



Communications Market Report: UK

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Introduction

This is Ofcom's eighth annual Communications Market Report. The report is a reference document containing statistics and analysis of the UK communications sector for industry, stakeholders and consumers. The report also provides context to the work that Ofcom undertakes in furthering the interests of consumers and citizens in the markets we regulate.

The report provides data and analysis on broadcast television and radio, the internet and on fixed and mobile telephony. It also offers insights into how people are using mobile technology to access audio-visual and online content.

Take-up of several devices and services reached landmark thresholds in 2010/11. For the first time household internet take-up (78%) exceeded PC ownership (77%) as a small proportion of households went online using mobile phones only; nearly all TV homes in the UK now have digital TV (96%), and three in ten mobile owners now use a smartphone handset.

Our new research has revealed how smartphones are changing social behaviours and how consumers are relying on their smartphones to help manage the overlap between their personal lives and their work lives.

This year's report also takes the opportunity to look back at the changes that have taken place in the last decade. The report shows that the communications market has been totally transformed by increased ownership and use of broadband, mobile telephones and multichannel TV services. Other services, such as analogue television and dial-up internet have declined so much that they can almost be declared extinct.

These are just some of the findings contained within this year's report. The first section of the report contains an in depth look at the changes that occurred in 'the digital decade' (page 27) and a summary of our research into use of the smartphone (page 47). The report goes on to examine how older people are engaging with communications services – with a particular examination of their use of the internet (page 69). This section concludes by comparing the nations' communications markets with the UK average.

The remainder of the report covers television and audio-visual content (page 95), radio and audio content (page 155), internet and web-based content (page 191) and telecoms and networks (page 243). In each, we set out in detail an analysis of industry and consumer data.

Finally, to make this report and its resources more useful to stakeholders, we are publishing all of the data and charts in a searchable resource. This can be found at www.ofcom.org.uk/cmruk. Companion reports for each of the UK's nations are once again published alongside this report; these can be found at www.ofcom.org.uk/cm11.

We publish this report to support Ofcom's regulatory goal to research markets constantly and to remain at the forefront of technological understanding; it also fulfils the requirements on Ofcom under Section 358 of the Communications Act 2003 to publish an annual factual and statistical report. It also addresses the requirement to undertake and make public our consumer research (as set out in Sections 14 and 15 of the same Act).

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. Nor does it represent any proposal or conclusion about the assessment of significant market power for the purpose of the Communications Act 2003, the Competition Act 1998 or any other relevant legislation.

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Key points: The market in context

Key market trends (page 17)

- Communications industry revenue (based on elements monitored by Ofcom) remained stable during 2010 at £53.4bn. Revenues from fixed internet services fell for the first time (by 5.7%) – a reflection of the shift towards bundling broadband with other communications services – while retail mobile revenues returned to growth. TV revenues increased by 5.7% to £11.8bn, while radio revenues rose by 2.8% to £1.1bn.
- Take-up of broadband has continued to increase and in Q1 2011 stood at 74%. Virtually all homes with a computer are now connected to the internet. Take-up of mobile broadband continues to rise and now stands at 17%. While the majority of mobile broadband connections are purchased in addition to a fixed broadband connection at home, 7% rely solely on a mobile broadband service.
- UK consumers continue to purchase new communications technologies. Over a quarter (27%) of adults in the UK say that they now have a smartphone, with the majority claiming to have purchased one in the past year. A third (32%) of homes now claim to have access to HDTV channels in their living room.
- The availability of most broadcast and telephony services remained unchanged during 2010. Digital terrestrial television availability rose four percentage points to 85% of homes as the digital switchover programme continued. In Q2 2011, 96% of people across the UK lived in postcode districts with at least 90% 2G area coverage from one or more operators. There was similar population coverage for 3G services (95% of people across the UK live in postcode districts with at least 90% 3G area coverage).

The digital decade (page 27)

- During the last decade the UK's communications market has been totally transformed. The fast emergence of digital technology has changed the way that communications services work for consumers and has had a major impact on businesses and networks
- This section highlights three important themes of the decade. Firstly it notes the relatively slow start, then the rapid acceleration in use of 3G mobile services. Secondly, the pace of change has increased, with new communications devices and services being adopted by consumers faster than ever. Thirdly, the resilience and evolution of television over the decade has ensured that broadcast TV remains central to our consumption of audio visual content.
- In real terms, despite massive change, industry revenues have remained stable. Total annual communications industry revenues in 2010 was £53.4bn, remarkably similar to the (inflation adjusted) revenues of £54.3bn in 2000.
- There has been massive growth in the time spent on mobile voice calls (up c. 350%) and SMS messages (up c. 2000%), accompanied by a decline in fixed voice calls. However, the total volume of fixed voice minutes is still greater than the volume of mobile voice minutes. Average time spent viewing TV and listening to radio has remained fairly stable, despite the increased availability of other methods of consuming media.

The smartphone revolution (page 47)

- There has been a huge growth in smartphone take-up and use in the past 12 months. Twenty-seven per cent of UK adults now claim to own one, with 59% of our sample having bought their phone in the past year (and the volume of data transferred over the UK's mobile networks increased by 67% during 2010).
- Smartphone users have a much stronger relationship with their phone than regular mobile users. When asked how addicted they are to their mobiles phones, 37% of adult smartphone users admitted high levels of 'addiction' to their phone, with this rising to 60% of teen smartphone users.
- Smartphone users get more use from their phone than regular mobile phone users. 81% of smartphone owners make and receive calls on their mobile everyday compared to 53% of regular mobile phone users, while 79% claim to send and receive SMS texts every day, compared to 50% of regular mobile phone users – this is driven by a higher proportion of smartphone users being on a contract.
- Smartphones are changing social habits and etiquette. Over half (51%) of adult smartphone users say they use their phone while socialising and nearly a quarter (23%) use their smartphone during a meal with others. Eighty-one per cent say they have their phone on all the time, while 22% use it in the bathroom – both significantly higher than among regular phone users.
- Teens (aged 12-15) who have grown up as part of the 'always connected' society appear to have different standards of social etiquette to adults with greater willingness to use their phone in a public place (63% of teens vs. 44% of adults) and less concern about disturbing others (64% of teens wouldn't use their phone if it disrupted others, compared to 81% of adults).
- The growing functionality of smartphones is affecting people's other leisure activities. Over half (55%) of adult smartphone users claim to be doing less of other activities, now that they have a smartphone. This is even greater among teens, with 68% of teen smartphone users claiming to do some activities less than before, such as playing games on a console/PC (30%), taking photos with a camera (30%), using a PC to access the internet (28%), watching TV (23%), and reading books (15%).
- Smartphones have merged people's home and work lives. Among smartphone users who work, 30% regularly use their phone at work for personal calls, while 35% regularly use their phone for work calls while 'off duty'. Twenty-four per cent say they use their phone for work while on leave.

The generation gap (page 69)

- There are significant differences in take-up of communications technologies between younger and older age groups. While 98% of those aged 16-24 use a mobile phone, older people are far more reliant on a fixed line phone, with only half of those aged 75+ (51%) having a mobile.
- Among those aged 65-74, five years ago only four in ten had internet access at home (42%), but by 2011, this had risen to over half of this age group (55%). However, still only a small minority (26%) of those aged 75+ have the internet at home in Q1 2011 (up from 15% in 2006).

- Watching television is the dominant regular media activity, both for those aged 16-24 and those aged 75+, but there is significant variation across other measures. The most marked difference between the age groups was in use of the internet via a computer or laptop – 83% of 16-24 year olds said they did this regularly, compared to 13% of those aged 75 and over.
- There is a strong relationship between privacy concerns and the age of the internet user; users aged 16-24 are far more likely than those aged 65+ to say that they would be happy to share photos online (61% vs. 14%), while older users are less confident in judging whether a website is truthful (58% of 16-24s vs. 21% of over-65s).

The nations' communications markets (page 83)

- As take-up of communications services such as mobile telephony, internet and digital television approach maturity we see fewer differences between the home nations.
- As digital switchover nears completion the vast majority of TV homes in the UK now have Digital Television (96%). In Wales, where the process is complete, the figure stands at 99%, while the largest increase in take-up was recorded in Scotland. DTV penetration here rose by six percentage points (pp) to 97%, driven by switchover, which was under way at the time the fieldwork was undertaken.
- Broadband take-up in the UK increased by three percentage points in the last year to 74%. Within this, take-up increased in Wales by 7pp (to 71%) and in Northern Ireland by 5pp (74%). However, broadband take-up in Scotland has remained stable over the past two years, and is lower than the other nations at 61%. Take-up is particularly low among low income homes and older consumers.
- The trend of purchasing two or more communications services from the same supplier has continued across the UK in 2010, with increases across all the UK nations. Fifty-three per cent of UK adults now purchase communications services in a bundle. Bundles are most popular in England (54%) and least popular in Northern Ireland (46%).
- Spend per head on PSB content (TV and radio) stood at £38.23 across the UK in 2010. Expenditure on programme production for UK audiences was a big component of spend in England. It was also a substantial part of spending in Wales and in Scotland, although spending on programme production specifically for Scottish and Welsh audiences was also significant. This spend on programme production for the nations was the largest component of spend in Northern Ireland, while in Wales, the largest component of expenditure was on Welsh-language productions.
- TV viewing share among the PSBs averaged 55% in 2010, ranging from 52% to 60% in parts of England. BBC radio services attracted a 55% listening share in 2010, ranging from 62% in Wales to 45% in Scotland (where commercial local radio is popular). Access to broadband is providing consumers with new ways to access audio and video content; 41% of people claimed they had watched TV content over the internet in 2010 (up by three percentage points year on year). A third of the population (32%) had used their mobile handsets to access data (including surfing the internet), up nine percentage points year on year.

Key points: TV and audio visual

- **UK television broadcasters generated revenue of £11.7bn in 2010, an increase of £638m (5.7%),** driven by a recovery in advertising revenue (up 11.2% year on year to £3.5bn) and by continued increases in subscription revenues (up 5.3% year on year to £4.8bn).
- **Spend on PSB network programming across the five main channels and the BBC digital portfolio channels increased by 5% to £2.9bn,** marking a break with a five-year trend of year-on-year reductions in content spending; 2010 was a big year for sport, and spending in that genre boosted the overall number significantly.
- **The multichannel sector spent a further £2.5bn on content in 2010,** up by 7% year on year. Sixty-three per cent (£1.5bn) was accounted for by sports and film channels; a further 21% (£518m) by entertainment channels. The remaining 16% (£402m) came from factual, leisure, music, retail, adult, ethnic and news channels.
- **9.5m television sets were sold in 2010, all of which were HD ready.** Television sets incorporating new functionality are also beginning to grow in popularity. There were nearly a million internet-enabled television sales during 2010 (about 10% of the total), and 125k sales of televisions with 3D capabilities (about 1%).
- **By Q1 2011, 93% of main TV sets in UK homes were connected to a digital television tuner,** either a set-top box or integrated digital TV, an increase of one percentage point year on year. 5.3m households now have an HD subscription, while 46% of consumers claimed to have a DVR at home.
- **On average, viewers watched four hours of TV a day in 2010.** Viewing hours increase with age, with those aged 65+ watching the most television at 5.7 hours/day; children watch the least at 2.5 hours a day.
- **The five PSB channels and their portfolio services attracted 71% of all viewer hours in multichannel homes in 2010 – on a par with 2009.** The five main services attracted a majority of viewer hours (54%, down by 1pp year on year), while their digital-only services accounted for a further 17% (up by 0.5pp over the same period).
- **Time-shifted viewing using DVRs accounted for 7% of all viewer hours in 2010, up from 6% in 2009 and 2% in 2006.** Among DVR homes, 14% of all TV viewing was time-shifted. This was evenly split by programmes recorded/watched on the same day and content that was watched 1-7 days after it was broadcast.
- **In Q1 2011, 35% of adults claimed to use the internet for viewing catch-up television services,** a four percentage point increase on Q1 2010 and a 12 percentage point rise in two years. Younger adults and men are more likely to use catch-up; but growth has been fastest since 2009 among people over 65, with 25% claiming to now use catch-up, versus just 10% in Q1 2009.

Key points: radio and audio

- **Total UK radio industry income was £1.1bn in 2010, up by 2.8% in a year.** Recorded music revenue was £1.2bn for 2010. This compares with TV industry income of £11.8 bn.
- **Commercial radio revenue stabilised during 2010, rising a little to £438m, the first nominal increase since 2007.** Ofcom estimates that BBC radio spending increased 3.8% in 2010 to £685m, representing 61% of total industry income.
- **Recorded music revenues fell by 8.6% in 2010.** This was despite revenues from online business models rising by 15% as the sales of physical music fell further than the rise from online sales. Digital sales accounted for 24% of recorded music revenue in 2010, a 5pp increase on 2009. Singles sales accounted for 98.7% of online music by volume and albums for 83.2% of the volume of physical retail sales.
- **The number of weekly radio listeners in the UK reached a new high of 91.6% of the adult population in Q1 2011,** up by one percentage point since Q1 2010. This represents the highest weekly reach figure since RAJAR's present research methodology was introduced in 1999.
- **Listener hours rose to 1.04 billion per week in 2010, up by 2.1% year on year.** All categories of radio service experienced rising listener hours during the year: BBC and commercial radio, national and local. National commercial stations saw the largest annual increase, up by 7% year on year.
- **In Q1 2011, RAJAR figures showed that digital radio platforms accounted for 26.5% of all radio listening,** a 2.5 percentage point (pp) increase on the same quarter of the previous year. Listening through DAB sets accounted for the largest component of digital listening, 16.7% of all hours, while digital television and online simulcast streaming represented a further 4.1% and 3.6% respectively.
- **Over the past five years, UK-wide stations' audience share rose, while that of local stations fell.** BBC network services listening hours increased by 2.5% over the five-year period, commanding a 46.3% share of all listener hours in 2010. National commercial stations' hours rose by 5.2% over the same period. BBC local and nations stations' hours fell by 21%, and local commercial stations' share fell by 7.3%.
- **DAB set sales remained steady at 1.9m in the year to Q1 2011,** representing a fifth (22.3%) of all radio device sales (up from 20.9% in the year to Q1 2010); the rest were made up of analogue set sales.
- **BBC 6 Music was the most listened to digital-only station in Q1 2011.** Its weekly listener base has grown by 261% since Q1 2006, reaching 1.3m listeners (3% of the market) weekly on average.
- **Listening to the radio online in the UK remains more popular than listening to other audio content online.** Eighteen per cent of households used the internet to listen to the radio whereas 7% used free streaming services such as Spotify and 2% used subscription based streaming services such as Spotify Premium.

Key points: internet and other web-based content

- **Over a quarter of all UK advertising spend is on the internet.** Advertising spend on the internet grew by 16% in 2010 to over £4bn, accounting for 26% of total advertising spend in the UK, marginally ahead of television. Mobile advertising increased by 121% in 2010 to reach £83m.
- **More than three-quarters of UK households have home internet access.** PC-based internet take-up was 77% in Q1 2011 (up from 73% a year previously). More than two-thirds (67%) of households have a fixed broadband connection and 17% have a mobile broadband (dongle) connection. In Q1 2011, 26% of over-75s had home internet access (up from 23% a year previously), as did 55% of 64-74 year-olds (up from 51%).
- **Over a quarter of people use their mobile phones for internet access** In Q1 2011, 28% of UK adults claimed to access internet services on their mobile phone, up from 22% a year previously.
- **The most popular claimed use of the internet on mobile phones was social networking services...** (used by 57% of mobile phone internet users), ahead of sending/receiving emails (53%) and using search (42%). Mobile users of Facebook spent an average of 5.6 hours on the site in December 2010 (11 minutes a day).
- **...but growth of social networking on fixed connections slows.** In Q1 2011 46% of UK adults claimed to use social networking services on a home internet connection, up from 40% a year previously. But there are signs that the growth of social networking may be reaching saturation point: total time spent on social networking sites was just 1.3% higher in April 2011 than in April 2010, and only 3% of people without a social networking profile said they were interested in having one.
- **Consumers use a wide range of devices to access the internet at home.** In 2010, 69% said they accessed the internet at home via a laptop or PC, 31% via a mobile phone, 9% via a games console, 6% via a portable media player and 4% of households with an e-reader. WiFi routers were used by 75% of broadband households in Q1 2011 (up from 66% in Q1 2010).
- **Google has the largest reach, Facebook leads by time spent.** Search giant Google had the highest reach of any online brand, with 79% of active internet users visiting its homepage, averaging 133 visits in April 2011. Facebook was easily the most popular website in terms of time spent on PCs, accounting for 169 million hours in April 2011 (more than two-and-a-half hours for every person in the UK), ahead of eBay (30 million hours) Google (28 million hours) and YouTube (22 million hours).
- **Nearly three-quarters of internet users shop online.** In Q1 2011, 73% of UK internet users claimed to use their broadband connection for purchasing goods or services. Visitors to coupon and reward sites increased by 25% in the year to April 2011, when nearly 40% of internet users visited at least one such site.

Key points: Telecoms and networks

Key market trends

- **Total operator-reported telecoms revenues fell by 2% in 2010.** Retail revenues from mobile services increased slightly (up 1%, having fallen for the first time in 2009), but those from fixed voice and fixed internet services continued to decline, down by 3% and 6% respectively.
- **Average monthly household spend on telecoms services fell by 4.3% in 2010 to £63.10.** Spend on telecoms services accounted for 3.1% of average household outgoings in 2010, the lowest proportion over the past five years.
- **Total broadband take-up increased by three percentage points to 74% by Q1 2011.** The largest increase in adoption was among those using solely fixed broadband services for internet access, up two percentage points to 58% in Q1 2011.
- **Over half of all UK households are passed by super-fast broadband.** Virgin Media's cable service offers speeds of at least 'up to' 50Mbit/s to 48% of all households, with around 15% of households able to get an 'up to' 100Mbit/s service. BT's 'up to' 40Mbit/s fibre-to-the-cabinet service was available to around 20% of households by July 2011 and we estimate that 57% of UK homes were able to receive super-fast services in July 2011.
- **Take-up of superfast services is increasing.** We estimate that around 2% of residential and SME UK broadband connections had a headline speed of 30Mbit/s or higher at the end of March 2011, more than five times the figure for a year previously.
- **Our consumer research indicates that take-up of super-fast broadband changes use of the internet.** More than half of those taking up super-fast service say they have increased the number of standard-definition or high-definition TV programmes or films they watch over the internet (54% and 63% respectively), while many also claim to have increased the amount of online gaming (37%), video calling (39%) and file sharing (40%).
- **2010 saw a large migration from pre-pay to contract mobile services.** At the end of 2010, 48.7% of mobile subscriptions were contract, compared to 41.1% a year previously. The main reasons behind this are growth in the popularity of smartphones (pay-monthly tariffs allows users to spread the cost of the handset across the length of the contract) and the popularity of cheap SIM-only tariffs.
- **In 2010, an average of five text messages a day were sent for every person in the UK.** In total, 129 billion text messages were sent, up 24% on 2009.
- **BT's share of voice call volumes fell to under 20% during the year.** BT's share of total fixed and mobile voice call volumes fell to 19.4% in 2010, while mobile's share increased to 49.2%, making it likely that more than half of UK voice calls will be mobile-originated in 2011. BT's share of fixed voice call volumes also fell to under 40% for the first time during the year.
- **The number of UK business fixed lines fell to under 10 million in 2010.** The decline in the number of business lines accelerated in 2010, falling by 5.2%, the largest annual fall since the number of business lines started its current decline in 2008.



The Communications Market 2011

1 The market in context

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1.1 Introduction and structure

1.1.1 Introduction

This introductory section of the Communications Market Report 2011 is divided into five sections:

- **Key market trends (Section 1, page 17)**

The section summarises developments in the UK's communications sectors during 2010/11. It focuses on service availability and take-up, industry revenues and on consumers' use and spending on communications services.

- **The digital decade (Section 1, page 27)**

During the past decade the UK's communications market has experienced rapid change. We now have access to a complete data set for the last ten years, allowing us to tell the story of the communications market in the 'noughties'. In this section we look back and contrast today's market metrics with those from the year 2000. This section describes some of the changes that have taken place and is a reminder of how much has changed in such a short space of time. The analysis concludes that take-up and use of digital communications services has rocketed, while subscribers' spend as a proportion of income has been in decline since 2005.

- **The smartphone revolution (Section 1, page 47)**

With the huge growth in smartphone take-up in the past 12 months – over one in four GB adults and almost half of teens now own one – this study looks at how the devices have affected people's lives. It considers how the rise of the smartphone has affected day-to-day social interaction, driven by the ability to be 'always connected'.

- **The generation gap (Section 1, page 69)**

While take-up and use of media and communications is developing rapidly across the UK, the experience of consumers is far from uniform. This chapter explores the significant differences that remain between older and younger people in terms of their take-up and use of various communications media, and also of the differences in some of their attitudes towards internet use.

- **The nations' communications markets (Section 1, page 83)**

This section sets out a selection of headline findings for communications markets across the UK's nations, putting them into context. It draws on the detailed reports that Ofcom publishes on communications services in each of the UK's nations (which can be found at www.ofcom.org.uk/cmr11).

1.2 Fast Facts

| Digital TV | |
|--|--|
| Proportion of UK homes with digital TV | 93% (Q1 2011) |
| Number of minutes of TV people aged 4+ watch each day | 242 (4 hours) (average in 2010) |
| Proportion of UK homes with Digital TV on any set | 96% (Q1 2011) |
| Proportion of TV homes with a DVR | 47% (Q1 2011) |
| Radio | |
| Proportion of households with access to a DAB Digital Radio | 37% (Q1 2011) |
| Proportion of listener hours through a digital platform (DAB, online, DTV) | 26.5% (Q1 2011) |
| Number of local radio stations (excluding community stations) | 344 (July 2011) |
| Number of national radio stations (Analogue and DAB) | 21 (July 2011) |
| Internet | |
| Number of fixed residential broadband connections | 18.0 million (end 2010) |
| Proportion of adults with broadband (fixed + mobile) | 74% (Q1 2011) |
| Proportion of adults with mobile broadband | 17% (Q1 2011) |
| Market share of fixed broadband providers (connections) | BT 28%, Virgin Media 22%, TalkTalk Group 22%, Sky 15%, Everything Everywhere 4%, O2/Be 3% |
| Average actual broadband speed | 6.8Mbit/s (May 2011) |
| Proportion of adults with a social networking profile | 48% (Q1 2011) |
| Proportion of people who use their mobile to access the internet | 32% (Q1 2011) |
| Number of mobile broadband (dongles/PC datacard) subscriptions | 4.8 million (end 2010) |
| Fixed and mobile telephony | |
| Number of residential fixed landlines | 23.7 million (end 2010) |
| Number of fixed landlines in the UK, including ISDN channels | 33.4 million (end 2010) |
| Market share of fixed line providers (voice call volumes) | BT 37%, Virgin Media 12%, other direct 18%, other indirect 33% (end 2010) |
| Proportion of adults who personally own/use a mobile phone | 91% (Q1 2011) |
| Proportion of adults who live in a mobile-only home | 15% (Q1 2011) |
| Proportion of PAYG mobile subscriptions | 51% (Q1 2011) |
| Number of text messages sent per mobile subscription per month | 133 (in 2010) |
| Market share per mobile provider (connections) | Everything Everywhere (inc Virgin Mobile) 38%, O2 (inc Tesco) 30%, Vodafone 25%, 3UK 7% (end 2010) |
| Number of 3G mobile subscriptions | 33.1 million (end 2010) |

1.3 Key market trends

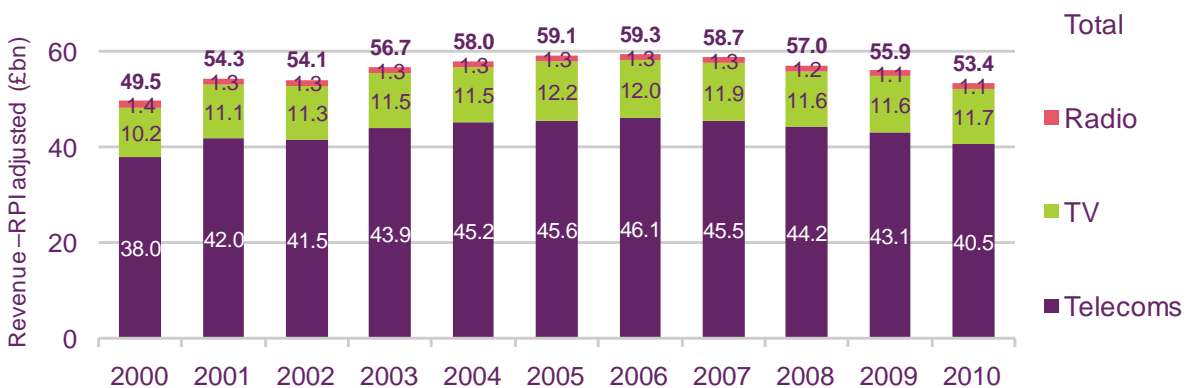
1.3.1 Communications industry revenue remains stable

Overall communications revenues remained stable year on year at £53.4bn

For the second successive year UK operator-reported retail telecoms revenues fell in 2010; to £40.5bn, although the rate of decline was lower than it had been in 2009. Revenues from fixed voice services and the volume of fixed calls continued to fall in 2010, while retail mobile revenues returned to growth, having declined for the first time in 2009. The total volume of mobile-originated calls and the number of active mobile connections both continued to increase, with the latter driven by growth in mobile data connections including mobile broadband dongles and data-only SIM cards. Revenues from fixed internet services fell for the first time in 2010, a reflection of the shift towards lower-cost bundled broadband services which are frequently provided using local loop unbundling (LLU).

UK television broadcasters generated revenue of £11.8bn in 2010, an increase of 6.6% year on year, driven both by a recovery in advertising revenue as well as continued increases in subscription revenues income. Total UK radio industry income was £1.12bn in 2010, up by 2.8% in the year, from £1.09bn.

Figure 1.1 Communications industry revenue



Source: Ofcom / operators

Note: Includes licence fee allocation for radio and TV

1.3.2 Availability of communications services

The availability of most key communication services remained largely unchanged during 2010, reflecting near-universal levels of coverage of most services.

The largest rise in availability came from the digital terrestrial television signal (DTT) which rose from 81% to 85% as the country’s switchover to digital gathered pace. Homes in Wales and Scotland now no longer receive an analogue signal, and over the next 12 months the digital switchover process will complete in England and Northern Ireland.

As of June 2011, the BBC DAB network consisted of 196 transmitters across the UK, which provide coverage to 92% of households, while the DAB commercial network (Digital One) reached 85% of the UK population (but is not available in Northern Ireland).

Across the UK 96% of people lived in postcode districts with at least 90% 2G area coverage from one or more operators. This figure increases to 99% in England, but population coverage levels are lower in Wales, Scotland and Northern Ireland, which is a reflection of large areas of low population density and areas where hilly or mountainous terrain limits the

range of cellular masts. 3G coverage is relatively similar to 2G coverage, although it is lower in Northern Ireland (where 54% of people live in postcode districts with at least 90% 2G area coverage from one or more operators).

The household availability of broadband through local loop unbundling (LLU) services (whereby incumbent operators make their local network available to other communications providers) rose during 2010, and at a higher rate than in the previous year, growing by four percentage points to 89% (compared to a one percentage point increase in 2009). Cable coverage was unchanged, reflecting rises in both the total number of households and the number of homes passed by Virgin Media's cable broadband network.

The strategic focus of telecoms service providers is now shifting towards driving up the availability of higher-speed networks; mobile operators are continuing to upgrade their 3G networks to offer higher data speeds. Moves to increase the coverage of fixed super-fast broadband accelerated during 2010 and into 2011:

- Virgin Media launched its 'up to' 100Mbit/s service at the end of 2010, and in June 2011¹ announced that the service was available to 4 million UK homes.
- In May 2011² BT announced that its 'up to' 40Mbit/s fibre-to-the-cabinet (FTTC) service would be available to 5 million homes "...in the next few weeks..." and was passing 80,000 additional premises a week. By 2012 BT plans to provide fibre-based broadband coverage to 40% of the UK population, and to 66% by 2015, and has stated that it will start the upgrade of its FTTC service to offer 'up to' 80Mbit/s in 2012.
- A number of local fibre deployments continued during 2010, and there are further plans to provide coverage in more local areas in 2011 and beyond, including in Bournemouth, Belfast and Cumbria.

¹ <http://pressoffice.virginmedia.com/phoenix.zhtml?c=205406&p=irol-newsArticle&ID=1572617&highlight=>

² <http://www.btplc.com/News/ResultsPDF/q411release.pdf>

Figure 1.2 Digital communications service availability: 2008 and 2009

| Platform | UK 2010 | UK 2009 | UK change | England | Scotland | Wales | N Ireland |
|---|---------|---------|-----------|---------|----------|-------|-----------|
| Fixed line | 100% | 100% | 0pp | 100% | 100% | 100% | 100% |
| 2G mobile ¹ | 96% | - | n/a | 99% | 85% | 84% | 87% |
| 3G mobile ² | 95% | - | n/a | 99% | 84% | 82% | 54% |
| Cable broadband ³ | 48% | 48% | 0pp | 51% | 37% | 23% | 30% |
| LLU ⁴ | 89% | 85% | 4pp | 91% | 81% | 84% | 75% |
| FTTC ⁵ | 23% | - | - | 23% | 8% | 14% | 81% |
| Digital satellite TV | 98% | 98% | 0 | - | - | - | - |
| Digital terrestrial TV ⁶ | 85% | 81% | 4pp | 85% | 99% | 98% | 66% |
| DAB BBC Network ⁷ | 92% | - | - | 94% | 87% | 78% | 79% |
| DAB commercial network (Digital One) ⁸ | 85% | - | - | 90% | 75% | 59% | - |

Sources: Ofcom and operators:

1. Based on Q2 2011. Proportion of population living in postal districts where at least one operator reports at least 90% 2G area coverage. Sourced from GSM Association / Europa Technologies
2. Based on Q2 2011. Proportion of population living in postal districts where at least one operator reports at least 90% 3G area coverage. Sourced from GSM Association / Europa Technologies. Data are not comparable with previous report due to changes made by the mobile operators in the methodology used to calculate coverage
3. Proportion of homes passed by Virgin Media's cable broadband network, June 2010;
4. Proportion of homes connected to an LLU-enabled BT local exchange, December 2010;
5. Proportion of homes connected to an FTTC-enabled BT local exchange, June 2011;
6. Calculations based on the estimated proportion of homes that can now receive at least 17 channels, versus the coverage of the DTT signal prior to digital switch-over.
7. BBC National DAB network coverage as of 1 June 2011
<http://stakeholders.ofcom.org.uk/binaries/consultations/dab-coverage-planning/annexes/annex-c.pdf>
8. Digital One coverage (indoor proportional method – households), June 2011
<http://stakeholders.ofcom.org.uk/binaries/consultations/dab-coverage-planning/annexes/annex-d.pdf>

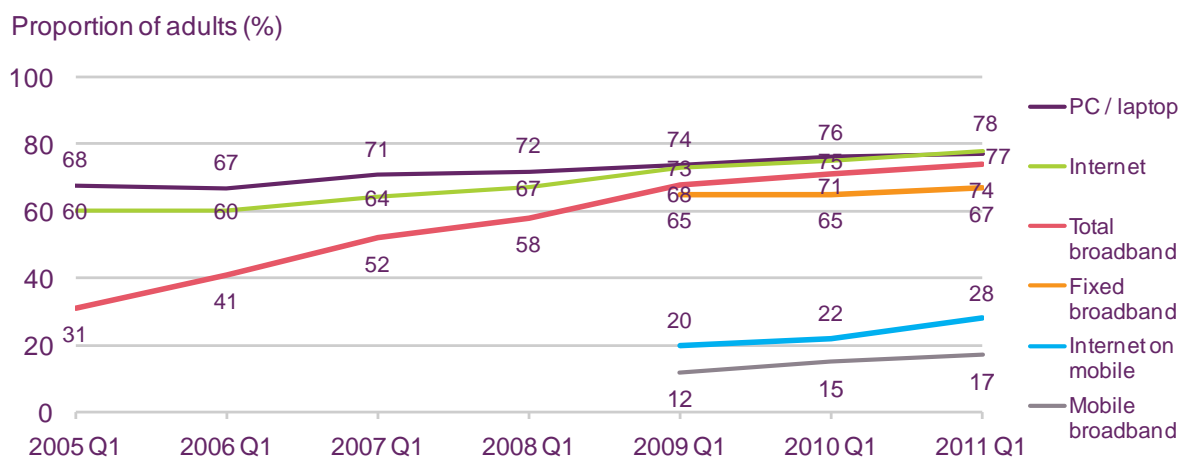
1.3.3 Take-up of services and devices

Increase in broadband take-up – internet penetration now exceeds PC penetration

Broadband internet connections continue to grow year on year, and in Q1 2011, take-up stood at 74% of UK households. There are indications of a slight rise in both fixed and mobile broadband connections, to 67% and 17% respectively, while the use of the internet on a mobile phone has grown substantially, currently standing at just over a quarter of all adults (28%). This has been driven by the growth in the smartphone market and mobile networks offering competitive mobile data packages, both allowing easier and more affordable access to mobile internet services than before.

Virtually all of the 77% of homes with a computer are now connected to the internet, with many households having more than one connection. When including internet access via a mobile phone, total internet penetration has reached 78%. The majority of mobile broadband connections are purchased in addition to a fixed broadband connection at home, although a minority of homes (7%) rely solely on a mobile broadband service.

Figure 1.3 Household penetration of broadband



QE1: Does your household have a PC or laptop computer? / QE2: Do you or does anyone in your household have access to the internet/World Wide Web at home (via any device, e.g. PC, mobile phone etc)? / QE6: Which of these methods does your household use to connect to the internet at home?

Source: Ofcom technology tracker, Q1 2011.

Base: All adults aged 16+ (n=3474)

Note 1: "Internet on mobile" is the % of adults who use a mobile phone for any of the following activities: Instant messaging, downloading apps or programs, email, internet access, downloading video, video streaming, visiting social networking sites.

Note 2: From Q1 2009 the 'Internet' figure includes those who access the internet on mobile phones.

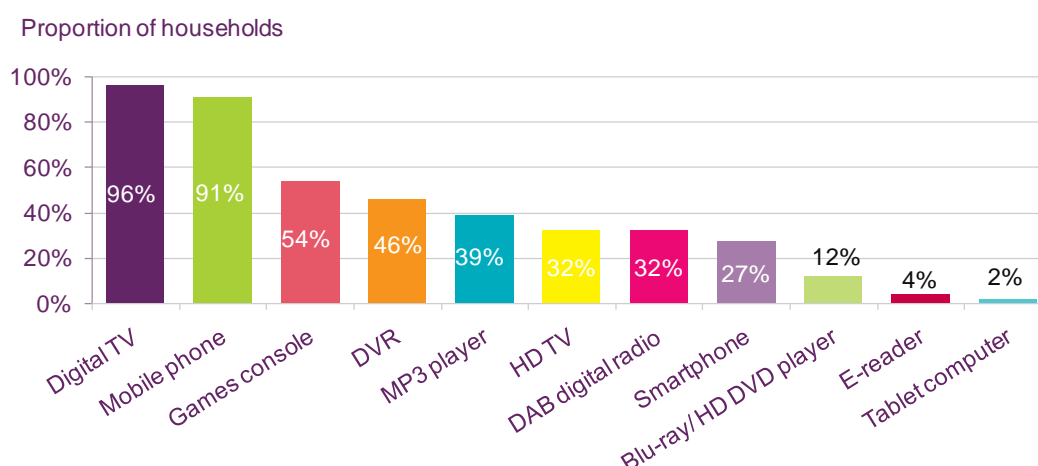
UK consumers continue to adopt digital communications technologies

Take-up of digital television (DTV) grew by four percentage points during 2010 to reach 96% of all TV homes, with the digital switch-over programme likely to have been the driver for some homes converting to digital.

The proportion of homes with digital video recorders (DVRs) continued to increase sharply during 2010, from 37% to 46%, while 32% of households claim to have access to HDTV channels in their living room.

Over a quarter (27%) of adults in the UK say that they now have a smartphone, with the majority claiming to have purchased this in the last year. Similar to Q1 2010, over half of all households have a games console (54%), while a third (32%) have a DAB set. E-readers have become increasingly popular over the past year, increasing from 1% take-up in Q1 2010, to 4% at the start of 2011. Two per cent of households have a tablet computer, such as the Apple iPad or Samsung Galaxy Tab.

Figure 1.4 Digital radio listening by age group, (monthly)



Source: Ofcom technology tracker, Q1 2011.
Base: All adults aged 16+ (n=3474)

1.3.4 Purchasing communications services in bundles

Take-up of communications services in a bundle remains relatively stable, with a third of households taking a 'dual play' package

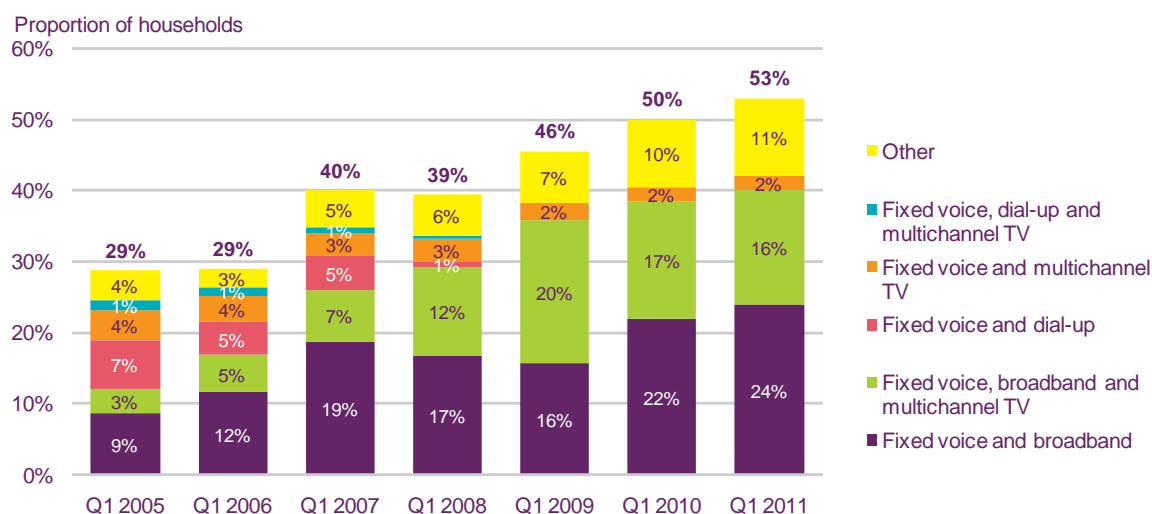
Across the UK, 53% of homes took a bundle of communications services in Q1 2011 (Figure 1.5). This has remained relatively stable – increasing by three percentage points year on year. The most popular type of bundle – taken by more than half (61%) of those who chose a bundle – was a 'dual' package of services such as fixed-line telephony and broadband.

Over the past five years, the proportion of households bundling these two communications services has doubled – from 12% to 24%. This is likely to be a popular choice for recent broadband adopters, who are choosing to purchase broadband services from their existing landline phone supplier.

Triple-play (bundling three services together) accounted for a further 32% of the homes taking bundles (or 17% of all consumers) – the most popular package was fixed voice, broadband and multichannel TV. Just 2% of consumers bundle four communications services together, covering landline, broadband, multichannel TV and mobile phone.

Of those who took a bundle, 67% received a discount, compared to 60% in Q1 2010.

Figure 1.5 Take-up of bundled services over time



QG1. Do you receive more than one of these services as part of an overall deal or package from the same supplier?

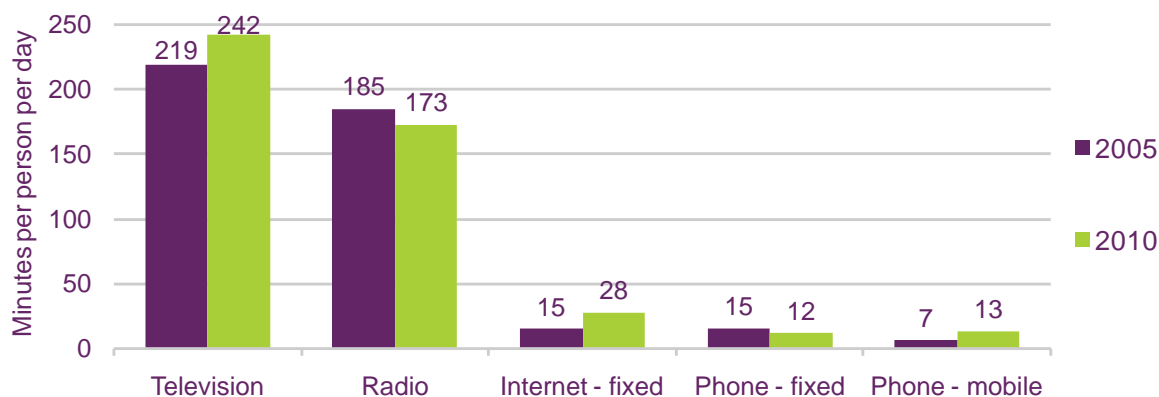
Source: Ofcom technology tracker, Q1 2011

1.3.5 Time spent on communications services continues to increase

Figure 1.6 examines how people consume different forms of media content and communications services.

Consumption of television and radio services continued to play a large role in the total time consumers spend on communications services each day during 2010. Figure 1.6 shows that adults in the UK spent 242 minutes daily watching television on a TV set, up by 23 minutes from 2005, while radio accounted for 173 minutes per day, down by 22 minutes over the same period. Fixed-line calls accounted for 12 minutes per person per day, while a similar amount of time (13 minutes) was spent on mobile phone calls and texting on a mobile. Internet activities undertaken on a fixed internet connection (using web and applications) experienced the largest increase in average daily use, nearly doubling from 15 minutes in 2005 to 28 minutes in 2010.

Figure 1.6 Average time per day spent using communications services



Source: Ofcom / BARB / RAJAR / Nielsen Netratings (home use only)

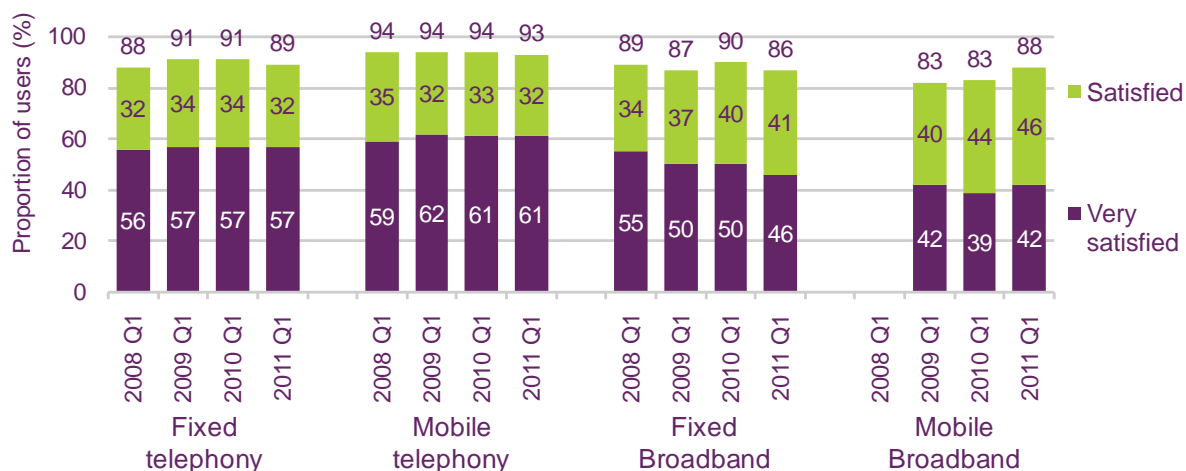
Note: Daily figures were calculated from monthly data on the assumption that there are 30.4 days in the average month; the exception was for internet consumption where the quoted figures relate to May 2005 and May 2010, and 31 days were used; the internet consumption figures include the use of online applications such as streaming media and only include use at home; mobile telephony figures are estimated assuming that the average time taken to send and receive a text message is 35 seconds.

1.3.6 Consumer satisfaction highest for mobile telephony

Overall satisfaction with communications services remained largely unchanged for most services. Across the telecoms services surveyed, satisfaction was highest for mobile telephony (93%), while nearly nine in ten (89%) consumers were satisfied with their fixed line service. Fixed broadband satisfaction has fallen by four percentage points since Q1 2010, with this decline being among those who were 'very satisfied' with their service, as opposed to just 'satisfied'.

Consumers' satisfaction with mobile broadband increased slightly; by five percentage points to 88%, perhaps reflecting improvements in customer expectations as well as service quality, with those satisfied with the speed of their mobile broadband service rising from 73% to 80% during 2010.

Figure 1.7 Satisfaction with communications services



Source: Ofcom technology tracker, Q1 2011. Note: Shows the proportion of users with each service, includes only those who expressed an opinion.

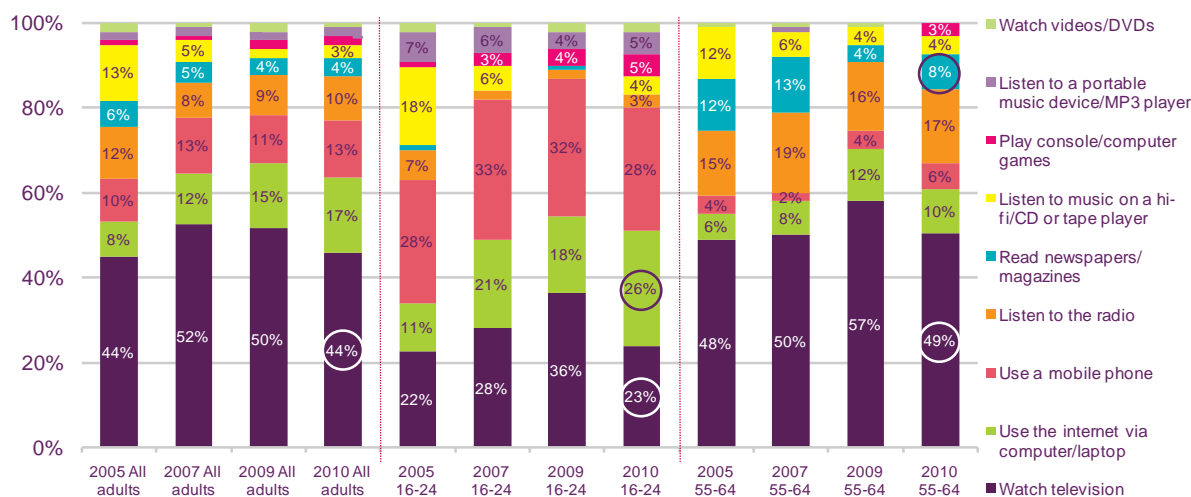
1.3.7 Nearly one in five adults cite internet as most missed media activity

When people are asked which medium they would miss the most if it were taken away, there are clear differences in response by age-group. Overall, 44% say they would most miss their TV – a decline of six percentage points on 2009, while 17% said they would most miss the internet – more than double the proportion five years ago (8% in 2005). Just over one in ten (12%) say they would most miss their mobile, and 10% listening to the radio.

For young adults aged 16-24, the picture is quite different – 28% say they would most miss their mobile, and 26% the internet – with the latter increasing from 18% in 2009. Broadcast media are less likely to be cited by this age group, with TV being the most-missed medium for 23%, and radio by 3%.

For people aged 55-64, 49% say they would most miss TV, 17% radio, and 8% newspapers/magazines. One in ten (10%) would most miss the internet and 1% mobile phones.

Figure 1.8 Which media activity consumers would miss the most



A2 – Which one of these would you miss doing the most?

Base: All adults aged 16+ (3244 in 2005, 2905 in 2007, 1824 in 2009, 2117 in 2010), adults aged 16-24 (530 in 2005, 413 in 2007, 253 in 2009, 295 in 2010), adults aged 55-64 (412 in 2005, 344 in 2007, 276 in 2009, 336 in 2010) Circles show statistically significant change between 2009 and 2010.

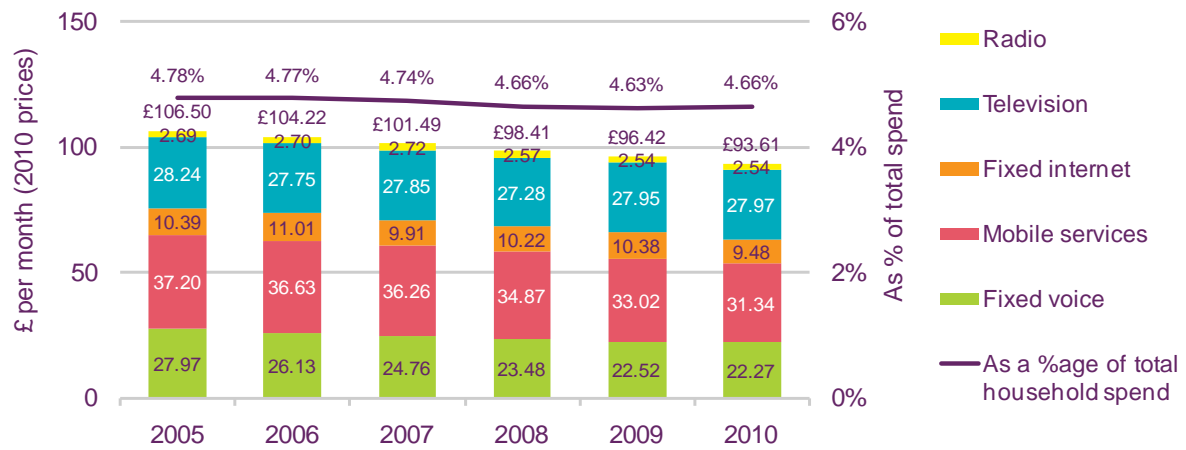
Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May 2009 and September to October 2010

1.3.8 Household spend on communications services continues to fall

In the context of increasing use of most communications services, and their widening availability, real monthly household spend on communications services fell again in 2010. It was down by 2.9% on 2009 to £93.61, 12% lower than in 2005. While television subscriber spend and radio spend (licence fee funding) remained stable over the past year (at £27.97 and £2.54 respectively), spend on fixed internet declined for the first time in three years to £9.48 (-8.7%). This is a reflection of the shift towards bundled broadband services which are often lower-cost, and have proved popular in the current economic climate when many consumers are looking for ways to reduce their household spend. Average spend on fixed voice, and mobile voice and texts, continued to decline year on year.

Spend on communications services accounted for 4.66% of total household expenditure in 2010, compared to 4.78% in 2005.

Figure 1.9 Average household spend on communications services



Source: Ofcom / operators

Note: TV includes pay-per-view. 2010 % of average household spend uses an estimate of household spend based on data for the previous four years

1.4 The digital decade

1.4.1 Introduction

During the last decade the UK's communications market has been totally transformed. The rapid emergence of digital technology has changed the way that communications services work for consumers and has had a major impact on businesses and networks. Since 2000, we have seen substantial changes that have shaped the decade:

- The majority of homes have connected to the internet.
- LLU roll-out has offered more choice in broadband supplier.
- Faster broadband connections have become available.
- There has been huge growth in consumption of mobile voice and data.
- The vast majority of homes have adopted digital, multichannel TV.
- Digital radio services now make up over a quarter of all radio listening.
- Smartphones are enabling people to access the internet while on the move.

We now have access to a decade of data, telling the story of the transformation of the communications market. This allows us to look back and contrast 2010/11's market metrics with those from the year 2000. This section describes some of the changes that have taken place and is a reminder of how much has changed in such a short space of time.

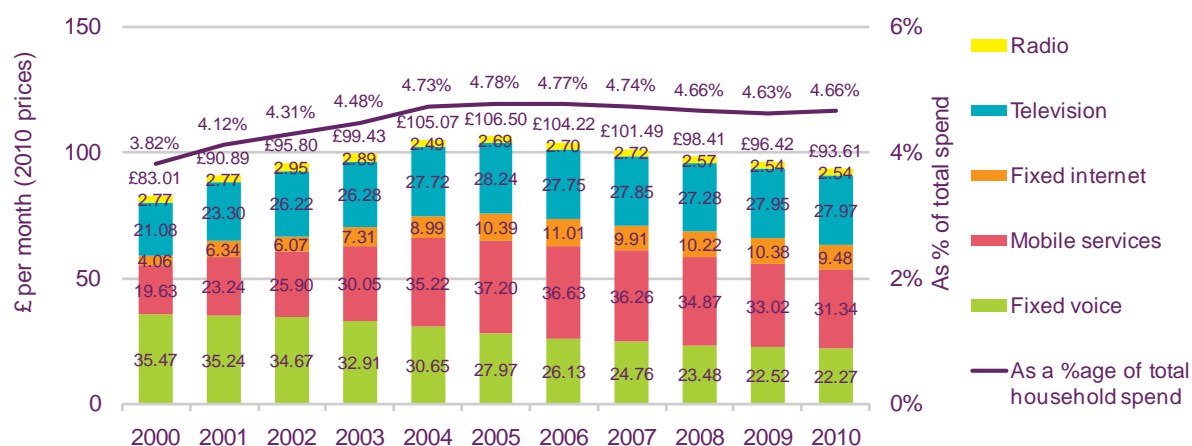
This section also highlights three important themes of the decade. Firstly, it notes the rapid acceleration in use of mobile data services in the latter part of the decade. Secondly, the pace of change has increased, with new communications devices and services being adopted by consumers faster than ever. Thirdly, the resilience and evolution of television over the decade has ensured that broadcast TV remains central to our consumption of audio-visual content.

1.4.2 The communications market and the economy

Consumers have been spending less on communications services since 2005

Household spend on communications services averaged at £83.01 per month in 2000 and ended the decade at £93.61 in 2010, after peaking in 2005. The decline in spend in the latter half of the decade can be mostly attributed to decreasing cost of fixed and mobile voice telephony, along with declining use of fixed voice services. The recent decline in spend on fixed and mobile telephony comes despite the increased take-up and use of these services, as this section will go on to discuss.

Figure 1.10 Average monthly household spend on communications services



Source: Office of National Statistics/ Ofcom

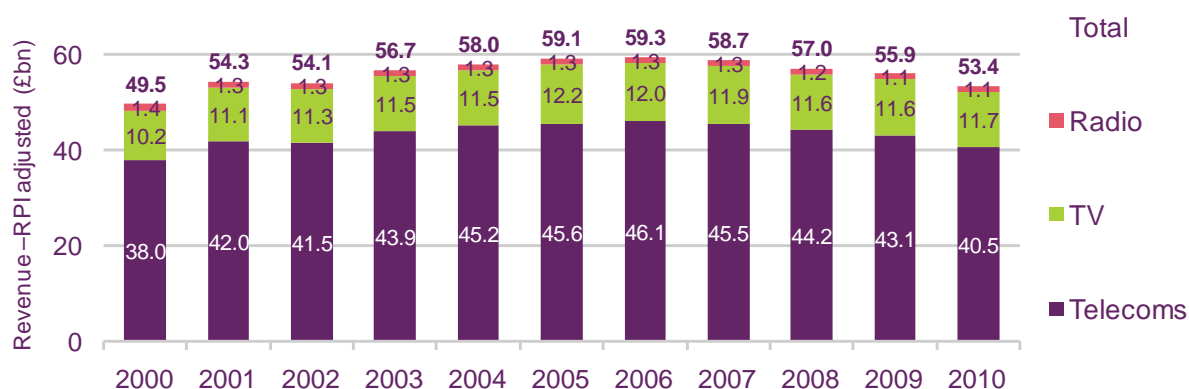
Notes: Radio data prior to 2004 was compiled using a different methodology and is not directly comparable to subsequent figures. TV includes PPV from 2004 onwards.

2010 % of average household spend uses an estimate of household spend based on data for the previous four years; figures are adjusted for RPI

In real terms, despite massive change, industry revenues have remained stable

Total annual communications industry revenue in 2010 was £53.4bn. This figure is remarkably similar to the (inflation adjusted) revenue of £54.3bn in 2000 (Figure 1.11). The first half of the decade saw gradual increases in total revenue as use of services increased, before a gradual decline in the latter half of the decade, to a large extent as a result of falling prices. This pattern was seen in both TV and telecoms revenues, with a relatively sharp decline in telecoms revenue seen between 2009 and 2010.

Figure 1.11 Communications industry revenue, RPI adjusted: 2010 prices



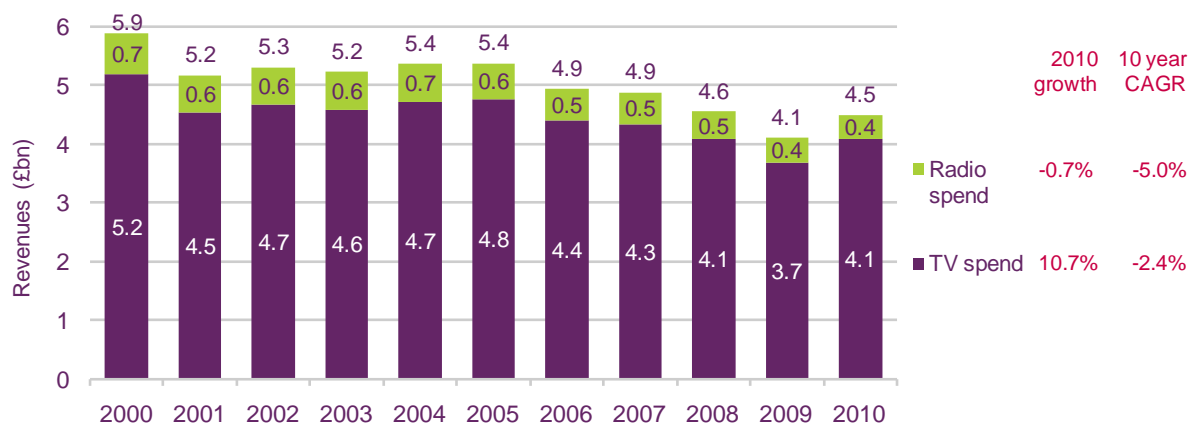
Source: Ofcom / operators

Note: Includes licence fee allocation for radio and TV, figures are adjusted for RPI

In real terms, spend by advertisers on broadcast channels declined during the decade

In real terms, annual spend on broadcasting channels by advertisers declined over the decade, falling from £5.9bn in 2000 to £4.5bn in real terms (Figure 1.12). The decline in spend was most marked between 2005 and 2009. 2010 saw a recovery in TV advertising spend, following the 2009 decline.

Figure 1.12 Real-terms broadcasting advertising spend, RPI adjusted: 2010 prices

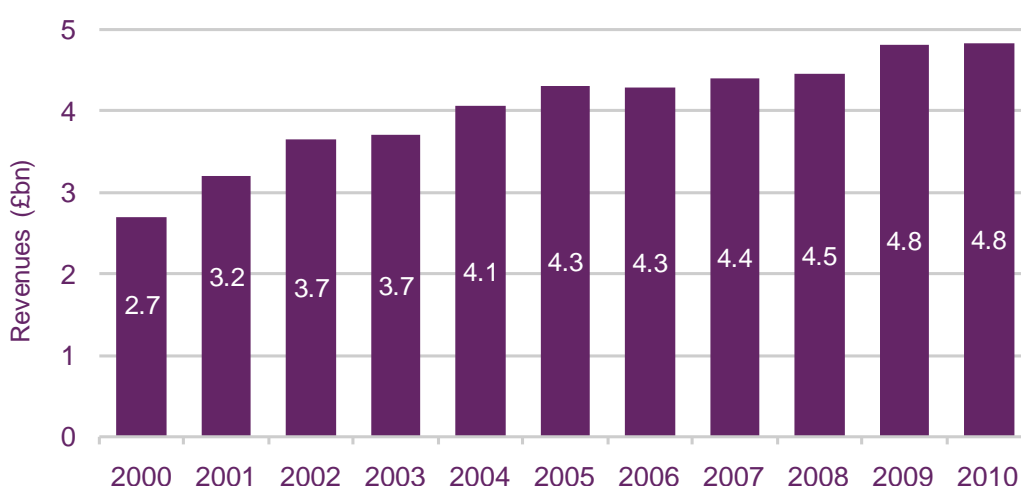


Source: Ofcom calculations based on AA/Warc Expenditure Report. Note: excludes sponsorship/branded content. Figures are adjusted for RPI

Pay TV subscriber revenue almost doubled in the past decade

As the number of pay-TV subscribers increased over the decade, the revenues generated by BSkyB and by the cable companies (latterly, Virgin Media) through television subscriber payments also increased in real terms. They rose sharply in the first half of the decade and continued to grow, albeit at a slower rate, in the latter half (Figure 1.13).

Figure 1.13 UK total pay-TV subscriber revenue

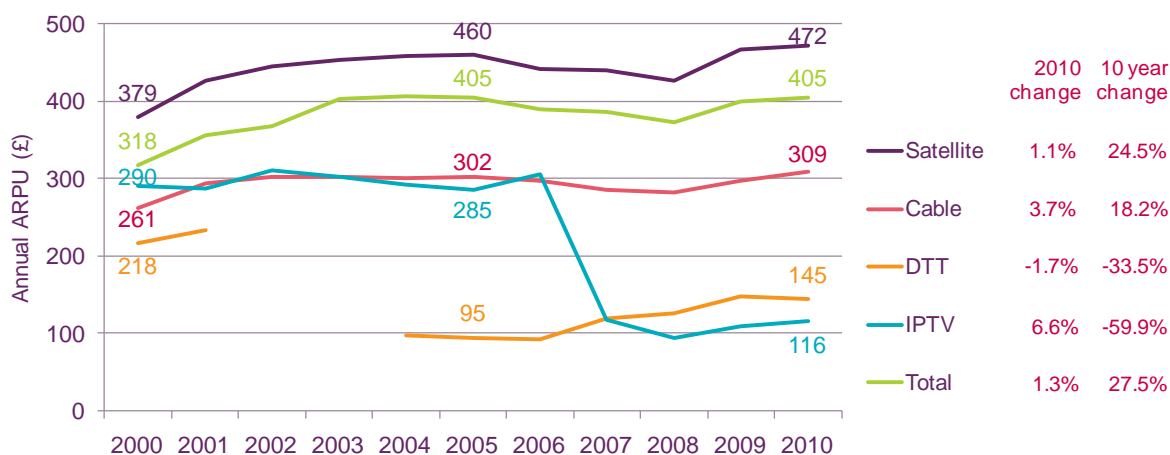


Source: Ofcom/ broadcasters. Notes: Figures are adjusted for RPI

Both take-up and ARPU have increased for pay-TV services

The increases seen in subscriber revenue have been driven by both growth in subscriber numbers and by growing average revenue per user (ARPU). Figure 1.14 shows how ARPU increased for all pay-TV platforms between 2000 and 2010.

Figure 1.14 Pay TV annual average revenue per user, RPI adjusted: 2010 prices



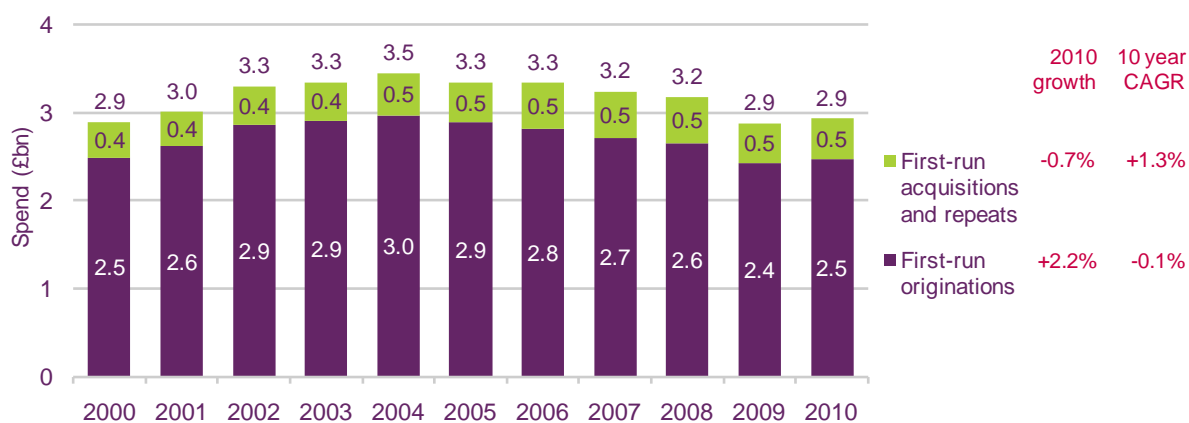
Source: Ofcom calculations based on data from Screen Digest. Figures are adjusted for RPI

Real-terms PSB spend ended the decade at the same level as ten years previously

In 2010 public service broadcasters (PSBs) spent £2.9bn on television programming, with £2.5bn of this being spent on first-run originated output. In real terms, this is at the same level recorded in 2000 (Figure 1.15).

The early part of the decade was characterised by real terms increases in the BBC’s licence fee, partly explaining rising expenditure. Although more recently, spend on first-run output has been on a downward trend, a range of factors could explain this including changes in the genre mix, production efficiencies, as well as increased investment in content management and distribution technologies, such as iPlayer.

Figure 1.15 Real-terms PSB network spending



Source: Ofcom/broadcasters. Figures include BBC One, BBC Two, BBC Three, BBC Four, CBBC, CBeebies, BBC News, BBC Parliament, ITV1, GMTV1/Daybreak, Channel 4 and Channel 5 and excludes S4C, BBC Alba and BBC HD; figures exclude nations/regions programming; figures are adjusted for CPI.

Commercial radio revenues have fallen over the last ten years

Figure 1.16 shows that, consistent with the advertising spend shown in Figure 1.11, commercial radio revenues declined during the past decade, falling in real terms from £0.7bn in 2000 to £0.4bn in 2010.

Over the same period Ofcom's estimate of the BBC's spend on radio remained broadly consistent.

Figure 1.16 Radio industry revenue and spend



Source: Commercial operators and Ofcom estimates based on BBC Annual Reports 1999/00-2010/11. Figures are in 2010 prices based on the Retail Prices Index (RPI). Note: figures are adjusted for RPI.

Telecoms industry revenues increased by 9% in real terms between 2000 and 2010

Telecommunications retail revenues increased by 9% in real terms between 2000 and 2010.

This increase in revenue was driven by growth in mobile revenues, while fixed-line revenue gradually decreased in the latter half of the decade as a result of growing fixed to mobile substitution and use of other forms of communications such as email (Figure 1.17).

Figure 1.17 UK fixed and mobile operator-reported UK telecoms industry retail revenue

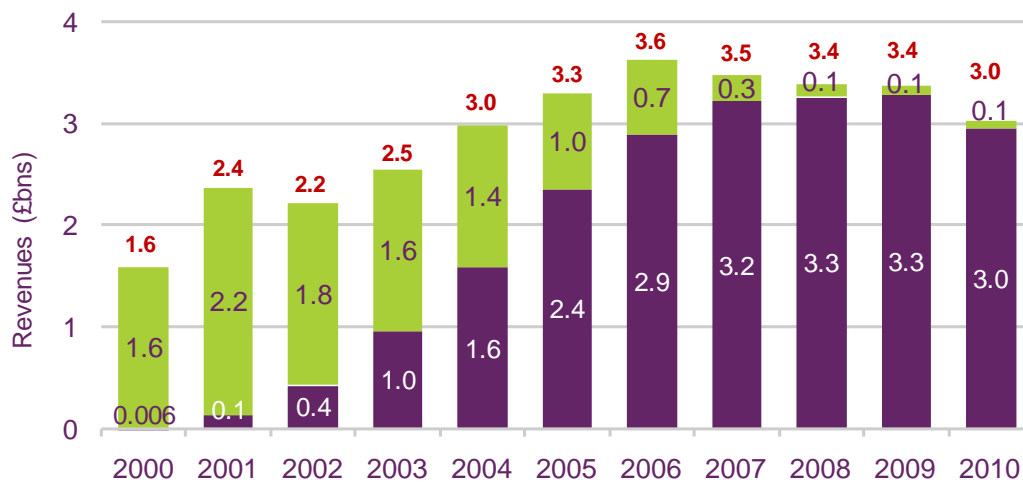


Source: Ofcom/ operators. Figures are adjusted for RPI.

Broadband emerged as a significant revenue source for the telecoms industry

Annual revenues from fixed broadband ended the decade at £3bn, having begun at virtually zero. In 2000 revenues from narrowband connections were £1.2bn, so growth in broadband revenues has been accompanied by a decline in narrowband revenues as consumers upgraded their connections.

Figure 1.18 UK fixed broadband and narrowband operator-reported UK telecoms industry retail revenue



Source: Ofcom / operators. Figures are adjusted for RPI.

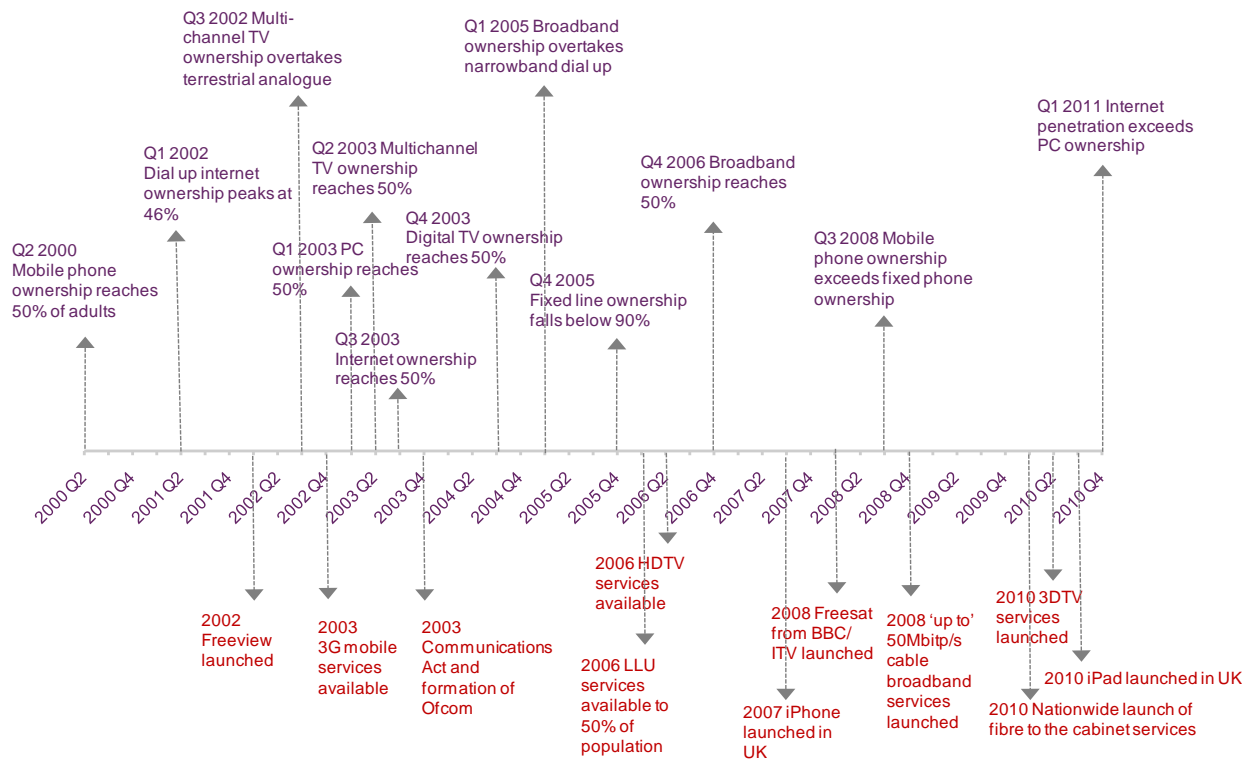
1.4.3 Take-up of communications services and devices

The decade saw many important milestones.

Internet connections, mobile phone ownership and multichannel TV have all become mainstream services, found in most homes

During the past decade there have been several notable milestones, both in service take-up and in service availability, as highlighted in Figure 1.19.

Figure 1.19 UK communications services milestones, 2000 – 2011



Source: Ofcom

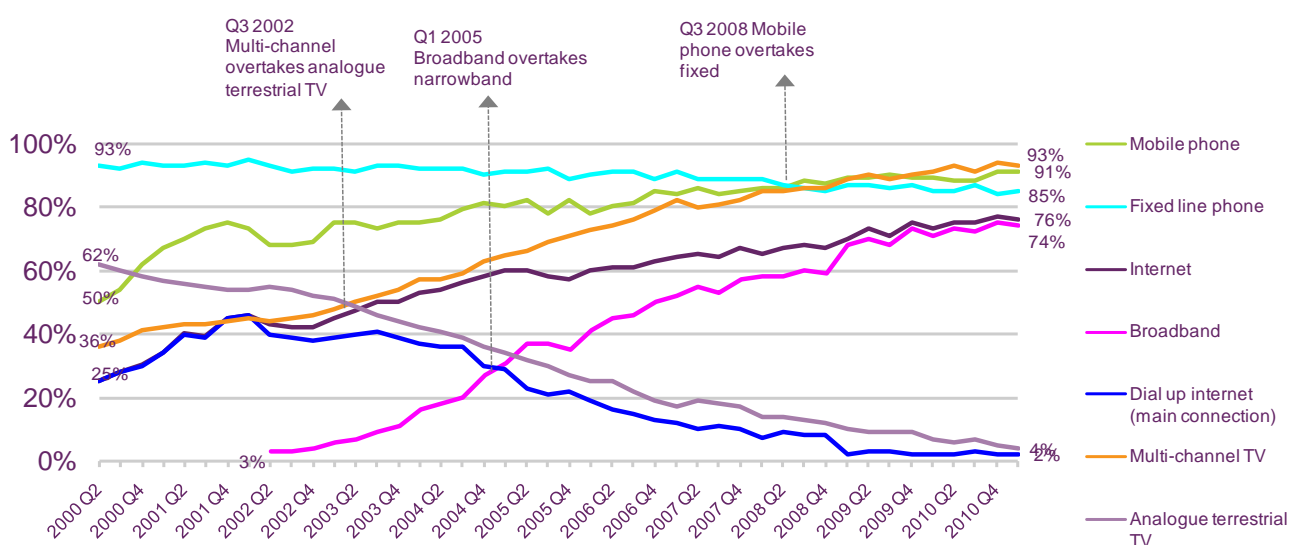
Several services have made the journey from niche to mainstream:

- Since 2000, the proportion of homes with an internet connection has tripled, increasing from 25% to 76%.
- Fixed and mobile broadband services have been launched and are now found in three-quarters of UK households (74%).
- Multichannel television penetration has increased by a similar amount, from 36% to 93%.
- In 2000, just half of UK adults said that they had a mobile phone – that figure now stands at 91%.

During the same period, fixed-line phone ownership has gradually declined, from 93% to 85%, as some consumers have chosen to rely entirely on mobile telephony.

Dial-up internet connections, along with four/ five channel analogue terrestrial TV services, are now almost extinct.

Figure 1.20 Take-up of communications services, 2000 – 2011



Source: Ofcom/ Ofcom survey research

Take-up of new devices, such as HD-ready TVs, DVRs and MP3 players, has become more widespread

The past decade has also seen technological advances that have resulted in new communications devices becoming available to consumers. Figure 1.21 shows take-up of communications devices that were not widely available ten years ago. HD-ready TV sets are now in six in ten UK homes, with a third of homes receiving HDTV channels.

Smartphone ownership has also risen rapidly, with over a quarter of all adults (27%) now owning one – a trend that is likely to continue over the coming years.

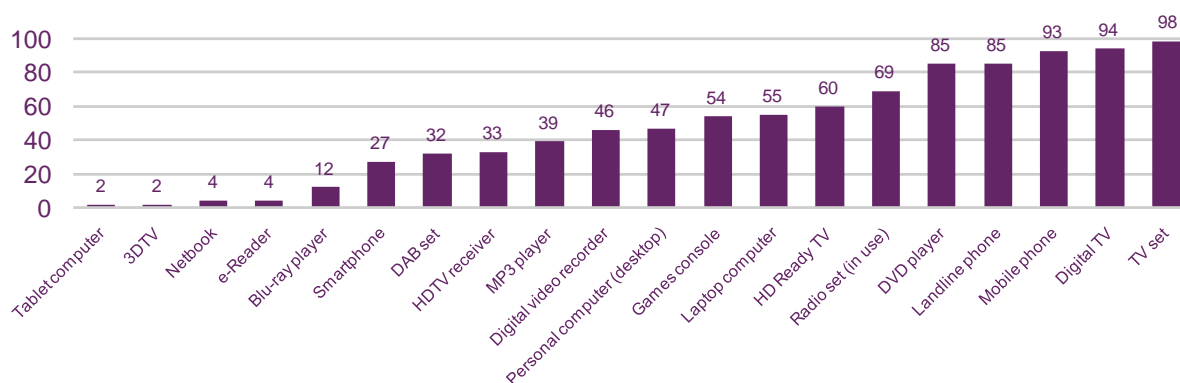
In the latter half of the decade broadband speeds have also been increasing. Ofcom’s Broadband Speeds research contains details of connection speeds that are achieved in the UK³.

However, some services have not proved to be so popular in the UK. PC-based telephone calls, made using an internet connection (VoIP) have proved less popular in the UK than in other nations. In 2009, 17% of UK adults claimed that somebody in their home used VoIP to make calls from a PC to a telephone, compared to 26% in France and 35% in Poland⁴. The prevalence of fixed and mobile telephone contracts with inclusive voice minutes means that for most call types there has been little cost incentive to use a VoIP service.

³ <http://stakeholders.ofcom.org.uk/market-data-research/market-data/broadband-services-data/>

⁴ Source: Ofcom, International Communications Market Report 2010, Figure 6.13, based on data from the European Commission E-Communications Household Survey Report.

Figure 1.21 Communications device ownership: Q1 2011



Source: Ofcom technology tracking survey, Q1 2011

Base: UK adults, n = 3,474

Increases in smartphone ownership have been accompanied by big increases in mobile data volumes in the latter part of the last decade

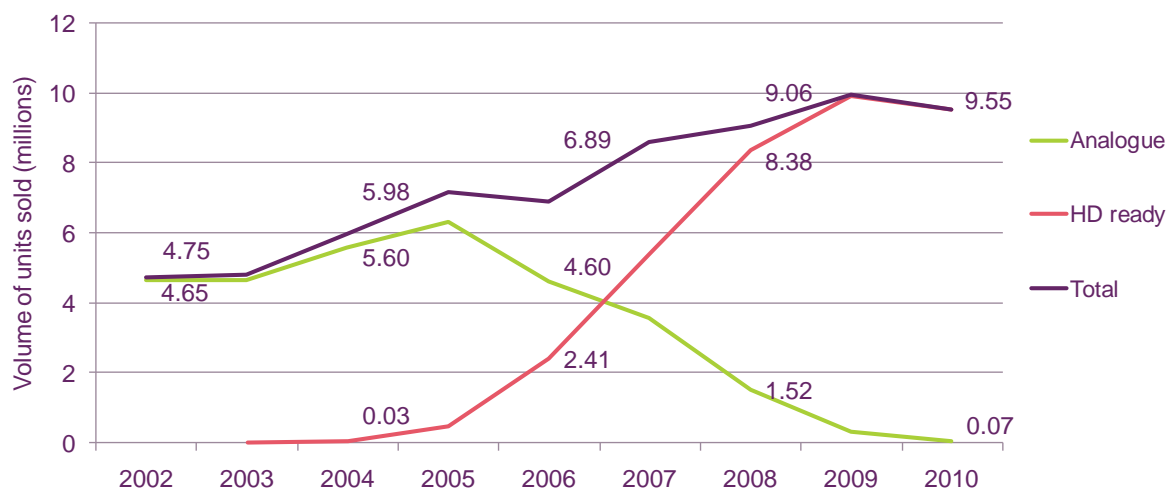
The first 3G mobile telephony services in the UK were launched in 2003, but availability of services that relied on 3G networks was at first, modest and mostly restricted to calls, texts, video calling, music downloads, games and short video clips. By the end of the decade, coinciding with the availability of smartphones, the range of services is much broader and the user experience is much better, with mobile-optimised web pages and applications available that facilitate mobile data access.

The recent growth in smartphone take-up has also been accompanied an increase in the volume of mobile data transferred over the UK’s mobile networks. This increased forty-fold between Q4 2007 and Q4 2010.

Television set sales have increased

The availability and subsequent fall in price of flat-screen, widescreen and HD-ready TV sets has led to an increase in sales of television sets. In 2010, 9.55 million TV sets were sold, compared to 4.75 million in 2002. Three in ten TV sets (31%) sold in 2010 had a screen size of 33” or above, which is indicative of a trend towards larger screen sizes.

Figure 1.22 Annual UK television set sales: 2002 - 2010



Source: GFK sales data

There are also indications that new communications services are becoming established, mainstream services more quickly. As illustrated by Figure 1.23 communications services once took around 8-12 years to reach 50% penetration, but these periods have now shortened.

New communications services are being adopted faster than ever

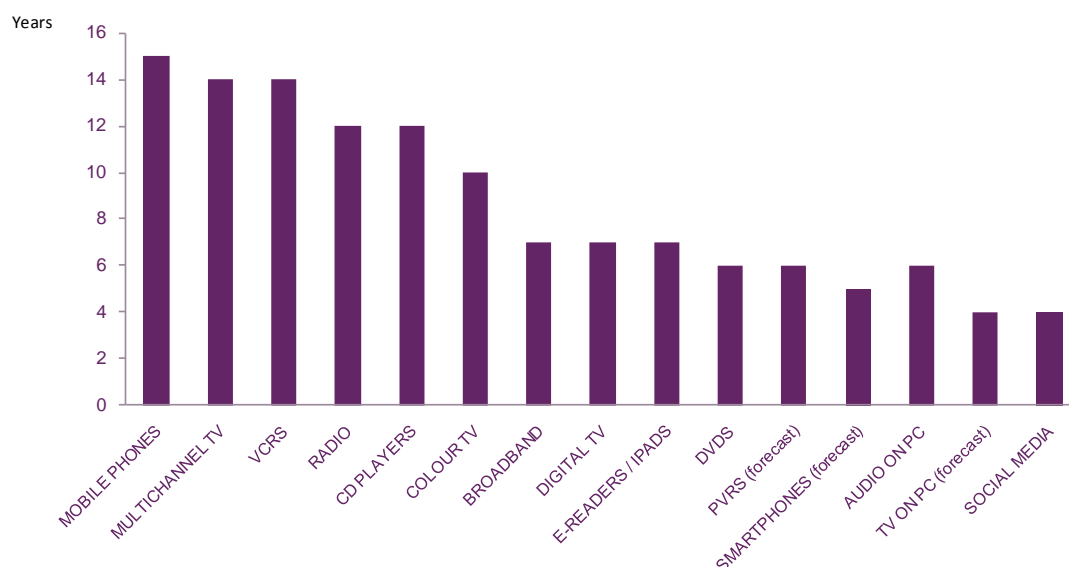
At the beginning of the last decade the launch of a new communications service was the beginning of a relatively slow adoption curve. As shown in Figure 1.23 mobile phones and multichannel television both took more than a decade to reach 50% penetration.

From 2000 to 2010, when services such as social networks and online TV were launched, they reached 50% penetration within 4-5 years. Analysts expect smartphones to reach the same landmark equally quickly.

This rapid change has typified the latter half of the past communications decade, enabled by higher penetration of computers, greater media literacy, increased availability of mobile data services and faster fixed broadband connections. These enablers have all been established within the same decade.

It seems likely that the rapid adoption of new communications services will continue during the current decade.

Figure 1.23 Years taken to achieve 50% penetration



Source: Oliver & Ohlbaum, date provided: May 2011.

1.4.4 Consumption of communications services

Time spent consuming communications services has increased

Last year we published our *Digital Day* research⁵, which found that, on average, nearly half of people's waking hours (45%) are spent using media and communications services. By

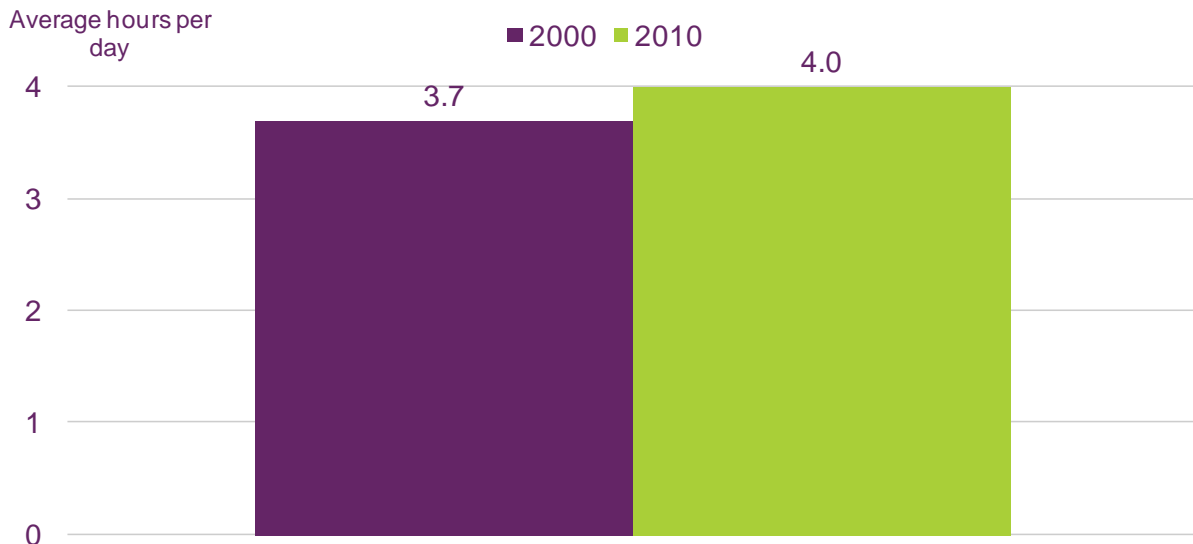
⁵ <http://stakeholders.ofcom.org.uk/market-data-research/market-data/digital-day/>

multi-tasking, people squeeze more media and communications consumption into this time; an equivalent of 8 hours 48 minutes into 7 hours.

Overall television consumption has remained relatively stable

Consumption of TV services has remained relatively stable over the same time period, with BARB data suggesting that the average hours of daily television viewing has increased from 3.7 hours to 4.0 hours.

Figure 1.24 Television consumption



Source: BARB

The resilience and evolution of broadcast TV

Consumers now have access to much greater choice and control over the ways that they consume audio-visual content in (and away from) the home than they did at the start of the decade. As well as broadcast TV, many can now watch video content streamed onto a PC connected over the internet to any one of a number of devices (PC/laptop, mobile device or games console). Audio-visual content can also be captured, stored and viewed at a later date, and paused in real time.

In this context it is notable that broadcast television viewing appears to have increased, from an average of 3.7 to 4.0 hours per day⁶.

Television viewing is as popular as ever, despite the increased choice and control available to consumers. This is probably because the television viewing experience has evolved, in many ways:

- Screen sizes have increased, offering a better-quality viewing experience.
- Picture quality has improved, with the launch of high-definition TV channels.

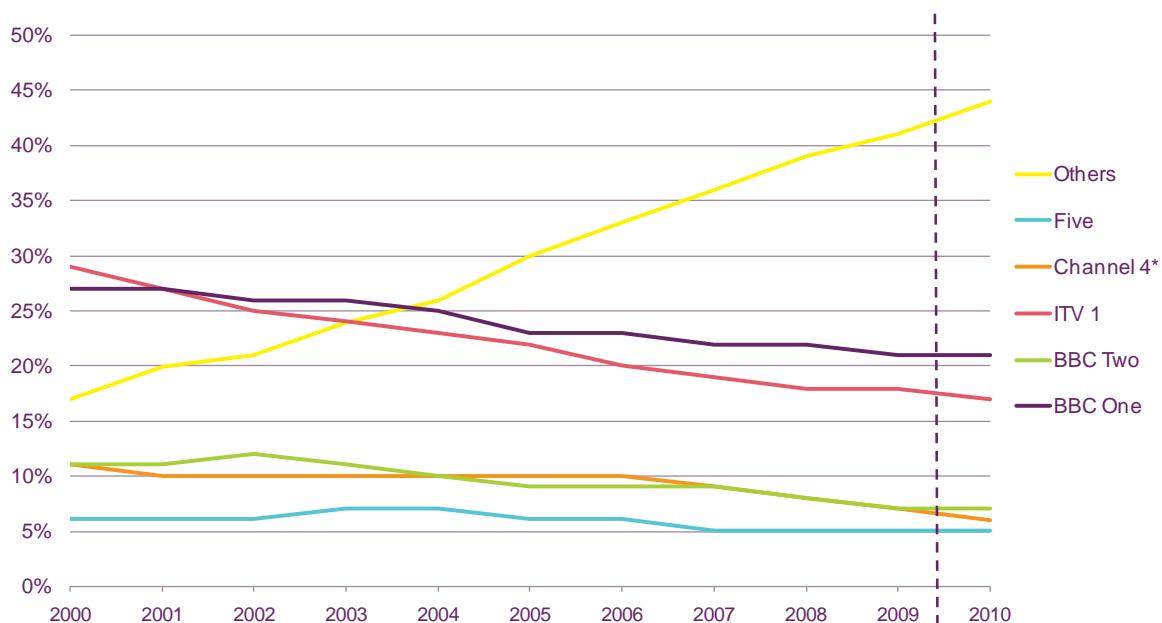
⁶ This change should be treated with caution due to changes in the make-up of the BARB panel that were made during this time period.

- Digital video recorders (DVR), with features such as ‘series link’ have given viewers more choice of what they watch and when.
- Broader choice of channels available, with multichannel penetration increasing from 23% to 93% of homes.
- Innovative commissioning strategies: while investment in content has been relatively stable, broadcasters have focussed spend on fewer, bigger and more impactful programmes which generate string audience engagement and approval.
- Online content complements TV viewing. Many viewers appear to treat television-related content online as a complement to broadcast TV services. Our research last year showed that some viewers multi-task by watching television at the same time as surfing the internet. Online catch-up services may act as a driver to television viewing, and increase viewer loyalty to television series.

TV viewers are watching a broader range of channels

As more homes have gained access to multichannel TV services over the decade, the share of viewing of the five main PSB channels has declined, as some viewing has moved to multichannel services. The ‘others’ category includes digital channels that are owned by the PSBs.

Figure 1.25 All day channel shares in all homes: 2000 – 2010



Source: BARB, All homes

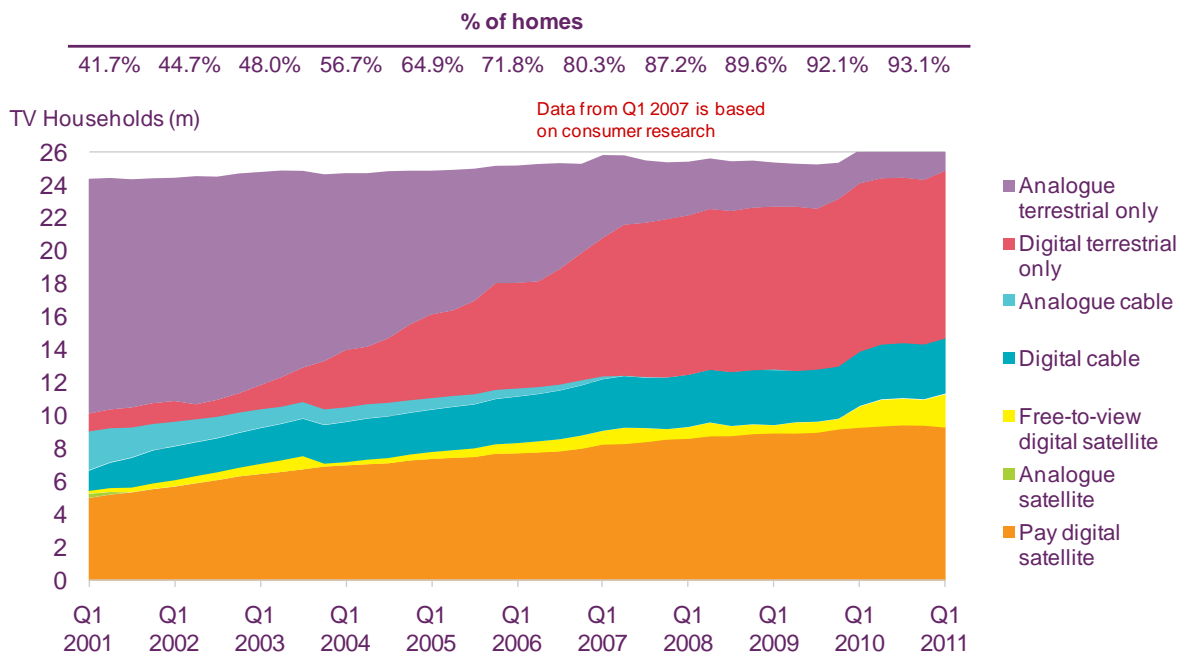
Notes: i) New BARB panel introduced 1 Jan 2010. As a result pre-e and post-panel change data must be viewed with caution (see dotted line). * C4 data 2006-09 includes S4C; in 2010 it is excluded as S4C became a separate channel following DSO in Wales. S4C 2010 share = 0.1%

Take-up of pay-TV services has become more widespread

As digital switchover has approached, we have seen a gradual increase in the number of homes that pay for their television service. Today, approximately 9.3 million homes have a pay-satellite television service, an increase from 5 million in 2001. Subscription TV delivered

by cable has remained broadly flat over the period, standing now at approximately 3.4 million homes.

Figure 1.26 Multichannel take-up by platform, percentage of homes: 2001-2011

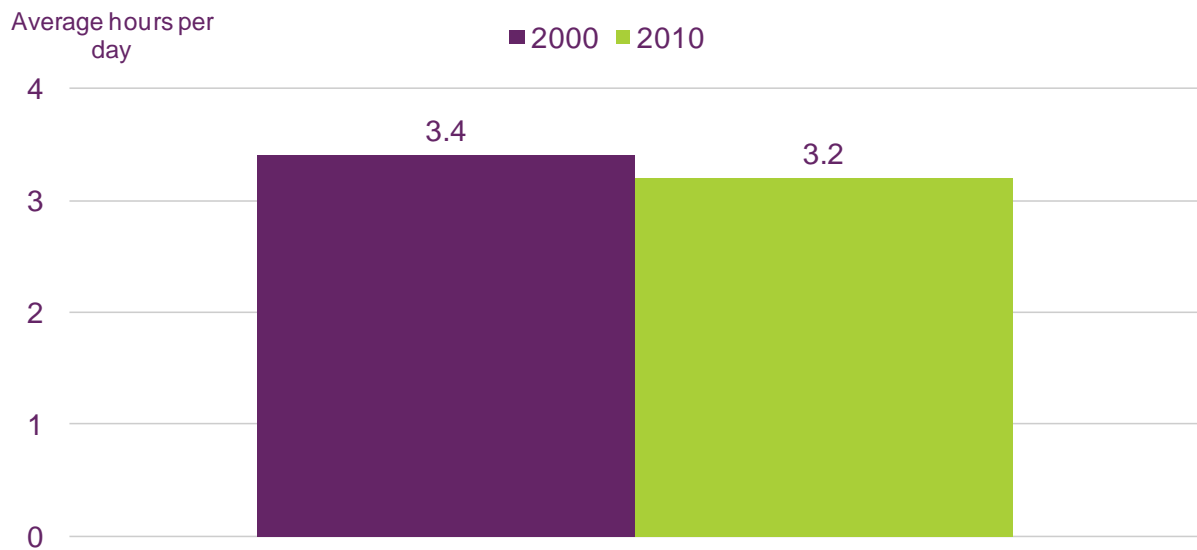


Source: Ofcom, GfK NOP research from Q1 2007, previous quarters include subscriber data and Ofcom market estimates for DTT and free satellite. Note: Digital terrestrial relates to DTT-only homes

Overall radio consumption has remained relatively stable

Consumption of radio remained relatively stable over the past decade, with RAJAR data suggesting that the average hours of daily radio listening has fallen from 3.4 hours to 3.2 hours.

Figure 1.27 Radio consumption



Source: RAJAR

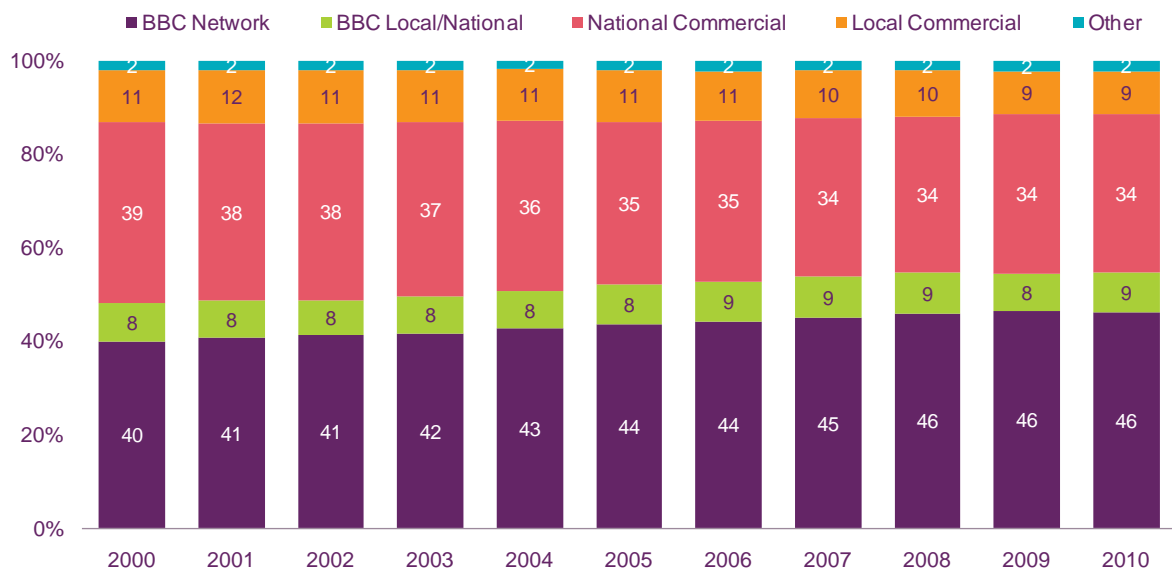
National commercial radio stations have gradually lost share to BBC network stations

During the past decade the listening share of BBC network stations increased from 40% to 46%, with the share of national commercial stations falling from 39% to 34% (Figure 1.28).

Smaller shifts in share were recorded for local/ regional stations, with local commercial's share declining by two percentage points, and BBC local/ national stations increasing its share by one percentage point.

Figure 1.28 Radio listening shares: 2000-2010

Listening hours share for BBC and commercial stations, local/national

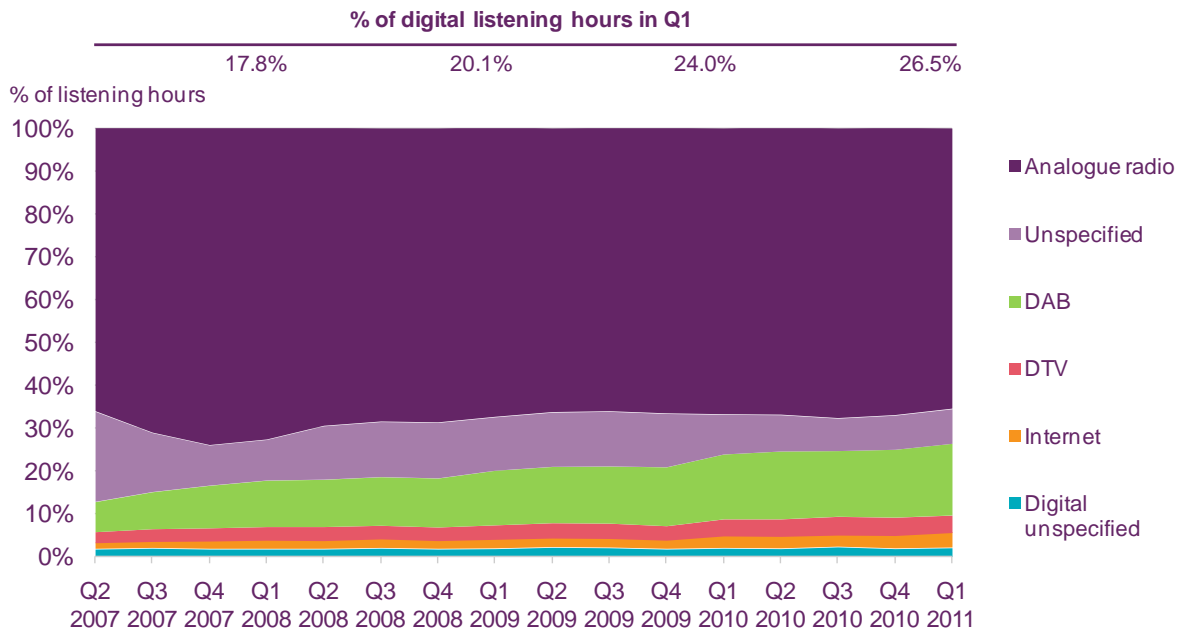


Source: RAJAR, All adults (15+), data relates to full 12 months of each corresponding year

Radio listening through a DAB tuner or over the internet has grown in the last ten years

Figure 1.29 shows that the total share of radio listening over digital platforms (especially DAB and internet) has gradually increased since 2007 (comparable data are not available before this). However, analogue radio has remained fairly resilient in its hold on the large majority share of listening. The data in Figure 1.28 shows a reduction in share (although in the chart below this is less obvious, as the share of listening that was unspecified in measurement has been reduced).

