3% across our comparator countries

While patterns of mail volume growth tend to follow economic growth, increased broadband take-up and the subsequent electronic substitution of traditional mail have contributed to the structural decline of mail volumes around the world. As such, volumes continued to decline in 2011, with Brazil and India the only countries where volumes did not fall. The largest decline was in Poland (11.3%), followed by Italy (8.1%) and Spain (7.9%). The comparable figure for the UK was 5.1%. 

Mail volume per head of population is highest in the US

The mail market in the US is the largest in the world, in terms of both volume and revenue, so it is unsurprising that it also generates the highest number of items of mail per head of population. In 2011, the US market generated 528.8 items per person, far higher than any other country. Sweden had the next highest volume per head of population (304.5) followed...
by Canada (291.7). The comparable figure for the UK was 264, second only to Sweden among the European countries analysed in this report.

While the US and the Netherlands generate similar revenues per head of population (Figure 7.11), the volume per head is significantly higher in the US (Figure 7.13). This suggests that it is cheaper to send mail in the US than in the Netherlands, and that the mix of mail in the US has a higher proportion of cheaper business bulk mail.

**Figure 7.13 Mail volume per head of population: 2011**

Sources: UPU postal statistics database, regulatory reports, operators’ annual reports, Ofcom analysis

Note: Population figures from US Census Bureau (end-of-year estimates from mid-year values)

### 7.2.5 Stamp price comparison

The following section looks at domestic stamp prices across the countries analysed in this report. In each case, we have considered the fastest letter mail product, which predominantly carry a next-day delivery target (D+1); although, as Figure 7.14 shows, there is some variance in each territory. The products that we have looked at are all single piece, domestic tariffs available to all consumers. In line with other currency conversions within this report, prices have been converted into British Sterling using the International Monetary Fund average exchange rates for 2011. The prices of the products compared are as they are published on the operators’ websites and have not been adjusted for purchasing power parity.

**Figure 7.14 Delivery specifications for the products analysed**

Source: Operators’ websites, [accessed 10 October 2012]

Note: Delivery targets in Japan, Russia and China are dependent on the point of origin and destination

We have looked at the prices for three mailings with different characteristics, based on typical envelope sizes. These are:

- **Small letter** – based on a DL envelope, 110mm by 220mm by 5mm, weighing 20g or less
- **Standard letter** – based on a C5 envelope, 229mm by 162mm by 5mm, weighing 100g or less;\(^\text{100}\) and

- **Large letter** – based on a C4 envelope, 324mm by 224mm by 25mm, weighing 101-150g

### Japan and the UK are the most expensive countries to send a small letter

At 63p, Japan is the most expensive country to send a small letter, followed closely by the UK (60p). Among the European countries analysed in this report, the UK is the most expensive, just ahead of Sweden, where it costs 58p to send a small letter. The cheapest country for this size of letter is India, where it costs just 7p, followed by China (12p). The US is also among the cheapest, costing 28p.

However, when it comes to sending a standard letter, the UK is among the cheapest in Europe. This is because most postal operators in Europe use tariff structures which start at a lower price for smaller letters and postcards weighing 20g or less. A higher price is charged for letters which weigh in excess of 20g, or exceed the dimensions of a DL envelope, as Figure 7.15 shows. In the UK, the US, and China the price threshold comes at a higher size and weight.

The Netherlands and Italy are the most expensive countries in which to send a standard letter (£1.30), followed by Sweden (£1.15) and Japan (£1.09). China is the cheapest (12p), followed by the US (28p). The lowest price among the European countries in our report is in Poland, where it costs 51p to send a standard letter.

### Figure 7.15 Published stamp prices for small (DL) and standard (C5) domestic letters: October 2012

![Graph showing stamp prices for small and standard letters](image)

**Source:** Operators’ websites, [accessed 10 October 2012]

**Note:** Small letter is based on DL envelope, 110x220x5 <=20g; Standard letter is based on C5 envelope, 229x162x5 <=100g; Large letter is based on C4 envelope, 324x224x25 101g-150g

*Values converted from the local currency unit to British Sterling (£1 = €1.154 / US$1.604 / CAN$1.587 / ¥127.979 / AUS$1.555 / SEK10.413 / BRL2.683 / RUB47.117 / INR74.841 / CNY10.362)*

### Poland is the cheapest country in Europe in which to send a large letter

Within Europe, the cheapest country in which to send a large letter is Poland (74p), followed by the UK (£1.20). The lowest price overall is China (31p), followed by India (53p). The most expensive overall is Australia (£4.24). This is because the maximum thickness of a large letter in Australia is 20mm, and as this analysis is based on the prices for letters which are

---

\(^{100}\) Most greetings cards in the UK are no larger than a C5 envelope
25mm thick, this price represents the lowest parcel price. To send a large letter up to 20mm thick in Australia would cost £1.16, cheaper than the UK.

**Figure 7.16 Published stamp prices for large letters: October 2012**

Source: Operators' websites, [accessed 10 October 2012]

Note: Small letter is based on DL envelope, 110x220x5 <=20g; Standard letter is based on C5 envelope, 229x162x5 <=100g; Large letter is based on C4 envelope, 324*224*25 101g-150g

Values converted from the local currency unit to British Sterling (£1 = €1.154 / US$1.604 / CAN$1.587 / ¥127.979 / AUS$1.555 / SEK10.413 / PLN4.751 / BRL2.683 / RUB47.117 / INR74.841 / CNY10.362)
7.3 Post and the residential consumer

7.3.1 Introduction

This section presents the findings of our consumer research, the methodology of which is detailed in Appendix A. The key findings in this section are:

- **Consumers in the US and France are more likely to pay bills by post than any other country surveyed.** In the US, 58% of consumers claimed that they had sent payment through the post in the past month. In France, 47% of consumers said they had done this. The comparable figure for the UK was 22%.

- **More consumers in the UK send greetings cards, invitations and postcards than in other countries.** Thirty-seven per cent of respondents in the UK claimed to have sent this type of mail in the past month. Australia ranked second (34%), with the fewest consumers claiming to send this type of mail in France (17%).

- **Consumers in France receive twice as much mail as those in the UK.** The average number of items received in a week by consumers in France was 14.9, higher than in any other country surveyed. Those in the US claimed to receive 9.6 items in a week. The comparable figure for the UK was 7.1.

- **Seventy-four per cent of consumers in France consider themselves ‘very reliant’ or ‘fairly reliant’ on post as a way of communicating, higher than in any other country.** In the UK, 51% of consumers considered themselves to be reliant on post. The lowest perceived reliance on post was in Japan, where only 14% of respondents considered themselves reliant.

7.3.2 Items sent

**Residential consumers in China claim to send the most post**

Respondents to our survey in China claimed to have sent the greatest number of items of post, of all the countries we surveyed (Figure 7.17). It should be noted that our research used an online survey, and as internet availability in China is lower than in other countries, these findings represent urban consumers only. Looking at the type of items which these consumers in China had sent in the past month, as set out in Figure 7.18, shows that a far greater proportion of respondents in China had sent personal letters in the past month than in any other of the countries surveyed (56%). The proportion of consumers that had sent personal letters in the past month ranged from 30% - 41% in the other countries surveyed.

The average number of items sent in a month by residential consumers in the UK was 5.2,101 lower than in Spain (6.7) and the US (6.2). The lowest average number of items sent by residential consumers was in Japan, where on average, just 2.3 items were sent.

---

101 Our UK CMR found that consumers sent an average of 3.2 items each month. Differences in sample sizes, questionnaire design and methodology between research projects mean that results can often differ.
Consumers in the UK were more likely than consumers in the other countries surveyed to have sent a greetings card in the past month. Thirty-seven per cent of respondents stated that they had sent this type of mail in the past month, followed by 34% of respondents in Australia. People in the US were more likely to have paid a bill by post, with 58% doing so in the past month. Paying bills by post was also popular in France (47%), compared with 22% in the UK (Figure 7.18).
Figure 7.18 Type of items sent each month

Source: Ofcom consumer research, September 2012
Q. Which of these types of mail would you say you have personally sent in the last month by post?
Base: All respondents who have sent items by post in the last month, UK=730, FRA=801, GER=697, ITA=364, USA=591, JPN=427, AUS=563, ESP=411, CHN=659

7.3.3 Items received

Consumers in France claim to receive the most items each week

Across all of the countries that we surveyed, consumers in France claimed to have received the most items in the past week (14.9), more than twice the average number of items received by people in the UK (7.1). The average number of items received by those in the US was also relatively high (9.6). Consumers in Italy and Australia received the fewest items: 4.9 and 5.0 items respectively.
Figure 7.19  Average number of items received in a week

As well as receiving the highest average number of items, consumers in France are also more likely to receive magazines, letters from organisations, and catalogues, than those in any of the other countries surveyed. Those in the US are more likely to have received addressed direct mail and standard circulars (with 47% and 49% respectively claiming to have received these in the past month) although the proportion of consumers in the UK who had received these types of mail in the past month was also high (43% and 49% respectively).

In almost all countries, transactional mail in the form of bills, invoices and statements are the most commonly-received type of item.
7.3.4 Reliance on post

Consumers in France are far more likely to consider themselves to be reliant on post

We asked respondents how reliant on post they considered themselves to be, as a way of communicating. Consumers in France were most likely to consider themselves to be ‘very reliant’ (20%) or ‘fairly reliant’ (54%) among all the countries surveyed. People in the US were the next most likely to consider themselves reliant on post, with 17% considering themselves to be ‘very reliant’ and 37% ‘fairly reliant’. Those in Japan were least likely to consider themselves reliant on post (14%), followed by Spain (21%). In the UK, 51% of people considered themselves to be reliant on post, the same as in Australia.
Figure 7.21  How reliant consumers perceive themselves to be on post, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Very reliant</th>
<th>Fairly reliant</th>
<th>Neither reliant nor not reliant</th>
<th>Not very reliant</th>
<th>Not at all reliant</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>11%</td>
<td>40%</td>
<td>26%</td>
<td>17%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>FRA</td>
<td>20%</td>
<td>54%</td>
<td>11%</td>
<td>10%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>GER</td>
<td>8%</td>
<td>28%</td>
<td>36%</td>
<td>18%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>ITA</td>
<td>8%</td>
<td>38%</td>
<td>28%</td>
<td>20%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>17%</td>
<td>37%</td>
<td>23%</td>
<td>13%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>JPN</td>
<td>12%</td>
<td>35%</td>
<td>34%</td>
<td>13%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>AUS</td>
<td>14%</td>
<td>37%</td>
<td>27%</td>
<td>13%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>ESP</td>
<td>4%</td>
<td>17%</td>
<td>35%</td>
<td>21%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>CHN</td>
<td>8%</td>
<td>38%</td>
<td>30%</td>
<td>15%</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ofcom consumer research, September 2012

Q. How reliant would you say you are on post as a way of communicating?

Base: All respondents, UK=1065, FRA=1016, GER=1024, ITA=1015, USA=1010, JPN=1004, AUS=1007, ESP=1001, CHN=1010
Appendix A – Consumer research methodology
Appendix A: Consumer research methodology

Introduction

This section describes the methodology used for the 2012 international communications behaviour research, which was carried out by Populus, an independent market research agency, on behalf of Ofcom.