Figure 1.29 Digital radio listening share, by platform

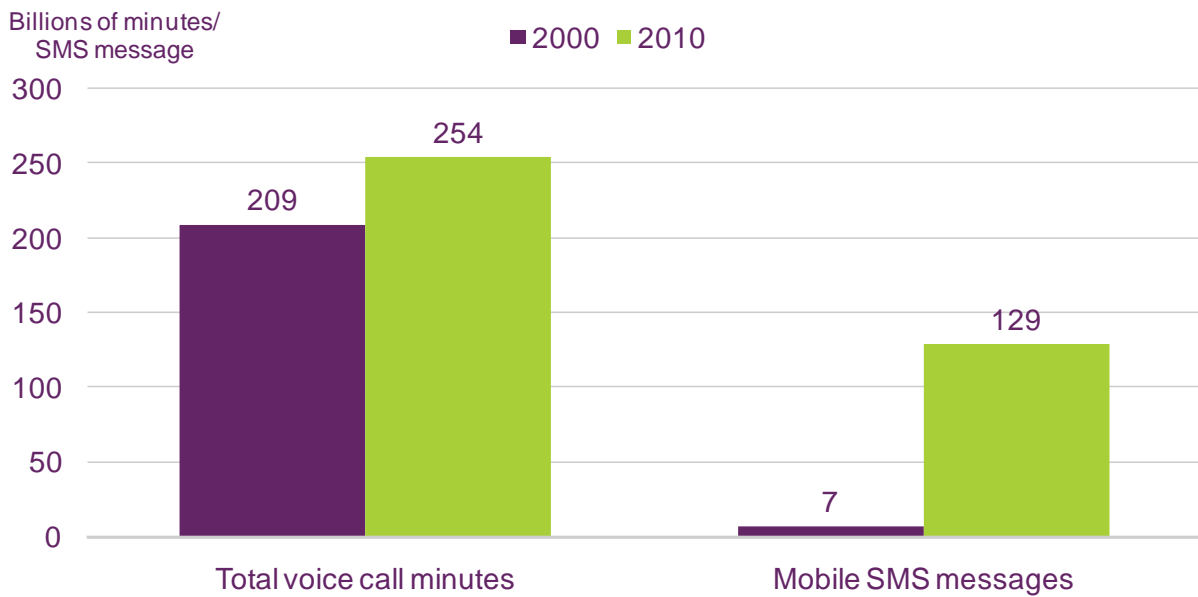


Source: RAJAR / Ipsos MORI / RSMB

Between 2000 and 2010 SMS volumes increased by around 2000%

Combined fixed and voice telephony volumes have increased by approximately 20%, with SMS message consumption having increased hugely - up by around 2000% (Figure 1.30).

Figure 1.30 UK call and SMS volumes



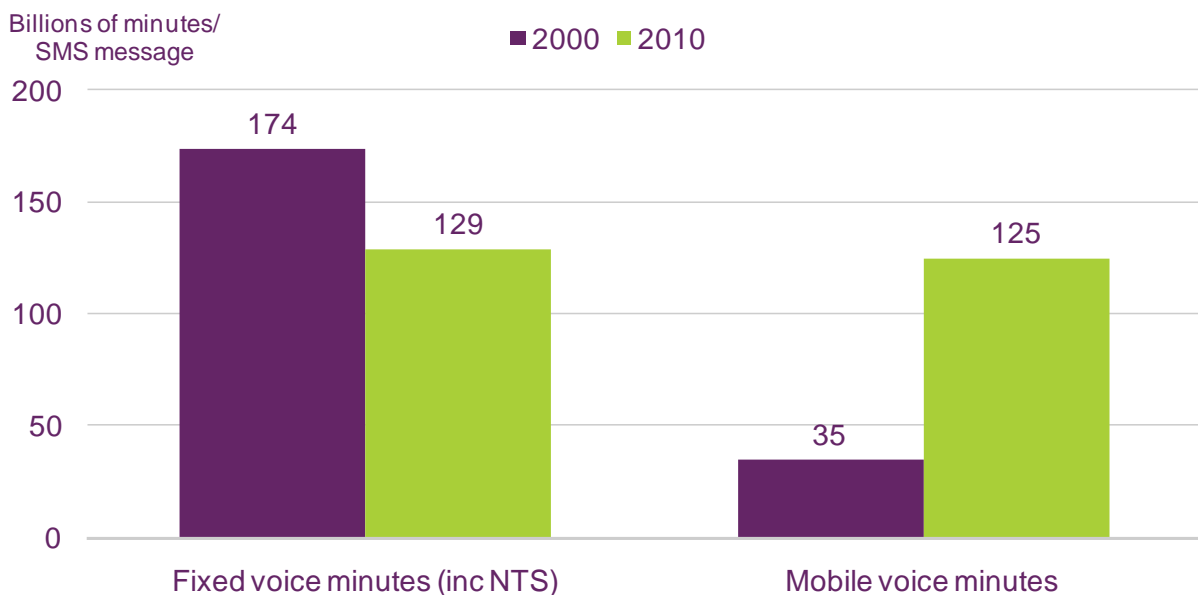
Source: Ofcom/ operators

Fixed voice volumes remain just higher than mobile voice

Fixed call minutes have fallen, but this is more than compensated for by the increases in mobile voice minutes: these increased by around 350% between 2000 and 2010.

Figure 1.31 shows that volumes of fixed voice minutes remain greater than mobile voice volumes, although only by a small margin.

Figure 1.31 UK call volumes

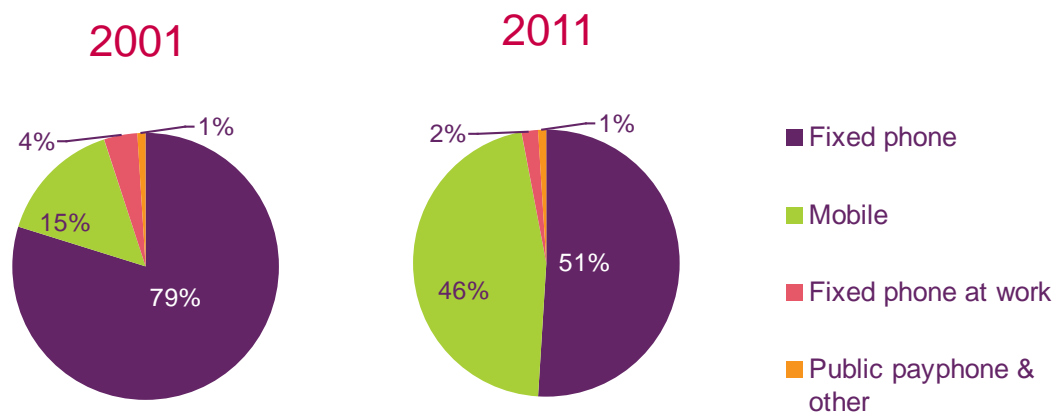


Source: Ofcom/ operators

Mobile became the main method of telephony for many consumers

The changes in use of fixed and mobile telephony is also illustrated in Figure 1.32, which shows which method consumers consider to be their main method of making and receiving calls. In 2001, 15% of the adult population claimed that mobile was their main method of making and receiving telephone calls; today this figure has risen to 46%. Consistent with the data on call volumes, fixed telephony still remains the main method of making and receiving calls for a marginally greater proportion of UK adults (53%, when calls made from a fixed-line phone at work are included).

Figure 1.32 Main method of making and receiving telephone calls (claimed)



Source: Ofcom/ Ofcom technology tracking survey, Q1 2011, Q1 2001

2011 Base: UK adults aged 16+, n = 3474

QC3. Which of these do you consider to be your MAIN method of making and receiving telephone calls?

Increased choice in fixed and mobile telephone networks has led to a more diverse range of suppliers

In Q3 2000 eight in ten (79%) homes had a BT telephone line, with most of the remainder using a cable supplier. A small proportion of homes (6%) used another supplier for their calls, using indirect access methods (but still requiring a BT line). The introduction of wholesale line rental and LLU has increased consumers' choice of providers, resulting in a fall in the proportion of fixed-line customers using BT and a sharp increase in the proportion of homes using retail suppliers other than cable and BT. In Q2 2010 just over half (56%) of fixed-line homes used BT, with almost one in five (18%) using another supplier.

Figure 1.33 Use of fixed-line suppliers

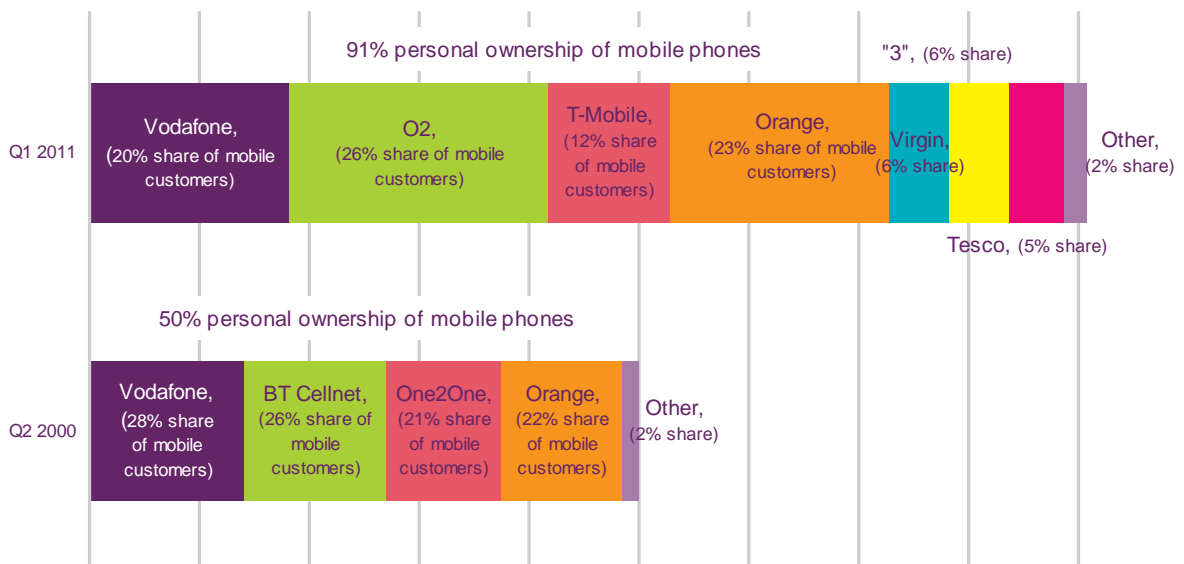


Source: Ofcom communications tracking survey. Q3 2000, Q2 2001-2003, Q1 2004, Q2 2005-2010
 Base: Those with a landline phone at home
 QC5. Which of these do you consider is your main supplier?

Consumers have taken advantage of increased choice of mobile providers

There has also been a subtle shift in the profile of mobile providers used by consumers in response to increased choice. In Q2 2000, the four main mobile providers accounted for virtually all mobile networks used. By 2011 this had changed somewhat, with most of the main networks losing share of retail customers to new suppliers (some of whom operate a 'virtual' network).

Figure 1.34 Mobile providers used most often by residential consumers

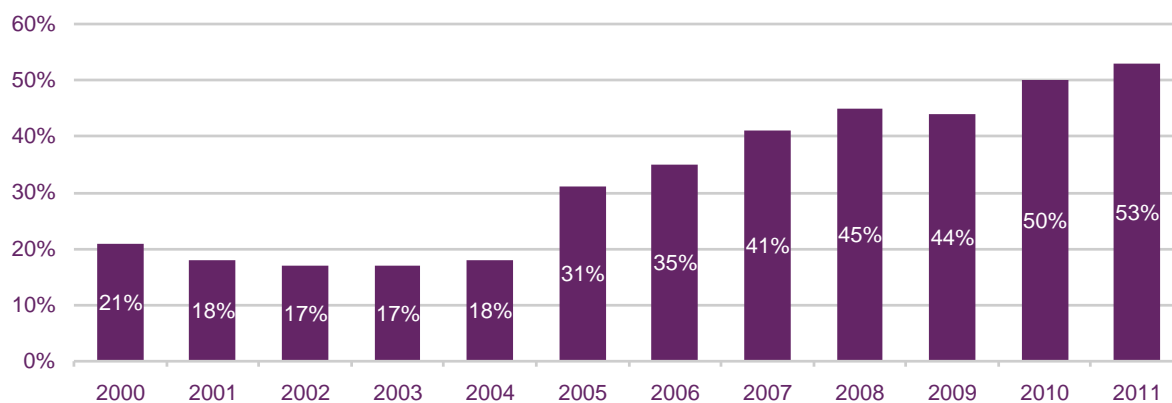


Source: Ofcom research (2000), Ofcom research (2011)
 Base: Adults who personally own or use a mobile phone, (Q2 2000, 1,007) (Q1 2011, 2,054)
 QD3. Which mobile network do you use most often?
 Note: %s on the bars in the chart indicate share of residential customers who used that network 'most often'

Bundles have become increasingly popular

The way in which consumers purchase communications services has also evolved over the past ten years. Today, over half (53%) of consumers purchase more than one communications service from the same supplier. Figure 1.35 demonstrates that this way of purchasing has almost doubled in popularity during the last six years.

Figure 1.35 Proportion of consumers purchasing bundled communications services



Source: Ofcom communication tracking survey

Base: All adults 15+ (2005, 8766) (2006, 9134) (2007, 8960) (2008, 7496) (2009, 8199) (2010, 10611) QG1. Do you receive more than one of these services as part of an overall deal or package from the same supplier?/ QG3. Do you receive a discount or special deal for subscribing to this package of services?

Note: for 2000 – 2004 Cable telephone use is reported as a proxy for bundling, which may overstate the percentages, since some customers may have been purchasing cable telephone services without television or internet.

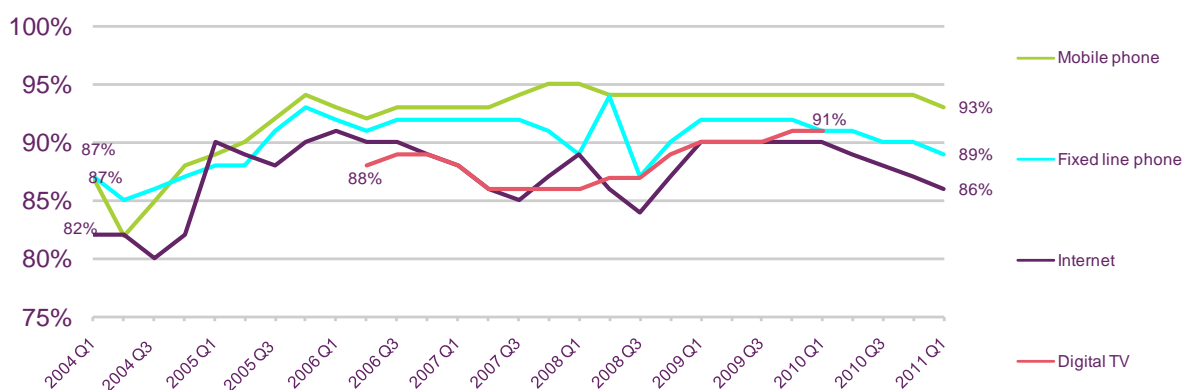
1.4.5 Satisfaction

Consumer satisfaction with communications services has gradually increased

Since 2000, satisfaction with communications services appears to have gradually increased, with the most rapid increase happening in between 2004 and 2006 (Figure 1.36). With the improvements in service availability and performance (particularly in fixed broadband speeds and 3G availability), a larger increase in consumer satisfaction might have been expected. But as services have improved consumers' expectations have increased, so satisfaction levels have not changed dramatically.

Overall satisfaction with mobile phone service ended the decade at 93%, having been at 87% in 2000. Over the same period, overall satisfaction with fixed line telephony increased slightly, from 87% to 89% and satisfaction with internet service increased from 82% to 86%.

Figure 1.36 Overall satisfaction with communications services: Q2 2000 – Q1 2011



Source: Ofcom/ Ofcom research % of adults who are very or fairly satisfied.

Note: Data have been interpolated for some survey periods where the question was not asked.

1.4.6 Conclusion

As described in this section, the past decade has witnessed a transformation of the UK communications market. The main underlying cause has been the huge growth in competition in all parts of the communications sector, which has led to falling prices, increased choice and new innovations. Improvements in technology, meanwhile, including the advent of smartphones, DVRs and MP3 players, have also led to huge changes in how consumers engage with communications services.

These related trends of growing competition and improving technology are almost certain to continue in the future, meaning that transformation of the communications sector is likely to accelerate rather than slow down. Devices such as smartphones and tablet computers are likely to become more popular, and as more and more devices are connected to the internet, online services will become more diverse and be used for a wider range of purposes, while fixed and mobile broadband connections become faster. Changing consumer behaviour is likely to determine which firms succeed and which fail to adapt. In another decade's time, therefore, today's communications market is likely to appear as archaic as our snapshot of 2000 – analogue, dial-up, limited choice - does today.

1.5 The smartphone revolution

1.5.1 Introduction

Smartphones are capable of a range of functions including playing audio and visual media, providing voice and data telecommunications, allowing access to emails, downloading files and applications, as well as viewing websites and surfing the internet. The smartphone user has the ability to download multiple applications, giving each individual a unique handset offering unlimited functions developed through personal choice. There are currently an estimated 12 million adult consumers in Great Britain who use a smartphone⁷.

The research presented in this chapter provides a detailed snapshot of people's relationships with their mobile phones, and in parallel, looks at how smartphone users have a stronger relationship with their phone and greater phone dependency. It examines how smartphone users display clear differences in social attitudes towards the use of mobile phones and how smartphones have affected people's daily lives. The sample is drawn from GB adults (16+) and teenagers (aged 12-15).

Compared to users of 'traditional' mobile phone handsets, smartphone users use their phone more and claim to be more addicted to their phone, leaving it switched on for longer and displaying different social behaviours and work-life balance.

1.5.2 Summary of key findings

Consumer take-up of smartphones

- There has been a huge growth in smartphone take-up in past 12 months. Over a quarter (27%) of UK adults are smartphone users⁸, with 59% of these claiming to have purchased their phone in the past year. This represents an estimated 12 million adult consumers.
- Smartphone users are more likely to be male, younger and from ABC1 social groups than regular mobile phone users. Almost half (47%) of all teens (aged 12-15) have a smartphone.
- The Apple iPhone is the most popular brand overall, but BlackBerry handsets are the most popular choice among younger consumers.
- Contract packages that include smartphone handsets may have helped the growth of the devices. Seventy-seven per cent of adults with a smartphone are on a contract, compared to 35% of all standard mobile phone users. Only 16% of smartphone adults are on 'pay as you go' (PAYG) compared to 63% of standard mobile phone users.

⁷ A smartphone was described in our survey as 'a phone on which you can easily access emails, download files and applications, as well as view websites and generally surf the internet. Popular brands of Smartphone include BlackBerry, iPhone and Android phones such as the HTC Desire'.

⁸ Figure from the Ofcom technology tracker Q1 2011, base 3474 UK adults. The smartphone research in this chapter is based on a GB sample of 2073 adults, which recorded smartphone penetration of 26%.

Traditional phone activities: smartphone users versus regular mobile users

- Phone calls and text messages are still the core functions of a smartphone and the functions that most people wouldn't want to live without. Calls are the most important function for adults, and text messages for teens and young adults.
- Call frequencies are higher among smartphone users than among standard mobile phone users. Eighty-one per cent of smartphone owners make and receive calls on their mobile every day, compared to 53% of regular phone users. Frequency of sending text messages is also higher among smartphone users; 79% of smartphone owners claim to make and receive SMS texts on their mobile every day, compared to 50% of standard mobile phone users.
- Younger adults and teens send and receive significantly higher numbers of SMS texts than older people, and teens send more texts than make calls.

Activities other than calls and texts among smartphone users

- Activities that were traditionally PC/laptop based, such as sending emails, surfing the net and social networking are now commonly conducted on a smartphone.
- The top three activities/functions used regularly on a smartphone by adults are email (46%), internet surfing (41%), and social networking (40%).
- The top three activities/functions used regularly by teens are social networking (62%), listening to music (62%), and playing games (50%).
- Smartphones are also affecting people's other activities. Over half of all adult smartphone users (55%) and two-thirds of teens (68%) claim to be doing another activity *less*, now that they have a smartphone.
- One third of adult smartphone users (33%) agree that their phone is more important for accessing the internet than any other device. For teens the figure is 38%.
- Over half (55%) of adults and three-quarters (74%) of teens have used their smartphone for social networking, with 40% of adults and 62% of teens doing this regularly.

Smartphones and social relationships

- The majority of smartphone users (81%) have their mobile switched on all of the time, even when they are in bed. This compares to 60% of standard mobile phone users.
- Smartphone users have a much stronger relationship with their phone than standard mobile phone users, with 37% admitting high levels of 'addiction' to their phone (scoring seven or more out of ten), compared to 12% of standard mobile handset users.
- Teens, in particular, are likely to have high levels of addiction to their smartphones, with 60% rating their level of 'addiction' to their phone at seven or higher. Teen girls are more addicted to their phones than boys.
- There are indications that smartphones are encroaching upon 'traditional' social interaction, with 51% saying that they ever use their phone while socialising with

others and 23% using their smartphone during a meal with others. Twenty-two per cent of smartphone users even claim to use it in the bathroom/toilet – these figures are all significantly higher than for standard mobile phone users.

- Teen smartphone users are generally much more likely to use their phone when socialising with others (66%), and at mealtimes with others (34%). Almost half (47%) of teen smartphone users claim to use it in the bathroom/toilet – this compares to just under one third (31%) for standard teen mobile phone users.

The inter-relationship between work and personal life in mobile phone use

- A significant majority (93%) of smartphone users who use a smartphone at work say they take part in personal phone calls during work hours. This compares to 88% among standard mobile phone users. Eighty-five per cent take part in work-related phone calls during personal time.
- Smartphone users are also more likely than regular mobile phone users to make work-related calls while they are on holiday

1.5.3 Methodology

In order to understand this relatively new marketplace in more detail, Ofcom commissioned an omnibus survey among a representative sample of 2073 GB adults to explore people's relationships with their mobiles – with a particular focus on looking at the differences between regular mobile phone users versus smartphone users. The survey was run by Kantar Media as part of the TNS CAPI (computer aided personal interviewing) omnibus. Fieldwork took place among a representative sample of GB adults between 18 March and 22 March 2011.

In addition to the adults' survey, Ofcom also commissioned a survey among children/teens aged 12 -15 using the TNS Online teens omnibus survey. This is an online self-completion survey. Invitations to complete the questionnaire are emailed out to a sample of GB online panellists who have agreed to participate in market research and have children in the relevant age group. Parents pass the completion of the survey on to their child, having agreed that the child can participate. This survey ran among a representative sample of 521 children/teens between 18 March and 22 March 2011. For simplicity, the 12-15 sample is referred to as the 'teen sample' throughout this report.

A similar questionnaire was used for both the adults' and the teens' surveys.

The adults' and the teens' surveys are reported together throughout this chapter, for comparative purposes, although the differences in the methodologies should be noted (face-to-face survey versus online survey).

1.5.4 Consumer take-up of smartphones

There has been huge growth in smartphone take-up in the past 12 months

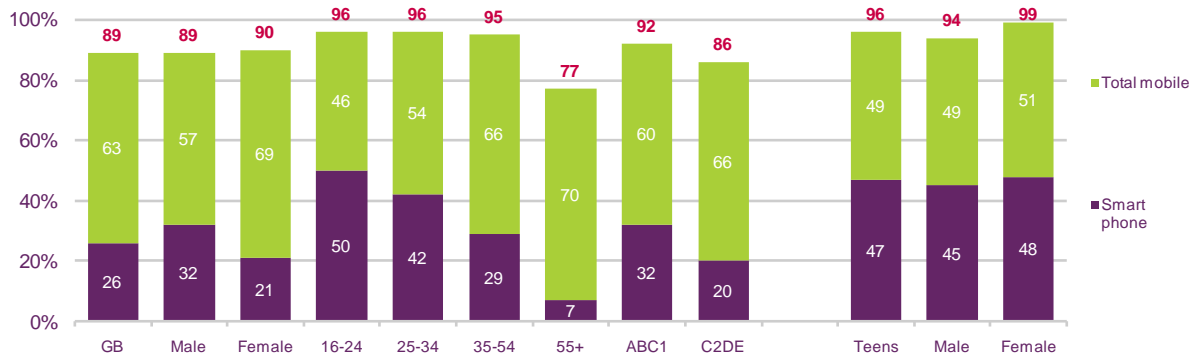
One quarter (27%) of UK adults are smartphone users. This represents an estimated 12 million adult consumers.

Teens and young adults are the age groups most likely to have a smartphone handset

Smartphone ownership is much higher among younger teens than in the general adult population; almost half (47%) of all teens aged 12 – 15 have one. There are no differences in take-up by gender among teens.

There are significantly higher levels of take-up of smartphones among males (32%), in younger age groups (50% among 16-24s, 42 % among 25-34s), and in higher socio-economic groups (32% among ABC1s).

Figure 1.37 Take-up of mobile phones / smartphones among the GB population



Source: Ofcom omnibus research, March 2011

Q2. How many mobile phones, if any, with different telephone numbers do you personally use at least once a month Q.3A Do you personally use a smartphone ?

Base: Total GB adults aged 16+ (n = 2073). Total GB teens aged 12 – 15 (n = 521).

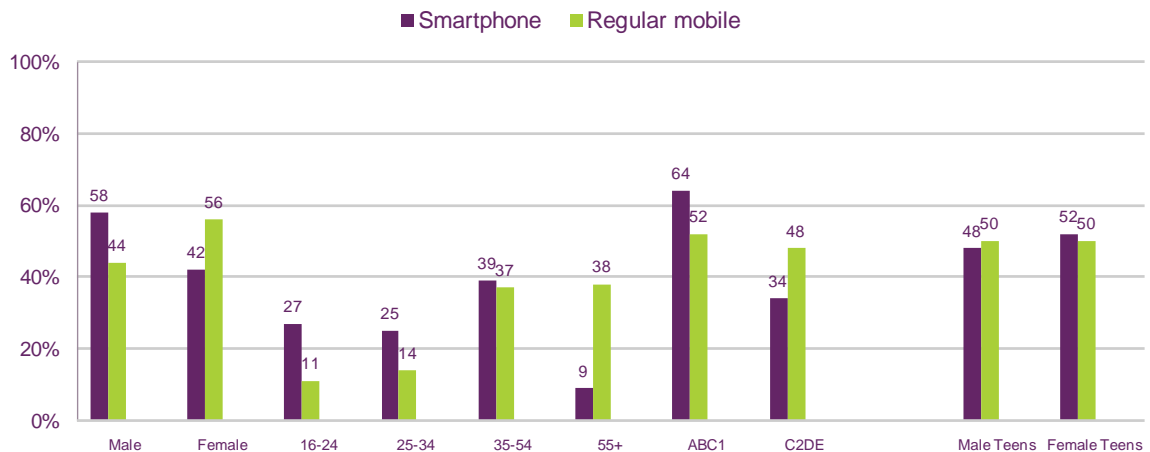
The take-up of this technology is a relatively new phenomenon, with 59% of adults acquiring their smartphone in the past year and 33% in the last six months. Eighty-seven per cent of teens got their smartphone in the past year, and 67% in the last six months.

Smartphone users tend to be male, younger and more ABC1 than standard mobile phone users

When looking specifically at demographic profiles of regular mobile phone users compared to smartphone users, there are some key differences:

- smartphone users are more likely to be male than regular mobile phone users (58% compared to 44%);
- they are also younger (27% are 16-24 compared to 11% of regular mobile phone users); and
- Sixty-four per cent are ABC1, compared to 52% of standard mobile phone users.

Figure 1.38 Demographic profile of smartphone users versus standard mobile phone users



Source: Ofcom omnibus research, March 2011

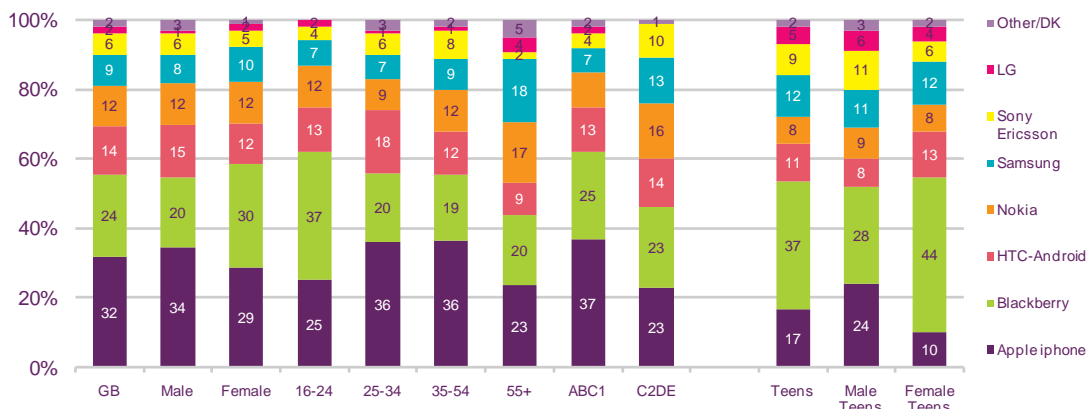
Q2. How many mobile phones, if any, with different telephone numbers do you personally use at least once a month Q.3A Do you personally use a smartphone ?

Base: GB adults who use a mobile (n = 1810). GB teens aged 12 – 15 who use a mobile (n = 502)

The Apple iPhone is the most popular brand of smartphone, but BlackBerry handsets are a favourite choice among younger consumers

Apple’s iPhone is the most popular brand of smartphone, with a 32% share among adults. This is the brand of choice among ABC1s (37%) and is even higher among ABs alone (44%). But BlackBerry handsets have also taken a significant share of the market (24%) and are particularly popular among younger adults and teens (37% each). Female teens, in particular, appear to have a preference for BlackBerry handsets (44%). Anecdotal evidence suggests that this preference is driven by the BlackBerry messenger service (BBM) which offers a free alternative to texting (SMS).

Figure 1.39 Smartphone brand choice among users



Source: Ofcom omnibus research, March 2011

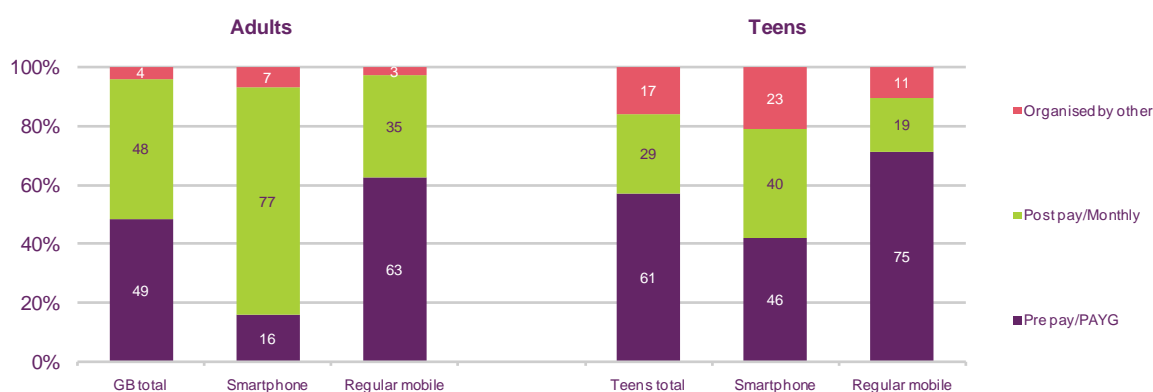
Base: Total GB adults aged 16+ with a smartphone (n = 474). Total GB teens aged 12 – 15 with a smartphone (n = 243).

Contract packages that include smartphone handsets may have facilitated the growth in smartphone penetration

Seventy-seven per cent of adult smartphone users are on a contract, compared to 35% of all regular mobile phone users. Only 16% of smartphone adults are on pay-as-you-go, compared to 63% of regular mobile phone users. The remaining 7% of smartphone users and 3% of regular phone users have their phone bills organised/paid for by someone else.

Unsurprisingly, there are different payment arrangements among teens, with lower numbers on contracts when compared to their adult counterparts. However, significant numbers of parents whose children have smartphones have arranged contracts for them. Forty per cent of teen smartphone users are on a contract (significantly lower than the 77% of adults) compared to 19% of teen standard mobile phone users.

Figure 1.40 Type of mobile phone package



Note: Figures add to more than 100% due to some respondents having more than one phone

Source: Ofcom omnibus research, March 2011

Q.6A Which of these best describes the mobile package you are on?

Base: GB adults who use a mobile (n = 1810) GB teens aged 12 – 15 who use a mobile (n = 502)

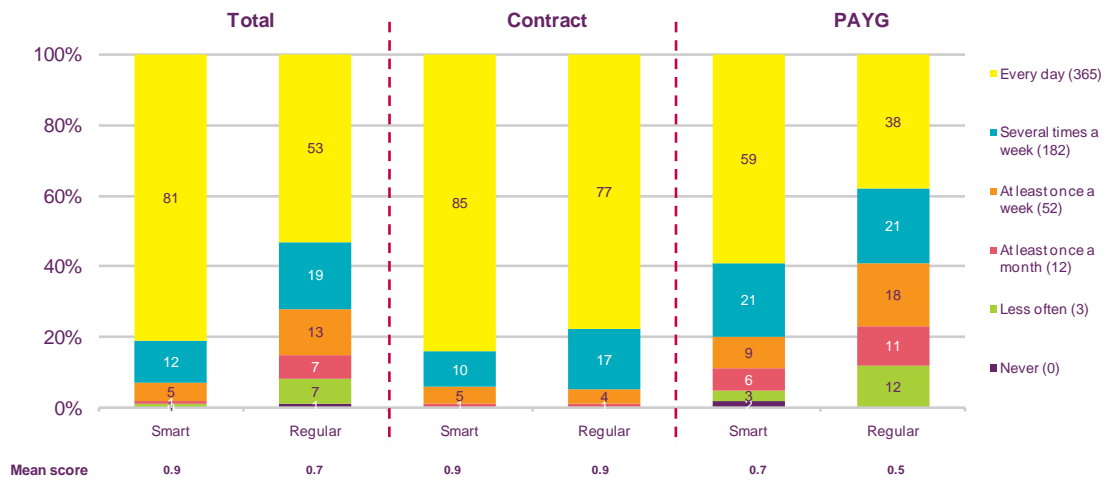
Most adults (89%) pay their own phone bills. A small minority (5%) have their bills paid for by work and by family/other people (6%). As one might expect, most teens have their phone bills paid for by adults (82%), although nearly one in five (18%) claim to pay their phone bill themselves.

1.5.5 Traditional phone activities: smartphone users versus regular mobile users

Smartphone users make calls more often than regular mobile phone users

Eighty-one per cent of smartphone owners make and receive calls on their mobile every day, compared to 53% of regular phone users. This difference in use can be partly explained by contract type, with contract phone users making calls significantly more often than pay-as-you-go users overall. This has been confirmed by analysing the research results, isolating the regular mobile phone users on contracts and comparing them with smartphone users on contracts – call frequency profiles are similar for both. But there are differences between regular and smartphone pay-as-you-go users; smartphone users make calls more frequently.

Figure 1.41 Frequency of making calls: adults



Source: Ofcom omnibus research, March 2011

Q.7a How often, if at all, do you use your mobile phone to make or receive calls?

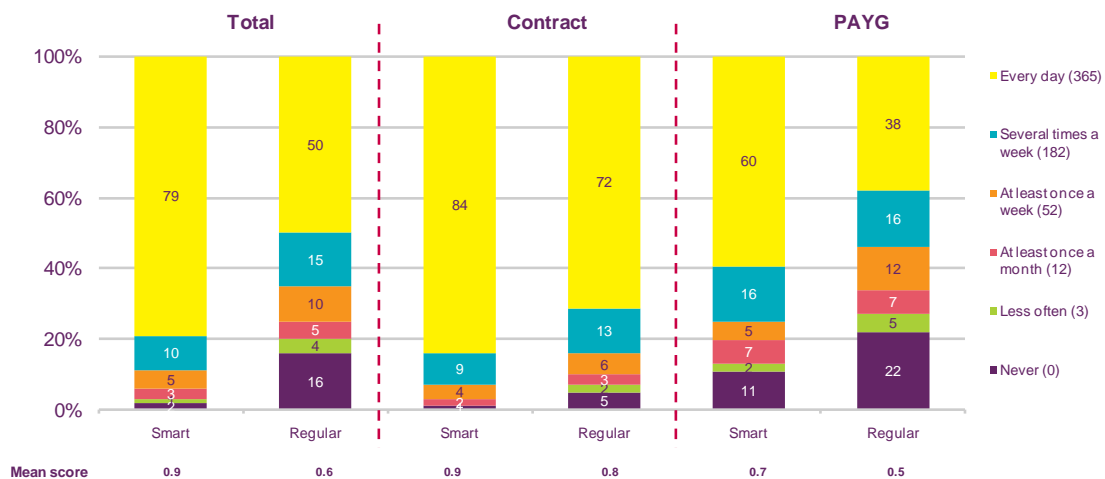
Base: GB adults who use a mobile phone (n = 1810).

In terms of demographic differences, there is a notable age skew on call frequency: among standard mobile phone users, younger people make calls more often than older people. These age differences are not observed among smartphone users.

Smartphone users also send texts more often

Seventy-nine per cent of smartphone owners claim to make and receive SMS texts on their mobile every day, compared to 50% of regular phone users. This difference, again, can partly be explained by contract type, with higher numbers of smartphone users being on a contract, and contract phone users sending / receiving SMS texts significantly more often than pay-as-you-go users. This is confirmed through analysis - when isolating regular mobile phone users on contracts and comparing them with smartphone users on contracts, their SMS frequency profiles are very similar. However, again, there are differences between regular and smartphone PAYG users; smartphone users send / receive significantly higher levels of SMS texts.

Figure 1.42 Frequency of sending texts: adults



Source: Ofcom omnibus research, March 2011

Q.7b How often, if at all, do you use your mobile phone to make or receive texts?

Base: GB adults who use a mobile phone (n = 1810).

Age skews on receiving / making SMS texts can be seen among both regular and smartphone users, with younger people sending / receiving significantly higher numbers of SMS texts than older people. Women also tend to send / receive more texts than men, regardless of whether they have a regular mobile phone or a smartphone.

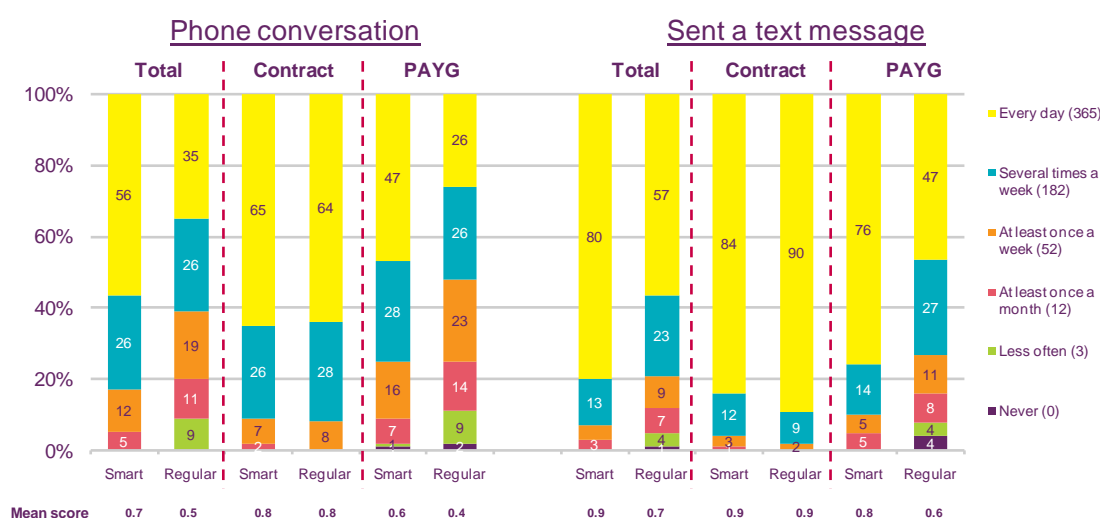
Among adults, the volumes of calls and texts are broadly equal.

Teens send more texts than make calls

The majority of teens make calls every day (56% of smartphone users and 35% of regular phone users). But a significantly higher proportion of teens send text messages every day (80% of smartphone users and 57% of regular phone users). The same influences by contract type apply to teens, who make calls and send SMS texts more often if they are on a contract, regardless of phone type. However, pay-as-you-go smartphone users do claim to make and receive more calls and texts than PAYG regular phone users.

When looking at the actual numbers of texts sent, 39% of teens who send texts claim to have sent over ten texts 'yesterday' (compared to 21% of adults).

Figure 1.43 Frequency of making calls and sending texts: teens



Source: Ofcom omnibus research, March 2011

Q.7a/b How often, if at all, do you use your mobile phone to make or receive calls/texts?

Base: Total GB teens aged 12–15 who use a mobile phone (n = 502)

In terms of gender differences, girls make significantly more calls than boys (53% make calls every day compared to 38% of boys). Girls also send more texts than boys (77% send / receive texts calls every day, compared to 60% of boys).

1.5.6 Activities other than calls and texts among smartphone users

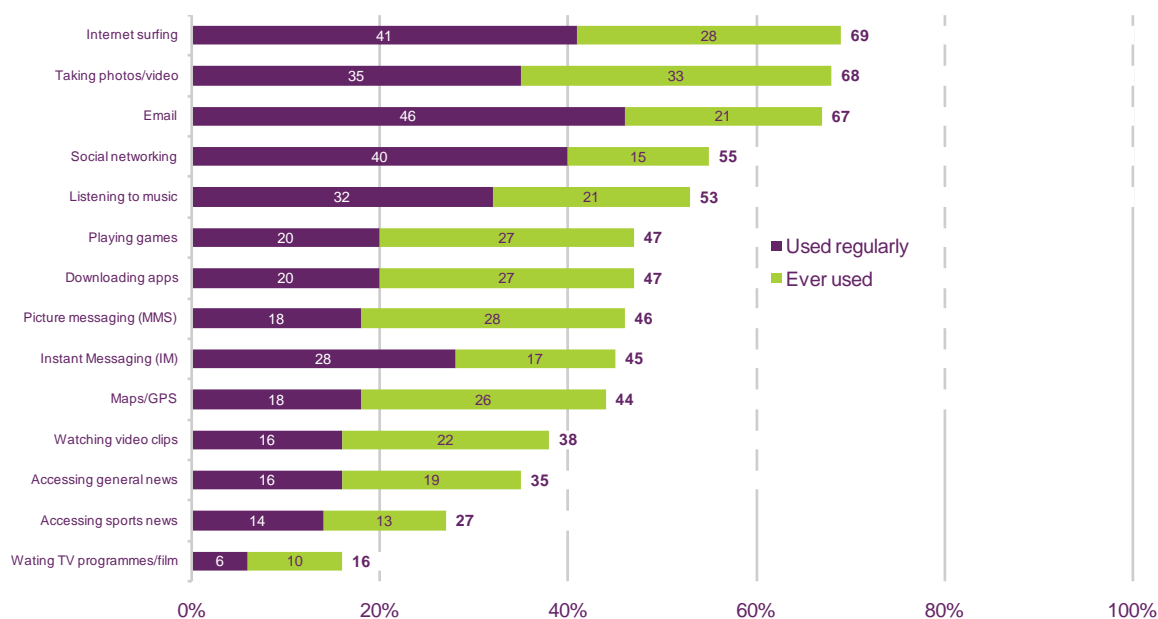
Activities that were traditionally PC/laptop-based, such as sending emails, surfing the net and social networking are now commonly conducted on a smartphone

Among GB adults, the top three activities / functions ever used on a smartphone (other than making and receiving calls and texts) are internet surfing (69%), taking photos/videos (68%), and email (67%).

The top three activities / functions used regularly are email (46%), internet surfing (41%), and social networking (40%).

The least-used features are accessing content (TV programmes, sports news, general news, video clips). Nine per cent of smartphone users do not regularly use any of these functions.

Figure 1.44 Activities conducted on a smartphone: adults



Source: Ofcom omnibus research, March 2011

Q.8/9 Which, if any, of the following functions or activities have you ever used/use regularly on your mobile?

Base: GB adults who use a smartphone (n = 474).

Younger adults (16-34s) are significantly more likely than average to use their smartphone for internet surfing, social networking and instant messaging.

However, phone calls and text messages are still the core functions of a smartphone and the functions that most people wouldn't want to live without. Calls are more important among adults and text messages among teens and younger adults.

The importance of smartphones in providing access to the internet is confirmed through an attitude statement ("My phone is more important to me for accessing the internet than any other device"). One third of adult smartphone users agree with this statement. These users tend to be younger (16-34) and there is a social group bias (C2s).

Teens' activities on a smartphone differ from adults' with more emphasis on social networking, music and games

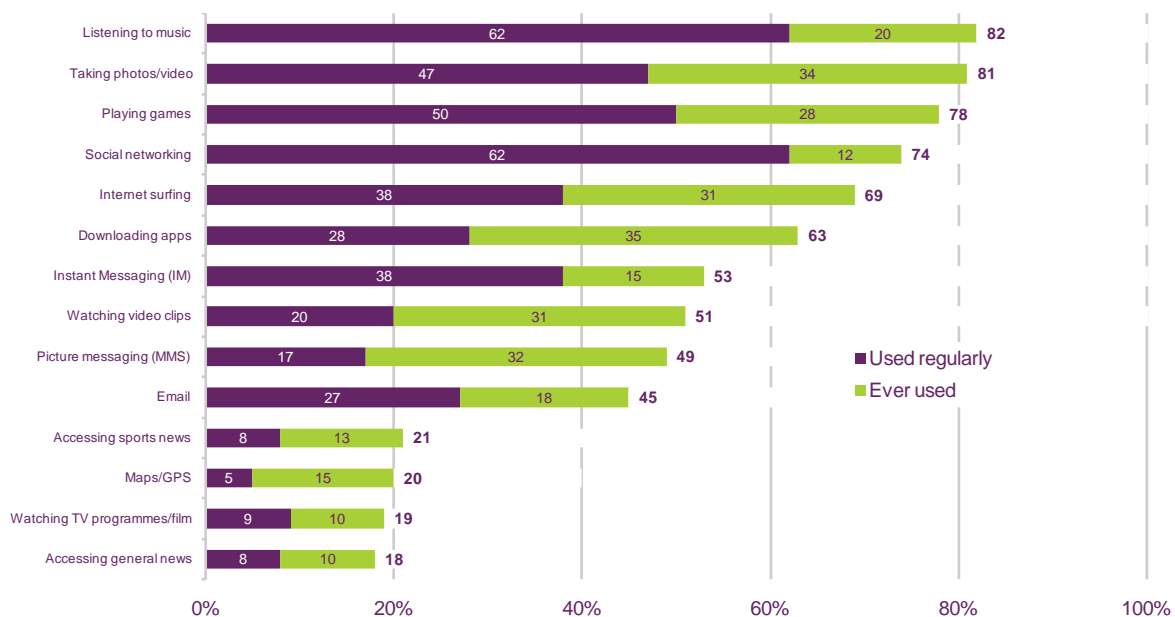
In general, teens use the various functions on their smartphones more than adults do. The top three activities / functions that teens have ever tried on a smartphone (other than making and receiving calls and texts) are: listening to music (82%), taking photos/videos (81%) and playing games (78%). Social networking (74%) comes fourth and internet surfing (69%) fifth.

The top three activities / functions used regularly are social networking (62%), listening to music (62%), and playing games (50%).

The least-used features are accessing content (TV programmes, sports news, general news) and maps/GPS.

Only 1% of teen smartphone users do not use any of these functions regularly.

Figure 1.45 Activities conducted on a smartphone: teens



Source: Ofcom omnibus research, March 2011

Q.8/9 Which, if any, of the following functions or activities have you ever used/use regularly on your mobile?

Base: GB teens who use a smartphone (n = 243).

Marginally more teens than adults agree with the statement: “My phone is more important to me for accessing the internet than any other device” (38% net agreement among teens compared to 33% among adults). More boys agree than girls – although this is not a significant difference on this sample size.

Instant messaging (IM) is a minority activity among adult smartphone users (28% of adult smartphone users do it regularly). But among those who do it, it has the highest frequency of use

Measured by the average number of occurrences ‘yesterday’ among adult regular users of each feature, instant messaging comes first, followed by social networking (averages of 8.65 and 7.99 times per day respectively).

- 29% of adults who use their phone to IM claim to have used instant messaging over ten times ‘yesterday’.
- 26% of adults who use social networking sites from their phone claim to have done this over ten times ‘yesterday’.

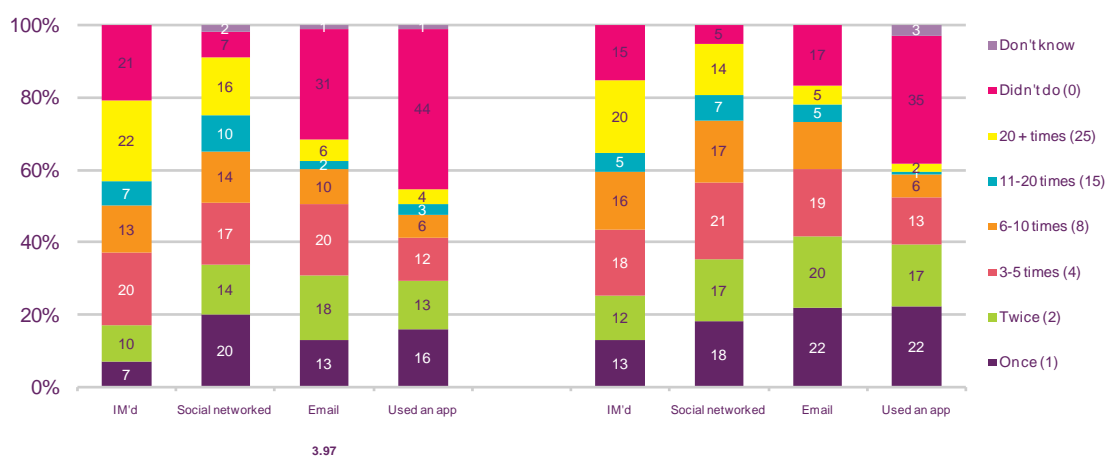
This is followed by email (3.97 times per day) and using an app (2.81 times per day).

Using the same methodology, instant messaging also has the highest frequency of use among teens aged 12-15, followed by social networking (averages of 8.16 and 7.38 times per day respectively).

- 25% of teens who use their phone to IM claim to have used instant messaging over ten times ‘yesterday’.
- 21% of teens who use social networking sites from their phone claim to have done this over ten times ‘yesterday’.

This is followed by email (4.25 times per day) and using an app (2.38 per day).

Figure 1.46 Number of times did activity 'yesterday' (all who do that activity): adults and teen smartphone users



Source: Ofcom omnibus research, March 2011

Q.11 For each activity, how many times did you do that activity using your mobile phone yesterday?
 Base: GB adults who use a smartphone (n = 474). GB teens who use a smartphone (n = 243).

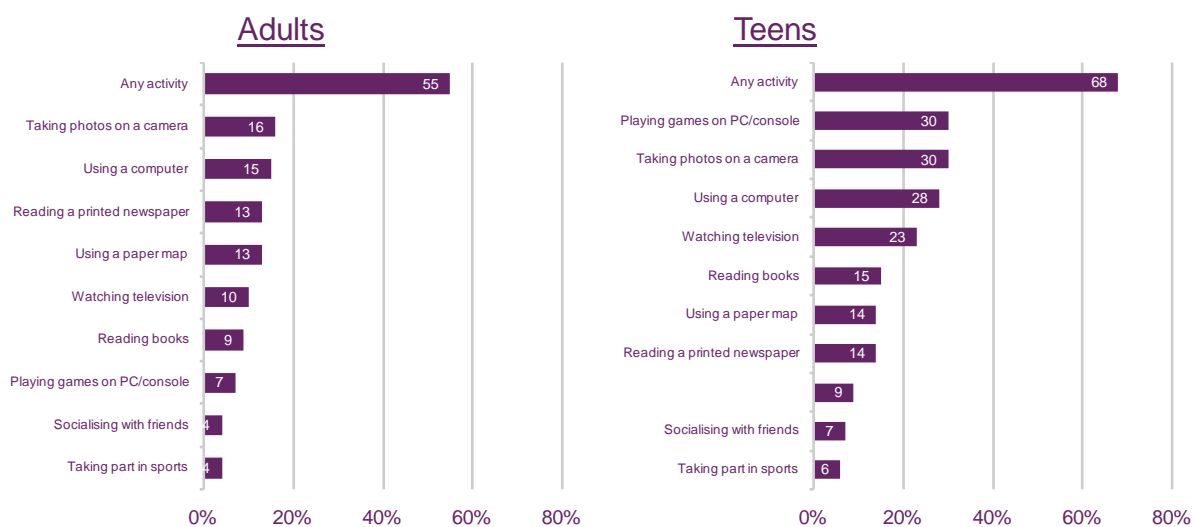
Smartphones are affecting people's other leisure activities. Over half of all adult smartphone users (55%) claim to be doing some kind of non-smartphone activity less, now that they have a smartphone

The activities that people claim to be doing less since getting a smartphone are: taking photos with a camera (16%), using a PC to access the internet (15%), reading a printed newspaper (13%), using a paper map (13%), watching TV (10%), reading books (9%), playing games on a console/PC (7%), socialising with friends (4%) and taking part in sport (4%).

The 'cannibalisation' of other activities is even greater among teens; over two-thirds (68%) claim to do some activities less than before

The activities teens claim to take part in less since getting a smartphone are: playing games on a console/PC (30%), taking photos with a camera (30%), using a PC to access the internet (28%), watching TV (23%), reading books (15%), using a paper map (14%), reading a printed newspaper (14%), socialising with friends (7%) and taking part in sport (6%).

Figure 1.47 Activities done less since having smartphone: adults vs. teens



Source: Ofcom omnibus research, March 2011

Q.25 Since you got your smartphone which, if any, of the following activities do you now take part in less than you used to ?

Base: GB adults who use a smartphone (n = 474). GB teens who use a smartphone (n = 243).

A look at social networkers

Adults:

Fifty-five per cent of adult smartphone users have used their phone for social networking, with one in four doing so regularly (40%). Regular smartphone social networkers are significantly more likely to be female and aged 16-24. There are no social group biases. The most popular social networking site among adults is Facebook (97%), followed by Twitter (24%), LinkedIn (5%) and MySpace (5%). Seventy-eight per cent do social networking via their smartphone at least once a day, 26% every couple of hours of more.

Teens:

Seventy-four per cent of teen smartphone users have used their phone for social networking, with 62% doing this regularly. The most popular social networking site used is Facebook (97%). Twitter comes in a distant second (26%), followed by MySpace (13%) and Bebo (10%). Eighty-three per cent of teen smartphone social networkers claim to do this via their smartphone at least once a day, 29% every couple of hours of more

A look at apps users

Adults:

Just under half (47%) of adult smartphone users have ever downloaded an app, with one in five (20%) doing so regularly. Regular apps downloaders are skewed male and age 25-34.

Just over half (54 per cent) of apps downloaders have paid for an app - with their mean average maximum spend on a single app being £3 – £3.99.

Just under one-third (27%) have paid a maximum of £1.99 or less. Around half (56%) have paid £4.99 or less. Just under a quarter (22%) have paid a maximum amount of £5.00 - £9.99. Twelve per cent have paid more than £10.00, and 10% don't know the maximum amount they have paid.

Men, 16-34s and ABC1s pay more than other demographic groups.

The top five paid-for apps are games (59%), music (30%), maps/navigation (28%), travel/journey planning (21%) and books (14%). The top five most popular apps downloaded for free are games (73%), social networking (60%), music (37%), maps/navigation (35%) and news (35%).

Teens:

Apps downloading is higher among teens than adults; around two-thirds (63%) of teen smartphone users have ever downloaded an app, with one in four (28%) doing so regularly.

Six in ten (60%) have paid for an app. The average maximum amount of spend among teens is £3.70 and the median is £3.00 - £3.99.

Just over half of all teens (53%) have paid a maximum price of £4.99 or less (with 22% paying £1.99 or less). Just under one-fifth (19%) have paid a maximum amount of £5.00 - £9.99, and 4% have paid more than £10. One-quarter (24%) don't know the maximum amount they have paid.

Although the numbers are not significant (due to small base sizes), there are indications that more boys download apps than girls.

The top three most popular paid-for apps among teens are games (84%), music (57%), and social networking (22%). The same areas appear in the top three most popular apps downloaded for free: (games (64%), social networking (61%) and music (47%).

1.5.7 Smartphones and social relationships

Smartphone users have a much stronger relationship with their phone than standard mobile phone users

When asked how addicted they are to their mobiles phones (10 represents '*completely addicted*' to 1 '*not at all addicted*'), smartphone users are clearly and significantly more addicted to their phones than regular mobile phone users. Almost four in ten (37%) adult smartphone users indicate 'high' levels of addiction (i.e. they rate their 'addiction' as 7 or more out of 10) compared to 12% among regular mobile phone users. Sixty-one per cent of regular mobile phone users measure 'low' addiction compared to 25% of smartphone users.

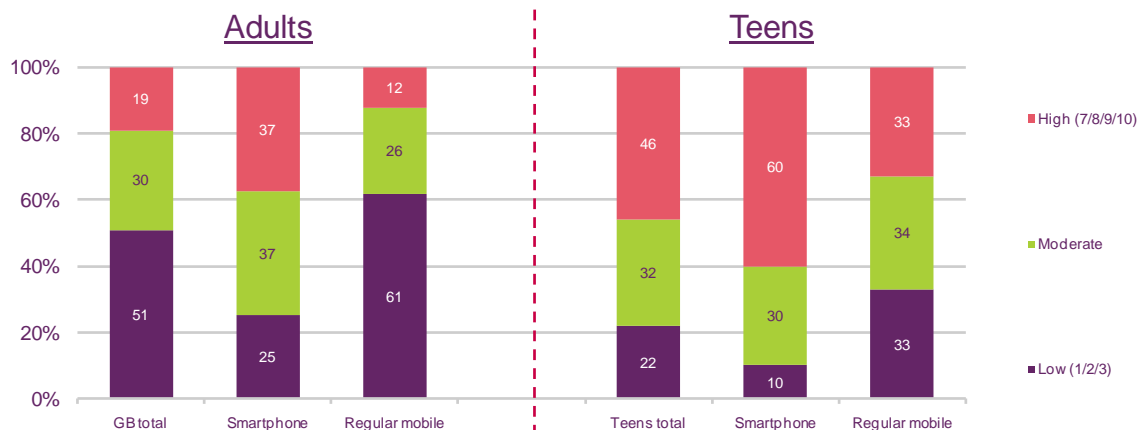
There are some age and gender differences among GB adults: higher levels of phone addiction are seen among younger adults (16-24s and 25-34s) and females.

Teens are more likely to claim ‘addiction’ to their smartphones

Teens aged 12-15 claim to be significantly more addicted to their phones than their adult counterparts. Six in ten (60%) of teen smartphone users indicate a high level of addiction, compared to a third (33%) of teen regular mobile phone users.

And girls are more addicted to their phones than boys (53% ‘high addiction’ across all mobile phones, compared to 38% among boys).

Figure 1.48 Mobile phone ‘addiction’



Source: Ofcom omnibus research, March 2011

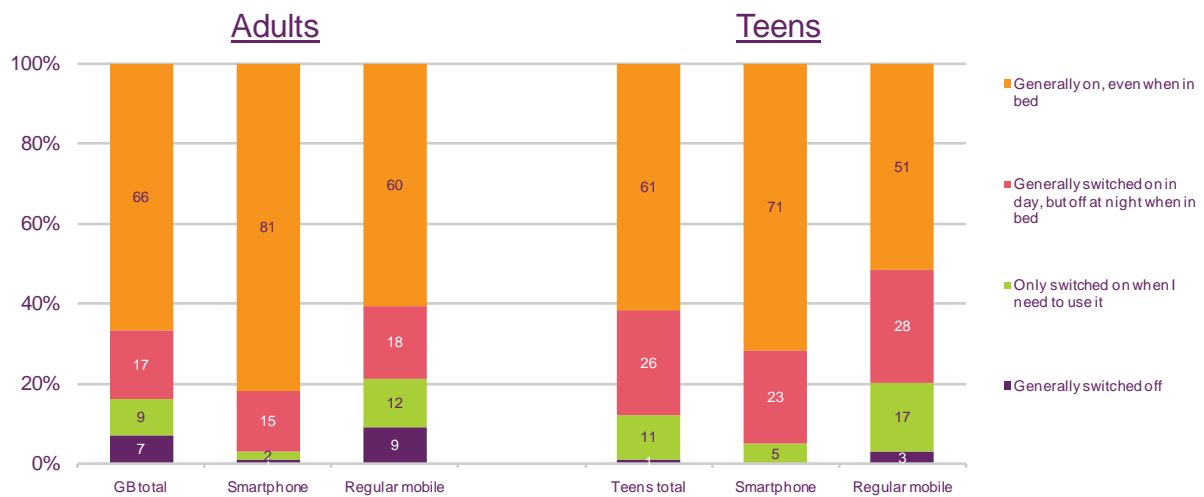
Q16 Choose a number between 1 and 10, where 1 represents ‘I’m not at all addicted to my mobile phone’ and 10 represents ‘I’m completely addicted to my mobile phone’.

Base: Total GB adults who use a mobile phone (n = 1810), Total GB teens aged 12 – 15 who use a mobile phone (n = 502).

Phone dependency among smartphone users is confirmed by studying data that show how often during the day people have their phone switched on. The majority (81%) of smartphone users have their mobile phoned switched on all the time, even when in bed, compared to 60% of standard mobile phone users. Older people (aged 65+) are the most likely to have their phone switched on only when they need to use it (23%) or generally switched off (24%).

The same relationship differences exist among teens; 71% of teens with smartphones generally have their mobile phoned switched on all the time. This compares to 51% of regular mobile phone users in the same age group. Again, there are indications that girls have their phones switched on more often than boys.

Figure 1.49 Amount of time mobile phone is switched on



Source: Ofcom omnibus research, March 2011

Q12 Which of these statements best applies to how often your phone is switched on?

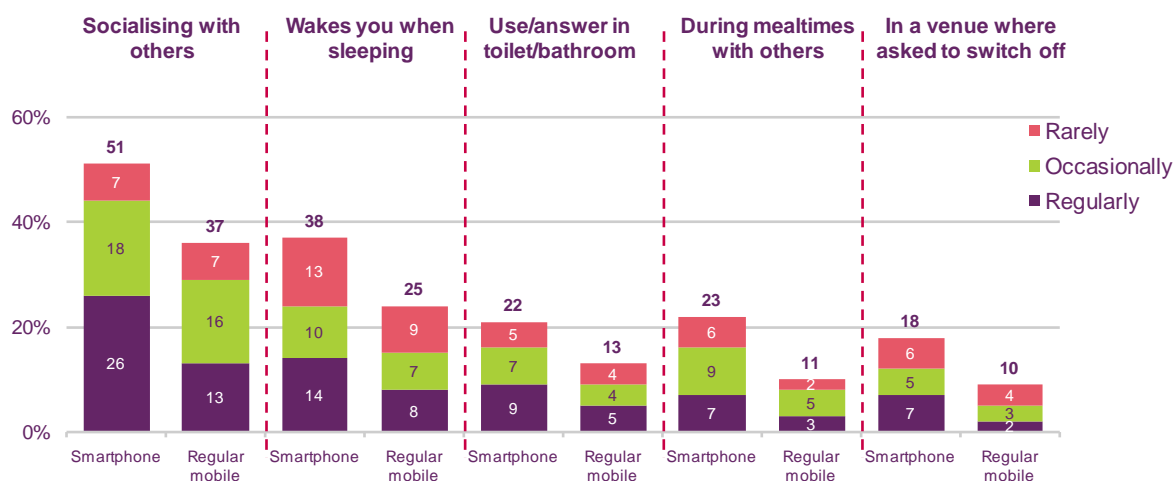
Base: Total GB adults who use a mobile phone (n = 1810), Total GB teens aged 12 – 15 who use a mobile phone (n = 502).

Smartphones are encroaching on ‘traditional’ social situations

There are indications that smartphones are encroaching upon ‘traditional’ social interaction, with 51% saying that they ever use their phone while socialising with others and 23% using their smartphone during a meal with others. Twenty-two per cent of smartphone users claim to use it in the bathroom or toilet – all significantly higher than regular mobile phone users.

There are, however, significant age skews across all of these activities. The younger age groups are more willing to use their phone in all situations, compared to the older age groups. This implies that the differences in behaviour are not driven only by phone dependency but are also influenced by differences in social etiquette between younger and older age groups – younger people are more willing to engage with their phones in all manner of social situations.

Figure 1.50 Occasions when use the phone: adults



Source: Ofcom omnibus research, March 2011

Q14a Which of the following do you ever do? Q14b and how often do you do it?

Base: GB adults who use a smartphone (n = 474).

Teen smartphone users are generally more likely than regular mobile phone users to use their phone in a variety of different social situations

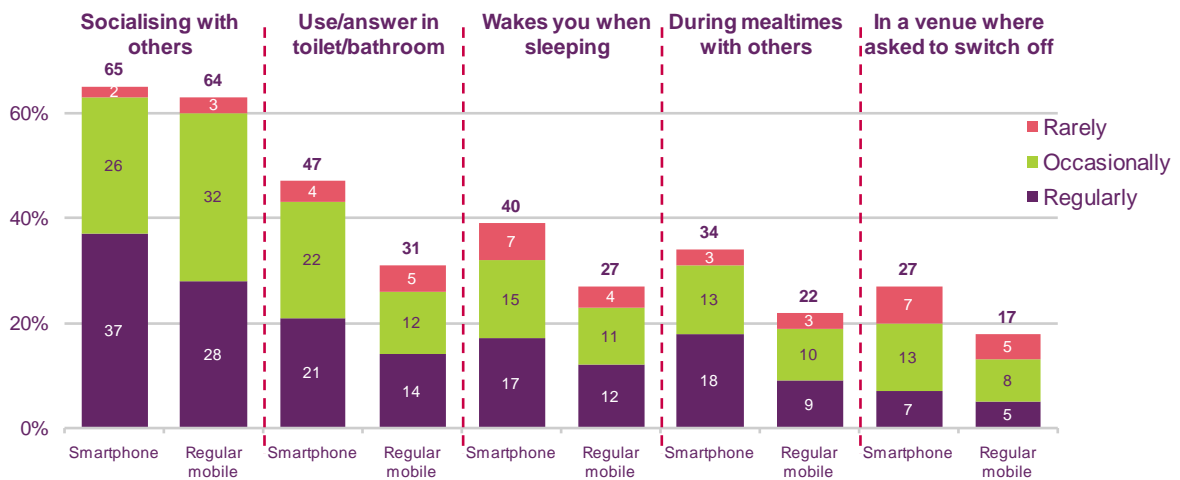
Teen smartphone users are generally much more likely to use their phone when socialising with others (66%), and at mealtimes with others (34%). Almost half (47%) of teen smartphone users claim to use it in the bathroom or toilet – this compares to just under one-third (31%) for regular teen mobile phone users.

These differences in behaviour appear to be partially driven by the additional functionality of a smartphone – with teen smartphone users also sending emails, social networking and instant messaging, in addition to making calls and sending texts in the situations listed.

The influence of age on social etiquette is more apparent when looking specifically at the teen data for using the phone ‘when socialising with others’ – there are no differences between regular teen mobile phone users and teen smartphone users.

There are also gender differences at play among the teens, with girls generally conducting these activities more frequently than boys.

Figure 1.51 Occasions when use the phone: teens

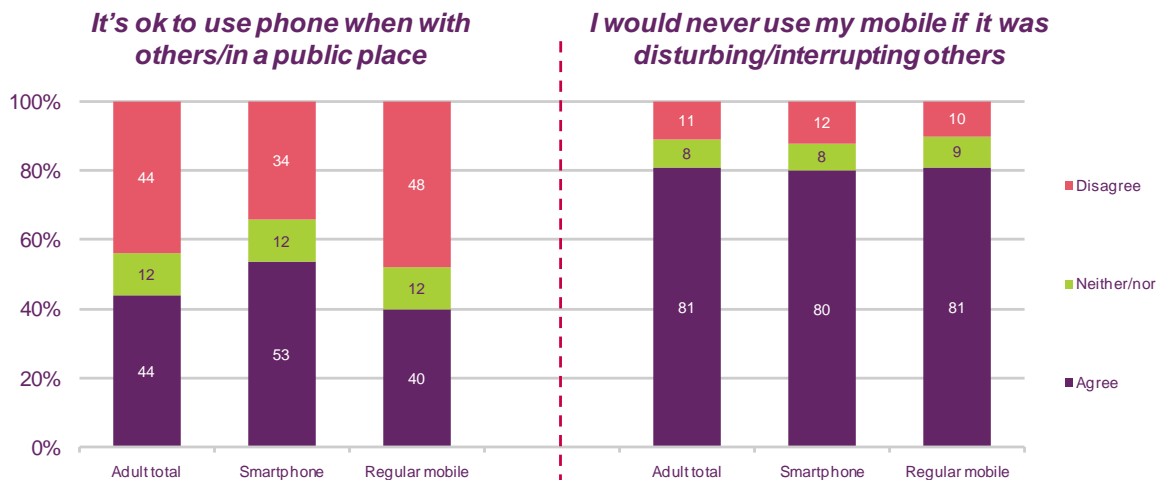


Source: Ofcom omnibus research, March 2011
 Q14a Which of the following do you ever do? Q14b and how often do you do it?
 GB teens who use a smartphone (n = 243).

Smartphone users are significantly more likely to think that it is OK to use their phone when with others/in a public place (53% compared to 40%). The influence of age as well as handset is also at play here. Younger people are more likely than older people to think it is OK (and they are more likely to have a smartphone). Social group also plays a part; C2DEs display significantly stronger levels of agreement than do ABC1s (49% compared to 40%).

However, interestingly, smartphone users are equally as likely to think it is not 'OK to use when disturbing others/interrupting others' as regular phone users (80% compared to 81%).

Figure 1.52 Attitude statements towards phone use: adults



Source: Ofcom omnibus research, March 2011
 Q15 Please tell me the extent you agree or disagree with the following statements?
 Base: Total GB adults who use a mobile phone (n = 1810).

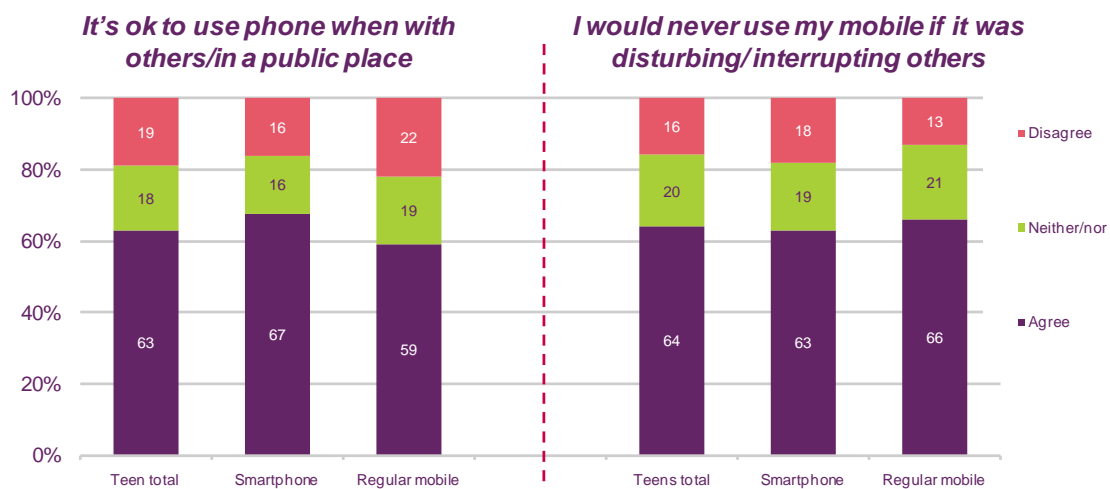
Teens' views on social etiquette differ from adults', with greater willingness to use their phone in a public place and less concern about disturbing others

Teen mobile phone users are much more likely than adult mobile phone users to think it is OK to use their phone when with others/in a public place (63% agreement at the total teen sample level compared to 44% agreement among all GB adults).

Teen smartphone users are marginally more likely than teen regular mobile phone users to think it is OK to use their phone when with others/in a public place (67% compared to 59%).

However, teen smartphone users are equally as likely as regular teen mobile phone users to think it is not OK to use their phone when disturbing others/interrupting others..

Figure 1.53 Attitude statements towards phone use: teens



Source: Ofcom omnibus research, March 2011

Q15 Please tell me the extent you agree or disagree with the following statements?

Base: Total GB teens aged 12–15 who use a mobile phone (n = 502).

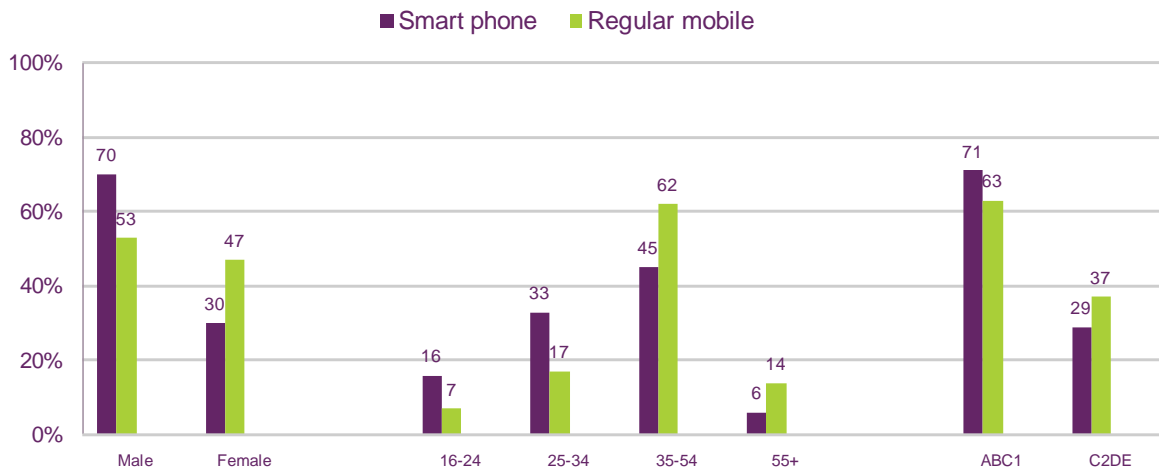
1.5.8 A look at phone etiquette among those who use phone for work

People who use a mobile phone for work are just as likely to take personal calls during work time as they are to take work-related calls during personal time

The majority (70%) of smartphone users who work use a mobile phone for personal reasons during working hours, and for work reasons outside working hours. Of this 70%, 45% are smartphone users and 55% are regular mobile phone users.

When looking at the profiles of people who use their mobiles at work, smartphone users are significantly more likely to be male and significantly younger (25-34). They are also more likely to be in the ABC1 socio-economic group.

Figure 1.54 Profile of those who use a phone for work: smartphone vs. regular mobile



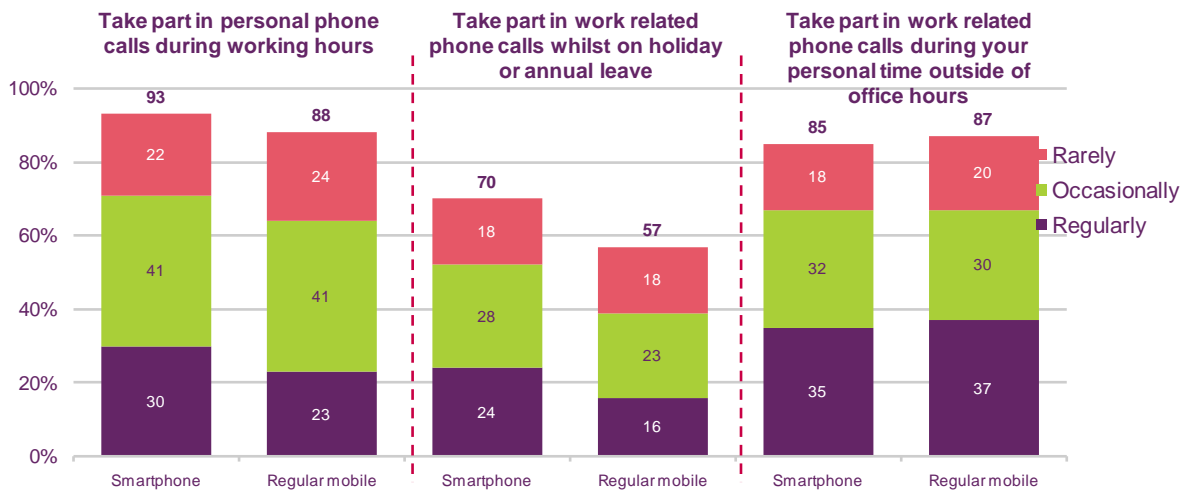
Source: Ofcom omnibus research, March 2011

Q17b. Is the phone you use when you are working a smartphone?

Base: Total GB Adults aged 16+ who use a mobile phone when working (n = 614).

Both smartphone users and regular mobile phone users are just as likely to take personal calls during work time as they are to take work-related calls during personal time. Thirty per cent of smartphone users who use a phone for work say they regularly use their phone for personal calls during work hours, compared to 23% of regular phone users. However, smartphone users are more likely to take work-related calls when on holiday or annual leave than are regular phone users.

Figure 1.55 Use of mobile phones among those who use a phone for work



Source: Ofcom omnibus research, March 2011

Q18. How often do you do the following using your mobile phone?

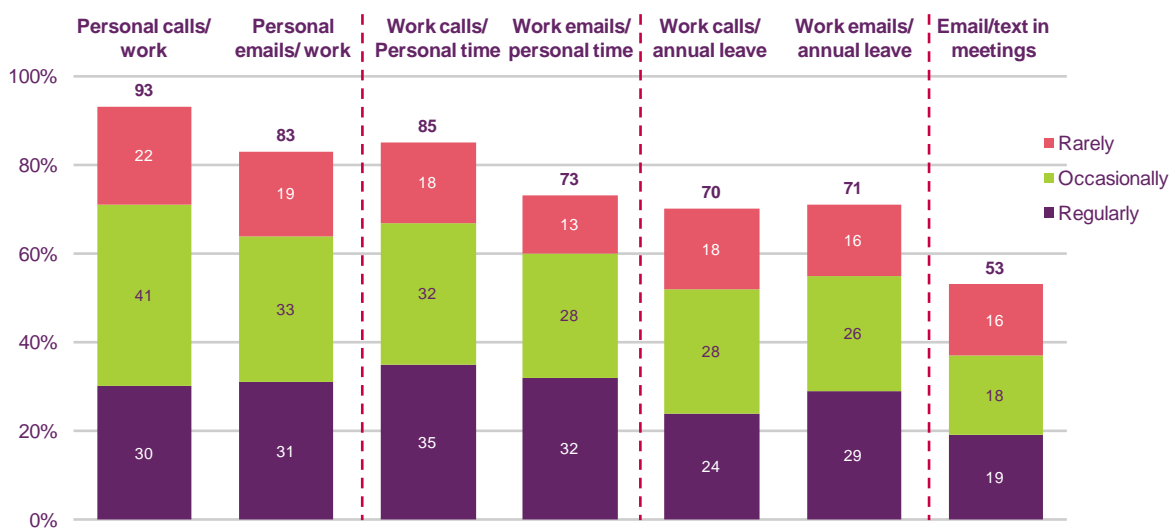
Base: Total GB adults aged 16+ who use a mobile phone when working (n = 614). Total GB adults who use a smartphone when working (n = 257)

Looking at smartphone users in isolation, there is a core group of working people who regularly conduct the whole range of personal and work-related activities on their smartphones. They represent about one-third of smartphone users who use a smartphone at work.

Smartphone users are slightly less likely to make work-related calls or emails during personal time than they are to make personal calls or send personal emails during work time. They are also slightly less likely to make work-related calls or emails during their annual leave. These differences are not significant at these base sizes.

The least-frequent behaviour is emailing or texting while in meetings, although a significant minority (19%) do this regularly - about half of all workers with smartphones (53%) have ever done this.

Figure 1.56 Profile of those who use a smartphone for work



Source: Ofcom omnibus research, March 2011
 Q18. How often do you do the following using your mobile phone?
 Base: Total GB adults who use a smartphone when working (n = 257)

1.6 The generation gap

1.6.1 Introduction

Take-up and use of media communications is developing rapidly across the UK, as *The digital decade* section illustrates. However, it is important to remind ourselves of the differences that remain between older and younger people in terms of their take-up and use of various communications services, and also the differences in some of their attitudes towards internet use.

This section reports on a variety of measures, including take-up of landlines, mobile phones and the internet; what people do regularly across a range of media; their reasons for using different media; and the preferred medium used for making contact in particular situations. It focuses in particular on the internet, and the types of internet activities carried out, as well as levels of confidence online and the degree of comfort people feel about giving out personal details online.

Ofcom's annual media literacy audits of adults and children seek to understand people's ability to use, understand and create communications. An overview of media literacy among UK adults (aged 16+), published in April, looks at take-up and use of communications services, understanding of and attitudes towards the internet, and privacy and security concerns in the online environment. Some of the findings are included below, while the full report is available here: <http://stakeholders.ofcom.org.uk/market-data-research/media-literacy/medlitpub/medlitpubrss/adultmedialitreport11/>

1.6.2 Take-up of telephony services

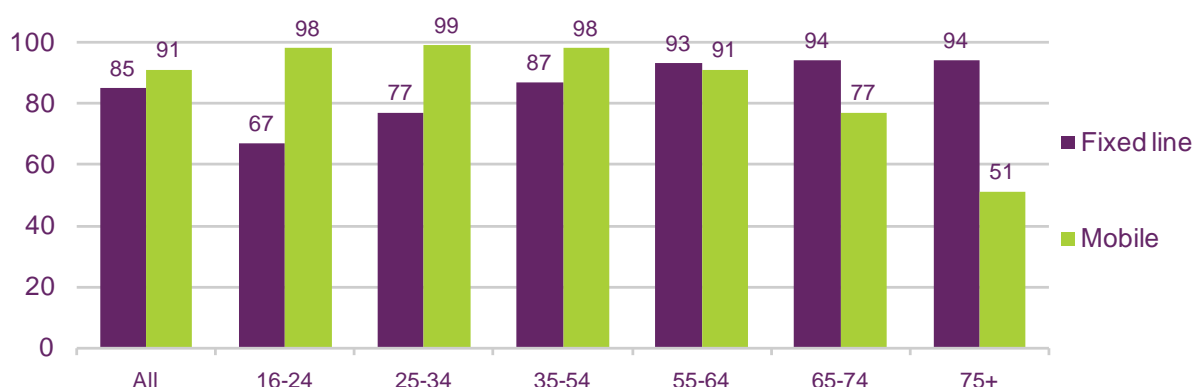
Landline and mobile phone ownership varies by age

At an overall level, broadly similar levels of the population have a landline and a mobile phone – some 85% of UK adults have a fixed line at home, and 91% say they personally use a mobile phone. However, younger adults aged 16-24 are much more likely to have a mobile phone than a fixed line (98% vs. 67%) and older people, particularly those aged 75+, are far more likely to have a fixed line (94%) than a mobile (51%).

Among those aged 65+, the proportion who personally use a mobile has increased from half of this age group in Q1 2006 (49%), to now nearly two-thirds (64% in Q1 2011).

Figure 1.57 Landline and mobile phone services, by age: 2011

Proportion of respondents with service (per cent)



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in January/February 2011
Base: All adults aged 16+ (3474)

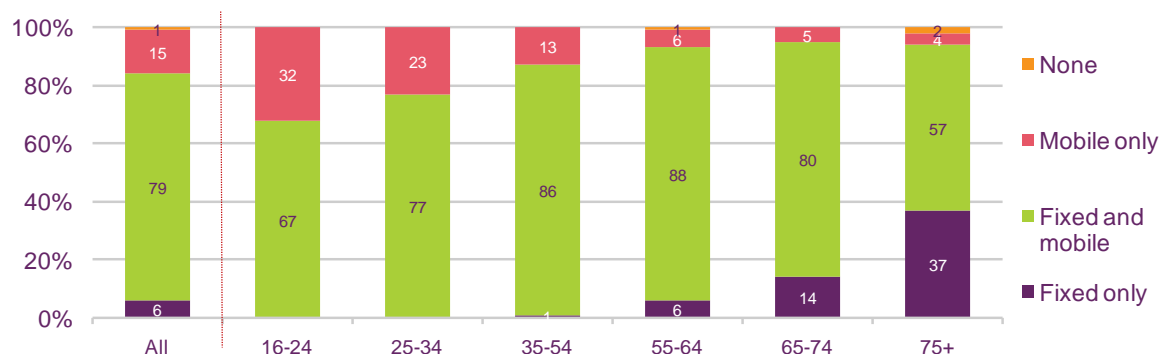
QC1. Is there a landline phone in your home that can be used to make and receive calls?
QD2. Do you personally use a mobile phone? How many mobile phones with different telephone numbers do you use at least once a month? Please include any phones used for work or other purposes.

One in four older people live in households reliant on fixed telephony

Older people are significantly less likely to live in 'mobile-only' households (homes with access to a mobile phone but not a fixed line). While 32% of those aged 16-24 are in mobile-only households, this falls to 4% of those aged 75+. Conversely, older people are significantly more likely to live in a household with only fixed-line telephony (37% of those aged over 75, compared to less than 1% of those aged 16-24).

Figure 1.58 Household penetration of fixed and mobile telephony, by age

Proportion of respondents (per cent)

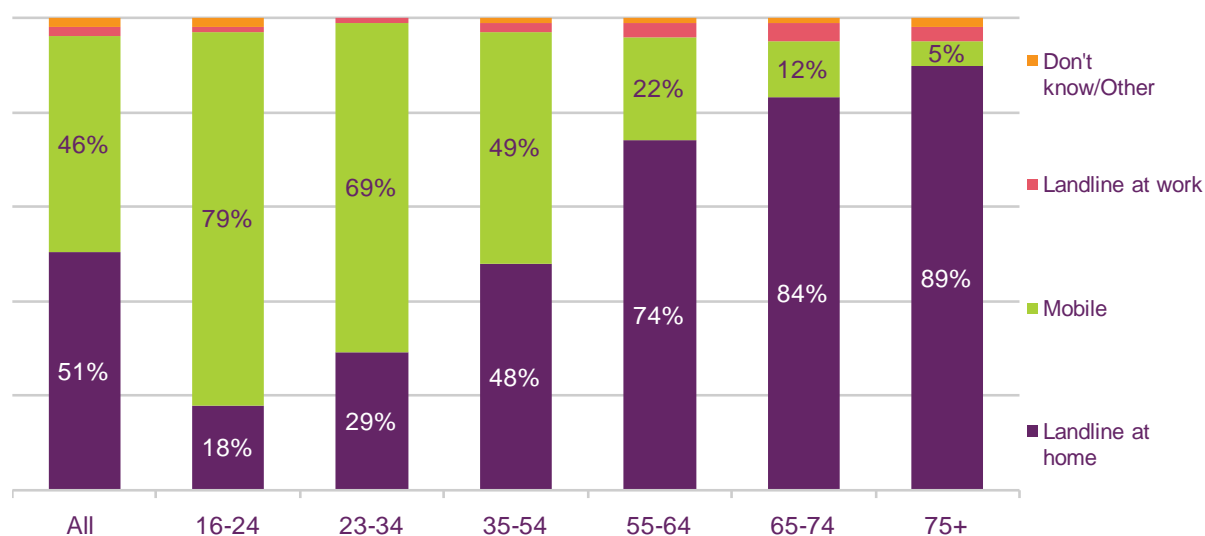


Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in January/February 2011
Base: All adults aged 16+ (3474)

Differences in main use of communications device

When people are asked about their main method of making and receiving phone calls, at an overall level around half nominate a landline, and half a mobile phone (51% landline, 46% mobile). However, this changes significantly by age, with four in five adults aged 16-24 nominating a mobile (79%), one in ten adults aged 65-74 (12%), and 5% of adults aged 75+.

Figure 1.59 Main method of making and receiving telephone calls, by age: 2011



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in January/February 2011
 Base: All adults aged 16+ (3474)
 QC3 (QC28). Which of these do you consider to be your MAIN method of making and receiving telephone calls?

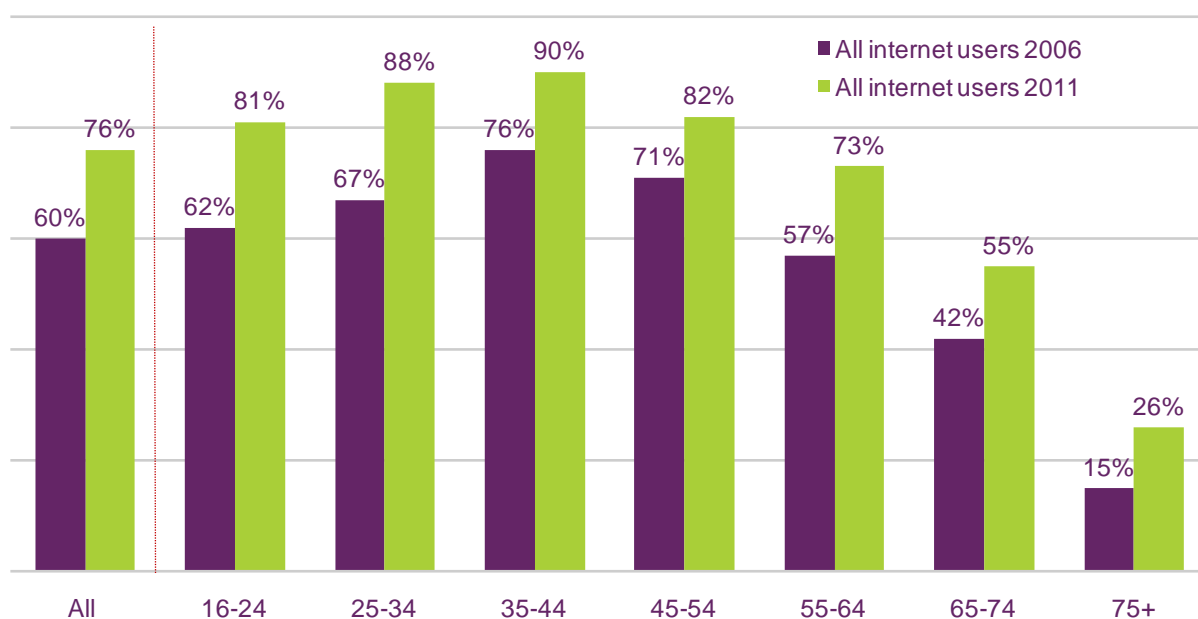
1.6.3 Internet take-up

Now over half of 65-74 year olds have internet access at home, compared to a quarter of those aged 75+

Three-quarters (76%) of the UK population aged 16+ have internet access at home. Younger people are far more likely to have the internet at home than older people – 81% of 16-24s, 88% of 25-34s, 90% of 35-44s and 82% of 45-54s have it, compared to 55% of those aged 65-74 and 26% of those aged 75+.

Among those aged 65-74, five years ago only four in ten had internet access at home (42%), but by 2011, this had risen to over half of this age group (55%). This compares to a quarter (26%) of those aged 75+ who have the internet at home in Q1 2011 (up from 15% in 2006).

Figure 1.60 Internet take-up, by age: 2006 and 2011



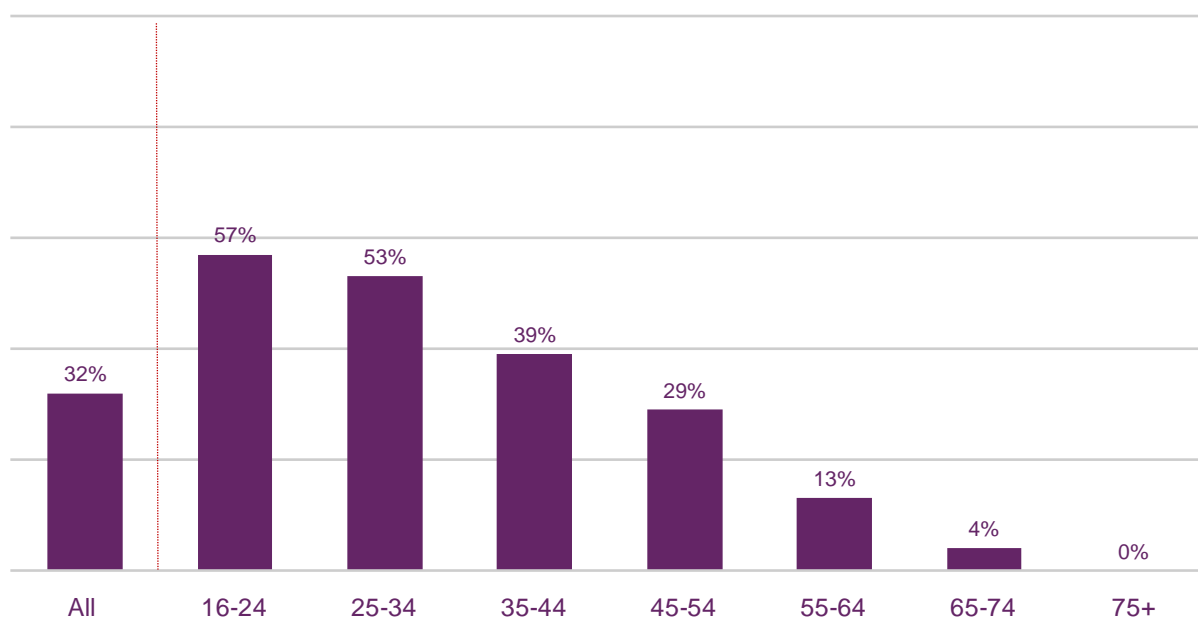
Source: Ofcom technology tracker survey, Q1 2006 and Q1 2011

Base: 2006: All adults aged 15+ (2214); 2011: all adults aged 16+ (3474) Q: do you or does anyone in your household have access to the internet/ World Wide Web at home? Note in 2011 this includes internet access via any device, e.g. PC, mobile phone etc.

16-24s over ten times more likely to go online via a mobile than those aged 55+

While around one third (32%) of the UK population aged 16+ uses a mobile phone to go online, this rises to 57% of those aged 16-24. However, 13% of those aged 55-64 say they do this, dropping to 4% of those aged 65-74. No respondents in our sample aged 75+ used a mobile phone to go online.

Figure 1.61 Use of mobile to go online, by age



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in January/February 2011
Base: All adults aged 16+ (3474) QD28: Which, if any, of the following activities, other than making and receiving calls, do you use your mobile for?

1.6.4 Use of communications services

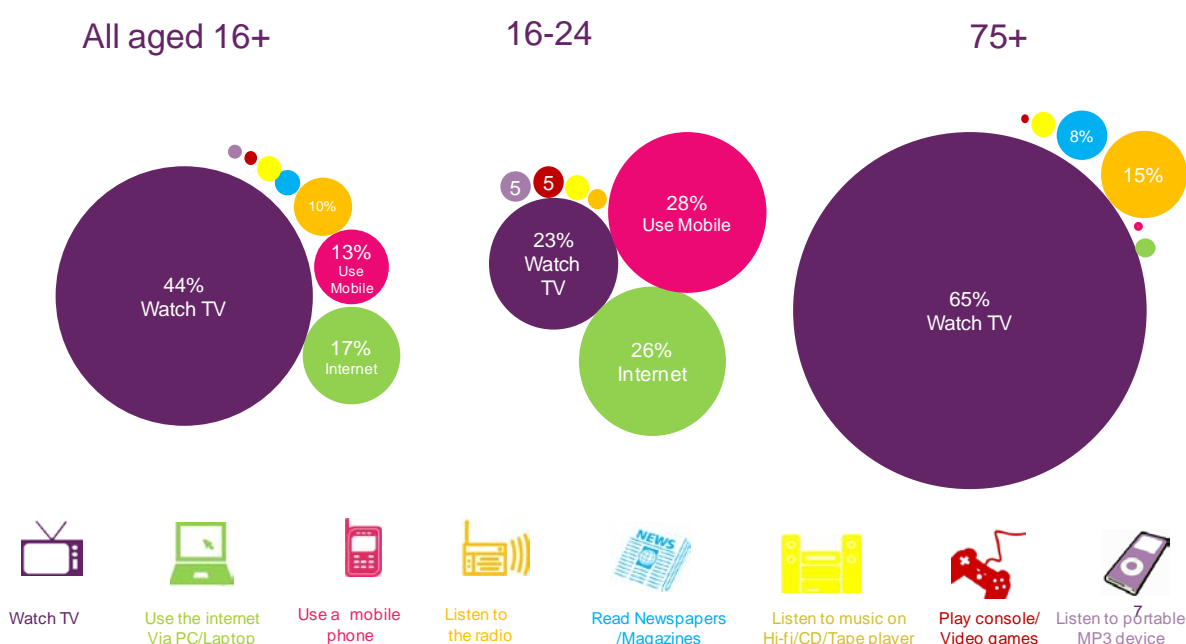
Older people are most likely to miss their TVs the most – then radio and the press

When people are asked which medium they would miss the most if it were taken away, there are clear differences by age group. Overall, 44% say they would most miss their TV, and 17% the internet. Just over one in ten (12%) say they would most miss their mobile, and 10% listening to the radio.

For young adults aged 16-24, the picture is quite different – 28% say they would most miss their mobile, 26% the internet, and 23% TV. Radio would be most missed by 3%.

For people aged 75+, 65% say they would most miss TV, 15% radio, and 8% newspapers/magazines. Just 2% would most miss a mobile phone and 2% the internet.

Figure 1.62 Which medium would be most missed, by age: 2010



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

Base: All adults aged 16+ (2117 aged 16+ in 2010, 295 aged 16-24, 172 aged 75+.

A2 – Which one of these would you miss doing the most? (Prompted responses, single coded)

Catch-up TV sees most significant growth among those aged 65+

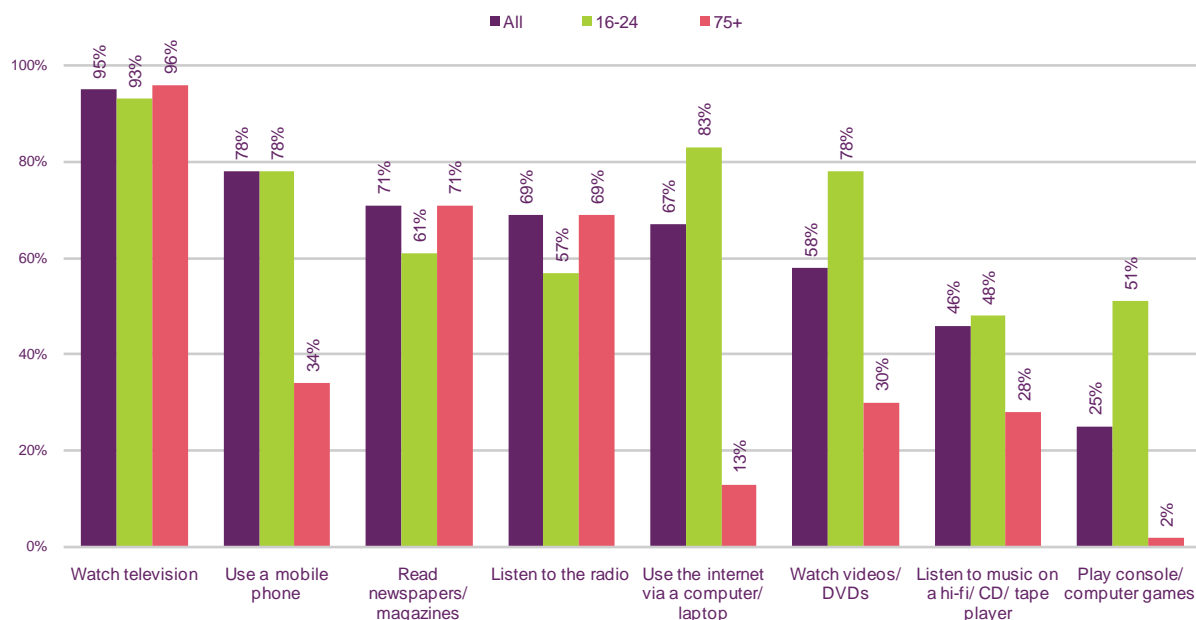
In Q1 2011, on average 35% of adults claimed to use the internet for viewing catch-up television services, up from 31% in the previous year, and 23% in Q1 2009. Although younger adults are the most likely to use catch-up; growth in its use has, since 2009, been fastest among people over 65, with nearly a quarter (24%) claiming to now use catch-up, against just 10% in Q1 2009.

Variation in types of media regularly used

Watching television is the dominant regular media activity, both for those aged 16-24 and those aged 75+, but there is significant variation across a number of other measures.

Older people are more likely to say they regularly read newspapers and magazines, and listen to the radio, than younger people, but for all the other media, younger people are more likely to say they regularly use them. The most marked difference between the age groups was in use of the internet via a computer or laptop – 83% of 16-24 year olds said they did this regularly, compared to 13% of those aged 75 and over.

Figure 1.63 Regular use of different media, by age



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

Base: All adults aged 16+ (2117 in 2010).

A1 – Which of the following do you regularly do? (Prompted responses, multi-coded)

E-readers popular across the age range

Our research indicates that 4% of adults claimed to use an e-reader in Q1 2011. Unlike other connected devices, e-readers are as popular with older age-groups as younger age-groups: 4% of 16-24s and 4% of 55-64s claimed to own an e-reader while take-up was highest among 35-54s (6%).

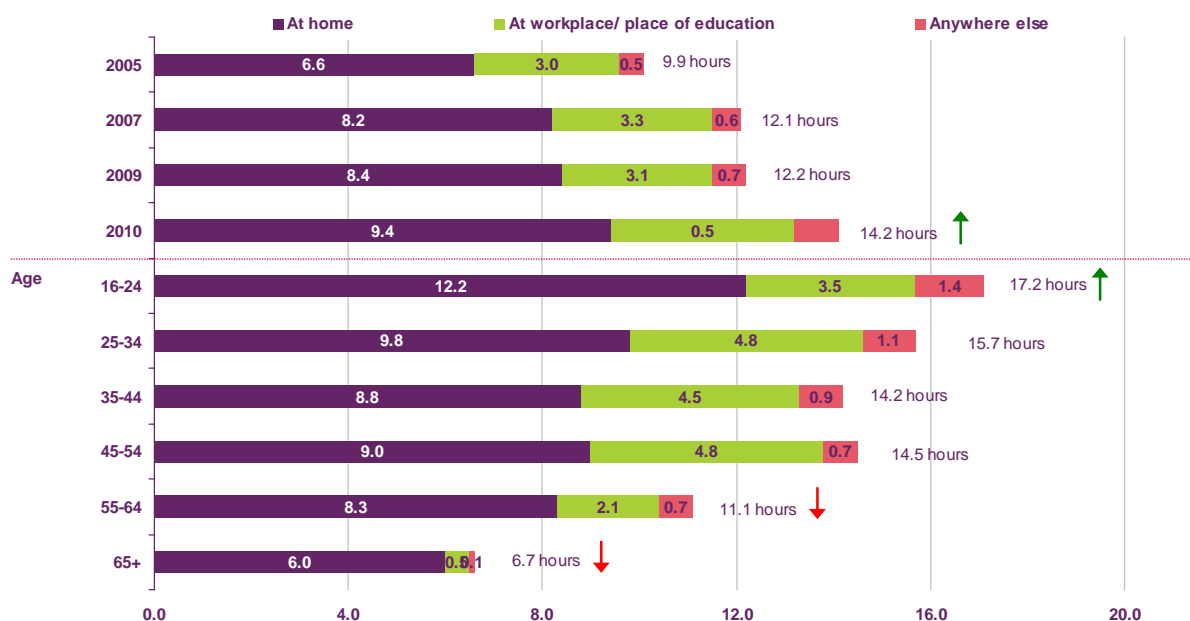
Self-reported hours of internet use significantly lower among adults aged 65+

The estimated⁹ weekly volume of use of the internet among users in 2010 was 14.2 hours¹⁰. Internet users aged 16-24 had a higher weekly volume of use in 2010 compared to all internet users (17.2 vs. 14.2 hours). Users aged 55-64 and 65+ had a lower weekly volume of use compared to all internet users (11.1 for 55-64 and 6.7 for 65+ vs. 14.2 hours).

⁹ Adults using the internet at home or elsewhere were asked to estimate how many hours in a typical week they used the internet at each of the places they accessed it. Because these estimates are self-reported it is likely that a degree of under- and over-reporting will be present, and the estimates shown should be taken as indicative only.

¹⁰ This compares to a UKOM/Nielsen figure of 13.5 hours per week spent using an internet-connected PC. This figure is from November 2010, and includes all internet users aged 2+.

Figure 1.64 Self-reported hours of internet use, by age: 2010



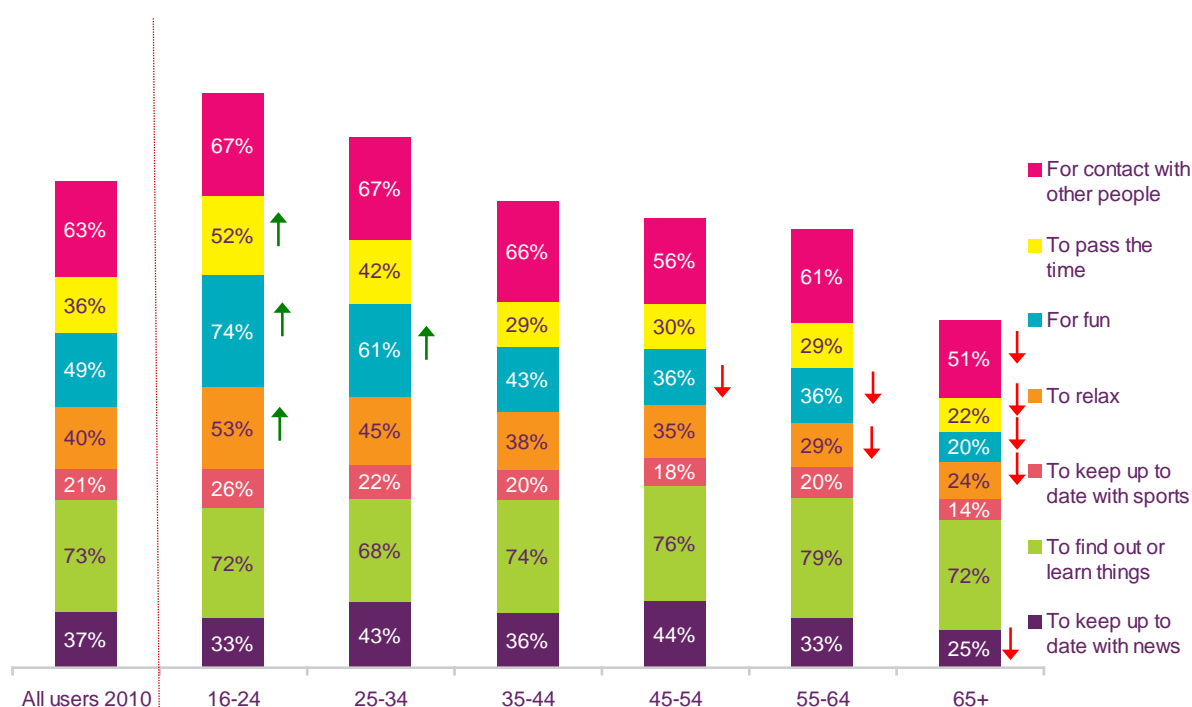
Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010
 Base: All adults aged 16+ who use the internet at home or elsewhere (1746 in 2005, 1723 in 2007, 1282 in 2009, 1489 in 2010) Significance testing shows any change between 2009 and 2010, any difference between any age group and all adults aged 16+. Data for those aged 75+ not available due to low base size.
 INTA-C – How many hours in a typical week would you say you use the internet at home/ at your workplace or place of education/ anywhere else? (Unprompted responses, single coded)

Older people less likely than young people to say they use the internet as a fun, relaxing pastime

Figure 1.65 focuses on the reasons for using the internet. It shows that younger internet users perceive their use of the internet differently from older age groups; they see it as a means of fun, relaxation and a pastime, while older age groups say they use it to find out information. Internet users aged 16-24 are more likely to say they use the internet for fun (74% vs. 49% of all users), to relax (53% vs. 40%) and to pass the time (52% vs. 36%).

People aged 65+ are most likely to focus on the informational element of the internet, and less likely to nominate reasons such as relaxation or pastime, or indeed to keep up to date with the news.

Figure 1.65 Reasons for using the internet, by age



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

Base: All adults aged 16+ who use the internet at home or elsewhere (1489 in 2010, 271 aged 16-24, 287 aged 25-34, 338 aged 35-44, 245 aged 45-54, 214 aged 55-64, 134 aged 65+, Significance testing shows any change between 2009 and 2010, any differences between any age group and all adults aged 16+.

Data for those aged 75+ not available due to low base size. IN42 – Which, if any of these are reasons why you use the internet? (prompted responses, multi-coded)

Older people more likely to make contact by meeting in person

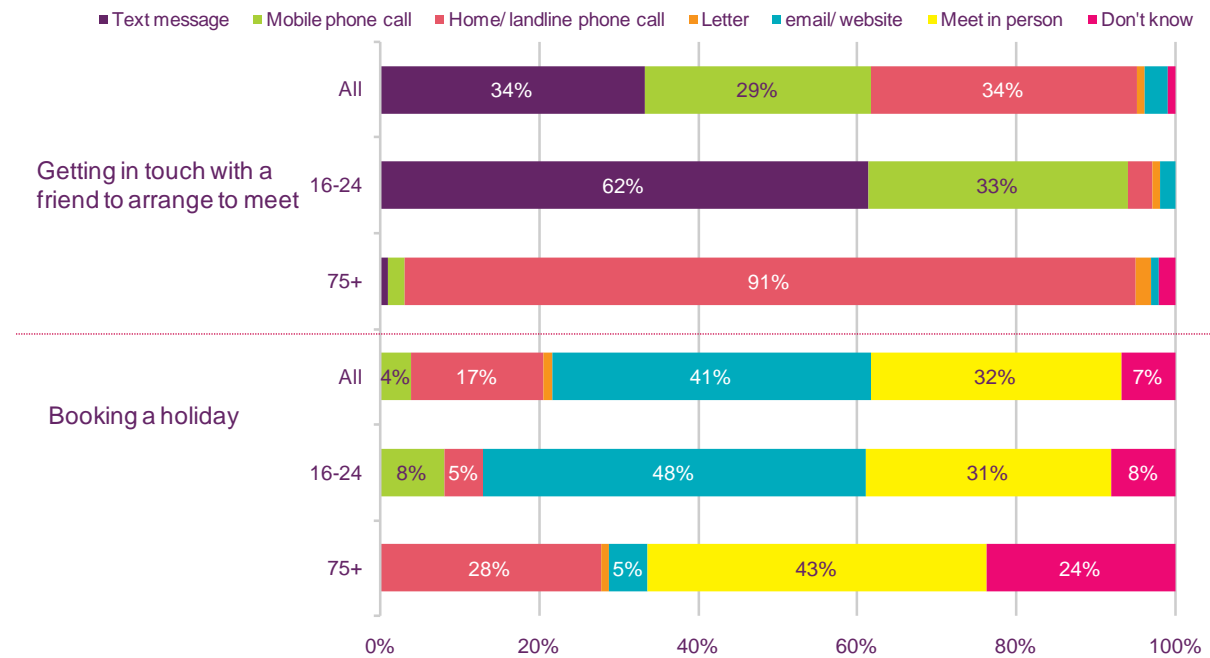
This looks at how people prefer to make contact in two everyday circumstances: booking a holiday and getting in touch with a friend to arrange to meet. For each scenario, respondents were shown a list of six methods and asked to say which one they would choose to use to make contact¹¹.

Preferences for ways of getting in touch with a friend to arrange to meet vary considerably by age. Adults aged 16-24 are more likely to prefer to send a text (62% of 16-24s vs. 34% of all adults), while adults aged 75 and over are more likely to prefer to make a call using the home / landline phone (91% aged 75+ vs. 34% of all adults).

Preferences for booking a holiday also show considerable differences by age – 48% of 16-24s say they would prefer to book via an email/website, compared to 5% of those aged 75+. Older people prefer to meet in person (43%) compared to 31% of 16-24s nominating this option.

¹¹ It should be noted that the responses shown are for all UK adults, and not solely those with the available technology, in order to be able to capture an overall picture of preferred communication methods across all adults. People's preferences for a method of communication depend on what communications devices they have access to. As we have seen, demographic groups vary in the extent to which they have access to various devices. Therefore, older people may be less likely to say that they would choose to make contact via email/website, as they do not have access to the internet.

Figure 1.66 Preferred methods of making contact



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

Base: All adults aged 16+ (2117 in 2010).

NZ2A-D. Please use this list to say which one way you would prefer to make

Older online users are less likely to use the internet weekly for a variety of activities, although 70% of them use it to communicate each week

Adults who use the internet were prompted with 26 different internet activities and were asked to say how often they did each¹².

¹² These activities in no way represent an exhaustive list of all the potential activities that can be undertaken online, but were chosen as representing the majority of activities for most people.

The individual activities have been grouped into nine types, to enable comparison. These are:

Communication – relates to activities such as sending or receiving email, using instant messaging services or making or receiving calls over the internet (e.g. Skype).

Transactions – relates to buying or selling things online, banking and paying bills online, downloading software or gambling online.

Work / studies information – relates to finding information online for work or for studies, doing an online course to achieve a qualification, or looking at job opportunities.

Social networking – relates to using social networking sites (such as Facebook, MySpace, Piczo, Bebo, hi5 or Twitter).

Entertainment – relates to uses such as listening to radio stations online, playing games online, watching or downloading video clips, TV programmes or films online, downloading or listening online to music, looking at adult-only websites, or (added in 2010) visiting dating websites.

News - relates to looking at news websites.

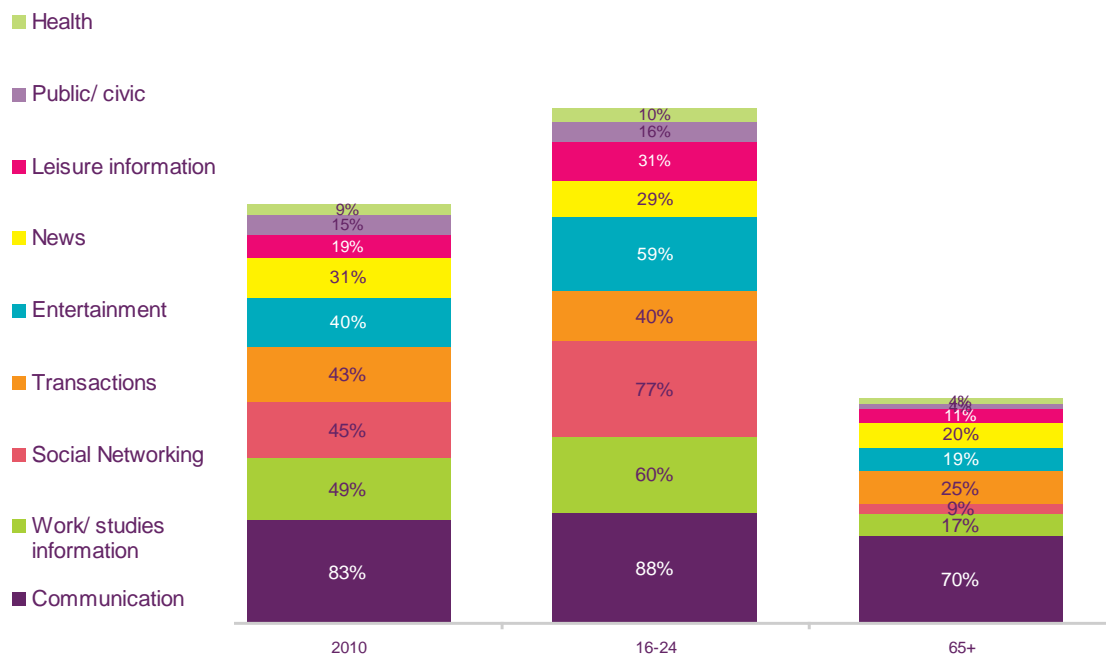
Leisure information – relates to finding information for booking holidays or finding information for leisure time such as cinema and live music.

Public / civic – relates to finding information online about public services provided by local or national government, or completing government processes online such as registering for tax credits, renewing a driving licence, car tax or passport, completing a tax return, or looking at political, campaign or issues websites.

Health – relates to finding information about health-related issues.

Figure 1.67 shows the proportion of internet users who carry out each of the categories of internet use at least weekly by age group. Internet users aged 16-24 are more likely to use the internet at least weekly for work/ studies information (60% vs. 49% of all UK internet users), social networking (77% vs. 45%), entertainment (59% vs. 40%) and leisure information (31% vs. 19%). By contrast, internet users aged 65 and over are less likely to use the internet at least weekly for each of the nine types of use, with the exception of health.

Figure 1.67 Types of internet activities carried out by age: 2010



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010
 Base: All adults aged 16+ who use the internet at home or elsewhere (1489 in 2010 271 aged 16-24, 134 aged 65+). Data for those aged 75+ not available due to low base size.
 IN13/14 – Could you please tell me from this list the types of things you currently do using the internet, and how often you do each? (Prompted responses, single coded)

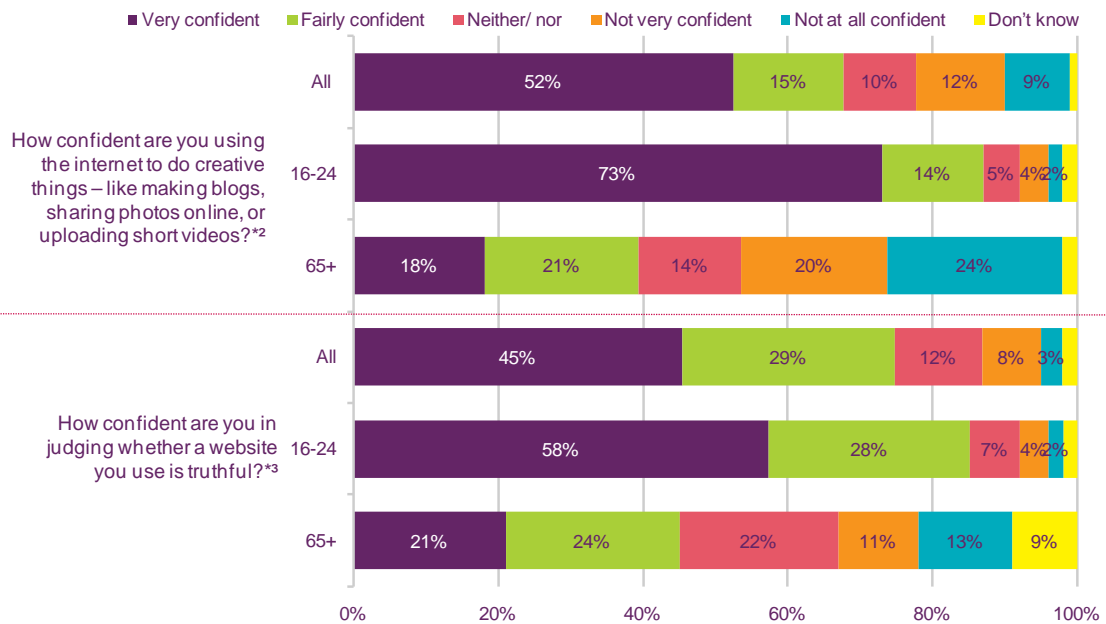
Older people have less confidence online

As context to these elements of use, we ask internet users to rate their levels of confidence across a range of aspects of using the internet.

Younger users aged 16-24 are far more likely than older people to say that they are confident doing creative things online such as making blogs, sharing photos and uploading short videos (73% say they are very confident, compared to 18% of those aged 65+).

Younger users aged 16-24 are also more likely to say they are very confident in judging whether a website is truthful (58% vs. 21% for older people aged 65+). Users aged 65 and over are more likely to say they are not confident (24% vs. 12% for all).

Figure 1.68 Confidence as an internet user



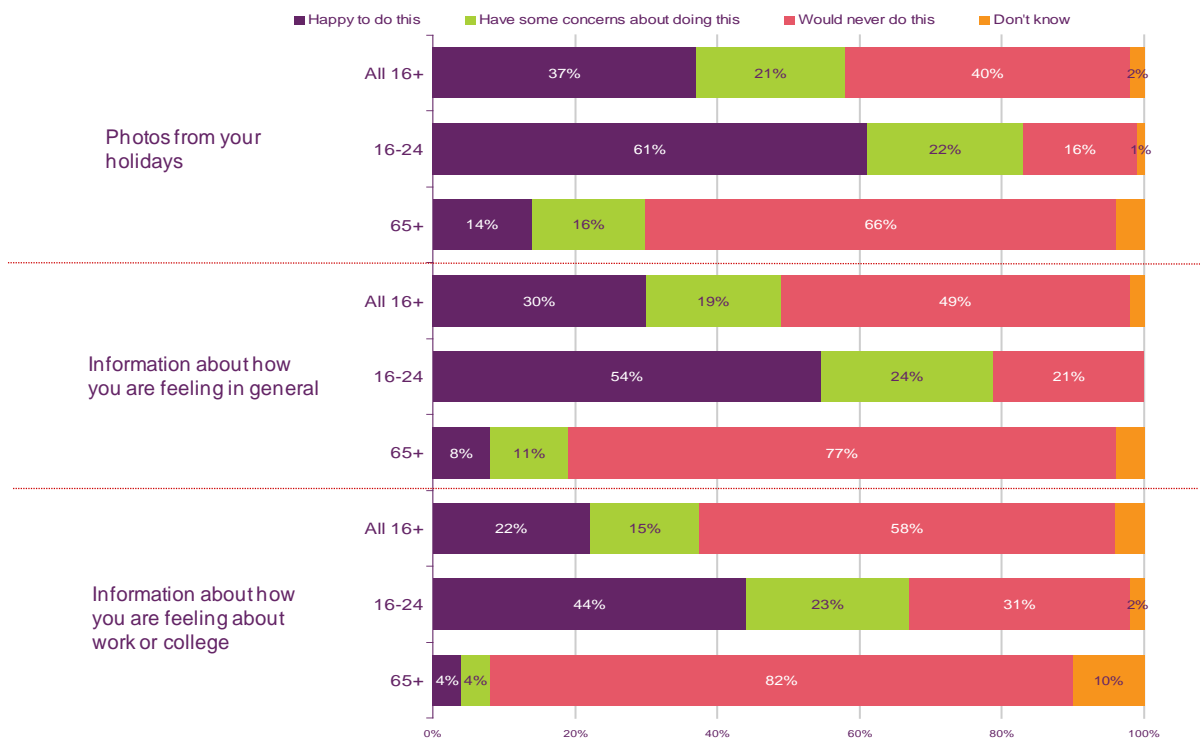
Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010
 Base: Adults aged 16+ who use the internet at home or elsewhere (1489 in 2010). Data for those aged 75+ not available due to low base size.
 IN10F/G/A/B/C/D – I'm going to read out some questions about confidence using the internet, for each one please say which of the options on the card applies to you. (Prompted responses, single coded)

Older people less likely to be happy to give out personal details

Around four in ten internet users say they would be happy to share photos online, while around three in ten say they would be happy to share information about how they are feeling in general (30%). Internet users are least likely to say they would be happy to share information about how they are feeling about work or college (22%).

As Figure 1.69 shows, there is a strong relationship between privacy concerns and the age of the internet user, with users aged 16-24 being far more likely than those aged 65+ to say that they would be happy to share these types of information online.

Figure 1.69 Information prepared to share online, by age



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010
 Base: All adults aged 16+ who use the internet at home or elsewhere (1489 aged 16+, 271 aged 16-24, 134 aged 65+). Data for those aged 75+ not available due to low base size.
 NIN35D/E/A/B/C – I'm going to read out some types of information that people can show on the internet, and for each one I would like you to say how you would feel about putting this information online in terms of any privacy concerns. (Prompted responses, single coded)

1.7 The nations' communications markets

1.7.1 Introduction, structure and findings

Introduction

This section sets out a selection of the key facts and figures relating to communications markets across the UK's nations in 2011, comparing and contrasting nations and highlighting changes that have taken place in the past year.

Structure

The section begins by highlighting a range of 'fast facts' for England, Scotland, Wales and Northern Ireland, which draws on Ofcom's annual survey of the nations and regions. It then reports on communications service availability and take-up by nation.

This section also includes analysis of data on service bundling and public service broadcasting spend and viewing.

Findings

- **Communications service availability** – Fixed-line telephony is available to all premises in the UK (along with dial-up internet access). Fixed-line broadband is available to a large proportion of the UK population (although individuals' experience of broadband and the speed they receive will be heavily influenced by factors including the length of the line between the customer premises and the exchange). Cable broadband, offering bandwidths of 'up to' 50 Mbit/s, is available to 48% of UK homes – with coverage highest (51%) in England and lowest (23%) in Wales. Freeview coverage is rising as digital switchover takes effect – 98% of homes in Wales and 99% in Scotland can now receive the signal and nationwide coverage of the DTT signal has risen to 85% over the year.
- **Service and device take-up** – Digital television remains the most widely-adopted digital communications technology across the UK's nations, at 96% of all TV homes. Take-up is highest in Wales (99%) and lowest in Northern Ireland (90%). Across the UK, DTV take-up increased by four percentage points in the past year, with the largest increase recorded in Scotland, where it rose by six percentage points. This was driven by digital switchover which was under way during the fieldwork period. Broadband take-up has increased by three percentage points to 74%, with year-on-year increases recorded in all of the UK nations with the exception of Scotland, which has the lowest level of broadband take-up (61%). Fixed-line take-up in the UK has remained at 85%, with mobile phone ownership having increased by two percentage points this year to stand at 91%.
- **Bundling** – The trend of purchasing two or more communications services from the same supplier has continued across the UK this year, with increases in all four UK nations. Fifty-three per cent of UK adults now buy communications services in this way. Bundles are most popular in England (54%) and least popular in Northern Ireland (46%).
- **Spending on content production** – spend per head on PSB content (TV and radio) stood at £38.23 across the UK in 2010. Expenditure on programme production for UK audiences was a big component of spend in England. It was also a substantial part of spending in Wales and in Scotland, although spending on programme production

specifically for Scottish and Welsh audiences was also significant. This spend on programme production for the nations was the largest component of spend in Northern Ireland, while in Wales, the largest component of expenditure was on Welsh-language productions.

- **Consumption of audio/audio-visual content** – Viewing share among the PSBs averaged 55% in 2010. BBC radio services attracted a 55% listening share in 2010, ranging from 62% in Wales to 45% in Scotland (where commercial local radio is popular). Access to broadband is providing consumers with new ways to access audio and video content; 41% of people claimed that they had watched TV content over the internet in 2010 (up by three percentage points year on year). Fourteen per cent had done the same with radio content, while a third of the population (32%) had used their mobile handsets to access data (including surfing the internet), up by nine percentage points year on year.

1.7.2 UK communications market: fast facts

Figure 1.70 illustrates how take-up and use of a variety of communications services across the UK has changed over the past year.

Figure 1.70 UK communication markets: fast facts

| | UK | England | Scotland | Wales | Northern Ireland | UK urban | UK Rural |
|--|-----------|-----------|-----------|-----------|------------------|-----------|-----------|
| Digital TV take-up among TV homes | 96 ↑+4 | 96 ↑+4 | 97 ↑+6 | 99 | 90 | 96 ↑+4 | 95 ↑+3 |
| Broadband take-up | 74 ↑+3 | 76 | 61 | 71 ↑+7 | 75 | 74 ↑+4 | 80 ↑+5 |
| Mobile broadband | 17 ↑+2 | 18 ↑+3 | 9 | 16 | 13 | 17 | 14 |
| Mobile phone take-up | 91 ↑+2 | 92 ↑+2 | 86 | 87 | 92 | 91 ↑+2 | 92 |
| Use mobile to access internet | 32 ↑+9 | 34 ↑+9 | 21 ↑+6 | 25 | 29 ↑+8 | 34 ↑+8 | 23 |
| Smartphone take-up amongst mobile phone owners | 30 ↑+ | 31 ↑+ | 21 ↑+ | 29 ↑+ | 23 ↑+ | 30 ↑+ | 30 ↑+ |
| Fixed landline take-up | 85 | 85 | 80 | 80 | 84 | 84 | 90 |
| Households taking bundles | 53 | 54 | 49 | 47 | 46 | 54 ↑+3 | 47 |
| DAB ownership amongst radio listeners | 37 | 39 | 31 | 27 | 28 | 37 | 40 |

Ofcom Research Q1 2011. Base: All adults aged 16+ (n = 3474 UK, 1983 England, 487 Scotland, 493 Wales, 511 Northern Ireland, 2458 UK urban, 1016 UK rural) Note: This is the first year that we have collected survey data on smartphone use, so we cannot report a precise year-on-year increase. But we are confident that ownership has increased significantly in the past year.



Figure is significantly higher than UK average



Figure is significantly lower than UK average



Figures has risen significantly by xx percentage points since 2010

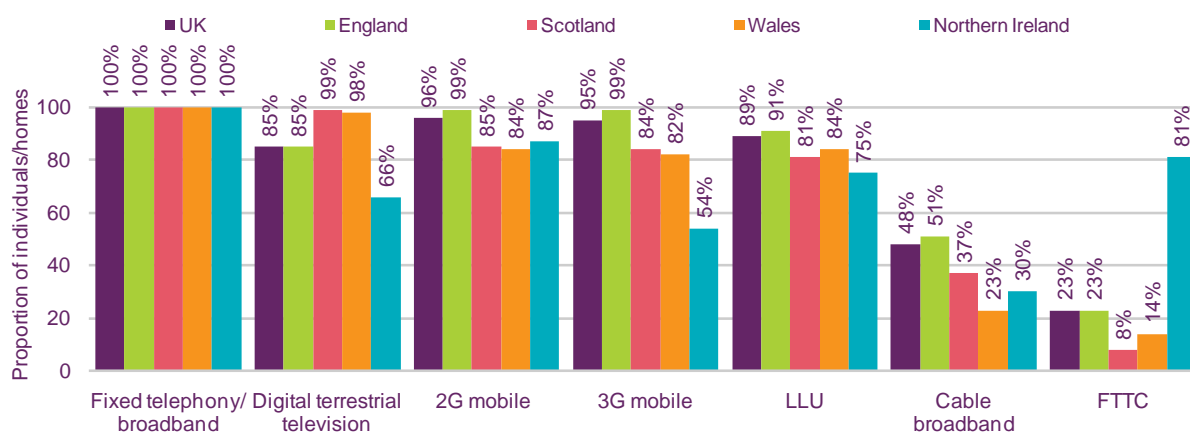
1.7.3 Availability of communications platforms and services

Availability of communications services varies across the UK's nations

Figure 1.71 shows the availability of communications services across the UK by percentage of population covered. The coverage of most services shown in the chart has not changed in the past year. Digital terrestrial television is an exception to this, having risen (substantially in Scotland, where digital switchover has recently completed. The charts shows that population coverage of communications services varies by service and by nation:

- Fixed-line voice telephony is available to 100% of homes in the UK. Broadband delivered over a standard fixed telephony line is available to almost all UK homes and commercial properties (99.98%) across the UK's four nations. However, factors such as line length and contention influence the actual broadband speed at customer premises.
- Local loop unbundling, providing consumers with a choice between fixed-line telephony and fixed broadband providers, stood at 89% of UK homes in Q1 2010. The figure was up by four percentage points year on year. Homes in England were the most likely to be connected to an unbundled exchange (91% of the total). In Wales the figure stood at 84%, in Scotland 81% and in Northern Ireland 75%.
- Cable broadband, offering access to high-speed internet and pay-TV services, is available to 48% of homes in the UK. Coverage, which is typically concentrated in areas of high population density, ranged from 51% of homes in England to 23% in Wales. Since the end of 2010, broadband speeds of 'up to' 100 Mbit/s have become available over Virgin Media's cable infrastructure.
- BT is now rapidly rolling out FTTC, passing around 80,000 new premises every week, and aims to make it available to two-thirds of UK homes by 2015. Northern Ireland has benefited from early deployment and at the beginning of March 2011 81% of homes were connected to an exchange where FTTC has been deployed – compared to around 23% across the UK as a whole.
- 2G mobile telephony services covered 96% of the UK population in Q1 2010. Levels of coverage are influenced by population densities and by topography. As a result, 99% of the population of England was covered, in contrast to 84% in Wales, 85% in Scotland and 87% in Northern Ireland. The comparable figures for 3G coverage were lower – 95% of the UK population; 99% in England and 54% in Northern Ireland.
- Digital terrestrial television availability, offering at least a 17-channel line-up, was available to 85% of the UK population (up from 81% a year ago). The increase is largely explained by the completion of switchover in Scotland, where coverage is now highest, at 99% of homes; switchover has also completed in Wales (where 99% of homes can receive DTT). In England the comparable figure was 85%; it was lowest in Northern Ireland at 66%.

Figure 1.71 Communications infrastructure availability across the UK's nations



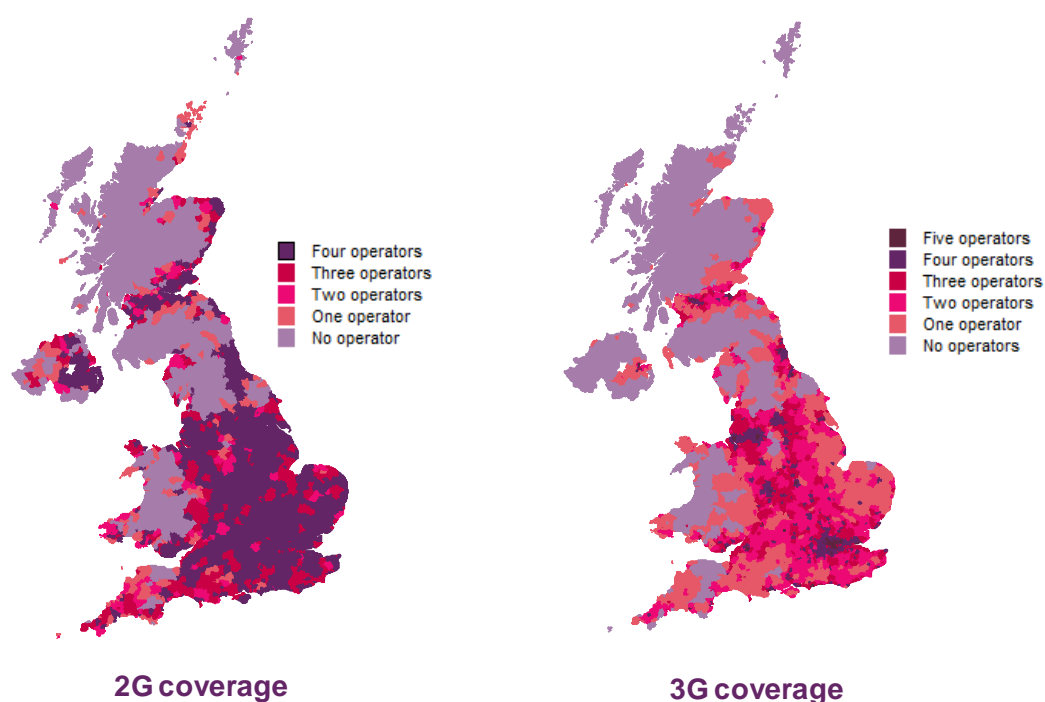
Sources: Ofcom and:

1. DTT: Availability of 17 services. Ofcom estimates.
2. Proportion of population living in postal districts where at least one operator reports at least 90% 2G area coverage. Sourced from GSM Association / Europa Technologies (Q2 2011). Note that coverage data has been restated; this means that year-on-year comparisons are not possible.
3. Proportion of population living in postal districts where at least one operator reports at least 90% 3G area coverage. Sourced from GSM Association / Europa Technologies (Q2 2011). Note that coverage data has been restated; this means that year-on-year comparisons are not possible.
5. Proportion of households connected to an LLU-enabled exchange
6. Proportion of households passed by Virgin Media's broadband-enabled network
7. Proportion of households connected to an FTTC-enabled exchange.

1.7.4 Coverage of 2G and 3G mobile services

Figure 1.72 illustrates the geographic coverage of 2G and 3G mobile services. It highlights postcodes only where there is mobile coverage of at least 90%. Those parts of the country where choice between mobile phone operators is greatest tend to coincide with areas of high population density, or with a major road network. The result is that geographic mobile phone coverage in the UK tends to be lower than population coverage. Lower network coverage in Scotland, Wales and Northern Ireland, compared to England, is a reflection of large areas of low population density and areas where hilly or mountainous terrain limits the range of cellular masts.

Figure 1.72 Coverage of 2G and 3G mobile services



Source: Ofcom/ GSM Association / Europa Technologies; Q2 2011

Note: Map shows the number of 2G operators with at least 90% geographic coverage by postcode area; not directly comparable to that published in the 2011 report

1.7.5 Take-up of communications platforms and services across the UK

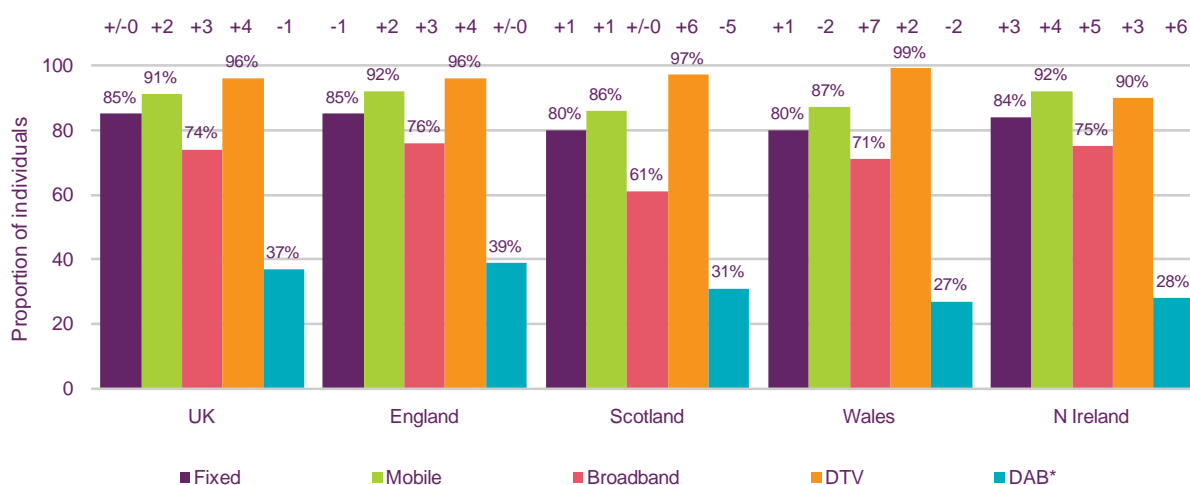
Modest increases in take-up of established communications services across the UK nations

Take-up of the most established communications services remained stable or increased modestly in the past year. Digital television and mobile telephony services are approaching universal ownership, so year-on-year increases in take-up have slowed.

- The small fall in ownership of fixed-line telephones across the UK that we reported on last year has been sustained, with take-up remaining at 85%. Take up of fixed-line telephones is lowest in Scotland and Wales (both at 80%).
- Broadband take-up (whether fixed or mobile) has continued to increase, with a three percentage point rise in the past year. The largest percentage point increases were seen in Wales (+7) and Northern Ireland (+5). In Scotland, broadband take-up remained at 61% and is now 13% points behind the UK average of 74%.
- Over nine in ten UK adults now own a mobile phone, following a two percentage point increase in take-up during the past year. There is modest variation in take-up between nations, with highest take-up (92%) in England and Northern Ireland and the lowest take-up in Scotland (86%). The apparent fall in mobile phone ownership in Wales is within the survey's error margins, so should not be considered significant.
- Digital television take-up has increased to 96% of the UK's adult population. Wales (the first UK nation to switch over to digital) has the highest take-up, at 99%. Digital switchover in Northern Ireland is scheduled for 2012, when all of the remaining regions of the UK will switch to digital.

Figure 1.73 Communications service adoption across the nations of the UK: 2011

Figure above bar shows % point change from Q1 2010



Source: Ofcom research, Q1 2011

Fixed line base: All adults aged 16+ (n = 3474 UK, 1983 England, 487 Scotland, 493 Wales, 511 Northern Ireland)

DTV, mobile and broadband bases: Adults aged 16+ with a TV in the household (n= 3412 UK, 1941 England, 479 Scotland, 483 Wales, 509 Northern Ireland)

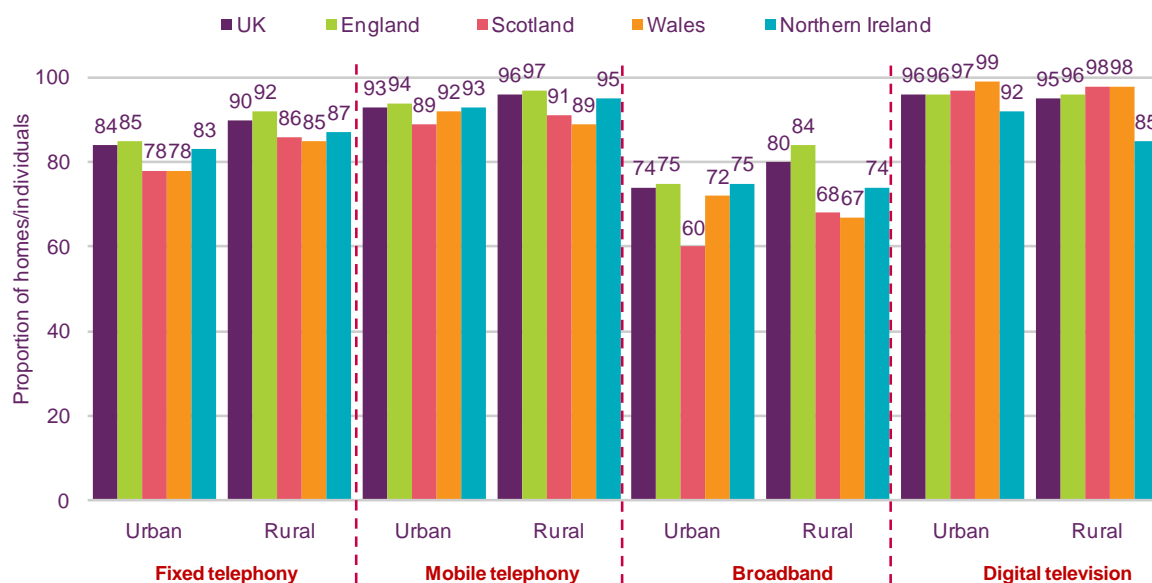
DAB base: Adults aged 16+ with any active radio sets in the household who listen to radio. *NB data prior to 2011 is based on all who listen to radio (n = 2811 UK, 1629 England, 357 Scotland, 397 Wales, 428 Northern Ireland)

See published tables for questions:

www.ofcom.org.uk/static/marketresearch/statistics/main_set.pdf

Figure 1.74 sets out patterns of communications technology / service adoption, by nation and by location (urban/rural). Broadly speaking, higher levels of take-up in rural locations tend to run alongside higher levels in urban areas. Fixed-line services are the only deviation from this pattern, where take-up is higher – sometimes substantially – in rural locations. That said, there are some variations in take-up by location: broadband take-up among homes in rural areas is higher than in urban areas in England and Scotland, which is likely to relate to higher-income households in rural areas. In Q1 2011, rural areas in England had the highest level of broadband take-up, at 84%.

Figure 1.74 Adoption of communications technology / services in urban and rural locations



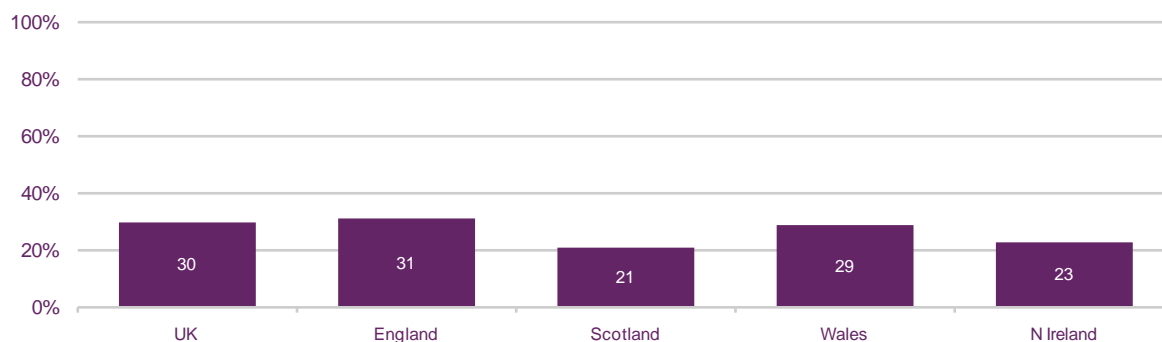
Source: Ofcom research, Q1 2011

Fixed telephony, mobile telephony, broadband base: All adults aged 16+ (n = 3474 UK, 1983 England, 487 Scotland, 493 Wales, 511 Northern Ireland)

DTV base: Adults aged 16+ with a TV in the household (n= 3412 UK, 1941 England, 479 Scotland, 483 Wales, 509 Northern Ireland)

Almost one in three (27%) UK adults now own a smartphone, equating to 30% of mobile phone users. Take-up has grown very quickly, with 59% having purchased their smartphone in the past year. Smartphone ownership varies across the UK nations with the highest levels of take-up being found among consumers in England (31%) and Wales (29%). Smartphone ownership is higher among ABC1 social groups and those aged 16-34.

Figure 1.75 Smartphone ownership among mobile phone owners



Source: Ofcom research, Q1 2011

Base: Adults aged 16+ who personally use a mobile phone (n = 3091 UK, 1786 England, 425 Scotland, 416 Wales, 464 Northern Ireland)

Question. Do you personally use a smartphone? A smartphone is a phone on which you can easily access emails, download files and applications, as well as view websites and generally surf the internet. Popular brands of smartphone include BlackBerry, iPhone and Android phones such as the HTC Desire.

Fifteen per cent of adults in the UK rely solely on mobile voice telephony. As highlighted in last year's report, Wales and Scotland have the highest proportion of mobile-only homes. Across the UK, lower-income homes are more likely to rely solely on mobile telephony.

Figure 1.76 Mobile-only households in the UK



Source: Ofcom research, Q1 2011

Base: All adults aged 16+ (n = 3474 UK, 1983 England, 487 Scotland, 493 Wales, 511 Northern Ireland)

Question. Is there a landline phone in your home that can be used to make and receive calls?/
How many mobile phones in total do you and members of your household use?

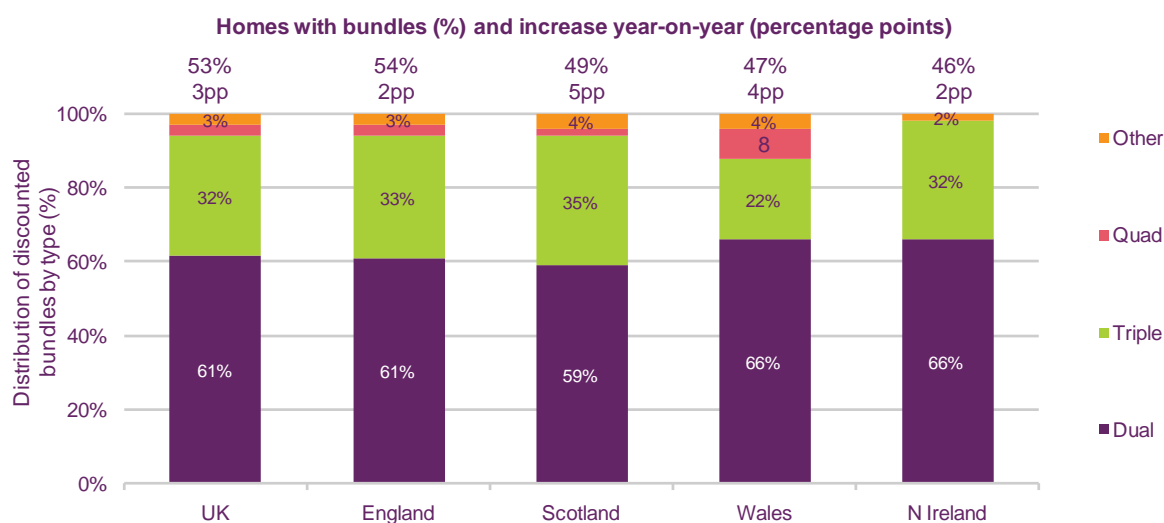
1.7.6 Consumer take-up of bundled services in the UK

Over half of all homes across the UK took a bundle of communications services at Q1 2011, up by three percentage points year on year.

Purchasing communications services in bundles continues to increase in popularity across the UK. Fifty-three per cent of UK homes now purchase communications services in this way, a three percentage point increase year on year, following a four percentage point increase from 2009-2010. The most popular type of bundle is a 'dual' package of two services (typically fixed-line telephony and broadband).

Take-up of bundled services is highest in England (54%), but is becoming an increasingly popular way to purchase services in the UK's other nations, in particular in Scotland and Wales, where we have seen year-on-year increases of five percentage points and four percentage points respectively.

Figure 1.77 Take-up of bundles, by nation



Source: Ofcom research, Q1 2011

Base: All adults aged 16+ with a package of services regardless of whether or not these include a discount (n = 1680 UK, 1035 England, 226 Scotland, 197 Wales, 222 Northern Ireland)

Note: Remaining percentages are Don't know responses

1.7.7 Spending by public service broadcasters on television and radio content across the UK's nations

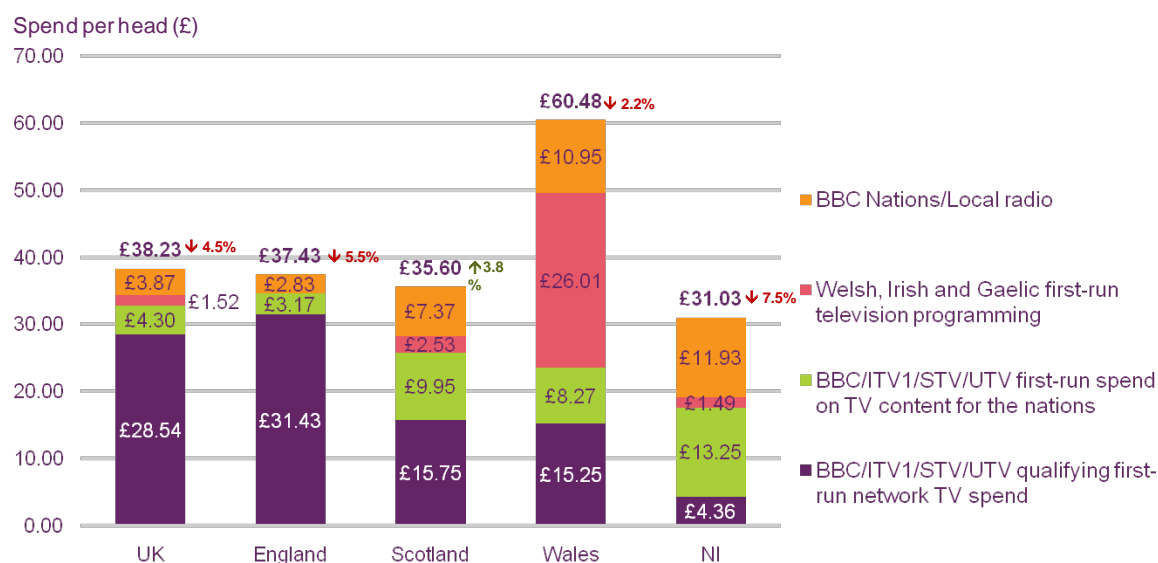
Figure 1.78 illustrates patterns of spend on broadcast output. It adjusts for population size by expressing spend on a per-head basis. The chart illustrates four types of expenditure:

- the value of qualifying first-run networked TV spending: programmes that are produced in one nation/English macro region, and then broadcast to all UK viewers;
- BBC spend on radio services for listeners in the nations (BBC Radio Foyle/Ulster, BBC Radio Wales/Cymru, BBC Radio Scotland/nan Gàidheal and BBC Local Radio in England);
- spend by the BBC and ITV/STV/UTV on first-run programmes specifically for viewers in each nation; and
- TV content produced in Welsh (and broadcast on S4C), Gaelic (BBC Alba) and the Irish language.

Total spend per head across the UK stood at £38.23 in 2010, down by 4.5% in real terms year on year; networked television productions accounted for three-quarters (75%) of that total, and nations/regional television output for a further 11%.

Patterns of spending across the four nations differed in terms of both their level and composition. Spend per head in Wales was the highest among the four nations, reaching £60.48 in 2010, down by 2.2% in real terms year on year. In England, spend per head stood at £37.43 and was driven primarily by networked television production; the figure was down by 5.5% year on year in real terms. In Scotland spend/head stood at £35.60 (up by 3.8%), where networked and regional production both made substantial contributions to that total. The comparable figure for Northern Ireland was £31.03 (down by 7.5%), with television output specifically for Northern Ireland viewers and radio output forming a substantial proportion of the figure.

Figure 1.78 Spend per head on UK-originated content broadcast by PSBs on TV and radio: 2011



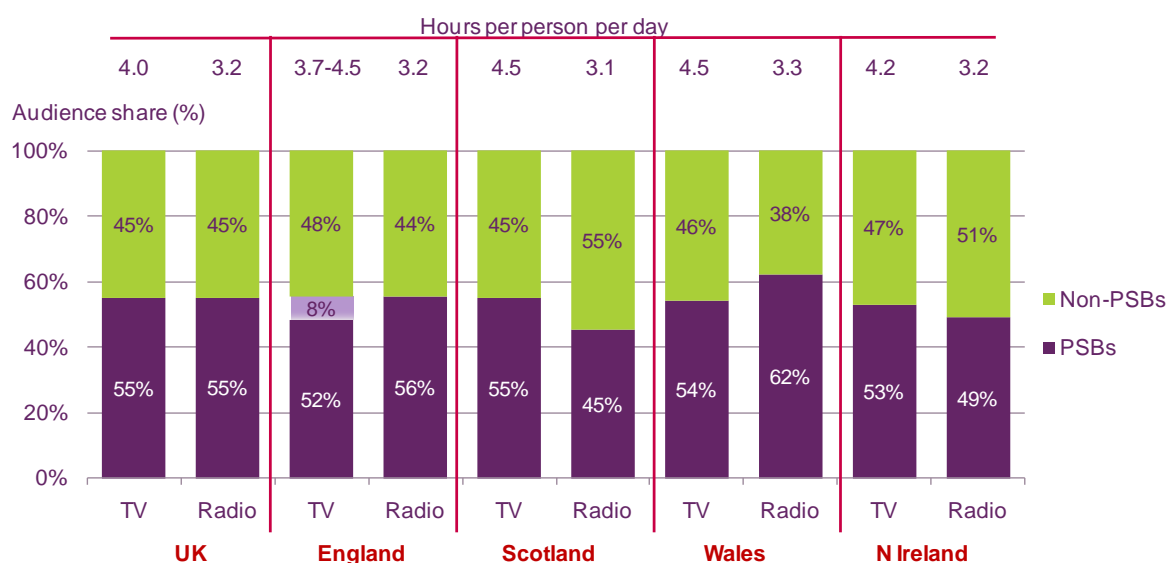
Source: broadcasters, BBC and S4C Annual Report and Accounts and Ofcom calculations

1.7.8 Consumption of television and radio services

People in Scotland and Wales spend an average of 4.5 hours per day watching TV

In 2010, average daily TV viewing among individuals (aged 4+) in UK was 4 hours per day. Viewing was highest in Wales and Scotland (average 4.5 hours per day). Average daily radio listening among adults (15+) in the UK was 3.2 hours, levels of listening among listeners in Wales and the UK's other nations were broadly similar, and all were comparable to the 2009 figures.

Figure 1.79 Hours of daily viewing of television and radio, by nation: 2010



Source: BARB. i) TV: PSBs = BBC One, BBC Two, ITV1, C4+S4C, Five. (ii) Radio : PSBs = all BBC radio stations.

Notes: For England TV, a range is displayed reflecting the regions with the highest and lowest average daily viewing figures respectively

For Wales, TV viewing hours show an increase of 0.9 hours on 2009 figures. While it is likely that there has been an increase in viewing in Wales, due to digital switchover, this increase may also be attributable to the effects of the new BARB panel introduced at the start of 2010. There are two important changes to note regarding the new BARB panel: 1) The panel is based on completely different viewers to the previous panel, so data comparisons pre- and post-2010 should be viewed with caution. 2) There was a redefining of border boundaries under the new panel change. Previously, viewing of C4 in some areas registered as 'out of area' and so did not count towards the Wales area viewing figures; under the new panel and re-defined regions, however, viewing of C4 in these regions is now included.

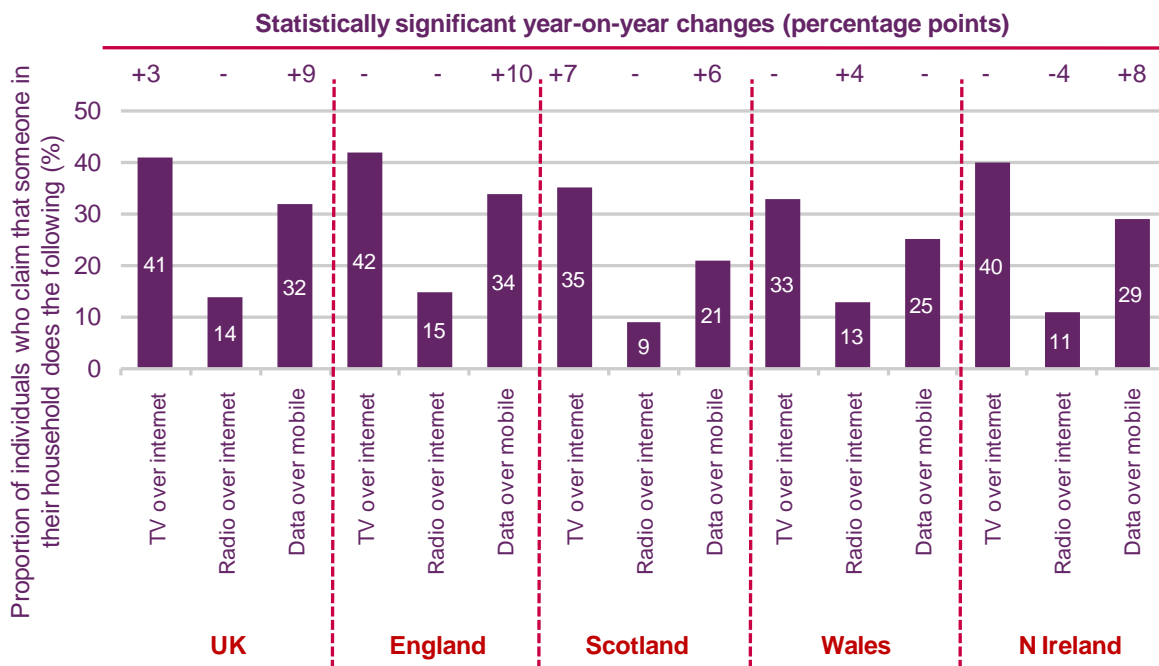
1.7.9 Use of converged platforms and devices by people across the UK

Consumers' use of data on mobile handsets has increased by 39% in the past year

A third (32%) of UK consumers now say that somebody in their households uses their mobile phone to access data services (internet, emails, web-enabled apps etc). This is an increase of nine percentage points (or 39%) since last year. This rapid growth has been driven by the fast increasing popularity of smartphones. Consumers' use of smartphones is discussed in more detail in *The smartphone revolution*.

Watching audio-visual content over the internet continues to be a popular pastime, with over four in ten (41%) homes watching services such as BBC iPlayer, 4oD and ITV Player.

Figure 1.80 Consumers' use of converging platforms



Source: Ofcom research, Q1 2011

Base: All adults aged 16+ (n = 3474 UK, 1983 England, 487 Scotland, 493 Wales, 511 Northern Ireland)

Questions. Which, if any, of these do you or members of your household use the internet for whilst at home?/ Which, if any, of the following activities, other than making and receiving calls, do you use your mobile for?/ Includes download free applications, download paid-for applications, send/ receive emails, accessing the internet, connecting to the internet using WiFi, using VoIP service, download a new video clip, video streaming, TV streaming, accessing/ receiving, sports/ team news/ scores, accessing/ receiving news, use IM/ Instant messaging



The Communications Market 2011

2 TV and audio-visual

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2.1 Key market developments in TV and audio-visual

2.1.1 Industry metrics and summary

Figure 2.1 Industry metrics

| UK television industry | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|-------|-------|-------|-------|-------|-------|
| Total TV industry revenue (£bn) | 10.5 | 10.6 | 11.1 | 11.2 | 11.1 | 11.7 |
| Proportion of revenue generated by public funds | 25% | 25% | 25% | 24% | 25% | 23% |
| Proportion of revenue generated by advertising | 35% | 33% | 32% | 31% | 28% | 30% |
| Proportion of revenue generated by subscriptions | 35% | 36% | 37% | 39% | 41% | 41% |
| TV as a proportion of total advertising spend | 30% | 28% | 27% | 27% | 28% | 29% |
| Spend on originated output by 5 main networks (£bn) | 3.0 | 2.8 | 2.7 | 2.6 | 2.4 | 2.5 |
| Digital TV take-up | 61.9% | 69.7% | 86.3% | 87.1% | 91.4% | 92.5% |
| Proportion of DTV homes paying for TV (Q1) | 64% | 60% | 55% | 53% | 55% | 55% |
| Viewing per head, per day (hours) in all homes | 3.65 | 3.60 | 3.63 | 3.74 | 3.75 | 4.04 |
| Share of the five main channels in all homes | 70% | 67% | 64% | 61% | 58% | 56% |
| Number of channels broadcasting in the UK | 416 | 433 | 470 | 495 | 490 | 510 |

Source: Ofcom/broadcasters/Advertising Association/Warc/BARB/GfK. Note: Public funds include the DCMS grant to S4C and BBC funding that is allocated to TV; TV as a proportion of total advertising spend excludes direct mail and is based on Advertising Association/Warc Expenditure Report (www.warc.com/expenditurereport); spend on originations includes spend on nations and regions programming (not Welsh and Gaelic language programmes but some Irish language). Note that digital television take-up in Q1 2011 had reached 93%.

This section examines at key developments and trends seen in the UK television market during the past year. These include:

- UK television broadcasters generated revenue of £11.7bn in 2010, an increase of £638m (5.7%) year on year**, driven both by a recovery in advertising revenue (up 11.2% on the year to £3.5bn) as well as continued increases in subscription income (up 5.3% year on year to £4.8bn) (page 98).
- Digital Video Recorders are now available in 46% of homes. Within these households, time-shifted viewing accounted for 14% of all viewer hours in 2010, down by one percentage point in a year.** Time-shifted viewing was shared equally between programmes recorded/watched on the same day and those that were watched one to seven days after broadcast (both 7%) (page 103).
- 93% of main television sets were connected to a digital television platform by the end of Q1 2011, up by 1pp year on year.** As migrations from analogue to digital slow down, multichannel operators are introducing new services/features on their platforms, such as on-demand content and 3D output (page 99).
- Just over a fifth (22%) of consumers with access to a games console use it to watch video content.** This includes 11% who claimed to have

downloaded/streamed from the web and 19% who have watched content through the BBC iPlayer. Four per cent used their consoles to watch live TV programmes/content; this rose to 7% among people aged 16-24 (page 103).

- **Most children’s TV viewing (95%) is through the main set in the home.** A small proportion is through sets in bedrooms –5% in 2010 (page 113).

2.1.2 TV industry revenue up by 5.7% to £11.7bn, fuelled by the ad recovery

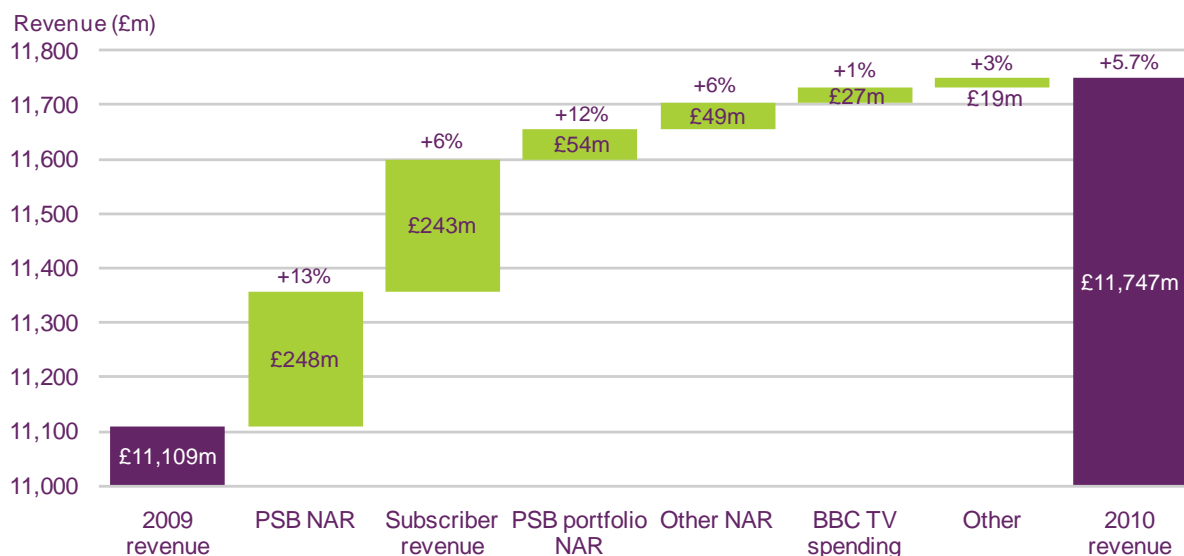
Total TV industry revenues increased by 5.7% (or £638m) to £11.7bn in 2010, driven by a recovery in the advertising market, coupled with continued growth in TV subscription income.

Net advertising revenue, which was the worst hit of all revenue streams in 2009, rose by 11.2% (or £350m) in 2010, thereby returning the value of the TV advertising market to 2008 levels (in nominal terms). Advertising revenue across all commercial television sectors increased in 2010 – including commercial PSBs, PSB portfolio channels and other multichannel services.

Revenue from pay-TV subscriptions, which remained largely unaffected throughout the economic downturn, increased further in 2010 to £4.8bn – the highest level recorded since Ofcom began tracking the market.

Income among publicly funded channels, including BBC revenue allocated to TV, and S4C’s grant from the Department for Culture, Media and Sport, increased by 1% to £2.7bn.

Figure 2.2 Total TV industry revenue, by source



Source: Ofcom/broadcasters

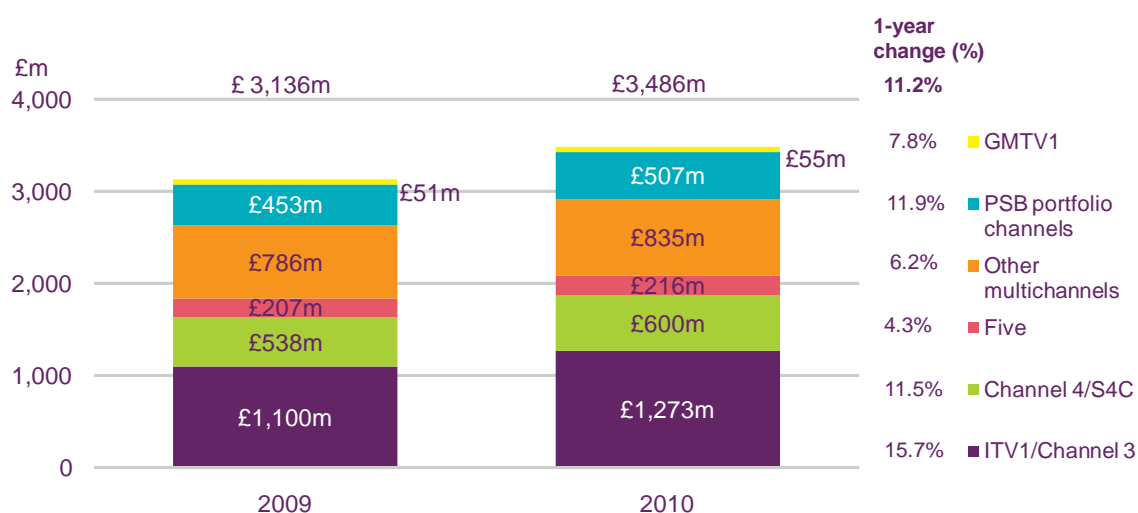
Note: Figures expressed in nominal terms. PSB NAR comprises Channel 3 licensees (including GMTV1, ITV Plc, Channel Television, STV and UTV), Channel 4, Channel Five and S4C. PSB portfolio NAR includes the commercial channels owned by the PSBs (ITV2, ITV3, ITV4, E4, More 4, Film 4, 5* and 5USA. 'Other NAR' comprises the rest of the multichannel market. Platform operator revenues do not include any installation costs, equipment sales or subsidies. BBC TV spending represents the amount of BBC revenue that is allocated to TV, which is estimated by Ofcom based on Note 2c in the BBC's annual report and accounts 2010/11 (www.bbc.co.uk/annualreport).

The largest year-on-year increases in advertising revenue came from the main commercial PSB channels (ITV1, STV, UTV, Channel Television, GMTV1, Channel4/S4C and Channel 5) where revenue has risen by 13% or £248m since 2009 – although collectively their

advertising income is still below the high of £2.7bn in 2004. The PSB digital portfolio channels also experienced a rise in income generated from advertising, exceeding £0.5bn for the first time (£507m, up 12% or £54m) – the highest recorded level.

Among the commercial multichannel services, advertising revenue increased by 6% (or £49m) to £835m over the 12 month period. Within the multichannel category, revenue generated by the entertainment channels accounted for 63% of the £835m, followed by the sports channels which made up 11%. Although Entertainment and Sports channels accounted for the biggest proportions of advertising income in 2010, the largest relative year-on-year increase came Factual, which saw its revenues rise by 36% year-on-year.

Figure 2.3 Advertising revenue, by share



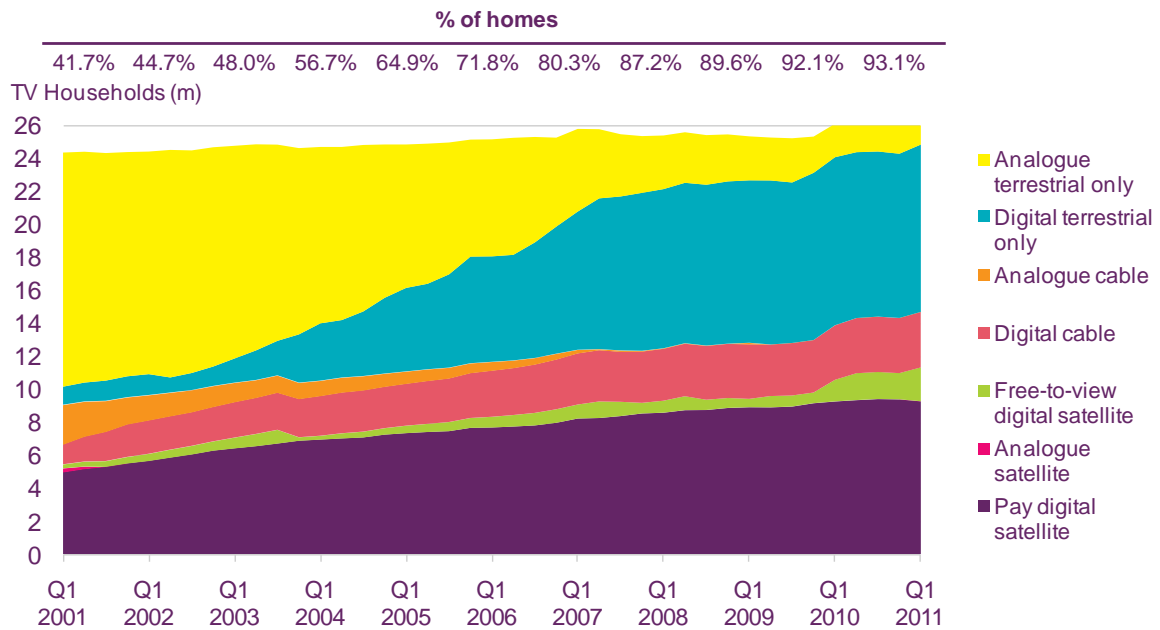
Source: Ofcom/broadcasters. Note: Totals may not equal the sum of the components due to rounding. ITV1/Channel 3 includes ITV Plc, STV, UTV and Channel Television. GMTV1 includes ITV Breakfast.

2.1.3 Digital TV take-up hits 93% of main sets, as platforms offer new services

As the UK's digital switchover programme nears its final phase, take-up of digital TV on main sets stood at 93% of UK homes at the end of Q1 2011. As a result, the opportunity for multichannel platform operators to increase subscriber numbers through analogue television migration is diminishing. Concurrently, a range of platform innovations have emerged, leading to a greater variety of services available on digital television platforms, introducing differentiation between the digital platforms.

In the year to Q1 2011, Sky and Virgin Media saw steady growth in their subscriber numbers. Virgin Media's customer base grew by 1.2% to 3.8 million, while Sky's rose by 2.8% to 10.1 million, according to company accounts. Figure 2.4 illustrates the progress of multichannel television platform growth since 2001.

Figure 2.4 Multichannel take-up in UK households



Source: Ofcom, GfK NOP research from Q1 2007, previous quarters include subscriber data and Ofcom market estimates for DTT and free satellite Note: Digital terrestrial relates to DTT-only homes.

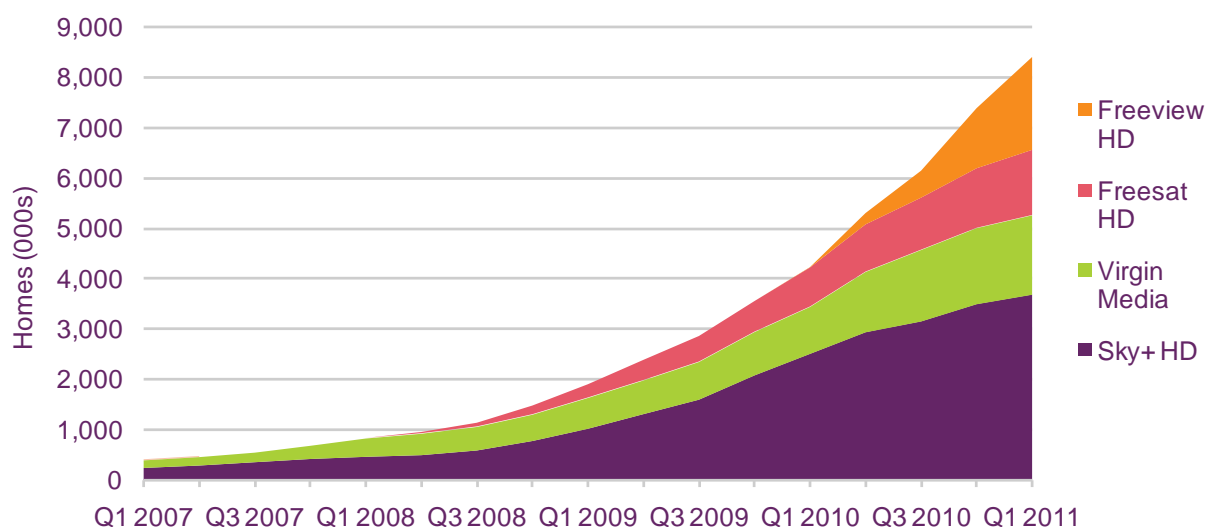
The TV environment in the home became yet more varied in 2010, with rising sales of both internet-enabled screens and 3D TVs¹³

High-definition television services are now available from all the UK's digital television platform operators, following the launch of Freeview HD in May 2010. On Freeview, the HD channel line-up includes BBC One HD, BBC HD, ITV1 HD and Channel 4 HD, which is currently available to 50% of UK homes. Coverage will rise as digital switchover continues to completion in 2012. Freesat, from the BBC/ITV, offers access to the same HD channel line-up as Freeview HD. Sky HD offers a portfolio of over 50 channels, while Virgin Media homes can receive up to 19 linear HD services, depending on their subscription package. Both BSkyB and Virgin Media offer HD content via their on-demand services.

Figure 2.5 demonstrates the growth in homes with access to HD services, either through a subscription to Sky HD, Virgin Media or free services. In Q1 2011 Sky reported that it had 3.7 million Sky HD customers, compared to the 1.6 million taking Virgin Media's V+HD service. The cumulative sales of Freesat HD devices had reached 1.3 million by Q1 2011, at which point consumers had purchased 1.8 million Freeview HD devices.

¹³ GfK consumer research Q1 2011

Figure 2.5 Number of broadcast HD homes: BSkyB, Virgin Media, Freesat and Freeview



Source: BSkyB/Virgin Media/GfK Note: Figures represent latest available data. Freesat HD and Freeview HD figures based on HD device sales, therefore the cumulative number of HD homes is indicative only and should be regarded as an upper boundary figure.

During 2010, digital television platform operators and device manufacturers introduced a range of new features and functionalities.

The first was internet-enablement and access to on-demand content. Freesat has provided consumers with access to the BBC iPlayer since December 2009 (and the ITV Player is now being beta-tested) on the majority of their HD set-top boxes. In October 2010 BSkyB began rolling out its Sky Anytime+ pull video-on-demand service¹⁴ while BBC iPlayer became available on some new Freeview set-top boxes and on the BT Vision service. In 2011 Virgin Media launched a new TiVo-branded set-top box with a more advanced user interface and more DVR hard drive space than its standard V+HD box. YouView, meanwhile, which will offer consumers access to 'over the top' audio-visual content using a set-top-box that incorporates a free-to-view DTT tuner, plans to launch in early 2012¹⁵.

At the device level, a range of television screens now incorporate an internet connection, and during 2010, 10% (1 million) of television set sales incorporated a connection to the internet. Services available on TVs with an internet connection include applications that access on-demand services such as BBC iPlayer, other 'over the top' content services such as LoveFilm and YouTube, and social networking sites including Twitter and Facebook.

The second was linear 3D content which was launched first by BSkyB in April 2010, broadcasting selected sporting events, and Virgin Media now offers access to some 3D content. The latter launched an on-demand 3D film service in September 2010, where consumers pay to rent content. Sky has pursued an alternative 3D model, launching a dedicated linear 3D channel in October 2010, three days after Virgin Media's 3D on demand.

The BBC became the first UK free-to-view channel to broadcast a 3D TV event in June 2011, carrying the 2011 Wimbledon tennis finals on all digital platforms where the BBC HD channel was available (including Sky, Virgin Media, Freesat and Freeview HD). 3D TV set sales accounted for around only 1% of sets sold in 2010.

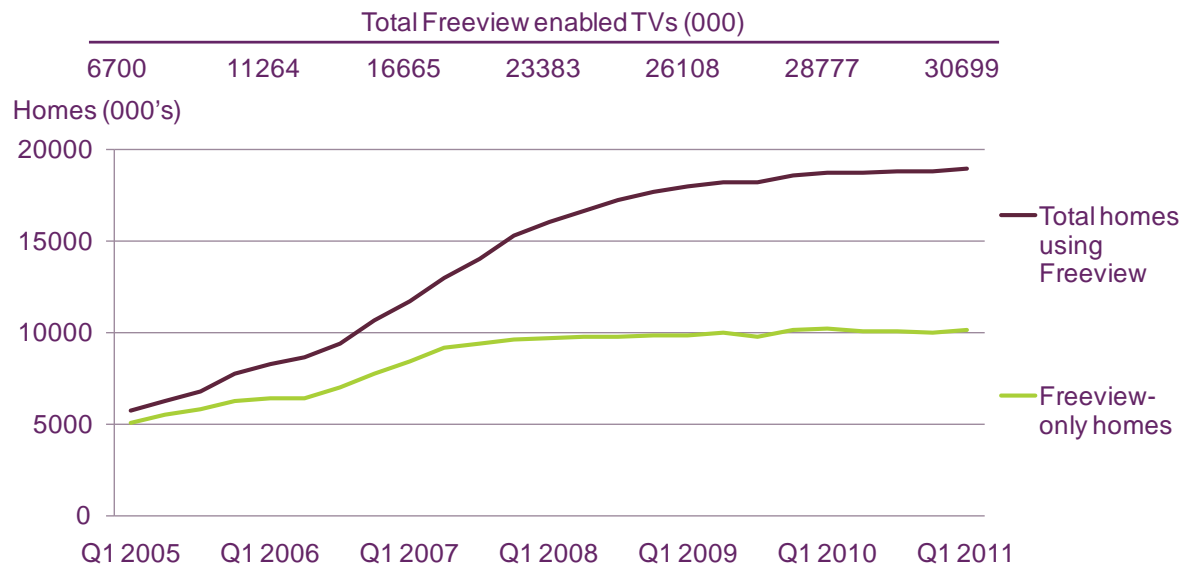
¹⁴ http://corporate.sky.com/media/press_releases/2010/sky_introduces_anytimeplus.htm

¹⁵ <http://www.youview.com/2011/02/09/youview-update-on-launch-timings/>

Take-up of Freeview-enabled TVs rose by 6% in 2010, while Freeview-only homes growth slowed

The wide availability of television sets with an integrated DTT tuner (IDTVs) has driven take-up of Freeview in UK homes. Figure 2.6 shows the growth trend since 2005 for Freeview-only homes, and for all Freeview homes. Over the past two years the number of UK homes only using Freeview has risen relatively slowly¹⁶, but the total number of Freeview-enabled TVs (including secondary sets) has risen by 17.6% over the same period.

Figure 2.6 Take-up of Freeview DTT services: 2005-2011



Source: Ofcom estimates based on GfK research and sales data. Note: Q1 2009 total Freeview-enabled TVs figure has been adjusted by Ofcom.

Freeview's recent growth has in part been driven by the conversion of secondary sets to digital TV and by the process of television set replacement (with integrated digital decoders being included almost all new TV sets sold). In the past two years, Freeview has accounted for 91.8% of secondary set conversions from analogue, numbering 4.6 million secondary sets in total¹⁷.

Platforms' channel line-up evolves over the year

In August 2010 the BSkyB channel Sky Sports News was removed from the Freeview platform, and was replaced by Sky 3+1. Sky 3 and Sky 3+1 were in turn rebranded as Pick TV and Pick TV+1 in February 2011. As part of BSkyB's acquisition of the Virgin Media TV channels, Virgin1 was rebranded as Channel One in October 2010 and was subsequently closed in February 2011. Programmes previously available on Channel One were transferred to Sky subscription channels, and Channel One's slot on Freeview was replaced with Challenge. Joining the platform, UKTV's Really launched in August 2011 on Freeview, replacing the +1 channel Dave ja vu.

BSkyB announced a new EPG arrangement in 2011 for the Sky HD platform, exchanging SD channels with their HD counterparts. At the same time, Sky Atlantic (and its HD equivalent) launched, focusing predominately on exclusive US drama productions.

¹⁶ GfK consumer panel research has a +/- 500,000 homes margin of error.

¹⁷ GfK consumer research Q1 2009 and Q1 2011. Secondary sets are calculated as the sum of second, third and fourth TV sets in the home.

2.1.4 Growing popularity of content on demand

Ofcom's latest technology tracking data suggest that digital video recorder (DVR) take-up in Q1 2011 stood at 9.6 million homes (46% of the UK population), compared to 3.0 million in 2005 – a threefold increase over the five-year period. Furthermore, in Q1 2011, 35% of individuals claimed to have used the internet to watch catch-up television services.

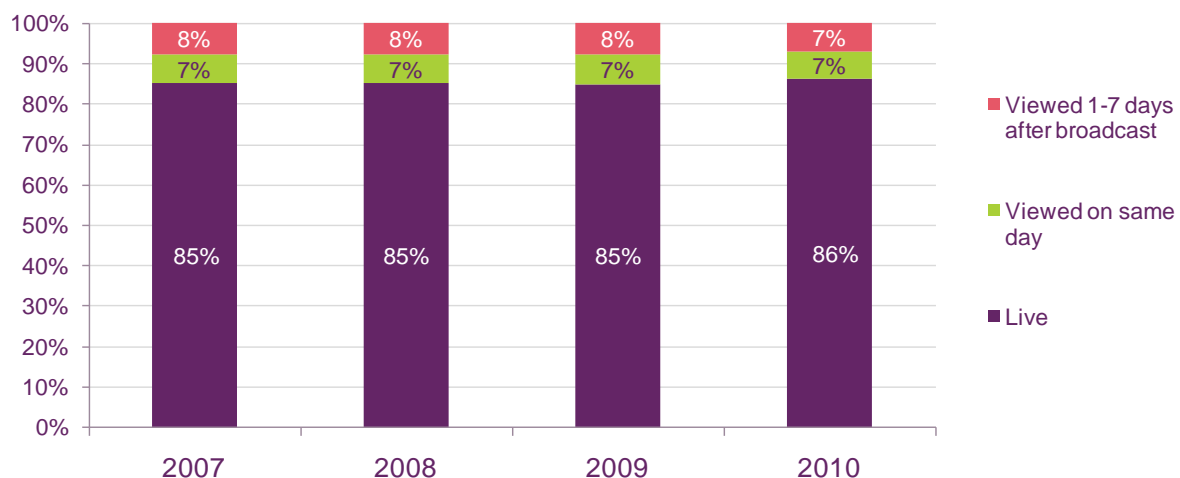
Within DVR homes, however, live viewing is still the preferred means of watching television. And despite the expansion of broadband (which is now available in 74% of homes), use of online catch-up TV still appears to be comparatively contained, though it is gradually increasing.

Live television viewing remains popular, even in homes that have DVRs

Figure 2.7 shows that in DVR homes live viewing remains the main means of watching television output. In 2010, time-shifted viewing through the DVR accounted for 14% of all viewer hours, broadly in line with the comparable figures since 2007. Half of all time-shifted content in 2010 was watched on the same day as transmission, while the remainder was watched within one to seven days after broadcast – again, broadly in line with the distribution of time-shifted viewing in earlier years (Note: viewing after seven days is not captured by BARB).

Figure 2.7 Live vs. time-shifted TV viewing, DVR homes

Proportion of viewing (%)



Source: BARB. All individuals with DVRs. Note: New BARB panel introduced 1 Jan 2010. As a result pre- and post-panel change data must be treated with caution

Across all channels, *Doctor Who* (BBC1) on Christmas Day attracted the highest proportion of time-shifted views through the DVR, accounting for 42% of the 7.7 million views that the show commanded in DVR homes. Other drama series and serials that appeared in the terrestrial top ten included *EastEnders* (accounting for 27% of time-shifted viewing), and *Upstairs Downstairs* (35%), both on BBC1.

Just over half of the top ten most viewed recorded programmes of 2010 fell in the last quarter of the year. Three were broadcast on Christmas Day itself (Figure 2.8); among the top 100 most recorded programmes of 2010, fifteen were aired on Christmas Eve, Christmas Day or Boxing Day. This shows that DVRs are popular at this time of year, as they allow consumers to capture content from a range of TV channels in spite of other commitments.

Figure 2.8 2010 top ten programmes – all channels, DVR homes

| Programme | Channel | Date | Recorded viewing (m) | Live viewing (m) |
|-------------------------|---------|------------|----------------------|------------------|
| 1 Doctor Who | BBC1 | 25/12/2010 | 3.2 | 4.5 |
| 2 Come Fly With Me | BBC1 | 25/12/2010 | 2.9 | 4.8 |
| 3 The X Factor | ITV1 | 03/10/2010 | 2.4 | 5.4 |
| 4 The Royle Family | BBC1 | 25/12/2010 | 2.4 | 4.4 |
| 5 Sherlock | BBC1 | 25/07/2010 | 2.0 | 2.5 |
| 6 EastEnders | BBC1 | 19/02/2010 | 2.0 | 5.4 |
| 7 Gavin & Stacey | BBC1 | 01/01/2010 | 1.9 | 2.8 |
| 8 Strictly Come Dancing | BBC1 | 18/12/2010 | 1.9 | 5.8 |
| 9 Britain's Got Talent | ITV1 | 05/06/2010 | 1.7 | 4.5 |
| 10 Upstairs Downstairs | BBC1 | 26/12/2010 | 1.7 | 3.2 |

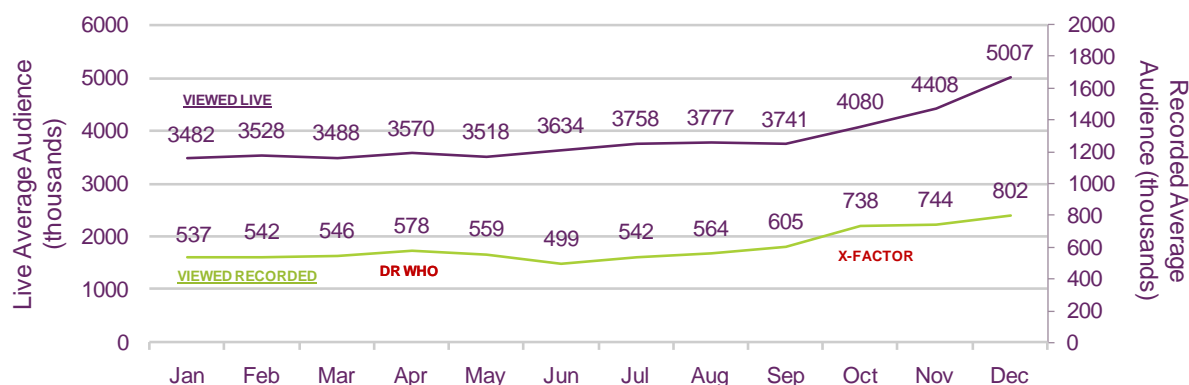
Source: BARB. All individuals with DVRs. Includes viewing on respective +1 channels. Only highest incidence of programmes reported.

Seasonal variations are apparent in patterns of viewing of DVR content

Seasonal programmes appear to have a bearing on DVR use; for example, the new series of *Doctor Who* (which began in April 2010) consistently featured in the top four most-watched time-shifted programmes of Q2 2010. The same was true of *The X Factor*, which was the most-watched time-shifted programme between August and November.

Other big entertainment and factual entertainment shows in the latter half of 2010 also appear to have influenced patterns of DVR use. Over the course of 2010, the volume of time-shifted viewing in the UK grew noticeably around October. This could be a result of increased take-up of DVRs in the latter part of the year. Or, perhaps more likely, because of the prevalence of big entertainment and reality programmes on-air during this period (such as *The X Factor*, *Strictly Come Dancing* and *The Apprentice*) - these programmes consistently featured in the monthly top ten most-watched recorded programmes of 2010.

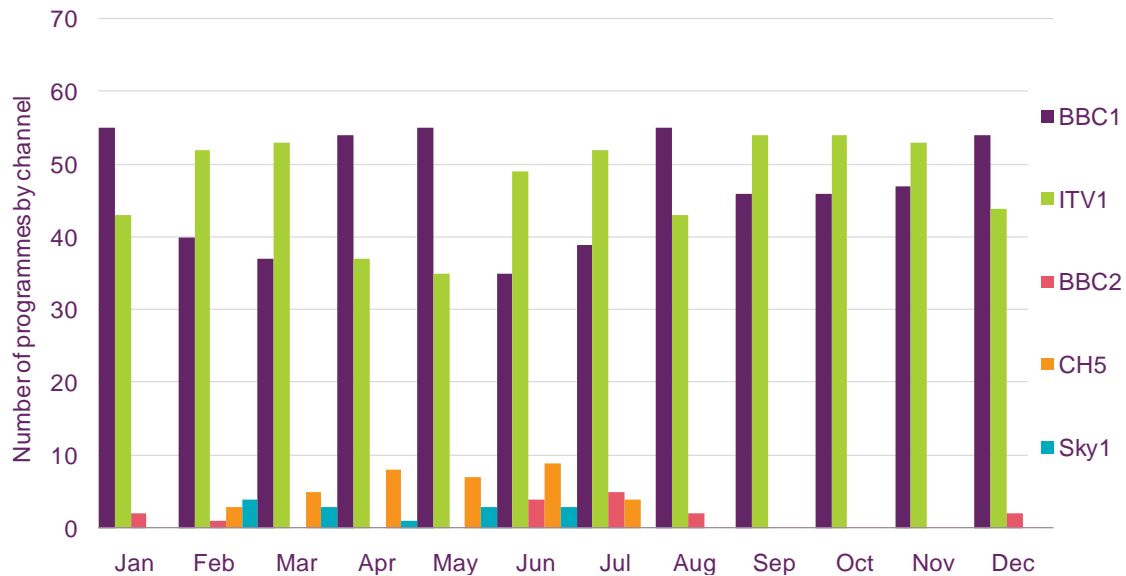
Figure 2.9 Average audience to live and time-shifted viewing (in thousands), by month



Source: BARB. All individuals with DVRs. Includes viewing on respective +1 channels.

By channel, seasonal fluctuations among the top 100 most viewed recorded programmes can be seen with the BBC's airing of not only *Doctor Who* in April, but *Sherlock* in August; and DVR viewing for ITV1 programmes was higher among studio entertainment programmes such as *Britain's Got Talent* in June and *The X Factor* auditions which began in September.

Figure 2.10 Distribution of the top 100 most watched recorded programmes by channel

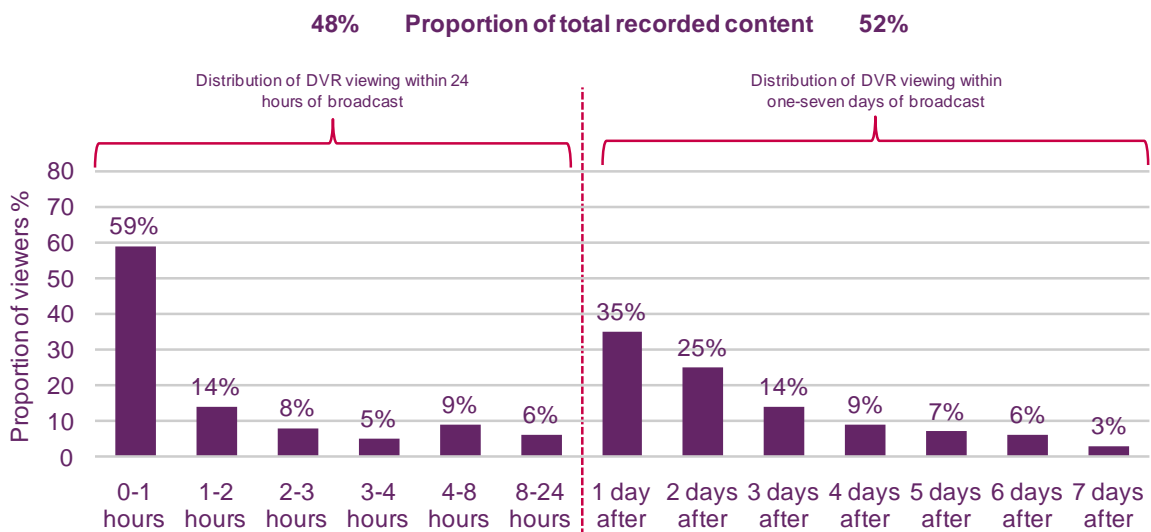


Source: BARB. All individuals with DVRs. Includes viewing on respective +1 channels. Columns represent number of views for top 100 recorded programmes across all channels.

There are also differences in the immediacy of the viewing of content captured on DVRs. Same-day viewing and same-week viewing was pretty evenly split (48% same day, 52% same week). Of the recorded programmes that were watched on the same day, almost three-quarters were watched within two hours of live transmission. Within same-day viewing, the majority of people watched the content as close to the transmission time as possible.

The 'tail' of viewing after the second day of recoding reduced gradually over the seven-day period. This suggests that viewers watching time-shifted content preferred to stick to the linear time-frame; content was less likely to be viewed further away from the transmission date. (Note: viewing after seven days is not captured by BARB).

Figure 2.11 2010 average, all time-shifted viewing



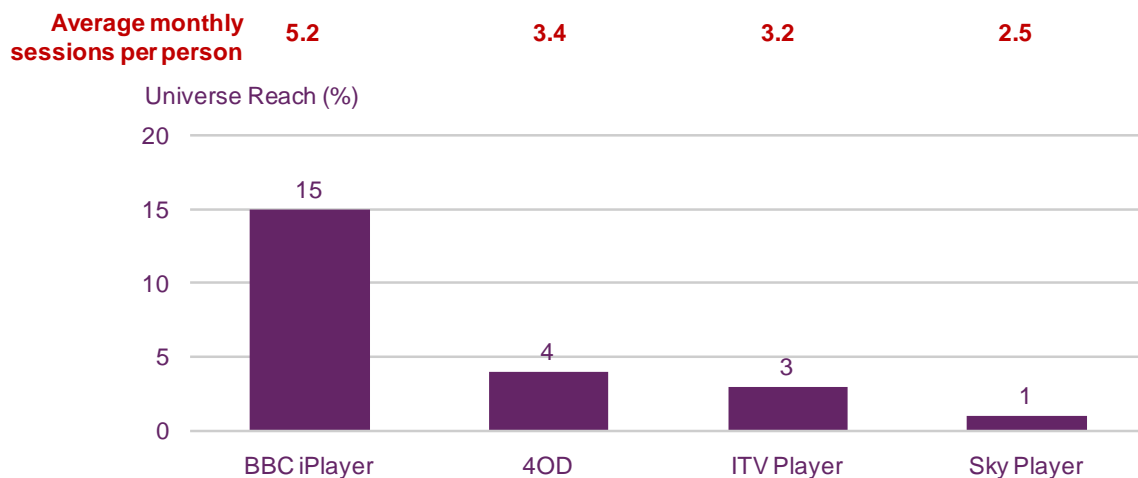
Source: BARB. All individuals with DVRs. Includes viewing on respective +1 channels.

Thirty-five per cent of individuals now claim to use broadband to watch catch-up television.

DVRs are not the only means by which consumers can access content on demand. Alongside catch-up services offered by TV platforms (see page 99), all the main television channels now offer catch-up television services online. Our tracking study data suggest that 35% of individuals use their broadband connection to access these sites online. According to Nielsen, around 20% of the online population accesses a catch-up TV site on a monthly basis, with the BBC iPlayer proving most popular.

BBC iPlayer received the largest number of catch-up TV requests, attracting an average monthly universe reach of 15%, and a monthly average of 5.2 sessions per person. In terms of universe reach, BBC iPlayer is almost four times greater than the second most popular online catch-up site.

Figure 2.12 Average online catch-up TV requests, 2010

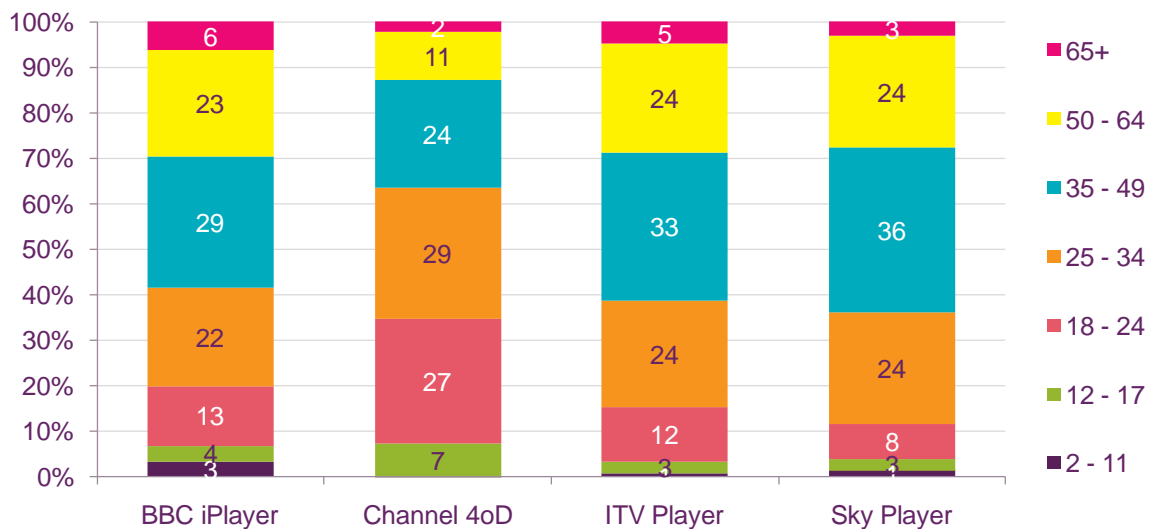


Source: UKOM/ Nielsen. Home and work panel. Applications included. Note: Universe reach is the percentage of all UK internet-accessible persons (aged 2+) who visited the site or used the application in the average month. 'Internet-accessible' is defined as anyone who has access to an internet-enabled computer within the time periods covered. These figures are based on averages across each calendar month of 2010.

BBC data showed that the majority of iPlayer TV requests in 2010 were for on-demand content requests, rather than simulcast (watching a programme live as it is being broadcast across various platforms simultaneously). The latter made up just 10% of iPlayer TV requests. Although relatively small, the figure shows that the internet is emerging for some as a source of live television viewing.

On the whole, the main users of online catch-up sites in 2010 were individuals aged between 25-49, although demographic skews were noticeable between the services. The 4oD audience was skewed towards viewers aged 18-34 and attracted more 18-24 year olds than any of the services. The ITV Player and Sky Player audiences tended to be relatively older (35-64). Users of BBC iPlayer, by contrast, were more evenly spread across the age groups.

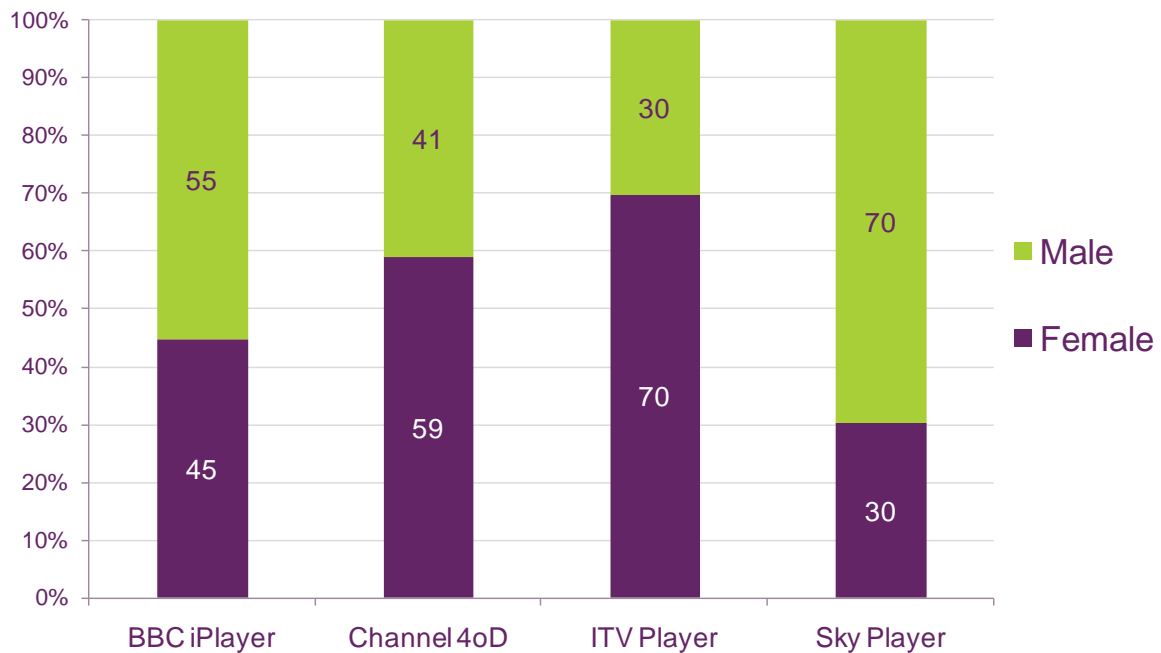
Figure 2.13 2010 average monthly online catch-up TV requests, by age group



Source: UKOM/ Nielsen. Home and work panel. Applications included. These figures are based on averages across each calendar month of 2010

There was also evidence of gender skews in users of all the main TV channels' catch-up sites during 2010. The BBC iPlayer had the most balanced gender profile, tilted slightly towards men. 4oD appealed more to women than men, while the ITV Player had a dedicated female following. Conversely, the majority of Sky Player users were male (70/30).

Figure 2.14 2010 average monthly online catch-up TV requests, by gender



Source: UKOM/ Nielsen. Home and work panel. Applications included. These figures are based on averages across each calendar month of 2010

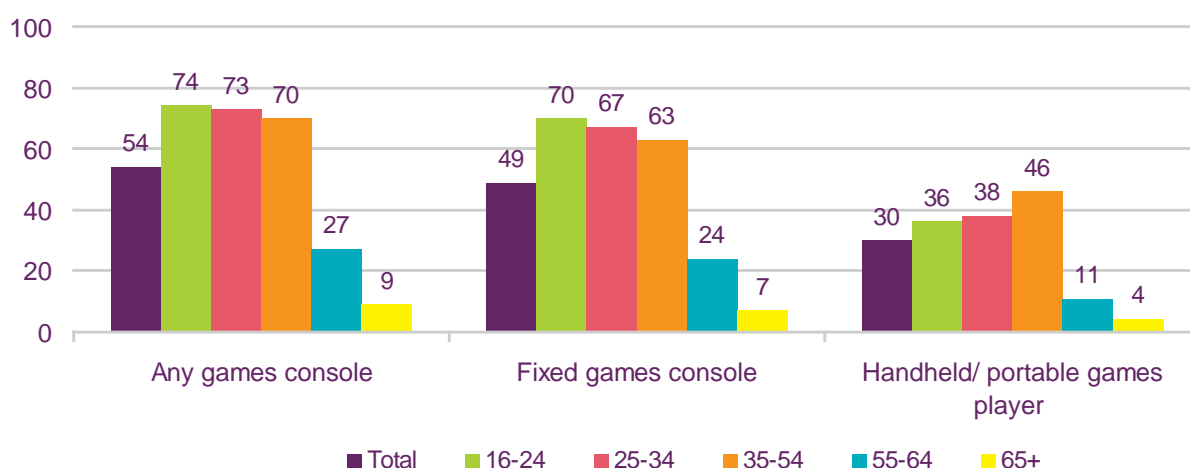
2.1.5 A fifth of games console users use them to view audio-visual output

Over half of UK adults now have a games console in their household

Just over half (54%) of all homes had access to a games console in Q1 2011, on a par with the 2009 figure. About half (49%) had a fixed console connected to a TV (e.g. Sony PlayStation, Nintendo Wii or Microsoft Xbox) and just under a third (30%) had a handheld/ portable games player (eg Nintendo DS, Sony PSP) .