The survey covered the communications behaviour of internet users in nine markets: the UK, Germany, France, Italy, Spain, the US, Japan, China, and Australia. As in previous years, the research looked at the ownership and use of communications services and devices such as TV, mobile, fixed landline and internet. In addition, it explored the changing nature of communication, and use of connected devices and postal services, in the various markets. The research looked in detail at how consumers used communication devices and services to follow the recently-concluded 2012 Olympic and Paralympic Games.

The 2012 research comprised 9,152 interviews completed in September 2012. Five previous waves of the research have been undertaken (2011, 2010, 2008, 2007 and 2006) and a number of key issues have been tracked across all waves.

Research methodology

Overview

The international communications behaviour research is conducted using an international online consumer access panel. In 2012, as in previous years, the research panel employed was managed by Toluna. The numbers of active panel members in each market are shown in Figure 8.2. A total of 9,152 interviews with internet users were completed – with at least 1,000 in each market. Age and gender quotas in each market were set in line with those employed in earlier waves to ensure historical consistency, although the research this year includes all age groups including those aged 65+, slightly changing the dynamics of the sample.

The study was carried out among adults aged over 18. In previous years our research sample has excluded those over the age of 64. The change in the sample this year was made to reflect the changing demographics of online populations, as more older people are now online. As a result, the online population reached by Toluna’s research panel is now more representative of the national populations in each of the countries surveyed. One exception to this is China, where we believe internet take-up is relatively low, so although the members of the online panel represent the online population, they are perhaps more likely to be affluent and urban and exhibit the behaviour of early adopters.

The quotas in the 2012 wave of the research are based on ComScore’s quotas of online populations. In previous years, the quotas have been based on e-Marketer’s Worldwide Internet Users Report 2005-2011.

Members of Toluna’s access panel were screened to meet age and gender requirements. Respondents were invited to participate using a random online sampling approach to ensure a representative sample. The following methods were used:

- Email invitation via random sampling from the panel, within qualifying age bands.
• Real-time sampling, allowing visitors to the Toluna website to access the screeners and participate (if they qualified).

Toluna sampled its panel by selecting email addresses randomly within the market and demographic quotas required, taking account of predicted response rates by target demographic, and country, to avoid over-contacting panellists and to ensure that a bias was not introduced in the responses. The sample itself was then automatically randomised for potentially-qualifying individuals. A twenty-five minute self-completion web-based survey was completed by all respondents in each market.

Quotas

1,000 interviews per market were completed to match previous waves.

The quotas had been set in the previous waves to reflect the age and gender profile of internet users in each market of consumers aged 18-64 years. The same quotas were set this year, with the exception of the 65+ age group, which has been included for the first time. The data are weighted using proportions comparable to previous waves.

Figure 8.1 Achieved sample, by nation and demographics

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>USA</th>
<th>JPN</th>
<th>AUS</th>
<th>ESP</th>
<th>CHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unweighted Total</td>
<td>1065</td>
<td>1016</td>
<td>1024</td>
<td>1015</td>
<td>1010</td>
<td>1004</td>
<td>1007</td>
<td>1001</td>
<td>1010</td>
</tr>
<tr>
<td>Weighted total</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Male</td>
<td>507</td>
<td>514</td>
<td>523</td>
<td>531</td>
<td>479</td>
<td>571</td>
<td>513</td>
<td>526</td>
<td>557</td>
</tr>
<tr>
<td>Female</td>
<td>493</td>
<td>486</td>
<td>477</td>
<td>469</td>
<td>521</td>
<td>429</td>
<td>474</td>
<td>474</td>
<td>443</td>
</tr>
<tr>
<td>18-24 yrs</td>
<td>170</td>
<td>153</td>
<td>144</td>
<td>143</td>
<td>139</td>
<td>139</td>
<td>164</td>
<td>162</td>
<td>267</td>
</tr>
<tr>
<td>25-34 yrs</td>
<td>206</td>
<td>192</td>
<td>178</td>
<td>234</td>
<td>195</td>
<td>210</td>
<td>216</td>
<td>265</td>
<td>308</td>
</tr>
<tr>
<td>35-44 yrs</td>
<td>198</td>
<td>202</td>
<td>194</td>
<td>276</td>
<td>205</td>
<td>250</td>
<td>214</td>
<td>263</td>
<td>242</td>
</tr>
<tr>
<td>45-54 yrs</td>
<td>193</td>
<td>183</td>
<td>223</td>
<td>217</td>
<td>194</td>
<td>183</td>
<td>184</td>
<td>181</td>
<td>109</td>
</tr>
<tr>
<td>55-64 yrs</td>
<td>116</td>
<td>53</td>
<td>95</td>
<td>15</td>
<td>52</td>
<td>25</td>
<td>38</td>
<td>42</td>
<td>35</td>
</tr>
<tr>
<td>65yrs +</td>
<td>117</td>
<td>217</td>
<td>166</td>
<td>115</td>
<td>215</td>
<td>193</td>
<td>184</td>
<td>87</td>
<td>39</td>
</tr>
</tbody>
</table>

Statistical significance

Demographic quotas were employed to match internet use in each market. Results were tabulated and significance testing (at 95% confidence) was applied. The data were weighted using proportions comparable to previous waves.

Access panel

The 2012 survey used Toluna’s access panel. The panel includes the following number of members in each of the relevant markets:
Panel members were recruited from a variety of sources, using a ‘double opt-in’ procedure. The process was as follows:

- **Step 1** - A prospective panellist completes a panel registration form, which includes contact and demographic information (first opt-in).

- **Step 2** - An automatic email is sent to the prospect, requesting verification of their panel registration by clicking a link that confirms their log-in details.

- **Step 3** - Once the prospect has clicked the link (second opt-in), he or she is officially a panellist and is presented with an opportunity to complete additional profiling. Another automatic email is sent that includes the panellist’s account log-in information for future reference by the panellist.

Members complete no more than two surveys per month. For this survey all panellists completing the survey were paid a small incentive payment for their time.
International Communications
Market 2012

Appendix B – Comparative international pricing methodology
Appendix B: comparative international pricing methodology

Introduction and objectives
For the 2012 international price benchmarking we used the same methodology as that deployed in previous reports, although some updates were made to the baskets to ensure that they more accurately reflected current use of communications services in the comparator countries.

We have used a bespoke model commissioned from telecoms pricing consultancy Teligen, which Teligen has populated with specifically-sourced tariff data for fixed-line voice, mobile phone, fixed broadband, mobile broadband, television and ‘multi-play’ (i.e. tariffs incorporating more than one service such as ‘triple-play’ fixed voice, broadband and television tariffs) services in the UK, France, Germany, Italy, Spain and the US.

The key objectives were as follows:

- to identify and compare the pricing that is available for consumers buying fixed-line voice services, pre-pay and post-pay mobile services, broadband internet and TV services;
- to identify and compare the pricing that is available by purchasing communications services within ‘bundled’ tariffs (for example, ‘triple-play’ services which typically offer a single bill for the delivery of fixed-line voice, broadband and television services);
- to compare pricing across a wide range of service usage scenarios, from the requirements of those with basic needs to those of consumers with more sophisticated consumption;
- to incorporate the cost of hardware such as set-top boxes or mobile handsets in order to reflect the real prices that consumers pay, and to compare like-with-like by allowing for equipment subsidies when they are included within propositions from service providers; and
- to represent average or typical use as accurately as possible across the five countries in order to avoid biases associated with comparing pricing based on usage characteristics that are more typical of one country than another.

Basic methodology
Further detail is provided below, but the basic principles are as follows.

- We constructed five ‘typical’ household types, which collectively may be seen as representative of the average population across our countries, and defined a basket of communications services (fixed-line voice, mobile, broadband, TV) appropriate for each household type.
- A wide range of components were included within the baskets to ensure as accurate as possible a representation of the real prices consumers pay. For example:
• Fixed voice minutes were distributed by whether they were to fixed or mobile lines, by call distance (local, regional, national and international, including a range of international destinations), and time of day (day, evening, weekend). Non-geographic calls were excluded from the analysis.

• Mobile calls (and messaging) were split between on-net and off-net, and voicemail was included.

• Call set-up and per-minute charging were incorporated, and a range of call lengths were used (distributed around a defined mean based on averages across 30 OECD countries).

• Incoming calls were included in recognition of the different pricing mechanism in the US.

• The broadband component was defined both by minimum headline speed and by minimum data and time online requirements (in recognition that in some markets some broadband service providers charge by time spent online, in addition to, or in place of data-based charging).

• The television element included the licence fee (where applicable), a digital receiver and, for some baskets, a digital video recorder (DVR). Because of difficulties in comparing programming bundles, two tiers of pay-TV were considered: the most basic service available above the channels available on free-to-air TV; and a premium service defined by a top price film/entertainment package and the best package of top-tier football matches.

• The average monthly use across all of the baskets was adjusted to ensure that it was closely aligned with average use across the households (for example, the average number of outbound minutes per fixed line across the six countries in 2007 was 298 minutes, our average number of fixed minutes across our five households is 300 minutes).

• Mobile handsets, broadband routers, digital set-top boxes and DVRs are included within the baskets (and amortised over an appropriate period in order to attribute a monthly cost). This is necessary because this equipment is often inseparable from the service price, as operators frequently include subsidised or ‘free’ equipment (for example a mobile handset or a WiFi router) within the monthly subscription. For similar reasons, connection and/or installation costs are included.

• In July 2011 and again in July 2012, detailed data of every tariff and every tariff combination (including bundled services) from the largest three operators in each country, by retail market share, were collected (and for more than three operators, if required to ensure that a minimum of 80% of the overall market was represented in terms of share of retail connections). Multi-play tariffs (i.e. those which incorporate more than one service) were also collected. Only those tariffs available on the websites of the operators were included (i.e. excluding bespoke tariffs which are offered only to certain customers).

• Across the six countries, the tariff data in 2012 consisted of:

  • 616 fixed voice tariffs;

  • 230 fixed broadband tariffs;
• 4,091 mobile tariffs;
• 386 mobile broadband tariffs;
• 307 television tariffs; and
• multi-play bundles: 2,280 tariff options.
• Our model identifies the tariffs that offer the lowest price for meeting the requirements of each of the households’ baskets.
• All sales taxes and surcharges have also been included, in order to reflect the prices that consumers actually pay (although we do not account for differences in other areas of personal taxation policy within each country).
• All prices are converted back to UK currency using a purchasing power parity (PPP) adjustment based on OECD comparative price levels and exchange rates as of 1 July 2012.
• In order to provide both an illustration of representative prices for the individual services in each country, and an illustration of the best value that consumers could get for their full ‘basket’ of services, we have provided two types of analysis for each basket:
  • the first, which we call “average single service” pricing, illustrates the price of each individual service as defined by the average of the lowest price tariff from each of the three largest operators for each service in each country, weighted by the market share of the service provider in order to ensure fair representation; and
  • the second, which we call “best offer” pricing, identifies the lowest price a consumer could pay for this basket of services, including, where appropriate, by purchasing ‘bundled’ services.

Principles of the model

The model developed for Ofcom by Teligen uses individual consumption baskets for each of the services in the pricing analysis, combined in a structure that allows the definition of household baskets of any combination of services.
Each household definition may include any of the four services, with any combination of basket parameters, describing the use of each service within the household. For the mobile service the system allows definitions of multiple users, for each member of the household.

The tariff information contains all charges and elements that will typically be part of a service offering. Some costs have been excluded as beyond the scope of the current analysis:

- PC/laptop/s for use with the broadband service
- Television set/s
- Recording equipment beyond those built into digital decoders
- Fixed telephone handset/s

However, mobile handsets, modems/routers and set-top boxes/TV receivers are included as they are an integral part of the service offerings, and are often subsidised by operators which recoup the value of the hardware throughout the course of a contract.