Overall, for both fixed and handheld/ portable games players, people aged under 55 are significantly more likely to have home access than those who are older. Take-up of fixed consoles is highest among consumers aged 16-34; for handheld/portable games, 35-54s are most likely to claim to have one.

Figure 2.15 Age profile of those who have a games console at home



Source: Ofcom residential tracker, w1 2011. Base: All adults 16+ (3,474). Which of the following do you, or does anyone in your household, have in your home at the moment?

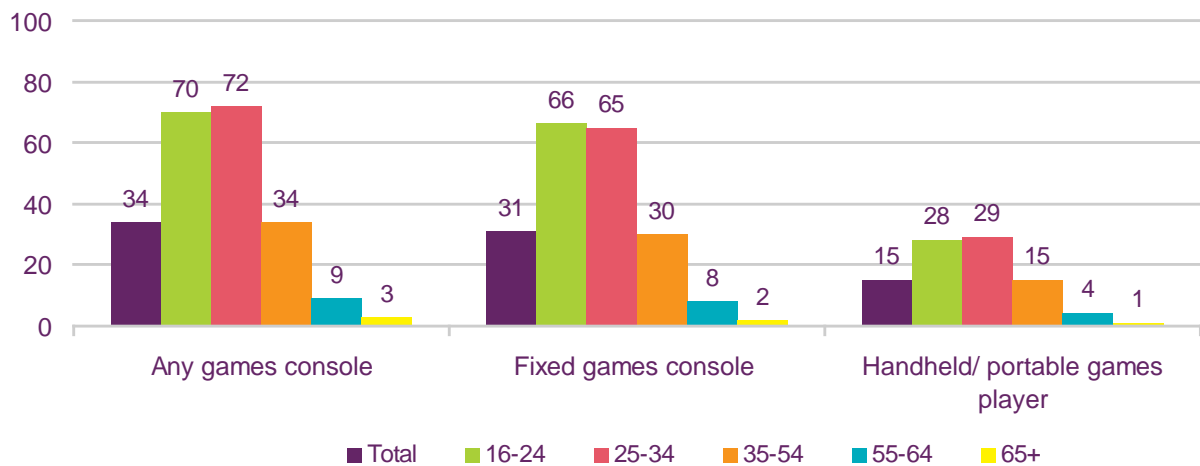
The presence of children in the household significantly increases the likelihood of a household having a fixed or handheld/ portable games console; over four in five homes (84%) with children have one, compared to a third (33%) without. Furthermore, working status and internet access also influence the tendency of people to have a fixed or handheld gaming device (65% of those working, 38% of those who are not; 64% among homes with the internet versus 20% of those without). Socio-economic grade also influences the propensity of handheld console adoption (32% for ABC1s vs. 27% of C2DEs).

A third of UK adults use a games console at home

A third of UK adults claim to personally use a console in the home. Fixed games consoles are the most popular, with three in ten (31%) using one, compared to 15% using a handheld/ portable games player.

Playing a games console in the home, whether fixed or handheld/ portable, is heavily skewed towards under-35s, with more than 7 in ten of those aged 16-34 doing so, compared to a third (34%) of 35-54s and less than one in ten of over-55s. Playing a fixed or portable/ handheld games console is also more likely among those with children in the household (53% vs. 23% with no children) and those working (49% vs. 19% not working). While there is no gender difference among users of portable/ handheld games consoles, fixed games consoles are more popular among males than female (35% vs. 26%).

Figure 2.16 Age profile of those who personally use a games console



Source: Ofcom residential tracker, w1 2011. Base: all adults 16+ (3,474). And do you personally use....

A fifth of those with a console use it to access audio-visual content

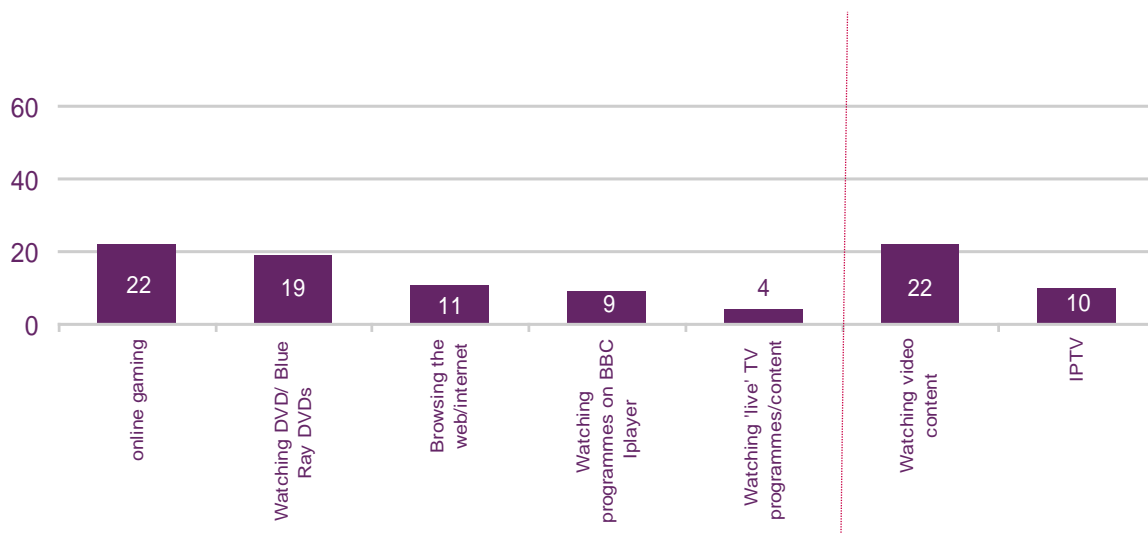
As games console functionality has increased in recent years, so has the range of activities that they can support. A significant minority of games console players are using their devices for far more than just traditional gaming.

Just over a fifth (22%) with access to a console use it to watch video content. This is mostly audio-visual content from the web (11%), or programmes on BBC's iPlayer (19%). Four per cent use a console to watch live TV programmes/content; this rises to 7% of 16-24s.

Alongside using consoles to access audio-visual content, online gaming is used by just over a fifth (22%) of console players. This is more popular among males than females (26% vs. 18%) and those aged 16-24 (32% vs. 24% among 25-34s, 19% among 35-54s and 11% among 55-64s).

Just under a fifth (19%) of people with access to a console in their home use it for watching DVDs. This is more likely among people aged 16-24 (26%) than 35-54s (16%) and 55-64s (10%).

Figure 2.17 What consumers use games consoles for



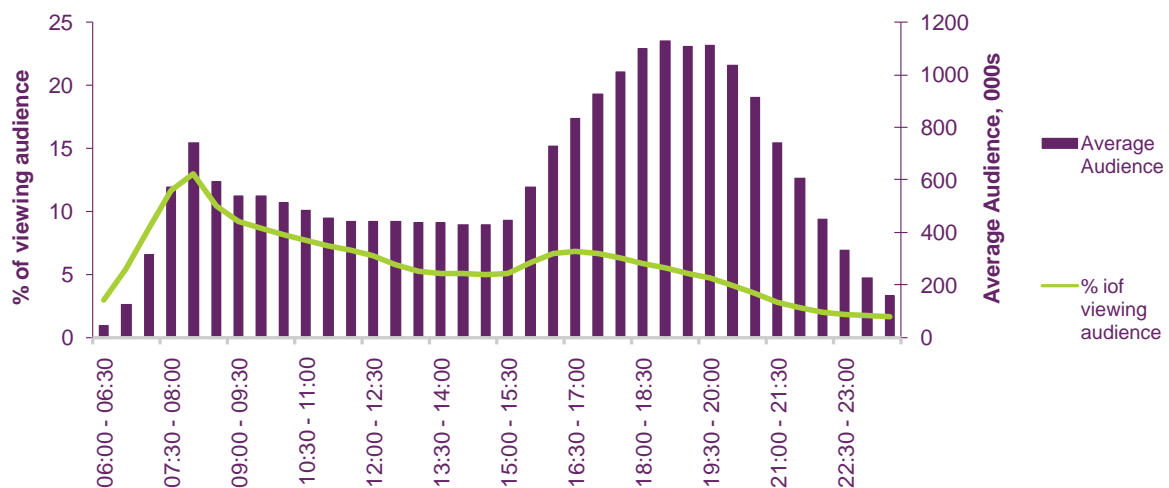
Source: Ofcom Residential Tracker, W1 2011. Base: all adults 16+ with access to a games console at home (1,793). QB4 (QB4) Which, if any, of these do you use your games console for?

2.1.6 Children's television viewing in 2010

On average, the children's TV audience peaked between 18:30 and 20:00 in 2010

The audience of children's television viewers in 2010 peaked both in the early morning and between 18:30 and 20:00 at night. As a proportion of all TV viewers, the children's audience was at its largest between 08:00 and 08:30, and fell progressively across the rest of the day, with a small recovery between 15:00 and 18:00.

Figure 2.18 Size of the children's television audience, by time of year



Source: BARB

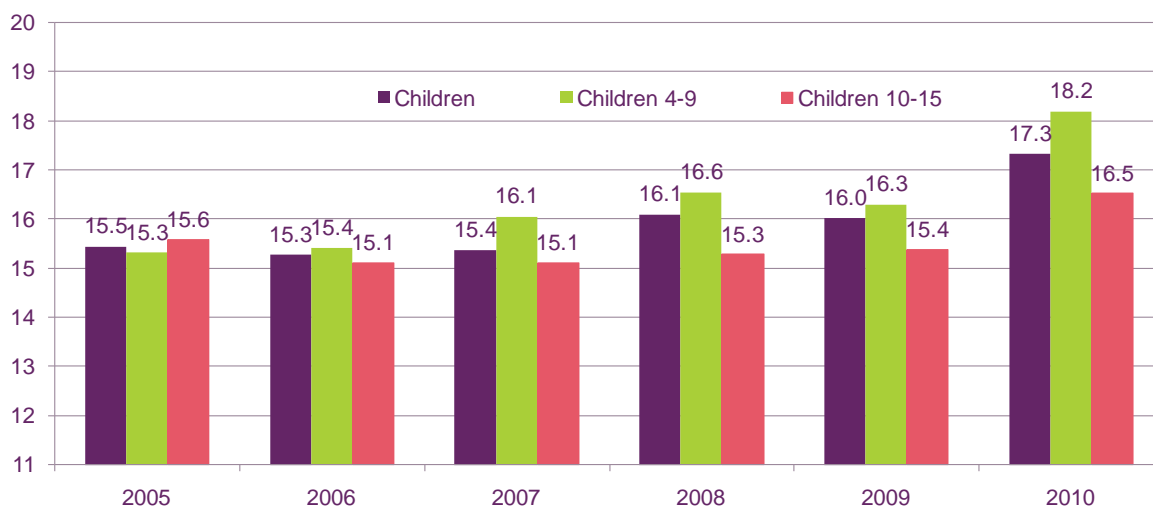
The average child watched over 17 hours of TV per week in 2010 or two and a half hours per day

Households including children are more likely to have access to a range of digital technologies, and increasingly those technologies are playing an important role in children's everyday lives.

Yet, despite the increased demands on children's leisure time that these new devices may make, levels of weekly TV viewing have increased over the past five years, standing at over 17 hours per child in 2010 (see Figure 2.19); note that the increase in hours of viewing recorded in 2010 is partly explained by effects of the BARB panel change introduced at the turn of 2010. Prior to that change, patterns of television viewing increased by 30 minutes per week among all children and by one hour for children aged four to nine years old..

Figure 2.19 Average hours of weekly TV viewing by children

Average weekly viewing (hours)



Source: BARB

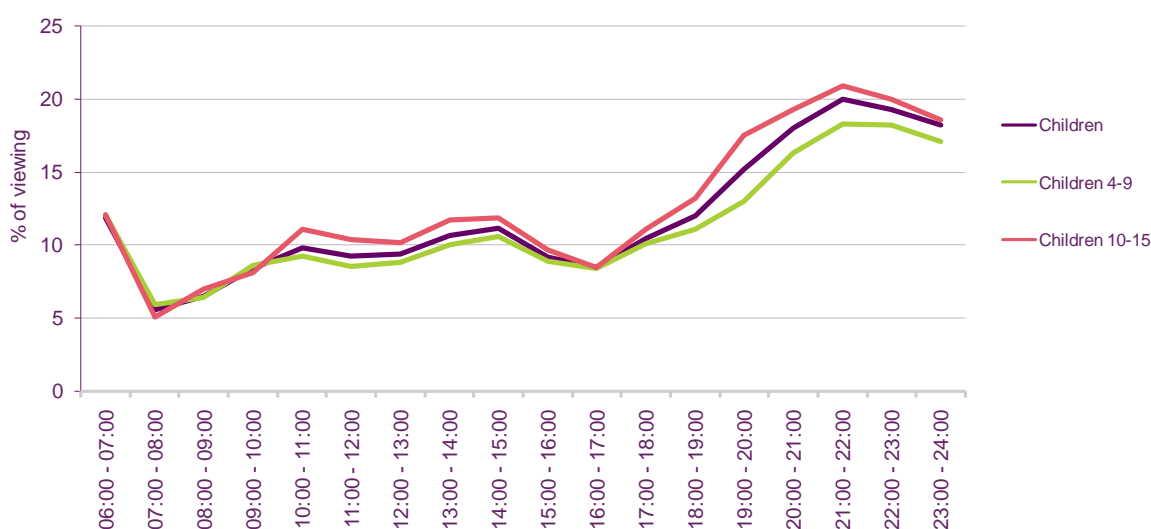
Children with access to DVRs time-shift an average of 13% of their TV viewing - in line with the population as a whole

In DVR homes, children spend most of their TV viewing time watching live broadcasts, accounting for 87% of all their viewing; the remaining 13% was time-shifted using digital video recorders (DVRs). Older children (10-15) were a little more likely to time-shift their viewing compared to those aged 4 to 9 - 15% compared to 11% respectively.

Children's time-shifted viewing, habits are influenced by the digital TV platform they use. Those with access to Sky+ show a greater propensity to time-shift (14%) than children with access to other DVRs (i.e. Freeview+ or V+), where just one in ten (10%) of all viewer hours were time-shifted.

Time-shifting among children also varies by time of day; they are more likely to do this after 18:00 (Figure 2.20). After the watershed (21:00), a fifth (20%) of all viewing by children is time-shifted (although volumes of viewing among children are falling rapidly at this time of night) – notably higher than the average 13% across the whole day .

Figure 2.20 Proportion of time-shifted viewing by children, by day part



Source: BARB

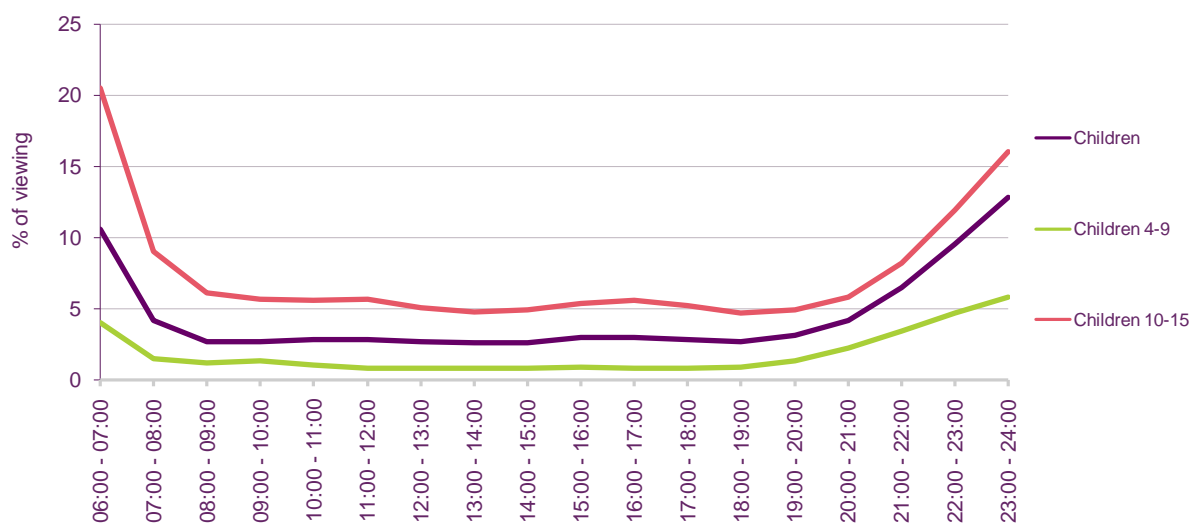
Just 5% of children’s TV viewing in 2010 was in their bedroom

Ofcom’s *Children’s Media Literacy*¹⁸ *Audit* in 2010 showed that the majority of children have a TV set in their bedroom, and that a growing proportion of these are digital. As this figure rises, more children have access to a wider range of channels in their bedrooms - perhaps increasing the attractiveness of viewing in that location.

The majority of children’s TV viewing is still on the ‘main set’ (which is not in the child’s bedroom), with just 5% of viewing through TVs in bedrooms.

In common with the observed pattern among all television viewers, bedroom-based viewing varies by day part, rising after 21:00; 10% of children’s total viewing after the watershed is on a bedroom set, double the figure for the day as a whole; among 10-15 year olds this figure rises to 13% (Figure 2.21).

Figure 2.21 Proportion of total viewing in the child’s bedroom, by day part



Source: BARB

¹⁸ <http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/media-lit11/childrens.pdf>

2.2 The TV and audio-visual industries

2.2.1 Introduction

This section examines some of the characteristics of the UK's audio-visual sector during 2010. It focuses on a range of metrics from the broadcast television industry and from those companies delivering audio-visual content over the internet.

Key points in this section include:

- **The UK television industry generated £11.7bn of revenue in 2010, an increase of £638m (5.78%) on 2009, driven by a recovery in the advertising market coupled with continued growth in subscription revenues.** Following a sharp decline in 2009, TV broadcasters experienced an 11.2% increase in net advertising revenues in 2010, up by £335m year on year to £3.5bn (page 116).
- **Advertising revenues among the four main commercial PSB channels grew by 13% (or £249m) year on year to £2,144m,** while the PSBs' digital portfolio channels and commercial multichannels also saw a resurgence in advertising revenues, with income up 12% to £508m and 6% to £835m respectively (page 119).
- **Broadcaster spend on content rose by 7% in 2010; up by £0.3bn to £5.4bn.** Spend among the Film and Sports channels rose the furthest, up by a fifth (20%) over the 12-month period to £1.6bn (page 122).
- **Spend on first-run originated programming for the five main PSB channels increased in 2010 by 5% to £2.5bn, following a decline of 15% the previous year;** however, the 2010 figure still fell short of the £2.6bn spent in 2008 (page 126).
- **Among the five main PSB channels in peak time, there was a marked increase in hours of Sports programming during 2010, up by 126 hours (12%) to 483 hours,** due in part to coverage of the Football World Cup in South Africa and the Vancouver Winter Olympics. Current Affairs output also expanded over the 12-month period, up by 6.5% to 328 hours; this may be due to the 2010 election. The other significant increase was for film, where hours rose by 10.5% to 675 (page 123).
- **The hours of first-run originations broadcast by the PSB channels stood at 618 hours per week, down from 627 hours in 2009.** Increases on BBC One, BBC Two, ITV/GMTV/Daybreak, Channel 4 and the BBC digital portfolio channels were offset by a reduction for Channel 5, where first-run weekly hours fell by half from 54 in 2009 to 27 in 2010 (page 124).
- **Within the multichannel sector the number of total hours broadcast in 2010 declined by 1% compared to 2009.** Channels in the Sport category saw a 46% year-on-year increase in hours, while the Factual, Children's and Leisure categories all fell year on year (page 128).
- **Commercial multichannel broadcasters spent £2.3bn on their programming in 2010, a 11% year-on-year increase.** At £1.3bn, sports content represented more than half the total multichannel spend, up by 22% year on year. Investment in Factual output also increased, by 19% from 2009 to £71m, along with Entertainment which grew by £39m to £518m, the second-largest genre category after Sports (page 129).

2.2.2 Television industry revenue

The UK television industry generated £11.7bn in revenue in 2010

The UK television industry generated £11.7bn in revenue during 2010, an increase of £638m (5.7%) on 2009, driven by a recovery in the advertising market, coupled with continued growth in subscription revenue (Figure 2.22).

Following a sharp decline in 2009, TV broadcasters experienced an 11.2% increase in net advertising revenues (NAR) in 2010, up £335m year on year, to £3.5bn.

Growth in pay-TV subscriber revenue increased by 5.3% year on year to £4.8bn in 2010 – the highest level recorded to date. The resurgence in advertising revenue meant that the gap between subscription and net advertising was reduced by 7.3% in 2010 to £1.4bn (from £1.5bn in 2009).

Ofcom estimates that the BBC spent £2.7bn on its television services in 2010, the same as 2009 - although its share of total industry revenue fell by 1.5 percentage points year on year (from 24% in 2009 to 22.7% in 2010).

Figure 2.22 Total TV industry revenue, by source



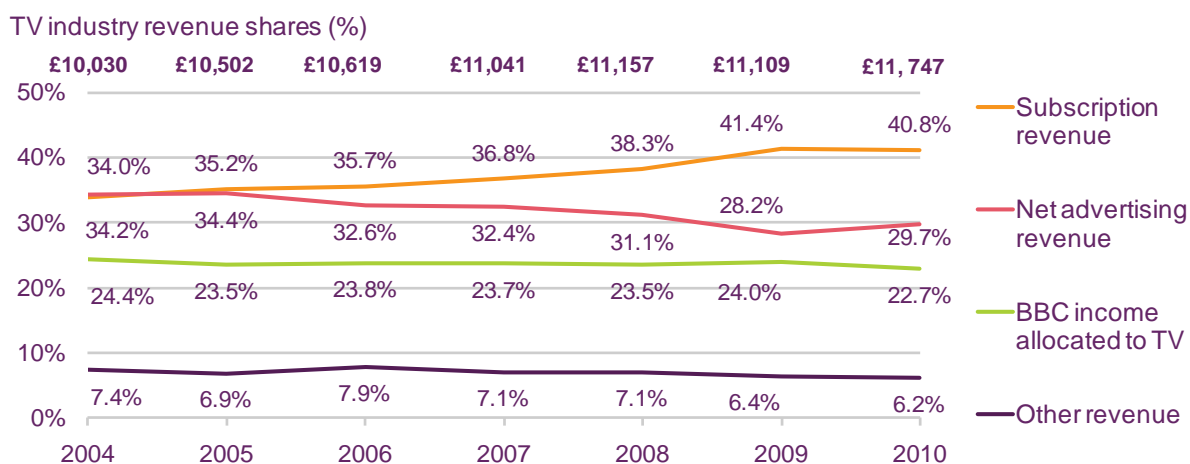
Source: Ofcom/broadcasters

Note: Figures expressed in nominal terms and replace previous Ofcom revenue data for TV industry, owing to restatements and improvements in methodologies. 'Subscription revenue' includes Ofcom's estimates of BSkyB, Virgin Media, BT Vision, TalkTalkTV, Setanta Sports (until its closure), ESPN and Top Up TV television subscriber revenue in the UK (Republic of Ireland revenue is excluded). It also excludes revenue generated by broadband and telephony. 'Other' includes TV shopping, sponsorship, interactive (including premium-rate telephony services), programme sales and S4C's grant from the DCMS. The BBC restated licence fee revenue in 2008. Totals may not equal the sum of the components due to rounding.

Among the four main TV revenue sources, the share generated through advertising (Figure 2.23) increased from 28.2% in 2009 to 29.7% in 2010, marking the end of a four-year period when advertising revenues were in decline. In contrast, 2010 represented the first year since tracking began that pay-TV subscriptions' share of TV industry revenue fell – by 0.6 percentage points to 40.8% in 2010.

BBC expenditure on TV services as a percentage of total TV industry revenue has been broadly stable since 2004, falling a little in 2010 (by 1.7 pp) to 22.7%.

Figure 2.23 Total TV industry revenue sources, by share



Source: Ofcom/broadcasters

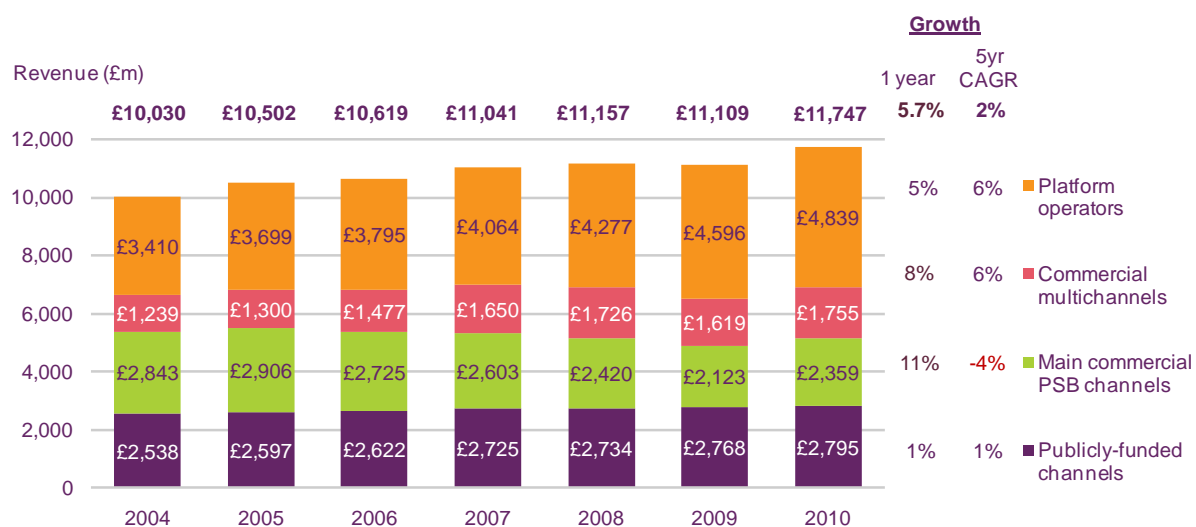
Note: Figures expressed in nominal terms and replace previous Ofcom revenue data for TV industry, owing to restatements and improvements in methodologies. 'Subscription revenue' includes Ofcom's estimates of BSkyB, Virgin Media, BT Vision, TalkTalkTV, Setanta Sports (until its closure), ESPN and Top Up TV television subscriber revenue in the UK (Republic of Ireland revenue is excluded). It also excludes revenue generated by broadband and telephony. 'Other' includes TV shopping, sponsorship, interactive (including premium-rate telephony services), programme sales and S4C's grant from the DCMS. The BBC restated licence fee revenue in 2008. Totals may not equal the sum of the components due to rounding.

Revenue generated by TV channels returned to 2008 levels in 2010

Figure 2.24 shows that revenues for the main commercial PSB channels and multichannels combined returned to 2008 levels in 2010 (in nominal terms), following reductions across both sectors during 2009. The main PSB channels (Channels 3 (plus GMTV1/Daybreak), Channel 4, Channel 5 and S4C) saw revenues increase by £236m (11%) in 2010 to £2.359bn - still below a high of £2,906m in 2005. Total TV revenue within the multichannel sector (including the digital portfolio channels of the PSBs) rose by £136m (or 8%) year on year to £1,755m.

Publicly-funded channels, which include Ofcom's estimate of BBC spend on TV output and S4C's grant from the Department for Culture, Media and Sport, accounted for £2,795m of revenue.

Figure 2.24 Total TV industry revenue, by sector



Source: Ofcom/broadcasters

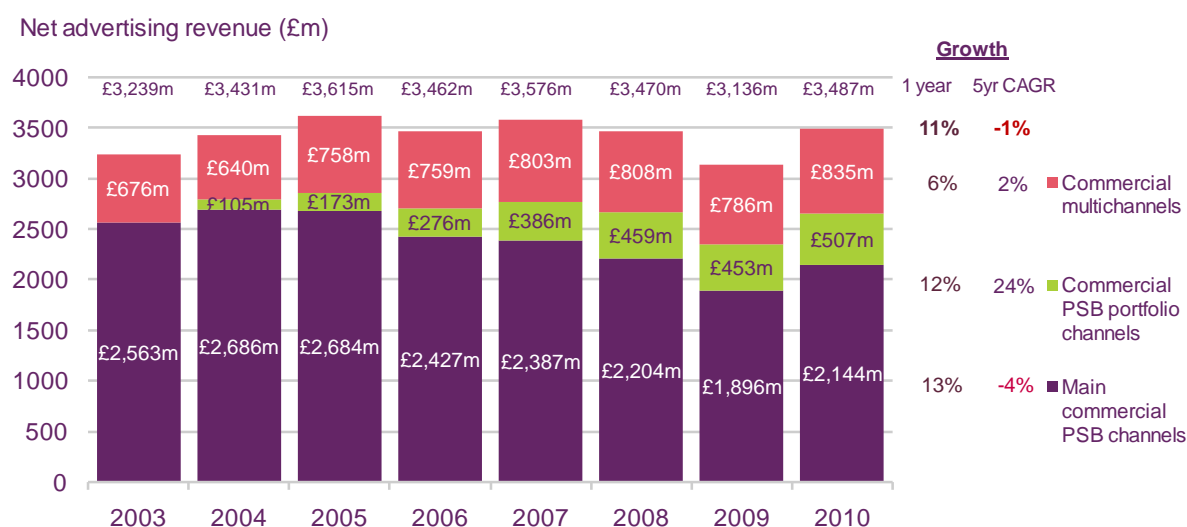
Note: Figures are nominal. Main commercial PSB channels comprise ITV1, STV, UTV, Channel Television, GMTV1, Channel 4, Five and S4C. Commercial multichannels comprise all multichannels including those owned by ITV1, Channel 4 and Five. Publicly-funded channels comprise BBC One, BBC Two, the BBC's portfolio of digital-only television channels and S4C. S4C is listed under publicly-funded and commercial analogue channels because it has a mixed advertising and public funding model. The BBC restated licence fee revenue in 2008. Totals may not equal the sum of the components due to rounding.

Advertising revenues recovered during 2010 following the economic downturn

Following a decline in 2009, advertising revenues rose once again in 2010 for all categories of commercial TV broadcaster. Among the commercial PSBs' portfolio channels (such as ITV2, E4 and 5*), advertising revenue rose by 12% year on year to £507m. This represents the highest yearly advertising income generated by the PSB digital portfolio channels, and may be explained by the continuing adoption of Freeview in the face of digital switchover, as well as the increasing number of digital channels launched by the PSBs over the last decade.

The main commercial PSB channels continue to generate a large proportion of all advertising income. In 2010, they raised £2,144m (Figure 2.25) – up 13% (or £248m) year on year. The resurgence in advertising revenue was also experienced by commercial multichannels outside the PSB portfolio channels, although with a 6% increase year on year (to £835m), the recovery was not as substantial as that of the main PSBs and their digital portfolio channels.

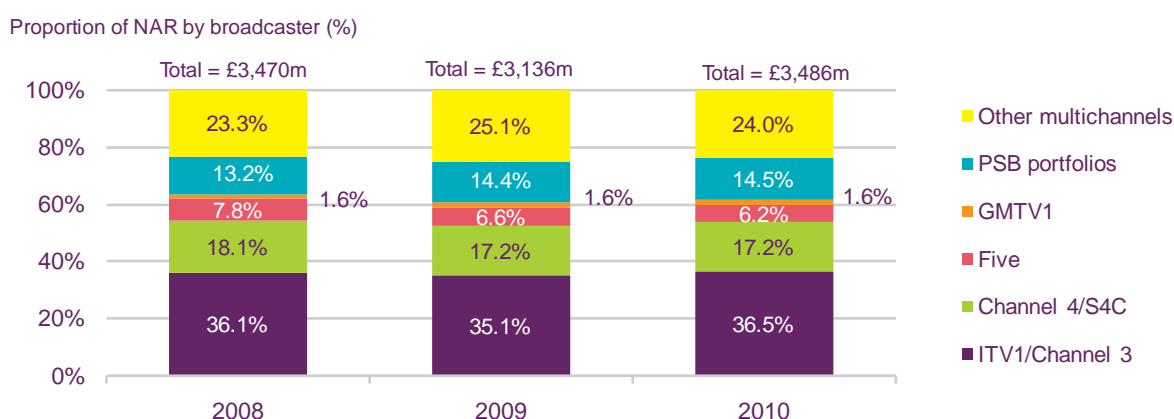
Figure 2.25 TV net advertising revenues, by source



Source: Ofcom/broadcasters. Note: Figures expressed are in nominal terms and replace previous data published by Ofcom. Main commercial PSB channels comprise ITV1, STV, UTV, Channel Television, 1/Daybreak/GMTV1/Daybreak, Channel 4, Five and S4C; Commercial PSB portfolio channels include, where relevant, ITV2, 3, 4, Men & Motors, CiTV, E4, More 4, Film 4, 4Music, Five USA and Fiver (and their '+1' channels). For previous years closed channels have also been included. Sponsorship revenue is not included. Totals may not equal the sum of the components due to rounding.

With the exception of Channel 5, the commercial PSBs all saw their share of TV advertising income increase or remain stable in the past year – while non-PSB multichannel broadcasters saw a 1.1 percentage point decline from 25.1% in 2009 to 24% in 2010 (Figure 2.26). ITV1/Channel 3 licences experienced the largest increase in share in 2010 (up by 1.4 percentage points year on year to 36.5%) while Channel 4 maintained its share of advertising. Channel 5's share fell by a further 0.4 percentage points in 2010 to 6.2%, following a drop of 1.2 in 2009.

Figure 2.26 TV net advertising revenue market shares: 2009 - 2010



Source: Ofcom/broadcasters. ITV1/Channel 3 includes ITV1, STV, UTV and Channel Television.

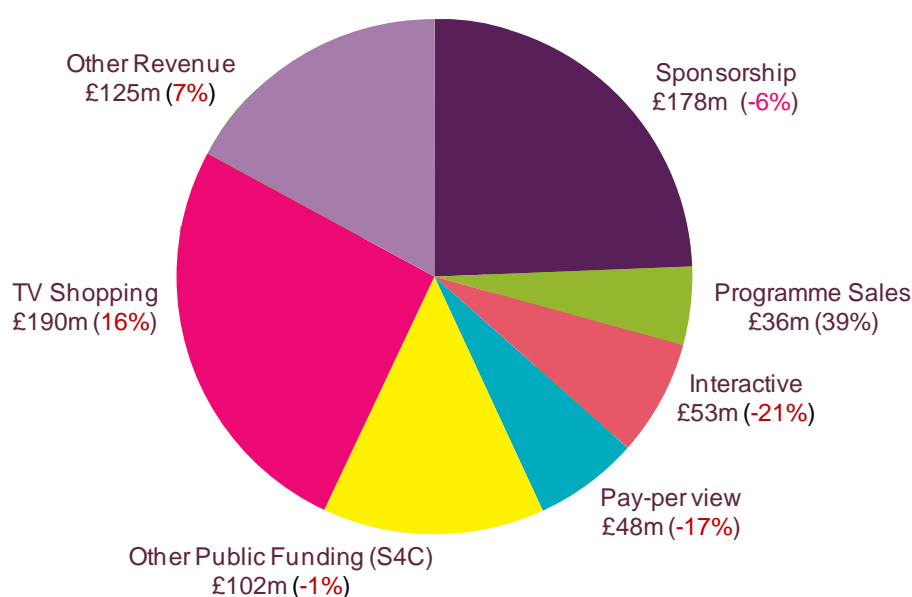
2.2.3 Other TV revenue

Broadcaster revenue raised from non-broadcast sources in 2010 stood at £732m, up by 2.7% year on year

Revenue from sources other than subscription income, advertising revenue and licence fee stood at £732m in 2010, up by 2.7% on the year. Sources from 'other revenue' accounted for 18% of the total, up by 7% year on year (which may be a function of having a higher number of broadcaster returns in at the time of writing, compared to earlier years). The margin earned by television shopping channels accounted for £190m, or 26%, of the total (up by 16 percentage points year on year) while sponsorship deals generated £178m (24% of the total – down by six percentage points). Together these three sources accounted for 67% of all revenue in 2010.

Figure 2.27 Breakdown of other / non-broadcast revenue: 2010

Total non-broadcast revenue = £732m (2.7%)



Source: Ofcom/broadcasters. Note: Percentage figures in brackets represent year-on-year change. TV shopping represents aggregate operating margin of products sold via television. Percentage figures represent year-on-year change. Totals may not equal the sum of the components due to rounding. Owing to the nature of these revenue components, annual changes may be a function of a higher number of broadcaster returns being made by the time of writing, rather than material changes in the contributions that these revenue components are making to total industry income.

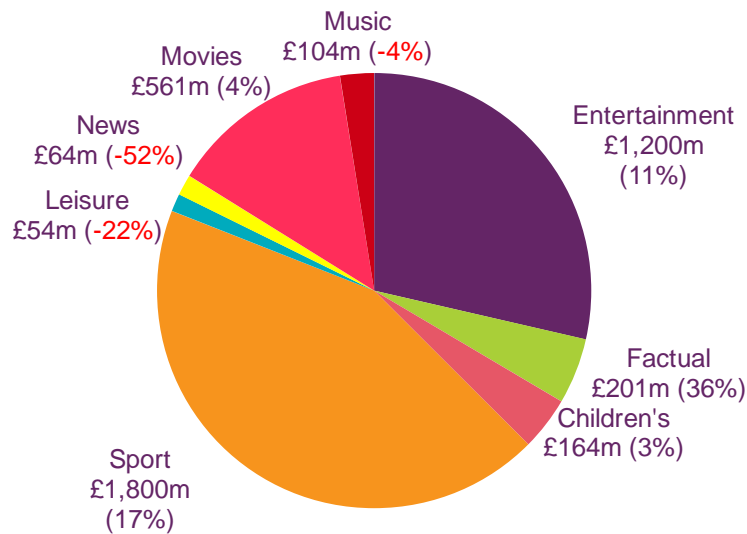
2.2.4 Revenue among multichannel genres

Revenue among key multichannel genres continued to grow in 2010

Most of the multichannels in mainstream genres experienced revenue growth in 2010, with total income reaching £4.1bn, an increase of £384m (10%) over the year. Sports remained the genre that generated the most revenue in 2010, up by 17% in 12 months. Entertainment, the second largest genre by revenue, also saw a 11% uplift in revenues to £1.2bn, while Factual experienced the biggest proportional increase in revenue - up by 36%. After a 3% decline in 2009, Leisure channels continued to see their revenues fall by 22% to £54m in 2010.

Figure 2.28 Revenue generated by multichannel broadcasters, by genre: 2010

Total revenue = £4,100m across the eight genres included (10%)



Source: Ofcom/broadcasters

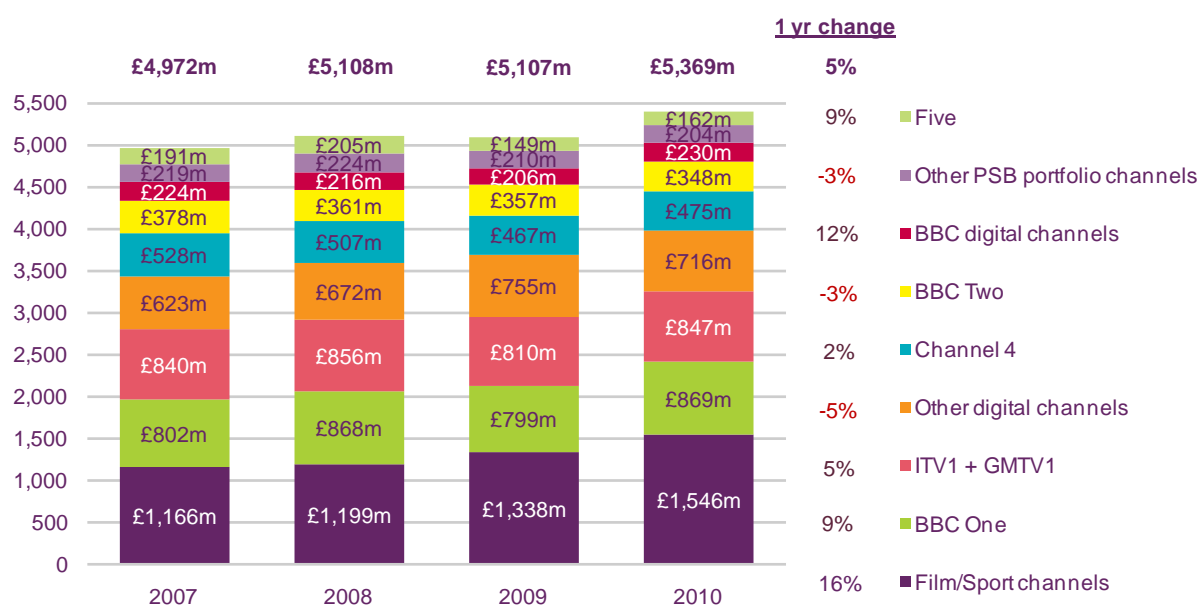
Note: Percentage figures in brackets represent year-on-year change. The figures in this chart include all sources of revenue accruing to multichannels and are expressed in nominal terms. This includes those set out in Figure 2.22 plus wholesale subscriber payments from platform operators.

2.2.5 Spend on UK television programmes

Broadcasters spent more on programmes in 2010

Spend on content by all UK TV channels in 2010 reached £5.4bn, up by 7% year on year. The PSBs' spending on content represented half (54%) of the total, while Sports and Film channels made up a further 29%. The PSB portfolio channels and the remainder of the multichannel sector accounted for the final 17%. Spending by the Sports and Film channels rose furthest in 2010, up by 16% to £1546m; spending by the other digital channels fell the furthest over the year, down by 6% over the period.

Figure 2.29 Spend on network programmes: 2007 - 2010



Source: Ofcom/broadcasters.

Note: Figures expressed in nominal terms. Figures do not include spend on nations and regions output. BBC digital channels includes BBC Three, BBC Four, BBC News Channel, BBC Parliament, CBBC and CBeebies (but not BBC HD). 'Other digital channels' include all genres (excluding Sports and Films). Programme spend comprises in-house commissions, productions, commissions from independents, spend on first-run acquired programmes, spend on rights and on repeats (originations or acquisitions).

2.2.6 Spend on first-run originations by the five main PSB channels

Spending on originations increased in 2010 following several years of decline

Following a significant decline in 2009, spend on first-run originated programming for the five main PSB channels rose in 2010 in nominal terms, by 5% to £2,522m. Despite the year-on-year increase, however, spend on first-runs still fell short of the 2008 figure (£2,616m). Output broadcast in the late-night timeslot saw the largest increase in spending (from a comparatively low base), up by 13% to £208m. Peak time and daytime schedules saw similar proportional increases in spend, up by 5% and 2% to £1,420m and £628m respectively. Spend on output for viewers in the nations and English regions rose 4% in 2010 to £266m (up from £256m in 2009).

2010 was a big year for sport (Vancouver Winter Olympics and the FIFA World Cup), and first-run spending on that genre rose by nearly 40% year on year; excluding this genre from first-run spending, investment in 2010 fell by 6% year on year¹⁹.

¹⁹ For more information see the PSB Annual Report 2011 (<http://stakeholders.ofcom.org.uk/broadcasting/reviews-investigations/public-service-broadcasting/annrep/psb11/>)

Figure 2.30 Spend on first-run originated output on the five main PSB channels



Source: Ofcom/broadcasters. Note: Figures are expressed in 2010 prices. They include GMTV1, spending in the nations and regions on English-language programming (and a small amount of Irish-language programmes) but do not include the BBC's digital channels.

2.2.7 TV industry output

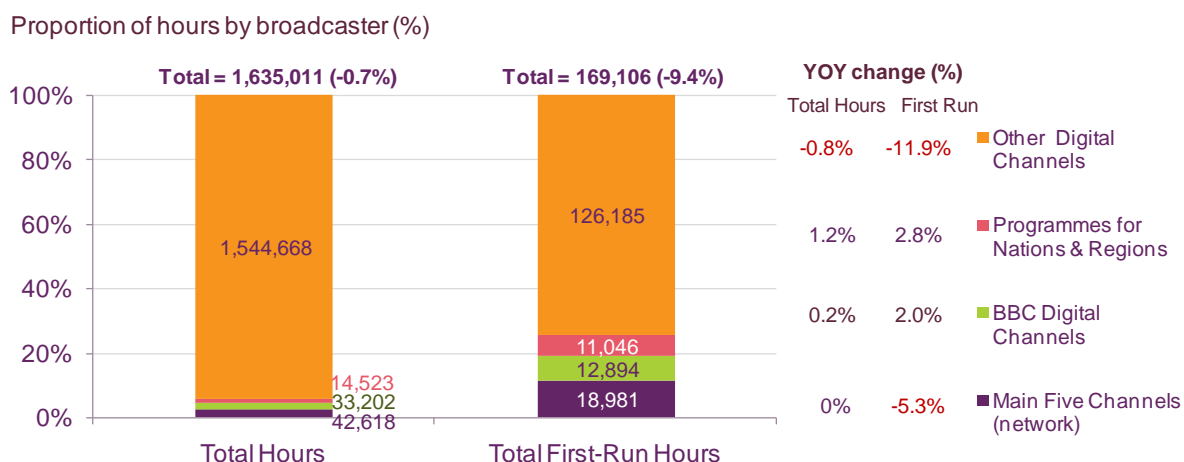
Over 2.8 million hours of television were broadcast in 2010, down 4.6% year on year.

Across all categories of UK television channels, there were 2.8 million hours of broadcast output in 2010. Figure 2.31 narrows down this analysis, to focus on the broadcast hours of the PSB channels and digital channels included in the mainstream genres of Entertainment, Sports, Films, Factual, Children's, News, Leisure and Music.

Those channels broadcast 1,635,011 hours in 2010, of which 169,106 (10%) were first-run originations, produced in-house or made by an external producer. The largest single component of first-run originations was for non-PSB multichannel services. They broadcast 1,544,668 hours of output in 2010, of which 126,185 (8%) were first-run originations in 2010.

Among the five main PSB channels, just under half (47%) of the 42,618 total hours were first-run originations. Over two-thirds of programmes made by the BBC and Channel 3 licensees for the nations and regions (67% of 14,235 hours) were first-run originations; the comparable figure for the BBC's digital channels was 37% (of 33,202 hours).

Figure 2.31 Total and first-run originated hours of output, all day: 2010



Source: Ofcom/broadcasters

Note: Percentage figures in brackets represent year-on-year change. The first-run figures include in-house productions and external commissions, not first-run acquisitions. GMTV/Daybreak1 is included within the figures for the five main channels. 'Other digital channels' includes Entertainment, Sports, Film, Factual, Children's, News, Leisure and Music genres. Regional hours exclude Welsh and Gaelic-language programming but include a small proportion of Irish-language programmes.

2.2.8 Television output on the five main PSB channels

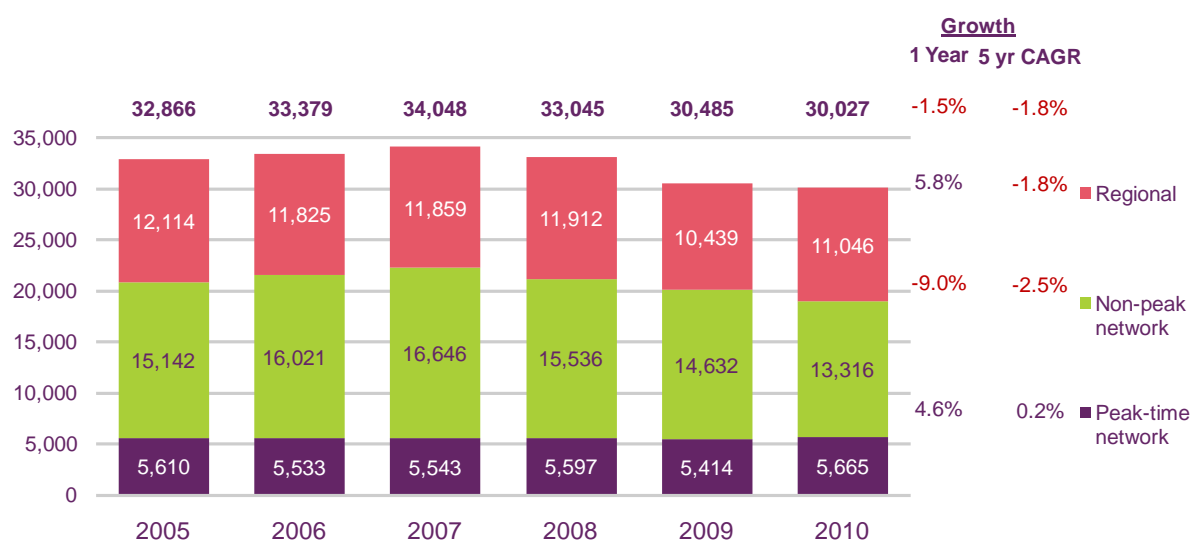
Hours of first-run originated regional output up by 6% in 2010

Although spending on originations increased slightly by the PSBs in 2010 (5%), total broadcast hours of originated programming fell slightly (-1.5%) to 30,027 hours.

After a sharp decline in programming for the nations and regions in 2009 (down 13% from 2008), in 2010 hours for the nations and regions rose by 5.8%, as a result of STV opting out of the Channel 3 network schedule more frequently.

Network hours of first-run originations in peak time (18:00 to 22:30) increased by 4.6% in 2010 to 5,665 hours. Meanwhile, first-run originations throughout the rest of the schedule of the main PSBs fell by 9.0% (1,316 hours) to 13,316 hours.

Figure 2.32 Hours of first-run originated output on the five main PSB channels

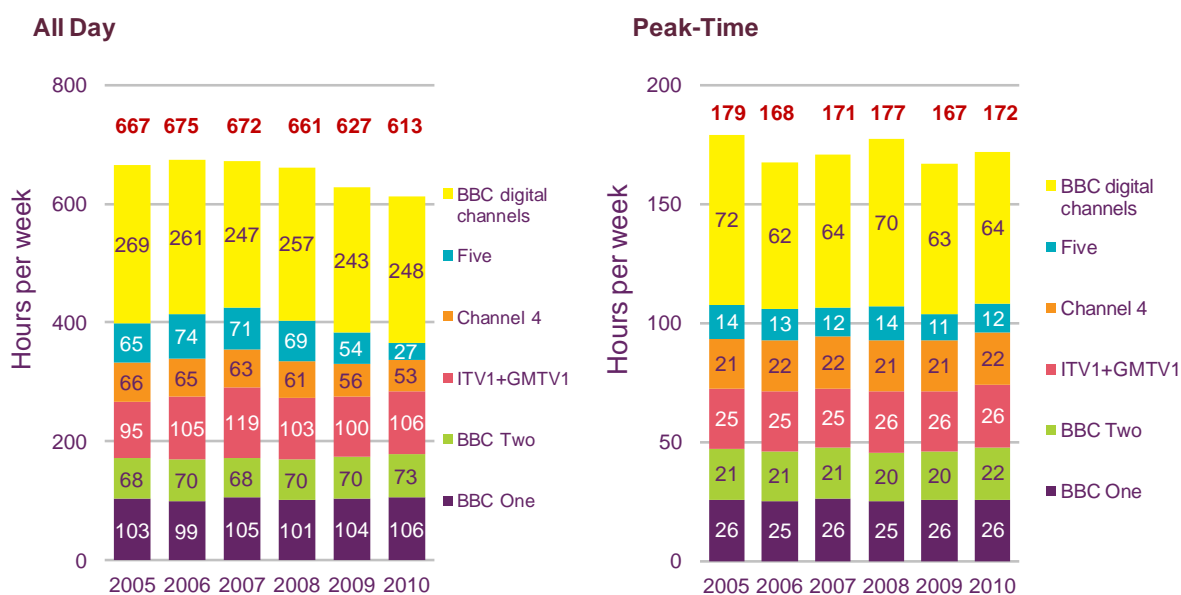


Source: Ofcom/broadcasters. Note: Figures include GMTV1 but do not include the BBC's digital channels. Regional hours exclude Welsh and Gaelic-language programming but do include a small proportion of Irish-language programmes.

Figure 2.33 illustrates how many hours of first-run originations the PSB channels (including the five main PSB channels and the BBC's digital channels) broadcast, on average, per week. In 2010, the figure stood at an average of 613 hours per week across the entire day (24 hours), down marginally from 627 in 2009. Increases for BBC One, BBC Two, Channel 4 and the BBC digital channels were offset by a reduction for Channel 5, where hours of first-run originations per week reduced by half; from 54 in 2009 to 27 in 2010, across the entire day.

For peak-time hours, the first-run hours per week rose from 167 in 2009 to 172 in 2010, driven by small increases on BBC Two (up from 20 hours in 2009 to 22 in 2010), Channel 4 (up from 21 to 22 hours), Channel 5 (up from 11 to 12) and the BBC digital channels (up from 63 to 64). There were no increases in peak time first-run weekly hours on either BBC One or ITV1 (26 and 22 respectively).

Figure 2.33 First-run originated output by the PSBs per week, all day and peak time



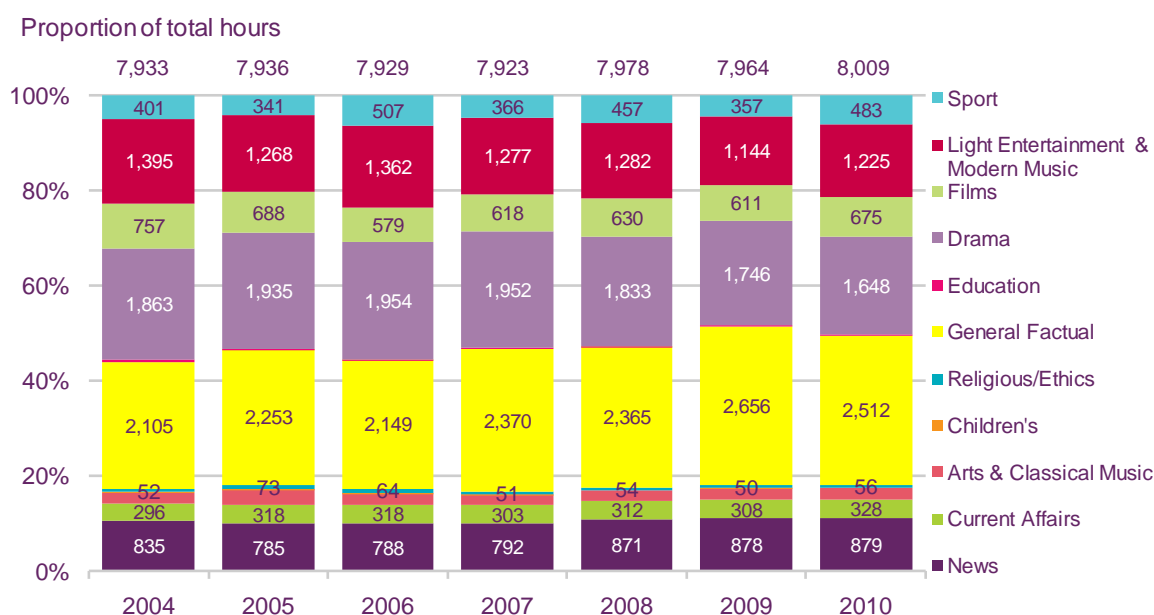
Source: Ofcom/broadcasters. Note: Figures do not include spend on nations and regions output.

At the programme genre level, among the five main PSB channels in peak, there was a marked increase in hours of Sports during 2010, up by 12% (126 hours) to 483. This can be attributed in part to the fact that 2010 was a big sporting year, with the Football World Cup in South Africa in June 2010 and the Vancouver Winter Olympics earlier in the year.

Other genres whose volume of output rose during 2010 included Films (up by 10.5% to 675 hours) and Light Entertainment and Modern Music, up by 7% to 1,225 hours following a 10.8% drop the previous year. Current Affairs output also grew year on year, up by 6.5% to 328 hours, which may be due in part to coverage of the 2010 general election.

Among the genres where hours contracted in peak time, Drama output fell by 5.6% to 1,648 hours – the fifth consecutive annual reduction in a row. Factual output fell by 5.4% to 2,512 hours, although the 2010 figure was still well above the number of hours broadcast in 2005. News remained unchanged between 2009 and 2010, at 879 hours in peak time.

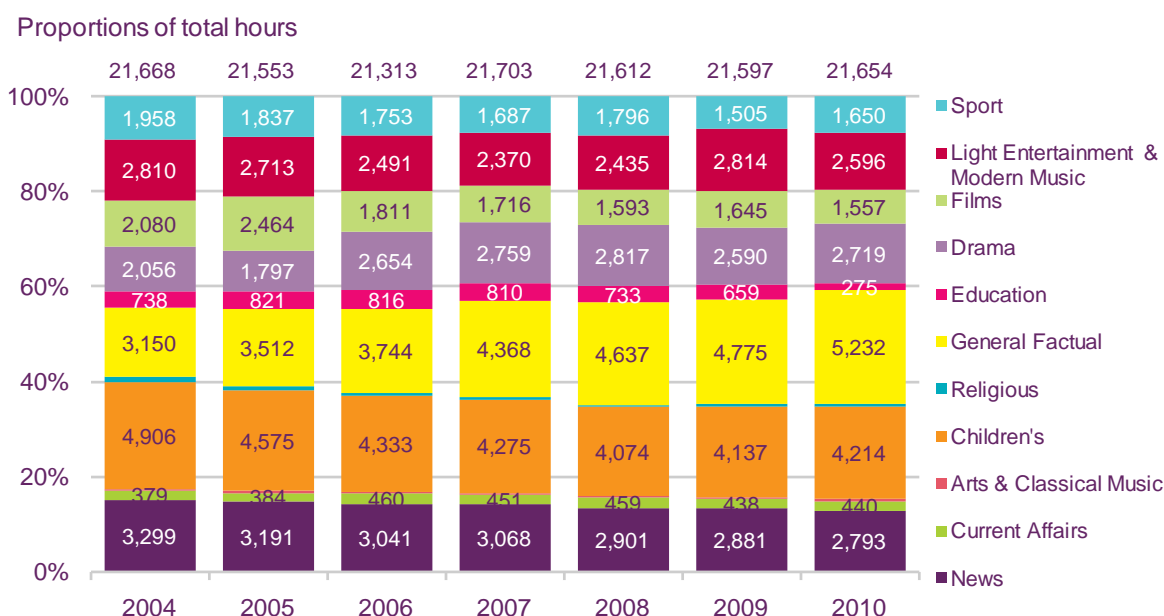
Figure 2.34 Genre mix on the five main PSB channels in peak time, by hours



Source: Ofcom/broadcasters. Note: Includes five main channels including GMTV1, figures do not include hours of nations and regions output.

Daytime (6:00 – 18:00) PSB output during 2010 told a similar story for Sports to that of peak time, with hours rising by 9.6% to 1,650 over the year. The number of hours of Factual output increased by 9.6% to 5,232 – the highest figure recorded for this genre since 2004. Children's programming in daytime increased year on year by 77 hours (1.9%) to 4,214 hours, while News hours experienced their sixth decline in a row since 2004, down by 88 hours (3%) to 2,793 during 2010.

Figure 2.35 Genre mix on five main PSB channels in daytime

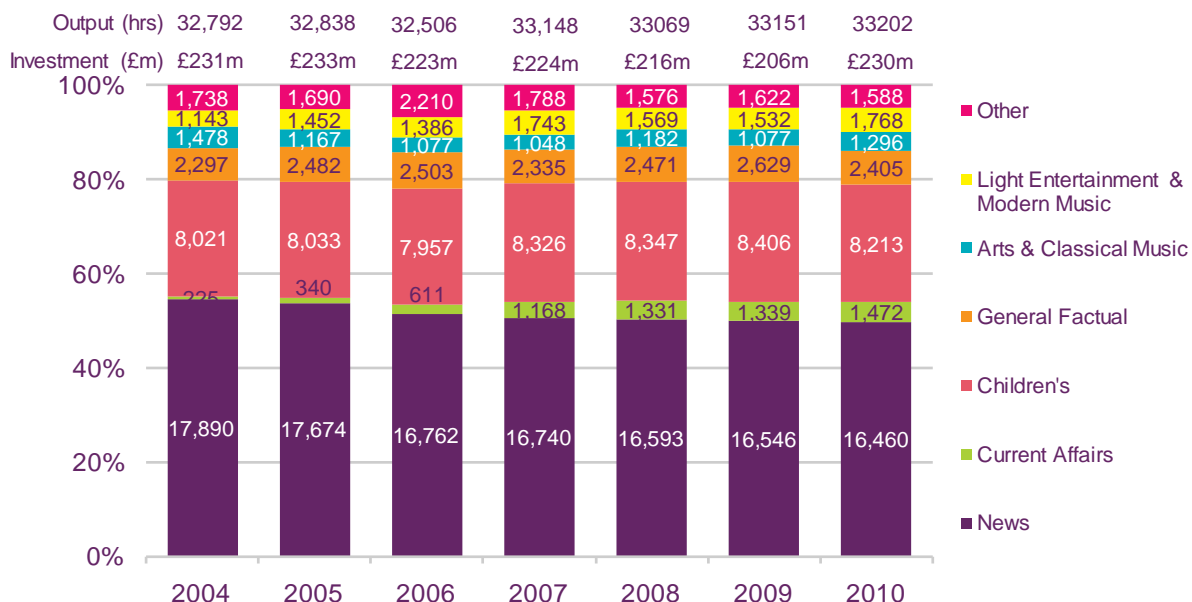


Source: Ofcom/broadcasters. Note: Includes five main channels plus GMTV1. Figures do not include hours of nations and regions output.

Figure 2.36 sets out the genre mix of the BBC's digital channels, which remains broadly similar to 2009 – in the main because three of the five digital channels are single-genre. The

three most notable year-on-year differences are more hours dedicated to Arts and Classical Music programming (up by 219 hours (20.3%) to 1,296), as well as Light Entertainment and Modern Music, and Current Affairs (up by 15.4% and 9.9% respectively). Commensurate with these changes in hours, BBC spend on programming for its digital channels increased by 11.7% to £230m year on year, with the 2010 figure broadly comparable to that of 2004.

Figure 2.36 The BBC's digital channels genre mix by hours: all day

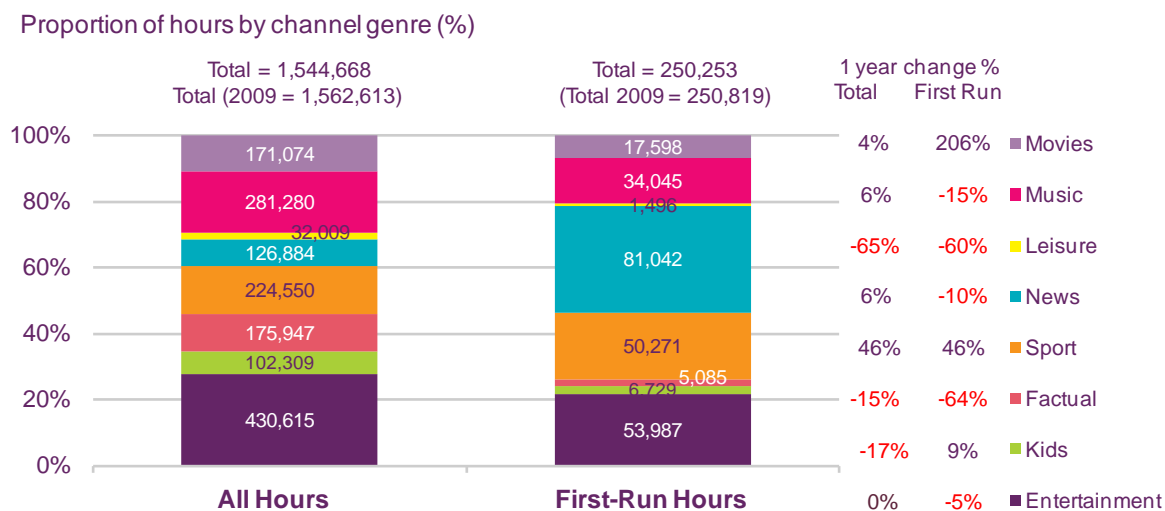


Source: Ofcom/broadcasters. Note: BBC digital channels include BBC Three, BBC Four, BBC News 24, BBC Parliament, CBBC, CBeebies. Investment figures are in 2009 prices. 'Other' includes: Education, Drama, Film, Religion and Sports. The BBC allocated Parliamentary coverage to the Current Affairs genre in the data for 1998 to 2003. From 2004, it has been allocated to either News or Current Affairs.

2.2.9 Multichannel output and spend

Multichannel broadcasters transmitted 1.5 million hours of output in 2010

Figure 2.37 Total multichannel hours and first-run originations/acquisitions, 2010



Source: Ofcom/broadcasters

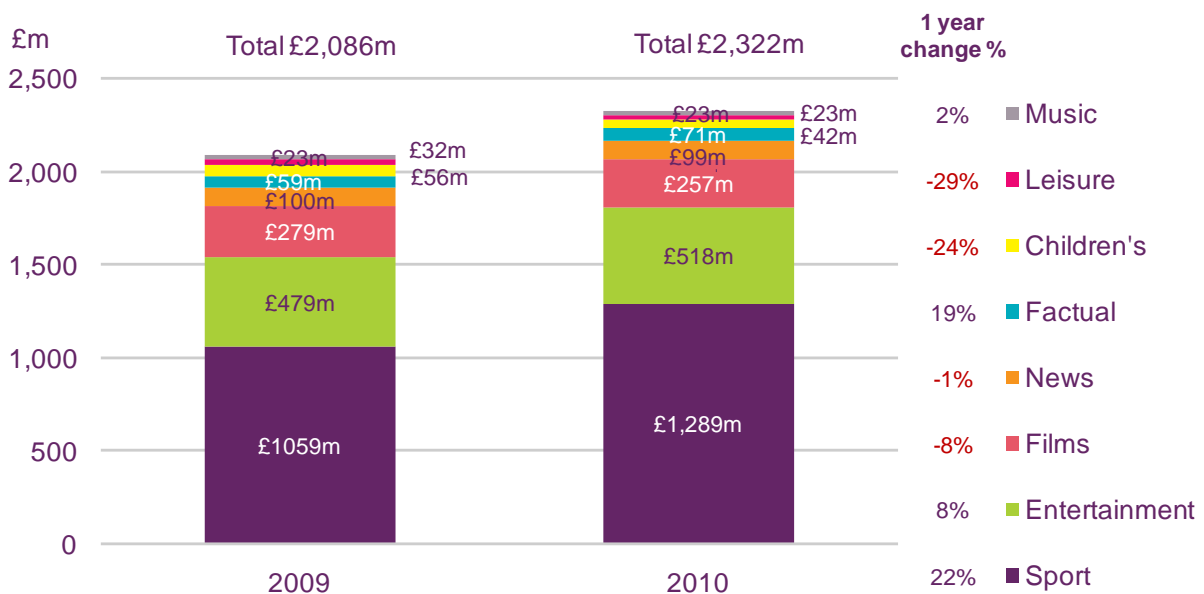
Note: Broadcast hours exclude Sky Box Office and 'barker' channels, which promote TV content. First-run hours include first-run in-house, commissioned and acquired content.

Multichannel content spend up 11% in 2010 to £2.3bn

Commercial multichannel broadcasters in the eight mainstream genres spent £2.3bn on programming in 2010, an 11% year-on-year increase.

At £1,289m, sports programming represented more than half the total multichannel spend, up 22% year on year. Leisure saw the biggest proportional decrease in content spending over the same period (-29%). Investment in Factual channels rose by 19% to £71m. Entertainment channels' spend grew by £40m to £518m, the second largest genre category after Sports. And spend over the same period among Children's channels fell by 24%.

Figure 2.38 Content spend by commercial multichannels in key genres: 2009 - 2010



Source: Ofcom/broadcasters. Note: Excludes BBC digital channels.

2.2.10 Other audio-visual revenue

Advertising remains the main source of revenue among online TV content providers as download-to-own gains pace

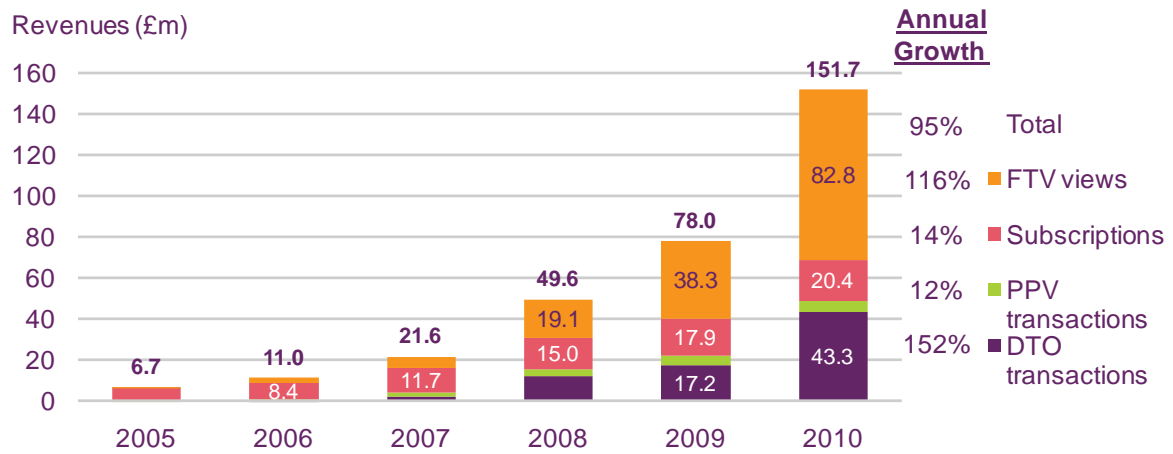
Online TV revenue in the UK grew by 95% year on year in 2010, according to data from Screen Digest, with total market revenue standing at £152m.

The free-to-view (FTV) business model remains the principal contributor, through advertising income, to overall online TV revenues, accounting for £82.8m in 2010. The catch-up services from commercial PSB broadcasters, including ITV Player, 4oD and Demand Five, are all funded wholly or in part from this business model.

The download-to-own business model (DTO) experienced the largest proportional revenue increase in 2010, growing by 152% to reach £43.3m. Through this business model consumers pay a fee to download a permanent copy of a programme. The increase may be partly explained by consumers' changing attitudes towards the physical ownership of media such as CDs and DVDs, and the popularity of DTO services such as Apple's iTunes.

The pay-per-view (PPV) and subscription models saw slower growth in 2009. Together these models made up 17% of the market as a whole. These models include services offered by LoveFilm's streaming service as well as add-ons to pay TV packages such as Sky Player.

Figure 2.39 Online TV revenues



Source: Screen Digest. Note: FTV = free to view; PPV = pay per view; DTO = download to own. Due to different data sources this chart is not directly comparable with previous charts.

2.3 The TV and audio-visual viewer

2.3.1 Summary

This section examines the availability and take-up of digital TV platforms and trends in television viewing, including some categories of non-linear viewing, during 2010. It also analyses viewers' attitudes to television. The key points include:

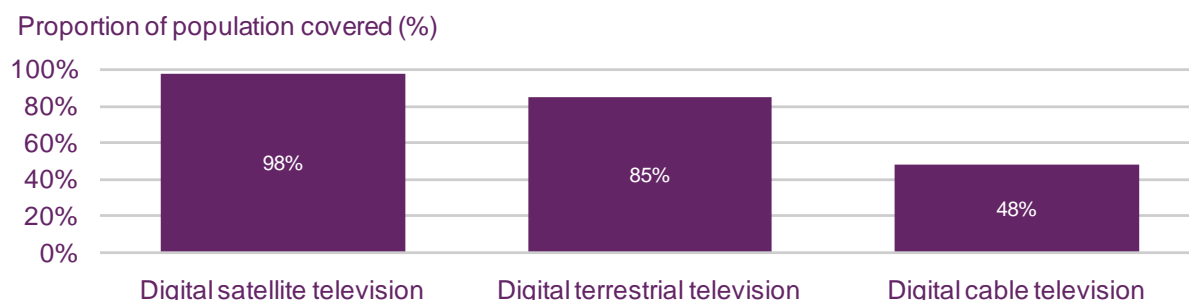
- **On average, viewers watched four hours of TV a day in 2010.** Viewing hours increase with age, with those aged 65+ watching the most daily television at 5.7 hours/day; children watch the least at 2.5 hours a day (page 135).
- **By Q1 2010, 93% of main TV sets in UK homes were connected to a digital television tuner,** either a set-top box or integrated digital TV, an increase of one percentage point year on year. Over five million (5.3m) homes (21% of the total) now have an HD subscription, while 46% of consumers claim to have a DVR at home (page 132).
- **The five PSB channels and their portfolio services attracted 71% of all viewer hours in multichannel homes in 2010** – on a par with 2009. The five main services attracted the majority of viewer hours (54%, down by one percentage point year on year), while their digital-only services accounted for a further 17% of viewer hours (up by 0.5 percentage points over the same period) (page 142).
- **In Q1 2011, 35% of adults claimed to use the internet for viewing catch-up television services,** a four percentage point increase on Q1 2010 and a 12 percentage point rise in two years. Younger adults and men are more likely to use catch-up; but growth has been fastest since 2009 among people over 65, with 24% claiming to now use catch-up, versus just 10% in Q1 2009 (page 151).
- **The total unique audience to video-sharing websites reached 24 million in April 2011,** a 1% decline on April 2010. The video-sharing sites category is dominated by YouTube, which accounted for 19 million of these views in April 2011, an increase of 12% year on year (page 152).

2.3.2 Availability of multichannel TV platforms

UK viewers can choose from four types of digital distribution technology to receive live broadcast-quality television - digital terrestrial, satellite, cable and IPTV - which have varying levels of availability.

Figure 2.40 shows that digital TV services that are delivered over the airwaves have the highest availability, with digital satellite having near-universal coverage at 98%. Digital terrestrial was available to 85% of the population by June 2011, a figure that is rising as digital switchover progresses. A year ago, DTT coverage was around 81% (having risen from a figure of 73% at DTT's launch in 1998). Cable coverage stands at 48% of UK homes as at Q1 2011.

Figure 2.40 Availability of digital television platforms



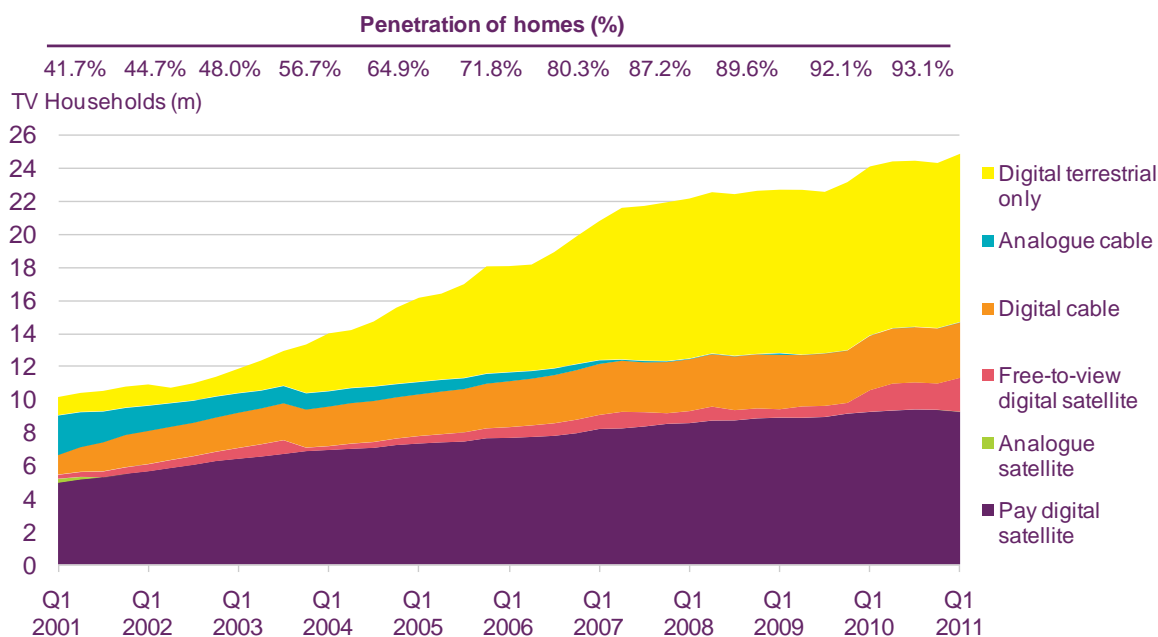
Source: Ofcom research/operators. Note that the DTT coverage figures represent the availability of a service of 17 television channels. DTT coverage levels represent Ofcom estimates. Data correct as at June 2011.

2.3.3 Multichannel television take-up

Analogue terrestrial homes are down to 7% as digital switchover enters its final phase

Digital TV penetration on main television sets increased by one percentage point year on year to reach 93.1% of UK homes by the end of Q1 2011. BSkyB's pay digital satellite platform, and homes using only Freeview's digital terrestrial (DTT) service continue to account for the larger proportion of those main sets. Only 6.9% of UK homes still exclusively use analogue terrestrial for television viewing.

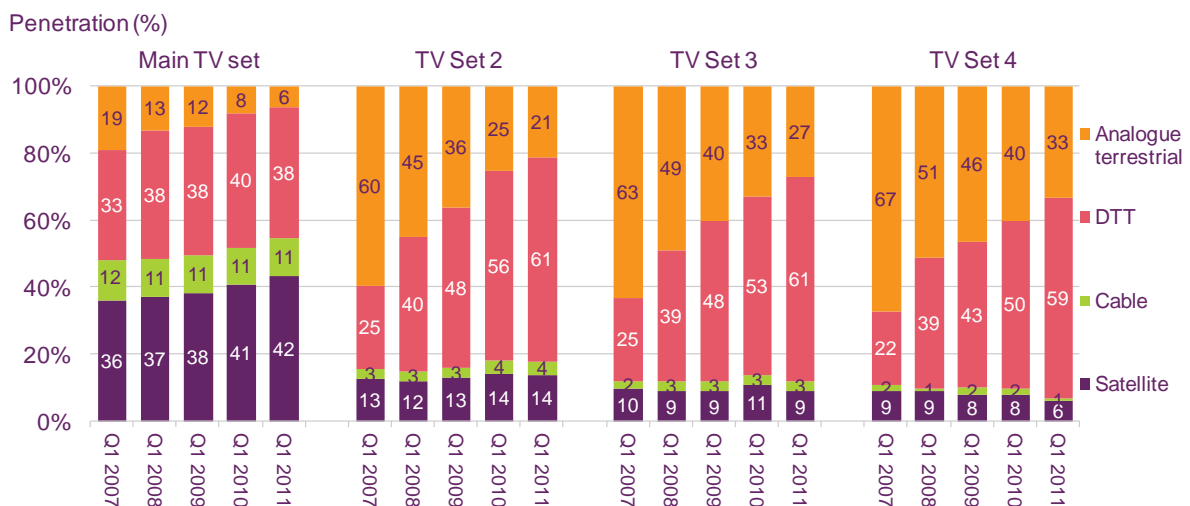
Figure 2.41 Take-up of multichannel TV on main sets



Source: Ofcom, GfK, Sky, Virgin Media. Data from Q1 2007 are based on consumer research, previous quarters use platform operator data, research and Ofcom estimates. Note: Digital terrestrial relates to DTT-only homes.

With multichannel growth slowing on main TV sets, DTT has continued to benefit from the switchover of secondary TV sets from analogue terrestrial. Figure 2.42 shows second to fourth sets relying heavily on DTT for conversion to digital, with satellite and cable platforms used on a significantly smaller number of sets. Over 8 million (8.5m) secondary TV sets still use analogue tuners to receive TV.

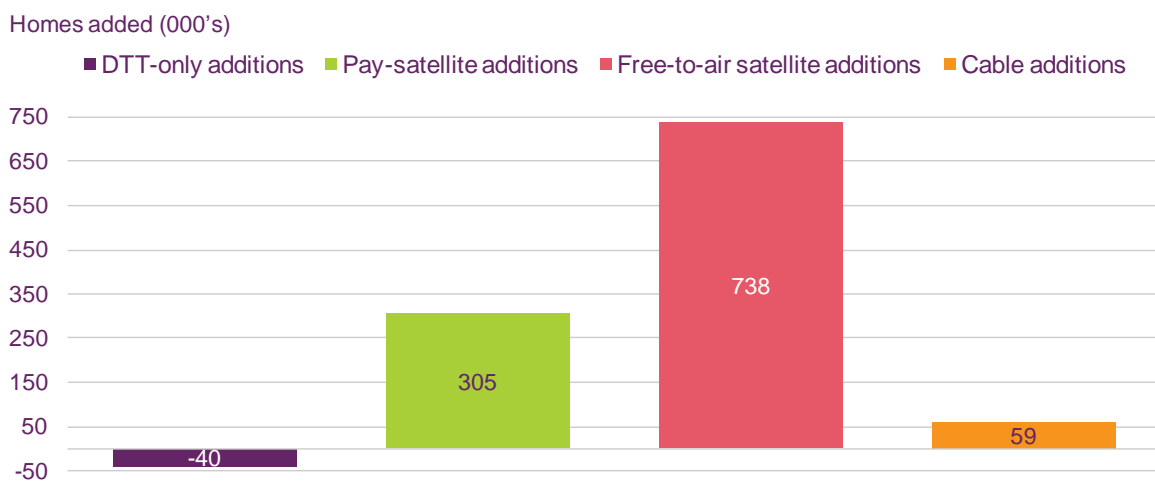
Figure 2.42 Platform share, by TV set



Source: GfK NOP consumer research. Note: columns do not always equal 100% due to the exclusion of some services from the chart, such as TV via broadband.

Figure 2.43 shows that the free-to-air satellite platform has experienced the largest number of net additions in the year to Q1 2011. Freesat (from the BBC/ITV) accounted for 79% of the 738,000 free satellite net additions. Pay satellite and cable also saw net additions in the year to Q1 2011; numbers of homes using DTT alone did not grow in the period.

Figure 2.43 DTT, satellite and cable net additions, year to Q1 2011



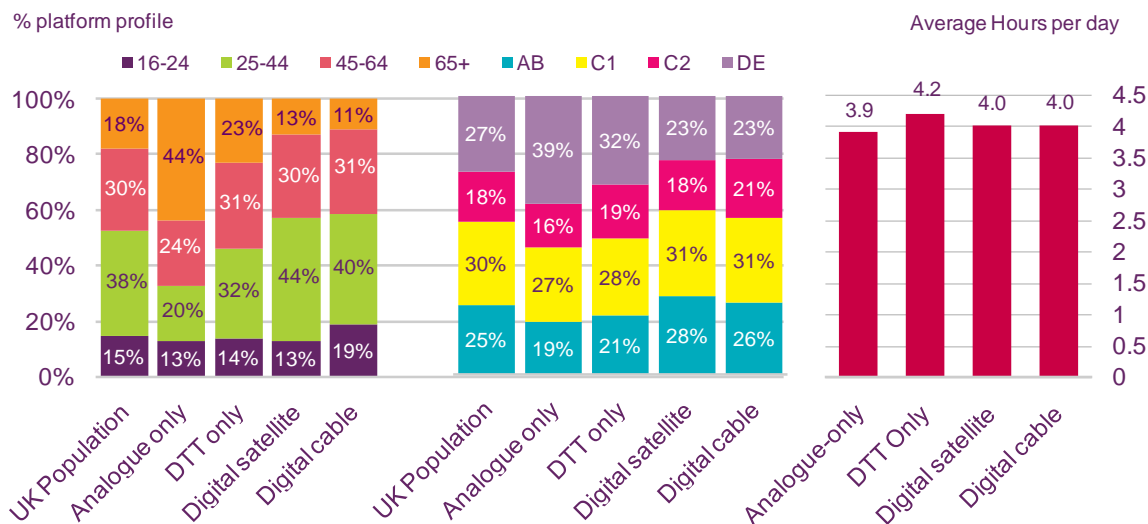
Source: Pay platform additions based on Virgin Media results and Ofcom- estimated UK figures based on BSkyB UK & Ireland results. DTT and free satellite additions based on Q1 2011 and Q1 2010 consumer survey results. Note: Chart uses multiple sources and is therefore intended to be considered only as a general indication of performance.

Platform demographics

Figure 2.44 shows the age and demographic mix of the television platforms in 2010, alongside average television viewing per head per day. Analogue-only households were skewed towards older viewers in 2010, with 44% of the platform’s viewers now over 65 (compared to 18% of the population as a whole). Digital cable had the youngest demographic, with 59% of its users under 44 (compared to 43% of the population).

Platforms offering pay-TV services skewed away from the DE demographic in 2010, accounting for 32% of DTT homes (compared to 27% of its universe), in comparison to 23% of both satellite and cable homes. Those viewing television over the DTT platform had, in 2010, the highest level of average viewing per day, at 4.2 hours. Satellite and cable platform viewers averaged 4.0 hours a day, while analogue-only viewers had the lowest level of viewing, at 3.9 hours a day.

Figure 2.44 Platform demographics by age, socio-economic group and viewing hours: 2010



Source: Ofcom and BARB

2.3.4 Consumption of television

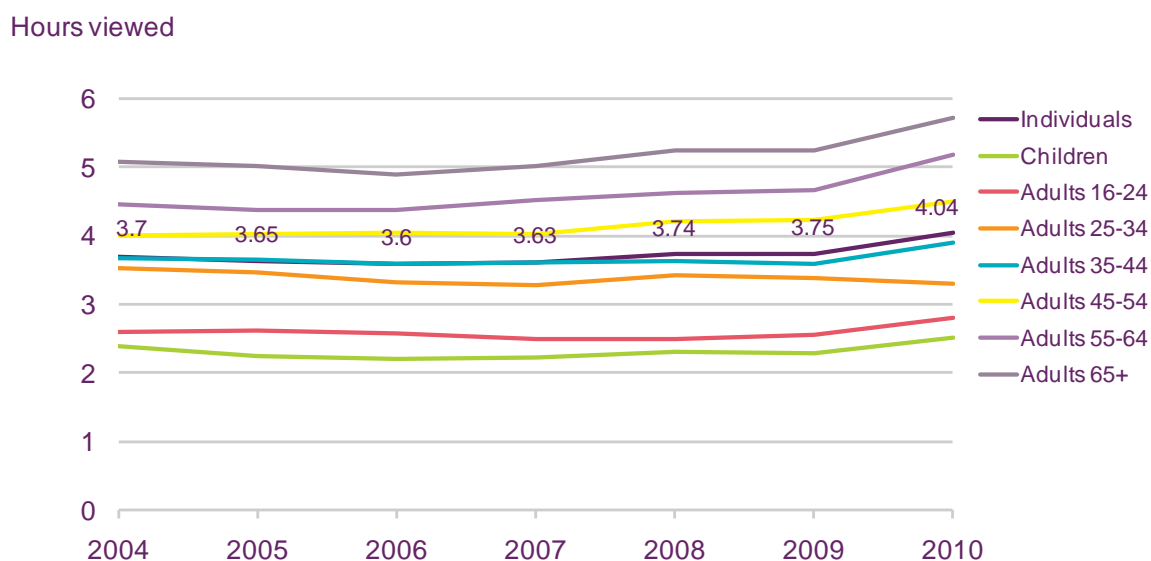
Average hours of TV consumption stood at four hours a day in 2010

Consumption of TV increases with age, with children watching the least amount of TV on average per day, at 2.5 hours, while over-65s watch 5.7 hours. On average, the typical television viewer watched 4.0 hours of television per day during 2010.

New BARB panel for 2010

It should be noted with Figure 2.45, and all other charts in this section where BARB is the source, that a new BARB panel of 5,100 homes went live from January 2010. Consequently, comparison of 2010 figures with those from previous years should be made with caution.

Figure 2.45 Average hours of television viewing per day, by age, all homes



Source: BARB. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years.

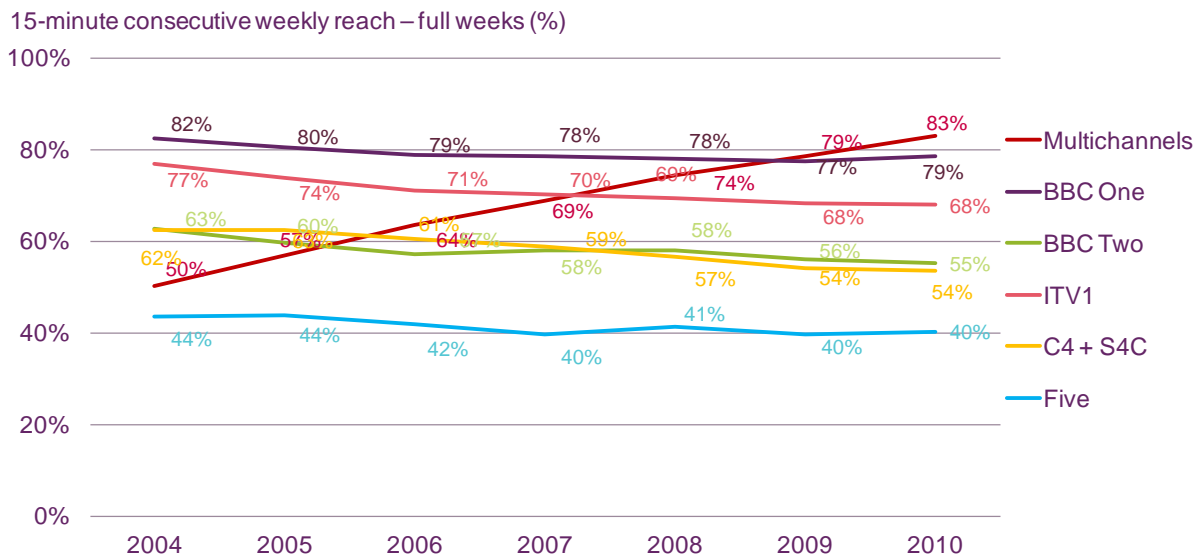
2.3.5 Channel reach

Collective reach of multichannels is higher than individual main PSB channels

While the main PSB channels command the greatest share of viewer hours, the reach²⁰ of all the multichannels combined on the digital platforms has continued to increase. In 2010 they commanded a reach of 83%, which compares to the reach of the channel with the highest reach, BBC One, at 79%. ITV1 has the second-highest reach at 68%. Channel 4 and S4C have the fourth-highest reach (54%) but are only one percentage point behind BBC Two (55%). Prior to the change in BARB's panel composition, the multichannel sector's audience reach had been growing year on year, rising by five percentage points in the year to 2009, and by 24 percentage points over the previous five years. At the same time, BBC One's reach fell by one percentage point between 2008 and 2009, and by five percentage points over the five-year period to 2009.

²⁰ Reach here is defined as the proportion of the total universe (expressed as a %) that have viewed at least 15 consecutive minutes in the average week.

Figure 2.46 Average weekly TV reach in all homes, by channel

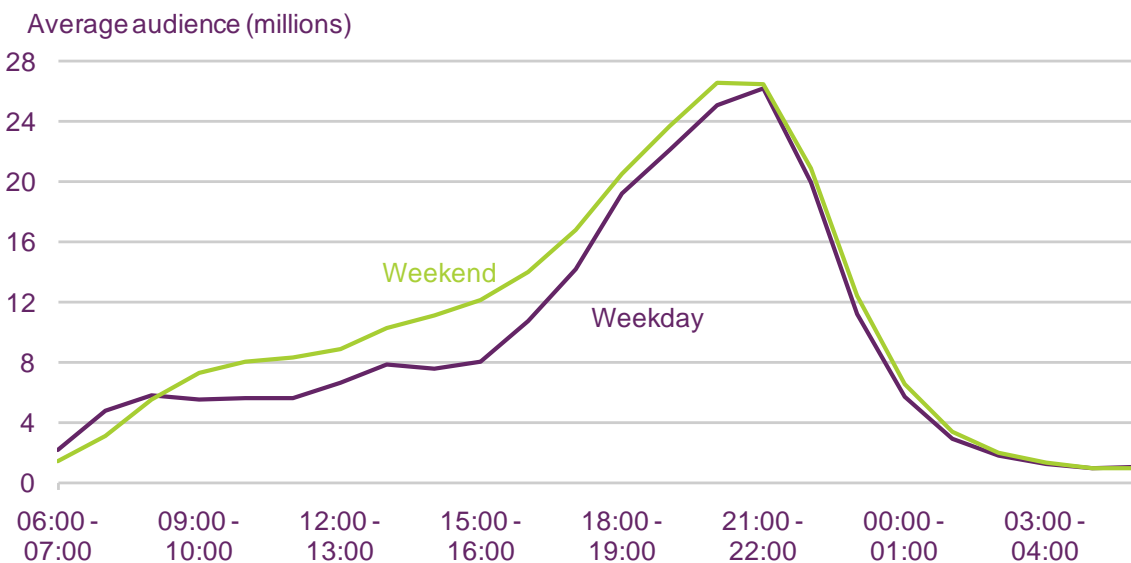


Source: BARB Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain labelled together in relevant charts. S4C weekly reach's in 2010 was 0.7%.

The TV audience is higher at weekends between morning and evening peaks

The distribution of audiences by time of day is generally similar between weekends and weekdays, with weekends achieving higher audiences between the morning and evening peaks. Weekdays achieve higher audiences earlier in the morning between 06:00 and 09:00. The weekend average total viewing audience peak was 26.5 million in 2010; the weekday total viewing audience peak was 26.3 million.

Figure 2.47 Average 2010 audiences, weekdays/weekends: by day part, all homes



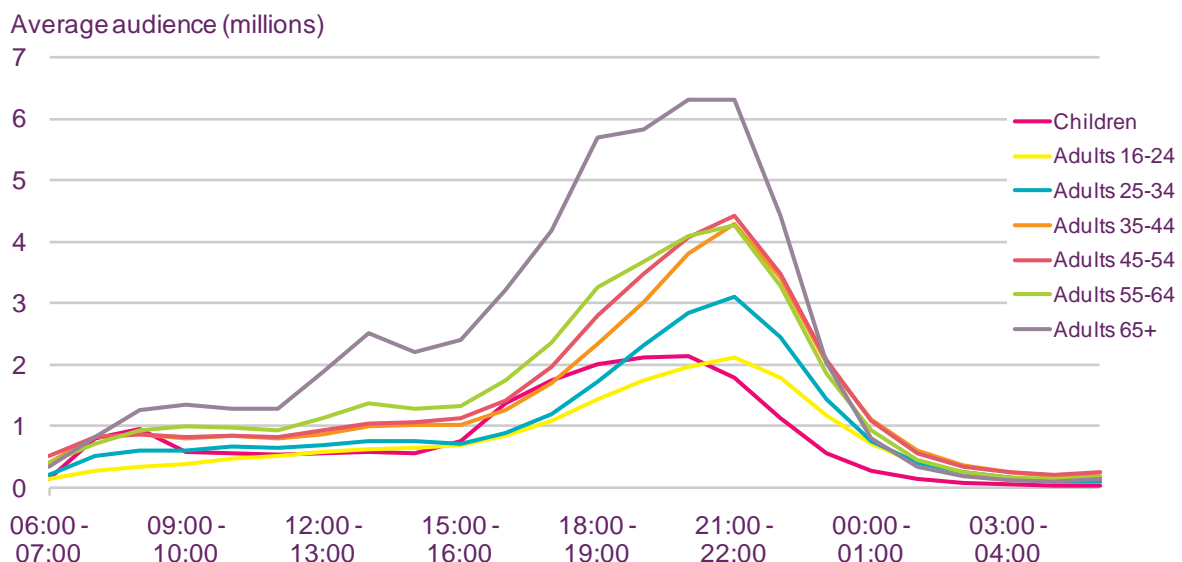
Source: BARB

Patterns of viewing, by time of day and age

The average weekday audience by day part and age is illustrated in Figure 2.48. The key patterns include:

- An average child's viewing peaks at 19:30 on weekdays, far earlier than the other age groups. There is also a spike in viewing at 08:00, unique to this group.
- The over-65 age group has by far the highest levels of weekday viewing. There is a longer peak in the evenings among this age group compared to others, as well as a large lunchtime peak.
- The 16-24 age group is the lowest weekday adult audience group. The evening peak is flatter than average for this group.
- The three age groups between 35 and 64 have a typically similar pattern of weekday viewing, peaking between 21:15 and 21:30, with the 55-64 age group also showing a small lunchtime peak. The 25-34 year-old group has a flatter peak, also at 21:15 to 21:30.

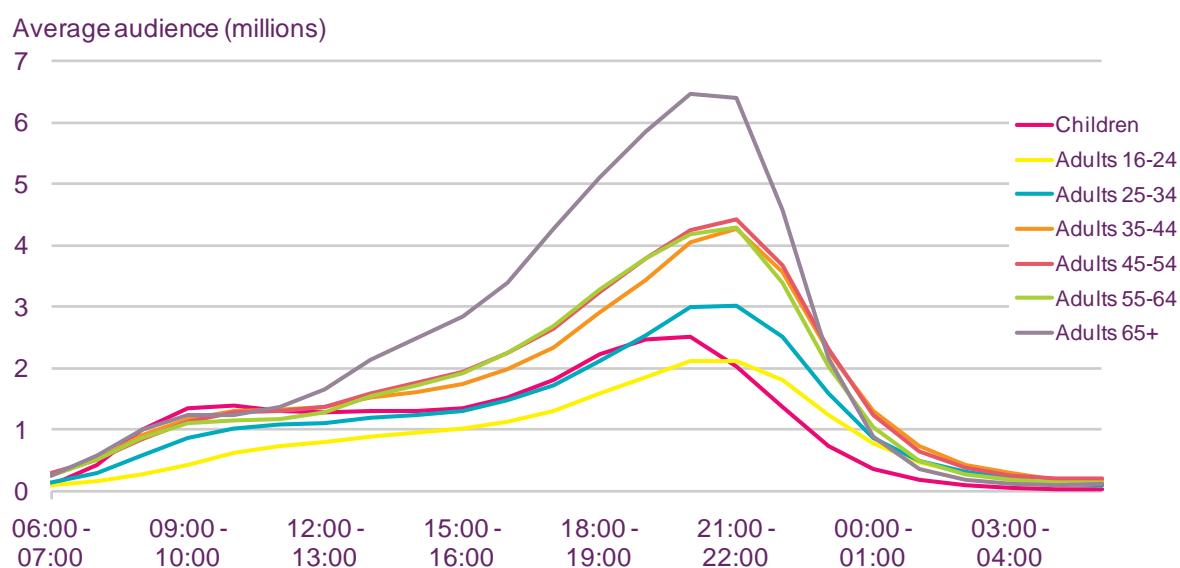
Figure 2.48 Average 2010 weekday audiences, by day part and age, all homes



Source: BARB

The average weekend audiences shown in Figure 2.49 are broadly in line with the weekday patterns. There are increased levels of viewing in the morning relative to weekday viewing, with no lunchtime peak among viewers in the older age groups.

Figure 2.49 Average 2010 weekend audiences, by day part and age, all homes



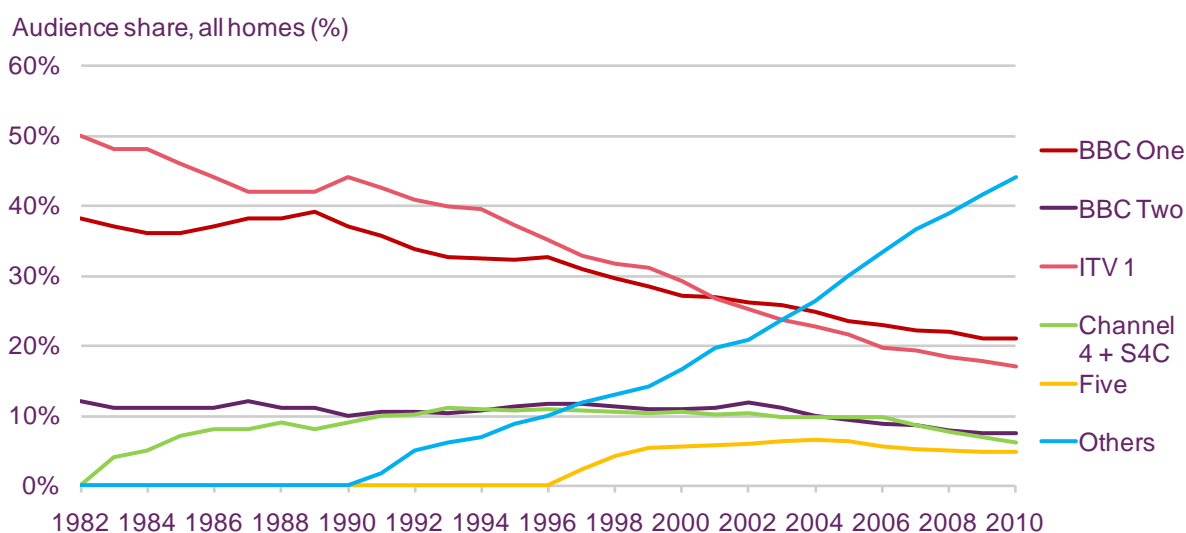
Source: BARB

2.3.6 Viewing shares of the five main PSB channels

The PSB main channels continued in 2010 on a long-term downward trend concurrent with the rise in multichannel platform take-up. BBC One and ITV1 continued to command the highest share of viewing in the UK, but each has seen a sharp decline over the past 20 years. In 1990 BBC One's audience share was 37% compared to 21% in 2010, a 16 percentage point fall. ITV 1 has seen a 27 percentage point decline in audience share, down from 44% to 17% in 20 years.

Channel 4 (including S4C) and Channel 5's shares have remained fairly consistent at 9% and 5% viewing share respectively. Cumulative share of the multichannel sector has risen to 44% in 2010, up by 27pp since 2000.

Figure 2.50 Channel shares in all homes: 1983 to 2010

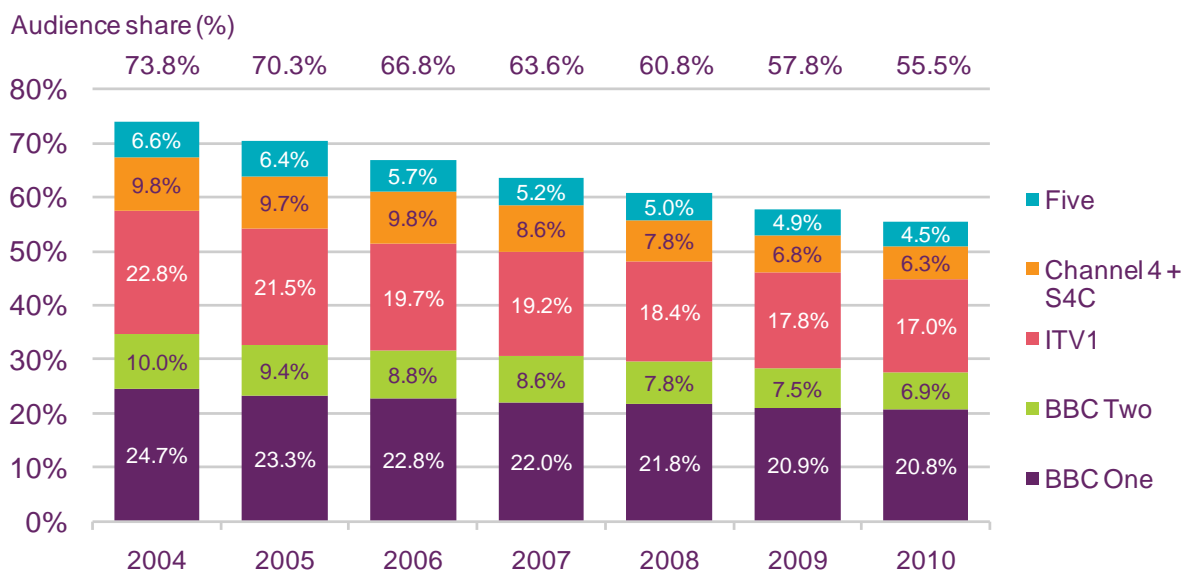


Source: BARB, TAM JICTAR and Ofcom estimates. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain labelled together in relevant charts. S4C 2010 channel share = 0.1%.