**Multi-play service offerings**

An important part of the analysis is the inclusion of the ‘multi-play’ service offers available in each of the study countries, whereby more than one service is purchased from a single service provider, often at a substantial discount compared with purchasing the services separately.

As the household definition determines which services are required by the household, and as this may or may not correspond with the multi-play offerings available, it is necessary to combine the multi-play offerings with the available single service tariffs in each market. Where the multi-play offer does not cover the household requirement for a particular service,
a suitable single service tariff is used to fill the gap. In such cases the best possible tariff (the cheapest single offer that can fulfil the usage requirements) is used.

**Figure 9.2 Examples of combinations of multi-play and single-service offers**

<table>
<thead>
<tr>
<th>Household requirement</th>
<th>Fixed voice</th>
<th>Fixed broadband</th>
<th>Mobile</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multi-play offer</strong></td>
<td>Multi-play fixed voice &amp; broadband</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single services</td>
<td>Single mobile tariff</td>
<td>Single TV service</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Multi-play offer</strong></td>
<td>Triple-play fixed voice, fixed broadband &amp;</td>
<td></td>
<td></td>
<td>bundled TV service</td>
</tr>
<tr>
<td>Single services</td>
<td></td>
<td>Single mobile tariff</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Multi-play offer</strong></td>
<td>Multi-play landline &amp;</td>
<td></td>
<td></td>
<td>bundled TV service</td>
</tr>
<tr>
<td>Single services</td>
<td></td>
<td>Single broadband</td>
<td>Single mobile tariff</td>
<td></td>
</tr>
<tr>
<td><strong>Multi-play offer</strong></td>
<td>Quad-play fixed voice, fixed broadband, mobile and TV service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Teligen*

**Geographic scope**

Pricing comparisons are made between six countries – the UK, France, Germany, Italy, Spain and the US. These countries have broadly similar socio-demographic, economic and communications-usage characteristics. High-level parameters such as population per household and comparative price levels (which is a proxy for cost of living) suggest that fair comparison can be made more easily, as relative prices are not substantially influenced by differences in economic development.

Because of the existence of local markets in the US, we have used tariffs available in the state of Illinois. This was chosen as being reasonably representative of the US as a whole in terms of its relative wealth and rural-urban split (it incorporates the city of Chicago as well as large agricultural regions). Nevertheless, US pricing should not be viewed as being representative of the whole country.
Tariff data

For practical reasons, it was not possible to incorporate every tariff from all of the operators in every country. Instead, we set a requirement that the analysis included the three largest operators by retail market share for each service and represented at least 80% of the retail market. Therefore in markets where the three largest operators had collective market share of over 80% we limited our analysis to tariffs from these three operators; otherwise we also included the fourth and fifth largest operators to ensure that we represented a minimum of 80% of the market. All operators included by these criteria were also considered for ‘multi-play’ offers. While this methodology excludes smaller operators, which may offer the lowest prices for some services, we believe that using the prices of the largest operators is appropriate, both because they are the best reflection of the general consumer experience and because they are in large part defined by the competitive environment in which they operate.

Research was undertaken in July 2008, July 2009, July 2010, July 2011 and July 2012, and only those tariffs detailed on the websites of the operators were included. Special offers and promotions (for example, reduced line rental for a number of months, or ‘free’ installation or hardware) were included, but only if they were available to all new customers and were available for the whole month.
**Figure 9.4 Operators included within the analysis**

<table>
<thead>
<tr>
<th></th>
<th>Fixed voice</th>
<th>Fixed broadband</th>
<th>Mobile</th>
<th>Mobile broadband</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UK</strong></td>
<td>BT, O2, Orange, Sky, TalkTalk &amp; Virgin Media</td>
<td>AOL/TalkTalk, BT, O2, Orange, Sky &amp; Virgin Media</td>
<td>BT, O2, Orange, T-Mobile &amp; Vodafone</td>
<td>BT, O2, Orange, T-Mobile, Three, Virgin Media &amp; Vodafone</td>
<td>BT, Sky &amp; Virgin Media</td>
</tr>
<tr>
<td><strong>FRA</strong></td>
<td>Bouygues Telecom, France Telecom, Free, Numericable &amp; SFR</td>
<td>Bouygues, Free, Numericable, Orange &amp; SFR</td>
<td>Bouygues, Orange &amp; SFR</td>
<td>Bouygues, Orange &amp; SFR</td>
<td>Bouygues, CanalSat, France Telecom, Free, Numericable, SFR &amp; TNT</td>
</tr>
<tr>
<td><strong>GER</strong></td>
<td>Kabel BW, O2, Telecolumbus, T-Home, United, Internet, Unity Media &amp; Vodafone</td>
<td>Kabel BW, O2, T-Home, Telecolumbus, United Internet, Unity Media &amp; Vodafone</td>
<td>O2, T-Mobile &amp; Vodafone</td>
<td>O2, T-Home &amp; Vodafone</td>
<td>Kabel Deutschland, Kabel BW, O2, Telecolumbus, Sky, T-Home, Unity Media &amp; Vodafone</td>
</tr>
<tr>
<td><strong>ITA</strong></td>
<td>Fastweb, TeleTu, Telecom Italia, Tiscali &amp; Wind</td>
<td>Fastweb, TeleTu, Telecom Italia, Tiscali and Wind</td>
<td>TIM, Vodafone &amp; Wind</td>
<td>TIM, Tre, Vodafone &amp; Wind</td>
<td>Fastweb, Mediaset, Sky &amp; Telecom Italia</td>
</tr>
<tr>
<td><strong>ESP</strong></td>
<td>Jazztel, Movistar, ONO, Orange &amp; Vodafone</td>
<td>Jazztel, Movistar, ONO &amp; Orange</td>
<td>Movistar, Orange &amp; Vodafone</td>
<td>Movistar, Orange &amp; Vodafone</td>
<td>Digital Plus, Movistar &amp; ONO</td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td>AT&amp;T, Comcast, Frontier &amp; RCN</td>
<td>AT&amp;T, Comcast, Frontier &amp; RCN</td>
<td>AT&amp;T, Sprint, T-Mobile &amp; Verizon</td>
<td>AT&amp;T, Sprint, T-Mobile &amp; Verizon</td>
<td>AT&amp;T, Comcast, DirectTV, Frontier &amp; RCN</td>
</tr>
</tbody>
</table>

Source: Teligen

Note: Some operators for some services only included in multi-play analysis

**Household types**

For this study we make reference to five hypothetical 'typical' households, and have defined their requirements for communications services. These household types are designed to be collectively broadly representative of the overall population of the five countries; however, in order to provide comparison across the full range, from very basic to advanced communications-service users, we have created significant variation in the contents of the baskets of communications services.

The details of the basket composition are provided in Section 2 above.

**Figure 9.5 Household types**

<table>
<thead>
<tr>
<th>'Typical household type'</th>
<th>Fixed voice</th>
<th>Mobile voice</th>
<th>Mobile messaging</th>
<th>Fixed line broadband</th>
<th>Mobile broadband</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A low use household with basic needs</td>
<td>Low</td>
<td>Low</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Basic</td>
</tr>
<tr>
<td>2 A broadband household with basic needs</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>n/a</td>
<td>Basic</td>
</tr>
<tr>
<td>3 A mobile 'power user'</td>
<td>n/a</td>
<td>High</td>
<td>High</td>
<td>n/a</td>
<td>High</td>
<td>Pay-TV</td>
</tr>
<tr>
<td>4 A family household with multiple needs</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>Medium</td>
<td>n/a</td>
<td>Pay-TV with recorder</td>
</tr>
<tr>
<td>5 An affluent two person household</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
<td>High use superfast</td>
<td>Medium</td>
<td>HD premium pay-TV with recorder</td>
</tr>
</tbody>
</table>

Source: Ofcom
The relationship between basket composition and usage by country

There is significant variation in the take-up and use of communications services across the six comparator countries.

Figure 9.6 Average take-up and use of communications services, by country

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>ESP</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>People per household</td>
<td>2.4</td>
<td>2.4</td>
<td>2.0</td>
<td>2.4</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Fixed-only households per 100 households</td>
<td>6</td>
<td>11</td>
<td>16</td>
<td>5</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Monthly outbound fixed minutes per access line</td>
<td>317</td>
<td>416</td>
<td>363</td>
<td>420</td>
<td>274</td>
<td>303</td>
</tr>
<tr>
<td>Mobile connections per household</td>
<td>3.1</td>
<td>2.3</td>
<td>2.7</td>
<td>3.6</td>
<td>3.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Mobile-only households per 100 households</td>
<td>17</td>
<td>13</td>
<td>12</td>
<td>34</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Monthly outbound fixed minutes per household</td>
<td>407</td>
<td>343</td>
<td>409</td>
<td>304</td>
<td>326</td>
<td>389</td>
</tr>
<tr>
<td>Monthly outbound fixed minutes per household</td>
<td>402</td>
<td>312</td>
<td>210</td>
<td>418</td>
<td>354</td>
<td>1584</td>
</tr>
<tr>
<td>Monthly outbound SMS messages per household</td>
<td>406</td>
<td>309</td>
<td>86</td>
<td>283</td>
<td>43</td>
<td>1451</td>
</tr>
<tr>
<td>Fixed broadband connections per 100 households</td>
<td>74</td>
<td>77</td>
<td>67</td>
<td>51</td>
<td>63</td>
<td>70</td>
</tr>
<tr>
<td>Pay-TV subscriptions per 100 households</td>
<td>52</td>
<td>55</td>
<td>59</td>
<td>25</td>
<td>27</td>
<td>86</td>
</tr>
</tbody>
</table>

Source: IDATE / European Commission

Notes: All data are for Q4 2010/Q1 2011; further details are available in the Telecoms and networks and Television and audio-visual sections; data for some countries were not available when the baskets were defined; as combined outbound and inbound call and SMS volumes are the only data available, this total has been halved as a proxy to represent outbound calls / SMS only

In order to address potential biases associated with our baskets being more closely aligned with the usage profiles of some countries than others, we have adjusted the overall average use across the five baskets to ensure that it closely matches the average use across the six countries. Nevertheless, the variations in average use should be considered when looking at the output from the individual baskets.

Figure 9.7 Alignment of average use across comparator households with average use across comparator countries

<table>
<thead>
<tr>
<th></th>
<th>Basket1</th>
<th>Basket2</th>
<th>Basket3</th>
<th>Basket4</th>
<th>Basket5</th>
<th>Average per household</th>
<th>Average across countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of people</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Fixed-only households</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.1</td>
</tr>
<tr>
<td>Mobile-only households</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Outbound fixed minutes</td>
<td>51</td>
<td>99</td>
<td>0</td>
<td>136</td>
<td>57</td>
<td>69</td>
<td>376</td>
</tr>
<tr>
<td>Outbound mobile minutes</td>
<td>37</td>
<td>37</td>
<td>290</td>
<td>258</td>
<td>212</td>
<td>167</td>
<td>542</td>
</tr>
<tr>
<td>Outbound SMS per household</td>
<td>0</td>
<td>0</td>
<td>150</td>
<td>190</td>
<td>70</td>
<td>82</td>
<td>794</td>
</tr>
<tr>
<td>Fixed broadband subscriptions</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Mobile broadband subscriptions</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Pay-TV subscriptions</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.6</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: Ofcom
Fixed-line voice services

Fixed voice tariff information

The fixed voice service is assumed to be a home-based fixed telephony service. A household is assumed to have not more than one fixed-line service.