The combined share of the five main PSB channels stood at 55.5% in 2010, down by 2.3 percentage points year on year

The five main PSB channels accounted for 55.5% of all viewing in 2010. Although still attracting more than half of all viewer hours, this reduction has come about as a result of viewing share fragmenting across multichannel services. Figure 2.51 shows the current shares of the five main PSB channels. While changes in the BARB panel mean that 2010 data are not directly comparable with those of previous years, the latest figures appear to be consistent with the historic downward trend.

Figure 2.51 Five main PSB channels' audience share, all homes



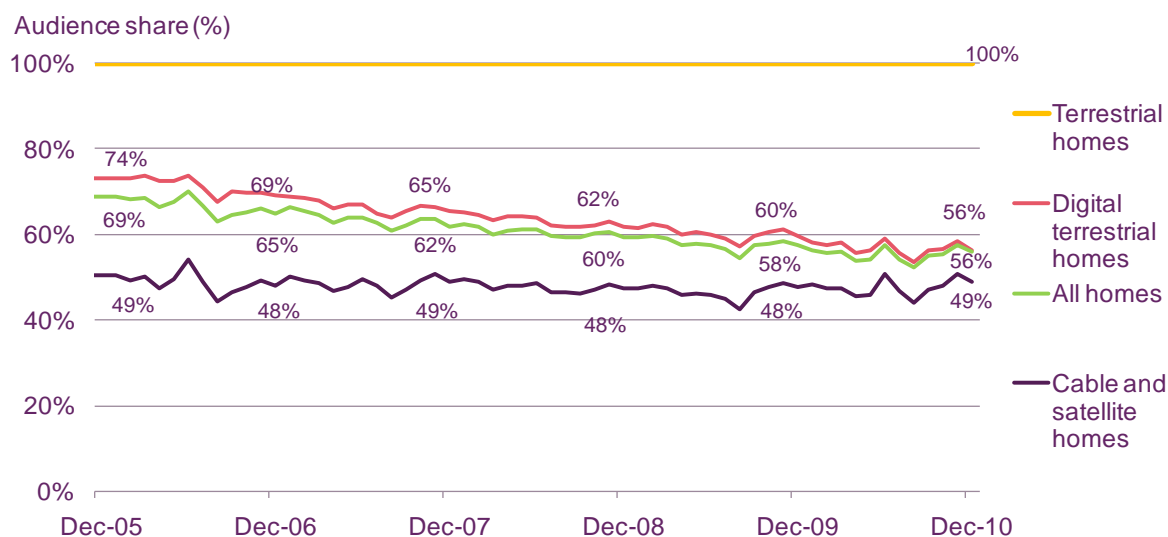
Source: BARB. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain labelled together in relevant charts. S4C 2010 channel share = 0.1%.

Figure 2.52 compares the shares of the five main PSB channels' audience shares by platform. On analogue terrestrial television, the main PSB channels remain the only option and therefore command 100% of viewer hours.

Across the other digital television platforms, the PSBs' audience share appears to correlate with the number of channels available. For example, over the cable and satellite platforms, the combined viewing share of the five main PSB channels stood at 49% in December 2010, compared to 56% on the DTT platform; the average was 56% in December 2010.

Although any comparison of 2010 data should be viewed with caution due to the January 2010 BARB panel change, over the five-year period there appears to be multichannel platform convergence in the viewing shares of the five main PSB channels.

Figure 2.52 Five main PSB channels' audience shares, by platform

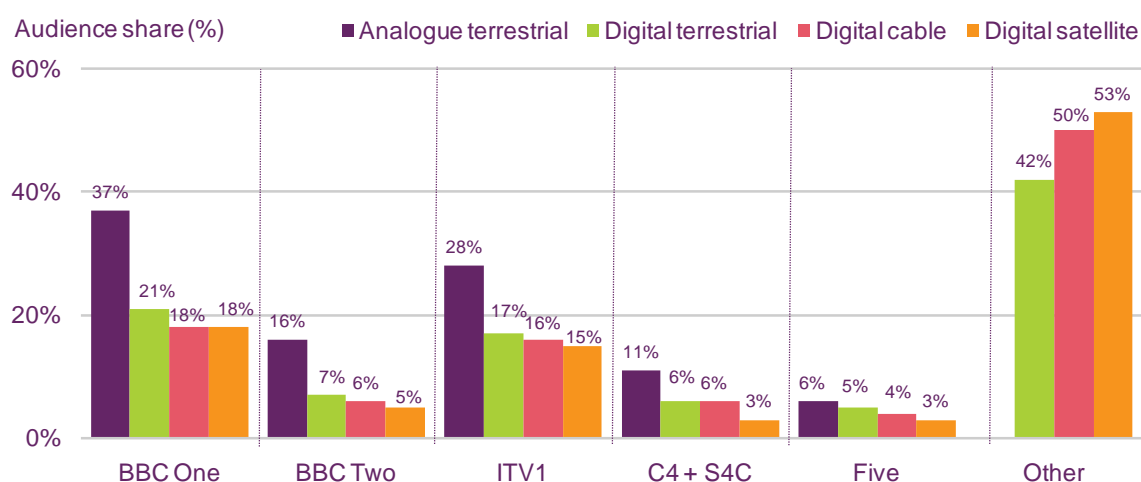


Source: BARB, all homes, all viewers, various platforms. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain grouped together in relevant charts. S4C 2010 channel share (all homes) = 0.1%.

Audience shares for the five main PSB channels varied by platform (Figure 2.53). During 2010 BBC One and ITV1 were the two most popular channels on all platforms. In analogue terrestrial homes, they attracted a combined viewing share of 65%, greater than the share they attracted on any other platform.

Among digital television platforms, the individual channels had a higher viewing share in DTT homes, followed by digital cable and digital satellite, in each case. On other channels, viewing share followed the reverse pattern, increasing incrementally between DTT, cable and satellite homes. This may be explained in part by the progressively larger number of additional channels available on each platform (within the basic channel packages that each has on offer).

Figure 2.53 Channel share, by platform: 2010



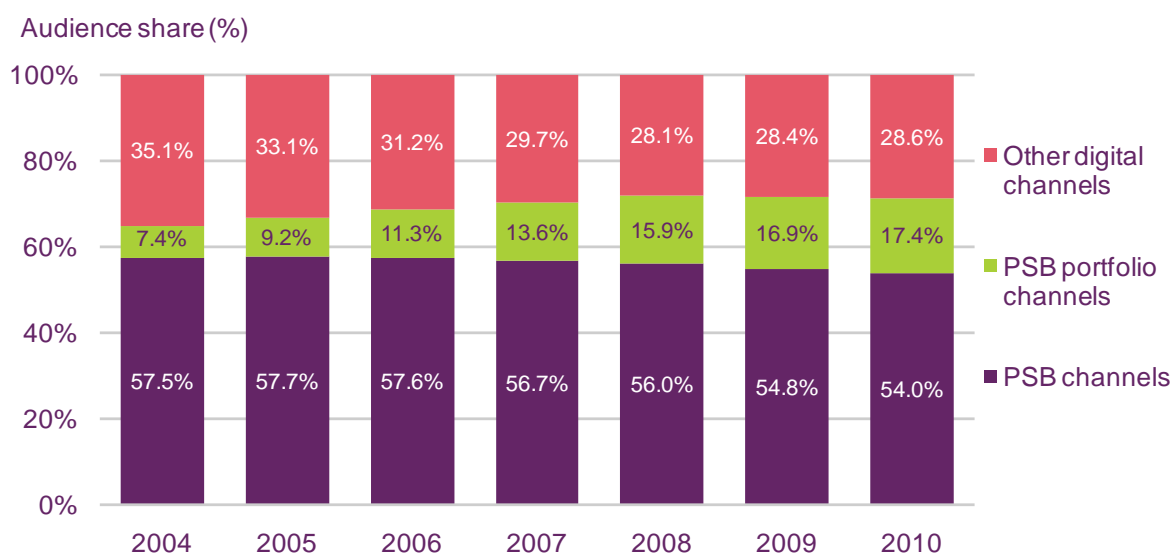
Source: BARB. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain labelled together in relevant charts. S4C 2010 channel share (all homes) = 0.1%.

2.3.7 Multichannel broadcaster shares

The five PSB channels and portfolio services accounted for 71% of viewing in multichannel homes in 2010 – the same as 2009

In addition to the five main PSB channels, PSBs broadcast a number of other channels available on multichannel platforms. These comprise BBC Three, BBC Four, CBBC, CBeebies, BBC News, BBC Parliament, ITV2, ITV3, ITV4, CITV, E4, More4, Filme4, 5* and 5USA. Taken together, these channels, along with the five main PSBs, attracted 71.4% of all viewer hours in 2010. Of this, 17.4% was from portfolio channels alone. Services not owned by a PSB had a 28.6% audience share in 2010. In the five years to 2009 (before BARB reconfigured its panel), the five main PSB services' share fell from 57.5% to 54.8% (a 2.7 percentage point reduction), and the portfolio channels' share rose from 7.4% to 16.9% over the same period (a 9.5 percentage point rise).

Figure 2.54 PSB and portfolio channel shares in multichannel homes

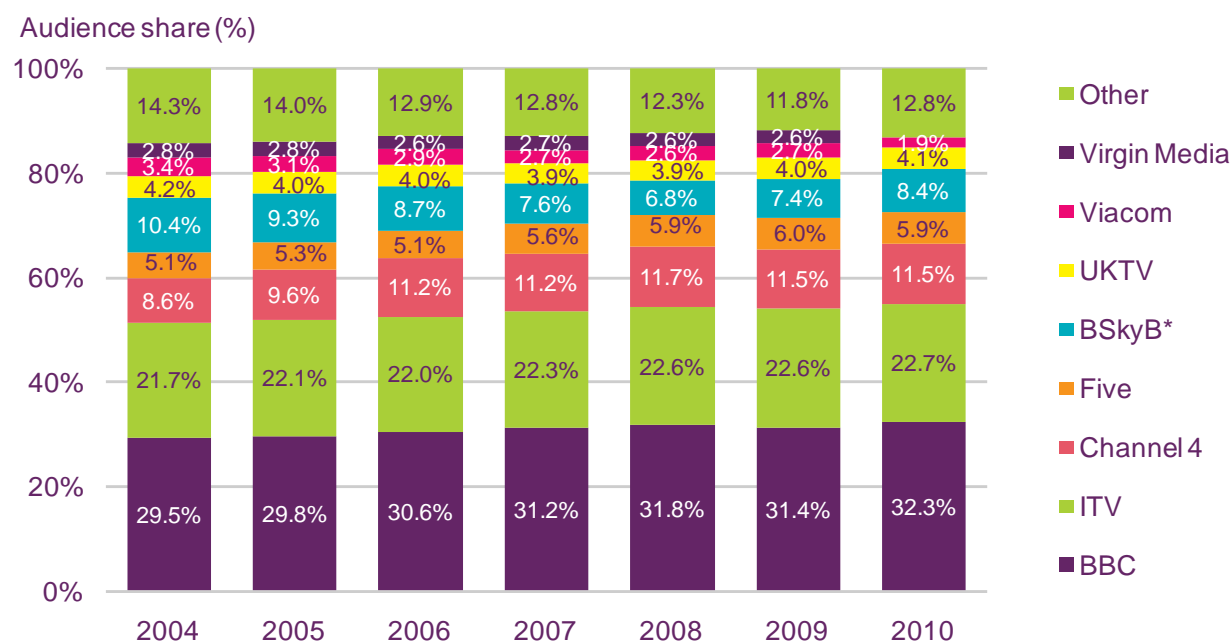


Source: BARB. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain grouped together in relevant charts. S4C 2010 channel share = 0.1%.

The make-up of individual broadcasters' audience shares in multichannel homes is explored in Figure 2.55. The BBC had the largest single share in 2010, attracting nearly a third (32.3%) of all viewer hours across its two main services and its portfolio channels. ITV and Channel 4 followed in 2010, with shares of 22.7% and 11.5% respectively. The newest PSB, Channel 5, had an audience share of 5.9% in 2010.

Of the 28.6% of audience share attracted by channels run by non-PSBs, BSkyB services accounted for 7.3 percentage points of that total. Virgin Media, whose channel portfolio was acquired by BSkyB toward the end of the year, had a further 1.5%. UKTV, which is a joint venture between BBC Worldwide and Virgin Media, accounted for a 4.1% share in 2010. Viacom, with channels including MTV and Comedy Central, accounted for 1.9% of viewer hours in multichannel homes. Other digital channels with smaller audience shares collectively represented 12.8% of the total.

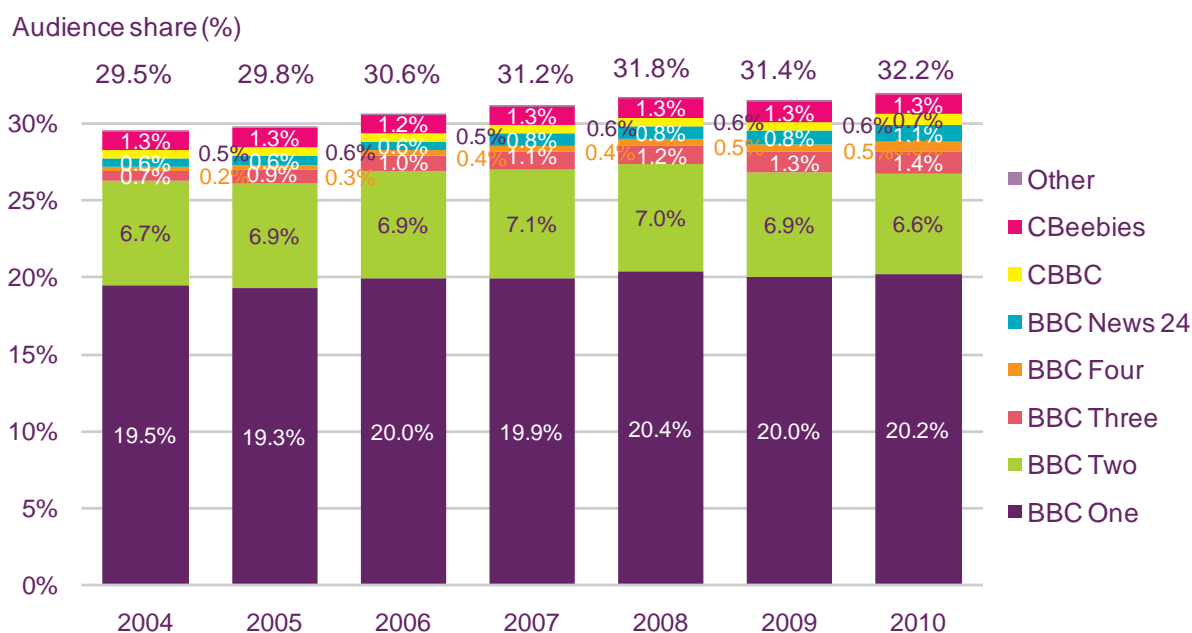
Figure 2.55 Broadcaster portfolio shares in multichannel homes



Source: BARB. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. *BSkyB took ownership of VMTV in June 2010, Virgin Media TV portfolio shares are included in the BSkyB figure for the whole of 2010. ITV includes all ITV network channels, not just those owned by ITV plc. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain grouped together in relevant charts. S4C 2010 channel share = 0.1%.

Figure 2.56 breaks down the BBC's audience share by channel. In 2010 BBC One accounted for the largest proportion of its viewer hours, with a share of 20.2% in multichannel homes. BBC Two accounted for a further 6.6%, while the BBC's remaining digital-only channels collectively represented a further 5.4%.

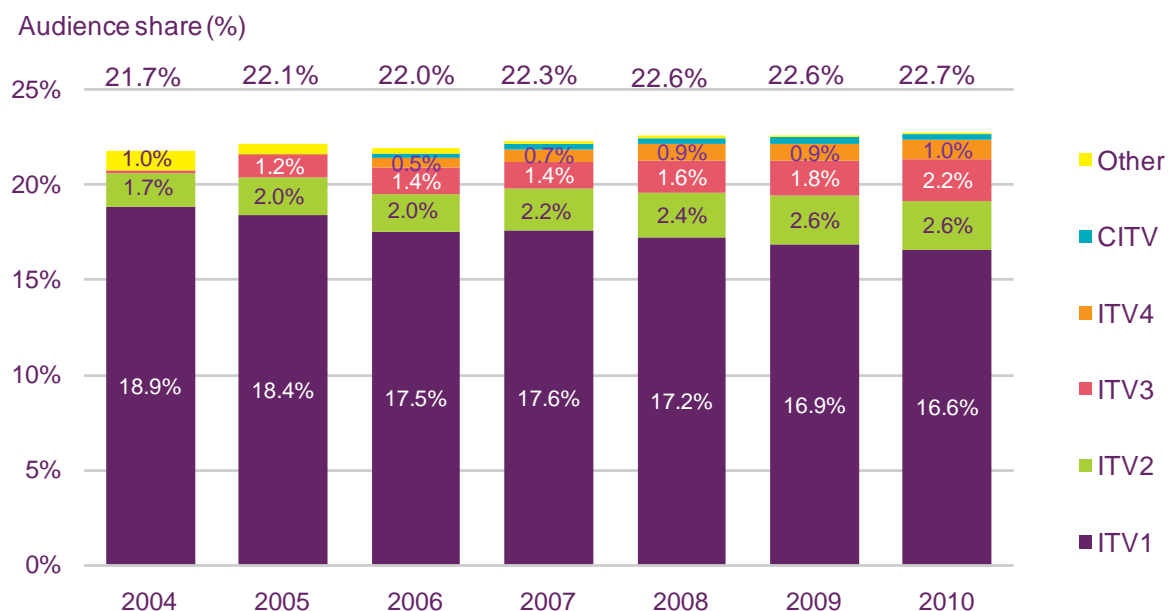
Figure 2.56 BBC portfolio share in multichannel homes



Source: BARB Note: 'Other' includes BBC Parliament, BBC Choice, BBC HD and BBC Knowledge. Due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years

ITV1 provided 73% of ITV's total audience share in 2010, with a share of 16.6% of UK multichannel viewer hours. The ITV network digital portfolio attracted a further 6.1% of those hours, with ITV2's share highest of all ITV network digital channels, at 2.6%.

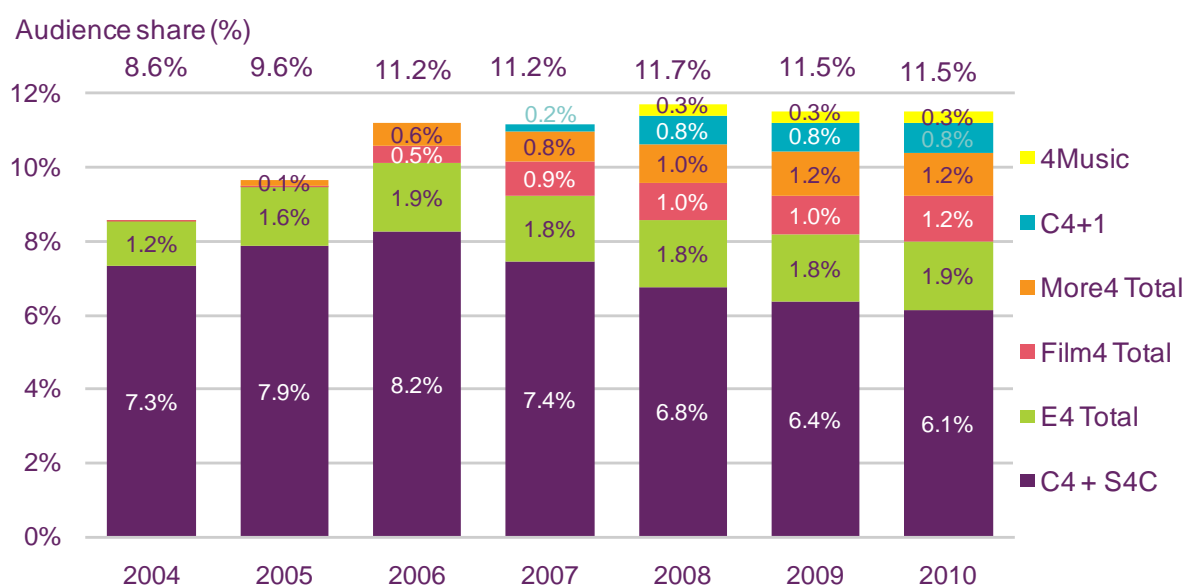
Figure 2.57 ITV portfolio shares in multichannel homes



Source: BARB Note: 'Other' includes (when relevant) ITV Play, Men & Motors, GMTV2, Granada Breeze, Plus, ITV News. ITV1, ITV2, ITV3 and ITV4 and include +1 services' share and HD services from 2010. Due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years.

Channel 4's audience share was, in 2010, proportionally more weighted towards its digital-only channels than the other PSBs, as shown in Figure 2.58. Nearly half (47%) of its share was derived from its digital channels during 2010. This compared with 17% for the BBC, 29% for ITV and 24% for Channel 5. Channel 4's most-watched digital channel was E4, with 1.9% of audience share. Film4 and More4 made up a further 1.2% of audience share each.

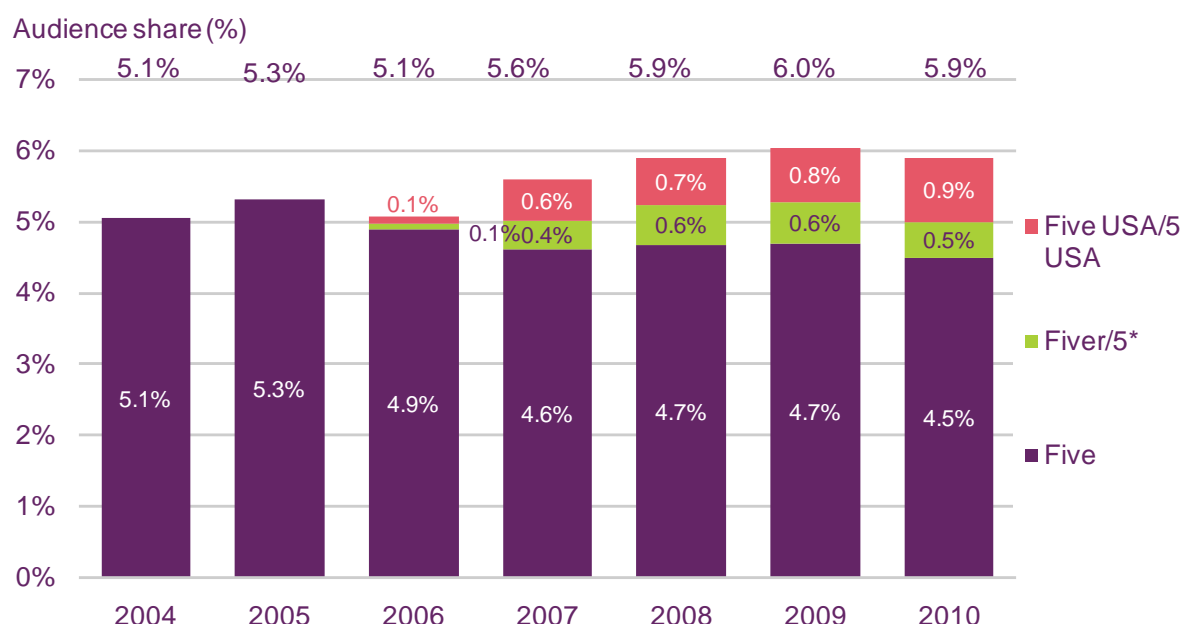
Figure 2.58 Channel 4 portfolio shares in multichannel homes



Source: BARB. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. E4, More4 and Film 4 respective +1 channel shares are included. Note: In 2010 C4 and S4C became two separate channels following digital switchover in Wales. For the purposes of this report the two channels remain labelled together in relevant charts. S4C 2010 channel share = 0.1%.

Channel 5's main service made up the majority of its share in 2010 – accounting for 4.5 percentage points of Five's total 5.9% in 2010. 5* (formerly Fiver) made up 0.5% of total audience share, while Five USA represented a further 0.9%.

Figure 2.59 Five portfolio shares in multichannel homes

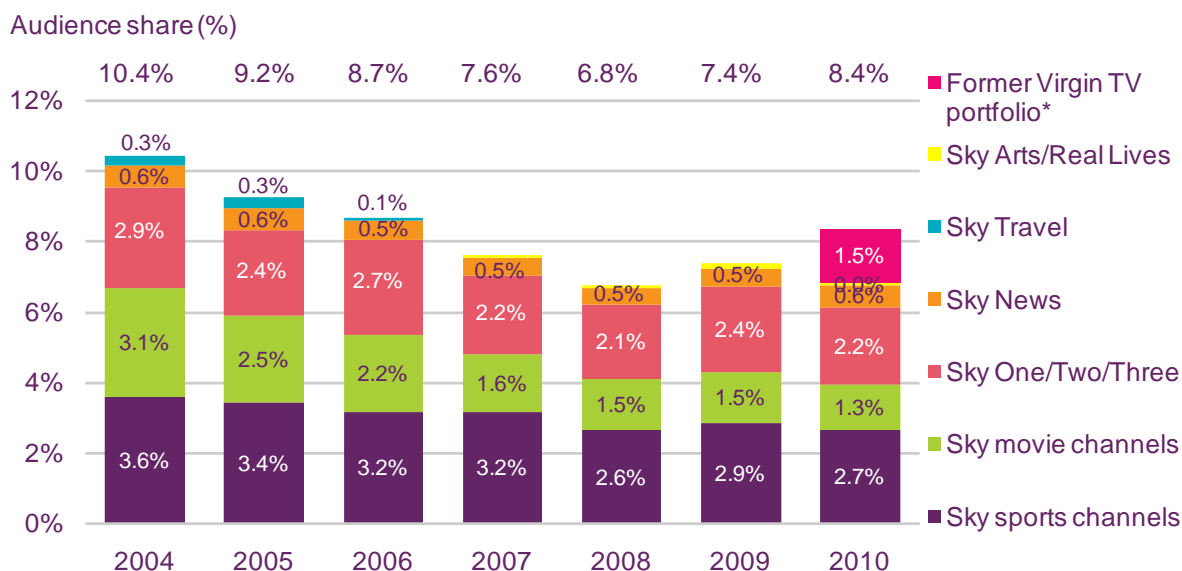


Source: BARB Note: 5* and 5 US include their +1 service share. Due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years

BSkyB's portfolio of channels achieved a 6.9% share of total multichannel viewing in 2010. Sky News and Sky Three (recently rebranded as PickTV in 2011) were the only channels in BSkyB's portfolio to be available on the free-to-air platform Freeview during 2010. Premium

sports subscription channels, available as part of the Sky Sports packages, represented the largest proportion of viewing share, at 2.7%. This compares to BSkyB's premium film channels, which generated a further audience share of 1.3%. BSkyB's entertainment channels were the second largest contributor to Sky's audience share, at 2.2%.

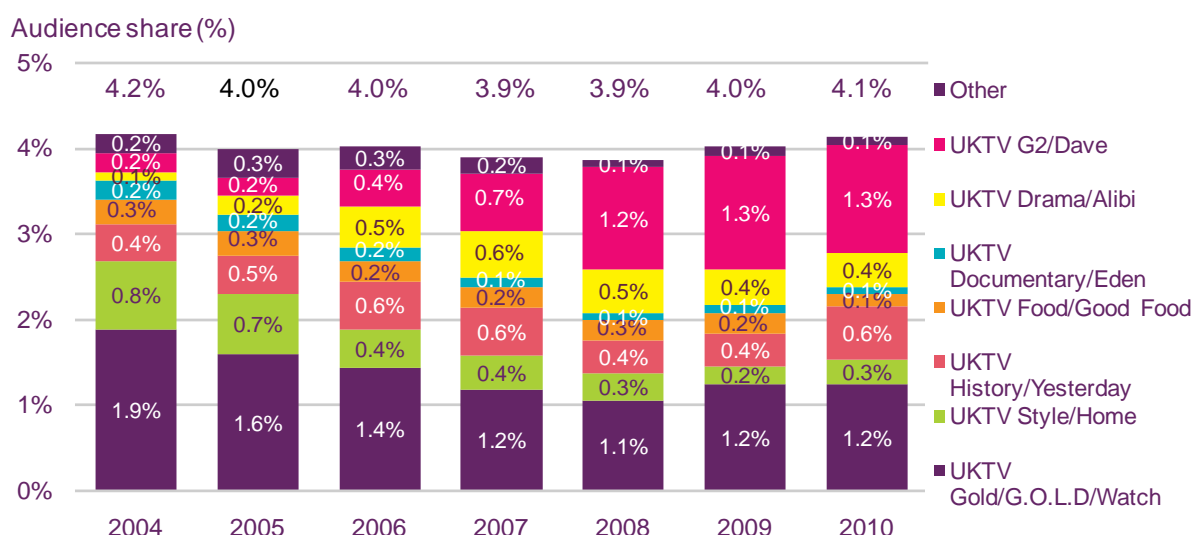
Figure 2.60 BSkyB portfolio shares in multichannel homes



Source: BARB. Note: due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years. *BSkyB took ownership of VMTV in June 2010, Virgin Media TV portfolio shares are included in the BSkyB figure for the whole of 2010.

Figure 2.61 shows the make-up of UKTV's portfolio audience share. Overall, its channel portfolio had a 4.1% audience share in 2010. Of this, Dave had the largest share, with 1.3%. Watch attracted a similar proportion of viewer hours at 1.2%. The remaining 1.6% was made up by the rest of the UKTV channel portfolio.

Figure 2.61 UKTV portfolio shares in multichannel homes



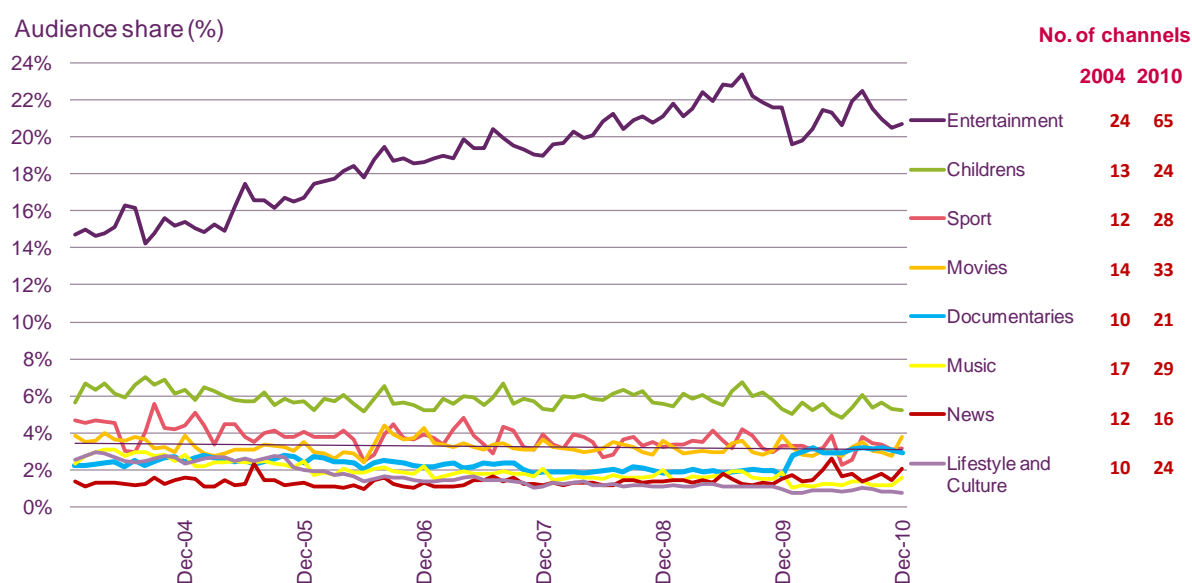
Source: BARB Note: UKTV portfolio channels have evolved over the past twelve months. In the 2008 figures, new channel names and shares have been matched to old channels. Due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years.

Figure 2.62 illustrates the aggregate share of channels by genre (as defined by Sky's electronic programme guide, excluding the five main PSB channels). The Entertainment channel category generated the highest collective share, accounting for over a fifth (20.9%) of all viewer hours (excluding the five main channels) during 2010.

The higher share of the Entertainment category can be partly explained by the large number of channels in this group. In 2010 there were 65 channels in this category, compared to the second largest category, Movies, with 33 channels. There are several entertainment channels that are also available on free-to-air multichannel platforms, and which further drove up the share of viewing of this genre of channels.

Children's was the second most-viewed category in 2010, with an average of 6.4% audience share in 2010.

Figure 2.62 Aggregate shares of channel genres in multichannel homes



Source: BARB. Note: Number of channels does not include '+1' services. Due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years

PSB portfolio channels made up 15 of the top 20 most-viewed channels in multichannel homes

All of the top ten channels by audience share (including channels' time-shift +1 services) were either PSB main services or their portfolio channels in 2010. Of the top 20, 15 were PSB-owned channels. BSkyB had four channels in the top 20, Sky Sports 1 was the 13th most viewed while Sky One and Pick TV (formally Sky 3) were the 17th and 18th respectively. BSkyB closed Channel One in February 2011, which had achieved a 0.9% viewing share (19th overall) in 2010. UKTV also had a channel in the top 20, with Dave reaching a 1.2% share, 12th overall.

Figure 2.63 The top channels by share in multichannel homes: 2009 to 2010

| Channel | Share | | Rank | | Channel | Share | | Rank | |
|-----------|-------|------|------|------|--------------|-------|------|------|------|
| | 2010 | 2009 | 2010 | 2009 | | 2010 | 2009 | 2010 | 2009 |
| BBC One | 20.2% | 1 | 1 | | Film4 | 1.2% | 11 | 15 | |
| ITV1 | 16.6% | 2 | 2 | | Dave | 1.2% | 12 | 11 | |
| Channel 4 | 7.0% | 3 | 3 | | Sky Sports 1 | 1.2% | 13 | 9 | |
| BBC Two | 6.6% | 4 | 4 | | More 4 | 1.1% | 14 | 13 | |
| Five | 4.5% | 5 | 5 | | BBC News | 1.1% | 15 | 19 | |
| ITV2 | 2.5% | 6 | 6 | | ITV4 | 1.0% | 16 | 16 | |
| ITV3 | 2.3% | 7 | 8 | | Sky One | 0.9% | 17 | 14 | |
| E4 | 1.9% | 8 | 7 | | Pick TV | 0.9% | 18 | 21 | |
| BBC Three | 1.4% | 9 | 12 | | Channel One | 0.9% | 19 | 18 | |
| CBeebies | 1.3% | 10 | 10 | | 5 USA | 0.9% | 20 | 22 | |

Source: BARB. Note: Includes channels' +1 services. Due to a new BARB measurement panel from 2010 onwards, 2010 data are not directly comparable with previous years.

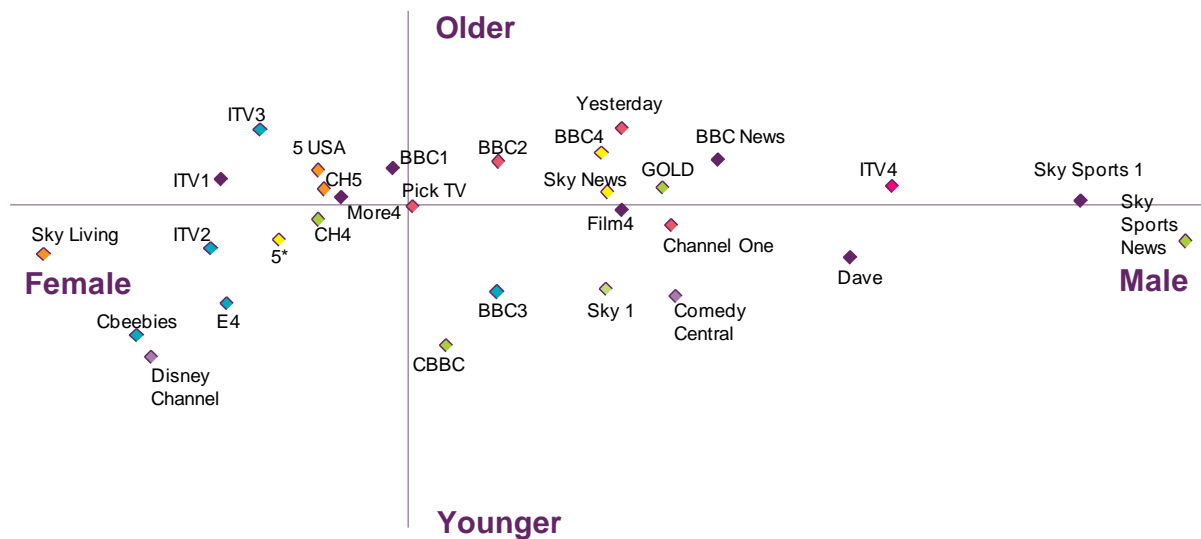
Channel demographics

Figure 2.64 illustrates the age and gender profiles of the 30 most-viewed channels during 2010. This is rebased against the average age and genre of the overall television audience in multichannel homes, which is found at the intersection of the two axes.

BBC Three and the two BBC children's channels attracted a younger audience in 2010, which is consistent with their demographic targets. The rest of the BBC channel portfolio has an older than average typical viewer. ITV channels showed a similar pattern, with ITV2 having a slightly younger profile, while the rest of the portfolio had an older than average demographic. Film 4's audience tended to be skewed towards males, while the rest of the Channel 4 portfolio had a female skew.

BSkyB had six channels in the top 30, and four of them – Sky News, Sky 1, Sky Sports 1 and Sky Sports News – profiled significantly more male than average, but Pick TV – the entertainment service available on Freeview – attracted an audience profile close to the multichannel average.

Figure 2.64 Age and gender profile of the 30 most-viewed channels in multichannel homes



Source: BARB Note: The profile of a channel is calculated relative to the television population in multichannel homes. Includes channel's +1 services.

2.3.8 Online TV reach and audience

Evidence of consolidation in online TV and film market

2010 saw industry consolidation but low growth in the user base for online-only on-demand AV services.

With 76% of consumers now having broadband connected at home, a number of service providers offer access to audio-visual content on demand over the internet.

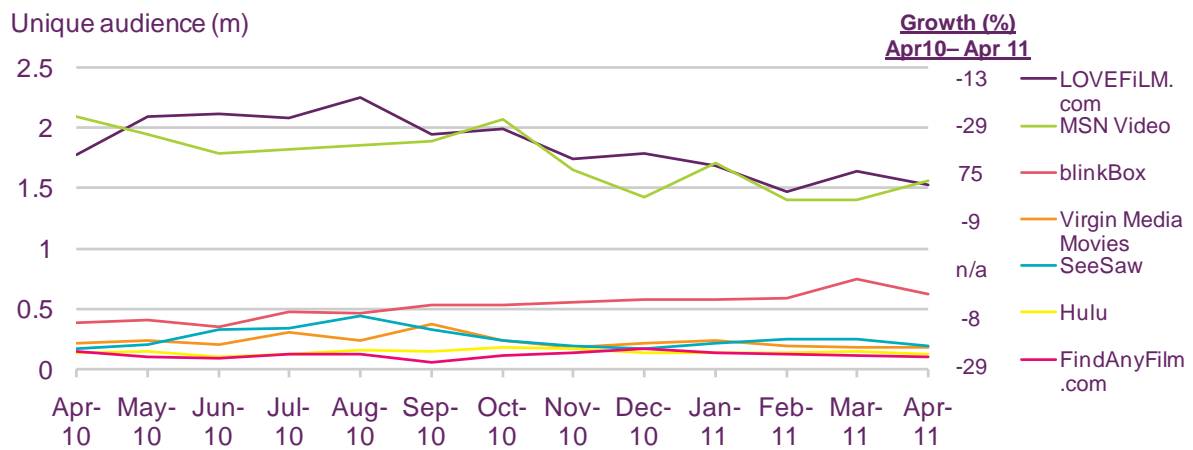
According to UKOM/Nielsen, BlinkBox, a pay-per-view download service, saw its unique audience rise by three-quarters (75%) in the year to April 2011; to 0.6 million, and in April 2011 Tesco announced that it would be acquiring a 80% stake in the business²¹. LoveFilm, which was acquired by Amazon in January 2011²², saw a 13% fall in unique audiences over the same period, to 1.5 million.

MSN Video includes a catch-up service from players including BBC Worldwide and Endemol (alongside user-generated content). It generated a unique audience comparable to LoveFilm in 2010, at just over 1.5 million unique monthly visitors.

²¹ <http://www.tescopl.com/news/news-releases/2011/tesco-prepares-for-the-next-generation-of-home-entertainment-with-majority-stake-in-blinkbox/>

²² http://www.amazon.co.uk/gp/press/pr/20110120/ref=amb_link_158998707_101

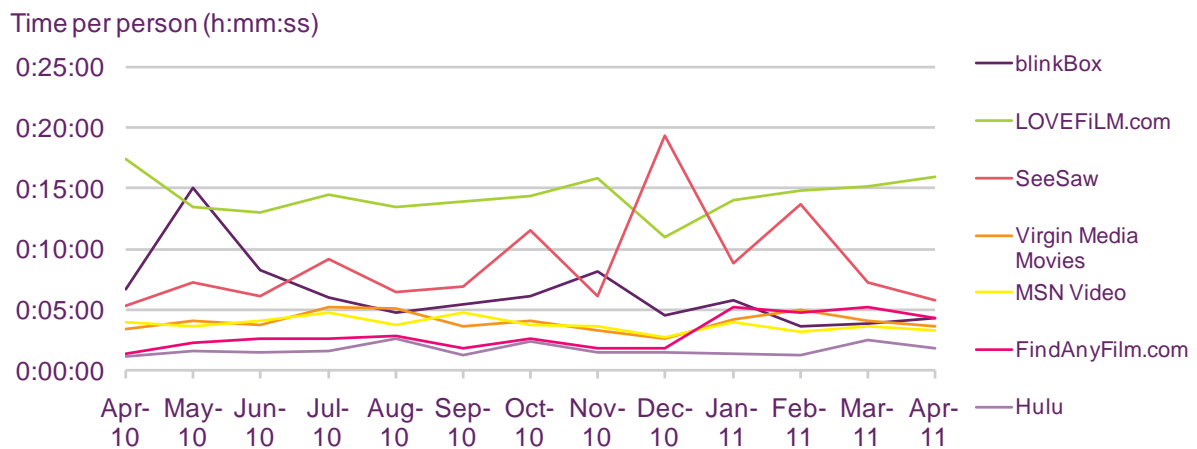
Figure 2.65 Unique audiences to selected online film and TV sites



Source: UKOM/Nielsen, home and work panel

LoveFilm users spent just over 15 minutes per month on the site on average in April 2011. LoveFilm also offers DVD rentals through the post, so Figure 2.66 is likely to primarily represent time spent managing accounts rather than viewing streamed content. For other sites, time spent is generally lower. SeeSaw users spent an average of nearly 20 minutes per month at its peak in December 2010.

Figure 2.66 Monthly time spent per person on selected online film and TV sites



Source: UKOM/Nielsen, home and work panel

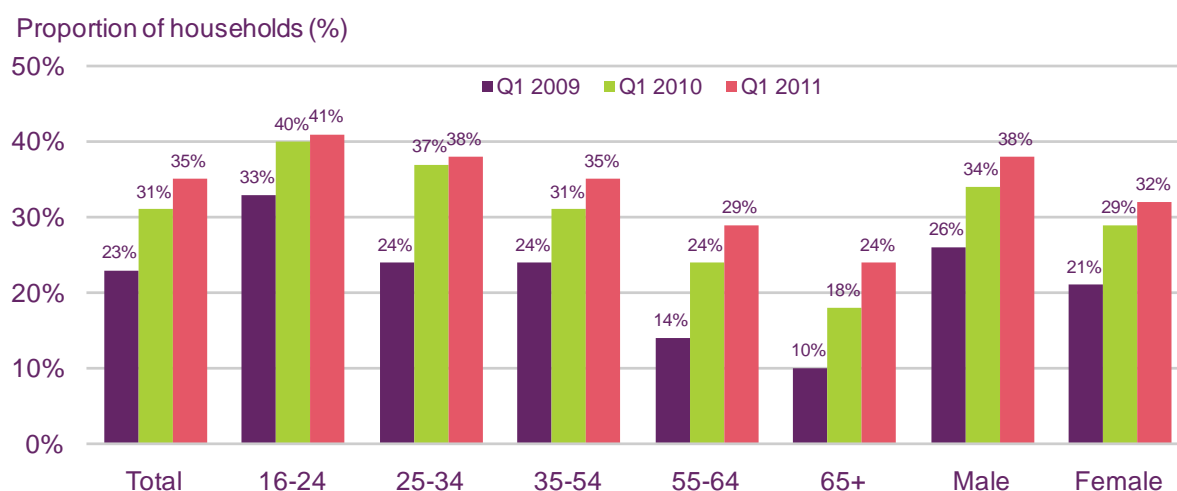
2.3.9 Catch-up TV use in homes with internet

35% of adults now use catch-up TV services, up from 23% two years ago

The growing availability of broadband in the home, coupled with the promotion of catch-up television services on linear television networks, may be contributing to the growing popularity of catch-up services.

In Q1 2011, 35% of adults claimed to use the internet for viewing catch-up television, a four percentage point increase on Q1 2010 and a 12 percentage point rise over two years. Figure 2.67 shows that younger adults and men are most likely to use catch-up; but growth in its use has latterly (since 2009) been fastest among people over 65, with nearly a quarter (24%) claiming to now use catch-up, versus just 10% in Q1 2009.

Figure 2.67 Proportion of adults with home internet who watch online catch-up TV



Source: Ofcom research Q1 2011 QE12. Which, if any, of these do you or your household use the internet for whilst at home? Base: All adults who have the internet at home (n=2534 UK, 376 16-24, 462 25-34, 1039 35-54, 368 55-64, 289 65+, 1234 Male, 1300 Female)

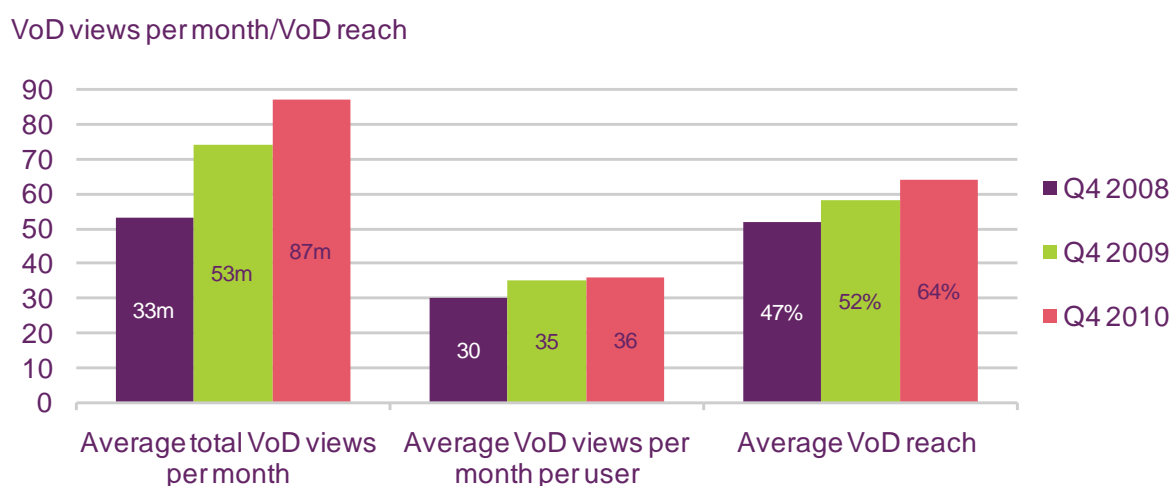
2.3.10 VoD use in Virgin Media homes

Virgin Media continues to increase use of video on demand

Thirteen per cent of households had access to Virgin Media's cable TV service by Q1 2011. Virgin Media offers its digital cable customers a range of on-demand content, including TV catch-up and back catalogue programmes as well as pay-per-view services.

Based on Virgin Media company data, its VoD services showed steady growth over the past twelve months; by Q4 2010 monthly reach stood at 64%, a 12 percentage point increase in a year. Service use has risen by 34 million views to 87 million per month; this has been driven by the service's growing reach, since average views per month per user rose by just one view over the period, now standing at 36.

Figure 2.68 Video on demand use in Virgin Media homes



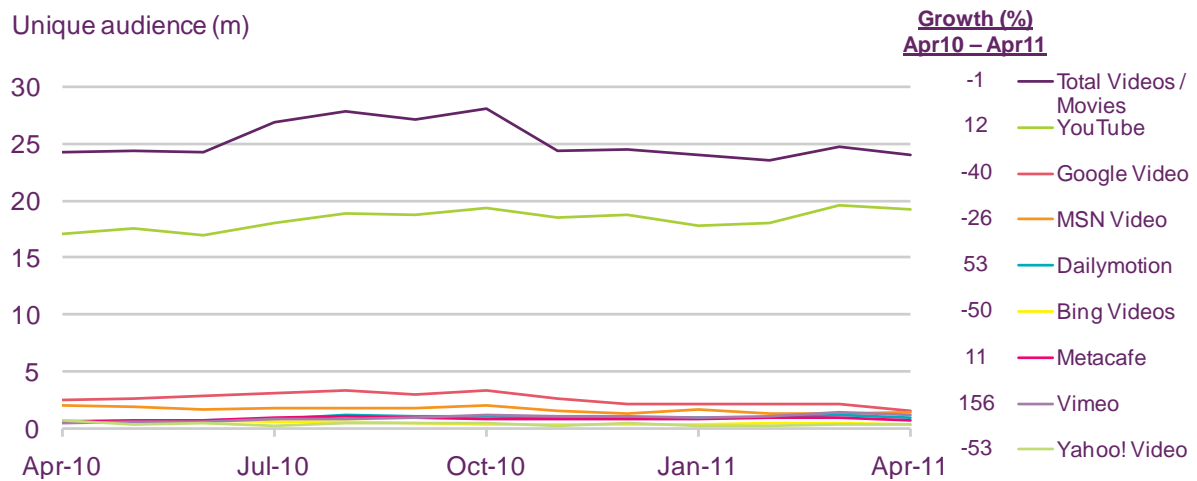
Source: Virgin Media company results 2008-2010

2.3.11 Video-sharing sites

Growth in the reach of video-sharing sites plateaus

As Figure 2.69 shows, the UKOM/Nielsen's video/movies category's unique audience contracted by 1% overall over the past year. At the same time, YouTube's unique audience grew by 12% in the year to April 2011.

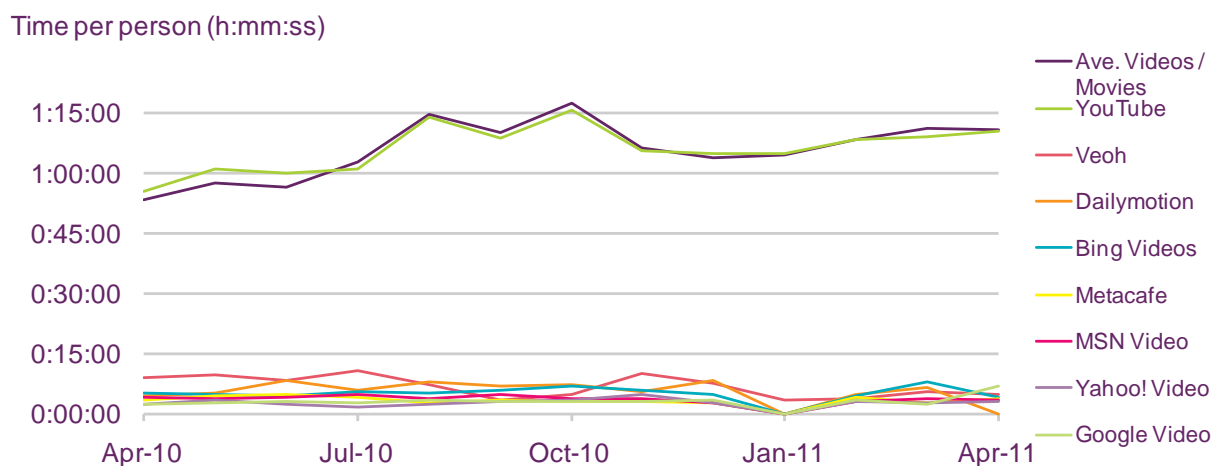
Figure 2.69 Unique audiences to selected video-sharing sites



Source: UKOM/Nielsen, home and work panel

The amount of time spent on video-sharing sites has remained relatively constant over the last three years at just over one hour of use per month. Figure 2.70 further illustrates the significance of YouTube in the video-sharing category.

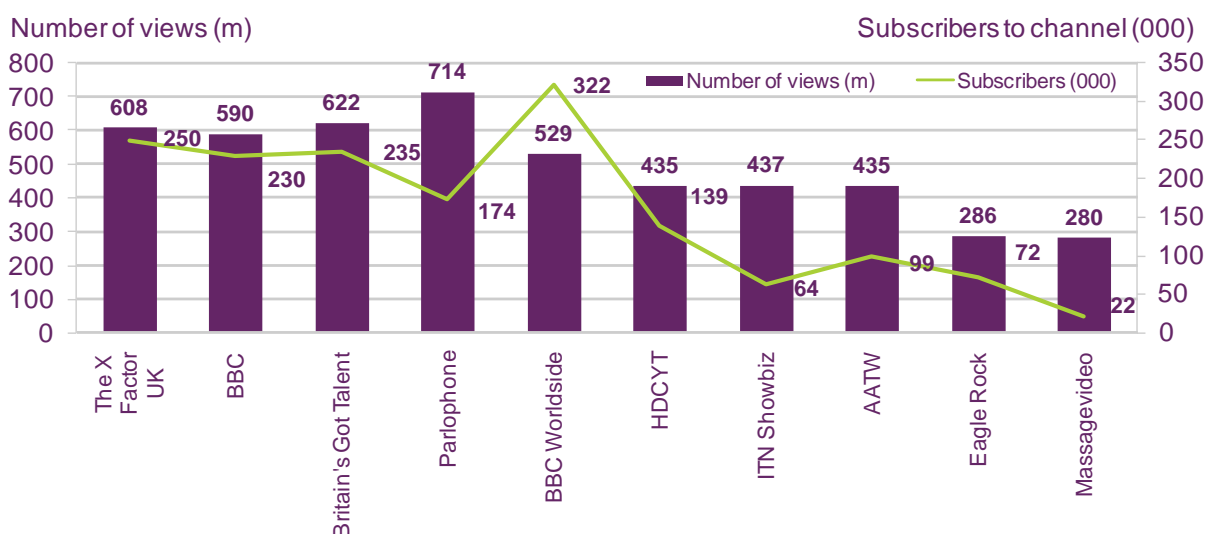
Figure 2.70 Monthly time spent per person on selected video-sharing sites



Source: UKOM/Nielsen, home and work panel

Within YouTube's sponsored channels, the capacity of established broadcasters to generate large numbers of viewers continues. Of the top ten most-viewed channels, five are from established broadcasters and three are from the music industry. The trend towards professional content producers and rights-holders uploading content directly to YouTube creates the potential for generating a new source of advertising revenue.

Figure 2.71 Popularity of top ten most-viewed UK YouTube channels



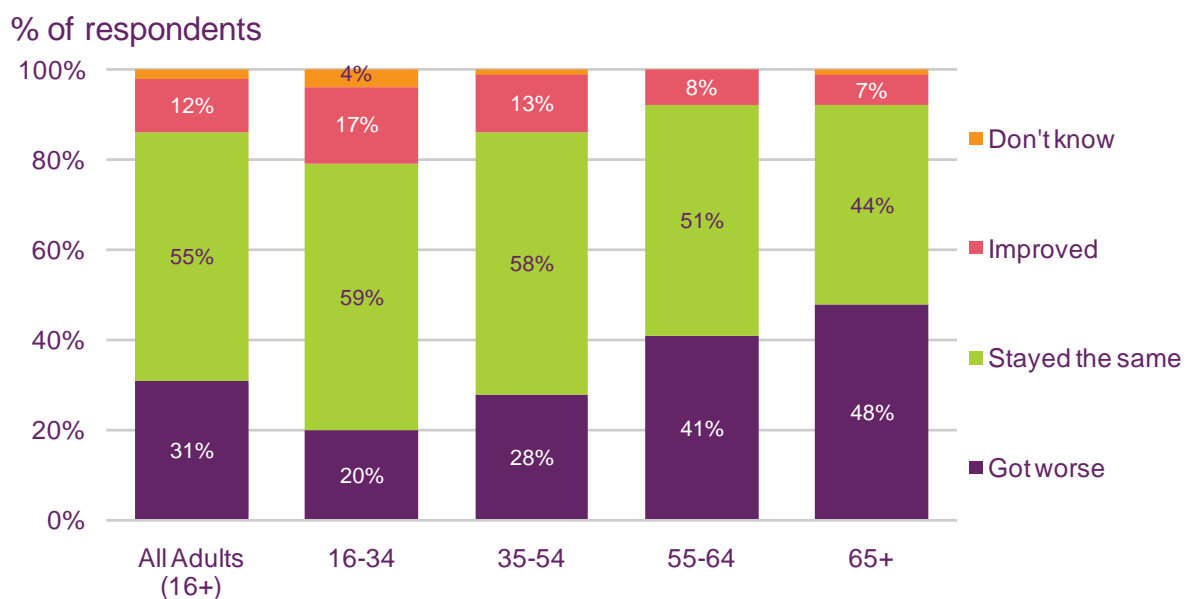
Source: YouTube statistics June 2011

2.3.12 Consumer attitudes towards television

Consumer attitudes towards programme quality change with age

Ofcom's media tracking study research found that in Q2 2011, across all adult groups, 31% believe that programme standards had 'got worse', down by two percentage points on 2009; a further 55% believed that they had stayed the same, while 12% thought that they had improved. Older consumers were more likely to believe that television programme standards had declined, while younger adults were the least likely to take this view. Figure 2.72 shows that among over-65s, 48% of respondents believed that programme standards had 'got worse' in the past year. This compared to just 20% of 16-34 year old respondents.

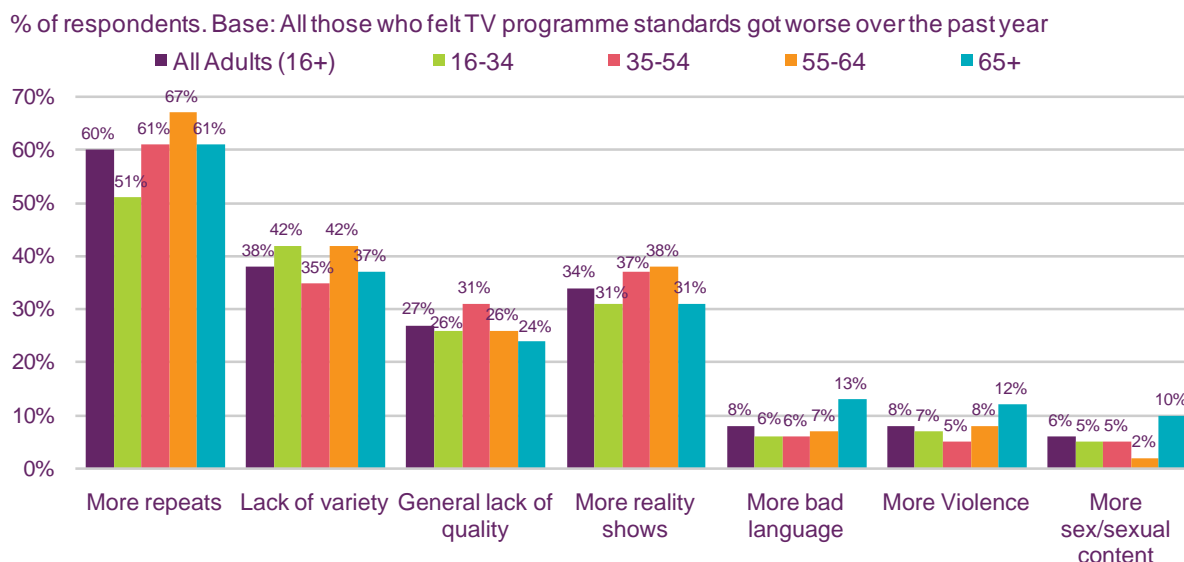
Figure 2.72 Consumer attitudes towards television programme standards, by age: 2010



Source: Ofcom 2010 Media Tracker survey. Fieldwork carried out by BDRC Continental Research. Q30 – Do you feel that over the past year, television programmes have improved, got worse or stayed about the same? Base: All adults aged 16+ (2104) (643 aged 16-34, 710 aged 35-54, 328 aged 55-64, 423 aged 65+)

Among those respondents who believed programme standards had worsened, 60% cited 'more repeats' as a reason. Figure 2.73 explores the distribution of common responses by age among those who believe that standards have fallen. Other than repeats, lack of variety and more reality shows were frequently-cited reasons, by 38% and 27% respectively of all adult respondents.

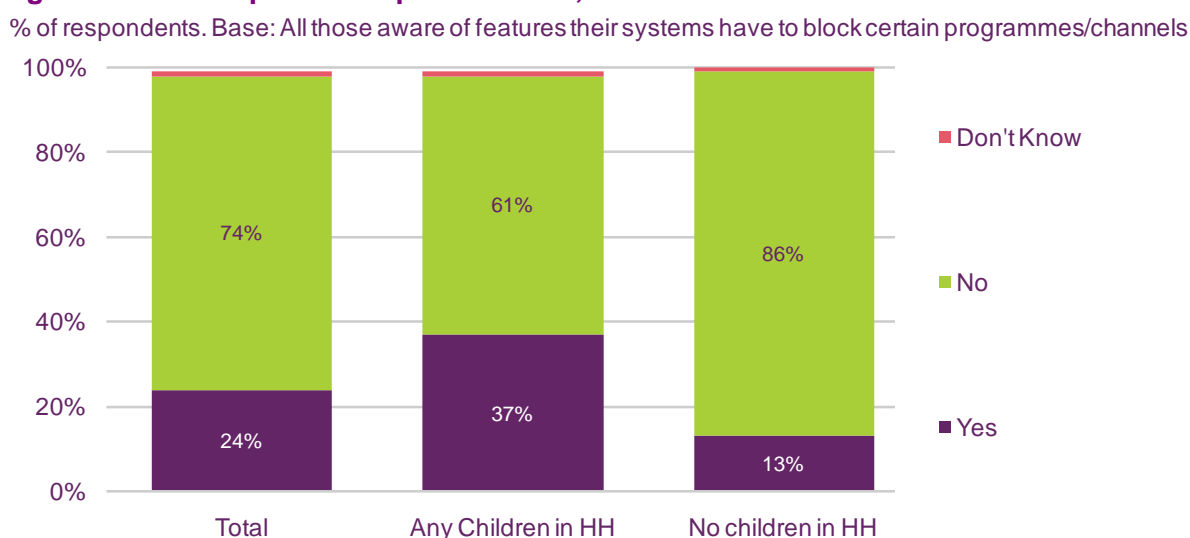
Figure 2.73 Reasons why viewers thought TV programme quality had deteriorated, 2010



Source: Ofcom 2010 Media Tracker survey. Fieldwork carried out by BDRG Continental Research. Q32 – In what ways do you think the television programmes have got worse over the past year? Base: All adults 16+ saying programmes 'got worse' over past year (673) (130 aged 16-34, 204 aged 35-54, 134 aged 55-64, 205 aged 65+).

Figure 2.74 shows that PIN or password protection is only used by 24% of those who have the functionality available. When there are children in the household, content blocking is more common, at 37%. For households with no children, 86% of respondents claimed never to have used PIN or password protection on their TV systems.

Figure 2.74 PIN/password-protected TV, 2010



Source: Ofcom 2010 Media Tracker survey. Fieldwork carried out by BDRG Continental Research. Q52 – Have you ever used this blocking system? Base: All adults 16+ aware of a feature on their systems enabling them to block/hide access to certain programmes/channels (1,051) (479 - Any children in household, 572 No children in household)



The Communications Market 2011

3 Radio and audio

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3.1 Key market developments in radio and audio

3.1.1 Industry metrics and summary

Figure 3.1 UK radio industry key metrics

| UK radio industry | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---------|---------|---------|---------|---------|---------|
| Weekly reach of radio (% of population) | 90.0% | 89.8% | 89.8% | 89.5% | 89.8% | 90.6% |
| Average weekly hours per head | 21.6 | 21.2 | 20.6 | 20.1 | 19.8 | 20.1 |
| BBC share of listening | 54.5% | 54.7% | 55.0% | 55.7% | 55.3% | 55.2% |
| Total industry revenue | £1,118m | £1,126m | £1,174m | £1,137m | £1,092m | £1,123m |
| Commercial revenue | £530m | £512m | £522m | £488m | £432m | £438m |
| BBC expenditure | £588m | £614m | £652m | £649m | £660m | £685m |
| Radio share of advertising spend | 3.3% | 3.0% | 2.9% | 2.8% | 2.8% | 2.7% |
| DAB digital radio take-up (households) | 11.1% | 16.0% | 22.3% | 29.7% | 33.4% | 35.8% |

Source: RAJAR (all adults age 15+), Ofcom calculations based on figures in BBC Annual Report and Accounts 2010/11 note 2c (www.bbc.co.uk/annualreport), AA/Warc, broadcasters. Revenue figures are nominal.

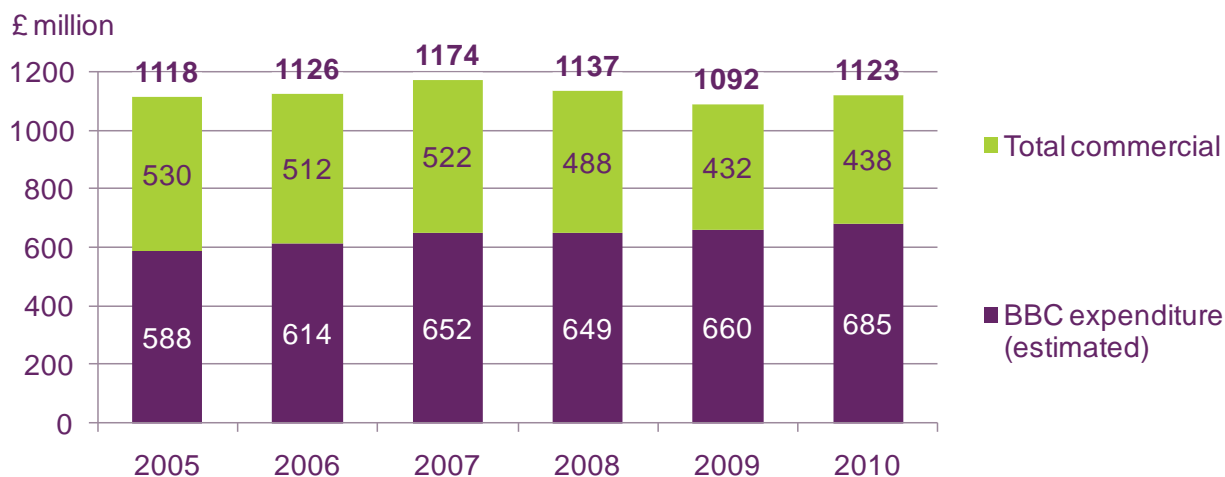
This section explores some of the significant developments and trends in the UK radio market. The key findings are:

- National commercial radio advertising sales and spend by the BBC on UK-wide radio services drove rising radio industry value during 2010 to £1.1bn, up 2.8%.** National commercial advertising revenue rose by 4.5% year on year in 2010, the only commercial revenue type to do so. BBC network stations available on analogue frequencies accounted for 46.7% of the rise in BBC Radio's 2010/11 expenditure, while BBC digital-only stations spend rose proportionally the furthest, up by 13.1% year on year (page 158).
- In Q1 2011, RAJAR figures showed that digital radio platforms accounted for 26.5% of all radio listening, a 2.5 percentage point (pp) increase on the same quarter the previous year.** Listening through DAB sets accounted for the largest component of digital listening, 16.7% of all listening hours, while digital television and online simulcast streaming represented a further 4.1% and 3.6% respectively (page 160).
- Listener hours rose to 1.04 billion per week in 2010, up by 2.1% year on year.** All categories of radio service experienced rising listener hours during the year - BBC and commercial radio, national and local. National commercial stations experienced the largest annual increase, up by 7% year on year (page 163).
- People in the 15-24 age bracket remain a harder-to-reach group for radio;** their listener hours fell by 4.3% year on year, accounting for 11.6% of all radio hours (page 163).

3.1.2 Radio revenue up by 2.8% to £1.1bn as commercial revenue stabilises

Radio industry income in 2010 increased for the first time in three years. It stood at £1.1bn, representing a 2.8% increase on 2009 (Figure 3.2). This year's overall increase is due in part to the first commercial revenue increase since 2007, rising from £432m to £438m, up by 1.4% year on year. Estimated spending by the BBC on its radio services was £685m in 2010, up from £660m in 2009, an increase of 3.8% over the year.

Figure 3.2 Radio industry revenue and spending: 2005-2010



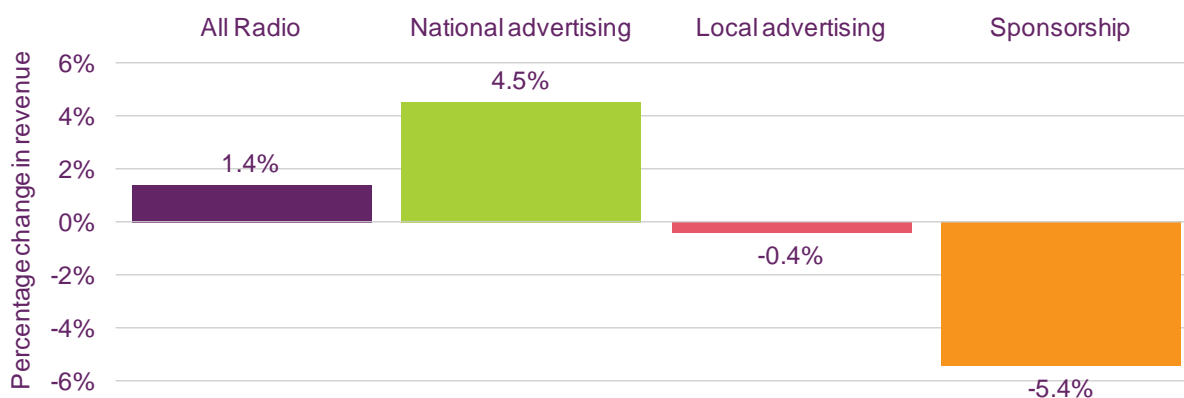
Source: Ofcom / operator data / BBC Annual Report 2005-2010 Note: BBC expenditure figures are estimated by Ofcom based on figures in Note 2c of the BBC Annual Report (www.bbc.co.uk/annualreport); figures in the chart are rounded and are nominal.

Commercial revenues stabilise as national advertising revenue rises by 4.5%

National advertising sales, the largest contributor to commercial revenues, increased by 4.5% to £210m in 2010. Local advertising, worth £136m, held steady while sponsorship revenue fell by 5.4% from £94m to £89m (Figure 3.3). The increase in national advertising revenue was generated for the most part by local radio stations. This may be explained by larger radio groups selling more national advertising across their local stations portfolio.

Despite commercial revenue rising by 1.4% in 2010, average revenue per listener declined from £13.71 to £13.33 over the same period (Figure 3.13). This is due to average weekly reach for the commercial sector rising faster (by 4.3% over 2010) compared to revenue.

Figure 3.3 Commercial revenue percentage: 2009-2010



Source: Ofcom / operator data 2009-2010

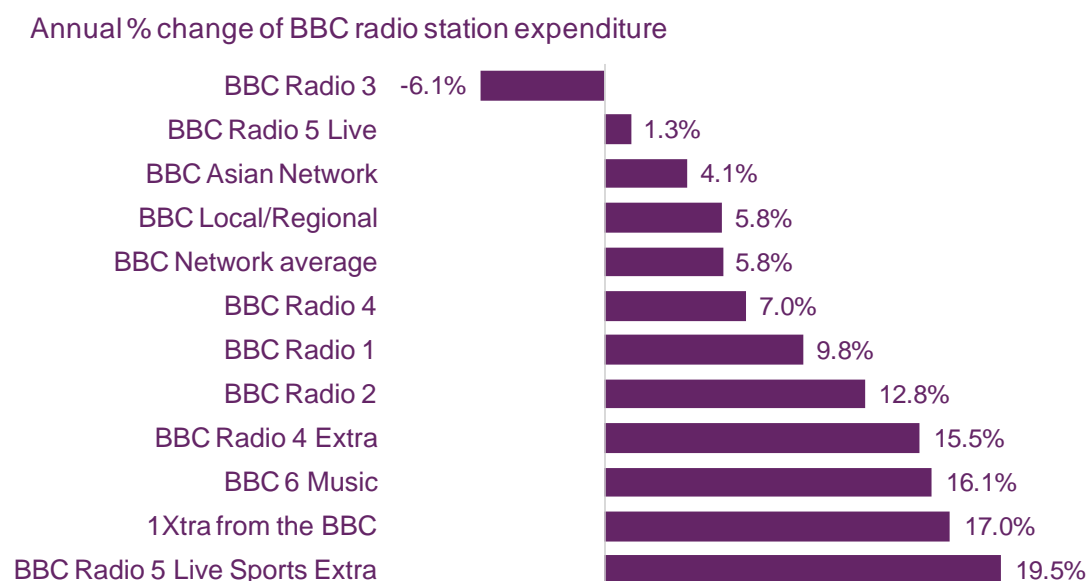
The BBC's digital-only radio services experienced the largest proportional increases in spending during 2010/11

The BBC's Annual Report and Accounts for 2010/11 provides greater detail on its stations' budgets (these data are not directly comparable to data set out Figure 3.2. Figure 3.4 shows the percentage change in operating expenditure of BBC radio services between the financial years ending in the first quarter of 2010 and 2011.

With the exception of the BBC Asian Network, spend on the BBC's digital-only station portfolio rose faster than that of the analogue/digital simulcast services. The largest increases were experienced by Radio 5 Live Sports Extra, 1Xtra, 6 Music and Radio 4 Extra (formally BBC Radio 7). BBC Radio 3 was the only service to see its expenditure fall in 2010/11. In combination, the BBC's spending on local and nations stations rose by 5.8%, the same as the average increase in BBC network stations overall.

Excluding overheads, BBC radio spending rose by £35m in nominal terms in the 12 months to the end of Q1 2011. Taken together, digital-only BBC stations' revenue rose by 13.1%, accounting for £5.5m (15.7%) of the increase. Expenditure on the BBC's UK-wide stations available on analogue frequencies increased by 4.9%, amounting to £16.4m (46.7%) of the annual increase. Spending on local and nations' radio services grew by 5.8%, contributing £13.2m (37.6%) to the annual increase.

Figure 3.4 BBC radio stations expenditure percentage change: 2009/10 – 2010/11



Source: BBC Annual Report 2010/11 note 2c (www.bbc.co.uk/annualreport). Note that these are financial year figures, excluding BBC-wide overheads, and are therefore not directly comparable to those set out in Section 3.2.2. Figures are nominal. It should be noted that the percentage changes are based on operating expenditure for individual stations based on financial years and they do not include BBC-wide overheads; as such they are not comparable with the calendar year figures that are set out in Section 3.2.2.

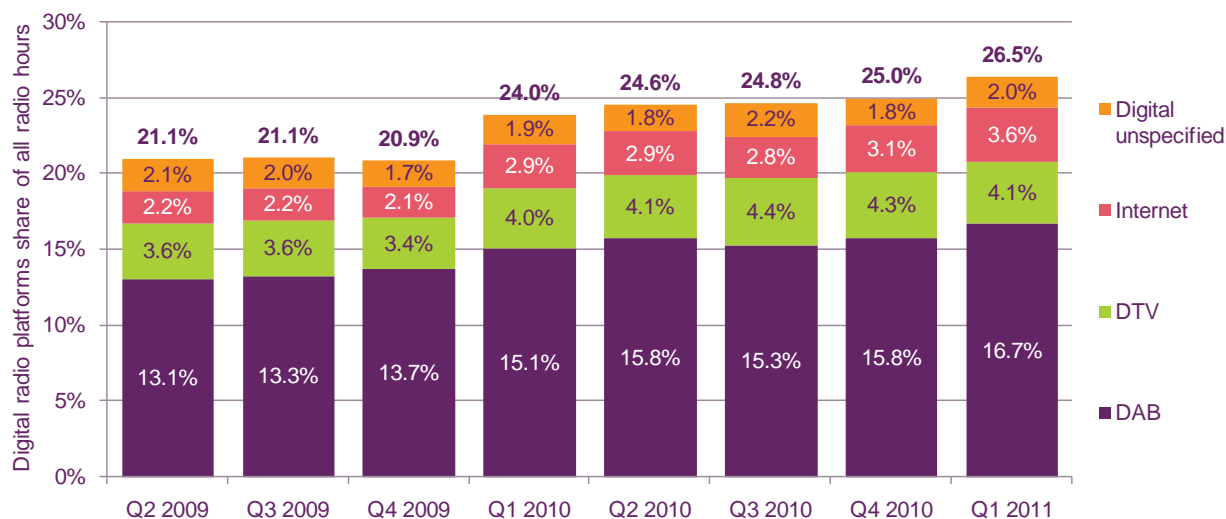
3.1.3 Listening through a digital radio platform accounted for over a quarter (26.5%) of all listener hours in Q1 2011

Digital radio's share of listening hours in Q1 2011 was 2.5pp higher than the same quarter in the previous year; accounting for over a quarter (26.5%) of all listener hours. Listening through a DAB radio accounted for the largest share of digital listening, at 16.7% of the total.

Digital television represented a further 4.1%, while the internet accounted for the remaining 3.6%.

Figure 3.5 shows the digital radio listening figures by quarter, highlighting the fact that over the past two years, digital listening experienced a larger increase in each Q1 than in other quarters, possibly as devices acquired during December/January start to be used.

Figure 3.5 Digital radio's share of radio listening, Q1 2011

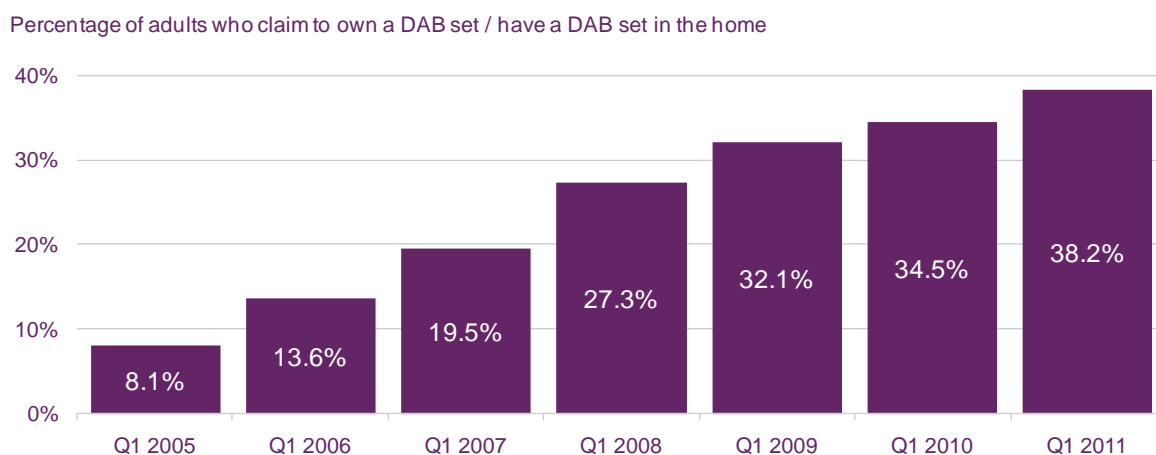


Source: RAJAR / Ipsos MORI / RSMB Note: 'Digital unspecified' relates to listening to digital-only stations where the survey respondent has not specified the listening platform used.

Ownership of DAB radio sets rose by 3.7pp to 38.2% of homes in the year to the end of Q1 2011

Adults claiming to have access to a DAB radio set in the home rose by 3.7pp in the 12 months to Q1 2011; to 38.2%. Take-up has tripled over five years, from 13.6% of homes in 2005; up by 24.6 percentage points over the period.

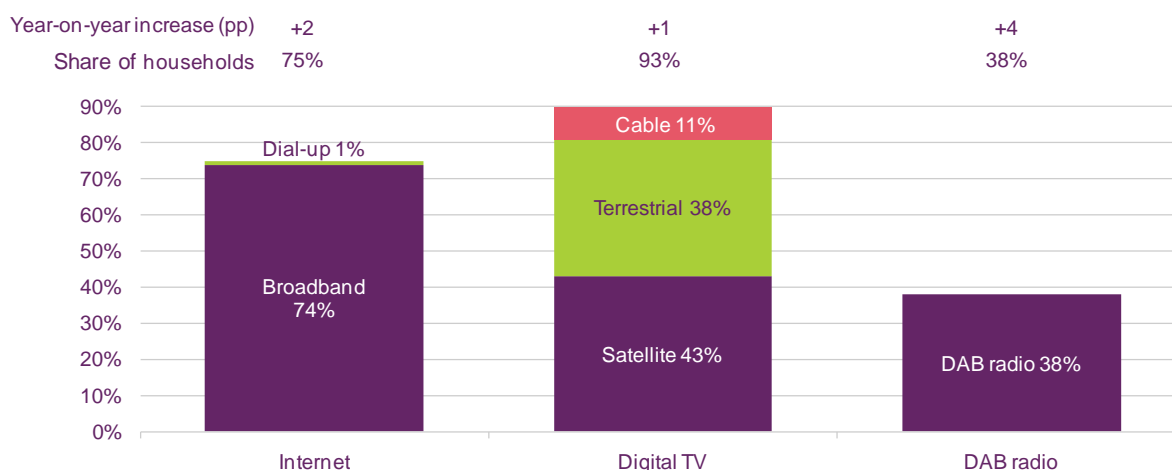
Figure 3.6 Ownership of DAB sets, Q1 2011



Source: RAJAR / Ipsos MORI / RSMB Q1 2005-2011

Consumers have access to digital radio services through a variety of platforms. By the end of Q1 2011, 93% of households had a digital television decoder connected to their main television set, capable of providing access to digital radio. Moreover, 75% of households had access to the internet at home, supporting access to radio services online.

Figure 3.7 Take-up of equipment capable of receiving digital radio, Q1 2011



Source: Ofcom research / GfK / RAJAR Q1 2011

Government policy on digital radio switchover

The Department for Culture, Media and Sport (DCMS) launched its Digital Radio Action Plan in July 2010. Its purpose is “*not to implement a transition to digital radio, but to provide the information to allow for a well-informed decision by Government on whether to proceed with a radio switchover*”. The plan emphasises that a digital switchover process should be primarily consumer-led. It includes milestones which would need to be achieved before the government could start to implement a transition from analogue to digital radio.

These milestones are when 50% of all listening is on a digital platform and when DAB coverage reaches 90% of the population, including all major roads. Figure 3.5 shows that 26.5% of listening takes place on a digital platform. The Government’s Digital Radio Action Plan can be found here: <http://www.culture.gov.uk/publications/8218.aspx>.

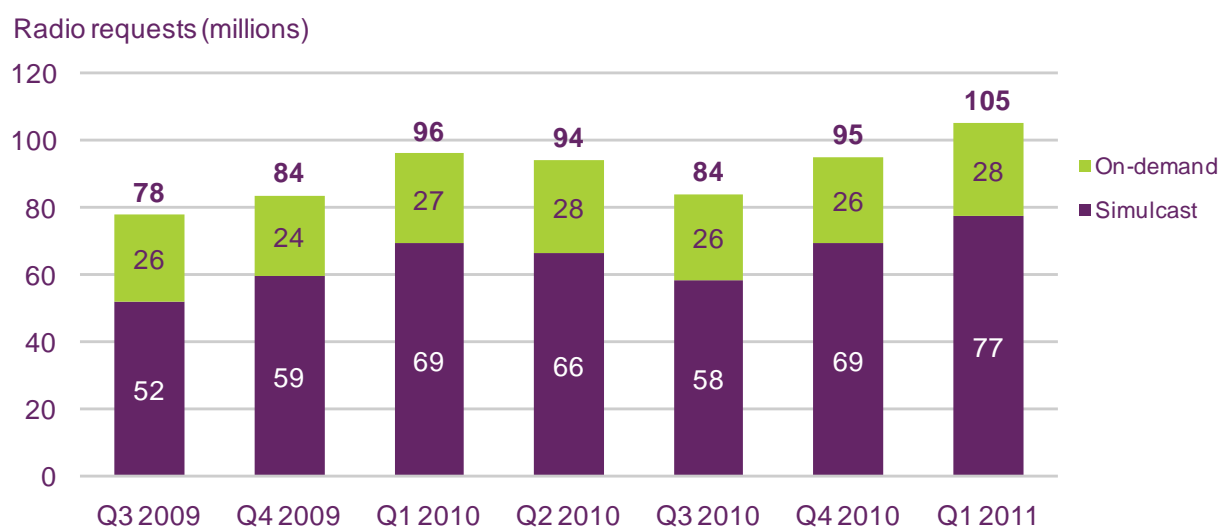
As part of the Action Plan, Ofcom was asked to publish an annual report on the availability and take-up of digital radio services. The most recent *Digital Radio Report* was published on 28 July 2011 and is available at <http://www.ofcom.org.uk/drr11>.

We have also recently published a consultation outlining an approach to building up DAB coverage. This is available at <http://stakeholders.ofcom.org.uk/consultations/dab-coverage-planning/> and we anticipate presenting a final report to government in Q4 2011.

BBC iPlayer radio simulcast requests reached 270 million in the year to Q1 2011

Figure 3.8 sets out the number of radio requests that consumers made through the BBC’s iPlayer, broken down into simulcast (i.e. listening to live radio) and listening to previously broadcast radio programmes on demand. In total, 105 million radio requests were made in Q1 2011, compared to 291 million for television. BBC iPlayer radio simulcast requests in Q1 2011 were 12% higher than in Q1 2010. The Q1 2011 figure was boosted in March 2011 by the *Cricket World Cup* on Radio 5 Live and *Chris Moyles’ Longest Show Ever for Comic Relief* on BBC Radio 1.

Figure 3.8 BBC iPlayer quarterly radio requests



Source: Ofcom calculations based on BBC iStats²³

2011 saw the launch of Radioplayer, offering a single point of online access to BBC and commercial radio stations' simulcasts and podcasts. It allows users to search, switch between and save their favourite participating stations. Each station uses its own branding, advertising and interactive features, and hosts its own web stream and player page. Radioplayer comprises a user portal with navigation and integration functions.

According to Radioplayer, early figures suggest that 5.7 million unique users accessed the service over a four-week period in May 2011, and a total of 22.5 million listening sessions were launched²⁴.

3.1.4 The volume of radio listener hours rose by 2.1% in 2010

Among all 15+ UK adults, RAJAR figures showed that hours of radio listening rose by 2.1% in 2010 to 1,036 million per week. National commercial radio stations saw the largest increase of radio listening in 2010 (up by 7%) while BBC network UK-wide stations were up by 1.6%

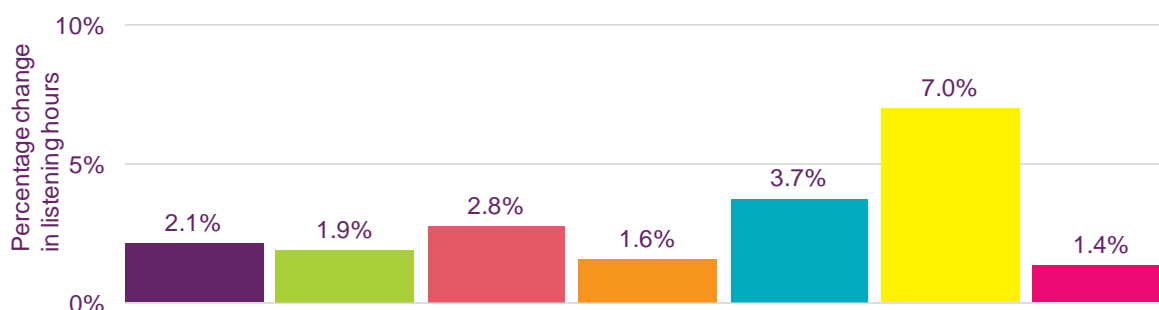
The BBC's portfolio of local radio stations experienced a 3.7% increase in listening hours while local commercial radio's hours rose by 1.4%. As a result of these trends, national commercial radio accounted for 11.1% of all radio hours in Q1 2011, while the BBC's network services attracted a 46.3% share. Among local radio stations, the commercial services attracted a higher proportion of listening hours than BBC local radio, with shares of 31.5% and 8.9% respectively.

²³ http://www.bbc.co.uk/blogs/bbcinternet/bbc_iplayer_press_pack/

²⁴ <http://www.radioplayer.co.uk/index.php/large-and-small/>

Figure 3.9 Change in listening hours between 2009 and 2010

| | All Radio | All BBC | All Commercial | BBC network | BBC local | Nat commercial | Local commercial |
|---------------------------|-----------|---------|----------------|-------------|-----------|----------------|------------------|
| 2010 weekly hours: | 1036m | 571m | 442m | 480m | 92m | 115m | 327m |
| Share of all radio hours: | 100% | 55.2% | 42.6% | 46.3% | 8.9% | 11.1% | 31.5% |



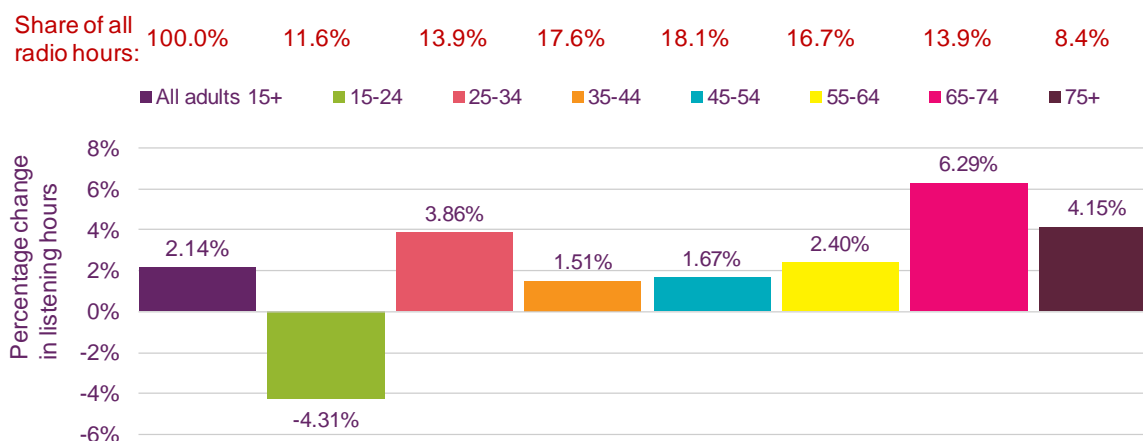
Source: RAJAR, all adults (15+). Data based on calendar year 2009 – 2010

15-24 year olds were the only group of listeners for whom radio consumption did not increase in 2010

Listeners in the 15-24 age group were the only group for whom listener hours did not increase in 2010, falling instead by 4.3%. 15-24 year olds now make up 11.6% of radio listening in the UK, compared to a share of 13.0% five years ago. The 25-34 year-old age group's share of all listening rose for the first time since 2004; up by 3.9% to 13.9% over the same period.

Listening among 65-74 year-olds increased the furthest year on year, up by 6.3%, while those aged 45-54 accounted for the largest proportion of listening, representing nearly one in five (18.1%) of all listener hours.

Figure 3.10 Changes in listening hours, 2010 vs. 2009, by age



Source: RAJAR, all adults (15+). Data based on calendar year 2009 – 2010

3.2 The radio and audio industries

3.2.1 Introduction

This section examines the characteristics of the UK radio and audio content industries. It focuses on commercial and community radio station revenue and BBC radio expenditure, together with the main players' audience shares.

Key points in this section include:

- **Total UK radio industry income was £1.1bn in 2010, up by 2.8% in a year.** Recorded music revenue was £1.2bn for 2010. This compares with TV industry revenue of £11.8bn in the same year (page 166).
- **Commercial radio revenue stabilised during 2010, rising a little to £438m, the first nominal increase since 2007.** Ofcom estimates that BBC radio spending increased by 3.8% in 2010 to £685m, representing 61% of the industry income as a whole (page 166).
- **Radio's share of advertising spending declined by 0.1pp in 2010 to 2.7% of the total.** Annual WARC figures show that overall spending on advertising in the UK grew by 8.1% year on year, with spend on radio rising by 4%, leading to a lower share of the overall market (page 167).
- **The two largest commercial radio groups accounted for 56% of commercial radio listening hours in Q1 2011,** a three percentage point decline on Q1 2010. The commercial sector as a whole accounted for 43% of all radio listening hours in Q1 2011, a 1.3pp increase over the year (page 169).
- **Recorded music revenues fell by 8.6% in 2010.** This was despite revenues from digital business models rising by 15%, as the value of physical music sales fell further than the rise from online sales. Digital sales accounted for 24% of recorded music revenue in 2010, a 5pp increase on 2009. Singles sales accounted for 98.7% of online music by volume and albums for 83.2% of the volume of physical retail sales (page 175).

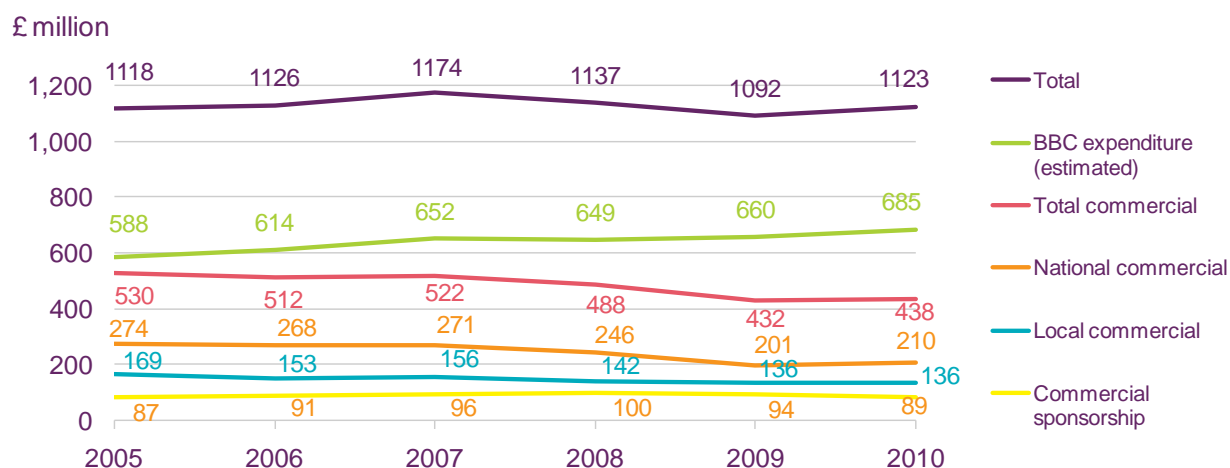
3.2.2 Radio industry revenues and expenditure

Radio industry revenue increased by 2.8% in 2010 to reach £1.1bn

We estimate that total radio industry income (commercial radio revenue and BBC expenditure on radio services) in 2010 stood at £1.1bn, up by 2.8% year on year. This was the first increase in total income since 2007. Estimated spending by the BBC on its radio services was £685m in 2010, up from £660m in 2009. Spending increased by 3.8% over the year, compared to a 1% increase on estimated BBC TV expenditure (to £2.7bn) and a 1.4% increase on its online services (£212m).

Commercial radio revenues were also up in 2010, rising from £432m to £438m, up 1.4% year on year. National advertising sales were responsible for the commercial revenue increase, increasing 4.5% on 2009 to £210m. Local advertising sales stabilised at £136m while sponsorship revenue fell by 5.3% to £89m.

Figure 3.11 UK commercial radio revenue and BBC radio spending



Source: Ofcom / operator data / BBC Annual Report 2005-2010 Note: BBC expenditure figures are estimated by Ofcom based on figures in Note 2c of the BBC Annual Report (www.bbc.co.uk/annualreport); figures in the chart are rounded and are nominal.

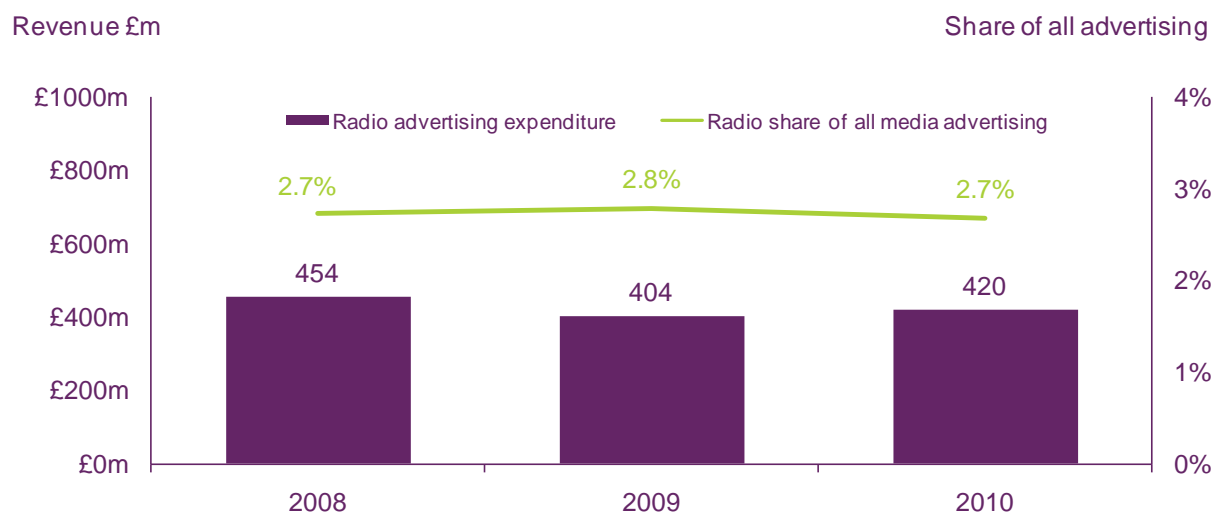
The data in Figure 3.11 combine Ofcom’s estimate of BBC expenditure on radio services (including overheads, drawing on information from the BBC’s 2010/11 Annual Report) with data from commercial radio licensees. Every year, licensees are required to submit annual revenue returns to Ofcom, breaking down revenue into national and local advertising revenue and sponsorship. As we rely on licensees to submit returns within the set deadlines, the aggregate revenue figures may not always represent 100% of the commercial market.

Radio advertising expenditure stabilised in 2010 but its share of display advertising fell

Against the background of total UK advertising market spend increasing by £1.2bn in 2010 to £15.7bn (a 8.1% nominal increase), the Advertising Association/Warc reported that radio’s share of that total fell by 0.1pp in 2010 to 2.7%.

The 4% year-on-year increase in radio advertising expenditure, shown in Figure 3.12, represents the first annual increase since 2007. Note that the data set out in this chart represent advertising expenditure and are sourced from the AA/Warc; the radio advertising income data set out in Figure 3.11 is collected by Ofcom, and represents advertising spend net of any production and agency fees.

Figure 3.12 UK radio advertising spend and share of display advertising: 2008 – 2010



Source: AA/Warc Expenditure Report. Figures are nominal.

Commercial radio revenue per listener fell by 38 pence in 2010 to £13.33

Despite an increase in commercial revenue, revenue per listener fell once again in 2010, by 38p to £13.33, a 2.8% reduction year on year. Figure 3.13 sets out revenue per listener by dividing the total net broadcasting revenue generated by the commercial radio sector by average weekly listener reach. Average weekly reach of commercial radio increased by 3.7% between Q4 2009 and Q4 2010, a larger increase than commercial revenue.

Figure 3.13 Commercial radio revenue, per listener



Source: Broadcasters and RAJAR, 2005-2010. Figures are nominal.

3.2.3 Radio sector market shares in 2010/11

Commercial radio station ownership shifts from smaller to medium-sized radio groups

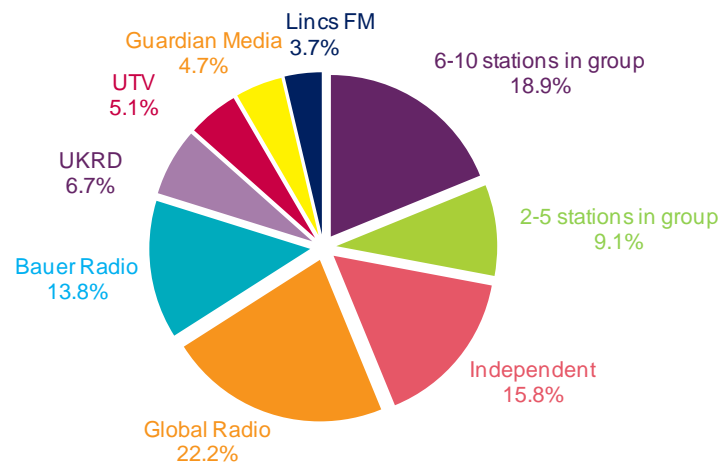
Following significant consolidation among the largest commercial radio groups, culminating in Global Radio's 2008 purchase of GCap Media and Chrysalis Radio, the past two years have seen some significant consolidation among the smaller commercial radio companies,

with UKRD Group taking control of a number of licences formerly held by The Local Radio Company and its various subsidiaries, while new players in the market such as Celador Radio, Quidem and Media Sound Holdings have brought together groups of licences formerly under a variety of different owners.

A few stations have left group structures to return to independent ownership, such as Isle of Wight Radio, Silk FM in Macclesfield, Dune FM in Southport and Imagine FM in Stockport.

Global Radio is the largest group in the commercial radio by number of licences held, accounting for over a fifth (22%) of all those on issue, although it should be noted that the size of licences (measured by the size of the population each covers) varies considerably across the radio sector. Figure 3.14 also shows that the Bauer Radio group is the second largest, with 14% of all commercial analogue radio licences.

Figure 3.14 Number of commercial analogue licences owned, by group

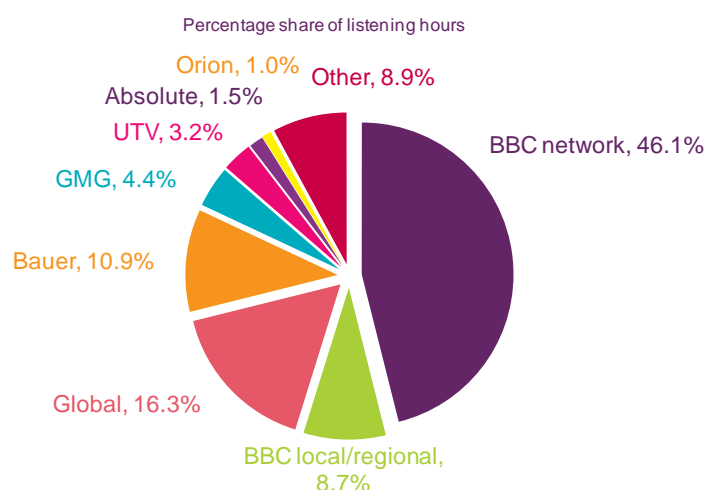


Source: Ofcom, June 2011

BBC radio services accounted for 55% of all radio listening in Q1 2011

The BBC's combined share of all radio listening was 54.8% in Q1 2011, in line with its share in earlier years; network radio attracted a 46% share while BBC local/nations' radio drew a further 8.7%. The UK's two largest commercial radio groups, Global Radio and Bauer Radio, accounted for a further 27.2% of all radio listening in Q1 2011, representing 56.3% of all commercial radio listening – this figure fell by 3pp on Q1 2010.

Figure 3.15 Share of all radio listening hours, Q1 2011



Source: RAJAR, (all adults 15+), Q1 2011, does not include community radio listening

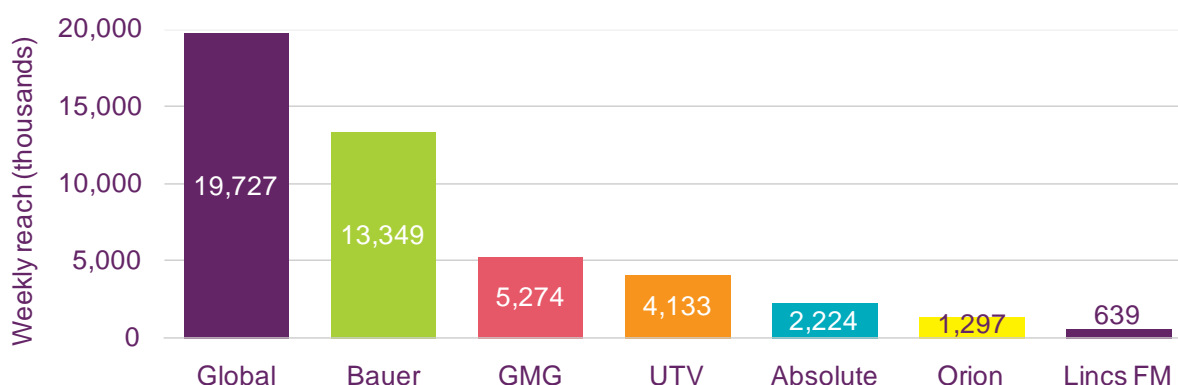
Commercial radio groups' reach rose by 3.2pp year on year

Commercial radio's weekly reach stood at 66% in Q1 2011, a 3.2pp rise on Q1 2010. In Q1 2011 the weekly reach of national commercial stations was 27% compared with 51% for local commercial.

Figure 3.16 illustrates the average weekly audience reach of the seven largest commercial radio groups in the UK in Q1 2011. The top six all saw their reach rise in the year to Q1 2011. The largest increases came from the two largest radio groups; Global Radio's weekly audience rose by 2.2pp to reach 38.2% (19.7 million adults) while Bauer Radio increased 1.7pp to 25.9% (13.3 million).

Figure 3.16 Commercial radio by weekly audience reach: Q1 2011

| Radio Group | Weekly UK audience reach | Annual change in reach |
|-------------|--------------------------|------------------------|
| Global | 38.2% | +2.2pp |
| Bauer | 25.9% | +1.7pp |
| GMG | 10.2% | +0.7pp |
| UTV | 8.0% | +0.9pp |
| Absolute | 4.3% | +0.9pp |
| Orion | 2.6% | +0.2pp |
| Lincs FM | 1.2% | -0.1pp |



Source: RAJAR, (all adults 15+), Q1 2011 Note: pp = percentage points increase

3.2.4 BBC radio services in 2010/11

BBC radio's 55% share of all radio listening in Q1 2011 was accompanied by a collective weekly reach of 68% of the adult population during 2010. Excluding BBC-wide overheads, the services received £638.9m of funding in 2010/11. This portfolio is made up of two components: BBC local and nations' stations include all BBC local and regional stations in England and the national stations for Scotland, Wales and Northern Ireland. BBC network stations include those that cover the whole of the UK, some stations of which are available exclusively on digital radio.

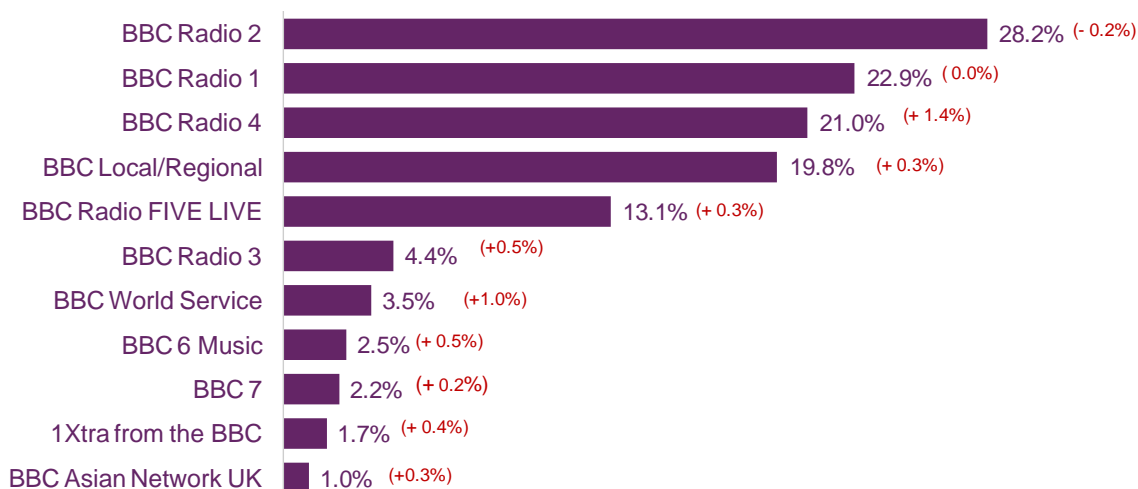
BBC Radio 2 remains the UK's most listened-to radio station

BBC Radio 2 was the only BBC station whose reach fell year on year. Despite the 0.2% decline in the last 12 months, it remained the UK's most listened-to station, with a weekly reach of 28.2% of the adult population. BBC Radio 1 remained the second most listened-to station, with a reach of 22.9%, in line with the previous year.

The reach of all other BBC network radio stations rose year on year (Figure 3.17) by between 0.3% and 1.4%; the collective reach of BBC local/nations stations rose by 0.3% over the same period. The reach of BBC Radio 4 and the BBC World Service rose the furthest since 2009, up by 1.4% and 1.0% respectively.

Figure 3.17 Weekly reach of BBC stations, Q1 2011

Average weekly listening (% UK adults), and year on year change



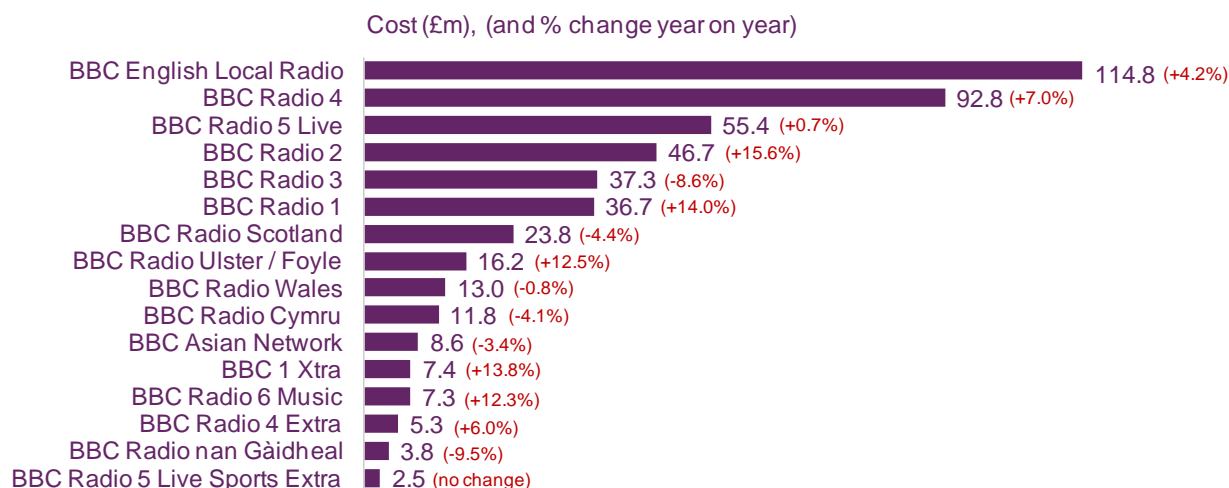
Source: RAJAR, (all adults 15+), Q1 2011

BBC Radio 2 had the largest percentage increase in spend among individual BBC radio stations in 2010/11

BBC Radio content spending rose from £463.6m in 2009/10 to £483.4m in 2010/11, up by 4.3% over the period. BBC Radio 2 saw the largest increase in content spending, with a 15.6% rise to £46.7m. The budget of Scottish Gaelic service BBC Radio nan Gàidheal saw the largest contraction, with a 9.5% reduction to £3.8m.

BBC Radio 4 had the largest content spend of any individual BBC station, at £92.8m in 2010/11. The lowest spend came from BBC Radio 5 Live Sports Extra at £2.5m, excluding individual BBC local radio stations in England.

Figure 3.18 BBC radio stations: spend on radio content, 2010/11



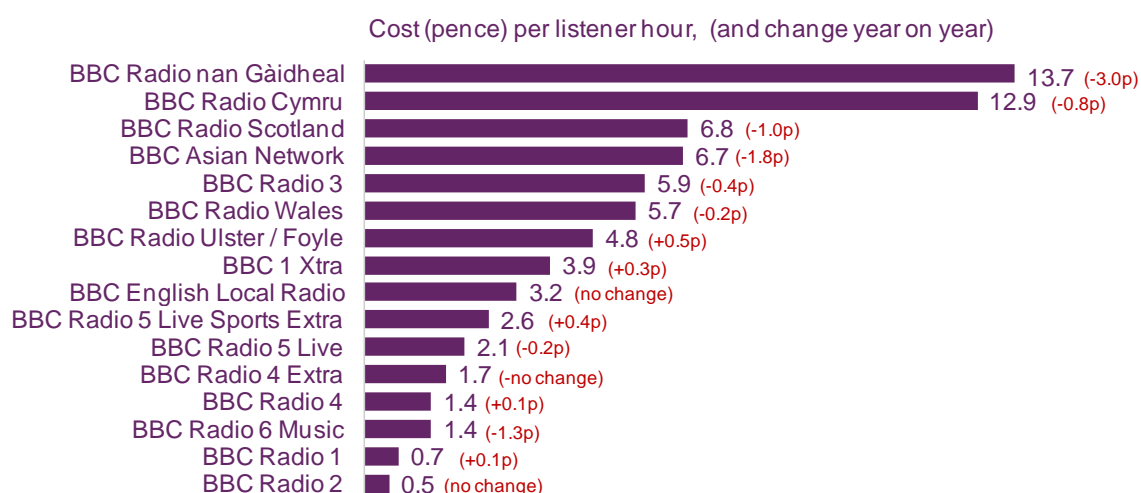
Source: BBC Annual Report 2010/11 Part 2 (www.bbc.co.uk/annualreport).

Note that the figures in Figure 3.18 cover radio content only; they exclude radio infrastructure and distribution expenditure as well as BBC-wide overheads.

BBC network stations' cost per listener hour tended to be the lowest within its radio portfolio

Figure 3.19 sets out the cost of BBC radio stations per adult (15+) listener hour for 2010/11. The BBC's Gaelic and Welsh language nations' services, BBC Radio nan Gàidheal and BBC Radio Cymru, had the highest cost per listener hour, at 13.7p and 12.9p respectively. BBC network services tended to have a lower cost per listener hour, with BBC Radio 2 lowest at 0.5p. BBC Asian Network and BBC Radio 3 had comparatively high costs per listener hour for BBC network services, at 6.7p and 5.9p respectively.

Figure 3.19 BBC radio stations: cost per listener hour of programmes, 2010/11



Source: BBC Annual Report 2010/11 Part 2 (www.bbc.co.uk/annualreport).

3.2.5 Radio licences

There are 298 local commercial services in operation and broadcasting on analogue (53 on AM and 245 on FM) across the UK. Many of these licences share programming; for

example, all of the 23 Gold services on AM carry the same programming. Across the Global Radio-owned Heart services (32 licences), there are 17 distinct services.

There are three national commercial services on analogue (talkSPORT and Absolute on AM and Classic FM), all of which are available on the Digital One DAB multiplex, which covers England, Scotland and Wales. The digital radio multiplex in Northern Ireland broadcasts two of the national services (talkSPORT and Classic) in addition to seven other services.

The number of national digital-only stations has grown over the past year, with Smooth Radio, Jazz FM and Absolute 90s being added to the line-up, bringing the total number of national DAB stations to 13 (this excludes services like Kiss, which are available across most of the UK via a range of local DAB multiplexes).

There are 46 local digital radio multiplexes. Services on these consist of simulcasts of local services, quasi-national services (i.e. services that are available on some local multiplexes but not all) and occasionally some digital-only services.

There are 193 community radio stations broadcasting (five on AM and 188 on FM) as of June 2011. Community radio licences are awarded to small-scale operators working on a not-for-profit basis to serve local areas or particular communities. No new licences have been issued since July 2010, although applications are now being invited for a third round of licensing.

Figure 3.20 UK radio stations broadcasting on analogue: July 2011

| Type of station | AM | FM | AM/FM total |
|-----------------------|-----------|------------|-------------|
| Local commercial | 53 | 245 | 298 |
| UK-wide commercial | 2 | 1 | 3 |
| BBC UK-wide networks | 1 | 4 | 5 |
| BBC local and nations | 36 | 46 | 46 |
| Community radio | 4 | 188 | 193 |
| TOTAL | 96 | 484 | 545 |

Source: Ofcom, July 2011 Note: the conditions of each licence will determine the amount of programming that may be shared between these licensed services. Here we have taken the view that a service providing at least four hours a day of separate programming (even if the same brand has other services) equals one service.

3.2.6 Community radio income

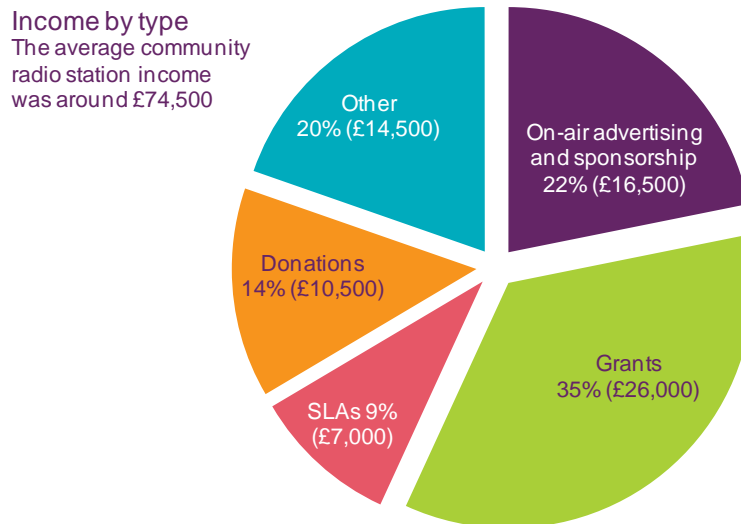
Average community radio income fell by 6% in the twelve months to the end of 2010

The main source of income for community radio stations is grants, for example from the Community Radio Fund, the Arts Council, the Ministry of Defence, local authorities or the National Lottery.

Average income per station stood at £74,500 in 2010, 6% less than the previous year. Figure 3.21 shows the distribution of funding sources for the average station, although it

should be noted that there can be quite a wide variation in those sources across operators. The grants' share of total industry income fell by 6pp year on year, accounting for 35% of all funds in 2010. Service level agreements or service contracts (SLAs) fell by 3pp over the year to 9%. SLAs involve the stations broadcasting output of social benefit on behalf of other organisations, in return for funding. The sale of on-air advertising and sponsorship accounted for 22% of income, roughly in line with the previous year (23%), although in real terms income from this source dropped (from an average of £18,000 in 2008/09 to £16,500 in 2009/10). Donations increased as a funding source rising, on average, from £7,100 to £10,500.

Figure 3.21 Community radio income, by source



Source: Ofcom, community station revenues 2009/10

The Future of Small-Scale Radio project

In mid-2010 Ofcom commissioned research into 'small-scale' radio stations, defined as those which have a coverage area of less than ten kilometres and/or serve a population area of fewer than 250,000 adults (aged 15+).

Small-scale stations are typically not in a position to commission research on their audiences. There is little data about who listens to these services, as few are members of RAJAR, the official audience measurement service for the radio industry.

The government's policy to move larger services to DAB-only might open up the possibility of growth in this market segment, through new availability of spectrum in the FM band. The aim of Ofcom's research was to develop a better understanding of smaller stations and how they serve their listeners.

Background and objectives

There are around 500 local non-BBC stations licensed in the UK, of which around 350 can be described as small local stations. These fall into two categories, according to the way they are licensed.

Small commercial stations - whose primary aim is to make profits by selling advertising. Licence conditions require the provision of a certain amount of locally-focused programming.

Community stations - a relatively new type of station. These are not for profit and have funding from different sources, such as grants. They may not make more than 50% of their income from advertising/sponsorship. Licences may not be traded. Licence conditions include a requirement to provide 'social gain' (e.g. community information).

Both of these types of small-scale station have been under growing financial pressure due to declining advertising revenues and more recently, declining public funding (Figure 3.21).

Brief summary of research findings

The research has shown that small-scale radio services are highly valued by their listeners.

They are felt to be unique and to offer benefits to listeners and communities, such as supporting local businesses, that are not provided by other (larger) radio stations. Listeners expressed relatively higher levels of engagement and attachment to their respective small-scale stations.

While listeners believed that community and small commercial stations had some similar characteristics, they were seen to have a very different 'feel' and appeal from each other, and to deliver benefits in different ways.

Despite this, for both types of small-scale stations, they are not seen to deliver to the same level as larger stations; for example, in their consistency of output.

As part of the research, hypothetical scenarios were explored, involving different responses to the growing financial pressure faced by these stations. The research findings indicate that listeners are willing to accept more local commercial activity as a way of helping stations remain sustainable; other possibilities, such as stations becoming more 'mainstream' and less locally focused, were less popular with listeners.

Full details of the project, including the research and findings, can be found here:

<http://stakeholders.ofcom.org.uk/market-data-research/radio-research/>

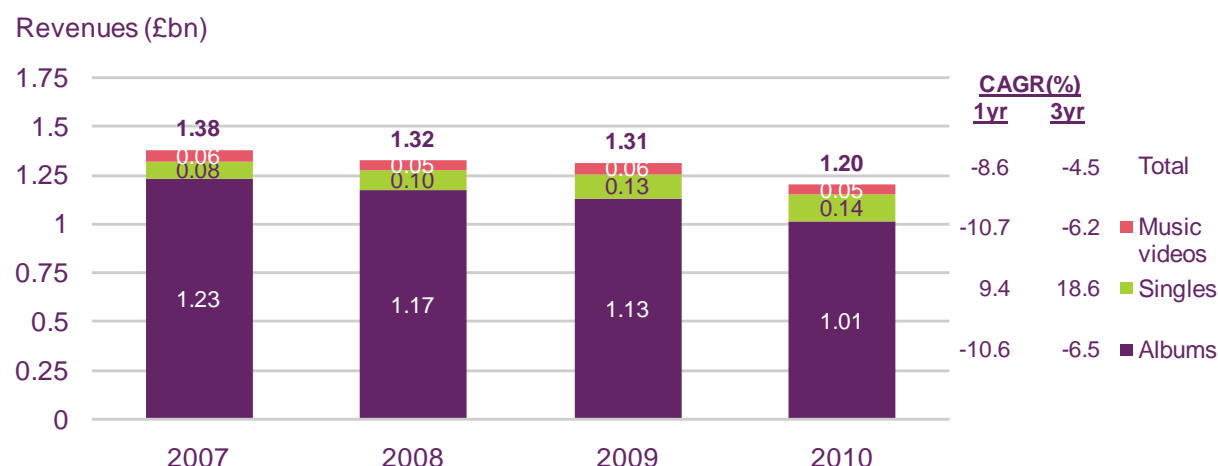
3.2.7 Recorded music revenue

Recorded music revenue continued to fall in 2010, mostly due to falling album sales

Total recorded music revenues fell by 8.6% in 2010, according to data from the Entertainment Retailers' Association (Figure 3.22). The value of album sales, which make up over 84% of the total recorded music revenue, fell by 10.6%. The value of singles sales continued to rise in 2010 with a 9.4% annual increase, as online music stores such as iTunes enabled consumers to purchase individual music tracks without having to buy an entire album.

The value of sales of recorded music fell further in 2010 than in the previous three years, declining 8.6% in 2010 compared to an average reduction of 4.5% since 2007. The far lower unit cost of singles compared to albums, despite increased volumes, resulted in consumer spending on music declining overall.

Figure 3.22 Recorded music retail revenues: 2007-2010

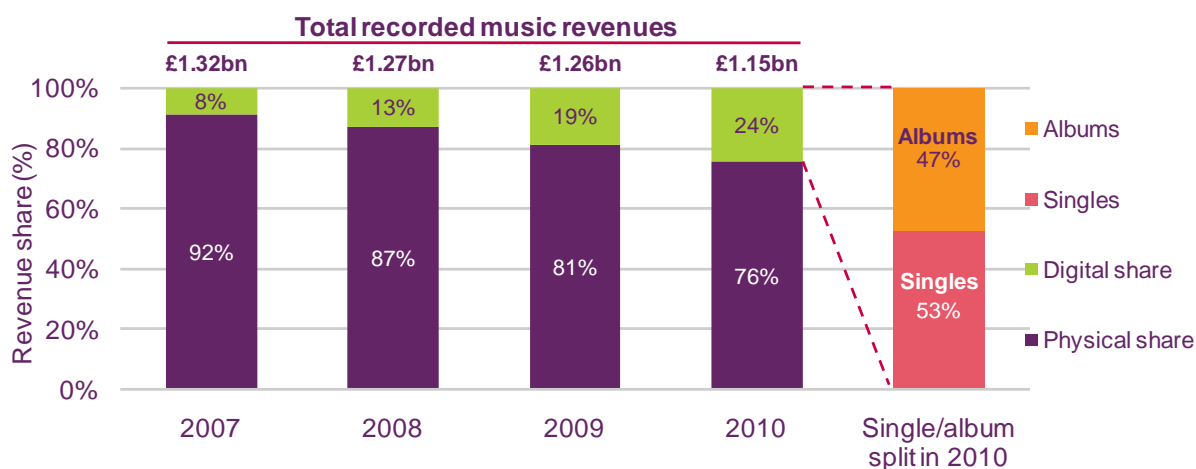


Source: Entertainment Retailers' Association yearbook 2011. Figures are nominal.

Digital sales accounted for nearly a quarter of music retail revenue in 2010

Digital's share of recorded music revenues increased in 2010 to reach 24% of the total (up by 5pp in a year). Within the digital total, singles' share of it overtook albums for the first time to account for 53% of digital revenue in 2010, compared to 50% in 2009. Physical sales still accounted for a significant (albeit declining) share of revenue.

Figure 3.23 Distribution of recorded music retail revenues: 2007-2010



Source: Entertainment Retailers' Association yearbook 2011 Note: This chart does not include revenues from music videos.

Volume of album sales continues to fall as singles sales increase to 162 million units

Figure 3.24 illustrates consumers' preferences for physical and digital media, split between albums and singles. While digital's share of both is increasing, the declining popularity of physical album sales resulted in an overall fall in album volumes in 2010. The volume of physical singles sales in 2010 was only 2.1 million units, compared to the 159.7 million sold online.

Figure 3.24 Recorded music sales, by volume: 2007-2010

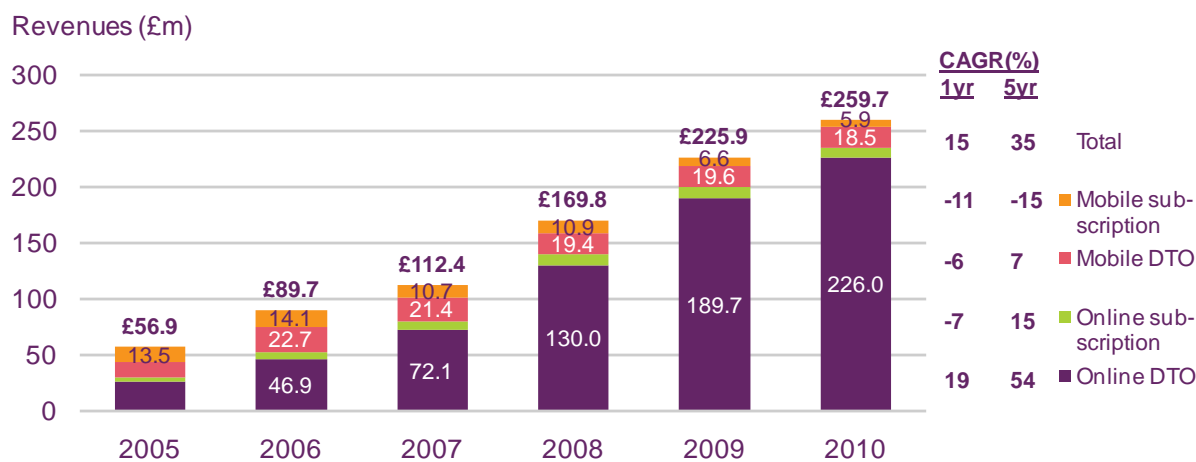


Source: Entertainment Retailers' Association yearbook 2011

Download-to-own business models are responsible for annual digital music revenue growing 15% year on year

Figure 3.25 illustrates that among the alternative digital music business models, the online 'download-to-own' (DTO) model (e.g. the music tracks that can be purchased from iTunes) was the only one to increase in value during 2010. Its £36.3m (19%) growth was responsible for driving the 15% increase in the digital music market overall, of which online DTO makes up 87%. Mobile subscription services have continued to fall in popularity during 2010, having contracted by an average annualised rate of 15% p.a. over five years.

Figure 3.25 Digital music revenues, by business model: 2005-2010



Source: Screen Digest. Note: excludes revenue from ad-supported services. Due to different data sources this chart is not directly comparable with previous charts. Figures are nominal.

3.3 The radio and audio listener

3.3.1 Introduction

The following section examines how patterns of radio and audio listening have changed in the UK, both in the past year and over the longer term. It uses audience data to analyse listening by sector and by age group, as well as drawing on consumer research.

Key points in this section include:

- **The number of weekly radio listeners in the UK reached a new high of 91.6% of the adult population in Q1 2011, up by 1pp since Q1 2010.** This represents the highest weekly reach figure since RAJAR's present research methodology was introduced in 1999 (page 178).
- **Over the past five years, UK-wide stations' share rose, while that of local stations fell.** BBC network services listening hours increased by 2.5% over the five-year period, commanding a 46.3% share of all hours in 2010. National commercial stations' hours rose by 5.2% over the same period. BBC local and nations stations' hours fell by 21%, and local commercial stations' share fell by 7.3% (page 179).
- **DAB set sales remain steady, at 1.9 million in the year to Q1 2011,** representing a fifth (22.3%) of all radio device sales (up from 20.9% in the year to Q1 2011); the rest were made up of analogue set sales (page 186).
- **Digital listening rose by 2.5pp in a year to reach 26.5% in Q1 2011.** Analogue accounted for a 65.4% share of listening while 8.1% was unspecified (page 181).
- **BBC 6 Music was the most listened-to digital-only station in Q1 2011,** with its weekly listener base growing by 261% since Q1 2006, reaching 1.3 million weekly listeners (3% of the market) on average (page 184).
- **Listening to the radio online in the UK remains more popular than listening to other audio content online through, for example, advertising-supported and subscription streaming services.** Eighteen per cent of households used the internet to listen to the radio, whereas 7% used free streaming services such as Spotify and 2% used subscription-based streaming services such as Spotify Premium (page 188).

3.3.2 Weekly radio reach in the UK

Weekly radio reach was up across the board year on year, reaching new highs in Q1 2011

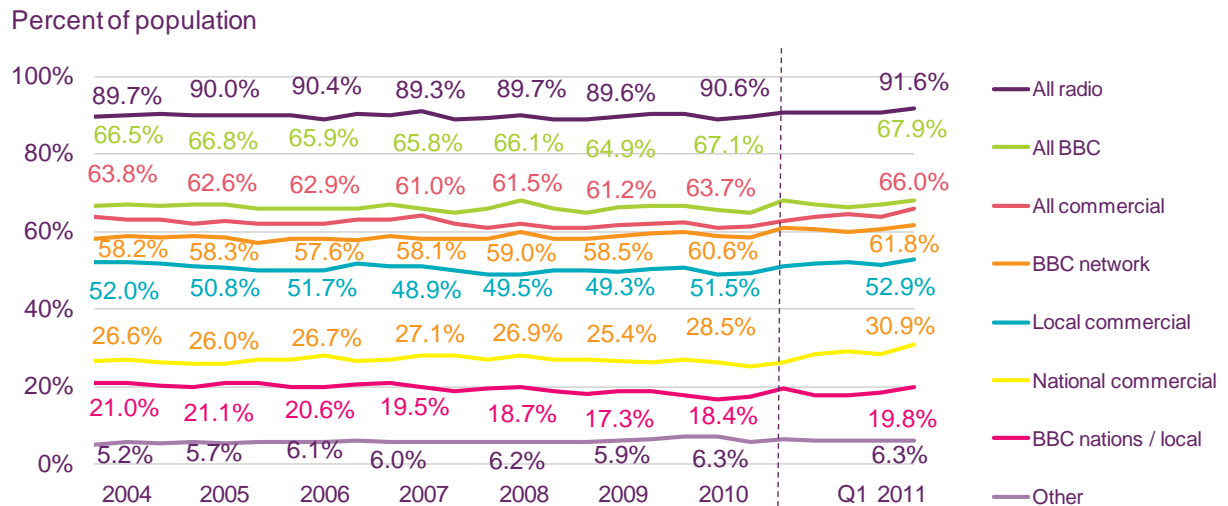
Weekly radio reach increased across all station types, reaching a record 91.6% of the adult (15+) population in Q1 2011, the highest level since RAJAR's present research methodology was introduced in 1999.

Over the past five years, the BBC local/nations' stations were the only station type where reach fell, collectively from 21.1% in 2005 to 18.4% in 2010. But the overall reach of the BBC's radio stations still rose (by 0.3pp to 67.1% at the end of 2010), thanks to a 2.3pp increase in the reach of BBC network stations.

For the commercial sector, reach increased both for national and local stations over a five year period. National commercial stations increased by 2.5pp to 28.5% at the end of 2010.

For local commercial stations, the comparative increase was 0.7pp, but the local commercial sector had a significantly higher reach than its national counterpart, at 51.5%. Taken together, the commercial sector reached 66% of the population in Q1 2011, attracting 34 million UK adults every week.

Figure 3.26 Reach of radio, by sector



Source: RAJAR, all adults (15+), 2004-2010 calendar years and Q1 2011

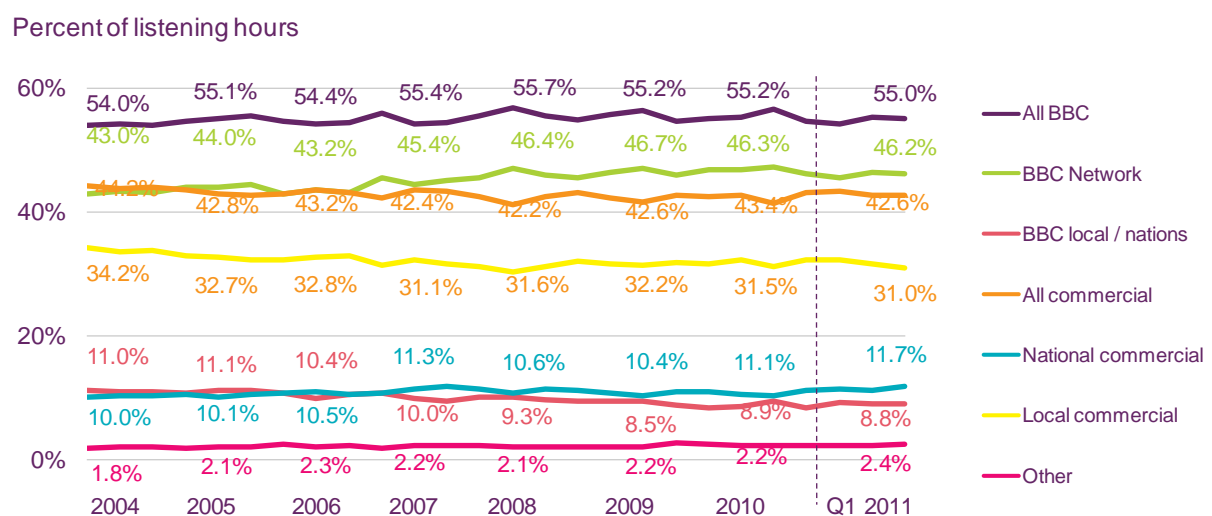
3.3.3 Listening hours

National stations increase in popularity over the past five years as local radio declines

Over five years, the BBC and commercial radio have seen listening fall. In terms of share of listening hours, the BBC has broadly held its share at 55% since 2005. It is the same story for commercial radio, registering a small (0.6pp) increase over five years, with a 43.4% proportion of listening hours at the end of 2010.

Year on year, the BBC's share remained unchanged, at 55.2% in 2010, whereas commercial radio's share increased by 0.8pp; from 42.6% in 2009 to 43.4% in 2010.

Figure 3.27 Share of listening hours, by sector



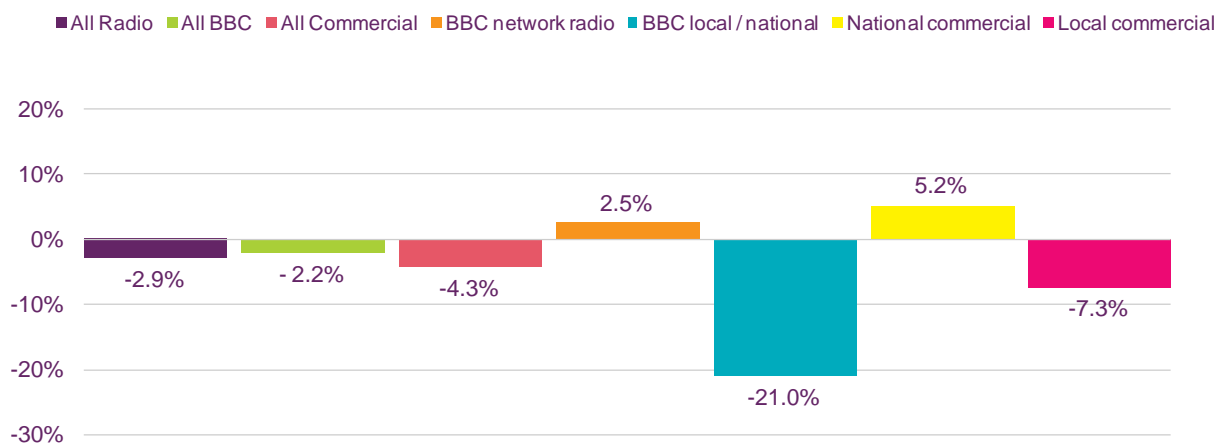
Source: RAJAR, all adults (15+), 2004-2010 calendar years and Q1 2011

BBC network radio (the BBC’s UK-wide radio stations) and national commercial radio were the only sectors in which listener hours grew between 2005 and 2010. With only three national commercial stations available on analogue radio, the national commercial sector has benefited from the increased number of stations available on digital radio.

BBC local stations, including the national stations for listeners in Scotland, Wales and Northern Ireland, have seen the largest reductions (21%) in listener hours in the five-year period to 2010. Local commercial station hours also registered a five-year decline of 7.3%.

Figure 3.28 Changes in listening hours, by sector: 2005-2010

Percentage change in listening hours

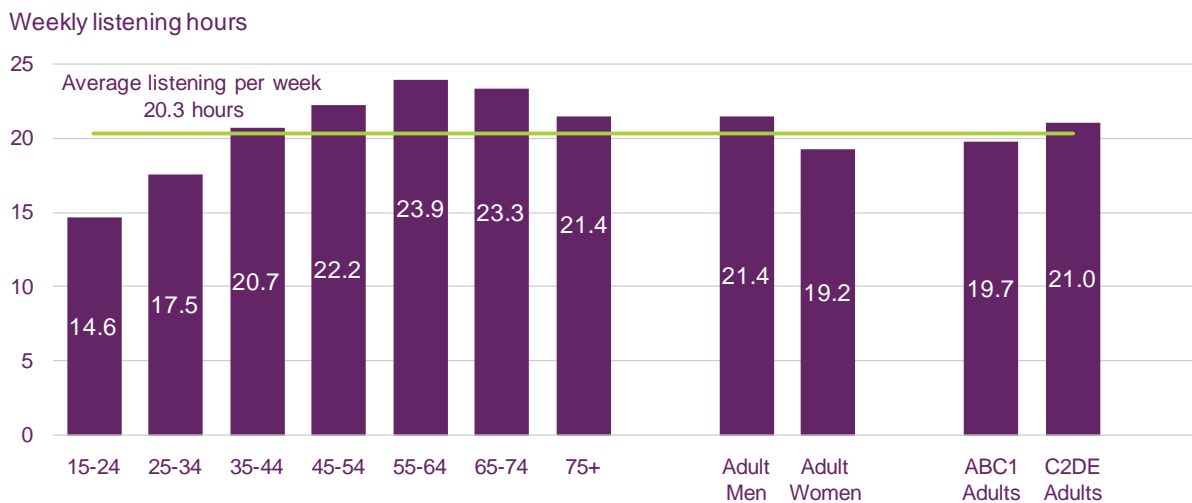


Source: RAJAR, all adults (15+), data based on calendar years 2005 and 2010

Average time spent listening to radio increases with age

Figure 3.29 shows the demographic profile of average weekly listening hours for adults in the UK in the year to Q1 2011. It shows that listening increases with age, peaking in the 55-64 age group. It is higher among men than women, with the former listening on average to 2.2 more hours per week than the latter. Those in the ABC1 group listen to 1.3 fewer hours than those in the C2DE category.

Figure 3.29 Average weekly listening by demographic, year ending Q1 2011

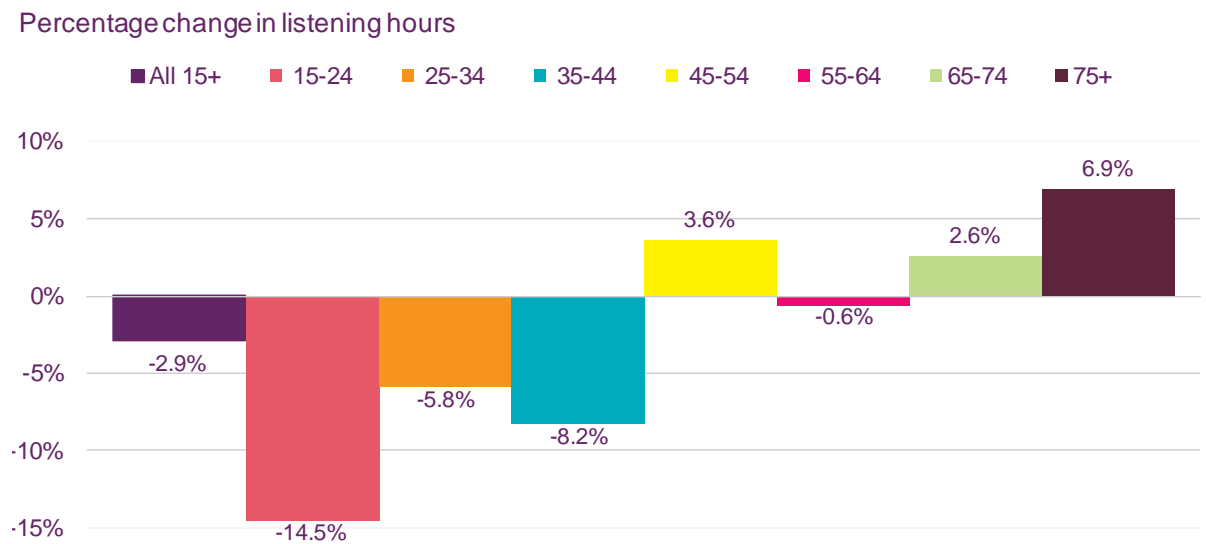


Source: RAJAR, all adults (15+), year ending Q1 2011, average weekly listening hours per head of population

Five-year decline in listening hours is driven by under-44s

Despite a positive 2010 for radio listening, as illustrated in Figure 3.10, the five-year trend remains negative, with a 2.9% fall in overall listening. Figure 3.30 shows the percentage change in listening hours over the last five years, by RAJAR age group. The 15-24 age group remains the group demonstrating the sharpest decline, with all listener hours among all adult groups under 44 showing a reduction.

Figure 3.30 Changes in listening hours, by age: 2005-2010



Source: RAJAR, all adults (15+), data based on calendar years 2005 and 2010

3.3.4 Most listened-to radio stations

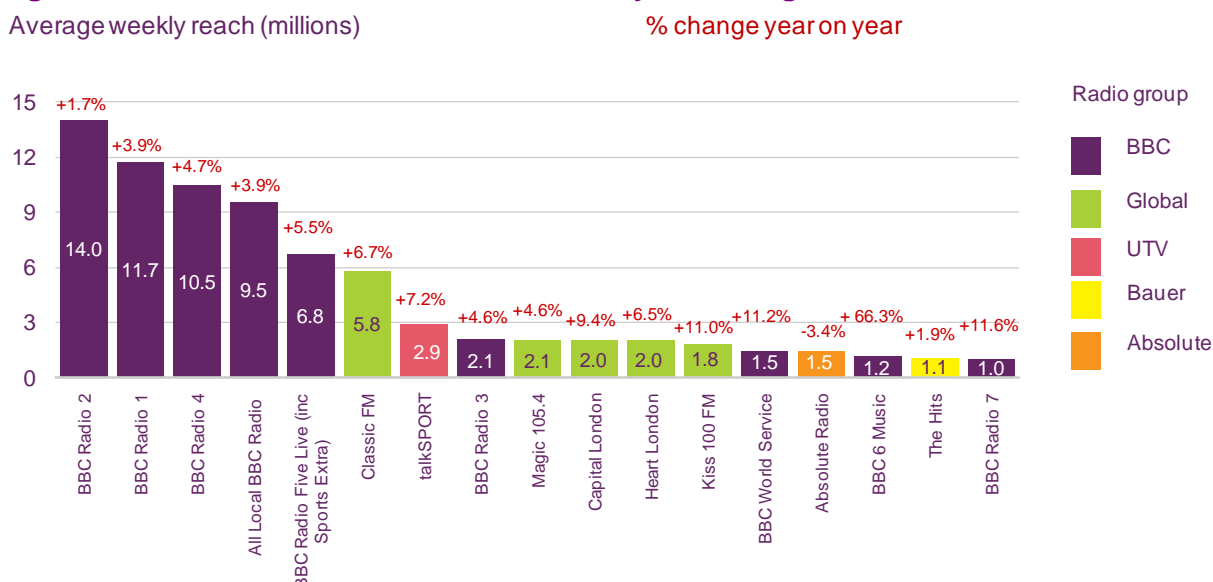
Many stations' weekly reach rose in 2010, with BBC network stations remaining the most popular

BBC Radio 2, BBC Radio 1, BBC Radio 4 and BBC Radio Five Live are the UK's most listened-to radio stations, according to RAJAR average weekly reach figures.

The national commercial radio stations Classic FM and talkSPORT also experienced increases during the year to Q1 2011 (of 6.7% and 7.2% respectively). They had higher listening than BBC Radio 3 but less than all other BBC analogue network stations.

BBC 6 Music, which is the UK's most listened-to digital-only station, was the fourteenth most listened-to overall. The Hits, the most listened-to digital-only commercial station, was placed fifteenth.

Figure 3.31 Most listened-to radio stations, year ending Q1 2011



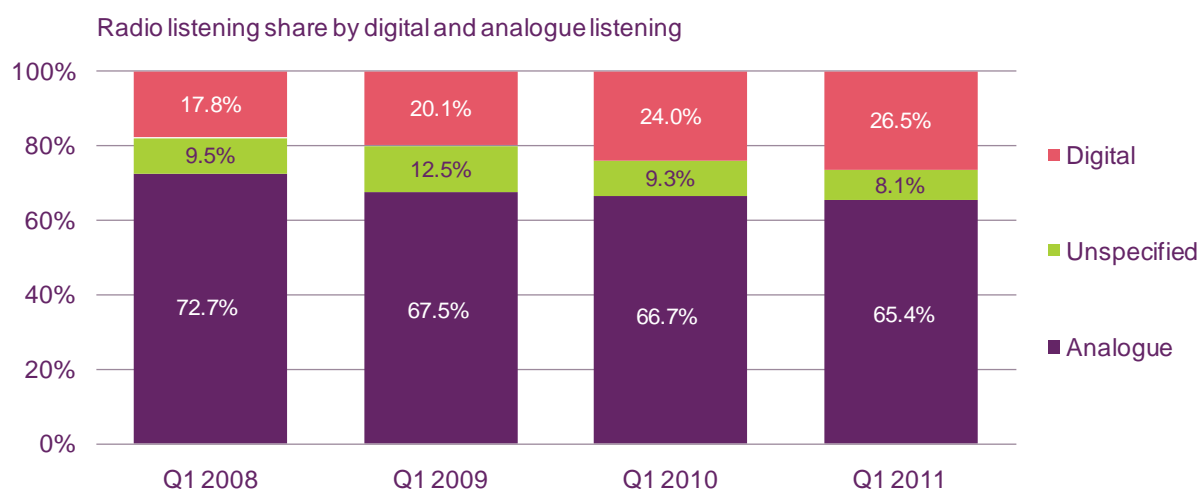
Source: RAJAR, all adults (15+), year ending Q1 2011

3.3.5 Digital radio listening trends

Digital listening increases by 8.7 percentage points in three years

Digital radio listening as a proportion of total listening rose by approximately 3pp each year, comparing Q1 figures in each of the last three years, rising by 8.7pp between Q1 2008 and Q1 2011. The figure includes listening via both online and digital TV platforms, as well as through DAB radio sets.

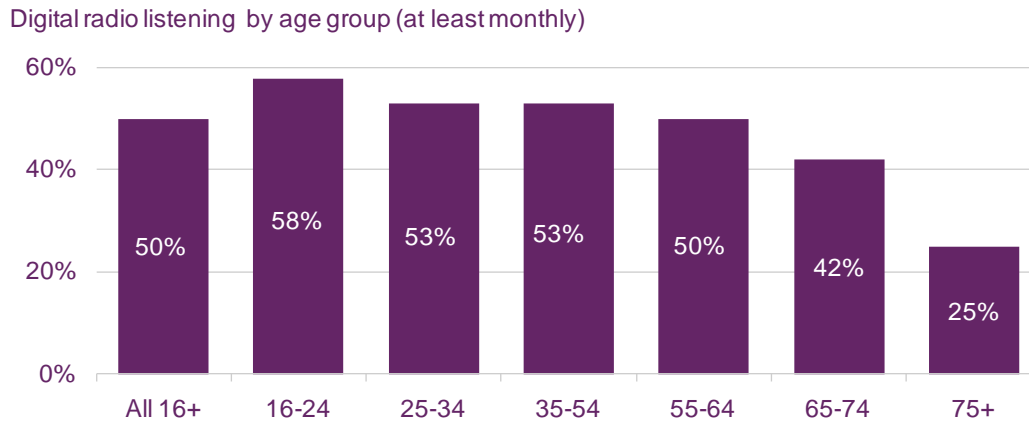
Figure 3.32 Share of listening hours across analogue and digital platforms



Source: RAJAR Ipsos MORI/ RSMB. 'All adults' (15+), data relate to corresponding year ending each date shown. Note: 'Unspecified' relates to listening where the radio platform was not confirmed by the listener

Figure 3.33 illustrates that older listeners are less likely to listen through a digital radio platform. For listeners under 64, at least half claim to listen to digital radio on a monthly basis. In the 65-74 age group the figure falls to 42%, and to 25% for the over-75s.

Figure 3.33 Digital radio monthly listening, by age group



Source: Ofcom research, Q1 2011. Base: All who listen to the radio (n=2811) Q: Use digital radio at least monthly

3.3.6 Digital radio share, by sector

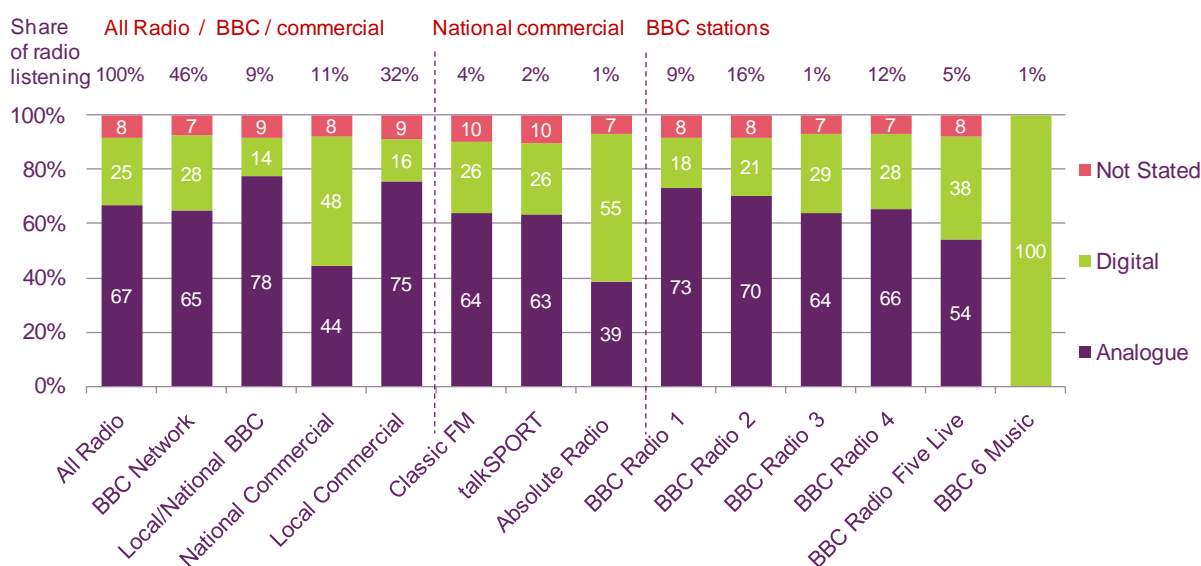
UK-wide stations have the highest proportion of digital listening

UK-wide BBC network stations and national commercial stations have the highest level of digital listening compared to other station types. Digital listening to local and nations' BBC stations, and to other local commercial stations, is typically less popular, at 14% and 16% respectively, compared to 2009 shares of 15% and 16% respectively.

There are only three national commercial stations available in the UK on analogue radio. Absolute Radio and talkSPORT are not available nationally on FM. Absolute Radio had a proportion of digital listening over the half-way mark, at 55%, possibly due in part to a focus on recorded music content and its limited FM availability (music listening on AM is generally considered an inferior experience). By comparison, national-FM-available Classic FM and talk-radio-based talkSPORT attract only 26% of listening hours through digital radio platforms.

BBC Radio Five Live, available only on analogue via the AM frequency band, had the highest share of digital listening for a BBC analogue-available station, with 38% occurring via a digital platform.

Figure 3.34 Audience profiles and platform split, by sector and station: year ending Q1 2011



Source: RAJAR, year ending Q1 2011, UK adults aged 15+

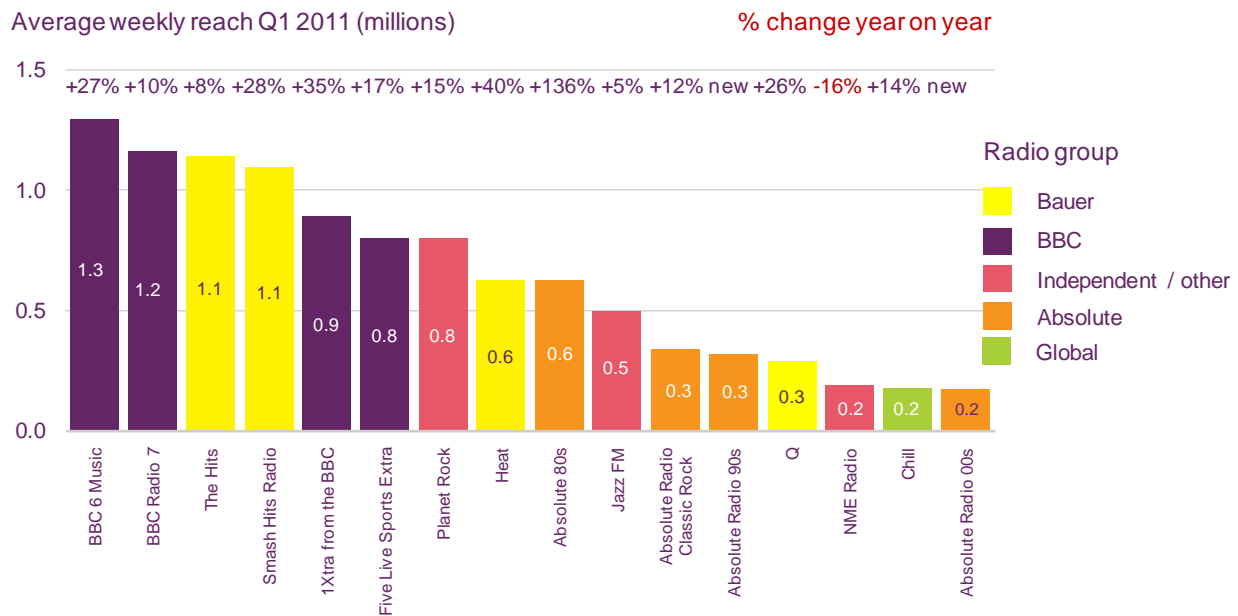
BBC 6 Music becomes the most listened-to digital-only radio station

Following a public campaign to keep the station open, which ran from February to July 2010, BBC 6 Music's reach increased by 27% (Q1 2011 compared to Q1 2010) to 1.3 million adult listeners, making it the UK's most popular digital-only radio station.

NME Radio was the only digital-only national station whose reach did not increase in the year to Q1 2011. The service ceased broadcasting nationally over DAB in June 2010. The largest increase in average weekly reach came from Absolute 80s, with a 136% rise since the station launched in December 2009. Other digital-only stations saw rises in reach ranging from 5% to 35%.

The digital-only market, while currently much smaller than analogue-available stations in terms of listening hours and reach, is populated by a wider range of owners among the most popular stations, compared to the same segment of the analogue market. There are two independent stations (not part of a larger radio group) in the top ten: Planet Rock and Jazz FM. Bauer Radio has three digital-only stations in the top ten, while Absolute has one. Global Radio owns one digital-only national station, Chill, which was available nationally only through the Sky and Virgin Media digital television platforms in 2010.

Figure 3.35 Most listened-to digital-only stations, Q1 2011



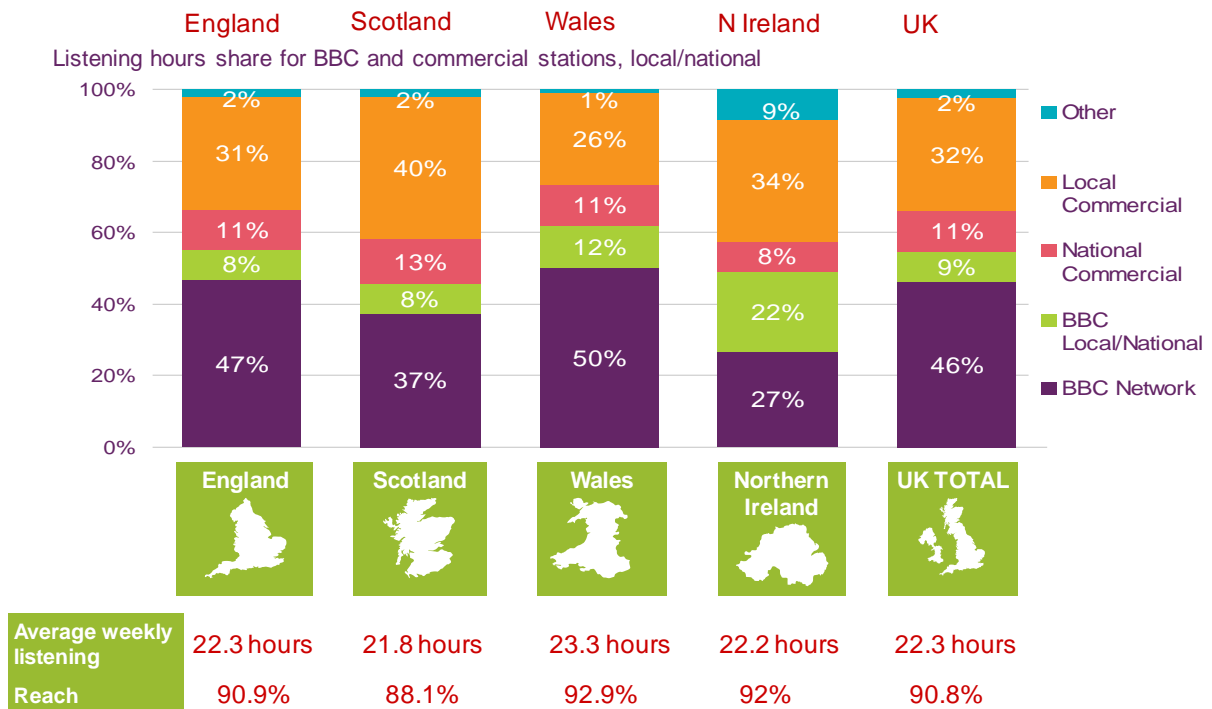
Source: RAJAR, Q1 2011, UK adults aged 15+

3.3.7 Listening patterns across the UK nations

The shares of listener hours among the categories of stations shown in Figure 3.36 have remained broadly similar for the UK in the year to Q1 2011. There are, however, significant variations in listening hour shares between the UK nations, outlined below.

- In **Northern Ireland**, BBC stations Radio Ulster and Radio Foyle achieve the highest proportion of listening hours for BBC local/national stations across the UK, with a share of 22%. BBC network stations' share has increased by 2pp over the year but was still the lowest among the four nations, at 27%, 19pp below the UK average.
- **Wales** had the highest levels of listening and reach in the year to Q1 2011. It has the lowest proportion of local commercial listening, 6pp below the UK average. Half of all listening in Wales is to one of the BBC's UK-wide network radio stations. Taken with BBC local/national stations, this brings the BBC's listening share to its highest level among the four nations, at 62%.
- In **Scotland**, local commercial services attracted a higher share than anywhere else in the UK, at 40% of all listening hours. Furthermore, 54% of all Scottish listening hours were to stations in the commercial sector, the highest proportion in the UK.
- In **England**, listening shares have stayed the same year on year, despite an increase in overall listening and reach. BBC network stations attract the largest collective share, at 55% of total hours.

Figure 3.36 Share of listening hours, by nation



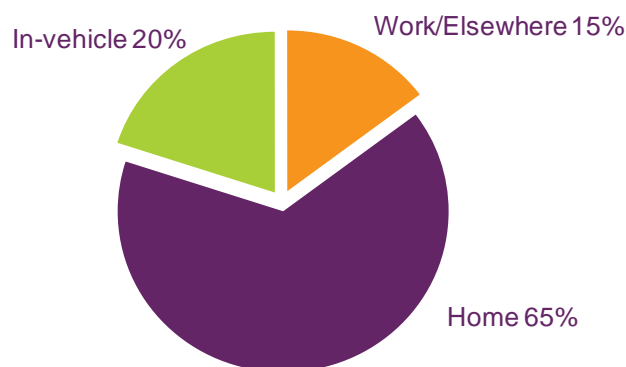
Source: RAJAR, All adults (15+), year ending Q1 2011 Note: Audience share by category (year to Q1 2011) % share BBC & commercial, local & national

3.3.8 Location of radio listening

65% of radio listening takes place in the home

The locations where radio listening takes place have remained relatively unchanged over the last five years. In-vehicle listening accounted for a fifth of all radio consumption in Q1 2011, according to RAJAR. A further 15% of listening takes place at work or away from the home.

Figure 3.37 Location of listening, year to Q1 2011



Source: RAJAR, year ending Q1 2011, UK adults aged 15+

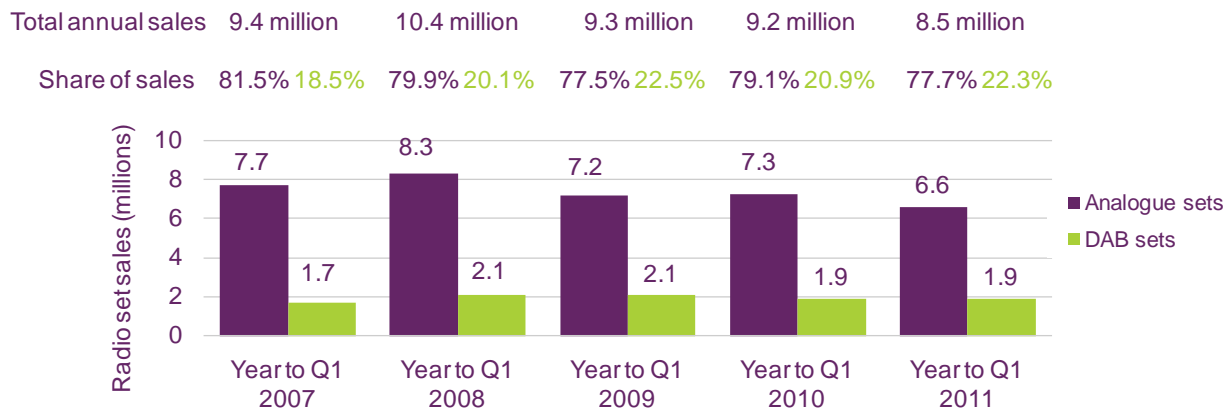
3.3.9 Retail sales of radio sets

DAB set account for 22% of all radio sales

DAB sales have remained stable at 1.9 million in the year to Q1 2011. While analogue sales still account for the majority of radio sets sold (77.7%), DAB increased its proportion of sales by 1.4pp to 22.3%.

The portable market accounted for nearly half (49.8%) of total DAB sales in the year to Q1 2011, representing 64.5% of the overall portable radio market. Total radio set sales (analogue and digital) were down by 677,000 to 8.5 million in the year, mostly due to a decline of 655,000 in analogue sales.

Figure 3.38 Number of analogue and digital radio sets sold

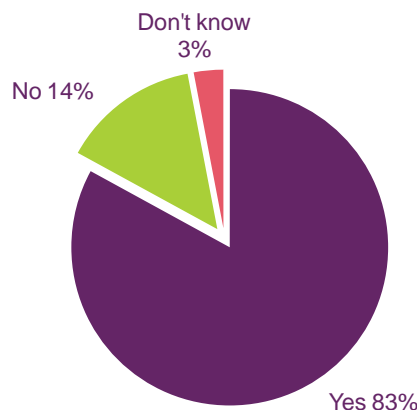


Source: GfK sales data, 2006-2011. Note: Figures cover GB only, GfK Panelmarket data represents over 90% of the market. Categories of device included are: portable radios, personal media players, car audio systems, home audio systems, clock radios, radio recorders, headphone stereos, tuners and receivers.

83% of consumers are aware of the term 'digital radio' or 'DAB'

Awareness of the terms 'DAB' and 'digital radio' have a high level of awareness, with 83% of consumers recognising at least one of the terms by Q1 2011. Figure 3.39 shows that 14% of consumers said they had not heard of either term, while 3% answered 'don't know'.

Figure 3.39 Have you heard of the term 'DAB' or 'digital radio'?

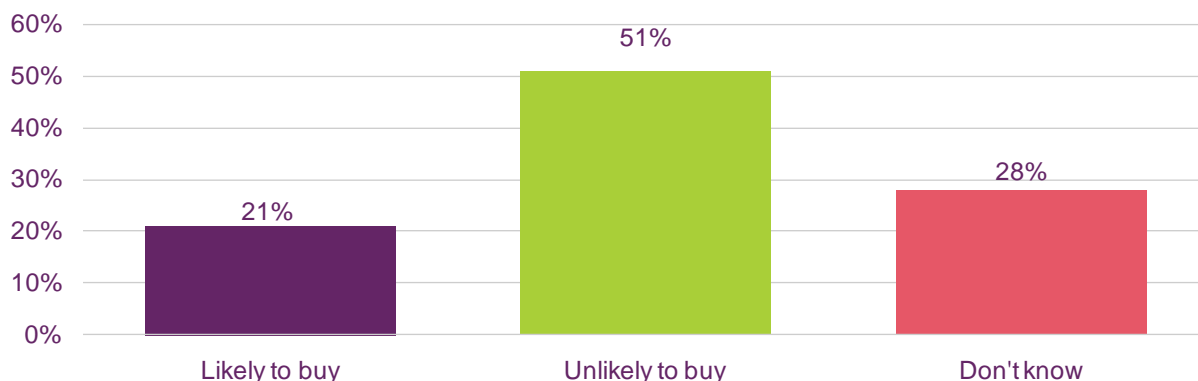


Source: Ofcom research 2011

By Q1 2011, 21% of research respondents without a DAB radio stated that they intended to buy one within the next 12 months. However, 51% of radio listeners without DAB said they were not planning to purchase a set in the next 12 months, 4pp lower than in 2010.

Figure 3.40 Likelihood of buying a DAB radio within the next 12 months

Percentage of respondents who listen to the radio and have any active radio sets at home but have no DAB set in the home



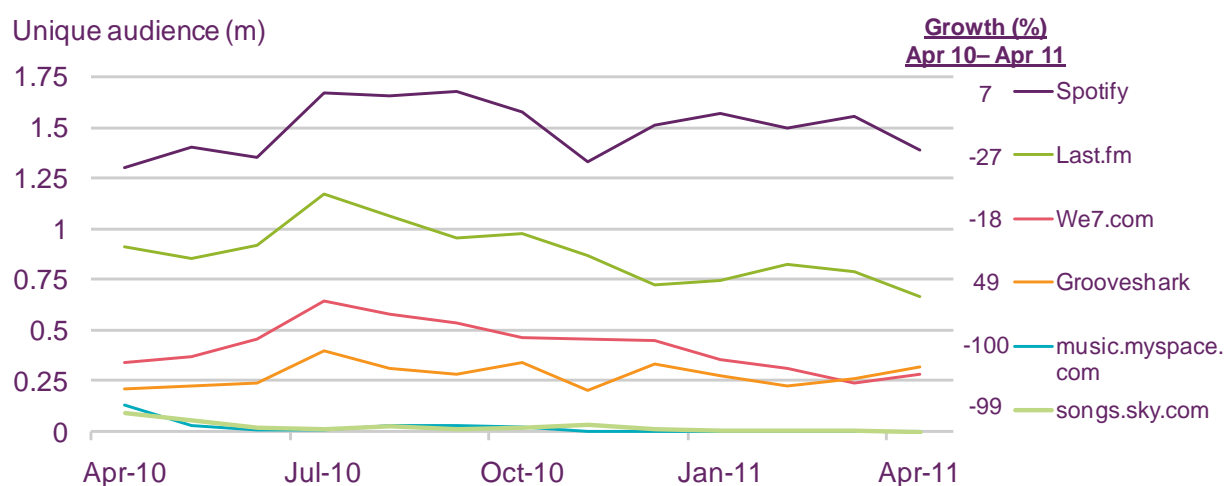
Source: Ofcom research Q1 2011. Base: Those who listen to the radio and have any active radio sets but have no DAB sets in the home (n=1304) QP12: How likely is it that your household will get a DAB radio in the next 12 months?

3.3.10 Online music streaming services

Growth in reach of music streaming sites slows

Spotify continued to command the highest unique audience of online streaming services in the UK during 2010, with 7% year-on-year growth. However, this is significantly lower than the 74% growth the streaming service saw in its unique audience in the same period last year. Groovespark also increased, with 49% growth. Last.fm's reach fell by 27% while We7.com's contracted by 18% over the same period. Sky Songs, a music subscription service from BSkyB, closed in February 2011²⁵ following its launch in October 2009.

Figure 3.41 Unique audiences of selected music streaming sites



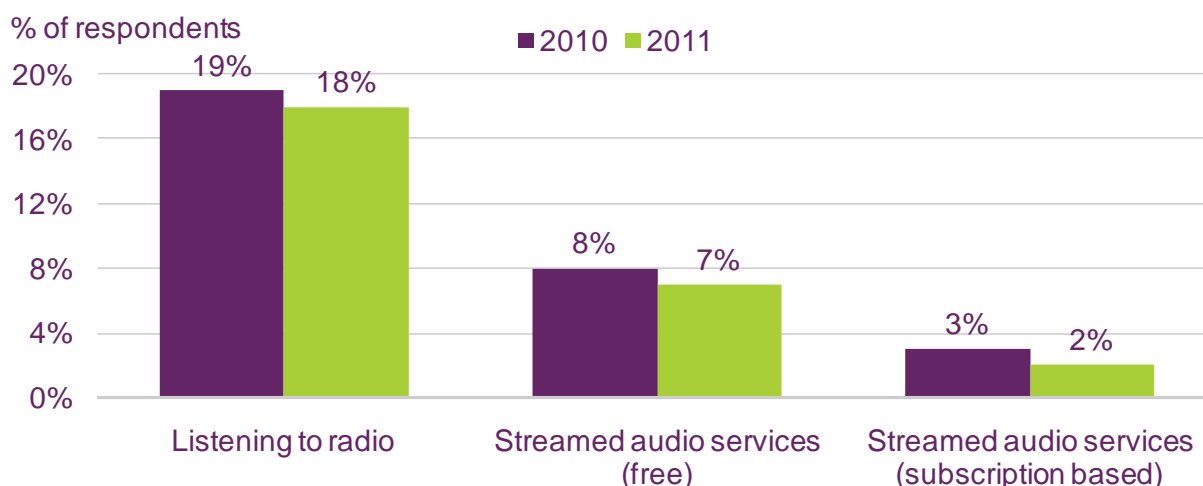
Source: UKOM / Nielsen. Month of April 2011, home and work panel. Applications included.

²⁵ <http://songs.sky.com>

Listening to the radio online is more popular than streaming services

According to Ofcom's own consumer research, nearly a fifth (18%) of households use the internet to listen to the radio. Seven per cent used free streaming services such as Spotify while 2% used subscription-based streaming services such as Spotify Premium.

Figure 3.42 Audio internet use



Source: Ofcom research, Q1 2011 QE10A. Which, if any, of these do you or members of your household use the internet for whilst at home? Base: Those with access to the internet at home (n=2534)

3.3.11 Use of digital music services and devices

UK listeners now spend more time using Spotify than iTunes

Spotify, a free advertising-supported and paid subscription-based music streaming service, has surpassed iTunes in terms of the time spent by users using the services each month. Figure 3.43 shows users spending more time on Spotify every month from July 2010 onwards, out-performing primarily offline music players iTunes and Windows Media Player.

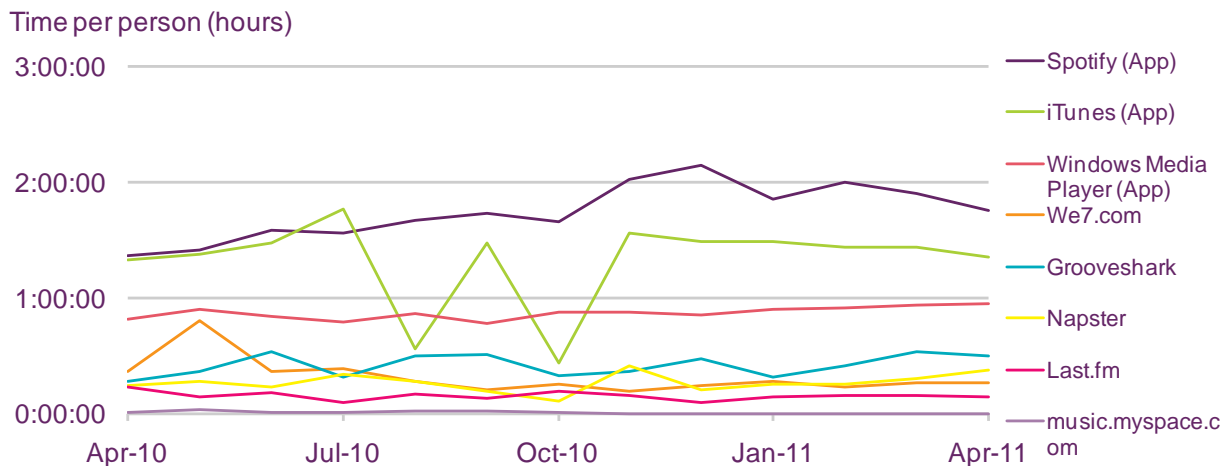
Despite Spotify's growth, in April 2011 it announced changes in the quantity of music that ad-supported users could listen to before having to take a paid subscription²⁶. The restrictions limit ad-supported users to 19 hours of music per month, with a maximum of five plays per track.

It is important to note that Nielsen Online's methodology only counts time spent on an application when it is 'in focus'. This refers to the application to which keyboard and mouse activity is directed; only one application can be in focus at any time. Furthermore, if the user remains inactive for 30 minutes or more, the time accrued to the application 'in focus' is discounted to one minute after the last-recorded activity.

As listening can occur while an application is 'out of focus' and because prolonged periods of inactive 'in-focus' activity are discounted, the time spent on the media applications and music streaming websites, shown in Figure 3.43, does not represent actual time spent listening to music; it is likely to underestimate it. However, these data do show the time spent browsing, searching and compiling music playlists. The figures show the number of people who opened and ran these applications on their computers, and do not necessarily represent a connection to the internet.

²⁶ <http://www.spotify.com/uk/blog/archives/2011/04/14/upcoming-changes-to-spotify-free-open/>

Figure 3.43 Time spent using selected music services and media players



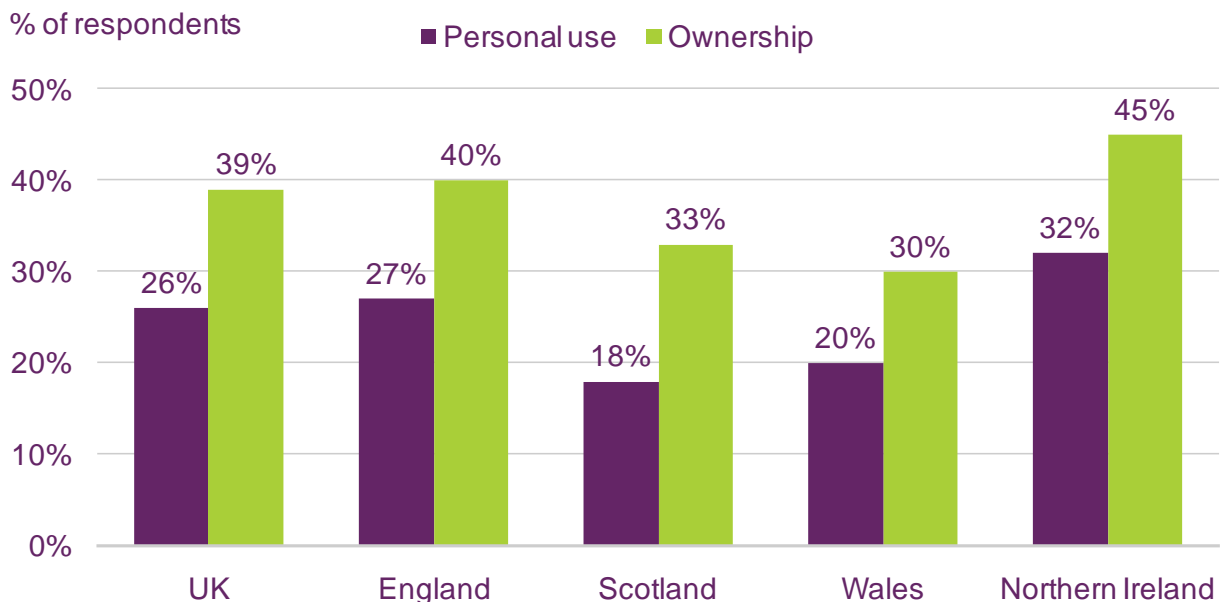
Source: UKOM / Nielsen. Month of April 2011, home and work panel. Applications included.

Personal use of MP3 players and iPods in the UK is 13 percentage points lower than ownership

Figure 3.44 shows that a clear gap has opened between personal use and ownership of MP3 players. The reasons for this gap may include the increase in use of smartphones as music players, leading to more consumers no longer using their MP3 players and iPods (see page 47).

Across the UK personal use was 26%, while ownership was 39%. Ownership and use remain highest in Northern Ireland, with personal use at 32%. The figure was lowest in Scotland, with only 18% personally using an MP3 player or iPod.

Figure 3.44 MP3 player/iPod ownership and personal use



Source: Ofcom research, Q1 2011. QB1: Which of the following do you, or does anyone in your household, have in your home at the moment? QB2. Do you personally use: MP3 player/ iPod? Base: All adults aged 16+ (n = 3474 UK, 1983 England, 487 Scotland, 493 Wales, 511 Northern Ireland)



The Communications Market 2011

4 Internet and web-based content

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4.1 Key market developments in internet and other web-based content

4.1.1 Introduction

Figure 4.1 UK internet and web-based content market: key statistics

| UK internet & web-based content market | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|--|--------|--------|--------|--------|--------|------|
| ¹ PC / laptop take-up (%) | 67 | 71 | 72 | 74 | 76 | 78 |
| ¹ Internet take-up (%) | 60 | 64 | 67 | 70 | 73 | 77 |
| ¹ Total broadband take-up (%) | 41 | 52 | 58 | 68 | 71 | 74 |
| ¹ Fixed broadband take-up (%) | n/a | n/a | n/a | 65 | 65 | 67 |
| ¹ Mobile broadband take-up (%) | n/a | n/a | n/a | 12 | 15 | 17 |
| ¹ Internet on mobile phone take-up (%) | n/a | n/a | n/a | 20 | 22 | 28 |
| ¹ Social networking on internet take-up (%) | n/a | n/a | 20 | 30 | 40 | 46 |
| ² Internet advertising expenditure | £2.0bn | £2.8bn | £3.4bn | £3.5bn | £4.1bn | n/a |
| ³ Mobile advertising revenue | n/a | n/a | n/a | £37.6m | £83.0m | n/a |

Sources: ¹Ofcom consumer research (Q1 each year), ²IABUK/PwC, ³IAB.

The internet is at the heart of how many people communicate, find information and seek entertainment. And more and more devices are becoming internet-enabled. As a result it is becoming increasingly difficult to separate the use of internet services from ‘television’, ‘radio’ and voice communication services - all can be provided by the same device.

The internet allows existing forms of content such as TV-like programming and radio to be consumed in new ways (for example: on demand, or interactively). Other sections in this report consider content delivered via the internet in the context of television and other audio-visual services (Section 2) and radio and audio services (Section 3).

The internet has also allowed new, internet-only content types to emerge (such as social networking sites, user-generated content and online shopping services), and this section of the report considers how these are transforming the ways in which people communicate and seek information and entertainment.

It is split into three sub-sections.

In the first section: **Key Market Developments**, we examine two themes which are at the heart of the transformative effect of the internet on consumer behaviour and industry structures.

- **Nearly one in three mobile users now access the internet on their phones.** We examine what is driving this and find that the most popular internet service is social networking, with 57% of mobile phone internet users spending an average of five and a half hours a month on social networking sites.

- **The internet advertising market grew by 16% in 2010** and generated £4.1bn – slightly more than television advertising. We look at what is driving this and find that a big area of growth has been display advertising on social networking sites. We also look at the mobile advertising market, which is a relatively small part of the overall market but more than doubled its size in 2010 to reach £83m.

The second sub-section looks at **internet use** in the UK in terms of the platforms (including fixed, cellular and WiFi) that consumers use to access the internet, and the demographic breakdown of internet users (including splits by age, gender, socio-economic group and region).

Finally, we provide an overview of the **consumption of web-based content** in which we examine how consumers navigate to content online, the most popular online services and websites, the uploading of content onto the internet and consumers' concerns about the internet.

4.1.2 Internet on mobile grows as users put their social networks in their pockets

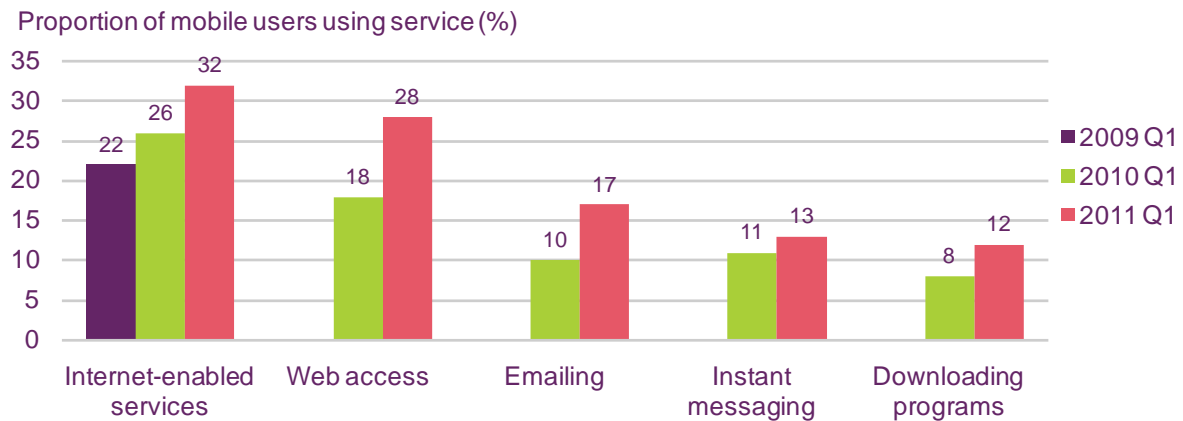
Smartphone take-up drives increase in use of internet on mobile phones

As detailed in Section 0 of this report, a key feature of the UK communications market in the past year has been the take-up of smartphones, i.e. phones which are specifically designed for the consumption of internet-enabled services such as websites and mobile applications. Our research in March 2011 found that more than a quarter of the UK population (26%), or 29% of all mobile users, owned a smartphone. We also found that more than half of these (59%) got their smartphone in the past 12 months.

It is likely that this growth in smartphone take-up is the primary driver of increasing use of data services on mobile phones. In Q1 2011, our technology tracker research found that almost a third (32%) of mobile users accessed internet services on their phone, up from 26% a year previously. There were significant increases in the numbers of mobile users accessing websites, using email and downloading programmes (Figure 4.2).

In addition to increasing take-up of internet services on mobile phones it appears that the intensity of use has increased significantly. Figure 5.21 in the Telecoms section of this report details that the volume of mobile data transferred over the UK's mobile networks increased by 67% during 2010, and increased forty-fold between Q4 2007 and Q4 2010. This suggests that the use of 3G/HSPA networks on smartphones is having a similar transformative effect on mobile internet use as that which happened in the early-mid 2000s on fixed-line networks with the migration from dial-up to broadband.

Figure 4.2 Use of mobile data services



QD9A: Which if any of the following activities, other than making and receiving voice calls, do you use your mobile for?

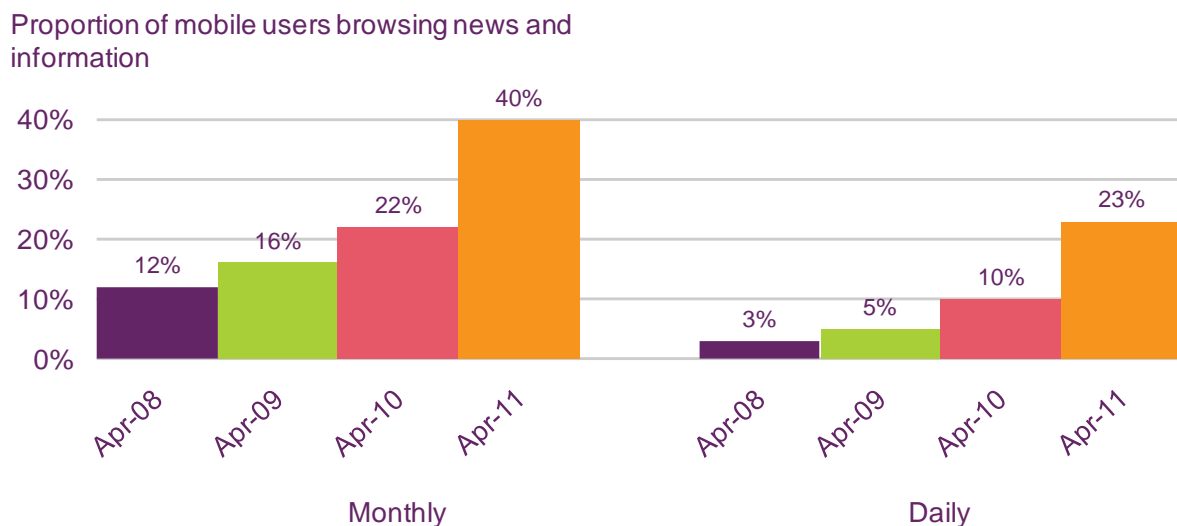
Source: Ofcom technology tracker, Q1 2011

Base: All mobile users aged 16+ (n=3091);

Note: 'Internet-enabled services' data shows the proportion of adults who use a mobile phone for any of the following activities: instant messaging, downloading apps or programs, email, internet access, downloading video, video streaming, visiting social networking sites.

Recent survey data from Enders Analysis indicates both that the take-up of internet use on mobile phones has accelerated in the past year, and also that among mobile internet users use is increasing, with 23% of mobile internet users claiming to access news and information on a daily basis in April 2011, compared to just 10% a year previously (Figure 4.3).

Figure 4.3 Browsing news and information on mobile phones



Source: Enders Analysis/TNS-RI survey, April 2011

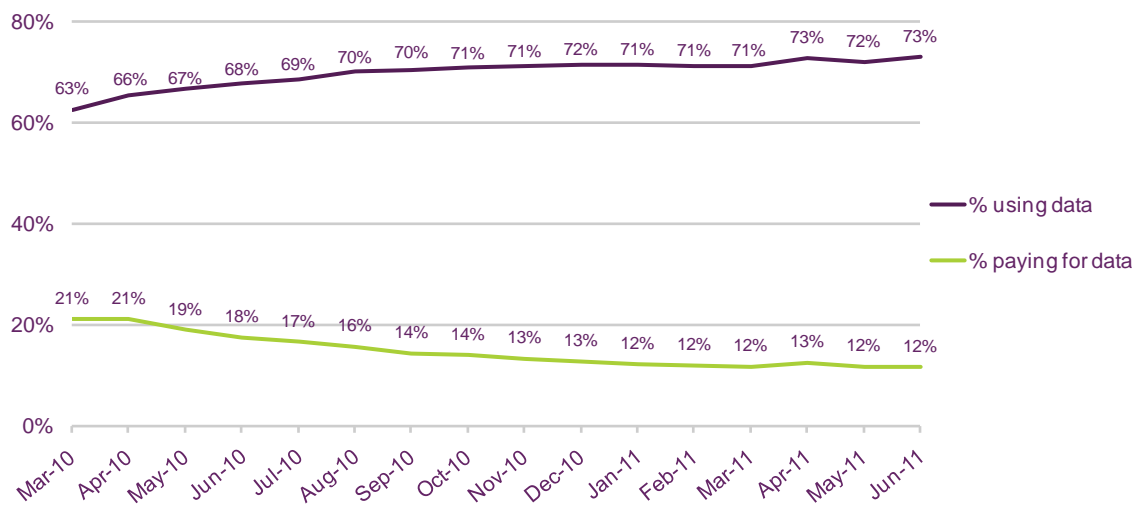
Inclusive data within mobile tariffs promotes use of internet services on mobiles

Hand-in-hand with the increasing take-up of smartphones is the increasing inclusion of data services within mobile tariffs. Although data allowances had featured in some mobile tariffs previously, the launch of the iPhone in the UK in September 2007, with unlimited data

included in every tariff, was a watershed event, and now most pay-monthly tariffs that include a smartphone also include a data allowance, while there are even some sub-£15-a-month SIM-only contracts available which include data as well as voice minutes and text messages.

The inclusion of data within standard mobile tariffs has therefore been a driver of increasing use of data services. Figure 4.4 shows information collected by price comparison company Bill Monitor, compiled from between 3,000 and 10,000 customer bills submitted every month. It indicates that by June 2011, 73% of mobile bills detailed some data use, but only 12% of bills included data charges on top of the monthly fee (Figure 4.4).

Figure 4.4 Proportion of pay-monthly customers using data and paying for it outside a bundle

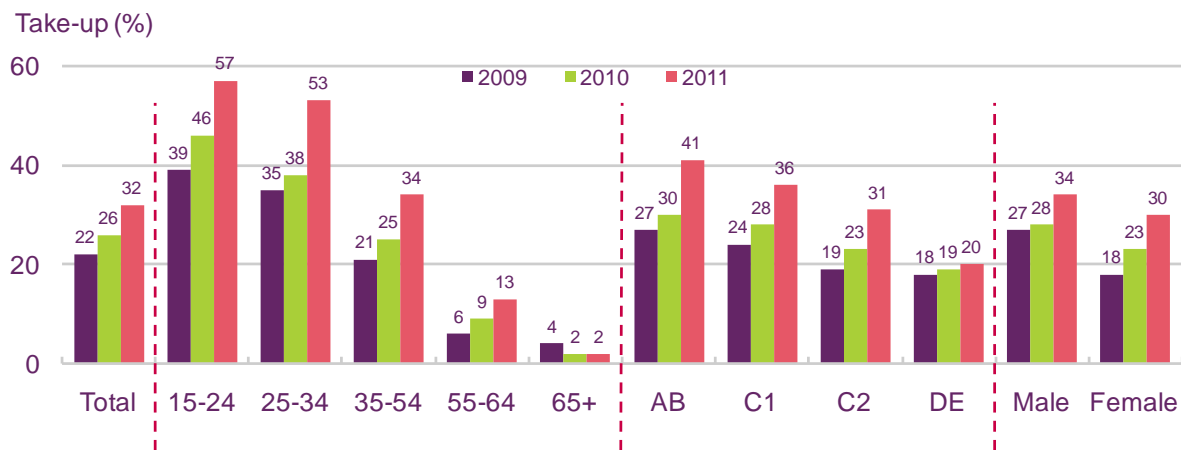


Source: Bill Monitor

There are significant differences in the use of internet services on mobile phones, by age, socio-economic group and gender (Figure 4.5). Over half of all adults under the age of 34 use the internet on mobile phones, compared to 34% of 35-54s, 13% of 55-64s and just 2% of over-65s. ABC1 socio-economic groups are more likely to use the internet on mobiles, perhaps because they are more likely to be able to afford expensive smartphones and data plans (although smartphones are now available for less than £100 – for example, the Android-based Orange San Francisco phone, manufactured by ZTE, is available for £99.99 on pay-as-you-go, and Orange claims that it outsold the iPhone 4 in early 2011²⁷).

²⁷ http://www.en.zte.com.cn/en/press_center/press_clipping/201106/t20110630_241355.html

Figure 4.5 Use of internet on mobile phones, by demographic



QD28A: Which if any, of the following activities, other than making and receiving voice calls, do you use your mobile for?

Source: Ofcom technology tracker, Q1 2011

Base: All adults 16+ (n = 3474 UK, 460 16-24, 540 25-34, 1204 35-54, 535 55-64, 735 65+, 784 AB, 1014 C1, 701 C2, 975 DE, 1679 male, 1795 female)

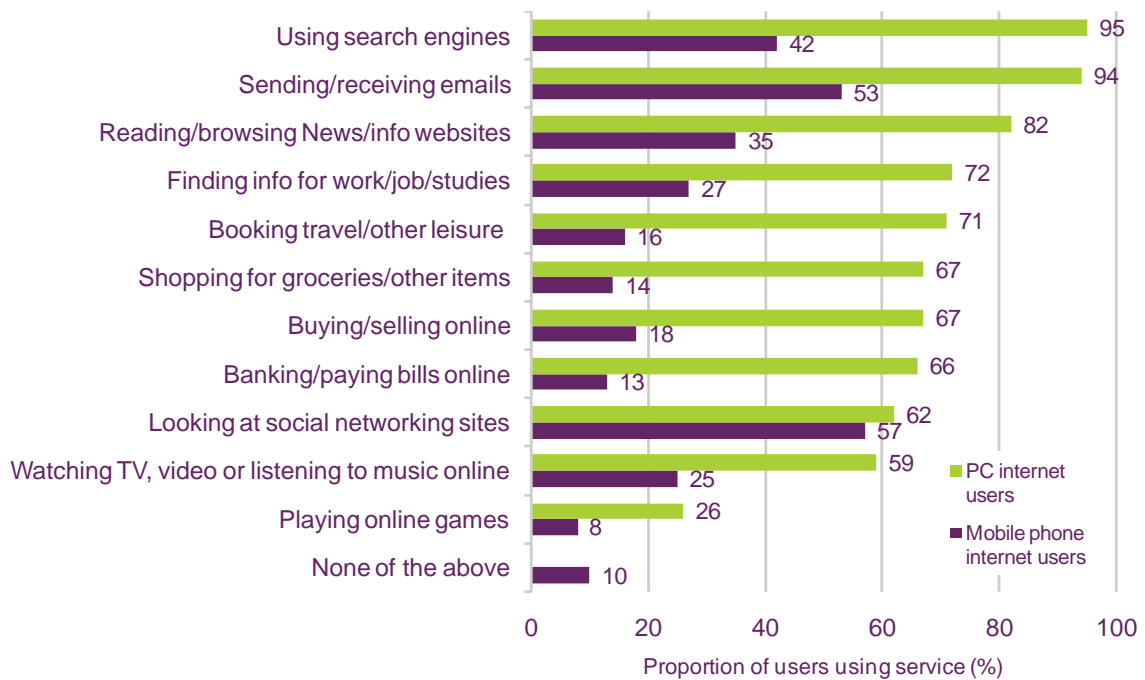
Note: Data show the proportion of adults who use a mobile phone for any of the following activities: Instant messaging, downloading apps or programs, email, internet access, downloading video, video streaming, visiting social networking sites.

Social networking is the most common internet use on mobile phones

As with internet use on PCs, there is a wide range of types of use of the internet on mobile phones, although as detailed in Figure 4.6, PC users are more likely to use all types of services than mobile phone users.

Whereas on PCs the most commonly used internet services are search engines and email, the most commonly used internet service accessed on mobile phones is social networking, used by 57% of mobile internet users.

Figure 4.6 Comparative use of internet by PC and mobile users



Q12. Which of the following type of activities do you use the internet for?

Base: All respondents (1022)

Q13. And which of these do you ever use the internet on your mobile phone for?

Base: Those who access the internet via mobile phone (212)

Source: Monetisation of data research, conducted on behalf of the Communications Consumer Panel by Accent, fieldwork in February 2011

Data from ComScore show that in March 2011 14.7 million people in the UK accessed social media sites or blogs on their phones (up 46% in a year). There is also evidence that these are used more intensively – the number of people accessing social networking services almost every day increased by 79% in the year, with more than half (54%) of those using social networking services on mobile phones in May 2011 doing so on a daily or near-daily basis (Figure 4.7).

Figure 4.7 Unique UK mobile phones accessing social networking services



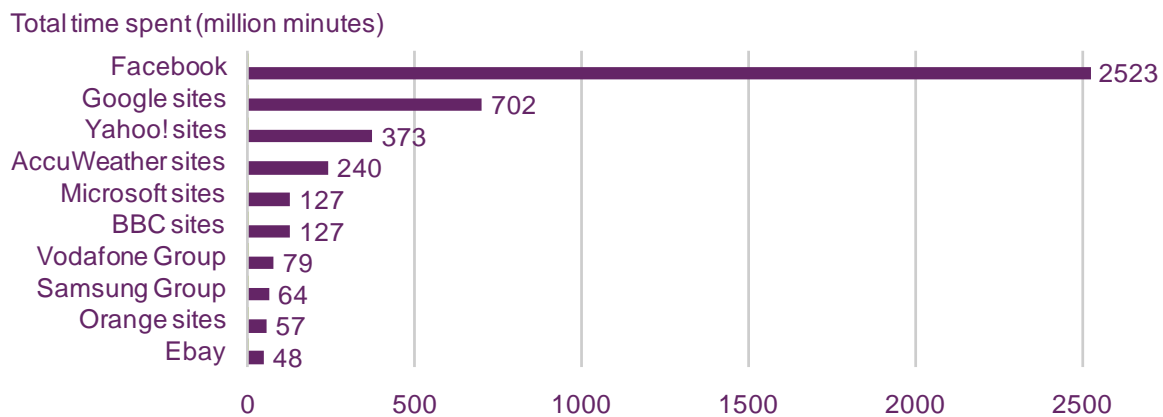
Source: comScore mobiLens, three month average ending Mar-10 vs. Mar-11, <http://www.comscoredatamine.com/2011/05/mobile-social-media-usage-up-80-percent-in-the-uk>

Facebook’s mobile users spend more than five and a half hours on the site a month

The extent of social networking on mobile phones is indicated by Figure 4.8 which shows that Facebook dwarfs other websites in terms of time spent online by mobile users. The data are collected on behalf of the GSMA by ComScore from the UK’s five mobile network operators and finds that UK users spent more than 2.5 billion minutes (42 million hours) on Facebook in December 2010, with each visitor spending an average of 5.6 hours on the site (11 minutes a day). (Note that this compares to an average of 7.2 hours spent on Facebook by fixed-line users in December 2010 – see Figure 4.36 below). However, not all time on Facebook is spent ‘social networking’: it is estimated that around 40% of time spent on Facebook globally is spent playing games – see Section 4.3.2 below).

While Facebook was a clear leader in terms of the amount of time mobile phone users spent on it, Google sites had a bigger reach, with nearly 9.5 million unique mobile phone visitors (compared to Facebook’s 7.5 million visitors). BBC Online had the third largest number of unique visitors, with 3.7 million.

Figure 4.8 Top ten UK mobile internet sites, by time spent: December 2010



Source: ComScore, Mobile Year in Review 2010 (February 2011), http://www.comscore.com/Press_Events/Presentations_Whitepapers/2011/2010_Mobile_Year_in_Review

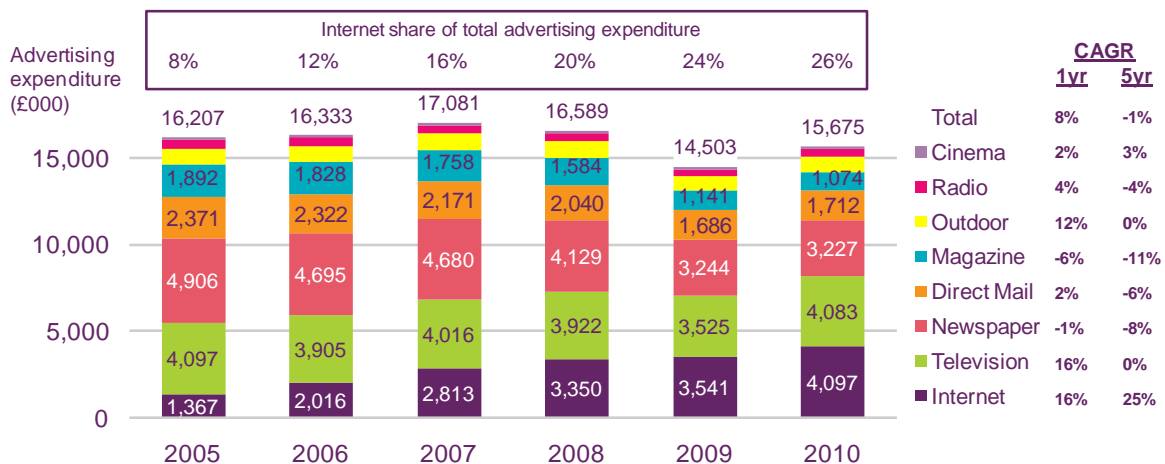
4.1.3 Internet advertising grows and diversifies

Over a quarter of advertising spend is on the internet

Advertising is the basis of many internet business models, accounting for virtually all of the £2.1bn revenue generated by Google in the UK in 2010²⁸, as well as most of the revenue of internet giants Facebook, Yahoo and MSN.

Although there has been a movement away from advertising-funded to subscription models by some high-profile content suppliers such as Spotify and News International, the market for online advertising has continued to grow, driven in part by the continued growth in online shopping (see Section 4.3.6 below), but also by the continued migration of display advertising from newspapers and magazines to online (and in particular to social networking sites). The internet was the only advertising sector to continue to grow through the economic downturn in 2009, and continued to have strong growth in 2010 as online advertising spend increased by 16% and it increased its share of total advertising spend from 24% to 26% (Figure 4.9). The internet became the largest advertising sector in 2009, when expenditure on internet advertising exceeded television advertising for the first time, and it remained the largest sector in 2010 despite a strong bounce-back by television advertising, buoyed by the end of the economic downturn and the football World Cup.