Single fixed-voice services are normally offered on a dedicated analogue line (PSTN services). In the context of multi-play, the fixed voice service may be delivered as a VoIP telephony service over a broadband connection, and these are included in our analysis. From a user point of view, these services are exchangeable, but from a technical point of view they are very different. As connection and line rental charges are covered by the broadband service, the multi-play fixed voice services can have zero or very small fixed charges over and above the broadband charges.

Typically, fixed-voice tariffs incorporate some or all of the following types of charging:

- Connection charge and takeover charge
- Monthly rental charge, plus the monthly charge for any additional options taken
- Allowances in terms of minutes included per month, or a value deducted from usage each month. These allowances are mapped onto the different types of calls and times of day.
- Billing system information
- Call charges for day, evening and weekend
  - Local calls
  - Regional calls
  - National calls
  - Calls to mobiles (for each network, weighted)
  - International calls to ten destinations

As such, calls to non-geographic numbers are excluded from the analysis.

The billing system information is used to determine the price elements included in a typical call. Seven types of billing are possible.
Each tariff is handled individually, and will have the most appropriate call cost calculation system applied.

**Fixed voice basket**

The fixed voice basket defines the usage per month for the household, and calculates the monthly cost of using the fixed voice service. The basket elements are listed below, with values for each of the five households. The cost of customer’s equipment was amortised over a five year period.

**Figure 9.9 Components of the fixed voice baskets**

<table>
<thead>
<tr>
<th>Call durations</th>
<th>Basket 1</th>
<th>Basket 2</th>
<th>Basket 3</th>
<th>Basket 4</th>
<th>Basket 5</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>4</td>
<td>4</td>
<td>n/a</td>
<td>4</td>
<td>4</td>
<td>Mins</td>
</tr>
<tr>
<td>Regional</td>
<td>6</td>
<td>6</td>
<td>n/a</td>
<td>6</td>
<td>6</td>
<td>Mins</td>
</tr>
<tr>
<td>National</td>
<td>6</td>
<td>6</td>
<td>n/a</td>
<td>6</td>
<td>6</td>
<td>Mins</td>
</tr>
<tr>
<td>Fixed to</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
<td>Mins</td>
</tr>
<tr>
<td>International</td>
<td>6</td>
<td>6</td>
<td>n/a</td>
<td>6</td>
<td>6</td>
<td>Mins</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Destination weights</th>
<th>Basket 1</th>
<th>Basket 2</th>
<th>Basket 3</th>
<th>Basket 4</th>
<th>Basket 5</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>67</td>
<td>70</td>
<td>n/a</td>
<td>68</td>
<td>60</td>
<td>%</td>
</tr>
<tr>
<td>Regional</td>
<td>10</td>
<td>8</td>
<td>n/a</td>
<td>9</td>
<td>7</td>
<td>%</td>
</tr>
<tr>
<td>National</td>
<td>16</td>
<td>13</td>
<td>n/a</td>
<td>14</td>
<td>13</td>
<td>%</td>
</tr>
<tr>
<td>Fixed to</td>
<td>7</td>
<td>7</td>
<td>n/a</td>
<td>7</td>
<td>12</td>
<td>%</td>
</tr>
<tr>
<td>International</td>
<td>0</td>
<td>2</td>
<td>n/a</td>
<td>2</td>
<td>8</td>
<td>%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time of day weights</th>
<th>Basket 1</th>
<th>Basket 2</th>
<th>Basket 3</th>
<th>Basket 4</th>
<th>Basket 5</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td>58.3</td>
<td>58.3</td>
<td>n/a</td>
<td>59.2</td>
<td>55.5</td>
<td>%</td>
</tr>
<tr>
<td>Evening</td>
<td>24.5</td>
<td>24.5</td>
<td>n/a</td>
<td>24.9</td>
<td>25.0</td>
<td>%</td>
</tr>
<tr>
<td>Weekend</td>
<td>17.2</td>
<td>17.2</td>
<td>n/a</td>
<td>15.9</td>
<td>19.5</td>
<td>%</td>
</tr>
<tr>
<td>Depreciation</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>years</td>
</tr>
</tbody>
</table>

Source: Teligen

Note: All fixed call types are calculated with five different durations, below and above the number of minutes indicated.

International calls are weighted according to the table below, considering each originating country and each destination country.
**Figure 9.10  Fixed voice international call destinations for comparator countries**

<table>
<thead>
<tr>
<th>Call from</th>
<th>CAN</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>JPN</th>
<th>RUS</th>
<th>SAF</th>
<th>ESP</th>
<th>UK</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN</td>
<td>2.2%</td>
<td>2.1%</td>
<td>1.7%</td>
<td>1.0%</td>
<td>0.3%</td>
<td>6.5%</td>
<td>86.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRA</td>
<td>2.8%</td>
<td>25.2%</td>
<td>19.0%</td>
<td>1.4%</td>
<td>13.7%</td>
<td>24.7%</td>
<td>13.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GER</td>
<td>2.7%</td>
<td>21.6%</td>
<td>20.0%</td>
<td>1.7%</td>
<td>2.3%</td>
<td>0.8%</td>
<td>8.6%</td>
<td>20.4%</td>
<td>22.0%</td>
<td></td>
</tr>
<tr>
<td>ITA</td>
<td>3.4%</td>
<td>26.5%</td>
<td>30.3%</td>
<td>1.0%</td>
<td>7.0%</td>
<td>15.6%</td>
<td>16.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JPN</td>
<td>4.4%</td>
<td>5.0%</td>
<td>6.8%</td>
<td>2.5%</td>
<td>1.6%</td>
<td>1.1%</td>
<td>11.5%</td>
<td>67.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUS</td>
<td>2.2%</td>
<td>8.8%</td>
<td>35.1%</td>
<td>11.8%</td>
<td>2.0%</td>
<td>3.4%</td>
<td>10.6%</td>
<td>26.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAF</td>
<td>4.4%</td>
<td>5.0%</td>
<td>13.9%</td>
<td>4.4%</td>
<td>1.8%</td>
<td>46.7%</td>
<td>23.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESP</td>
<td>0.8%</td>
<td>27.6%</td>
<td>23.8%</td>
<td>11.2%</td>
<td>0.7%</td>
<td>0.2%</td>
<td>24.0%</td>
<td>10.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>6.2%</td>
<td>18.1%</td>
<td>19.5%</td>
<td>8.7%</td>
<td>2.8%</td>
<td>2.7%</td>
<td>8.0%</td>
<td>34.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| USA       | 47.9%| 5.6%| 12.2%| 4.6%| 8.7%| 1.3%| 0.8%| 2.2%| 16.7%|

**Source:** Teligen

*Note: Vertical axis is “from”, and horizontal is “to”.*

**Basket logic**

Once the cost of using each fixed voice package is calculated, the cheapest package per provider and per country is identified. These are the packages that are considered in the household cost scenarios.

The packages that are part of a multi-play offering are identified separately from the single packages.

**Fixed voice data issues**

Fixed voice services are covered with both direct and indirect services. Any line installation or monthly rental charges incurred by those using indirect services are included in the service costs.

Some providers offer a wide range of add-on options for their tariff packages, with possible cost reductions. Where relevant, these have been incorporated in order to identify the lowest prices available for a basket of services.

Tariff packages offering free or reduced-price calls to specific destinations or selectable numbers are not considered.

**Mobile services**

**Mobile tariff information**

The mobile service is assumed to be a personal service; a household may have several users with individual usage profiles and requirements. VoIP over mobile networks services were excluded from the analysis.

Typically, the mobile tariffs will use some or all of the following charge categories:

- Connection charge
- Monthly rental charge, plus the monthly charge for any additional options taken
• Allowances in terms of call minutes and/or messages included per month, or a value deducted from usage each month. These allowances are mapped onto the different types of calls and times of day.

• Billing system information

• Call charges for day, evening and weekend
  - Local calls
  - National calls
  - On-net calls to mobiles
  - Off-net calls to mobiles (for each network, weighted)
  - Voicemail calls
  - International calls to ten destinations
  - Data use
  - Messages

The billing system information is used to determine the price elements included in a typical call. Seven types of billing are possible:

**Figure 9.11 Types of billing for mobile voice calls**

<table>
<thead>
<tr>
<th>Calculation types</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Per second</td>
</tr>
<tr>
<td>2 Per unit</td>
</tr>
<tr>
<td>3 Per minute</td>
</tr>
<tr>
<td>4 Per second with allowance</td>
</tr>
<tr>
<td>5 Per second with initial minute</td>
</tr>
<tr>
<td>6 Per second capped</td>
</tr>
<tr>
<td>7 Per minute capped</td>
</tr>
</tbody>
</table>

*Source: Teligen*

Each tariff is handled individually, and will have the most appropriate call calculation system applied.

**Mobile basket**

The mobile basket defines the usage per month for the user, and calculates the monthly cost of using the mobile service. The basket elements are listed below, with values for some of the typical user types. Mobile handsets were assumed to have a three-year lifetime.
Figure 9.12  Components of the mobile baskets

<table>
<thead>
<tr>
<th>Basket 1</th>
<th>Basket 2</th>
<th>Basket 3</th>
<th>Basket 4</th>
<th>Basket 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users 1&amp;2</td>
<td>Users 1&amp;2</td>
<td>User 1</td>
<td>User 1</td>
<td>User 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>User 2</td>
<td>User 2</td>
<td>User 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>User 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>User 2</td>
</tr>
</tbody>
</table>

**Call durations**
- **Local**: 1.5, 1.5, 1.7, 1.8, 1.8, 1.5, 1.5, 1.7, 1.8 Mins
- **National**: 1.5, 1.5, 1.7, 1.8, 1.8, 1.5, 1.5, 1.7, 1.8 Mins
- **On-net**: 1.6, 1.6, 1.9, 1.9, 1.9, 1.6, 1.6, 1.9, 1.9 Mins
- **Off-net**: 1.4, 1.4, 1.8, 1.7, 1.7, 1.4, 1.4, 1.8, 1.7 Mins
- **Voicemail**: - , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1 Mins
- **International**: 2 , 2 , 2 , 2 , 2 , 2 , 2 , 2 , 2 Mins

**Destination weight**
- **Local**: 16 , 16 , 8 , 11 , 13 , 20 , 20 , 13 , 20 %
- **National**: 8 , 8 , 5 , 6 , 7 , 10 , 10 , 7 , 10 %
- **On-net**: 38 , 38 , 37 , 33 , 34 , 30 , 30 , 29 , 30 %
- **Off-net**: 38 , 38 , 37 , 33 , 34 , 30 , 30 , 29 , 30 %
- **Voicemail**: 0 , 0 , 7 , 7 , 12 , 10 , 10 , 8 , 10 %
- **International**: 0 , 0 , 6 , 10 , 0 , 0 , 0 , 14 , 0 %

**Time of day weight**
- **Day**: 48 , 48 , 60 , 50 , 50 , 48 , 48 , 60 , 50 %
- **Evening**: 25 , 25 , 19 , 24 , 24 , 25 , 25 , 19 , 24 %
- **Weekend**: 27 , 27 , 21 , 26 , 26 , 27 , 27 , 21 , 26 %
- **Calls per month**: 37 , 37 , 290 , 159 , 99 , 38 , 38 , 212 , 109 Calls
- **Messages**: - , 30 , 150 , 30 , 160 , 70 , 65 , 80 , 20 SMS
- **On-net**: 50 , 50 , 50 , 50 , 50 , 50 , 50 , 50 , 50 %
- **Off-net**: 50 , 50 , 50 , 50 , 50 , 50 , 50 , 50 , 50 %
- **Peak**: 48 , 48 , 60 , 50 , 50 , 48 , 48 , 60 , 50 %
- **Off-peak**: 52 , 52 , 40 , 50 , 50 , 52 , 52 , 50 , 50 %

**Data usage**
- **Volume/month**: - , 1000 , 300 , - , - , - , 300 , 100 MB
- **Time/month**: - , 500 , 200 , - , - , - , 200 , 100 Mins
- **Days/month**: - , 30 , 30 , - , - , - , 20 , 15 Days

<table>
<thead>
<tr>
<th>Handset type</th>
<th>Basic</th>
<th>Basic</th>
<th>High</th>
<th>High</th>
<th>Medium</th>
<th>Basic</th>
<th>Basic</th>
<th>High</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**Source**: Teligen

**Notes**: All mobile call types are calculated with five different durations, below and above the number of minutes indicated.