Figure 4.9 UK advertising expenditure, by category



Source: AA/Warc Expenditure Report

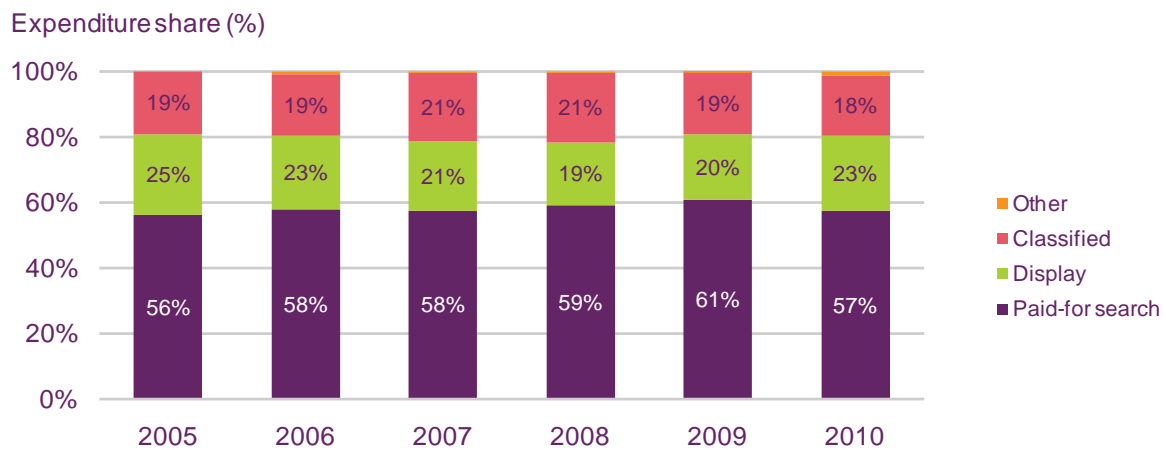
Notes: All figures are nominal; CAGR = compound annual growth rate.

Display advertising increases its share, driven by ads on social networking sites

Paid-for search (dominated by Google, which generates revenues from advertised links on its own site and other search engines powered by Google) accounted for the majority of revenue, and total search advertising revenues increased by 9% in 2010. However, for the first time paid-for search's share of revenue fell, as display advertising revenues increased by 33%.

²⁸ The UK accounted for 11% of Google's \$29.3bn global revenue in 2010; of this global revenue, 96% came from advertising, http://investor.google.com/documents/20101231_google_10K.html

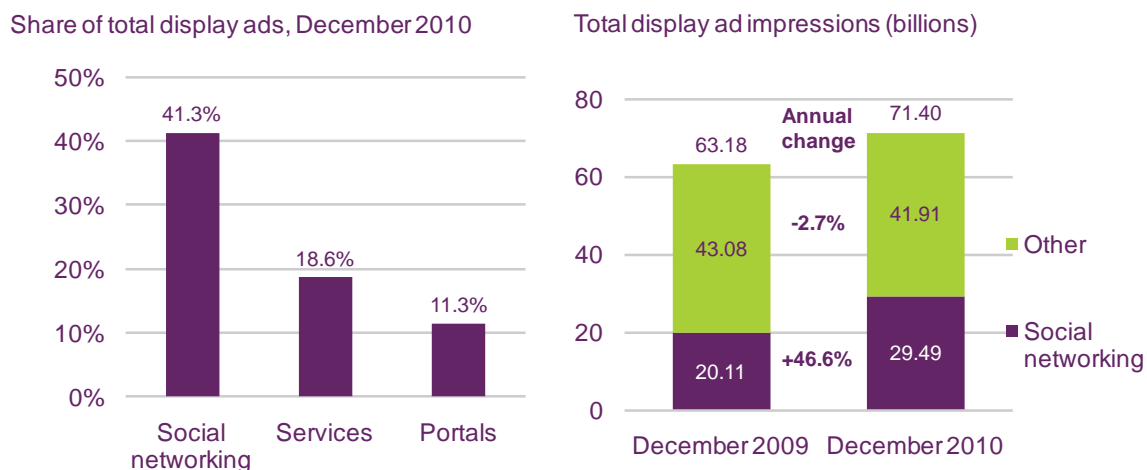
Figure 4.10 Distribution of internet advertising expenditure, by category



Source: IABUK/PwC

Figure 4.11 indicates how the growth in display advertising has been driven by social networking. In December 2010, social networking accounted for 41% of total display advertising. During the year, display ads on social networking increased by 47%, while other display advertising suffered a small decline (-3%).

Figure 4.11 UK internet display advertising



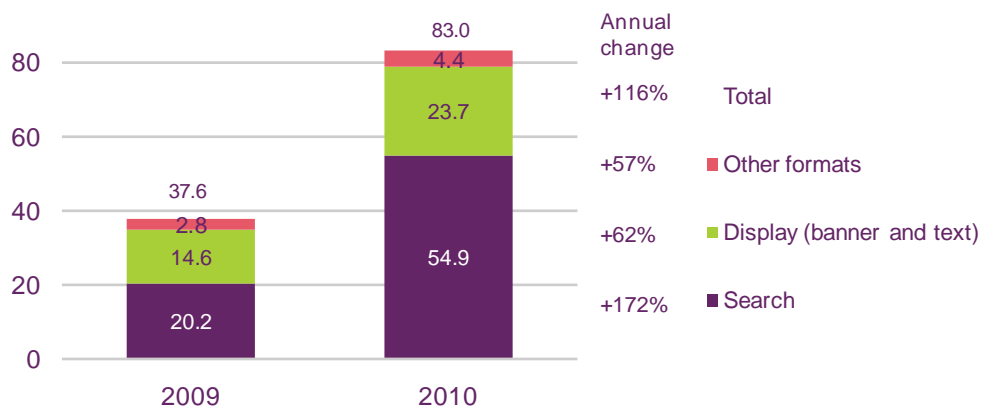
Source: comScore Ad matrix, cited in *The 2010 Europe Digital year in Review*, http://www.comscore.com/Press_Events/Presentations_Whitepapers/2011/2010_Europe_Digital_Year_in_Review

Mobile advertising more than doubled in 2010

In 2010 the mobile advertising market was only 2% the size of the internet ad market. However, driven by increasing use of internet services on mobile phones, together with more sophisticated business models (for example, fully or partially advertising-funded mobile applications), mobile advertising revenue more than doubled during 2010. Search-based advertising increased by the greatest amount (172%) and increased its share of mobile advertising from 54% to 66%. This is likely to be the result of Google's increasing emphasis on mobile advertising; although, with Facebook having a clear lead in terms of the amount of time spent on mobile internet sites (see Figure 4.8 above), it remains to be seen whether

display ads on mobile will win back share, or whether the limitations of mobile screen size will constrain the growth of display advertising.

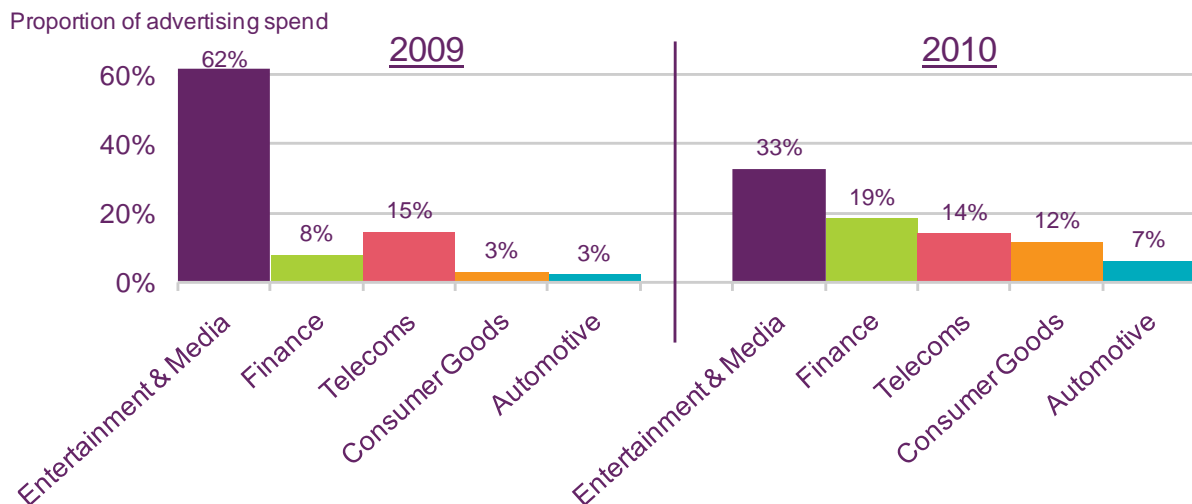
Figure 4.12 Mobile advertising revenues



Source: Source: IAB, referenced at http://www.digitalstrategyconsulting.com/intelligence/2011/03/smartphones_helped_double_uk_m.php #

Another feature of the maturing mobile advertising market is the diversification of spending away from entertainment and media (Figure 4.13). Significant growth in advertising spend on consumer goods and finance products in 2010 is likely to reflect the increasing use of online shopping on mobile as well as the changing profile of mobile internet users, as take-up moves from the early adopter phase to the mass market.

Figure 4.13 Top five mobile advertising categories, 2009 and 2010



Source: IAB, referenced at http://www.digitalstrategyconsulting.com/intelligence/2011/03/smartphones_helped_double_uk_m.php

4.2 Internet use in the UK

4.2.1 Introduction

Internet take-up in the UK has increased very rapidly over the last decade and is an essential part of day-to-day life for many people. However, engagement with web-based content is limited by internet take-up. It has grown rapidly in recent years, but has not yet reached the take-up levels of other major communications services such as broadcast networks and fixed-line and mobile telephony. This section examines internet take-up and use in the UK.

- Section 4.2.2 considers the **platforms that consumers use to access the internet**, including networks and devices.
- Section 4.2.3 examines the **demographics of internet access**, detailing how access varies by age, gender, and socio-economic group.
- Section 4.2.4. looks at the **time spent online** by UK internet users.
- Section 4.2.5 details the **range of internet use** and how it varies by age group.
- Section 4.2.6 compares the level of **confidence in using the internet** between different demographics.

Key findings

The key findings from this section of the report are:

- **More than three-quarters of UK households have home internet access**
PC-based internet take-up was 77% in Q1 2011 (up from 73% a year previously). More than two-thirds (67%) of households have a fixed broadband connection and 17% have a mobile broadband (dongle) connection.
- **Consumers use a wide range of devices to access the internet at home**
In 2010, 69% said they accessed the internet at home via a laptop or PC, 31% on a mobile phone, 9% via a games console and 4% of households using an e-reader. WiFi routers were used by 75% of broadband households in Q1 2011 (up from 66% in Q1 2010).
- **Over a quarter of over-75s have internet access at home**
In Q1 2011, 26% of over-75s had home internet access (up from 23% a year previously), as did 55% of 64-74 year-olds (up from 51%); 25-34 year-olds were the most likely to have home internet access (88%).
- **On average, internet users spent an average of around 1 hour 40 minutes a day online in April 2011.** Younger users on average spent longer online than older users.
- **Email is the most popular use of the internet.** More than three-quarters of internet users claim to have used email in the last week.
- **People are increasingly confident using the internet.** In 2010, 93% of internet users said they were confident in using the internet, up from 88% a year previously.

Older age groups, women and lower socio-economic groups are less confident, but levels have increased for all groups.

4.2.2 Internet take-up, by platform

More than three-quarters of households have home internet access

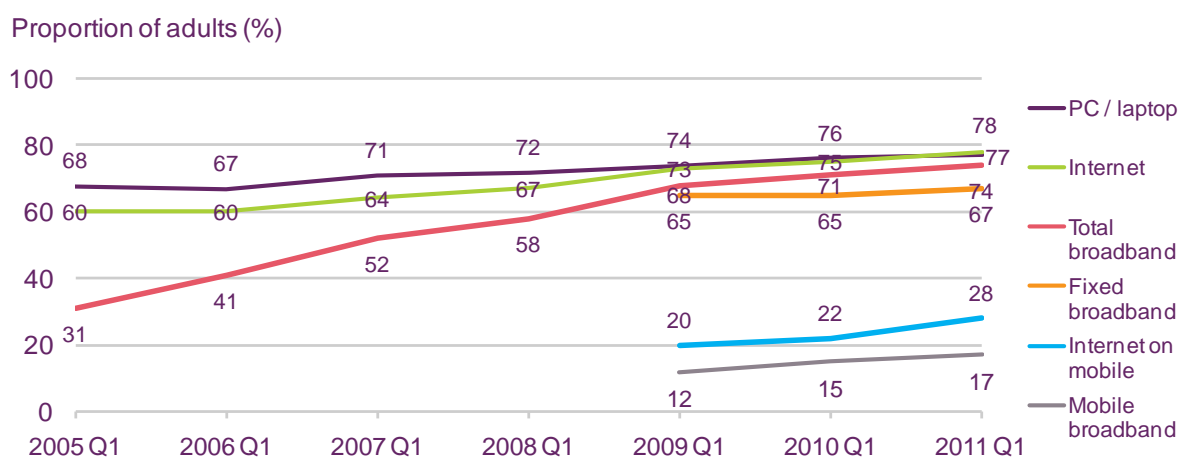
The ownership of a PC has always been a constraint on the take-up of home internet services, with the cost of the PC preventing some households from getting online and others saying they do not have the knowledge/skills to use a computer (see page 208 below). However, the mass-market emergence of internet-enabled phones and internet services designed specifically for mobile phones (such as mobile applications) means that increasingly people are getting online through mobile phones. For the first time in Q1 2011 household internet take-up (78%) exceeded PC ownership (77%) as a small proportion of households went online via mobile phones only.

By Q1 2011, 28% of households had internet access via mobile phones (see Section 4.1.2 above), and the growth in mobile phone access is outstripping growth in mobile broadband via dongles/datacards connected to PCs. A notable finding from our research into smartphone use (see Section 0) was that a third of users agreed that their smartphone was more important to them for accessing the internet than any other device, with the proportion rising for younger users.

The type of internet connection that a consumer has influences the type of content they can access. Our research into users of super-fast broadband services (see Section 5.1.3) indicates that they are typically using more services that benefit from high bandwidth (such as watching full-length TV programmes or films) since moving to a super-fast service. Although broadband performance is highly dependent on location, fixed broadband typically delivers faster speeds and a more stable and responsive connection than mobile broadband; this makes fixed access more suitable for high-bandwidth activities such as video streaming and those which require a high level of responsiveness, such as some online gaming. Mobile broadband is also generally subject to usage constraints, which makes it expensive for heavy users. However, in addition to having the benefit of being portable, mobile broadband may also be less expensive for some consumers, as it does not require a landline, and pay-as-you-go tariffs are available.

Because of the different characteristics of fixed and mobile broadband, many households have both. Of the 17% of households that had a mobile broadband connection in Q1 2011, the majority (10% of all households) also had a fixed-line broadband connection. Indeed, even while internet access via mobile networks increases (via mobile dongles and mobile phones), fixed-line internet access also continues to creep upwards, with 67% of households having a fixed internet connection in Q1 2011, up from 65% a year previously. This indicates that households are increasingly using multiple methods of accessing the internet.

Figure 4.14 Household PC and internet take-up, 2005-2011



QE1: Does your household have a PC or laptop computer? / QE2: Do you or does anyone in your household have access to the internet / World Wide Web at home (via any device, e.g. PC, mobile phone etc)? / QE6: Which of these methods does your household use to connect to the internet at home?

Source: Ofcom technology tracker, Q1 2011

Base: All adults aged 16+ (n=3474)

Note 1: "Internet on mobile" is the % of adults who use a mobile phone for any of the following activities: instant messaging, downloading apps or programs, email, internet access, downloading video, video streaming, visiting social networking sites

Note 2: From Q1 2009 the 'internet' figure includes those who access the internet on mobile phones.

WiFi networks facilitate multiple devices connecting to the internet

Within the home WiFi routers enable multiple devices to access the internet. Virtually all laptops sold have an in-built WiFi modem, while most smartphones are also WiFi enabled. Internet service providers typically now include a WiFi router within the service package for new customers and since 2008 most fixed-line broadband connections have used a WiFi router; by Q1 2011 this had risen to 75%.

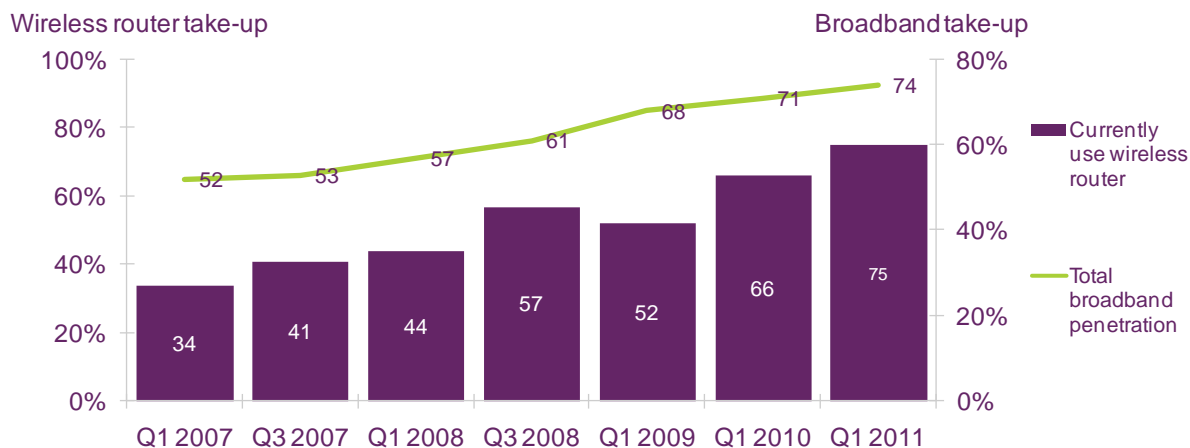
Home WiFi networks use unlicensed spectrum in the 2.4GHz or 5GHz spectrum bands, and are sometimes used in association with other technologies that facilitate internet access to multiple devices, such as:

- **'power line' technology** – that uses the mains wiring in homes to transmit data to other devices (this is often used for internet-connected TVs, as power sockets tend to be closer to televisions than phone sockets); and
- **'femtocells'** – small in-home cellular base stations. These allow consumers to use 3G/HSPA devices in their homes and route the data over their fixed broadband connections rather than the cellular network, thereby potentially offering faster connectivity and higher data capacity.

Similarly, mobile connections can potentially provide internet connections to multiple devices, either through the 'tethering' of mobile phones (whereby the mobile internet connection of a mobile phone is shared with other devices, sometimes via WiFi, thereby creating a mobile hotspot) or through 'MiFi' hardware (a cellular wireless router that creates a mobile hotspot).

Collectively, the ubiquitous in-home internet connectivity is blurring the boundaries between fixed and mobile networks, between the roles that devices such as computers, mobile phones and televisions play, and between broadcast television and on-demand video content.

Figure 4.15 Use of wireless router vs. broadband take-up, 2007-2010



Source: Ofcom research, Q1 2010.

Base: Adults aged 15+ with a broadband connection at home (from 2009 this is based on fixed broadband connections only).

Note: Total broadband penetration (fixed and mobile) based on all adults aged 15+.

New device launches extend internet access beyond the PC

The range of internet-connected devices available to consumers has increased significantly in recent years. Indeed, our research into the reasons for taking super-fast broadband services found that the desire for “good simultaneous performance on different devices” was the most common performance-related reason cited by consumers (second overall after “the deal I was offered provided good value for money” - see Figure 5.7 in the Telecoms section of this report). In addition to PCs, laptops and mobile phones, devices used to access internet content in the home include the following:

- **Games consoles** such as the Sony PlayStation 3, Microsoft Xbox 360 and Nintendo Wii allow users to browse the internet and consume web-delivered video content as well as playing games online. Our research finds that 9% of households accessed the internet using a console in Q1 2011.
- **Internet-connected TVs** – in 2010 all of the leading manufacturers launched TVs which included internet connectivity (primarily via applications providing access to services such as LoveFilm, YouTube and the BBC iPlayer, as well as manufacturers’ own services such as Sony’s Qriocity or Samsung Apps). One million were sold in the year (representing 10% of total TV sales) – see Section 2.1.3 of the TV and audio-visual section of this report for more information on web-enabled TVs.
- **Tablet computers** – Apple’s launch of the iPad in May 2010 has created the impetus for a major new category of hand-held touchscreen computers. Five main tablet platforms (operating systems) are available: iPad, Android, Blackberry, Windows and HP. Research by Enders Analysis in April 2011 found that 6% of UK mobile phone users claimed to own a tablet, with a further 24% interested in owning one.²⁹

²⁹ Enders Analysis, Mobile User Survey 2011, June 2011

- **E-readers** – Devices such as the Amazon Kindle and the Sony e-reader enable electronic books to be downloaded from online stores and read on a device of similar dimensions to a typical paperback book. Amazon.co.uk announced in May 2011 that it was now selling twice as many e-books as hardcover books, and data from the Publishers Association show that digital books' share of the total book market increased from 2% in 2009 to 11% in 2010.³⁰ Our research indicates that 4% of adults claimed to use an e-reader in Q1 2011. Unlike other connected devices, e-readers are as popular with older age-groups as younger age-groups: 4% of 16-24s and 4% of 55-64s claimed to own an e-reader while take-up was highest among 35-54s (6%).

Launch of Apple's iPad triggers major new category of connected devices

Although it was not the first tablet computer, the launch of Apple's iPad in April 2010 (May 2010 in the UK) established tablet computers as a major new category of devices for accessing the internet. In March 2011 Apple launched the iPad 2, and in June 2011 announced that it had sold 25 million units worldwide.³¹

Apple accounted for around 95% of tablet sales in Q3 2010³², and data from ComScore show that the iPad accounted for 99% of data volumes used by tablets in May 2011³³. However the market has rapidly become crowded – tablet PCs were a major theme at the Consumer Electronics Show in Las Vegas in November 2010, where upwards of 80 models were showcased³⁴. High-profile tablet PCs included the Samsung's Galaxy Tab and Motorola's Xoom, which run on Google's Android operating system, and the Blackberry Playbook.

Our consumer research finds that 2% of UK adults claimed to have a tablet PC in Q1 2011. Enders Analysis estimates that around 1.5 million tablets had been sold in the UK by June 2011.³⁵ There also appears to be considerable scope for growth – consumer research by Enders in March 2011 found that in addition to the 6% of UK mobile users who claimed to own a tablet, a further 6% were very interested in owning one and 18% quite interested.³⁶

Tablet PCs are highly portable, generally offer a touchscreen, are quicker to boot up than PCs and – for the iPad and Android-based tablets in particular – promote the consumption of internet content through applications (apps), produced by third-party developers and sold (or offered free of charge) via stores such as Apple's App Store and Android Market.

However, while tablet PCs may be changing the way in which users consume internet content, they appear to be complementary rather than substitutes for other devices. Enders' research found that 97% of tablet owners also had a home laptop or desktop (90% had a laptop) and 78% had a smartphone.

Figure 4.16 indicates how the take-up of some of these devices varies with age. In line with general internet take-up (see Section 4.2.3 below), devices generally have the highest take-up among 16-24s and 25-34s, with markedly lower take-up among over-65s. Notably, one in five 16-24 year-olds access the internet via a games console.

³⁰ 'Amazon.co.uk Now Selling Twice as Many Kindle Books as Hardcover Books', 19 May 2011, <http://www.amazon.co.uk/gp/press/home/2011> ; The Publishers Association reveals accelerated growth in 2010 digital book market', 3 May 2011, <http://www.publishers.org.uk/>

³¹ <http://www.apple.com/pr/library/2011/03/02Apple-Launches-iPad-2.html>

³² <http://www.metro.co.uk/tech/845926-apple-ipad-has-95-of-all-tablet-sales>

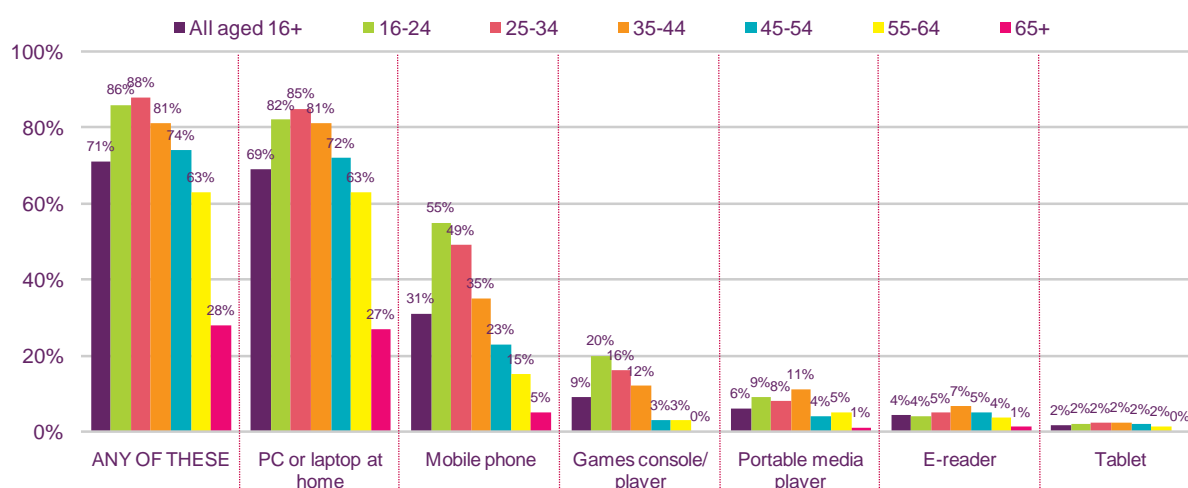
³³ <http://www.comscore.com/2011/06/ipad-share-of-tablet-traffic-by-country/>

³⁴ http://www.computerworld.com/s/article/9204258/CES_11_tablets_worth_watching

³⁵ Enders Analysis, Apple, Android and tablet market share, 14 July 2011

³⁶ Enders Analysis, Mobile User Survey 2011 (June 2011)

Figure 4.16 Devices used to visit internet websites in 2010, by age



IN1/ IN2 – Do you or does anyone in your household have access to the internet at home through a laptop or computer? And do you personally use the internet at home?/ Do you own and use any of the items shown on this card to visit internet websites? (Prompted responses, single coded)

Base: All adults aged 16+ (2117 aged 16+, 295 aged 16-24, 328 aged 25-34, 409 aged 35-44, 314 aged 45-54, 336 aged 55-64, 434 aged 65+) Significance testing shows any difference between any age group and all adults aged 16+

Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

4.2.3 The demographics of internet access

Older people and those in lower socio-economic groups are less likely to have internet access

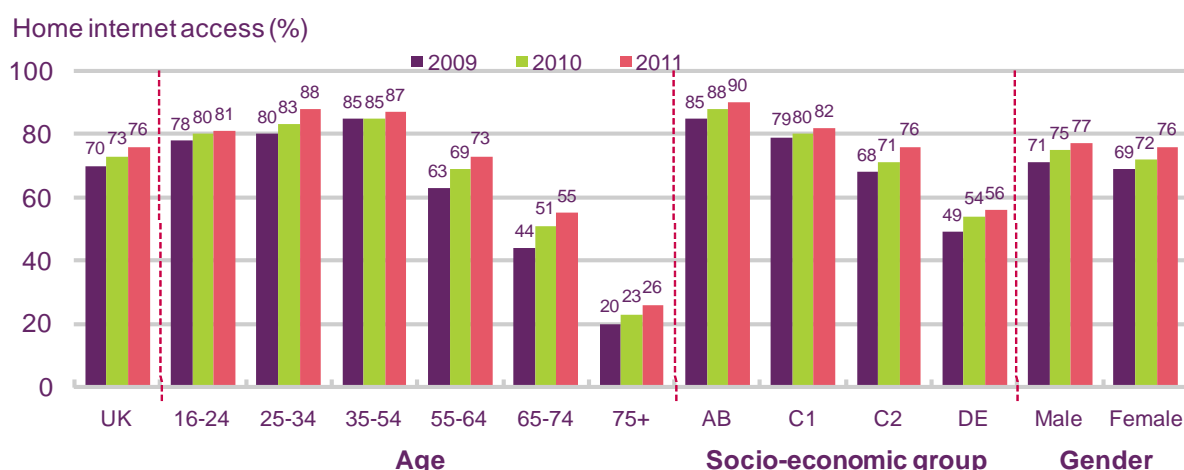
Younger people, men and those in higher socio-economic groups are more likely to have access to the internet at home, although take-up among all groups increased between Q1 2009 and Q1 2011 (Figure 4.17).

Internet take-up is highest among 25-34s (88%) and 35-54s (87%). This is related to a strong correlation between internet access and having children in the household – across the UK as a whole 91% of households with children have internet access, compared to 66% of households without children. Over-65s are significantly less likely to have internet access, although take-up is increasing, with 55% of 65-64s and 26% of over-75s having home internet access. For most over-65s without internet access the main reason is a lack of interest – 31% said that the main reason for not having internet access was that they had no need for it, with 24% saying they were too old to use the internet and 17% saying they did not want a computer. A significant minority (15%) said that their main reason was they did not know how to use the internet / a computer, and 3% said that it was too expensive.³⁷

Take-up among DE households is just 56%, compared to 90% of AB households. Cost is a main concern for some of these households, with 17% saying that their main reason for not having an internet connection was that the service, set-up, or computer was too expensive; however, lack of interest was again the most common reason, with 25% saying they had no need for it and 16% saying they did not want a computer.

³⁷ Consumer research data on reasons for not having a home internet connection is collected via Ofcom's technology tracker (QE24A and QE24B), <http://stakeholders.ofcom.org.uk/market-data-research/continuing-research/>

Figure 4.17 Home internet access, by age, socio-economic group and gender



QE2: Do you or does anyone in your household have access to the internet/ World Wide Web at home?

Source: Ofcom technology tracker, Q1 2011.

Base: all adults 16+ (n = 3474 UK, 460 16-24, 540 25-34, 1204 35-54, 535 55-64, 407 65-74, 328 75+, 784 AB, 1014 C1, 701 C2, 975 DE, 1679 male, 1795 female)

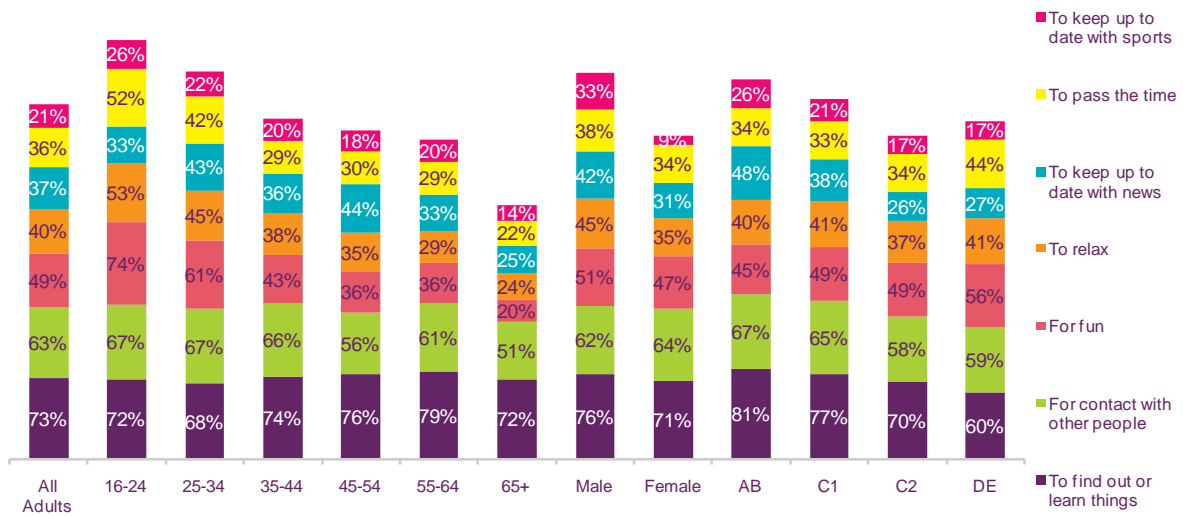
Reasons for using the internet vary by age

As internet take-up varies by age, so too do the reasons for using the internet. Figure 4.18 shows some of the reasons for using the internet by consumer group, 'stacked' to show the breadth of responses.

There are differences between generations in their motivations for using the internet. Older people in general appear to have a much more functional approach to the internet, using it primarily 'to find out or learn things' (72% of over-65s) and 'for contact with other people' (51% of over-65s) and are less likely to use it 'for fun' (20%), 'to relax' (24%) or 'to pass the time' (22%). By contrast, younger people are much more likely to also use the internet for entertainment: 74% of 16-24s say they use the internet 'for fun', 53% 'to relax' and 52% 'to pass the time'.

There are also some differences between men and women. Women are slightly more likely to use the internet to contact other people (64% compared to 62% of men), but are less likely to use the internet 'to relax' (35% compared to 45% of men) or 'to keep up to date with news' (31% compared to 42% of men).

Figure 4.18 Reasons for using the internet, by age, gender and SEG



IN42 – Which, if any of these are reasons why you use the internet? (prompted responses, multi-coded)

Base: All adults aged 16+ who use the internet at home or elsewhere (1489 aged 16+ in 2010, 271 aged 16-24, 287 aged 25-34, 338 aged 35-44, 245 aged 45-54, 214 aged 55-64, 134 aged 65+, 752 male, 737 female, 433 AB, 478 C1, 278 C2, 300 DE)

Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

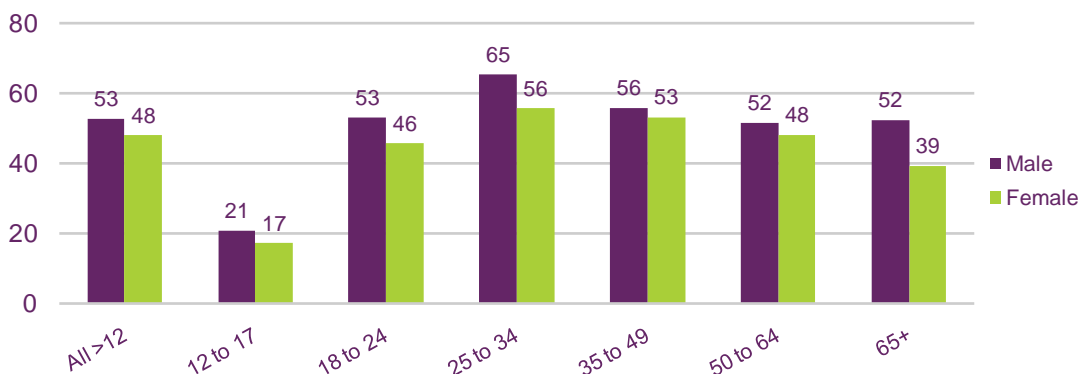
4.2.4 Time spent online

Younger people typically spend much more time online

Not only are younger people more likely to access the internet at home, those who do so are likely to spend more time online. Overall, internet users spend around 50 hours a month online at home – this rises to 65 hours a month, or more than two hours a day, among 25-34 year-olds.

Figure 4.19 Average time spent on the fixed-line internet, by age and gender

Average monthly hours online per internet user



Source: UKOM/Nielsen, April 2011

UKOM/Nielsen data on internet use

We use data collected from the UKOM/Nielsen panel to report internet use in the UK.

The panel consists of over 48,000 internet users (33,000 at home and 16,000 at work) who are selected to be a representative sample of UK PC users as a whole. Monitoring software installed on internet-enabled PCs in the panellists' households and workplaces record every activity they undertake on the PC.

Time spent is based on what is in focus on the screen – i.e. only the open 'window' is considered, background activities are not measured. There is a cut-off of 30 minutes, whereby measurement stops if no activity has been detected.

The data are collected from UKOM/Nielsen's home and work panel. This means that internet use at both home and work is included.

However, it should be noted that only internet use on PCs is captured. This means that internet use on mobile phones, and on other devices such as games consoles, tablet computers and internet-connected televisions is not included. Therefore total internet use is likely to be understated and data detailing change over time should be treated with some caution, as it may be that internet users are increasingly substituting time spent on the internet on a PC with time spent accessing the internet via other devices.

UKOM/Nielsen considers everyone in the UK aged 2 or above, and there are different measures of reach, or penetration, of internet sites and applications.

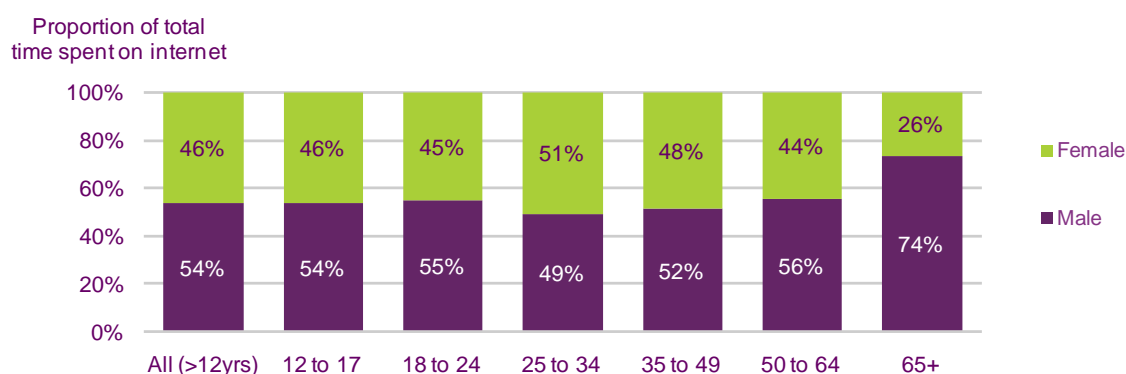
Active reach – this a percentage (for a site, applications etc ,in any given month), of the unique visitors to a site, based on individuals aged 2+ who have used an internet-enabled computer at home or work in the time period. Reach is based on anyone who has used their PC (not necessarily gone online).

Universe reach - this a percentage (for a site, applications etc ,in any given month), of the unique visitors to a site based on individuals aged 2+ who have an internet-enabled computer.

Population reach - this a percentage (for a site, in any given month), of the unique visitors to a site based on individuals aged 2+ of the population as a whole.

Figure 4.20 indicates how the total time spent online varied by gender among different age groups. It shows that in April 2011 men in the UK spent slightly more time than women accessing the internet. This is driven in particular by the usage pattern among older age groups: among over-65s men spend three times as much time as women on the internet – driven both by a higher proportion of men than women accessing the internet and also higher time spent per user.

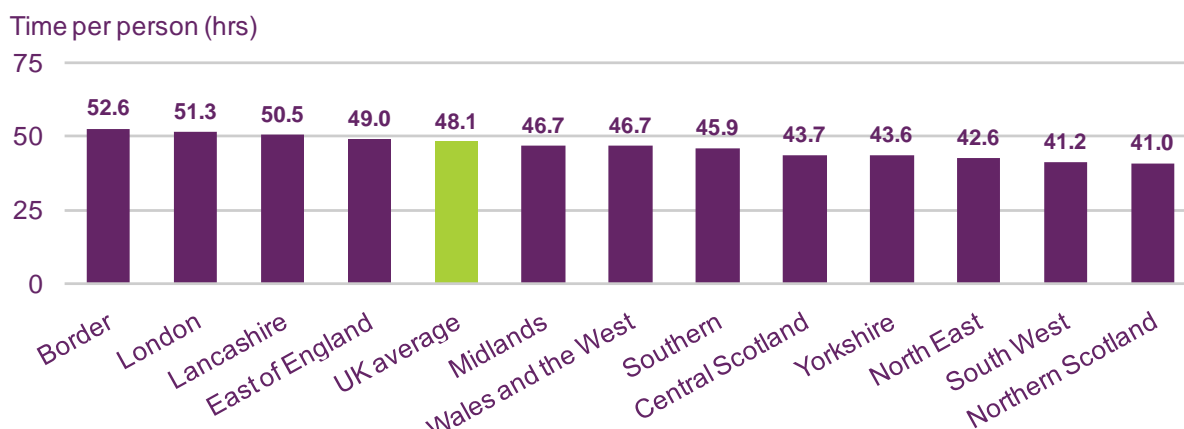
Figure 4.20 Home internet use, by gender (total time spent online)



Source: UKOM/Nielsen, April 2011

Internet usage data from UKOM/Nielsen also allows a comparison of average time spent on the internet by region (Figure 4.21). It finds that on average internet users in the Border region of England and Scotland spend the most time online, while users in South West England spend the least amount of time on the internet. Of course, differences between regions are driven by different demographic characteristics – it is likely that lower use in the South West is the consequence of an older population, with older internet users typically spending less time on the internet than younger users.

Figure 4.21 Monthly internet-enabled PC time per user, by region



Source: UKOM/Nielsen, home and work panel, applications included. Month of April 2011. Regions based on ISBA regions.

Note: active online universe = number of users aged 2+ who use an internet-enabled computer.

4.2.5 Range of internet use

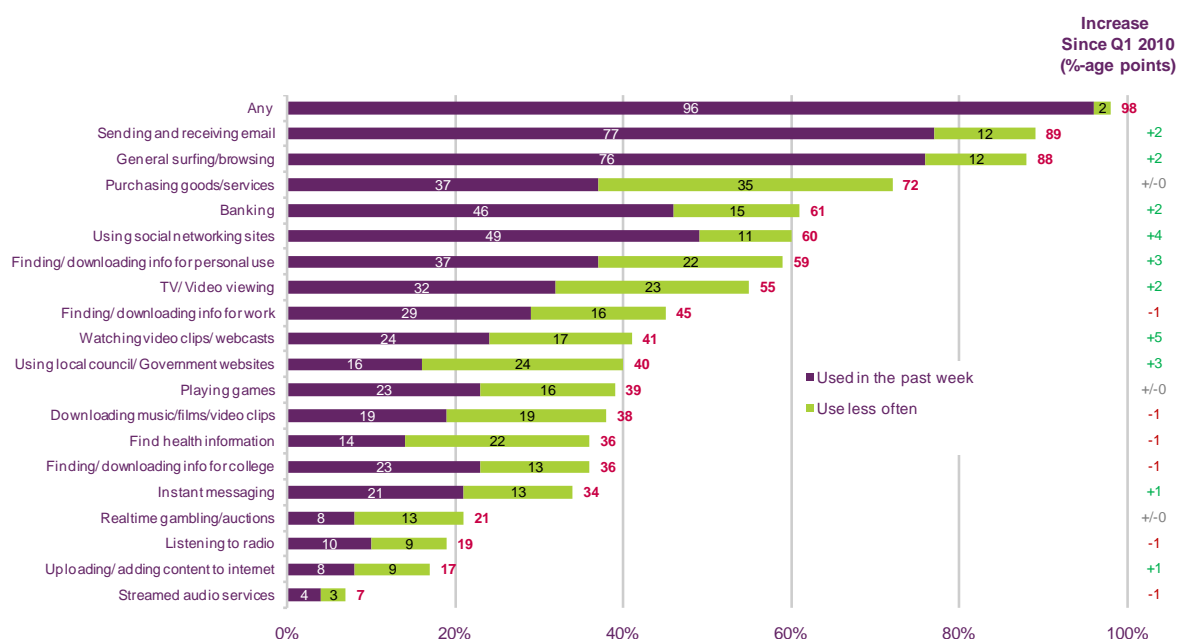
Email and web browsing are the most popular web activities

As indicated by Figure 4.22, consumers in the UK use the internet for a wide range of activities including communications (email, social networking, instant messaging), entertainment (playing games, TV/video viewing), and finding information and transactions (purchasing goods/services, banking). Despite the growth of social networking sites as a means of communication, email is used by more people than any other internet service, with 77% saying that they had used it within the past week.

Use of most internet services had modest growth in 2010, with notable increases in watching video clips/webcasts (up five percentage points), use of social networking (up four percentage points), and using local council/government websites (up three percentage points).

None of the services we tracked had any significant decline between 2009 and 2010. However, it is notable that online viewing of television programmes or listening to radio did not increase significantly. This is perhaps the result of the growth of other ways of consuming television and radio programmes – for example, an increasing number of TV programmes are recorded on DVRs, and digital radio services are available through television platforms.

Figure 4.22 Claimed use of the internet for selected activities



QE5. Which, if any, of these do you or members of your household use the internet for whilst at home?

Source: Ofcom research, Q1 2011

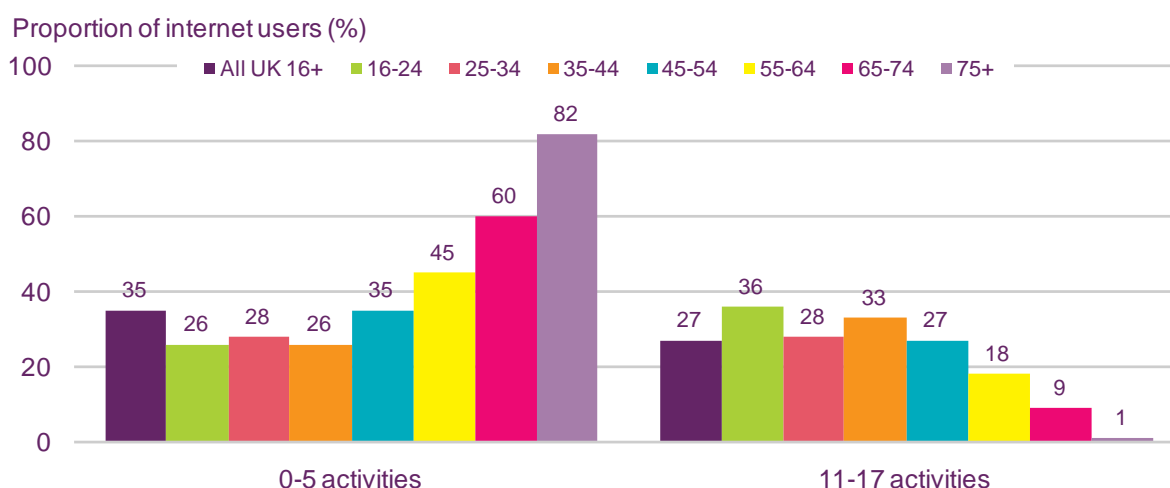
Base: Adults aged 16+ with a broadband connection at home (n= 2481 UK)

Older users are likely to use the internet for relatively few activities

Figure 4.18 above indicates that reasons for using the internet vary with age, with younger users more likely to use the internet for entertainment as well as communication and finding information. This is also reflected in the findings from our research into digital participation, which shows that breadth of internet use varies substantially by age. We asked people how many of a specified list of 17 online activities they engaged in, and compared the results by age group (Figure 4.23).

Older age-groups generally use the internet for fewer types of services than younger age groups – we found that 82% of over-75s and 60% of 65-74s said that their household used five or fewer internet activities, compared to only just over a quarter of those under 44. Similarly, younger users are much more likely to engage in a large number of our list of activities: 36% of 16-24s claimed to use the internet for at least 11 of the activities, compared to less than 10% of over-65s.

Figure 4.23 Breadth of internet use (number of internet activities undertaken)



Q10A: Which, if any, of these do you or members of your household use the internet for whilst at home?

Source: Ofcom Technology Tracker digital participation research, Q1 2011

Base: All home internet users (n=2534)

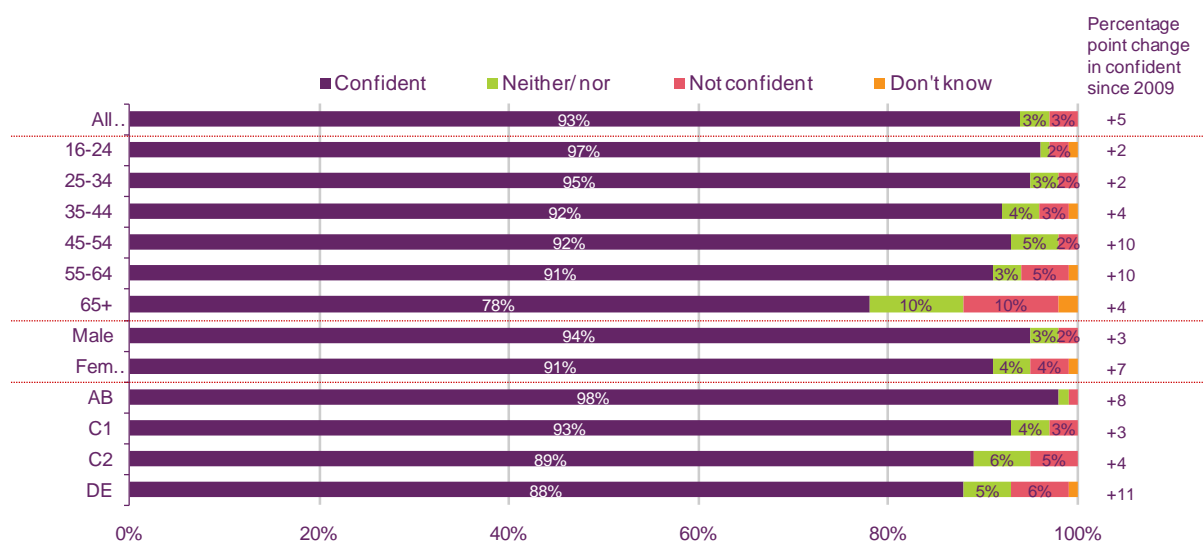
4.2.6 Confidence and concerns about using the internet

Older people are increasingly confident using the internet

The large majority of internet users claim to be confident in using the internet, and levels of confidence increased across all age groups and social groups between 2009 and 2010 (Figure 4.24). Older people are least likely to be confident in using the internet, with one in ten of over-65s saying they are not confident, while only one in 50 under-34s say they are not confident. The biggest increases in confidence come among 45-54s and 55-64s, with a ten percentage point rise in both age groups; more than 90% now claim to be confident.

Men are still marginally more likely to be confident in using the internet than women (97% to 94%), but the gap has been closing. Higher social groups are also more likely to be confident internet users, although the proportion of those in social group DE claiming to be confident increased from 77% in 2009 to 88% in 2010.

Figure 4.24 Confidence as an internet user, by age, gender and SEG



IN10D – Overall then, how confident are you as an internet user? (Prompted responses, single coded)

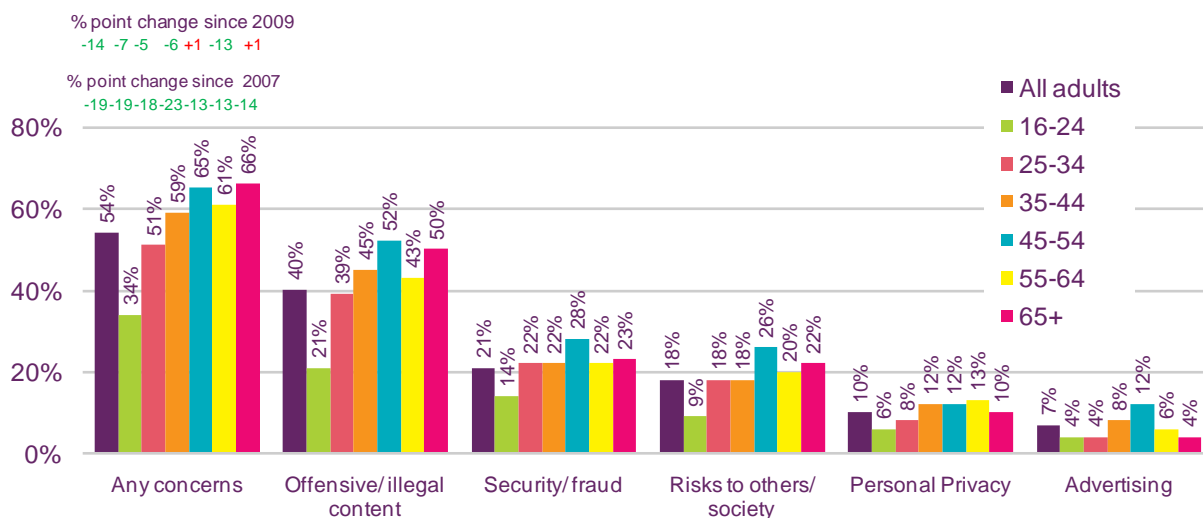
Base: All adults aged 16+ who use the internet at home or elsewhere (1489 aged 16+ in 2010, 271 aged 16-24, 287 aged 25-34, 338 aged 35-44, 245 aged 45-54, 214 aged 55-64, 134 aged 65+, 752 male, 737 female, 433 AB, 478 C1, 278 C2, 300 DE)

More than half of internet users have some concerns about using it

Within our media literacy research we also ask about the concerns that consumers have using the internet. As the internet has matured as a medium and as users have got more and more used to it, concerns about it have decreased among all age groups. Overall, 54% of all users surveyed in 2010 said they had some concerns, compared to 73% in 2007. Older users are most likely to have concerns, with two-thirds of over-65s (66%) saying they had concerns, compared to just one-third of 16-24s (34%).

The biggest single cause of concern among all age groups was offensive/illegal content, although there was a marked difference between 16-24s and other age groups, with 21% of 16-24s saying they had concerns compared to 40% of internet users overall.

Figure 4.25 Concerns about the internet among users, by age



IN30 – Can you tell me if you have any concerns about what is on the internet? (Spontaneous responses, multi-coded).

Base: Adults aged 16+ who use the internet at home or elsewhere (1282 aged 16+, 225 aged 16-24, 235 aged 25-34, 313 aged 35-44, 213 aged 45-54, 168 aged 55-64, 128 aged 65+). Significance testing shows any differences between any age group and all adults aged 16+.

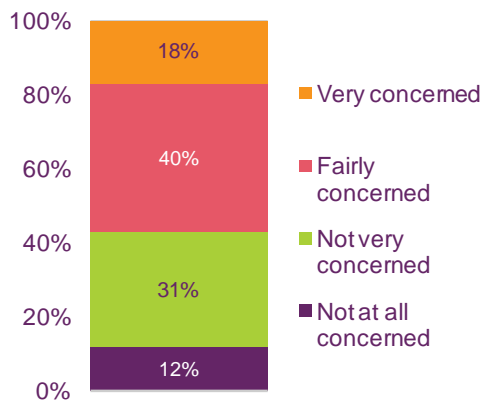
Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010.

Online privacy is a concern for many internet users

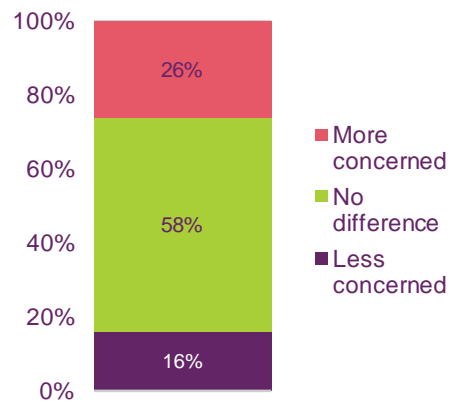
Only half of all people have any front-of-mind concerns about using the internet, with lower levels of concern about individual issues such as privacy. But, when prompted, people's concerns inevitably rise. In research commissioned by the Communications Consumer Panel, concerns about online privacy were explicitly explored. This found that, when specifically prompted, 58% of internet users said they had some concerns about online privacy. Among those who accessed the internet on both mobile phone and computer, a quarter (26%) said that they were more concerned about privacy issues while using a phone, with the majority (58%) not making a distinction between online privacy issues on mobile phone or PC.

Figure 4.26 Concerns about privacy online

How concerned are you about your privacy on line?



Are you more or less concerned about privacy issues using a mobile phone compared to a PC?



Q10. Generally speaking, when you use the internet, how concerned are you about your privacy online?

Base: All respondents (1022)

Q11. Are you more or less concerned about privacy issues when you use your mobile phone to access the internet compared to when you use a PC, laptop or tablet?

Base: Those who access the internet via mobile phone (212)

Source: Online Personal Data: the Consumer Perspective , research conducted on behalf of the Communications Consumer Panel by Accent, fieldwork in February 2011

4.3 Consumption of web-based content

4.3.1 Introduction

Having examined how people access the internet and the time they spend online in the previous section, this section explores the specific use of internet content and services.

- Section 4.3.2 examines the **most popular online sectors, websites and applications** in terms of reach and time spent.
- Section 4.3.3 focuses on the use of **social networking** sites.
- Section 4.3.4. explores the use of **search engines**.
- Section 4.3.5 considers **user-generated content**.
- Section 4.3.6 provides an overview of use of the internet for **shopping**, including the use of shopping sites, price comparison sites and voucher/coupon sites.

Key findings

The key findings from this section of the report are:

- **Google has the largest reach, Facebook leads by time spent.** Search giant Google had the highest reach of any online brand, with 79% of active internet users visiting its homepage, averaging 133 visits in April 2011. Facebook was easily the most popular website in terms of time spent on PCs, accounting for 169 million hours in April 2011 (more than two-and-a-half hours for every person in the UK), ahead of eBay (30 million hours) Google (28 million hours) and YouTube (22 million hours).
- **Six in ten broadband users use social networking, but there are signs that it may be reaching saturation.** Total time spent on social networking sites was just 1.3% higher in April 2011 than in April 2010, and in 2010 just 3% of people said they did not yet have a social networking profile but were interested in having one.
- **An increasing number of internet users are creating content.** In 2010, 54% of internet users said they had a social networking profile (up from 44% in 2009), 53% said they had uploaded photos (up from 49%) and 17% said they had uploaded a video (up from 11%).
- **Nearly three-quarters of internet users shop online.** In Q1 2011, 73% of UK internet users claimed to use their broadband connection for purchasing goods or services. Visitors to coupon and reward sites increased by 25% in the year to April 2011, when nearly 40% of internet users visited at least one such site.

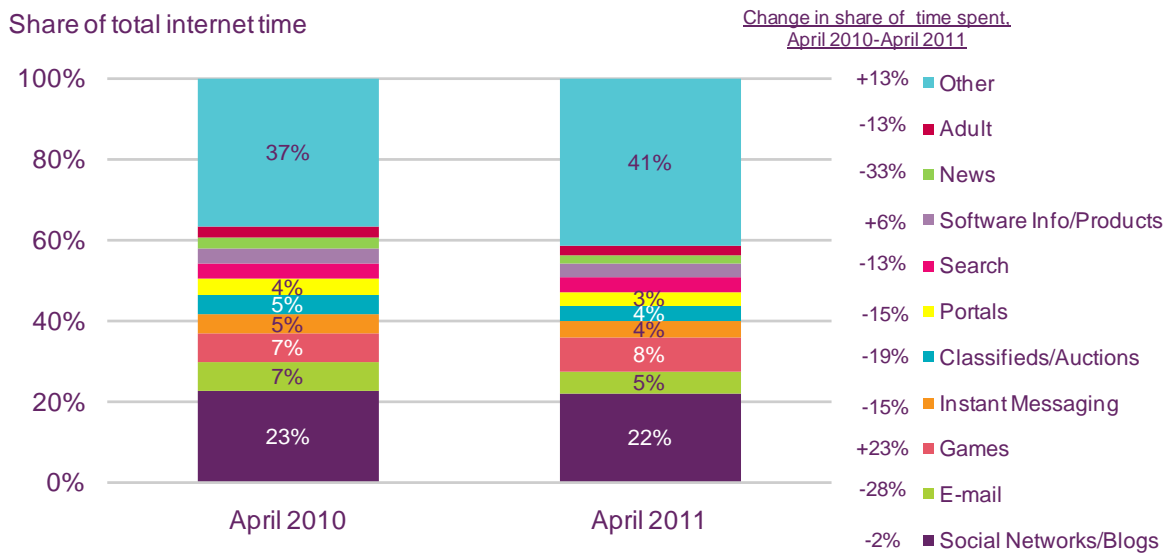
4.3.2 Most popular online sectors, websites and applications

Social networking accounts for more than a fifth of all time spent on the internet

Figure 4.27 details the total share of time spent by UK users of the internet on PCs, based on data collected from the UKOM/Nielsen panel. It indicates a good deal of continuity between April 2010 and April 2011, with the 'other' category (which includes a range of entertainment services including short- and long-form video) increasing its share from 37% to 41%. The share of time spent on social networking actually decreased marginally (in

absolute terms it increased slightly, see Figure 4.37 below), although it still accounted for 22% of all time spent on the internet. Notably, there were declines for email, instant messaging and portals, all of which provide services that can be replaced by social networking services; sites like Facebook are used for communication and can also be set up as users' home pages. Declining time spent on email and instant messaging on the fixed internet may also reflect increasing use of smartphones for these services, while a decline in the share of time spent looking at news sites may also be driven by people increasingly using smartphones to keep in touch with current affairs.

Figure 4.27 UK internet sectors' share of total PC internet time



Source: UKOM/Nielsen

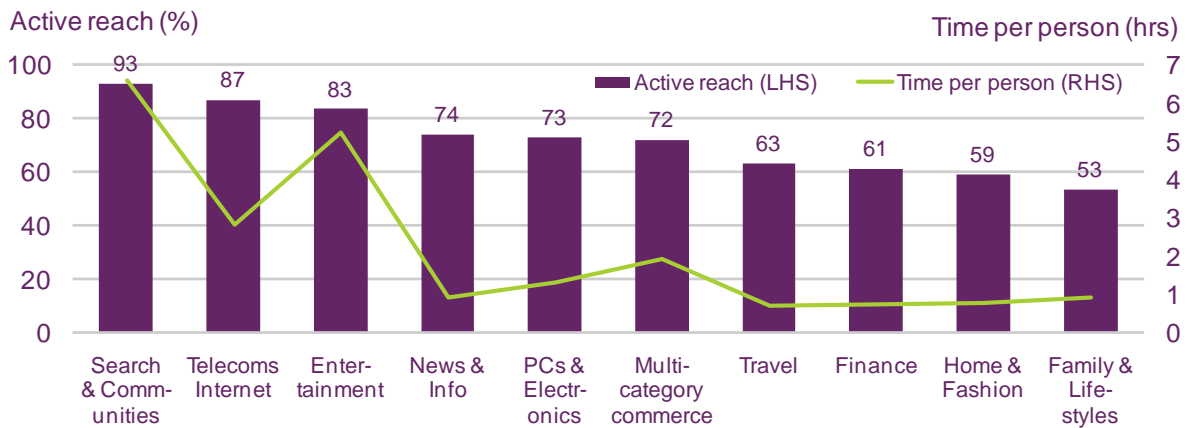
Note: Home and work panel, applications included. Email excludes work-related email

UKOM/Nielsen audience analysis organises websites into categories. The most popular category in May 2010 was 'search and communities' (this includes search engines like Google, portals like Yahoo! and social networking sites like Facebook). It attracted a monthly active reach of 93%, meaning that 93% of all unique internet users visited a site in this category. It was also the most popular category from the perspective of time spent per person, with the average person using sites in this category for 6 hours 36 minutes in April 2011 (Figure 4.28).

'Telecoms/Internet' sites had the second highest reach, with 87% of users visiting a site, spending an average of 2 hours 51 minutes a month. This category includes email, instant messaging and voice over IP services like Skype.

Sites within the 'Entertainment' category were visited by 83% of internet users, who spent an average of 5 hours 13 minutes – this category includes most video and music sites. Nearly three-quarters of users (74%) visited news and information sites, but on average users spent less than an hour (56 minutes) visiting sites in this category.

Figure 4.28 Most popular site categories, by active reach



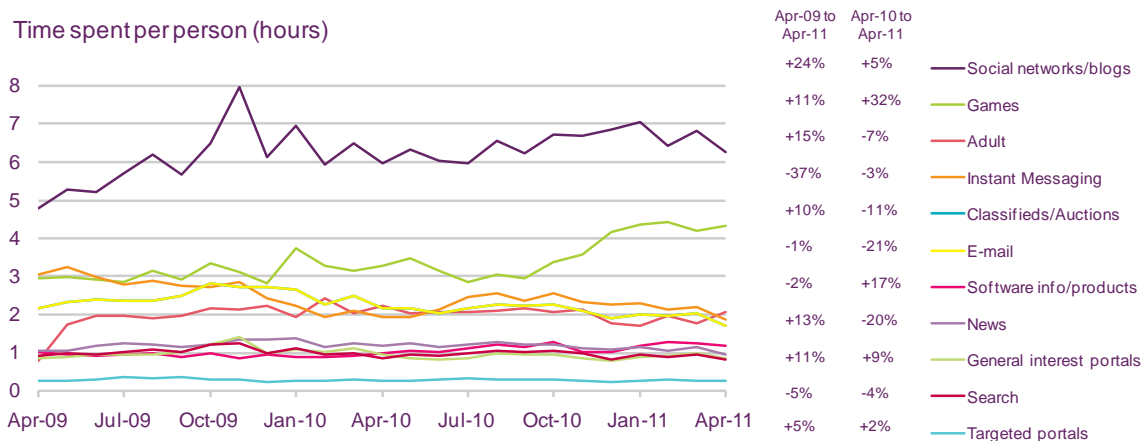
Source: UKOM/Nielsen home and work panel, applications included, month of April 2011.
 Note: "active reach" = the percentage of all active 2+ unique persons who visited the site or used the application. 'Active' is defined as anyone who used an internet-enabled computer within the time period.

Time spent playing online games increased by 33% between April 2010 and April 2011

Figure 4.29 looks at changes in average time spent per month on some of the most popular sub-categories of websites in the UKOM/Nielsen classification. After social networks/blogs, the sub-category which took the second highest proportion of total time on the internet was online gaming, accounting for 8% of total UK internet time in April 2010. Users of online games played for on average of 4 hours 19 minutes in April 2011, up from 3 hours 16 minutes a year previously. However, this time is likely to be understated as it excludes time spent on games within social networking sites— therefore excluding the likes of the Farmville game when played via Facebook.

Average timer per user on email declined by 21% between April 2010 and April 2011. This might partly again be explained by the Facebook effect – with some users potentially using Facebook for communications that that they would have previously made using email. Some users may also be increasingly using smartphones for email, leading to a reduction in time spent using email on PCs.

Figure 4.29 PC-time per user per month spent on internet activities



Source: UKOM/Nielsen
 Note: Home and work panel, applications included. Email excludes work-related email

People spend more than five times as much time on Facebook than on any other site

More than five times as much time is spent on Facebook than on any other single internet site, with UK users spending a total of 169 million PC hours on the social networking site in April 2011, far ahead of second-placed eBay (30 million hours) (Figure 4.30). This is in addition to time spent on Facebook on mobile phones – which amounted to 42 million hours in December 2010 (see Figure 4.8 above). However, not all time on Facebook is spent 'social networking': Facebook has developed into a general portal offering services such as email, films (for example, it has agreed a deal with Warner Brothers, which streams movies on the site³⁸) and, most significantly, games - it is estimated that around 40% of time spent on Facebook globally is spent playing games, provided by third-party developers such as Zynga or Playfish.³⁹

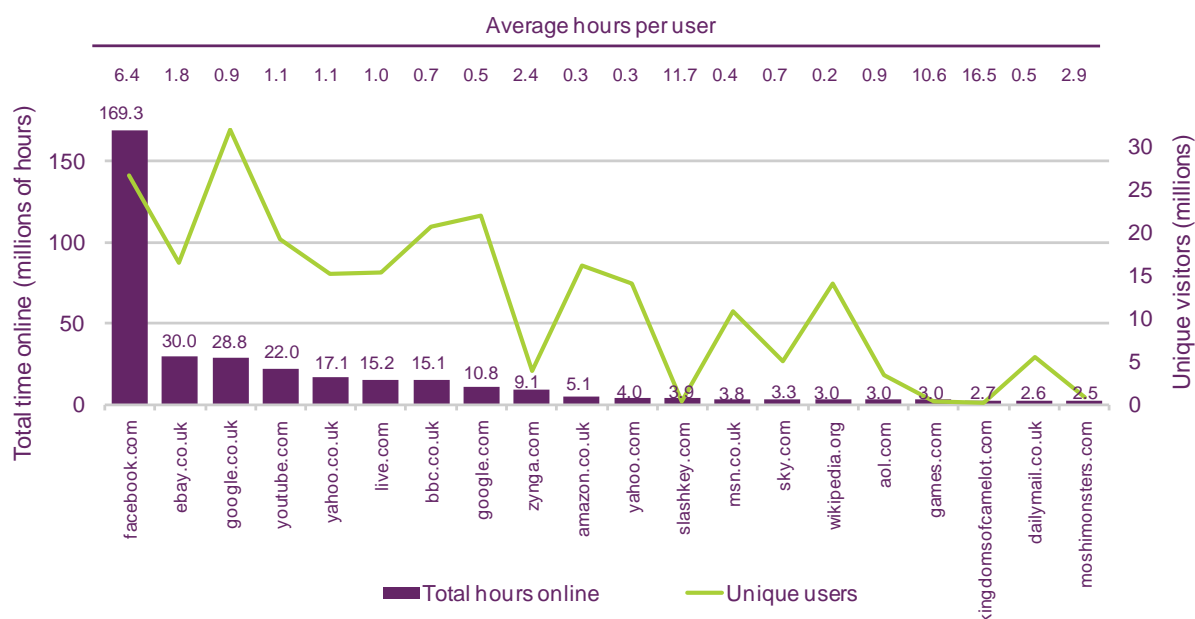
More PC internet users in the UK visited search giant Google in the month, with 32.0 million unique visitors (79% of active users), compared to 26.6 million visitors to Facebook. Google users spent an average of 54 minutes on the site, doing an average of 133 searches. The much lower time spent on Google compared to Facebook represents fundamental differences in the business models – the objective of Facebook is to keep users on its site for as long as possible to maximise advertising revenues, while Google's objective is to have users on its site for as little time as possible for each search, ensuring that users quickly find the information they require and generating revenues when users go to advertisers' sites

Most of the UK's top 20 websites by time spent are online-only brands – the exceptions are the websites of the BBC, Sky and the Daily Mail. The four gaming sites in the top 20 have lower reach than all of the other top-20 sites, but are characterised by users spending a large amount of time on them. Three of the gaming sites - Zynga (home of the FarmVille game), Kingdoms of Camelot and Slashkey.com (home of the FarmTown game) are primarily Facebook-based, while Games.com also has a Facebook presence.

³⁸ <http://www.bbc.co.uk/newsbeat/12688633>

³⁹ <http://techcrunch.com/2010/07/30/half-of-all-facebook-users-play-social-games-its-40-of-total-usage-time/>

Figure 4.30 Top 20 UK websites by time spent on PCs online, April 2011



Source: UKOM/Nielsen, April 2011 – ‘At home’ data excluding internet applications

Google has the greatest reach among all ages of internet users

Section 4.2.3 highlighted significant differences in take-up and use of the internet by age group. However, there are few differences in the most popular websites in terms of reach, with the same nine companies accounting for all top ten sites across all age groups.

Google’s leading position in search means that it has the highest reach across all age groups, while the integration of aspects of MSN, Windows Live and Bing within the Windows platform explains the high reach of the Microsoft brand across all age groups. It is no surprise that Facebook also features prominently among younger age groups, but worth noting that it is behind only Google, Microsoft and the BBC among over-65s. Indeed, this represents a significant change from May 2010, when Facebook ranked ninth among over-65s.⁴⁰

The BBC network of sites also feature in the top ten among all age groups, indicating its success in reaching all age groups with a range of content including programme-related, news, sport and weather.

⁴⁰ Ofcom Communications Market Report 2010, Fig 4.30.

Figure 4.31 Top ten sites by unique audience, split by age

| Rank | 2-17 | 18-24 | 25-34 | 35-49 | 50-64 | 65+ |
|------|------------------------|------------------------|----------------------|----------------------|----------------------|----------------------|
| 1 | Google | Google | Google | Google | Google | Google |
| 2 | Google Search | Google Search | Google Search | Google Search | Google Search | Google Search |
| 3 | Facebook | Facebook | Facebook | MSN/WindowsLive/Bing | MSN/WindowsLive/Bing | MSN/WindowsLive/Bing |
| 4 | MSN/WindowsLive/Bing | MSN/WindowsLive/Bing | MSN/WindowsLive/Bing | Facebook | Facebook | BBC |
| 5 | YouTube | YouTube | Yahoo! | BBC | Yahoo! | Facebook |
| 6 | BBC | Windows Live Messenger | YouTube | Yahoo! | BBC | Yahoo! |
| 7 | YouTube Homepage | YouTube Homepage | BBC | Google Maps | Amazon | Amazon |
| 8 | Yahoo! | Google Maps | Google Maps | Amazon | Google Maps | Microsoft |
| 9 | Windows Live Messenger | Yahoo! | eBay | YouTube | Microsoft | Google Maps |
| 10 | Google Image Search | BBC | Microsoft | eBay | eBay | YouTube |

Key

- Google (ex. YouTube)
- Microsoft
- Facebook
- Yahoo!
- BBC
- YouTube
- eBay
- Amazon
- Wikipedia

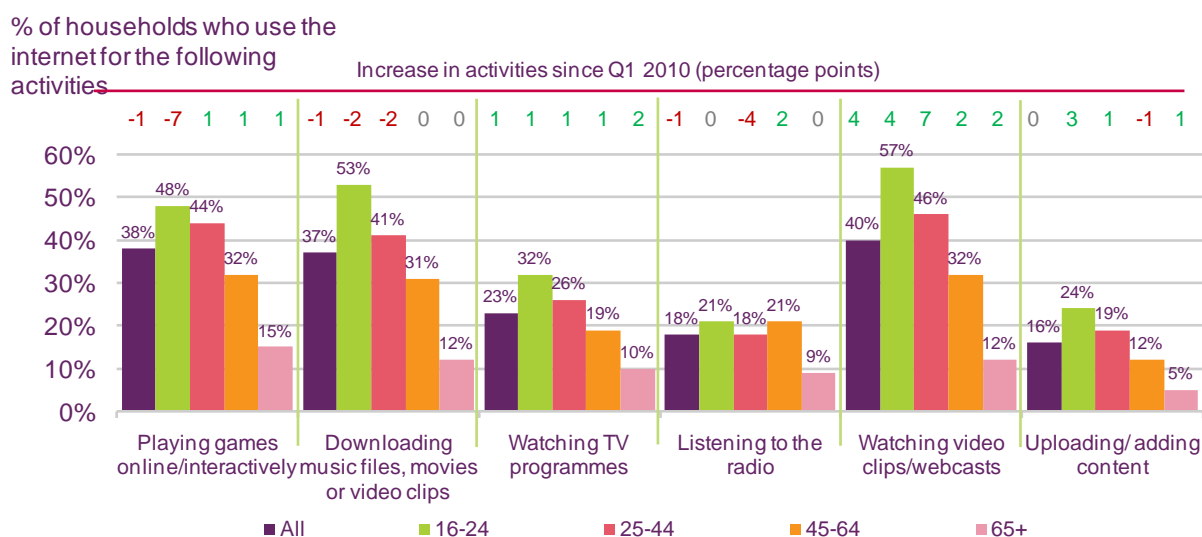
Source: UKOM/Nielsen home and work panel, applications included, month of April 2011
 Note: "Unique audience" = the total number of unique persons who have visited a website or used an application at least once on a PC in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once.

More people play games than watch TV on the internet

The use of websites is of course only part of the online experience for most internet users – with users increasingly using applications to play games, watch audio-visual content and upload their own content. Figure 4.32 indicates that around four in ten home internet connections are used for playing games (38%), downloading music or video (37%) and watching video (40%), with smaller proportions watching TV programmes (23%), listening to the radio (18%) and uploading content (16%). (Note that this figure for uploading content is lower than that in Figure 4.42 below – this is likely to be because, unless prompted, people do not generally consider updating social networking profiles as "uploading content").

For all types of media content except listening to the radio, reach is highest among the youngest age group and lowest among the oldest. Radio has similar levels of take-up among all age groups except the over-65s. This is likely to be due to higher levels of interest in radio programmes among older people, as discussed in Section 3 of this report.

Figure 4.32 Engagement with online media content, by age



QE5A: Which, if any, of these do you or members of your household use the internet for while at home?

Source: Ofcom research, Q1 2011

Base: All adults who have the internet at home (n= 2534)

Microsoft applications have the highest reach

Audio-visual and interactive content is commonly delivered to customers using stand-alone programs or applications outside the web browser.

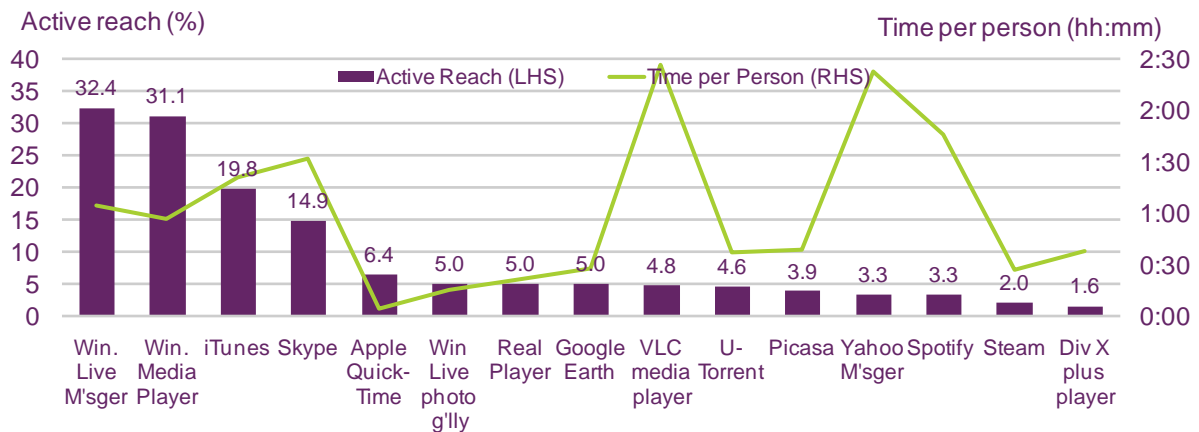
According to UKOM/Nielsen, the most popular online application in April was Windows Live Messenger, Microsoft’s instant messaging application, with an active reach of 32%. This number is broadly in line with the number of internet users who say that they use instant messaging (34% - see Figure 4.22 above), and is a long way ahead of the second most popular instant messaging platform (Yahoo Messenger, with 3% active reach, although it does average more than twice as much time per user per month).

Microsoft’s Windows Media player had the highest reach of any media player (31%), well ahead of Apple’s iTunes (19%). The high reach of Media Player can be partly explained by the fact that it is the default media player on many Windows PCs, while iTunes’ reach is helped by the fact that it is required for those who own an iPod or an iPhone. However, the open-source, cross-platform VLC media player, with 4.8% reach, had much higher average use, with users spending an average of two-and-a-half hours on it in April 2011. It also had the greatest increase in reach between May 2010 and April 2011, up by around 30%.⁴¹

The leading VoIP application, Skype (which was acquired by Microsoft in May 2011), was used by 15% of UK internet users in April 2011. Other types of applications in the top 15 by reach included photo-sharing sites Windows Live photo gallery (5%) and Picasa (4%), Google Earth (5%), file-sharing application U-torrent (5%), music service Spotify (3%) and gaming platform Steam (2%).

⁴¹ Ofcom Communications Market Report 2010, Fig 4.31.

Figure 4.33 Most popular internet applications, by active reach



Source: UKOM /Nielsen home and work panel, applications included, month of April 2011
 Note (1): "active reach" = the percentage of all active age 2+ unique persons who visited the site or used the application. 'Active' is defined as anyone who used an internet-enabled computer within the time period.
 Note (2): Time per person refers only to the application that is 'in focus' (i.e. the one to which keyboard and mouse activity is directed), and does not count minimised applications or applications running in the background. Therefore the metrics are not always compatible as applications that tend to require people to keep them in focus the whole time (such as video or messaging applications) will record higher time spent than audio applications which can run in the background.

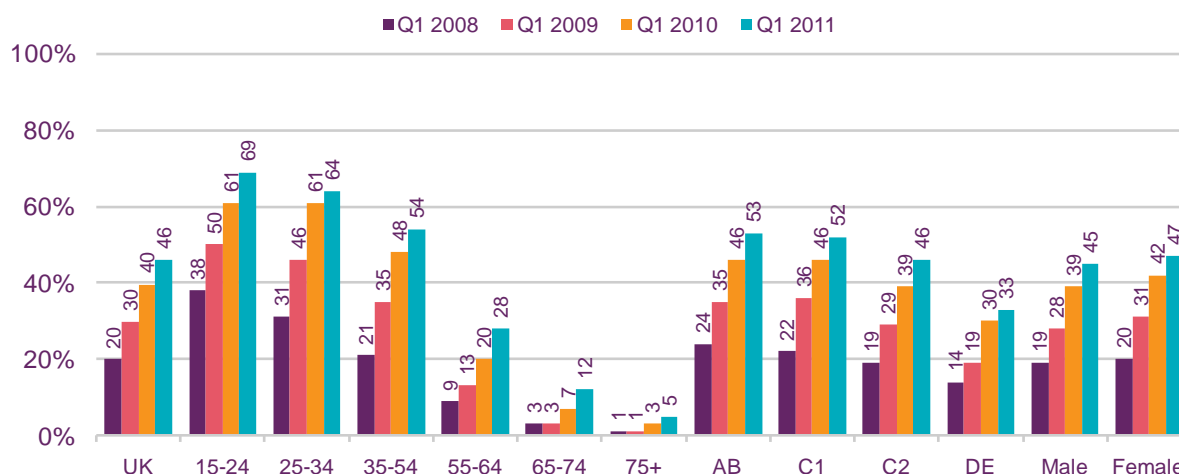
4.3.3 Social networking

Nearly half of all UK households use social networking sites

More than one in every five hours spent by UK users on the internet in April 2011 was on social networking sites (see Figure 4.27 above), and in Q1 2011 nearly half of all UK internet users (46%) claimed to have used a social networking site in the past week, up from just one in five three years previously.

Figure 4.34 indicates how social networking has grown across all age groups and socio-economic groups since 2008. Points to note in the past year are the increased use of social networking among older age groups: in Q1 2011, 28% of 55-64s, 12% of 65-74s and 5% of over-75s claimed that their households used social networking sites. Women are slightly more likely to use social networks than men.

Figure 4.34 Proportion of adults who access social networking sites on the internet at home



QE12: Which, if any, of these do you or members of your household use the internet for while at home?

Source: Ofcom technology tracker, Q1 2011

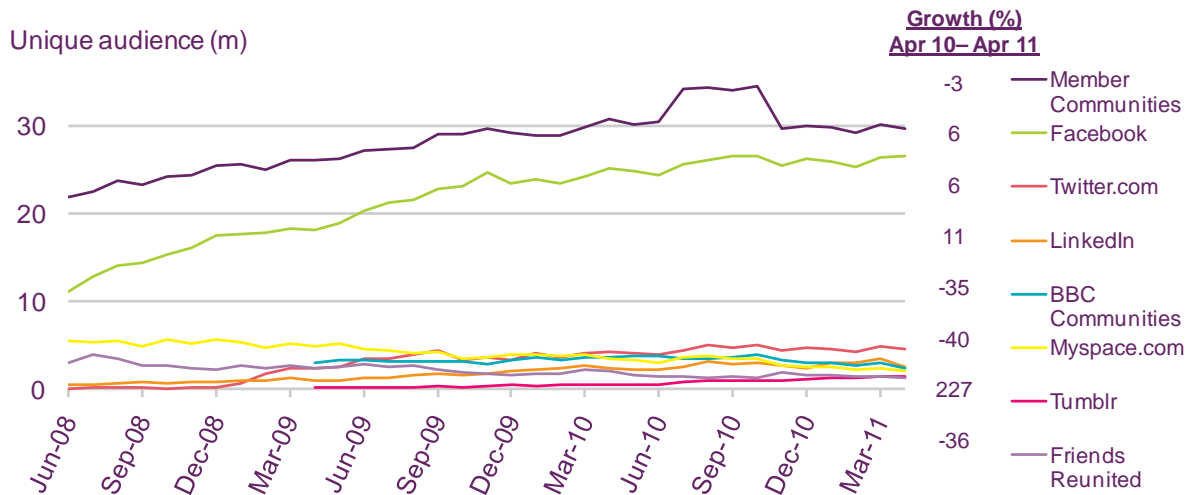
Base: All adults aged 16+ (n = 5812 Q1 2008, 1581 Q3 2008, 6090 Q1 2009, 9013 Q1 2010, 3474 Q1 2011).

There are some signs that social networking on PCs may be levelling off

The growth of social networking in the past three years has largely been driven by the growth of Facebook (Figure 4.35). According to data from UKOM/Nielsen, in April 2011 Facebook was visited by 24.8 million UK internet users, more than six times as many visitors as to the second most-visited site, Twitter.

However, after several years of rapid growth, the reach of Facebook, and of social networking services in general, appears to have levelled off. The overall reach of UKOM/Nielsen's 'Member Communities' category fell by 3% between April 2010 and April 2011, and Facebook increased its reach by just 6%, having increased by 33% in the previous 12 months. There is also some evidence that social networking is reaching saturation – our consumer research found that in 2010 only 3% of UK internet users say they do not have a social networking page or profile but are interested in setting one up (43% say they do not have one and have no interest in having one – see Figure 4.41 below). However, it should be noted that these data only include use of the internet on PCs. As discussed in Section 4.1.2 above, use of social networking services on mobile phones has increased significantly over the past year – 57% of mobile phone internet users (around 12.5% of all UK adults) claim to use social networking on mobile phones, and Facebook users average around five-and-a-half hours on the mobile service every month.

Figure 4.35 Unique audience of selected social networking sites



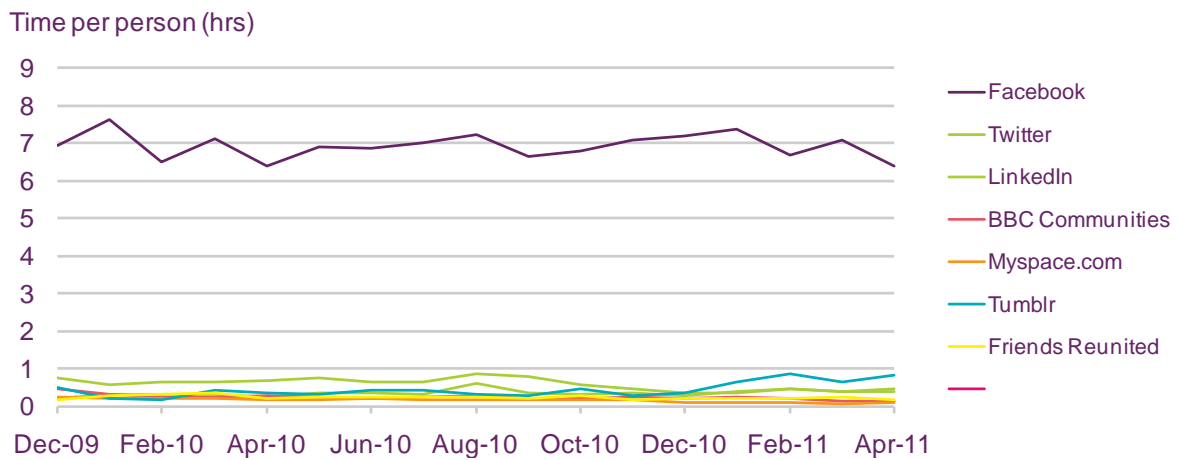
Source: UKOM/Nielsen

Note: Home and work panel, applications included. 'Member communities' is the UKOM category that primarily consists of social networking sites. "Unique audience" = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once.

More than 90% of social networking time is spent on Facebook

Not only does Facebook have the greatest reach, but on average its users spend much longer on the site than users of other social networking sites (Figure 4.37). On average, in April 2011, Facebook users spent 6 hours 23 minutes on the site. Over time, Facebook has evolved from being a social network to become a more general portal – offering games, video content (e.g. some films from Warner Bros and, from July 2011, episodes of the BBC's *Dr Who*) and email addresses. In contrast, average use of all the other leading social networking sites was less than half an hour, suggesting that many users of these sites are occasional users.

Figure 4.36 Time per user per month spent on selected social networking sites



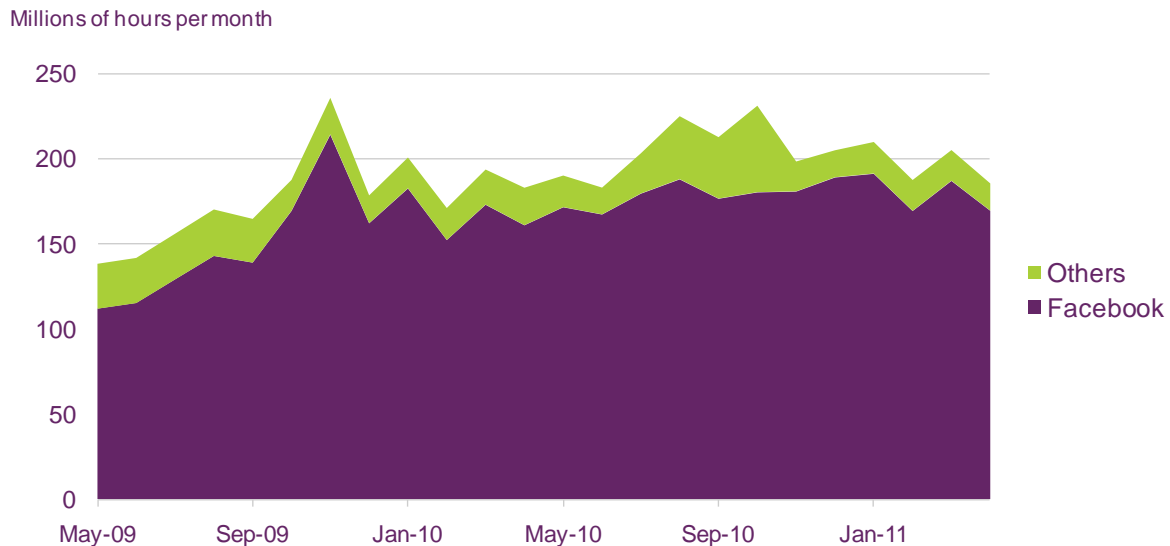
Source: UKOM/Nielsen.

Note: Home and work panel, applications included.

The dominance of Facebook in the social networking landscape of UK internet use is illustrated by Figure 4.37 which details the total time spent online on sites within UKOM/Nielsen's 'Member Communities' category. It indicates that of the total 186 million hours spent on these sites in April 2011, 170 million hours were spent on Facebook (91% of the total time).

Figure 4.37 also indicates that overall use of social networking, and of Facebook, has been fairly stable since the beginning of January 2010, although again it should be noted that these data exclude the use of social networking services on mobile phones.

Figure 4.37 Total time spent on social networking and blogging sites



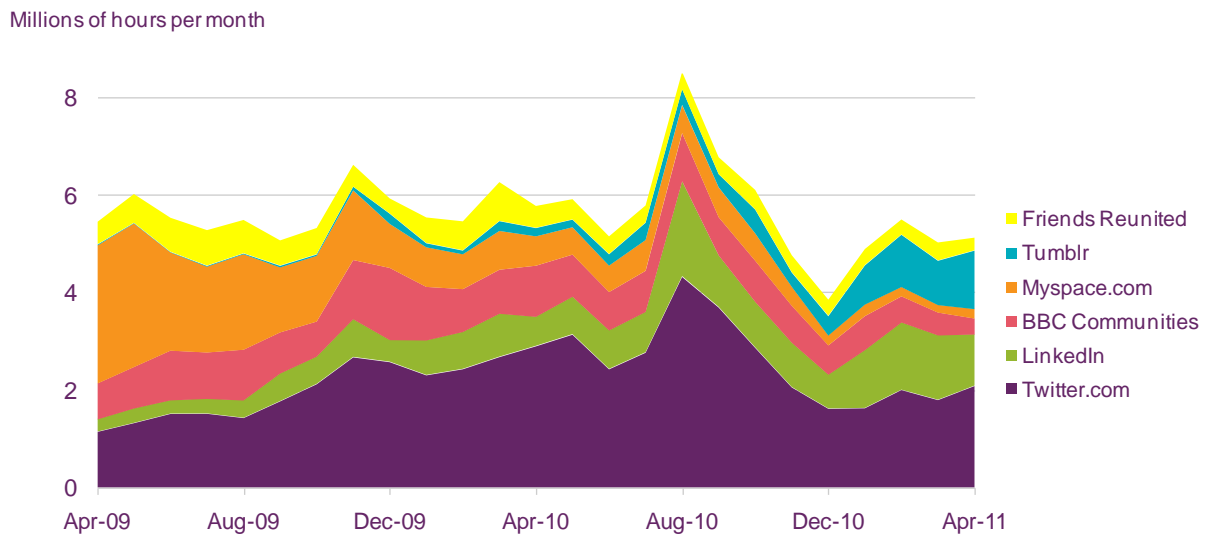
Source: UKOM/Nielsen

Note: Includes all sites in the UKOM/Nielsen category of 'Member Communities'

Changes in use of other social networking sites

Figure 4.38 details the time spent online on the UK's most popular social networking sites excluding Facebook. It indicates that there have been some significant changes in the past two years; use of earlier services such as MySpace (sold by News Corporation to Specific Media in June 2009 for around 6% of the price paid by News Corp in 2005) and Friends Reunited has fallen, while time spent on Twitter, LinkedIn and Tumblr has grown. But overall, there has been a small fall in the total time spent on these sites; although some have been successful in targeting specific segments (LinkedIn, for example, among business users), they have not made any significant inroads into Facebook's market share. In June 2011 Google launched its new social networking platform, Google+, initially on a trail basis to randomly invited Gmail users.

Figure 4.38 Total time spent on selected social networking sites (excluding Facebook)



Source: UKOM/Nielsen

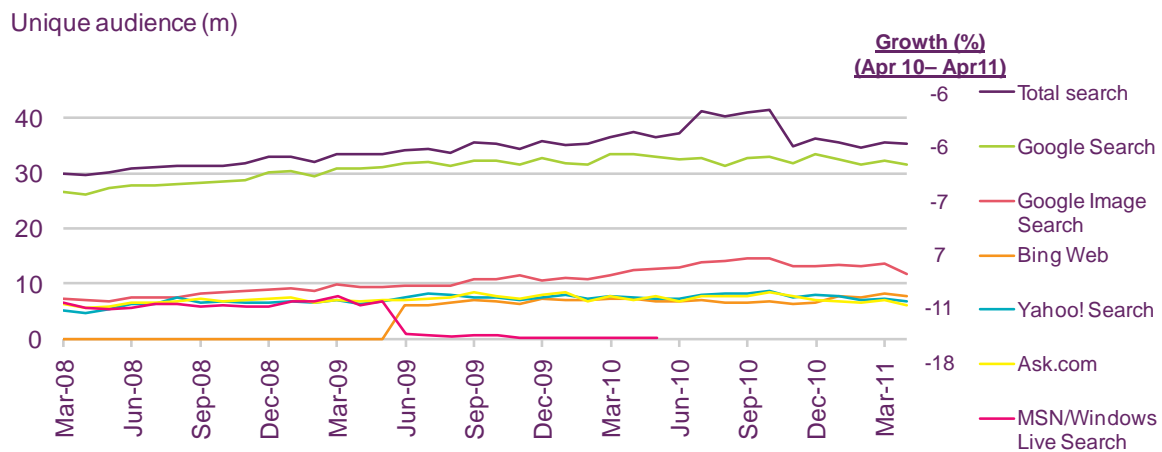
4.3.4 Search

Google has more than three times the user base of any other search engine

The main way in which people navigate the web and find information is typically via search engines. As such, search is used by the large majority of internet users – among all the UKOM/Nielsen sub-categories, search has the highest reach, with 88% of UK active users using it in April 2011.

Figure 4.39 indicates that Google has by far the largest reach of any search engine, with 31.4 million unique UK users in April 2011, more than three times as many as those of Yahoo! Search, Ask.com or Microsoft's Bing. However, Bing was the only one of the UK's leading search engines to increase its reach between April 2010 and 2011, perhaps in part due to its integration as the default search engine on Windows 7 computers, in which Internet Explorer comes pre-installed, with Bing set as the default homepage. Following a deal in July 2009, the Bing search engine also powers Yahoo! Search.

Figure 4.39 Unique audience of leading search sites



Source: UKOM/Nielsen home and work panel, applications included, month of May 2010.

Note: "Unique audience" = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once.

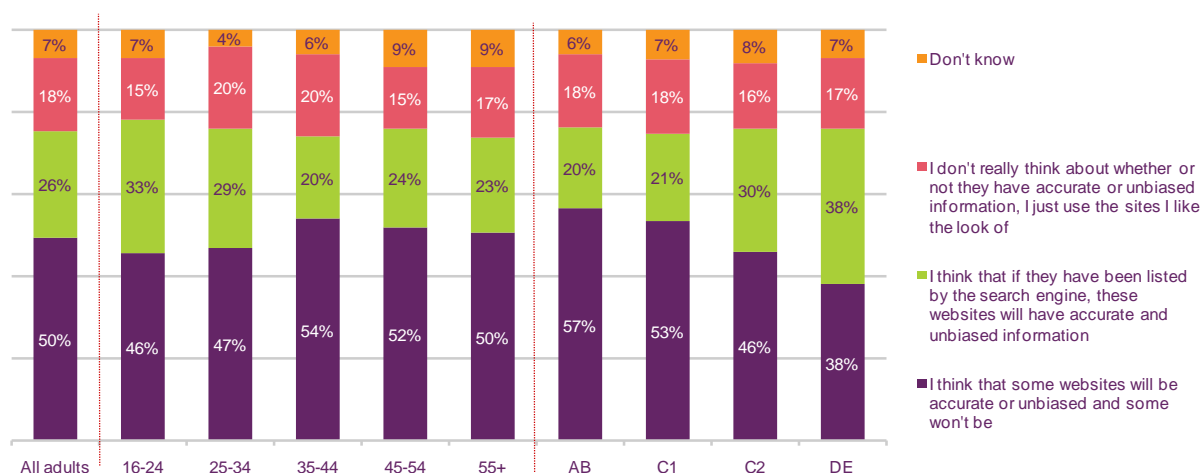
MSN/Windows Live search rebranded as Bing in May 2009.

Half of all internet users are sceptical about accuracy or bias of some search engines

Given their role in directing consumers to information and services on the internet, search engines have considerable power in determining the websites that consumers visit. Search engine businesses are built on balancing the need to build a reputation for providing wholly impartial search results, delivering the best information to meet the user's requirements, with the commercial imperative to drive revenue through advertising. One way that search engines balance this need is by displaying 'ads' (or 'sponsored links') related to the user's search terms prominently at the top of most search queries, while clearly differentiating them from the general search results.

While trust in search engine results is critical to consumers' confidence in the internet, they also need to be able to evaluate and interpret search results; unlike broadcast platforms, where there are rules about the impartiality of content, there are no such rules on the internet. In order to investigate consumers' levels of trust, Ofcom's media literacy research asks internet users about their views on the accuracy, or bias, of search engine results, and finds that they have a mixture of views. Half of all internet users claim that they have suspicions about some search results, and consider some websites to be accurate and unbiased and some not. Younger users and those in lower socio-economic groups are less likely to make a critical evaluation and more likely to assume that search results will return accurate and unbiased information (Figure 4.40)

Figure 4.40 User attitudes towards accuracy or bias of search engine results



NIN46 – When you use a search engine to find information, you enter a query in the search box and the search engine will then show some links to websites in the results pages. Which one of these is closest to your opinion about the level of accuracy or bias of the information detailed in the websites that appear in the results pages? (Prompted responses, single coded)

Base: All adults aged 16+ who ever use search engine websites (1090 aged 16+, 205 aged 16-24, 227 aged 25-34, 235 aged 35-44, 183 aged 45-54, 240 aged 55+, 329 AB, 353 C1, 199 C2, 209 DE)

Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

4.3.5 User-generated content

Most UK internet users have published something online

Most of the content on the internet is not professionally produced, but may be categorised as user-generated content (UGC), uploaded from the PC by internet users looking to share news or views, pictures or audio, with other internet users – sometimes just with friends and family, sometimes with anyone who has an interest. As a low-cost, interactive publishing platform with social and democratic possibilities, the internet has allowed this content to flourish. Indeed, in the past year there has been a lot of media attention about the role that UGC (sometimes referred to as ‘social media’) has played in events such as the uprisings in the Middle East, and responses to the earthquake/tsunami in Japan.⁴² But UGC has also led to concerns about privacy and safety online, as well as (because of its ubiquity) about content quality and navigation.

There are many types of UGC; the best-known include personal websites, blogs, and the pictures, profiles and updates provided on social networking sites. The websites of many news organisations encourage users to upload their own comments, pictures and videos; and some of the world’s most popular websites are primarily aggregators of UGC – for example Wikipedia (encyclopaedia), YouTube (videos), Facebook (social networking) and eBay (auctions).

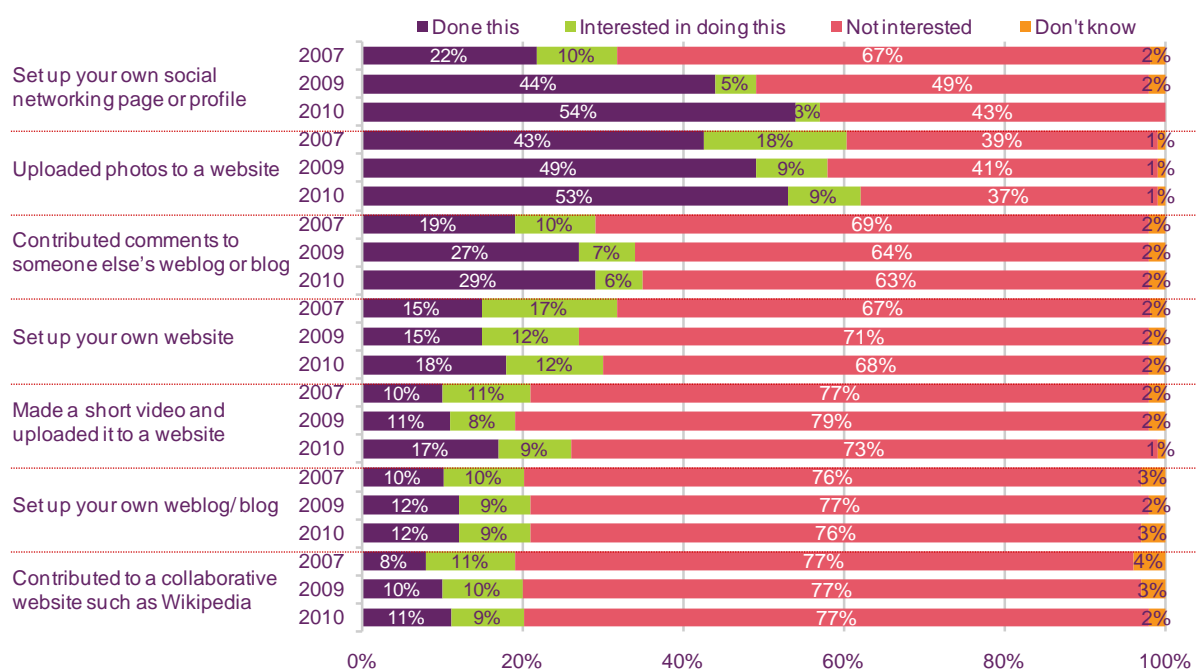
⁴² See for example, <http://www.bbc.co.uk/news/world-middle-east-12573995> and <http://www.mirror.co.uk/celebs/news/2011/03/11/japan-earthquake-and-tsunami-reaction-on-twitter-115875-22982288/>

The majority of UK internet users have published something on the internet. However, the most common way in which this is done is through setting up a social networking page or profile, which 54% of UK users surveyed in 2010 said they had done (Figure 4.41). This typically involves uploading photos, which explains why 53% of UK internet users say they have uploaded pictures (although it should be noted that sites such as Flickr and Picasa are dedicated to photos and photo sharing – and picture sharing sites were among the first social networking sites).