International calls are weighted according to the table below, considering each originating country and each destination country.
Handsets are defined in three categories:

i) Basic -2G, ideally without camera or MP3 player, if not then up to 2MP camera + MP3 player / FM radio

ii) Mid-range - 2.5G or basic 3G, above 2MP camera, + MP3 player / FM radio

iii) High-end – 3G smartphone.

**Basket logic**

Once the cost of using each mobile package is calculated, the following take place:

- Does the package include a handset, or can a suitable handset be included with the package? If not, the amortised cost of a suitable handset will be added to the package’s monthly usage cost.

- If the basket assumes an amount of data traffic, the package must also be able to offer this. If not, the package will not be considered. In such instances the handset must be compatible with data services.

Then the cheapest package per provider and per country is identified. These are the packages that will be considered in the household cost scenarios. The packages that are part of a multi-play offering will be identified separately from the single packages.

**Mobile service data issues**

Although the model allows for pre-pay and post-pay services to be considered separately, we have not defined whether the mobile phone component in a basket is pre-pay or post-pay. We believe this enables better international comparison, given the very different pre-pay/post-pay splits in different countries (for example, around 90% of Italian mobile connections are pre-pay, while around 90% of US mobile connections are post-pay). However, a consequence of this is that the analysis does not recognise the different characteristics of the services; for example, a pre-pay mobile may be the only option...
available to consumers with a poor credit rating, and may also offer advantages to those
who vary their usage month by month.

The effect of free or discounted calls to specific destinations or selectable numbers is not
included.

Allowances or free minutes/message/data volumes are included in the tariffs, and are
treated as close to the billing system principles as possible (e.g. per-minute or per-second
charging). The deduction of minutes and messages will follow the traffic weights defined by
the basket profiles.

**Broadband services**

**Broadband tariff information**

The broadband services covered may be on any platform typical for home use, the most
common ones being DSL and cable. Wireless broadband is also included wherever possible,
although these services are most often provided by mobile service providers. Tariffs are
categorised by headline speed.

Typically, broadband tariffs use some or all of the following charge categories:

- Connection charge
- Installation charge, for either self install or engineer install (the cheapest solution is
  used)
- Purchase price for modem and possibly router
- Any specific connection charges paid to the incumbent operator
- Monthly rental for broadband service
- Possibly, a monthly price for modem and router rental
- Any specific rental charges paid to the incumbent operator
  - Usage time allowance
  - Usage time limit
  - Usage time charge (per minute or hour beyond allowance)
  - Usage data volume allowance
  - Usage data volume limit
  - Usage data volume charge (per MB or GB beyond allowance)
- Maximum cost per month

**Broadband basket**

The broadband basket is relatively simple, and basically calculates the monthly cost of using
a broadband service in a home environment. The basket parameters are generally given per
month. The values below are related to the five defined households.
The ‘up to’ advertised ‘speed of each tariff package is checked against the usage volume, and if the speed is too low to accommodate the traffic indicated, the tariff is excluded from the analysis.

The speed of each tariff package is checked against the speed range required by the basket, and if the speed is outside this range the tariff is excluded from the analysis.

If the tariff package has a penalty for excess usage whereby the speed delivered is ‘throttled’, the tariff is excluded from the analysis once this penalty takes effect.

The resulting cost is presented as connection/set-up cost, rental and use.

- The monthly connection/set-up cost is the sum of all one-off charges (including any discount/promotions), amortised over three years.
- The rental cost is the sum of all monthly charges.
- The usage cost is calculated from any per-minute or per-MB charges. The session durations and usage volumes of the baskets are used for this calculation, along with any time or volume allowances.

### Basket logic

Once the cost of using each package is calculated, the following checks take place:

- If the package uses a limiting mechanism that will take effect when the allowance is exceeded, the status of this limit has to be checked. If it turns out that the package is not able to accommodate the traffic defined in the basket within this allowance, and that download speed will be limited as a result, the package cannot be considered.
- If the download speed of the package is outside the range defined by the basket, the package will not be considered.
- The basket will define whether a fixed or wireless package is used, and this will also be checked.
• The resulting total monthly cost of the remaining packages will be compared, and the cheapest package from each provider and also for each country will be identified.

**Broadband data issues**

Broadband services of different types are covered: ADSL, cable and FTTh as well as wireless.

The bitrates used are the headline ‘up to’ speeds published by the provider, not considering any speed reductions caused by local circumstances. Only the download speed is considered, even though the upload speed is also covered.

Where available, the prices for both self-installation and engineer installation are covered. However, in some cases only one of these may be available. The cheapest option is always used.

It is common to have special offers with reduced rental for the first few months. This is included wherever it applies, given that the promotional offer is valid in the month of tariff data collection (July 2011 and July 2012). The monthly rental is then averaged over the depreciation period of three years.

The research shows that some providers will only offer broadband services bundled with other services, as a multi-play package. Hence there will not always be single-service offers for all providers listed.

**Television services**

**Television tariff information**

Television services are probably where there is most variance between the countries in terms of services’ description and quality. In this benchmarking study the television services covered fall into three categories:

• Basic service with a range of free-to-air channels

• Basic pay-TV service, with a basic set of channels beyond the free-to-air channels

• Premium service, based on the provider’s top-of-the-range offering, including top league football/NFL matches and a top-price film/entertainment package

Two additional parameters will be considered:

• Whether or not a digital recording (DVR) facility is included in the set-top box.

• Whether or not high definition (HD) services are included.

The basket definitions below will show how these parameters are defined for each of the households.

Television services will cover the most relevant offerings from each provider based on the two broad definitions above. Typically television tariffs will use some or all of the following charge categories:

• Connection charge
• One-off charges for the set-top box (STB) and digital video recorder (DVR)
• Monthly rental for basic television service
• Monthly rental for additional channel packages
• Monthly rental for hardware (STB, DVR)
• Licence fee

The cost of the TV set is excluded from the analysis.

**Television basket**

The television basket is relatively simple, and calculates the monthly cost of having the relevant channel package, together with the cost of installation and/or equipment amortised over three years. The basket parameters are generally given per month. The values below are related to the five defined households.

**Figure 9.15  Components of the television baskets**

<table>
<thead>
<tr>
<th></th>
<th>Basket 1</th>
<th>Basket 2</th>
<th>Basket 3</th>
<th>Basket 4</th>
<th>Basket 5</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenna reception</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>n/a</td>
</tr>
<tr>
<td>HD capable</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>DVR included</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>Football channels</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>Movie channels</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>Depreciation</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Years</td>
</tr>
</tbody>
</table>

*Source: Teligen*

**Basket logic**

Once the charges for using each television package are calculated, the following checks take place:

- Is the number of channels offered in the package equal to or above the minimum number of channels defined in the basket?
- Is HD capability required by the basket and offered by the package?
- Are a top price film/entertainment package and top-level football / NFL required by the basket and offered by the package?

If any of these are answered with a “no” then the package will not be considered.

The cheapest package is identified for each provider and for each country, and these are used in the household cost assessment.
Television data issues

The television data have been limited to packages offering channels that are within the basket definition, largely resulting in three categories of offers:

- Basic “free-to-air” packages over a digital transmission network
- Basic pay-TV access with no special programming requirements
- HD premium pay-TV access, including premium channels with a top-price film/entertainment package and top-level football/NFL matches. This option also requires hardware with a DVR capability.

A vast number of optional offers exist, and it is not feasible to cover them all.

Purchasing power parity adjustment

All prices have been converted back to UK currency, using a purchasing power parity (PPP) adjustment based on OECD comparative price levels in July 2012 and exchange rates as at 1 July 2012.

Comparative price levels represent the number of specified monetary units necessary to buy the same representative basket of consumer goods and services, relative to any specified country (in this case, the UK), and enable a comparison of relative consumer pricing for any product or service.

In addition, in order to ensure that the changes we identify within countries have been driven by changes in the market rather than simply by changes in the currency exchange rate, we have used the exchange rate used for 2012 and applied it to 2011 data.

Figure 9.16 Purchasing power parity conversion rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Currency</th>
<th>Exchange rate August 2011 to July 2012 (£)</th>
<th>Comparative price level (July 2012)</th>
<th>PPP adjusted rate (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>GBP (£)</td>
<td>1.00</td>
<td>100.00</td>
<td>1.00</td>
</tr>
<tr>
<td>FRA</td>
<td>EUR (€)</td>
<td>1.24</td>
<td>84.85</td>
<td>1.05</td>
</tr>
<tr>
<td>GER</td>
<td>EUR (€)</td>
<td>1.24</td>
<td>79.55</td>
<td>0.99</td>
</tr>
<tr>
<td>ITA</td>
<td>EUR (€)</td>
<td>1.24</td>
<td>73.48</td>
<td>0.91</td>
</tr>
<tr>
<td>ESP</td>
<td>EUR (€)</td>
<td>1.24</td>
<td>76.52</td>
<td>0.95</td>
</tr>
<tr>
<td>USA</td>
<td>USD ($)</td>
<td>1.57</td>
<td>75.76</td>
<td>1.19</td>
</tr>
</tbody>
</table>

Source: Teligen using OECD data

Analysis

Having identified the lowest prices for each single service from each of the three largest operators in each country, and the lowest-price ‘bundled’ services appropriate to meet the needs of all, or part of, each basket, we performed two types of analysis, which are detailed in the write-up of the findings:

- The ‘average single service’ pricing available for each of the components in every basket (fixed-line voice, broadband, post-pay mobile, pre-pay mobile, pay-TV). This
was calculated as the average of the lowest-price tariffs from three operators for each service in each country, weighted by the market share of the service provider in order to ensure fair representation.

- The ‘best offer’ pricing available for the overall basket. This identifies the lowest price that a consumer could pay for this basket of services, including, where appropriate, by purchasing ‘bundled’ services. This was calculated by identifying the lowest price from any tariff for each component of every basket, together with the lowest-price bundled services suitable for the basket, and identifying the overall lowest price available.

We believe both types of analysis are important for providing an overall understanding of comparative pricing.

Single-service pricing provides a useful comparison of the relative costs of communications services, and, because it is an average weighted by market share, it also provides a good indication of the prices that many consumers are actually paying. However, an important limitation is that single-service offers are sometimes not available from leading suppliers. For example, in the UK, TalkTalk only offers broadband together with its fixed-voice service.

We believe the inclusion of ‘bundles’ within ‘best offer’ pricing is also essential to understand the pricing of communications services, which are increasingly being delivered as multi-service propositions (examples in the UK include TalkTalk’s standard broadband and voice tariffs, Sky’s triple-play offer which provides TV, voice and broadband, and Virgin’s quad-play offer which includes TV, voice, broadband and mobile.) However, a limitation is that ‘bundled’ service offerings are typically not available to all consumers, as they are generally geographically confined to areas where premises are connected either to a cable network or to an unbundled telephone exchange. And although focusing on the ‘best offer’ provides insight to the lowest prices available to some customers, it is not as good a reflection of the prices that consumers are actually paying as the weighted average analysis that is possible when looking at single-service pricing.

**Limitations**

One of our key learnings in four years of constructing international price comparison models is that is a very problematic exercise, which requires assumptions to be made and imposes ‘like-for-like’ comparison on markets which are very different. In future years we will look to continue to improve our methodology, and we welcome feedback at: market.intelligence@ofcom.org.uk.

We highlight the following limitations to the analysis:

- The analysis assumes a systematic and rational consumer who has a full understanding of his or her usage requirements and is prepared to shop around and undertake some often quite complex calculations to identify the tariff which offers the best value. In reality, few consumers act in this way and will be on the lowest-cost combination of services for their usage profile, but we believe the assumption is necessary in order to provide effective international comparisons. It should be noted, however, that alternative measures of consumer choice and the competitive environment are the complexity of tariff structures (a large range of tariffs is generally beneficial to consumers as it indicates that consumers have choice and are more likely to find an option which meets their needs; but the complexity of tariffs may make it more difficult to compare prices and select the optimal tariff), and the ease of switching to an appropriate tariff.
• In looking only at tariffs offered by the largest operators in each country, lower prices which might be available from smaller operators seeking to disrupt markets are not included, purely for practical reasons. Nevertheless, we believe that using the prices of the largest operators is appropriate, both because they are the best reflection of the general consumer experience and because their pricing both defines and is defined by the competitive environment in which they operate.

• Although we have been as comprehensive as possible, tariffs are often highly complicated and there are some components that we have been unable to incorporate into our model; for example, benefits which are available only to certain types of consumers, such as BT Basic which offers lower-price line rental to consumers on income support, and levels of customer service.

• In order to calculate the weighted average, we have used market share calculations based on operators’ retail customers. It should be noted that market share calculations are based on the overall subscriber base, not the subscriber base for the particular tariff (for which figures are not available).

• Pay-TV services are a component of three of the baskets we examine. However, it has not been possible to compare like-for-like subscriptions, principally because of differences in the composition of basic and premium channels across the six countries. As a consequence, quantitative comparison of international TV pricing is arguably less meaningful than for telecoms services. This is also an issue in the pricing of ‘triple-play’ services, where there is a wide variation in the types of TV content.

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

• To avoid ‘skewing’ the average single-service pricing analysis, tariffs which are over 100% higher than that offered by the lowest-price provider are excluded from the weighted average (the aim here is to exclude tariffs which are clearly not targeted at the usage profile we are analysing).

• Some services are not available nationwide. This is particularly true for services which are available only where local exchanges have been unbundled, and for IPTV, which requires a high-speed broadband connection, but is also true for cable TV and all types of broadband.

• We do not define whether the mobile phone component in a basket is pre-pay or post-pay. We believe this enables better international comparison, given the very different pre-pay / post-pay splits in different countries (for example, over 80% of Italian mobile connections are pre-pay, while over 80% of US mobile connections are post-pay). However, a consequence of this is that the analysis does not recognise the different characteristics of the services; for example, a pre-pay mobile may be the only option available to consumers with a poor credit rating and may also offer advantages to those who vary their use month by month.

• Representative pricing in the US as a whole is difficult, due to large regional variations as a result of local incumbent telco operators and cable operators offering localised prices for fixed-line services. We use only those tariffs available within the state of Illinois, chosen because it is broadly representative of the US as a whole in terms of its relative wealth and rural-urban split (it incorporates the city of Chicago as
well as large agricultural regions). Nevertheless, US pricing should not be viewed as representative of the whole country.

- In order to ensure that the changes we identify within countries have been driven by changes in the market rather than simply by changes in the currency exchange rate, we have used the same PPP-adjusted exchange rate in 2012 and applied it to 2011 data. This means that there may be some distortions in the relative positions of countries compared to the findings in 2011. The prices quoted are in nominal terms.
International Communications Market 2012

Glossary and Table of Figures
Glossary

2.5G In mobile telephony, 2.5G protocols extend 2G systems to provide additional features such as packet-switched connections (GPRS) and higher-speed data communications.

2G Second generation of mobile telephony systems. Uses digital transmission to support voice, low-speed data communications and short messaging services.

3.5G Refers to evolutionary upgrades to 3G services, starting in 2005-2006, which provide significantly enhanced performance. High Speed Downlink Packet Access is expected to become the most popular 3.5G technology.

3DTV Three-dimensional television. A television viewing system whereby a 3D effect is created for the viewer. The 3D image is generated using red and blue colour tints on two overlaid images intended for left and right eye. Some forms of 3D TV can involve the viewer wearing glasses (stereoscopic) but more advanced systems do not require glasses (auto-stereoscopic).

3G Third generation of mobile systems. Provides high-speed data transmission and supports multimedia applications such as full-motion video, video-conferencing and internet access, alongside conventional voice services.

Access network An electronic communications network which connects end-users to a service provider; runs from the end-user's premises to a local access node and supports the provision of access-based services. It is sometimes referred to as the 'local loop' or 'last mile'.

Active internet user An internet user is deemed active if they are online at least once in a given period of time e.g. a month.

Active reach The number of unique visitors to a website as a proportion of all active internet users, for a given time period and geography.

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

ADSL2+ A technology which extends the maximum theoretical downstream data speed of ADSL from 8Mbit/s to 24Mbit/s.

Alternative operator Refers to service providers, usually in telecoms, other than the incumbent (or established) operator/s (see incumbent operator/s).

AM Amplitude modulation. Type of modulation produced by varying the strength of a radio signal. This type of modulation is used by broadcasters in three frequency bands: medium frequency (MF, also known as medium wave (MW)); low frequency (LF, also known as long wave (LW)), and high frequency (HF, also known as short wave (SW)).

ARPU Average revenue per user. A measurement used by pay-television or mobile companies to indicate the average monthly revenue earned from a subscriber.

BARB Broadcasters Audience Research Board. The pan-industry body that measures television viewing.
Blog  Short for weblog. A weblog is a journal (or newsletter) that is frequently updated and intended for general public consumption. Blogs generally represent the personality of the author or the website.

Broadband  A service or connection generally defined as being ‘always on’ and providing a bandwidth greater than narrowband.

Bulk mail  High volumes of mail sent in one posting, typically of the same format and weight and often sorted to a predetermined level before being handed to the operator.

CAGR  Compound annual growth rate. The average annual growth rate over a specified period of time. It is used to indicate the investment yield at the end of a specified period of time. The mathematical formula used to calculate CAGR = (present value/base value)^(1/#of years) – 1.

Catch-up TV  Usually refers to a services that allow consumers to watch or listen to content on a non-linear basis after the initial broadcast.

Connected TV  A television that is broadband-enabled to allow viewers to access internet content.

Connected device  A device which can access the internet in some form or other. Accessible content varies by device. Also known as an internet-enabled device.

DAB  Digital audio broadcasting. A set of internationally-accepted standards for the technology by which terrestrial digital radio multiplex services are broadcast in the UK.

Digital switchover  The process of switching over the analogue television or radio broadcasting system to digital.

Direct mail  Addressed advertising mail.

DMB  Digital mobile broadcasting. A variant of the DAB digital radio standard for mobile TV services, and an alternative to DVB-H (see DVB, below).

Dongle  A physical device, attached to a PC’s USB port, which adds hardware capabilities and is often used to enable a laptop to connect to mobile broadband services.

DSL  Digital subscriber line. 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, capable of supporting advanced services such as fast internet access and video on demand. ADSL, SDSL (symmetric digital subscriber line) and VDSL (very high data rate digital subscriber line) are all variants of xDSL. VDSL is usually used to connect premises in fibre-to-the-cabinet networks.

DTT  Digital terrestrial television. The television technology that carries the Freeview service in the UK.

DVR  Digital video recorder (also known as ‘personal video recorder’ and ‘digital television recorder’). A digital TV set-top box including a hard disk drive which allows the user to record, pause and rewind live TV.

EPG  Electronic programme guide. A programme schedule, typically broadcast alongside digital television or radio services, to provide information on the content and scheduling of current and future programmes.
**E-reader** An electronic, portable device capable of downloading and displaying text such as digital books or newspapers.

**E-retail** Distance shopping, using online services to order and pay for goods.

**Feature phone** A low-end mobile phone that has less computing ability than a smartphone, but more capability than the most basic handsets.

**Fibre-to-the-cabinet** Access network consisting of optical fibre extending from the access node to the street cabinet. The street cabinet is usually located only a few hundred metres from the subscriber premises. The remaining segment of the access network from the cabinet to the customer is usually a copper pair but could use another technology, such as wireless.

**Fibre-to-the-home** A form of fibre optic communication delivery in which the optical signal reaches the end user’s living or office space.

**FM** Frequency modulation. Type of modulation produced by varying the frequency of a radio carrier in response to the signal to be transmitted. This is the type of modulation used by broadcasters in part of the VHF (very high frequency) band, known as VHF Band 2.

**Free-to-air** Broadcast content that people can watch or listen to without having to pay a subscription.

**GDP** Gross domestic product.

**HDTV** High-definition television. A technology that provides viewers with better quality, high-resolution pictures.

**Headline connection speed** The theoretical maximum data speed that can be achieved by a given broadband. A number of factors, such as the quality and length of the physical line from the exchange to the customer, mean that a given customer may not experience this headline speed in practice.

**Incumbent operator/s** An incumbent operator usually refers to a market’s established provider/s and in the case of the UK fixed market this is BT and Kingston Communications.

**International roaming** A service offered by mobile operators that allows customers to use their phone abroad. The home operator has agreements with foreign operators that allow customers to make and receive calls, send and pick up text messages, and use some of the other mobile services (such as access to voicemail or topping-up credit on pre-pay phones). The exact services available and the charges for their use vary between operators.

**Internet** A global network of networks, using a common set of standards (e.g. internet protocol), accessed by users with a computer via a service provider.

**Internet-enabled device** See ‘connected device’.

**IP (internet protocol)** The packet data protocol used for routing and carrying messages across the internet and similar networks.

**IPTV** Internet protocol television. The term used for television and/or video signals that are delivered to subscribers or viewers using internet protocol (IP), the technology that is also used to access the internet. Typically used in the context of streamed linear and on-demand content, but also sometimes for downloaded video clips.
ISP  Internet service provider. A company that provides access to the internet.

ITV  ITV’s licensees are ITV Broadcasting Limited, STV, UTV and Channel Television.

LLU (local loop unbundling) LLU is the process whereby the incumbent operators (in the UK these are BT and Kingston Communications) make their local network (the lines that run from customers’ premises to the telephone exchange) available to other communications providers. The process requires the competitor to deploy its own equipment in the incumbent’s local exchange and to establish a backhaul connection between this equipment and its core network.

Local loop  The access network connection between the customer’s premises and the local PSTN exchange, usually a loop comprised of two copper wires.

LTE  Long-term evolution. Part of the development of 4G mobile systems that started with 2G and 3G networks.

Mbit/s  Megabits per second. The speed of transmission of data across a network. Other prefixes may also be used before bit/s. Equivalent to the notation Mbps.

MMS  Multimedia messaging service. The next generation of mobile messaging services, adding photos, pictures and audio to text messages.

MNO  Mobile network operator, a provider which owns a cellular mobile network.

Mobile broadband  Access to the internet via a cellular network connecting through the use of, for example, a dongle, wireless modem or a SIM embedded in a mobile device. Does not include access to the internet via a mobile handset.

Mobile internet advertising  Internet advertising viewed on mobile platforms, in particular through mobile browsers and applications on smartphones.

Mobile social networking  Visiting social networking sites on a mobile device, often a smartphone, through the device’s browser or a dedicated app.

MP3 (MPEG-1 audio layer-3)  A standard technology and format for compressing a sound sequence into a very small file (about one-twelfth the size of the original file) while preserving the original level of sound quality when it is played.

MP3 player  A device that is able to store and play back MP3 files.

Multichannel  In the UK, this refers to the provision or receipt of television services other than the main five channels (BBC One and Two, ITV1, Channel 4/S4C, Five) plus local analogue services. ‘Multichannel homes’ comprise all those with digital terrestrial TV, satellite TV, digital cable or analogue cable, or TV over broadband. Also used as a noun to refer to a channel only available on digital platforms (or analogue cable).

Multiplex  A device that sends multiple signals or streams of information on a carrier at the same time in the form of a single, complex signal. The separate signals are then recovered at the receiving end.

MVNO  An organisation which provides mobile telephony services to its customers but does not have allocation of spectrum or its own wireless network.
**Netbook** A small, lightweight, and often inexpensive laptop that lacks certain features of a conventional laptop, such as a DVD drive.

**Net neutrality** The principle that all traffic on the internet should be treated equally, regardless of content, site or platform.

**Next generation access networks (NGA)** New or upgraded access networks that will allow substantial improvements in broadband speeds and quality of service compared to today's services. This can be based on a number of technologies including cable, fixed wireless and mobile. Most often used to refer to access networks using fibre-optic technology.

**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.

**Non-linear** Content that is delivered 'on demand' as opposed to linear, broadcast content.

**Over-the-top video** Refers to audio-visual content delivered on the 'open' internet rather than over a managed IPTV architecture.

**Pay-per-view** A service offering single viewings of a specific film, programme or event, provided to consumers for a one-off fee.

**Peer-to-peer (P2P) distribution** The process of directly transferring information, services or products between users or devices that operate on the same hierarchical level.

**Podcasting** A way for digital audio files to be published on the internet, and then downloaded onto computers and transferred to portable digital audio players.

**PSTN** Public switched telephone network. The network that manages circuit-switched fixed-line telephone systems.

**Publications** Regularly produced publications such as periodicals and magazines.

**PVR** See DVR.

**RAJAR Radio Joint Audience Research** – the pan-industry body which measures radio listening.

**Search term** The word(s) or phrase an internet user enters into a search engine.

**Service bundling (or multi-play)** A marketing term describing the packaging together of different communications services by organisations which traditionally offered only one or two of those services.

**Service provider** A provider of electronic communications services to third parties, whether over its own network or otherwise.

**SIM (subscriber identity module)** A SIM or SIM card is a small flat electronic chip that identifies a mobile customer and the mobile operator. A mobile phone must have a SIM card inserted before it can be used.

**SIM-only** A mobile contract that is sold without a handset.

**Smart TV** A standalone television set with inbuilt internet functionality.
**Smartphone** A mobile phone that offers more advanced computing ability and connectivity than a contemporary basic ‘feature phone’.

**SMS** Short messaging service, or text messaging (see text message below).

**Superfast broadband** Sometimes known as next-generation broadband, superfast broadband delivers headline download speeds of at least 30Mbit/s.

**Tablet computer** A mobile computer which is included within a single panel with a touchscreen.

**Telecommunications, or ‘telecoms’** Conveyance over distance of speech, music and other sounds, visual images or signals by electric, magnetic or electro-magnetic means.

**Text message** A short text-only communication most commonly sent between mobile devices.

**Transactional mail** Business mail usually sent on a regular scheduled basis, often used in financial transactions, including statements, invoices and credit card bills

**Unbundled** A local exchange that has been subject to local loop unbundling (LLU).

**VoD Video-on-demand** A service or technology that enables TV viewers to watch programmes or films whenever they choose, not restricted by a linear schedule.

**VoIP** Voice over Internet Protocol. A technology that allows users to send calls using internet protocol, using either the public internet or private IP networks.

**WiFi hotspot** A public location which provides access to the internet using WiFi technology.

**Wired internet advertising** Internet advertising that traditionally delivered to laptop and desktop computers, but which now may be viewed on other connected devices. Contrasted with ‘mobile internet advertising’.

**WLR (Wholesale line rental)** A regulatory instrument requiring the operator of local access lines to make this service available to competing providers at a wholesale price.
## Table of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>Global communications revenues</td>
<td>17</td>
</tr>
<tr>
<td>Figure 1.2</td>
<td>Communications sector revenues: 2011</td>
<td>18</td>
</tr>
<tr>
<td>Figure 1.3</td>
<td>Communications sector revenues per capita: 2011</td>
<td>19</td>
</tr>
<tr>
<td>Figure 1.4</td>
<td>Sources of global revenue for radio and television industries: 2011</td>
<td>20</td>
</tr>
<tr>
<td>Figure 1.5</td>
<td>Global advertising expenditure, by medium</td>
<td>21</td>
</tr>
<tr>
<td>Figure 1.6</td>
<td>Fixed-line voice and mobile connections per head: 2011</td>
<td>23</td>
</tr>
<tr>
<td>Figure 1.7</td>
<td>Fixed broadband connections per 100 households: 2011</td>
<td>24</td>
</tr>
<tr>
<td>Figure 1.8</td>
<td>DTV homes per 100 TV households: 2011</td>
<td>24</td>
</tr>
<tr>
<td>Figure 1.9</td>
<td>Ownership and personal use of devices</td>
<td>26</td>
</tr>
<tr>
<td>Figure 1.10</td>
<td>Regular use of selected communications services / media</td>
<td>27</td>
</tr>
<tr>
<td>Figure 1.11</td>
<td>Method of communication with friends and family</td>
<td>30</td>
</tr>
<tr>
<td>Figure 1.12</td>
<td>Methods used at least once a day to communicate with friends and family</td>
<td>32</td>
</tr>
<tr>
<td>Figure 1.13</td>
<td>Methods used at least once a week to communicate with friends and family</td>
<td>33</td>
</tr>
<tr>
<td>Figure 1.14</td>
<td>Net weekly voice-based communication and text-based communication</td>
<td>35</td>
</tr>
<tr>
<td>Figure 1.15</td>
<td>Communication methods ever used to send greetings (e.g. birthdays)</td>
<td>36</td>
</tr>
<tr>
<td>Figure 1.16</td>
<td>Communications methods ever used to communicate with businesses and services</td>
<td>38</td>
</tr>
<tr>
<td>Figure 1.17</td>
<td>Communications methods ever used to communicate with government and organisations</td>
<td>40</td>
</tr>
<tr>
<td>Figure 1.18</td>
<td>Net claimed changes in communications methods used: past two years – negative changes</td>
<td>42</td>
</tr>
<tr>
<td>Figure 1.19</td>
<td>Net claimed changes in communications methods used in past two years – positive changes</td>
<td>43</td>
</tr>
<tr>
<td>Figure 1.20</td>
<td>Change in preference levels: face-to-face communication vs. sending a message online</td>
<td>45</td>
</tr>
<tr>
<td>Figure 1.21</td>
<td>Change in preference levels: the use of email vs. social networking</td>
<td>46</td>
</tr>
<tr>
<td>Figure 1.22</td>
<td>Change in preference levels: using post vs. sending messages online</td>
<td>47</td>
</tr>
<tr>
<td>Figure 1.23</td>
<td>Change in voice minutes per head vs. change in SMS messages sent per head, year-on-year change in 2011</td>
<td>48</td>
</tr>
<tr>
<td>Figure 1.24</td>
<td>Percentage who expressed preference for communicating by SMS and online messaging instead of phone calls</td>
<td>49</td>
</tr>
<tr>
<td>Figure 1.25</td>
<td>Viewers of more than 15 consecutive minutes of the Games on scheduled TV: 2004, 2008 and 2012</td>
<td>51</td>
</tr>
<tr>
<td>Figure 1.26</td>
<td>Top five Olympic Games half-hour slots, by average audience</td>
<td>52</td>
</tr>
<tr>
<td>Figure 1.27</td>
<td>Anticipated and reported frequency of following coverage of the Games using television, radio or online in the UK</td>
<td>53</td>
</tr>
<tr>
<td>Figure 1.28</td>
<td>Frequency of following coverage of the Games using television, radio or online</td>
<td>54</td>
</tr>
<tr>
<td>Figure 1.29</td>
<td>Most common means of accessing Olympics / Paralympics coverage</td>
<td>55</td>
</tr>
<tr>
<td>Figure 1.30</td>
<td>Use of devices at least once a week to watch the Games</td>
<td>56</td>
</tr>
<tr>
<td>Figure 1.31</td>
<td>Reason for choosing to watch the Games on scheduled television</td>
<td>57</td>
</tr>
<tr>
<td>Figure 1.32</td>
<td>Reason for choosing to watch the Games on a PC</td>
<td>58</td>
</tr>
<tr>
<td>Figure 1.33</td>
<td>Reason for choosing to watch the Games on catch-up / recorded TV</td>
<td>59</td>
</tr>
<tr>
<td>Figure 1.34</td>
<td>Levels of interest in types of news</td>
<td>60</td>
</tr>
<tr>
<td>Figure 1.35</td>
<td>Weekly access to news, by platform</td>
<td>61</td>
</tr>
<tr>
<td>Figure 1.36</td>
<td>Online news source, by type</td>
<td>62</td>
</tr>
<tr>
<td>Figure 1.37</td>
<td>Traditional brands compared to aggregators and social media</td>
<td>63</td>
</tr>
<tr>
<td>Figure 1.38</td>
<td>Types of digital participation</td>
<td>64</td>
</tr>
<tr>
<td>Figure 1.39</td>
<td>Platforms used as a main source of news: national news</td>
<td>64</td>
</tr>
<tr>
<td>Figure 1.40</td>
<td>Platforms used as a main source of news: international news</td>
<td>65</td>
</tr>
<tr>
<td>Figure 1.41</td>
<td>Platforms used as a main source of news: regional / local news</td>
<td>66</td>
</tr>
<tr>
<td>Figure 1.42</td>
<td>Platforms used as a main source of news: sports news</td>
<td>67</td>
</tr>
</tbody>
</table>
Figure 3.17 Total TV industry revenues among BRIC countries................................. 144
Figure 3.18 TV revenues among comparator countries, by source: 2006 and 2011..... 145
Figure 3.19 TV revenue per head, by source: 2011.................................................. 146
Figure 3.20 Changes in components of TV revenues per head: 2010 to 2011........... 147
Figure 3.21 Cost of a TV licence fee.................................................................... 147
Figure 3.22 Latest reported revenues for selected free-to-view TV operators: 2011... 148
Figure 3.23 Latest reported revenues from selected pay-TV operators: 2011........ 149
Figure 3.24 Pay-TV ARPU, by country: 2006-2011.............................................. 150
Figure 3.25 Take-up of digital television – top nine comparator countries .......... 152
Figure 3.26 Take-up of digital television – the next eight comparator countries ... 153
Figure 3.27 The two most popular DTV platforms, by country: 2011.................... 154
Figure 3.28 Take-up of DTV, by platform and country: 2011............................... 154
Figure 3.29 Year-on-year changes in platform take-up (pp), by country and technical platform...................................................................................................... 155
Figure 3.30 Number of HD homes, by platform and country: end 2011..... Error! Bookmark not defined.
Figure 3.31 Number of HDTV channels and HD penetration: end 2011.................. 156
Figure 3.32 Take-up of digital video records, connected TVs and 3D-ready TVs .... 158
Figure 3.33 Take-up of pay-TV among groups of comparator countries................. 159
Figure 3.34 Take-up of pay and free-to-air television: end 2011 ............................ 160
Figure 3.35 Pay-TV take-up in 2006 and 2011, millions of homes ........................ 161
Figure 3.36 Daily TV viewing, per head: 2010-2011 ........................................... 162
Figure 3.37 Patterns of viewing among the top five TV channels: 2009 - 2011 ........ 163
Figure 3.38 Viewing of publicly-funded channels ............................................. 164
Figure 3.39 Terrestrial versus multichannel share.............................................. 164
Figure 4.1 Key radio market indicators: 2011........................................................ 167
Figure 4.2 Total radio revenues for the 17 comparator countries: 2007-2011 ....... 168
Figure 4.3 Changes in radio revenue, by country: 2010 and 2011 ....................... 168
Figure 4.4 Absolute increases in advertising revenue, by country: 2010-2011 .... 169
Figure 4.5 The most substantial increases in radio revenue, by component: 2010-2011 ............................................................... 169
Figure 4.6 Changes in radio revenue among comparator countries with licence fees, by component: 2010-2011.............................................................. 170
Figure 4.7 Ownership and use of analogue and digital radio sets ......................... 171
Figure 4.8 DAB/DAB+/DMB coverage.................................................................. 172
Figure 4.9 Global industry revenues: 2007 – 2011.............................................. 174
Figure 4.10 Radio industry revenues: 2011............................................................ 174
Figure 4.11 Radio industry revenue annual growth: 2010-2011 .......................... 175
Figure 4.12 Proportion of radio revenue, by source ............................................ 176
Figure 4.13 Radio industry revenues, per head of population: 2011.................... 177
Figure 4.14 Proportion of adults who claim regularly to consume audio content ... 179
Figure 4.15 Use of home internet connection to consume audio content ............ 180
Figure 4.16 Use of a smartphone / mobile phone to consume audio content ....... 181
Figure 4.17 Proportion of adults using radio as a source of news, by country ....... 181
Figure 5.1 Internet and web-based content: key international statistics.............. 185
Figure 5.2 Internet share of total advertising expenditure................................... 186
Figure 5.3 Total wired internet advertising expenditure, per head: 2007-12 ......... 187
Figure 5.4 Wired internet advertising expenditure, by category......................... 188
Figure 5.5 Mobile internet advertising expenditure: 2007-12 ......................... 189
Figure 5.6 Mobile internet advertising expenditure per head: 2007-12 .......... 189
Figure 5.7 Fixed broadband connections per 100 households........................... 191
Figure 5.8 Mobile broadband connections per 100 population ......................... 192
Figure 5.9 Household devices used to access the internet ................................. 193
Figure 5.10 Handheld devices used to access the internet .................................. 194
Figure 5.11 Device used most frequently to access the internet ......................... 194
Figure 5.12 Proportion of internet traffic using mobile, tablet, and other connected devices

Figure 5.13 Active internet users on laptop and desktop computers: August 2011 to August 2012

Figure 5.14 Unique online audience on a laptop or desktop computer, by gender: August 2011 and August 2012

Figure 5.15 Unique online audience on a laptop or desktop computer, by age: August 2011 and August 2012

Figure 5.16 Unique online audience on a laptop or desktop computer, by age and gender: August 2012

Figure 5.17 Average number of minutes spent online on a laptop or desktop computer per week

Figure 5.18 Time spent online and offline each week on a laptop or desktop computer

Figure 5.19 Top ten website brands, by country

Figure 5.20 Active reach of search engine brands, by country

Figure 5.21 Most searched-for terms on Google between August 2011 and August 2012

Figure 5.22 Active reach of Facebook, Twitter and Google+ on laptop and desktop computers

Figure 5.23 Use of home internet connection to visit social networking sites

Figure 5.24 Use of home internet connection to visit social networking sites, by age

Figure 5.25 Use of mobile phones to visit social networking sites

Figure 5.26 Use of mobile phones to visit social networking sites, by age

Figure 5.27 Active reach of online video websites on laptop and desktop computers

Figure 5.28 Top three online video websites among laptop and desktop users

Figure 5.29 Value of B2C e-commerce per head: 2007-2012

Figure 5.30 Smartphone users accessing online shopping websites

Figure 5.31 Frequency of purchasing digital content online

Figure 5.32 The internet as a primary source of news

Figure 5.33 Frequency of accessing news websites/apps among smartphone owners

Figure 6.1 Key telecoms indicators: 2011

Figure 6.2 Mobile broadband subscribers and mobile data users, per 100 people: 2011

Figure 6.3 Mobile traffic volume per connection: 2009-2011

Figure 6.4 Mobile broadband data use per SIM: 2007-2011

Figure 6.5 Mobile data average revenue per user: 2006-2011

Figure 6.6 Percentage of revenues and subscribers attributable to LTE: 2011

Figure 6.7 Fixed broadband availability

Figure 6.8 Availability of FTTx and cable networks: end 2011

Figure 6.9 Proportion of total fixed broadband connections, by headline speed

Figure 6.10 Fibre-based connections as a proportion of all fixed broadband connections: 2010 and 2011

Figure 6.11 Volume of SMS (text messages) sent per person per month: 2006-2011

Figure 6.12 Percentage of respondents who sent texts at least once a day, including splits by female, 18-24 years old and 65 years and older

Figure 6.13 Proportion of users who said the statement that they sent texts instead of making phone calls because it was easier ‘applied’ or ‘totally applied’ to them

Figure 6.14 Most frequently-cited reasons for increasing SMS use

Figure 6.15 Average revenue per SMS message

Figure 6.16 SMS revenues: 2006 to 2011

Figure 6.17 Total comparator country retail telecoms revenue by sector: 2006 to 2011

Figure 6.18 Telecoms service retail revenues by sector: 2006 and 2011

Figure 6.19 Total telecoms service revenue, per capita: 2006-2011
Figure 6.20  Fixed broadband and mobile data revenues - total for the comparator countries: 2006 to 2011 .......................................................... 241
Figure 6.21  Percentage of voice minutes originating on a mobile: 2006 to 2011 ......................................................................................... 242
Figure 6.22  Average cost of a fixed and mobile call minute: 2011 .......................................................... 244
Figure 6.23  Fixed-line voice retail revenues: 2006 to 2011 .......................................................................................... 245
Figure 6.24  Fixed-line voice call volumes: 2006 and 2011 ........................................................................... 246
Figure 6.25  Monthly outbound minutes per fixed line: 2006 to 2011 ......................................................................................... 247
Figure 6.26  Incumbent operator’s share of fixed voice call volumes: 2006 and 2011 .................................................. 248
Figure 6.27  Fixed exchange lines: 2006 and 2011 ......................................................................................... 249
Figure 6.28  VoIP revenues as a proportion of fixed voice revenues: 2006 and 2011 .................................................. 250
Figure 6.29  Fixed broadband revenues: 2006 and 2011 ......................................................................................... 251
Figure 6.30  Fixed broadband as a proportion of total fixed revenues: 2006 and 2011 .................................................. 252
Figure 6.31  Fixed broadband connections: 2006 and 2011 ......................................................................................... 253
Figure 6.32  Retail connection share of the three largest fixed broadband providers: 2006 and 2011 .......... 255
Figure 6.33  Mobile retail revenues: 2006 and 2011 ......................................................................................... 256
Figure 6.34  Mobile voice call volumes: 2006 and 2011 ......................................................................................... 257
Figure 6.35  Mobile messaging volumes: 2006 and 2011 ......................................................................................... 258
Figure 6.36  Mobile connections: 2006 and 2011 ......................................................................................... 259
Figure 6.37  Mobile connections, by type: 2006 and 2011 ......................................................................................... 260
Figure 6.38  Data as a proportion of total mobile service revenues: 2006 and 2011 .................................................. 261
Figure 6.39  Mobile broadband penetration: 2008 and 2011 ......................................................................................... 262
Figure 6.40  Average fixed voice revenue per person: 2006 to 2011 ......................................................................................... 263
Figure 6.41  Monthly fixed line voice call minutes per person: 2006 to 2011 .................................................. 266
Figure 6.42  Fixed lines per 100 population: 2006 and 2011 ......................................................................................... 267
Figure 6.43  Use of VoIP among fixed broadband users: September 2012 .................................................. 268
Figure 6.44  Average fixed broadband revenue per person: 2006 to 2011 ......................................................................................... 269
Figure 6.45  Fixed broadband connections per 100 households: 2006 to 2011 .................................................. 270
Figure 6.46  Average monthly revenue per mobile connection ......................................................................................... 271
Figure 6.47  Average monthly voice and data revenue per mobile connection: 2006 and 2011 ......................................................................................... 272
Figure 6.48  Voice minutes per month per mobile connection: 2006 to 2011 ......................................................................................... 273
Figure 6.49  Mobile take-up: 2011 .......................................................................................... 274
Figure 6.50  Mobile availability: 2011 .......................................................................................... 275
Figure 6.51  Proportion of respondents who access the internet via a mobile device: 2012 ......................................................................................... 276
Figure 6.52  Consumer perceptions of the reliability of mobile voice signal and mobile internet connectivity: 2012 ......................................................................................... 277
Figure 7.1  Industry metrics and summary ......................................................................................... 281
Figure 7.2  Total mail volumes in the 17 comparator countries: 2006-2011 ......................................................................................... 282
Figure 7.3  Proportional change in mail volume by country: 2006-2011 ......................................................................................... 282
Figure 7.4  Mail item volume decline in the European comparator countries: 2006-2011 ......................................................................................... 283
Figure 7.5  Fall in revenue: 2006-2011 .......................................................................................... 283
Figure 7.6  Growth in revenue: 2006-2011 .......................................................................................... 284
Figure 7.7  Proportion of residential customers who claim to have received a parcel in the past month ......................................................................................... 285
Figure 7.8  Value of B2C e-commerce per head: 2007-2011 ......................................................................................... 285
Figure 7.9  Revenues: 2007-2011 .......................................................................................... 287
Figure 7.10  Year-on-year changes in volumes and revenues: 2010-2011 ......................................................................................... 287
Figure 7.11  Revenues per head of population: 2011 ......................................................................................... 288
Figure 7.12  Mail volume: 2007-2011 .......................................................................................... 288
Figure 7.13  Mail volume per head of population: 2011 ......................................................................................... 289
Figure 7.14  Delivery specifications for the products analysed ......................................................................................... 289