There has been significant growth in the past year in the proportion of people who have uploaded short videos. This may be due to increasing take-up of mobile phones which make video uploading simple, and, as with still pictures, it is likely that many of these videos are published for friends and family to view on social networking sites.

The collaborative nature of the internet is evident from the growing numbers of internet users who have contributed comments to someone else’s blog (29% in 2010), or contributed to a collaborative website such as Wikipedia (11%).

Figure 4.41 Experience of, and interest in, content creation



IN23A-I – I’m going to read out a number of things people might do online. Please tell me for each one I read out if you’ve done it, or you’d be interested in doing it, or not interested. (prompted responses, single coded)

Base: All who use the internet at home or elsewhere (1723 in 2007, 1282 in 2009, 1489 in 2010)

Significance testing shows any change between 2009 and 2010

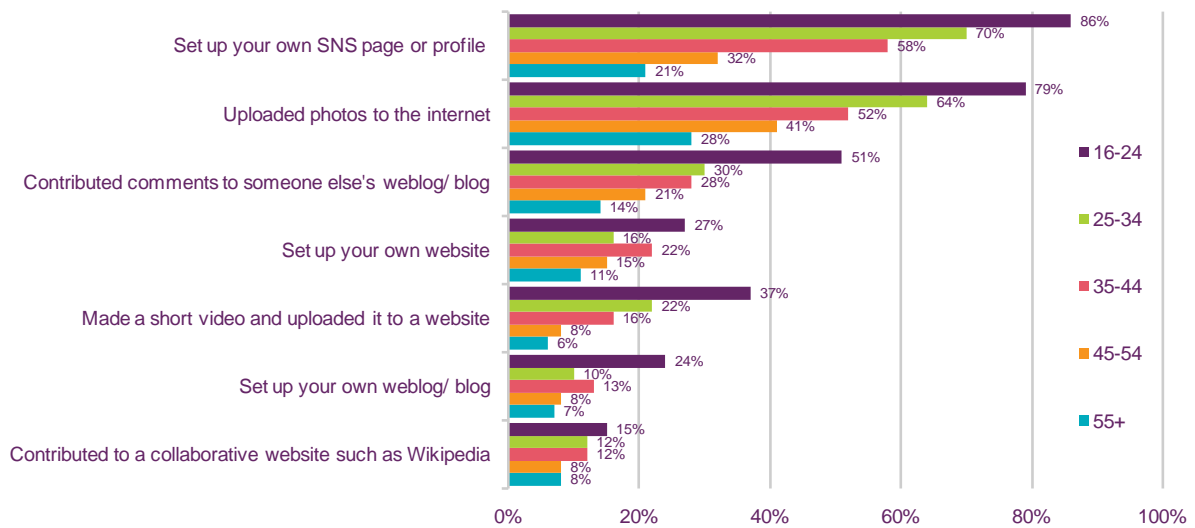
Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

More than a quarter of over-55 internet users have uploaded photos

As with most internet activities, young internet users are most likely to have uploaded content. For example, more than half (51%) of 16-24s have contributed comments to someone else’s blog, compared to just 21% of over-55s. However, a significant minority of

over-55s are also engaged in content creation and publishing – 28% of over-55 internet users have uploaded photos.

Figure 4.42 Experience of creative activities, by age



IN23A-I – I'm going to read out a number of things people might do online. Please tell me for each one I read out if you've done it, or you'd be interested in doing it, or not interested.

All who use the internet at home or elsewhere (271 aged 16-24, 287 aged 25-34, 338 aged 35-44, 245 aged 45-54, 348 aged 55+)

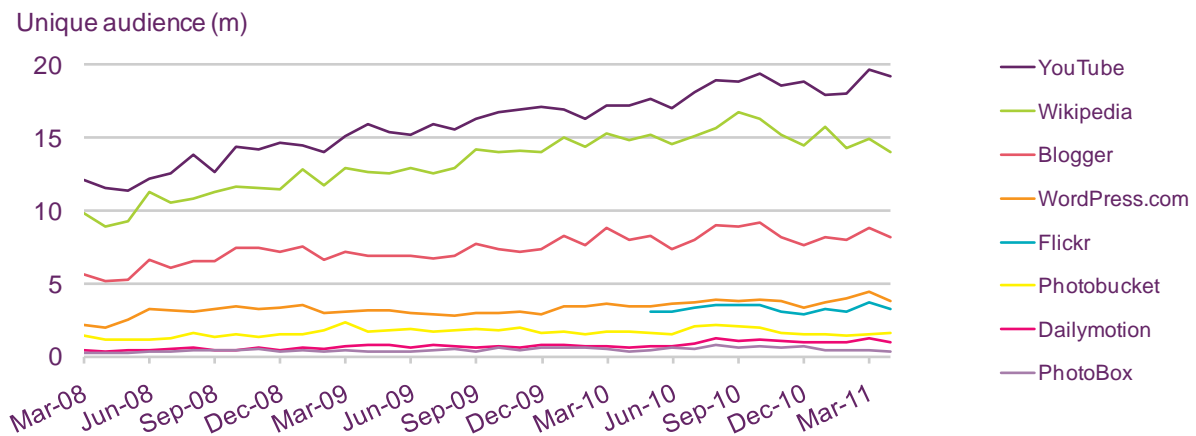
Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in April to May and September to October 2010

Despite overlap with social networking, many UGC sites continue to grow

There is a wide range of user-generated content sites, and Figure 4.43 focuses on a selection of them (note that social networking sites are not included – see Figure 4.35 above). YouTube remains the most popular video-sharing site, and grew its UK user base by 11% in the year to April 2011, when it was accessed by nearly 20 million unique users. However, while the large majority of videos on YouTube may be categorised as UGC, increasingly the site also includes professionally-produced content made available by broadcasters, film studios and music companies. For example, YouTube's UK site includes a prominent link to "TV Shows" which includes 'catch-up' TV programmes from Channel 4, Channel 5 and STV.

Online collaborative encyclopaedia Wikipedia was visited by nearly 15 million UK internet users in April 2011, although since September 2010 its reach has declined slightly. The leading blogging site is Google's Blogger, which reached 8.2 million users in April 2011. It is notable that Blogger and leading photo-sharing site Flickr have been able to slowly grow their user base, despite some overlap with social networking sites such as Facebook, which also enable users to upload photos and publish blog-like articles.

Figure 4.43 Unique audience of selected user-generated content sites

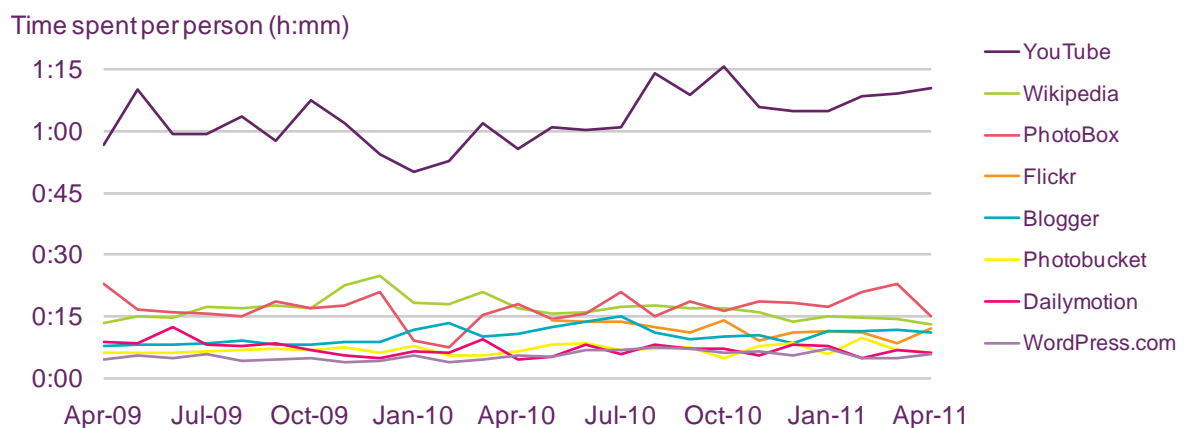


Source: UKOM /Nielsen home and work panel, applications included, Note: “Unique audience” = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once. Flickr: due to UKOM changes no data available pre-May 2010.

YouTube users spend on average over an hour a month on the site

According to data from UKOM/Nielsen, UK users spent on average 1 hours 10 minutes on YouTube in April 2011, considerably longer than on any of the other (non-social networking) UGC sites for which we have data. It is also notable that average time spent on YouTube has increased since the end of 2009 – although it is not clear if this is driven by viewing of user-generated content or the professionally-produced content available on the site.

Figure 4.44 Time spent on selected user-generated content sites



Source: UKOM/Nielsen home and work panel, applications included, month of May 2010.

4.3.6 Online shopping

A key benefit of the internet for many consumers is the convenience, choice and value offered by online shopping. Similarly, retailers are able to benefit from efficiencies offered by internet sales, as well as the increased reach enabled by the ability to address a global market.

UK consumers have been relatively early adopters of online shopping, facilitated by the historic popularity of catalogue shopping, high penetration of credit cards, a willingness to

trust online payment systems and the early launch of retailers such as Amazon.co.uk, which had a high-profile launch in 1998. Research by Mediascope Europe at the end of 2009 found that, on average, UK internet users estimated that they spent on average £1,031 online, across an average of 19 transactions – more than double the number of purchases by consumers in France, Germany, Italy, Spain and the Netherlands, and around twice the value.⁴³

In this section we explore three dimensions of how consumers are using the internet for shopping:

- purchasing goods from mass-market retailers such as Amazon.co.uk, Tesco.com and Argos.co.uk;
- using price comparison sites to identify the best-value product or service for their needs; and
- downloading coupons or vouchers to take advantage of special offers.

More than eight in ten internet users visit shopping sites

According to data from UKOM/Nielsen, in August 2010 more than eight in ten active internet users visited at least one of the UK's top e-commerce sites. In total, 546 million site visits were made, resulting in 89 million transactions⁴⁴. Around a quarter of the U.K.'s 50 most popular sites are e-commerce sites – a ratio that has been maintained for the past three years. The most popular is eBay, with 17.7 million unique U.K. visitors in August 2010, putting it ahead of Amazon, Apple, Tesco and Argos.

This is broadly in line with Ofcom's consumer research, which finds that 72% of adults claim to use their broadband connection for 'purchasing goods/services', making it the third most popular online activity among broadband internet users, behind sending and receiving email and general surfing/browsing (see Figure 4.22 above). It is likely that this figure is lower than the Nielsen data because of the differences between visiting shopping sites and actually shopping.

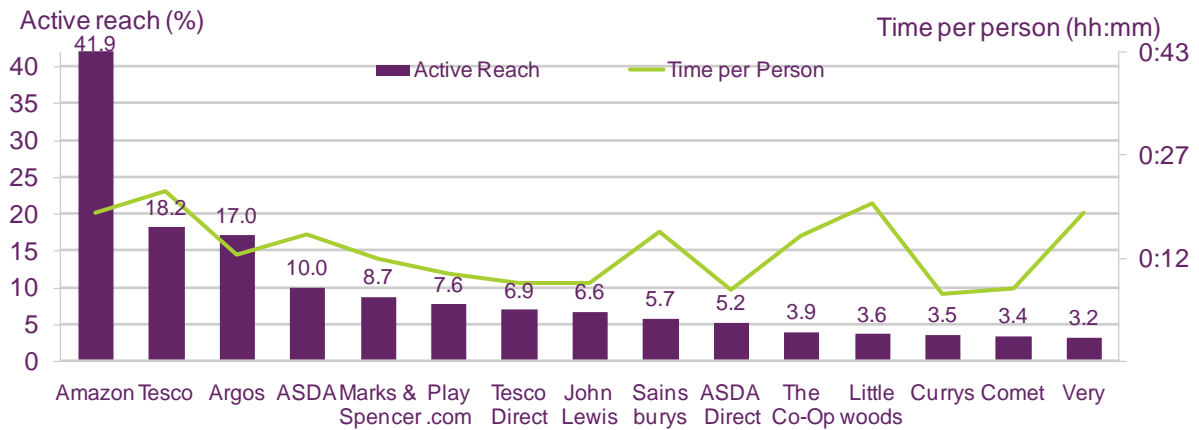
Figure 4.45, below, details the reach of the UK's largest mass merchandising websites. It shows that online-only retailer Amazon has considerably the greatest reach, with over 40% of internet users accessing the site at least once in April 2011. But most of the other sites are high-street retailers. Tesco has the largest reach of the supermarkets, with 18% of internet users accessing its main site (and 7% accessing the Tesco Direct site), while despite competition from sites such as internet-only retailer Very, Argos has the third largest reach, with 17% of internet users accessing its site.

⁴³ See Ofcom, *International Communications Market report 2010 pp217-218*,

http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/icmr/ICMR_2010.pdf

⁴⁴ <http://www.nma.co.uk/opinion/industry-opinion/analyst-speak-online-shoppers-spend-the-most-on-electronics-and-groceries/3020674.article>

Figure 4.45 Mass merchandising, by active reach: April 2011

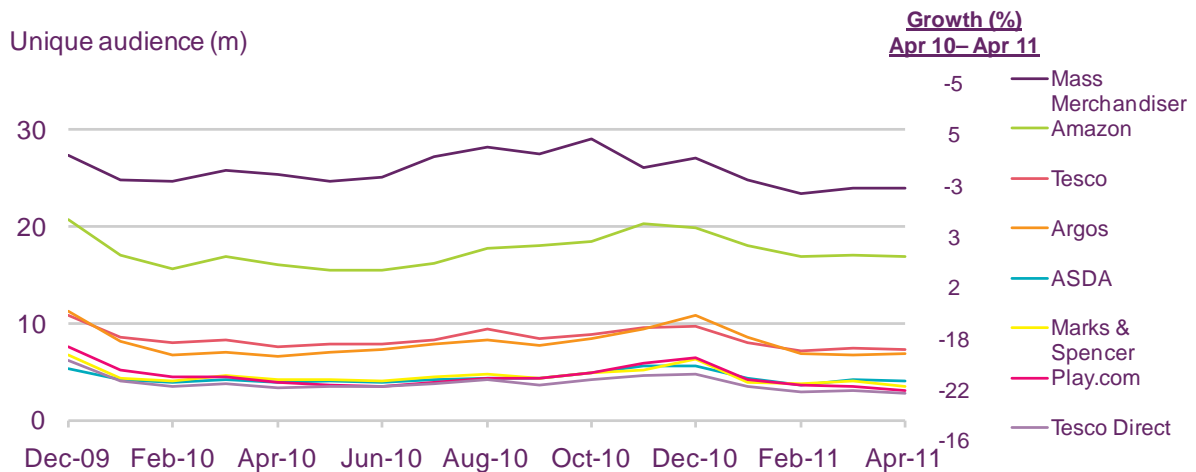


Source: UKOM/Nielsen home and work panel, month of April 2011

Note: "active reach" = the percentage of all active age 2+ unique persons who visited the site or used the application. 'Active' is defined as anyone who used an internet-enabled computer within the time period.

There are some suggestions that online mass merchandising is maturing as a market. Between December 2009 and April 2011 there has been a good deal of continuity in the reach of the major sites (Figure 4.46). The growth of Amazon (up 5% between April 2010 and April 2011) indicates the continuing success of the world's major online shopping brand, although its lower reach than other internet giants such as Facebook and Google (discussed in Section 4.3.3 and Section 4.3.4 above), indicates that there may be less of a network effect, and therefore less scope for dominance, in online shopping than in search or social networking. However, the decline of Play.com (down 22%), may indicate that it is difficult for more niche online retailers to maintain market share in the face of competition from the combination of internet giants (Amazon, and also potentially eBay) and high street brands (e.g. Tesco).

Figure 4.46 Unique audience of selected mass merchandising sites



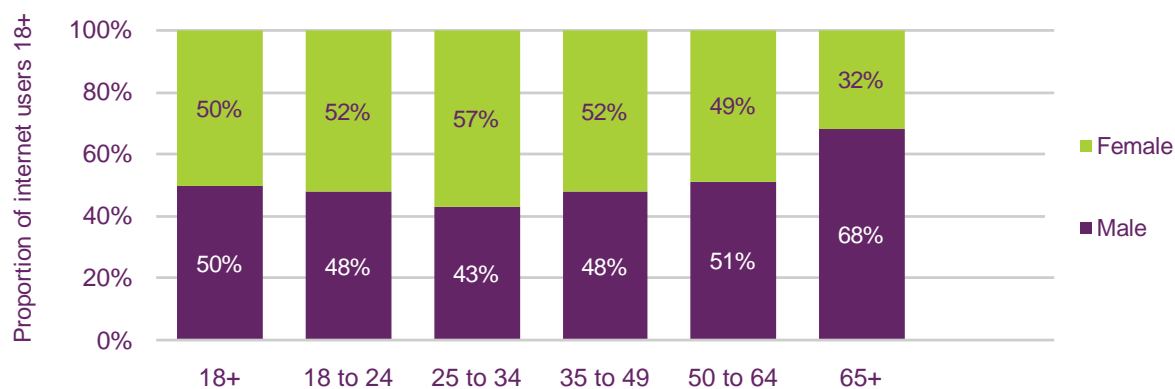
Source: UKOM/Nielsen.

Note: Home and work panel, 'Unique audience' = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once.

Female internet users are slightly more likely to visit mass merchandising sites than male internet users. Overall, 47.6% of time on the internet is spent by women (see Figure 4.20);

however, women account for 50% of visitors to mass merchandising websites (Figure 4.47). Among 25 to 34-year-olds, 57% of visitors to mass merchandising sites are women, although women account for only 46% of total time spent online.

Figure 4.47 Mass merchandising, by gender

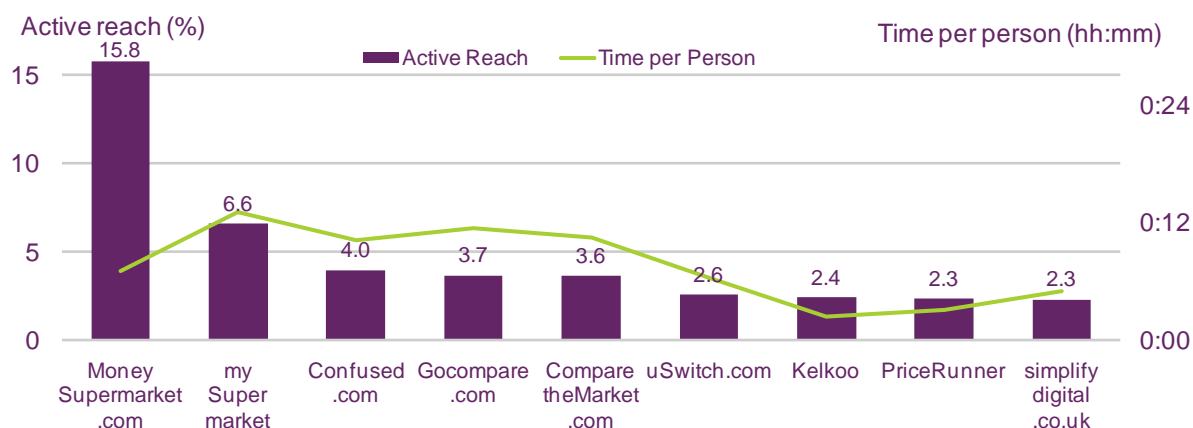


Source: UKOM /Nielsen April 2011

Comparing prices

For many consumers, a key benefit of internet shopping is the ability to compare prices between providers before making an online or offline purchase. Figure 4.48 details the UK's leading price comparison sites in April 2011, and indicates that more than one in seven internet users (16%) visited the leading comparison website, moneysupermarket.com.

Figure 4.48 Reach and time spent on selected price comparison sites, April 2011

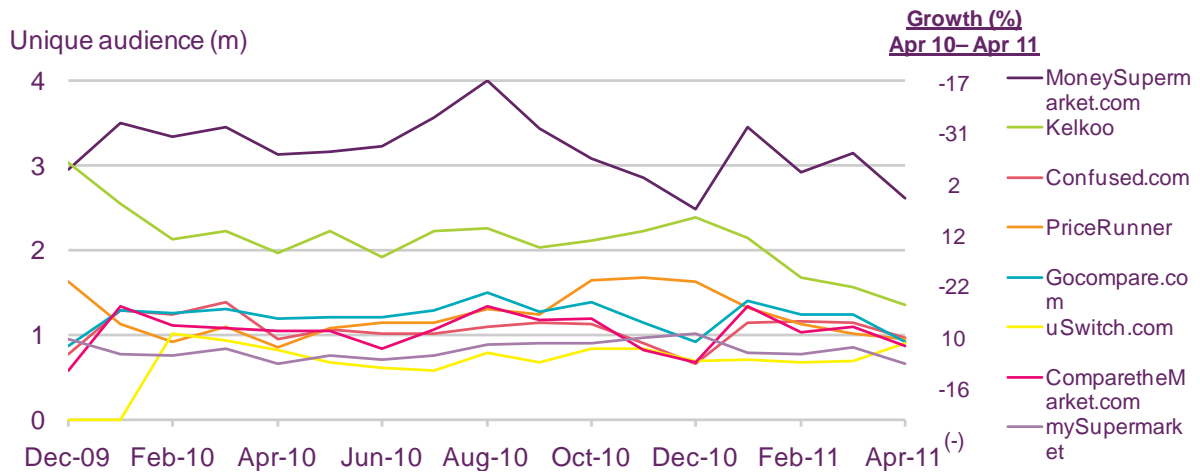


Source: UKOM/Nielsen

Note: Home and work panel, 'Unique audience' = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once.

As with mass merchandising websites, price comparison sites are now reasonably well established – most leading sites have now been operating for several years and there was little change in overall use between April 2010 and April 2011, although there were some significant changes in the reach of individual sites (Figure 4.49).

Figure 4.49 Unique audience of selected price comparison sites



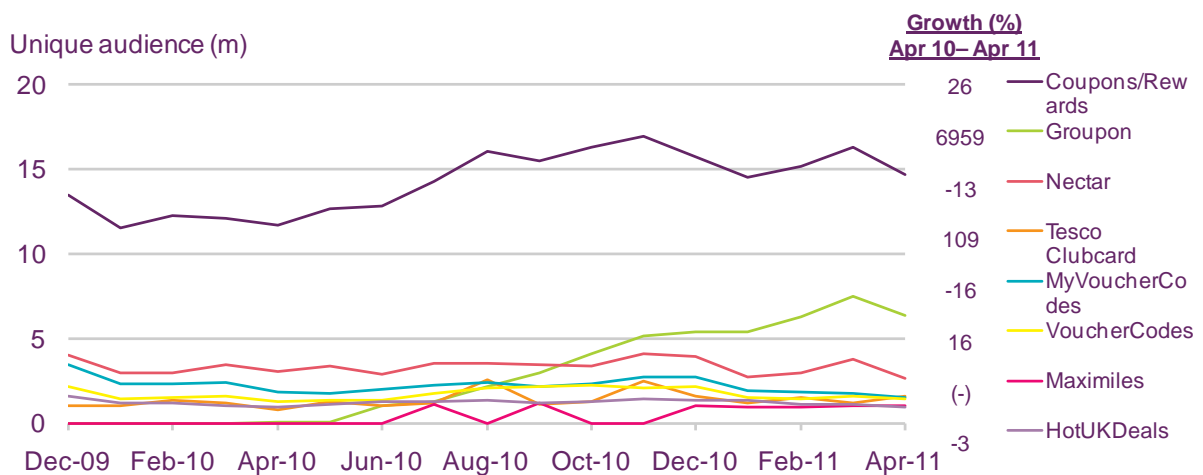
Source: UKOM/Nielsen

Note: Home and work panel, 'Unique audience' = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once.

Vouchers and coupons

A major development in the past year has been the growth of voucher and coupon sites, where retailers offer consumers discounted prices for products and services, typically for a short period of time and often for a specific location. Around 15 million internet users in the UK used voucher or reward sites in April 2011 (Figure 4.50).

Figure 4.50 Unique audience of selected coupon and reward sites



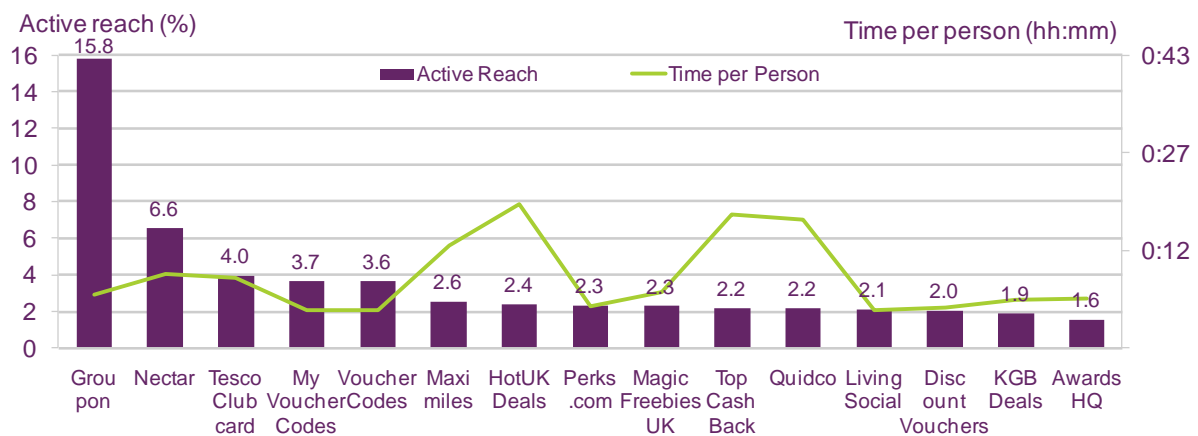
Source: UKOM/Nielsen.

Note: Home and work panel, 'Unique audience' = the total number of unique persons who have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once. Maximiles data unavailable for some months, Groupon not available pre Feb10.

The highest profile coupon site is Groupon, which, from its January 2010 expansion into the UK, has grown rapidly, becoming the UK's most-visited coupon and reward site in October 2010 and reaching 16% of UK internet users by April 2011. Its innovative business model involves partnering with retailers in particular locations to offer deals to consumers: if a stated number of people sign up for the offer then the deal is available.

The UK's largest two reward card schemes, Nectar and Tesco Clubcard, both have significant internet presence, reaching 7% and 4% of UK internet users respectively (although given that they are supported by two of the UK's largest supermarkets (Tesco and Sainsbury's), there appears to be scope for much more growth). Another category of sites are voucher sites such as My Voucher Codes; these provide users with the ability to print discount coupons for use in retail outlets including restaurants, high street stores and visitor attractions, while sites such as Top Cashback and Quidco offer cashback for purchasing products and services via their sites.

Figure 4.51 Coupon and reward sites: active reach

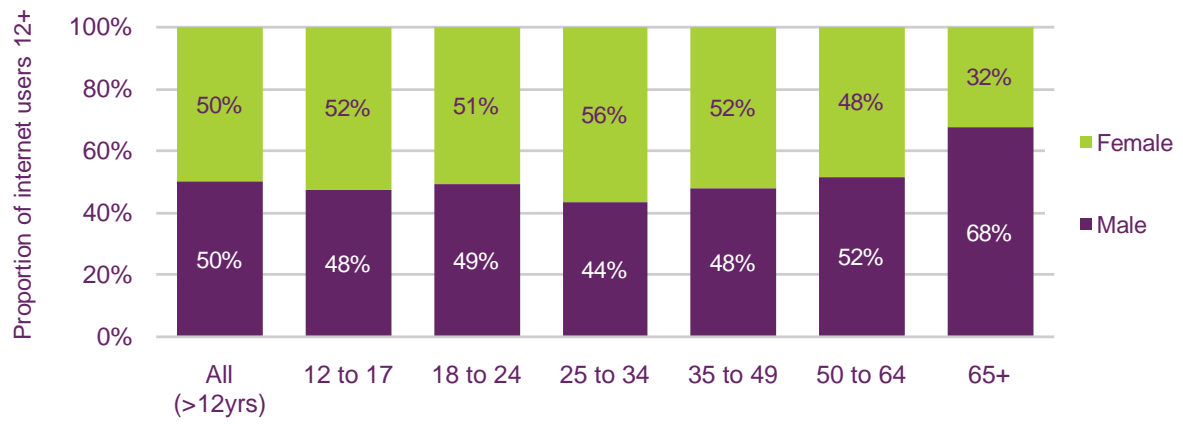


Source: UKOM/Nielsen home and work panel, month of April 2011

Note: "active reach" = the percentage of all active age 2+ unique persons who visited the site or used the application. 'Active' is defined as anyone who used an internet-enabled computer within the time period

Overall, men and women are equally likely to use internet coupon and voucher sites; indeed the pattern is very similar to that for using mass merchandising sites (see Figure 4.47 above). Among 25-34 year-olds, 56% of visitors to coupon and reward sites are women (Figure 4.52).

Figure 4.52 Coupon and reward sites: active reach



UKOM /Nielsen April 2011

Ofcom



Communications Market Report 2011

5 Telecoms and networks

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5.1 Key market developments in telecoms and networks

5.1.1 Industry metrics and summary

Figure 5.1 UK telecoms industry key statistics

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|-------|-------|-------|-------|-------|-------|
| Operator-reported retail revenue (£bn) | 29.6 | 30.7 | 31.7 | 32.0 | 31.1 | 30.8 |
| Operator-reported wholesale revenue (£bn) | 9.6 | 10.1 | 10.4 | 10.5 | 10.2 | 9.7 |
| Total operator-reported revenue (£bn) | 39.2 | 40.8 | 42.1 | 42.5 | 41.2 | 40.5 |
| Fixed voice call minutes (billions) | 163 | 155 | 150 | 141 | 132 | 129 |
| Mobile voice call minutes (billions) | 71 | 82 | 100 | 111 | 118 | 125 |
| Average monthly household telecoms spend (£) | 75.56 | 73.77 | 70.92 | 68.57 | 65.92 | 63.10 |
| Fixed access and call revenues (£bn) | 10.6 | 10.5 | 10.3 | 10.0 | 9.6 | 9.3 |
| BT share of fixed call volumes (%) | 50.7 | 46.9 | 46.5 | 43.7 | 40.1 | 36.5 |
| Proportion of premises connected to an unbundled exchange (%) | 39.6 | 66.6 | 80.2 | 84.2 | 84.5 | 89.0 |
| Fixed lines (millions) | 34.9 | 34.5 | 34.5 | 34.2 | 34.2 | 33.4 |
| Mobile retail revenues (£bn) | 13.1 | 13.9 | 15.0 | 15.4 | 14.9 | 15.1 |
| Active mobile connections per 100 population | 108.8 | 115.2 | 120.5 | 124.5 | 129.5 | 130.1 |
| Active 3G mobile connections per 100 population | 7.6 | 13.1 | 21.3 | 31.6 | 43.5 | 53.2 |
| Fixed internet revenues (£bn) | 2.1 | 2.5 | 2.8 | 3.2 | 3.2 | 3.3 |
| Fixed internet connections per 100 population | 27.4 | 28.1 | 29.8 | 30.1 | 31.0 | 32.9 |
| Fixed broadband connections per 100 population | 16.4 | 21.4 | 25.5 | 28.0 | 29.5 | 31.4 |

Source: Ofcom / operators

For the second successive year UK operator-reported retail telecoms revenues fell in 2010, although the rate of decline was lower than it had been in 2009. Revenues from fixed voice services and the volume of fixed calls continued to fall during the year as consumers increasingly use mobile telephony and other forms of communication such as email, VoIP and instant messaging as substitutes for landline calls.

Retail mobile revenues returned to growth in 2010, having fallen for the first time in 2009. The total volume of mobile-originated calls and number of active mobile connections both continued to increase, and by the end of the year there were more than 1.3 mobile connections per person in the UK. Growth in mobile data connections, including mobile broadband dongles and data-only SIM cards (for use in devices such as tablet computers) continued in 2010, and these accounted for 80% of the total growth in mobile connections during the year.

Revenues from fixed internet services fell for the first time in 2010, a reflection of the shift towards bundled broadband services, which are frequently provided using local loop unbundling (LLU). These services, which are often lower-cost alternatives, have proved popular in the current economic climate when many consumers are looking for ways to reduce their household spend.

The following two sections look at the telecoms sector from an industry and then from a consumer perspective. In this section we look at five key market developments that are shaping the future of the industry and changing consumer behaviour. These are:

- **The increasing availability of super-fast broadband services.** We look at the roll-out of fibre to the cabinet (FTTC) and cable super-fast broadband services, along with the pricing of these services and planned future service upgrades (page 246).
- **Purchasing and usage patterns among super-fast broadband users.** We look at the drivers behind super-fast broadband take-up, along with how users are taking advantage of these higher-speed connections (page 249).
- **The migration of customers from pre-pay (pay-as-you-go) to pay monthly mobile contracts.** The proportion of mobile connections on pay-monthly tariffs increased from 41% at the end of 2009 to 49% by the end of 2010. We look at the drivers of this shift in the market (page 259).
- **The explosion in mobile data volumes.** The increasing use of mobile broadband services via dongles and smartphones resulted in a 67% increase in data transferred over the UK's mobile networks in 2010. We look at the implications of this and how the scene is set for the launch of higher-capacity LTE networks in the next few years (page 264).
- **Recent trends in residential fixed telecoms pricing.** We look at whether the average prices paid by consumers are going up in real terms as a result of the seeming acceleration of residential fixed telephony price increases over the past few years (page 267).

5.1.2 Roll-out of super-fast broadband services

BT fibre-to-the-cabinet roll-out gains pace as Virgin Media upgrades to 100Mbit/s

The first large-scale super-fast broadband deployment in the UK was by Virgin Media, which started upgrading its cable network to offer an 'up to' 50Mbit/s service using DOCSIS 3.0 technology at the end of 2008 and this service was available across its entire cable network (around half of UK homes) by mid-2009. In 2010 Virgin Media started to upgrade its network to support an 'up to' 100Mbit/s service, which is currently available to around four million⁴⁵ UK homes and the roll-out of which should be completed by mid-2012, while it has also trialled an 'up to' 200Mbit/s service. In 2010 Virgin Media extended the footprint of its cable network to cover an additional 177,000⁴⁶ homes.

In March 2011, Virgin Media replaced its mid-tier 'up to' 20Mbit/s with an 'up to' 30Mbit/s service (existing 'up to' 20Mbit/s customers are able to upgrade for a one-off payment of £30 which covers the cost of a new wireless router). The change means that Virgin Media's basic 'L' 'up to' 10Mbit/s service is its only cable broadband product that is not classed as being super-fast. Virgin Media's cable packages all offer 'up to' upload speeds of 10% of the connection's headline 'up to' download speed, following a recent upgrade.

BT's roll-out of fibre-to-the-cabinet (FTTC) services continued in 2010, and by the end of the year an estimated 16% of UK homes were connected to an FTTC-enabled local exchange. BT claims that its roll-out of super-fast broadband is one of the most rapid in the world; its

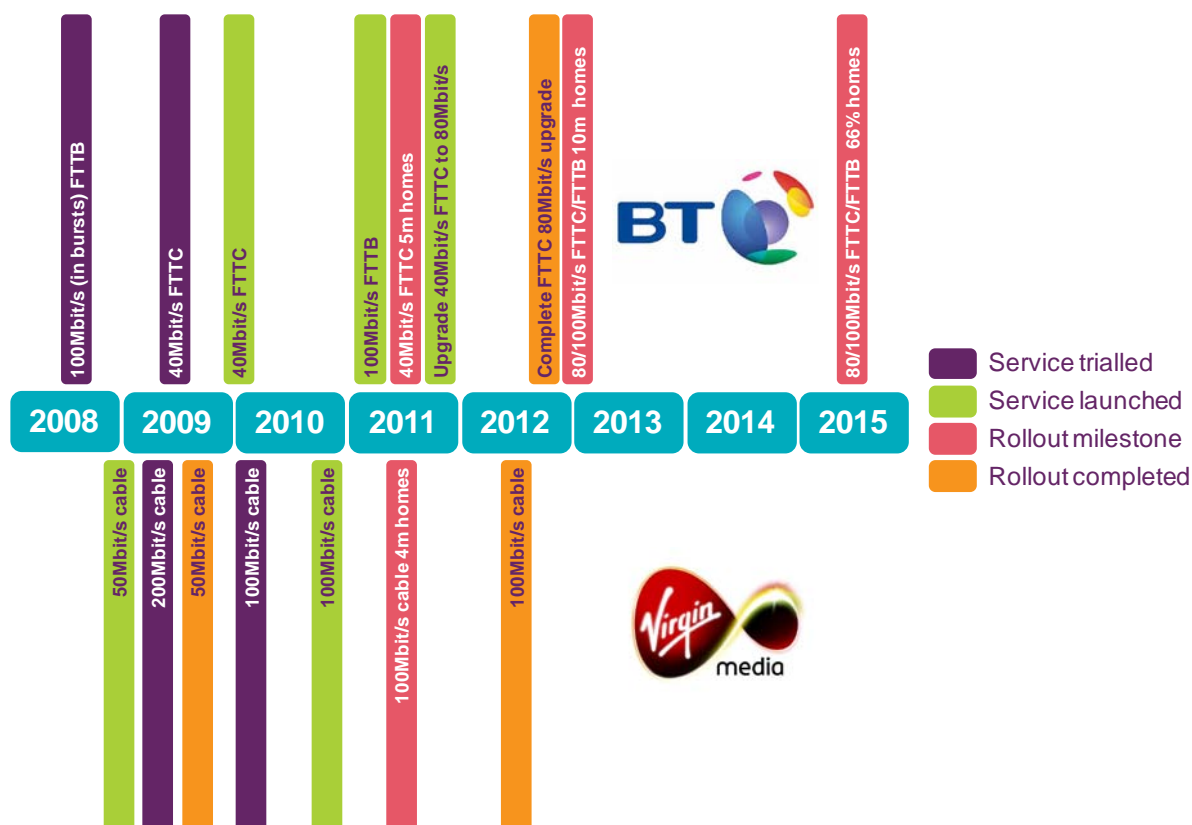
⁴⁵ <http://pressoffice.virginmedia.com/phoenix.zhtml?c=205406&p=irol-newsArticle&ID=1572617&highlight=>

⁴⁶ <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9ODE4MTJ8Q2hpbGRJRD0tMXxUeXBIPtM=&t=1>

FTTC network is passing an average of 80,000 additional premises a week⁴⁷, and we estimate that by July 2011 around 20% of homes were able to obtain FTTC services (and a total of around 57% were able to receive BT and/or Virgin Media's super-fast broadband services).

BT has committed to making fibre-based services available to 40% of UK households by summer 2012, and to 67% by 2015, using a mixture of fibre-to-the-home (FTTH) and FTTC. It also plans to increase the speeds available via FTTC from 'up to' 40Mbit/s to 'up to' 80Mbit/s in 2012 and its FTTC product currently offers upload speeds of 'up to' 2Mbit/s or 10Mbit/s, depending on which tariff the user subscribes to. Figure 5.2 below shows a timeline for the roll-out of BT and Virgin Media's super-fast services, including future milestones.

Figure 5.2 UK super-fast broadband rollout timeline



Source: Ofcom

Broadband Delivery UK (BDUK) is trialling fibre services in Cumbria

In addition to BT and Virgin Media's super-fast roll-out, many smaller fibre deployments are either in the planning stage, being deployed or complete. These include Broadband Delivery UK's (BDUK)'s trial deployment in Cumbria.

BDUK, a team within the Department for Culture, Media and Sport (DCMS), was set up to deliver the government's broadband strategy of bringing super-fast broadband to all parts of the UK. BDUK's main role is to allocate and distribute £530m of funding to bring super-fast broadband to the third of UK homes which are unlikely to be provided for by the broadband market and would otherwise miss out.

⁴⁷ <http://www.btplc.com/News/ResultsPDF/q411release.pdf>

County councils, unitary authorities and Local Enterprise Partnerships can apply for a share of this money by developing a local broadband plan setting out how everyone in the area will be provided with super-fast broadband access. Once the local plan is sufficiently developed, BDUK will allocate the funding and the work will be put out to tender to bidding suppliers. In July 2011 Ofcom published data showing broadband information by administrative authority, which is aimed at helping local authorities to bid for a share of the BDUK funding⁴⁸.

The first BDUK FTTH trial deployment is to take place in Cumbria, and Cumbria County Council has begun the procurement process for its super-fast broadband pilot, the intention being that deployment of the network will begin in 2012. In addition, £50m of BDUK funding has been earmarked to fund similar deployments in Wiltshire, Norfolk and Devon & Somerset and further pilots have been announced in North Yorkshire, Herefordshire, the Highlands and Islands and Wales. The aim is that 90% of UK homes and businesses will have access to super-fast broadband by 2015.

In addition there are developments based on EU funding in Cornwall and South Yorkshire, the latter of which covers around 500,000 homes.

Take-up of super-fast services remains low

Despite the growth in availability of super-fast services and the range of services that are available, we estimate that only around 2% of residential and SME UK broadband connections had a headline speed over 24Mbit/s at the end of March 2011 (although this was more than five times the figure for a year previously). Figure 5.3 below shows how the monthly cost of residential super-fast services compares to those with a headline speed of 'up to' 24Mbit/s or less. It indicates that a premium of at least £5 a month is generally charged for super-fast broadband services.

This may be constraining take-up, although a notable finding from our consumer research among super-fast broadband customers was that value for money was the most commonly-cited reason for choosing their service, and satisfaction with value for money was very high (see Figure 5.7 below). In fact, Enders Analysis estimate that only 15% of households with a broadband connection would be willing to pay an additional £5 a month for higher connection speeds.⁴⁹

⁴⁸ <http://maps.ofcom.org.uk/broadband/>

⁴⁹ UK residential high speed broadband outlook: leading the horse to water, Enders Analysis July 2011

Figure 5.3 Comparison of broadband costs

| | Virgin Media 'up to' 10Mbit/s cable | BT 'up to' 20Mbit/s ADSL | Virgin Media 'up to' 30Mbit/s cable | BT 'up to' 40Mbit/s FTTC | Virgin Media 'up to' 50Mbit/s cable | Virgin Media 'up to' 100Mbit/s cable |
|---|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------------------|
| 'Up to' upload speed | 1Mbit/s | 1Mbit/s | 3Mbit/s | 2Mbit/s | 5Mbit/s | 10Mbit/s |
| Data cap | Unlimited | 10GB | Unlimited | 40GB | Unlimited | Unlimited |
| Standalone monthly cost | £21.00 | n/a | £28.50 | n/a | £35.00 | £45.00 |
| Monthly cost when bundled with landline (excluding line rental) | £13.50 | £13.00 | £18.50 | £18.00 | £25.00 | £35.00 |
| Average download speed, May 2011 | 9.5Mbit/s | 8.2Mbit/s | 31.0Mbit/s | 33.8Mbit/s | 48.4Mbit/s | No data |

Source: Ofcom / PurePricing Broadband Pricing Factbook, June 2011

Note: BT also offers a more expensive FTTC service with upload speeds of 'up to' 10Mbit/s and unlimited monthly use, which is available on a standalone basis.

5.1.3 Purchasing and usage patterns among super-fast broadband users

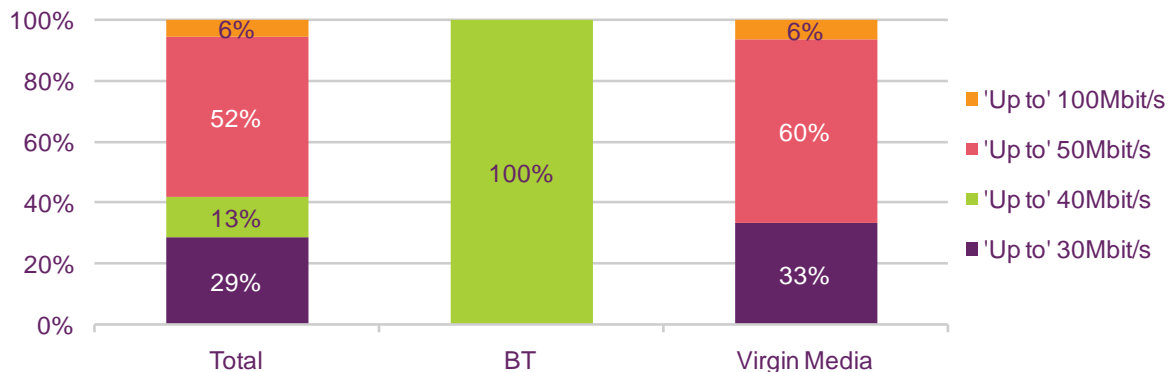
Introduction

In order to better understand how consumers choose and use super-fast broadband services we commissioned market research company YouGov to conduct consumer research among BT and Virgin Media super-fast users. For the purposes of this survey super-fast broadband was classified as connections with headline speeds above 'up to' 24Mbit/s, and we included Virgin Media cable customers on 'up to' 30Mbit/s, 50Mbit/s and 100Mbit/s services, and BT customers receiving its 'up to' 40Mbit/s FTTC service. Other ISPs including Plusnet, TalkTalk and Zen Internet have also launched FTTC services using BT wholesale products, but were not included in this research due to currently small customer bases.

The research was conducted by an online survey of 1,008 super-fast users. The mix of consumers surveyed is detailed in Figure 5.15 below and was to a great extent defined by the take-up of services when the research was undertaken. The research methodology is detailed on page 259.

Figure 5.4 Headline download speed, by provider

Q1 – What is the maximum download speed you have been told you would get from your home broadband service?



Source: Ofcom research, fieldwork carried out by YouGov in April 2011

Base: All with super-fast broadband (1008; Virgin Media 874, BT Infinity 134)

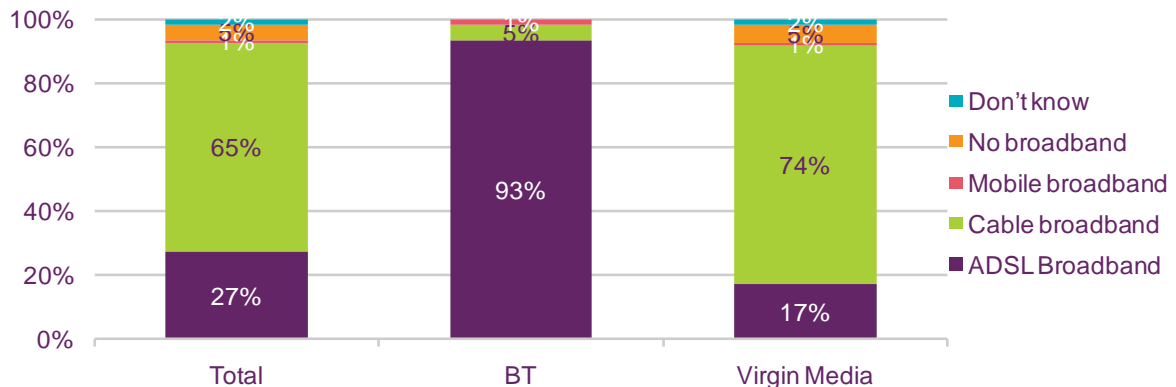
Note: Only respondents citing available suppliers and speeds were included in the survey

Most super-fast users stick with the same technology when upgrading their service...

The majority of BT FTTC customers said that they had previously had a fixed broadband ADSL service before subscribing to their current service, while the majority of Virgin Media super-fast users had previously had a cable broadband package, less than one-fifth having previously subscribed to an ADSL service (Figure 5.5).

Figure 5.5 Previous broadband package, by current provider

Q6 – What type of broadband package did your household have before subscribing to the (current) broadband service?



Source: Ofcom research, fieldwork carried out by YouGov in April 2011

Base: All with super-fast broadband (1008; Virgin Media 874, BT Infinity 134)

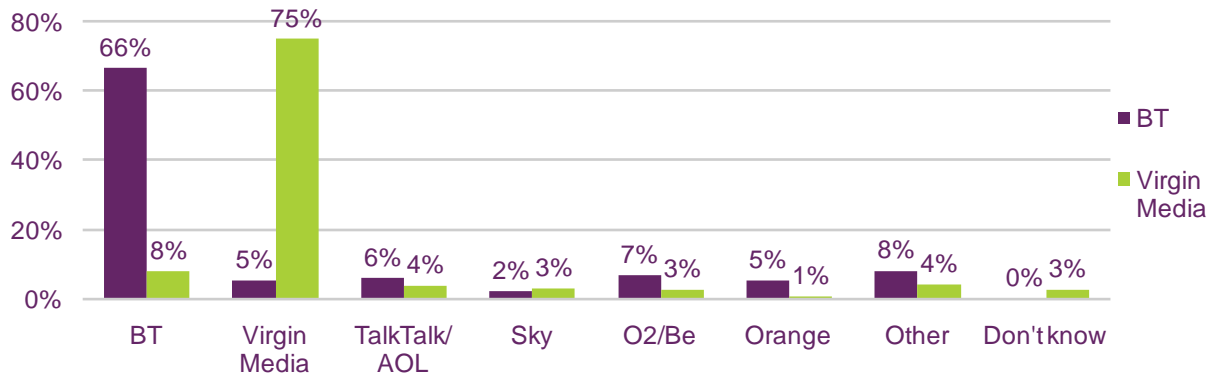
...in fact, most stay with the same ISP

Most respondents said that they had not changed supplier when they upgraded to a super-fast broadband service; 75% of superfast connections with Virgin Media had previously used Virgin Media and only 5% of BT Infinity customers had switched from Virgin Media (Figure 5.6). Similarly, 66% of BT FTTC customers were previously BT customers and only 8% had been with Virgin Media. BT super-fast broadband users customers appear to be drawn from

a broader range of previous suppliers, with small but notable proportions migrating from O2, Orange and TalkTalk/AOL.

Figure 5.6 Previous internet service provider, by current provider

Q6a – And which internet service provider did your household use before you subscribed to your (current) service?



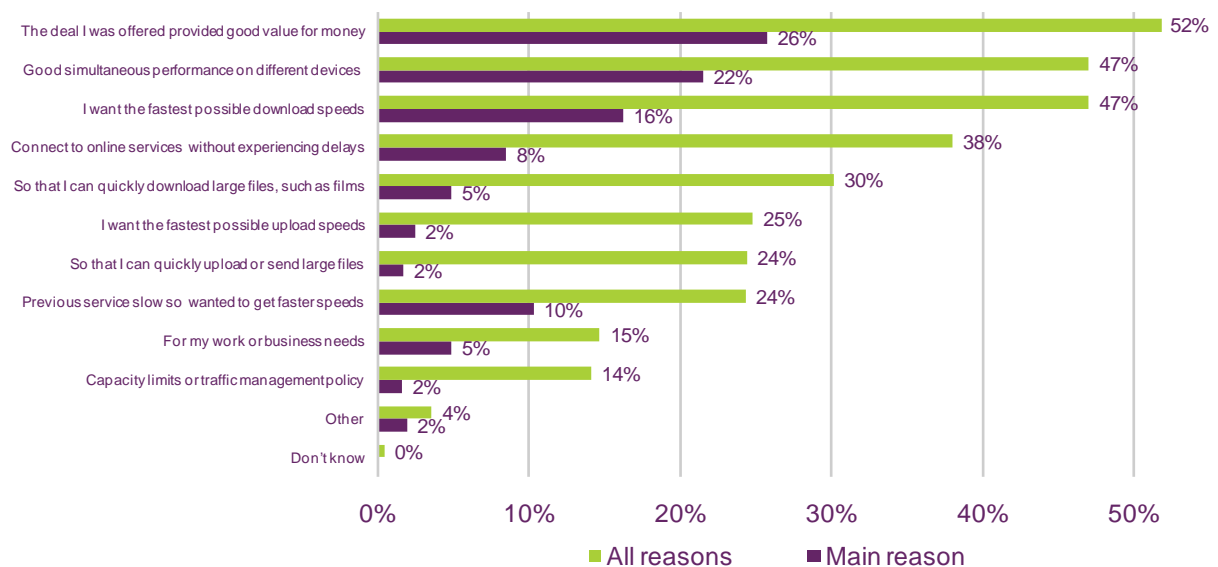
Source: Ofcom research, fieldwork carried out by YouGov in April 2011
 Base: All with broadband before (943; Virgin Media 809, BT Infinity 134)

Value for money was the most important consideration when choosing a super-fast service

Even though super-fast broadband services are generally more expensive than slower services (see section 5.1.2 above), value for money was the most important single reason for consumers choosing their current super-fast broadband service (Figure 5.7). Nearly half of all respondents said that good simultaneous performance on multiple devices was a reason for taking super-fast broadband, indicative of how households are increasingly using WiFi connectivity to provide internet connections to multiple devices, including desktop, laptop and tablet PCs, mobile phones, games consoles and internet-enabled televisions.

Figure 5.7 Reasons for choosing current broadband service

Q3/4 – Why did you choose a <xMbit/s> broadband service? And which of these was the single most important reason?



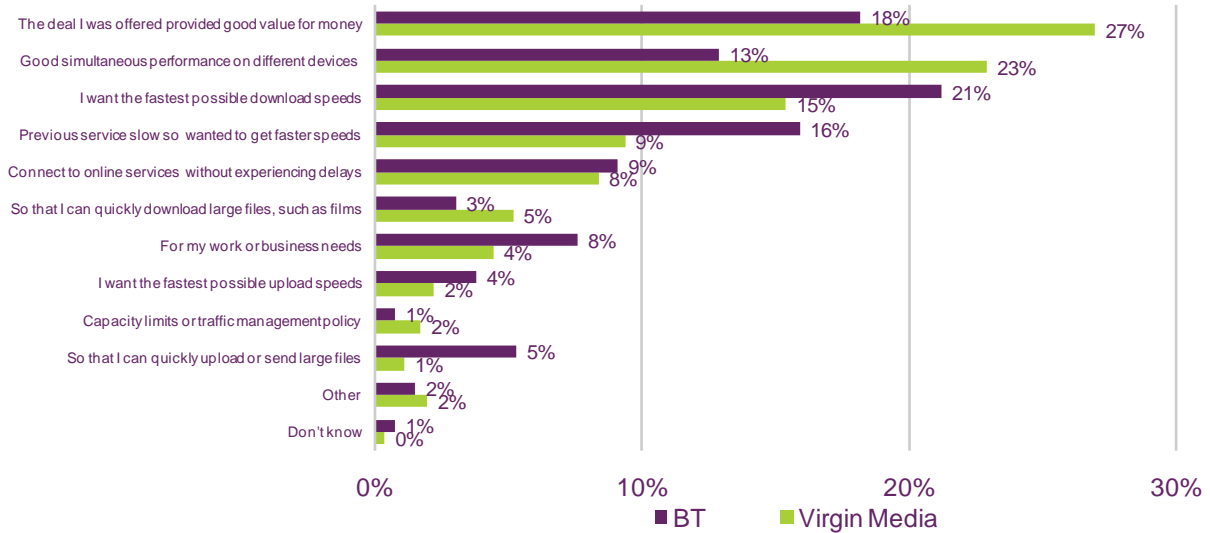
Source: Ofcom research, fieldwork carried out by YouGov in April 2011
 Base: All with super-fast broadband (1008; Virgin Media 874, BT Infinity 134)

...but having the fastest speeds available was most important to BT Infinity users

BT and Virgin Media super-fast broadband customers give different reasons for taking their current services; Virgin Media customers are more likely to say that the most important reason was because the deal offered good value for money, or that they wanted good simultaneous performance on different devices, while BT customers were more likely to say that they wanted faster speeds (Figure 5.8). This may well relate to customers' previous experience of using broadband services, as BT customers would typically have experienced slower speeds than Virgin Media customers, due to the high proportion previously having used ADSL broadband (which typically delivers lower average speeds than comparable cable services).

Figure 5.8 Most important reason for choosing broadband service, by current provider

Q4 – Why did you choose a <xMbit/s> broadband service? And which of these was the single most important reason?



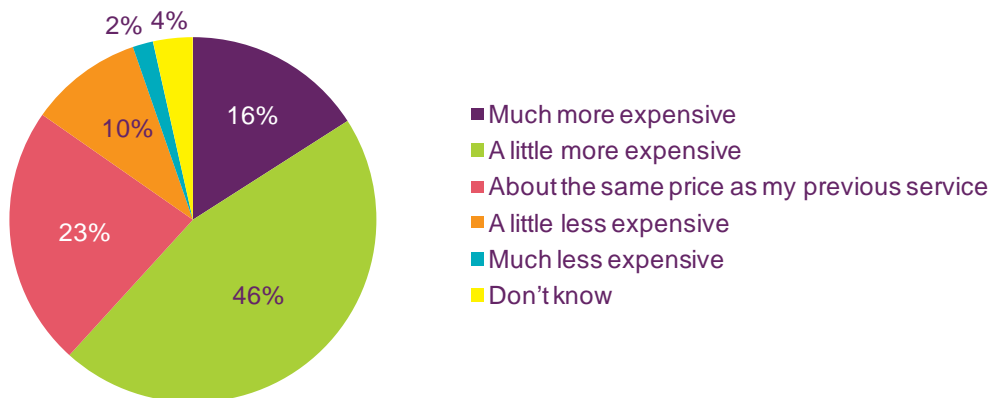
Source: Ofcom research, fieldwork carried out by YouGov in April 2011
 Base: All with super-fast broadband (1008; Virgin Media 874, BT Infinity 134)

Most super-fast users recognise that they pay a premium for the service

Nearly two in three respondents said that their current broadband service was more expensive than the service they used to have, and one in six said that it was much more expensive (Figure 5.9). This pattern was similar across both Virgin Media and BT super-fast customers.

Figure 5.9 Price of current broadband service compared to previous service

Q9 – How does the price of your current broadband service compare to the broadband service that you used to have?



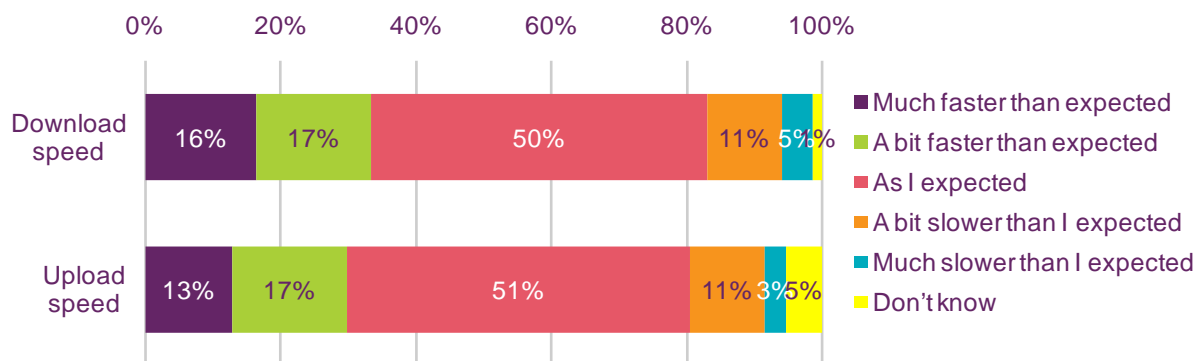
Source: Ofcom research, fieldwork carried out by YouGov in April 2011
 Base: All with broadband before (943)

Actual super-fast speeds are meeting or exceeding expectations in most cases

Half of all respondents said that upload and download speeds had met their expectations when they signed up for the service, while a third said that the speed of the service had exceeded expectations (Figure 5.10). BT FTTC customers were more likely to say that their speeds were faster than expected (43% compared to 32% for download speed and 28% for upload speed for Virgin Media); again, likely to be driven by previous experience of slower broadband speeds on ADSL compared to cable connections.

Figure 5.10 Speed of broadband service compared to initial expectations

Q10/11 – How does the download/upload speed of your current broadband service compare with what you expected when you signed up for it?



Base: All with super-fast broadband (1008)

Source: Ofcom research, fieldwork carried out by YouGov in April 2011

Over 80% of super-fast users said that they were satisfied with their service

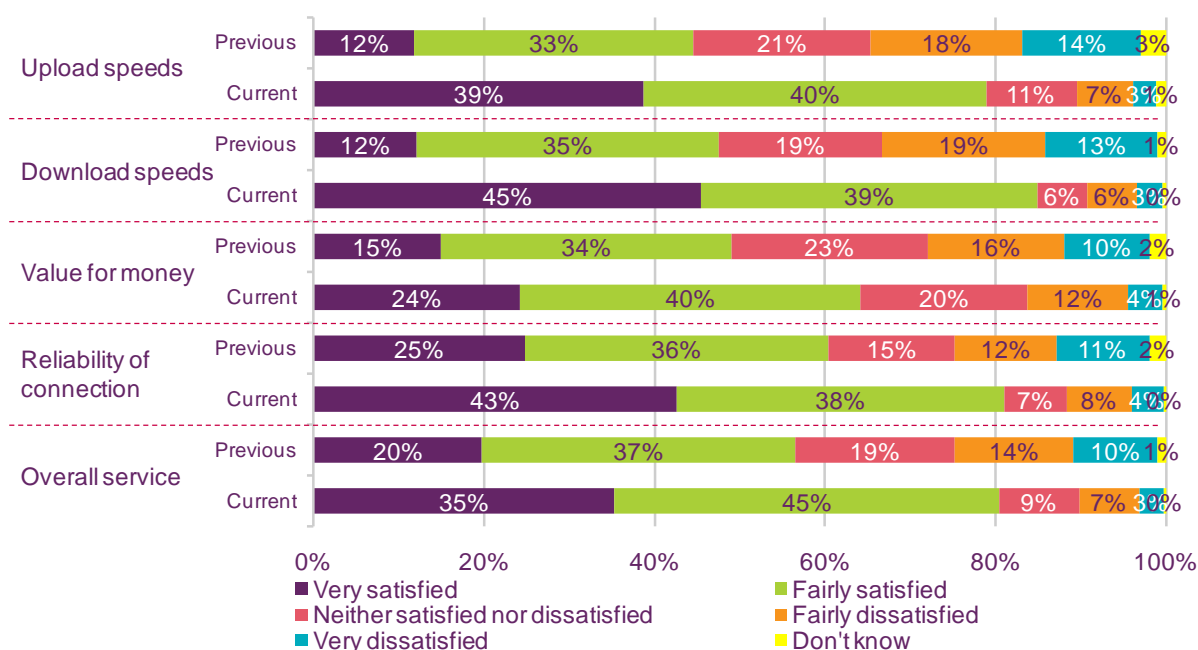
The majority of super-fast broadband users were happy with their overall service, 80% being 'very' or 'fairly' satisfied and just 10% being 'very' or 'fairly' dissatisfied. These levels compare favourably with respondents' satisfaction levels with their previous services, which showed that 57% had been 'very' or 'fairly' satisfied and 24% 'very' or 'fairly' dissatisfied).

Super-fast broadband users' satisfaction with the upload speeds, download speeds and reliability of their current services also compared favourably with those for their previous services (Figure 5.11 **Error! Reference source not found.**). The biggest increases in satisfaction levels between current and previous service were for download speeds (a 37 percentage point increase in the proportion that were 'very' and 'fairly' satisfied) and for upload speeds (a similar 34 percentage point increase).

Satisfaction with value for money also increased (a 15 percentage point increase in the proportion that were 'very' and 'fairly' satisfied), despite the fact that most respondents were paying more for their current service than they had done previously.

Figure 5.11 Satisfaction with aspects of current broadband service

Q7/8 – To what extent are you satisfied or dissatisfied with the following aspects of your home broadband service?/Thinking about the broadband service that you used to have, to what extent were you satisfied or dissatisfied with the following aspects of that service?



Source: Ofcom research, fieldwork carried out by YouGov in April 2011
 Base: All with super-fast broadband (1008), all with broadband before (943)

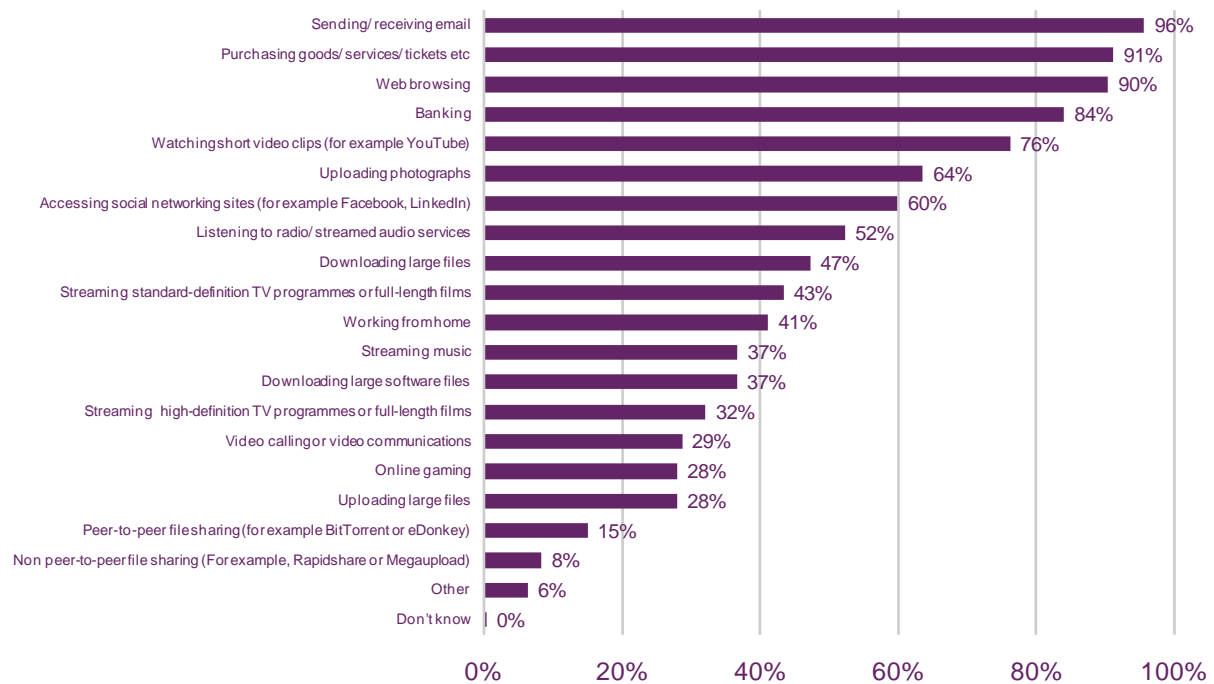
Less than half of super-fast users use their connection to download large files...

While over 90% of the super-fast broadband users surveyed used their broadband connection for sending/receiving email, purchasing goods/services/tickets and web browsing, and over 80% used their broadband service for banking, just 47% said that they used their connection to download large files (Figure 5.12). Comparing these results with usage among all internet users⁵⁰ reveals higher use of a number of services; some of the biggest differences were: watching short video clips (76% compared to 40% for all internet users), banking (84% compared to 60% for all users) and purchasing good/services/tickets (91% compared to 71% for all users). It is likely that these differences are due to higher levels of digital engagement among these consumers, as well as differences in the demographic profile of super-fast broadband users compared to all internet users⁵¹.

⁵⁰ Ofcom Technology Tracker Q1 2011, QE12A

⁵¹ Super-fast broadband users in our survey were more likely than all internet users to be male and to fall into the ABC1 social group; they also tended to be older and were less likely to have children living at home

Figure 5.12 Services current broadband connection used for



Source: Ofcom research, fieldwork carried out by YouGov in April 2011
 Base: All with super-fast broadband (1008)

...but levels of large file downloading and content streaming are higher than average

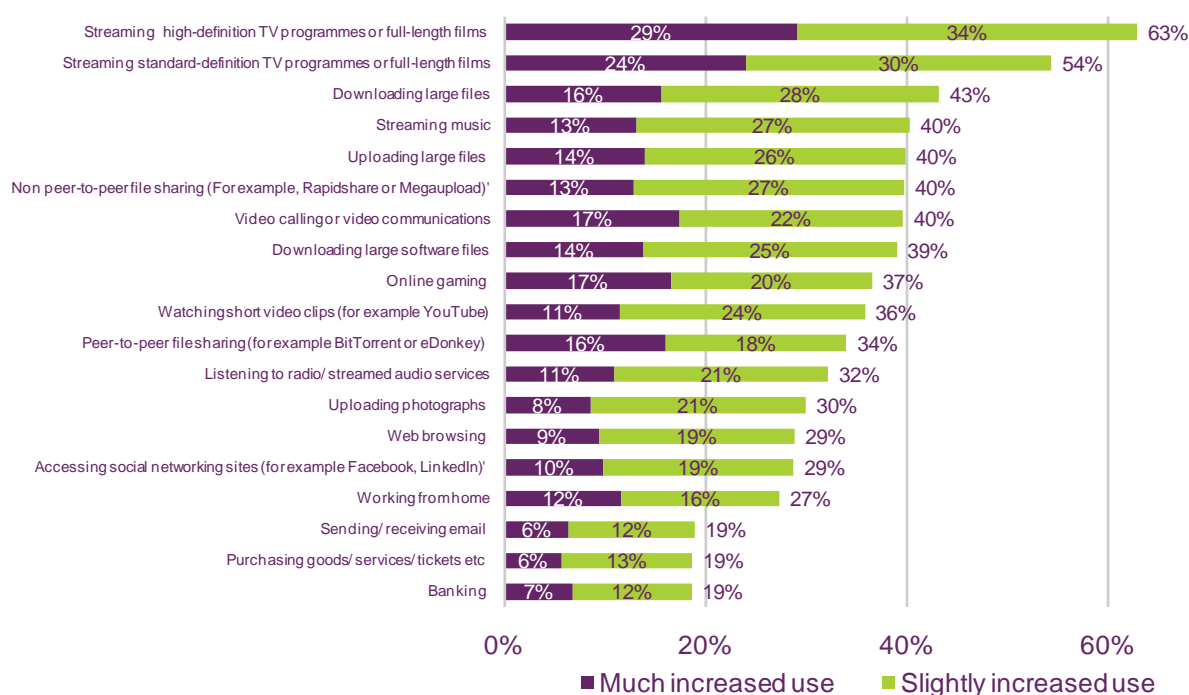
There is strong evidence that the take-up of super-fast broadband changes the ways in which consumers use the internet, as users benefit from the improved experience of services which benefit from faster speeds and the higher quality of service typically offered by super-fast services.

The largest increases in reported use relate to streaming TV programmes or full-length films; nearly two-thirds of respondents said that they had increased their levels of streaming high-definition content and more than half had increased their streaming of standard-definition content (Figure 5.13). There were also notable increases in some services which are less mainstream, including file-sharing and online gaming.

The lowest increases were for those services where use was already high, and which typically benefit less from having faster speeds: sending and receiving email, purchasing goods/services/tickets and banking.

Figure 5.13 Change in use compared to previous broadband connection

Q13 – How has the amount you use this service(s) changed compared to when you had your previous broadband connection?



Source: Ofcom research, fieldwork carried out by YouGov in April 2011

Base: All with broadband before and using specified service (943)

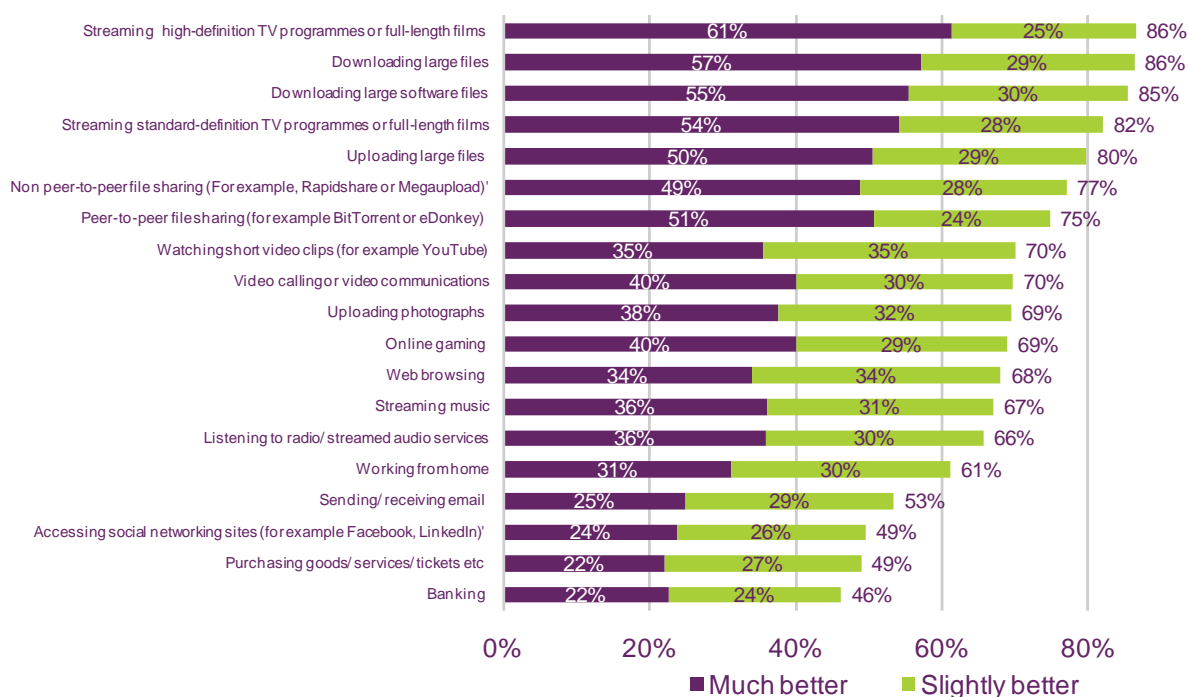
Most super-fast users say that the service has improved their online experience

Most respondents said that their experience of using services had improved since taking up their new broadband service; over 80% of respondents said that streaming high-definition TV programmes and full-length films, downloading large files, downloading large software files and streaming standard-definition TV programmes and full-length films had improved (Figure 5.14). The majority of consumers (68%) also said that web browsing was better over their super-fast connection; this possibly being due to the typically higher responsiveness of super-fast connections⁵².

⁵² Responsiveness is typically measured by latency, which is the time it takes for a single packet of data to travel from a user's PC to a third party server and back again. Ofcom research into broadband speeds finds that super-fast broadband services typically had latency more than 30% faster than ADSL services, <http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/broadband-speeds/>

Figure 5.14 Experience of using these services compared to previous broadband connection

Q14 – And how would you describe your experience of these services using your current connection compared to your previous connection?



Source: Ofcom research, fieldwork carried out by YouGov in April 2011

Base: All with broadband before and using specified service (943)

Notes on methodology

In order to better understand how consumers choose and use super-fast broadband services we commissioned market research company YouGov to conduct consumer research among BT and Virgin Media super-fast broadband users. For the purposes of this survey super-fast broadband was classified as connections with headline speeds above 'up to' 24Mbit/s, and we included Virgin Media customers on 'up to' 30Mbit/s, 50Mbit/s and 100Mbit/s services, and BT customers receiving its 'up to' 40Mbit/s FTTC service.

YouGov screened respondents on its online panel to identify 1,008 super-fast broadband users who met these criteria, and these respondents formed our survey sample. All respondents were UK adults aged 18+. Fieldwork was conducted from 19 to 27 April 2011.

The survey data have not been weighted and may not represent the profile of the total UK super-fast broadband market; due to the low incidence of super-fast broadband subscribers in the total population (less than 2%) it is not possible to profile this market accurately using our current data. Figure 5.15 summarises the sample profile.

Figure 5.15 Super-fast broadband research sample profile

| | Respondents | % of sample | % of population |
|-------------------------|-------------|-------------|-----------------|
| Total | 1008 | | |
| Age | | | |
| 18 to 24 | 72 | 7 | 14 |
| 25 to 34 | 146 | 14 | 18 |
| 35 to 44 | 181 | 18 | 19 |
| 45 to 54 | 228 | 23 | 15 |
| 55+ | 381 | 38 | 33 |
| Gender | | | |
| Male | 728 | 72 | 48 |
| Female | 280 | 28 | 52 |
| Social group | | | |
| ABC1 | 631 | 63 | 55 |
| C2DE | 377 | 37 | 45 |
| Children at home | | | |
| No | 756 | 75 | 60 |
| Yes | 236 | 23 | 40 |

Source: Ofcom

5.1.4 Mobile customers flock to pay-monthly contracts

Nearly seven million contract subscriptions added in 2010 as consumers move to pay-monthly

For several years there has been a gradual shift of consumers from pre-pay (pay-as-you-go) mobile connections to post-pay (pay monthly contracts). This shift gathered pace in 2010 as the number of pre-pay mobile connections increased by 6.5 million, and the number of pre-pay connections fell by 5.7 million. By the end of the year, 49% of mobile connections were post-pay, compared to 41% at the end of 2009 (Figure 5.16).

As mobile take-up approaches saturation, mobile network operators have focused on increasing their pay-monthly customer bases as a way of reducing customer churn and maximizing revenues. Average monthly spend for pay-monthly connections is more than three times that of a pre-pay customer (although the differential has been falling as customers increasingly take lower-price pay-monthly tariffs), and the customer lifetime value of a post-pay customer is much higher than that of a pre-pay customer, as the propensity to switch provider is much lower (in part because most post-pay customers are tied into a minimum contract duration).

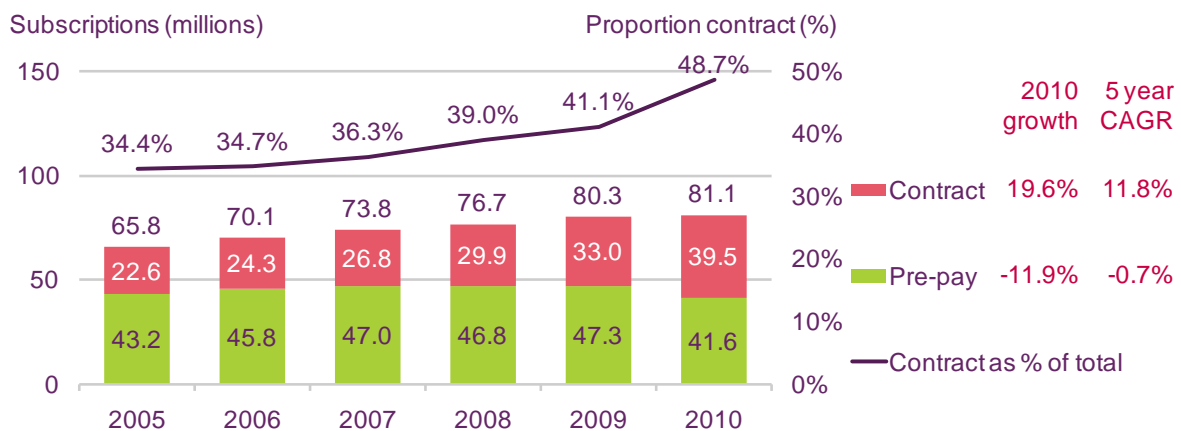
The migration from pre-pay to post-pay can be attributed to three main factors:

- the growth of sub-£20 mobile contracts, which have made pay-monthly contracts affordable for more users, and often offer greater value than pay-as-you-go tariffs.
- the growth of one-month SIM-only contracts, which enable subscribers to take advantage of the bundled calls, messages and data allowances provided by post-pay contracts without committing to a long-term contract; and

- growth in the popularity of smartphones (which were owned by 27% of adults and accounted for around half of mobile phone sales in Q1 2011), the most desirable models of which are often only available on post-pay contracts, and because post-pay tariffs allow users to spread the high handset cost across the duration of the contract rather than paying up front

This trend towards contract subscriptions looks set to continue, as following Ofcom's move to reduce mobile termination rates to 0.69p per minute by 2015, some operators have increased the cost of pre-pay charges. In July 2011 Orange increased its standard pre-pay prices by 25% for calls to mobiles, landlines and voicemail and the price of texting by 20%, and Vodafone also increased its pre-pay prices⁵³. In addition, Vodafone, O2, and Everything Everywhere (which operates the T-Mobile and Orange brands) have all announced that they will stop subsidising pre-pay handsets, thereby increasing the overall cost for pre-pay consumers and making monthly contracts potentially more attractive for some consumers.⁵⁴

Figure 5.16 Pre-pay and contract mobile connections



Source: Ofcom / operators

Notes: Based on data provided to Ofcom by operators; includes estimates where Ofcom does not receive data from the operators

One in five pay-monthly contracts is for less than £15 a month

Figure 5.17 details how the monthly rental costs of new mobile contracts have changed between Q1 2005 and Q1 2011. It indicates how there has been an ongoing growth in lower-value contracts: in Q1 2011 the majority of new contracts (51%) were for less than £25 a month, compared to just 15% of new contracts sold in Q1 2005.

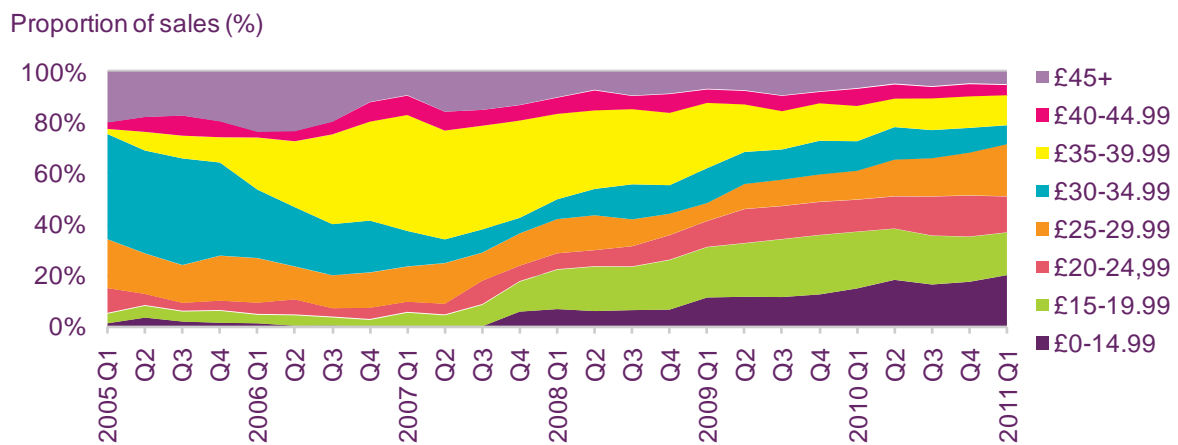
Also evident is the growth of sub-£15 a month contracts, which accounted for 20% of new contracts sold in Q1 2011, having been virtually non-existent four years previously. The low monthly cost and limited contractual commitment makes SIM-only contracts attractive to many pre-pay users who continue to use their existing handsets. In June 2011 SIM-only tariffs, including at least 100 anytime, any network minutes, were available on one-month contracts from all the UK's mobile network operators as well as leading MVNOs for £10.50 or less a month. These SIM-only contracts also typically include a large number of text messages; indeed some tariffs offer 100 minutes and unlimited texts for £10 a month,

⁵³ http://www.mobiletoday.co.uk/News/11951/Orange_and_Vodafone_hike_PAYG_charges_as_EU_slashes_roaming_fees.aspx

⁵⁴ <http://www.independent.co.uk/news/uk/home-news/mobile-operators-pull-prepay-phone-subsidies-2290895.html>

making them particularly attractive to younger users who are often very high users of text messaging.

Figure 5.17 Monthly line rental prices for new mobile contract connections



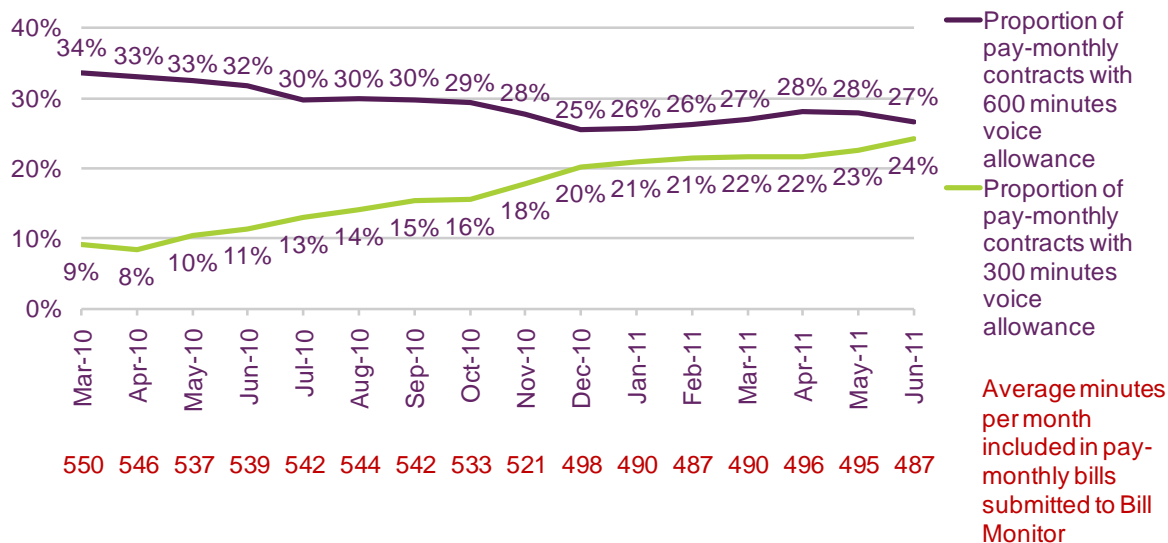
Source: GfK Retail and Technology UK Ltd, *Contract Handset Acquisitions: price segments*.
 Notes: England, Scotland and Wales only (excludes Northern Ireland); based on GfK's coverage of 94% of the consumer market; based on new post-pay connections; excludes contract renewals; only represents sales through consumer channels (i.e. most business connections are excluded)

Numbers of inclusive minutes fall as mobile contracts get cheaper

As the proportion of sub-£25 mobile contracts has increased, the average number of inclusive minutes in pay-monthly contracts has fallen. Based on an analysis of mobile bills submitted to price comparison service billmonitor, the average number of inclusive minutes on mobile contracts fell from 550 minutes in March 2010 to 487 in June 2011. These data should be treated with caution, as users of billmonitor may not be representative of mobile users as a whole, and it is likely that the data over-represent users at the ends of their contracts, as it is these users who are of course most likely to be using a price comparison site.

Nevertheless, it is clear that there is a movement towards pay-monthly users taking subscriptions with lower numbers of inclusive minutes. Figure 5.18 shows that there has been a significant increase in contracts with 300 minutes, which accounted for nearly a quarter of the mobile bills submitted to billmonitor in June 2011, while there has been a steady drop in the proportion of mobile contracts that include 600 minutes.

Figure 5.18 Proportion of pay-monthly customers with 300 and 600 minutes voice allowance



Source: billmonitor

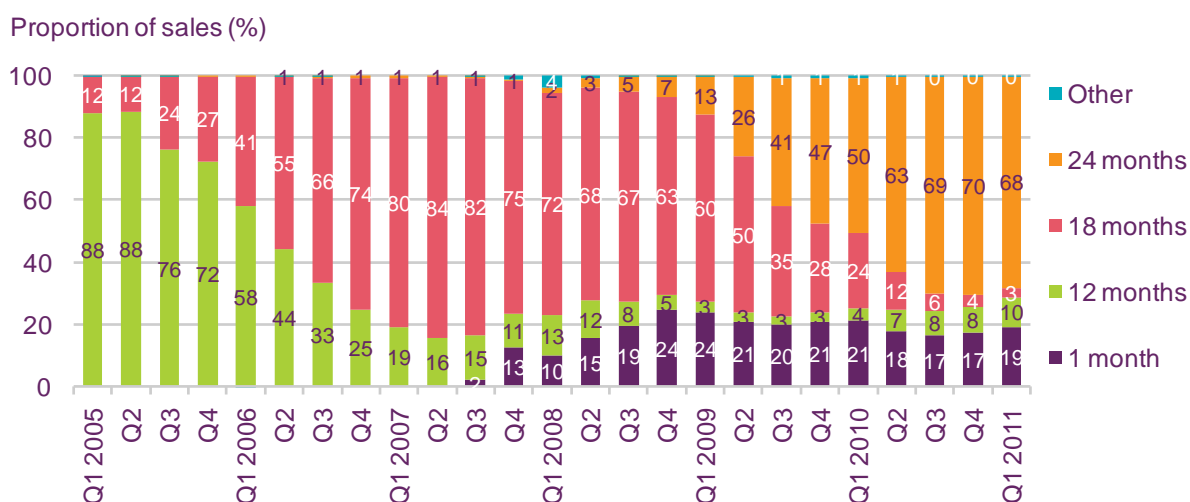
The large majority of contracts are either one month or 24 months

Figure 5.19 below details how the length of mobile contracts has evolved in recent years. It shows that one-month contracts (i.e. most SIM-only contracts) accounted for around one in five new connections in Q1 2011. However, the emergence of one-month contracts has been accompanied by the increasing availability and take-up of two-year contracts, which have accounted for more than two-thirds of new pay-monthly connections since Q3 2010.

The lengthening of standard contract lengths from 12 months to 18 months, and then to 24 months (and in some cases 36 months), has been driven by operators looking to reduce customer churn. It has also made smartphones more affordable for many consumers, as the monthly fees on 24-month contracts are lower than on 12- or 18-month contracts, as mobile operators recoup the cost of a subsidised handset over a longer period.

However, in May 2011 new EU regulations came into force that mandate mobile providers to offer 12-month contracts and place an upper limit of 24 months on new contract lengths. These shorter contracts may be popular with consumers who do not wish to subscribe to longer contracts, or those who are eager to have the latest handsets (as previously the limited availability of the latest handsets on 12-month contracts meant that they were forced to continue using a handset which had been replaced by a newer model).

Figure 5.19 Monthly line rental for new mobile contract connections



Source: GfK Retail and Technology UK Ltd, Contract Length Sales of new Mobile Connections, Q1 2005-Q1 2011.

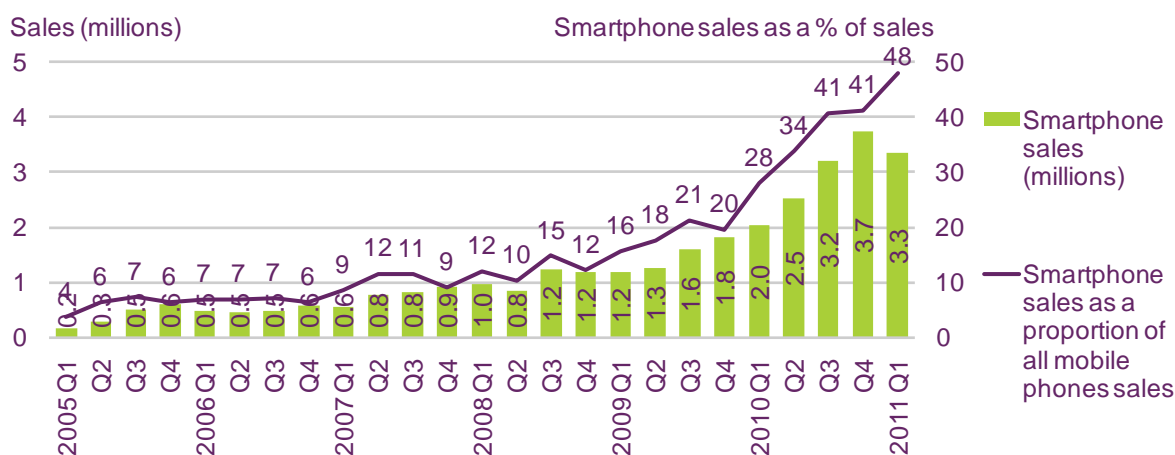
Notes: England, Scotland and Wales only (excludes Northern Ireland); based on GfK's coverage of 94% of the consumer market; based on new post-pay connections; excludes contract renewals; only represents sales through consumer channels (i.e. most business connections are excluded)

Growth of smartphones and mobile internet use

A key characteristic of the communications market in the past year has been the growth in take-up of smartphones (see Section 0 above). Figure 5.20 details sales data collected by GfK, which indicate that smartphone sales nearly tripled between Q1 2009 and Q1 2011. By the first quarter of 2011, around half of new handsets sold were smartphones (note that in this analysis smartphones are defined by the operating system – this may be a more restrictive definition of smartphone than is used elsewhere in this report, where smartphones are defined more by functionality).

It is likely that the demand for smartphones, particularly among younger users, has played a role in the increasing take-up of pay-monthly contracts, as users repay much of the cost of an expensive handset over a 24-month contract. In addition, as internet access on mobile phones becomes more widespread (we find that 36% of mobile users claim to access the internet on their mobile phone – see Section 4.1.2 of this report), pay-monthly tariffs may be more attractive than pay-as-you-go tariffs, as the majority of post-pay tariffs now include some element of bundled data use.

Figure 5.20 UK smartphone sales



Source: GfK Retail and Technology Ltd, based on factual point-of-sale information

- (1) Smartphones are defined as any handset running an open operating system, including Symbian (6.1 and above), Android, BlackBerry, iPhone, Palm, Windows Mobile or Linux operating systems;
- (2) England, Scotland and Wales only (excludes Northern Ireland);
- (3) Based on GfK's coverage of 95% of the market – data have been extrapolated to represent whole market;
- (4) Only represents sales through consumer channels, i.e. most business connections are excluded

5.1.5 Mobile networks look to keep up with explosion in mobile data use

Data volumes transferred over mobile networks increased by 67% in 2010

As detailed elsewhere in this report, there has been an explosion in the use of mobile data services in the last couple of years – both through the take-up of dongles connecting PC/laptops to the internet and through the increasing use of data services on mobile handsets. We estimate that data volumes increased by a factor of 38 in the three years to the end of 2010.

It is the increasing take-up of smartphones, which were used by 26% of the UK population in March 2011 (see Section 0 of this report) and represented over 40% of handset sales in the second half of 2010 (see Figure 5.20 above), that is likely to have been the primary driver of the 67% increase in mobile data volumes in 2010; in Q1 2011 our consumer research found that 28% of UK adults claimed to access the internet on a mobile phone (up from 22% a year previously), and 17% claimed to access the internet on a PC/laptop via mobile broadband (up from 15% a year previously). (See Figure 4.14 in Section 4 of this report for further details).

This rapid increase in data use inevitably puts a strain on mobile networks, particularly at peak times. Our research into mobile broadband performance, undertaken in Q4 2010, found that the average speed delivered to consumers in off-peak periods was 1.9Mbit/s, compared to an average speed of 1.4Mbit/s in peak periods, while average download speeds for operators on their 3G networks were between 16% and 50% lower in peak periods than in off-peak periods⁵⁵. However, there is some evidence that investment in network upgrades is keeping up with increases in demand. The average download speed of 1.5Mbit/s that we measured in Q4 2010 was significantly faster than the 1Mbit/s average speed reported in a previous study of mobile broadband performance by Epiteiro (December

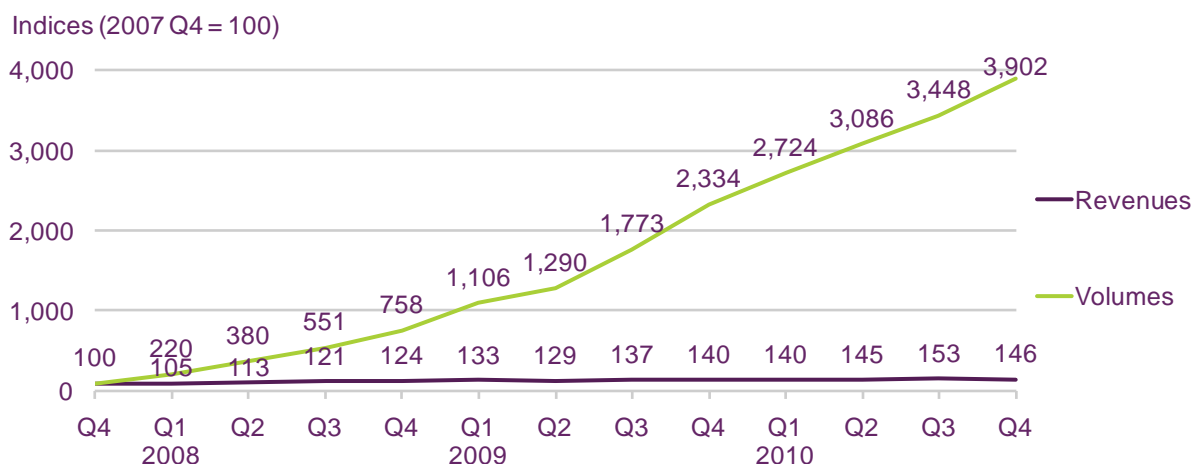
⁵⁵ http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/bbspeeds2010/Mobile_BB_performance.pdf

2008 to May 2009)⁵⁶. Although like-for-like comparison is not possible due to methodological differences, the increase in speeds may be indicative of improved network performance.

In addition to detailing the increase in data volumes, Figure 5.21 also maps the increase in data revenues over the same period. It shows that while data volumes increased by 3800% between Q4 2007 and Q4 2010, data revenues only increased by 46%. During 2010, data revenues were fairly flat (up 4.3%), while data volumes increased by 67%. It is important to note that these data revenues are likely to be understated, as we are able to include only data-specific revenues (i.e. metered fees or separate add-ons), whereas increasingly a data allocation is included within the monthly line rental fee for mobile phone contracts. It is also true that substantial increases in capacity can often be achieved with relatively inexpensive upgrades, for example from 3G to HSPA.

Nevertheless, this growing gap between data volumes and data revenues represents a significant challenge to the mobile industry. It is this that has led some operators to reduce the data limits associated with mobile phone subscriptions and introduce tiered pricing. For example, in January 2010 T-Mobile set a 500MB limit on streaming or downloading video, while still continuing to offer unlimited web browsing; and in June 2010 O2 ended unlimited data plans for all its mobile tariffs, setting limits ranging from 500MB to 1GB per month according to tariff, and offering additional 'bolt-ons' of an extra 500MB for £5 a month or 1GB for £10.

Figure 5.21 Mobile data volume and revenue growth



Source: Ofcom / operators

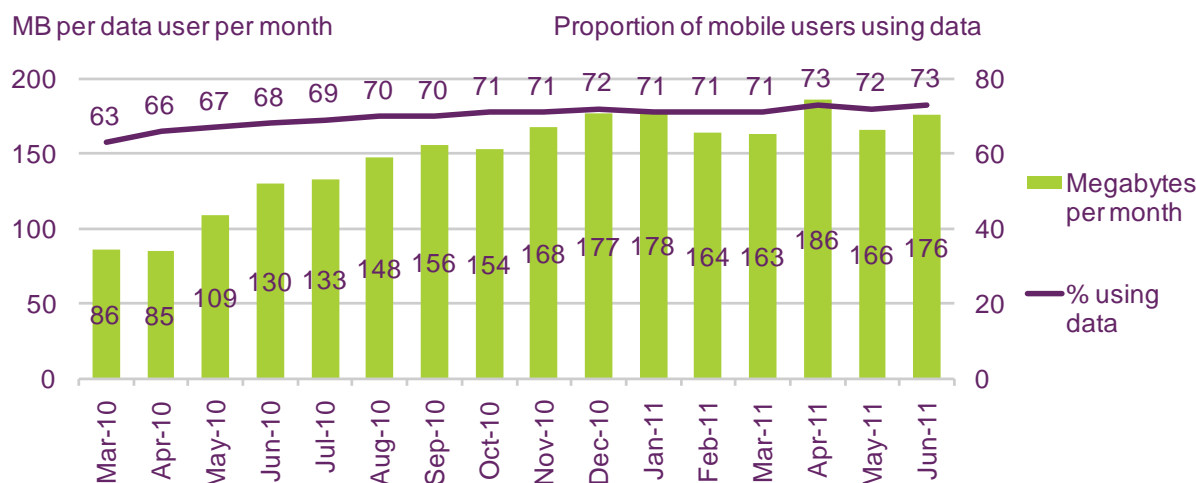
Notes: Data revenues include revenues for data services on mobile phone connections and mobile broadband (dongle) connections, but do not include any allocation for data services which may be bundled with access charges in mobile phone subscriptions; includes estimates where Ofcom does not receive data from operators

Data collected by price comparison service billmonitor allow us to track the changes in data use, as reported on the mobile phone bills that users of the service submit. It should be noted that consumers using billmonitor may not be representative of mobile users as a whole, but nevertheless the data does provide some insight into the trends in the use of mobile data services. Based on between 3,000 and 10,000 bills submitted every month, the proportion of pay-monthly customers who used data services increased from 63% to 73% between March 2010 and June 2011. However, more striking is the increase in the average data use by these consumers, which approximately doubled over the same period. But there are some signs that the average data use of pay-monthly customers has levelled off since

⁵⁶ http://www.epitiro.com/assets/files/ukmobilebroadband_final.pdf

November 2010 – although it is difficult to draw conclusions from a limited data set over a short period of time, it may be that the rapid growth phase seen until the end of 2010 is slowing, due to a combination of factors including changing behaviour as the market moves from early adopter to late adopter phase, and operator pricing policies reducing heavy users' data consumption.

Figure 5.22 Average monthly data use for pay-monthly mobile phone users



Source: billmonitor

WiFi offers some potential for off-loading mobile data...

Our research finds that by Q1 2011, 75% of home broadband connections used a WiFi router (see Figure 4.15 in Section 4 of this report), thereby allowing consumers with WiFi-enabled mobile phones (which most smartphones are) to use their home fixed-line broadband connection, thereby reducing the risk of exceeding data limits and generally benefitting from better performance (our research finds, for example, that average download speeds over home fixed-line broadband connections were 6.2Mbit/s in Q4 2010, compared to 1.5Mbit/s over mobile broadband networks)⁵⁷.

Public WiFi 'hotspots' also offer the potential for off-loading data used on mobile devices to fixed-line networks. BT is the largest provider of hotspots in the UK, with over 2 million on the BT FON network (these are BT home broadband subscribers who securely share a portion of their WiFi connection, making it available to other members who are in range), and nearly 4,000 OpenZone public hotspots. BT Total Broadband customers with an iPhone or Android device can download a free app that gives free access to BT's WiFi network and includes a mapping service showing the nearest hotspot. By November 2010, BT reported that over 170,000 people had downloaded this app⁵⁸.

O2, Orange, Vodafone and Tesco Mobile all include access to WiFi hotspots within some of their mobile tariffs. In January 2011 O2 announced that it was investing in developing its own public WiFi network, initially in 450 O2-owned sites, but with plans to expand to 15,000 WiFi hotspots by 2013. Also in January 2011, Sky announced that it was purchasing WiFi operator The Cloud, which has 5,000 hotspots throughout the UK – indicating the

⁵⁷ http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/bbspeeds2010/Mobile_BB_performance.pdf

⁵⁸ http://www.btopenzone.com/news/news_20101109.jsp

importance Sky attaches to being able to deliver data (and in particular content) services to its customers outside the home without relying on cellular networks.

...but a step change in the performance of mobile networks will come with the launch of LTE networks

Current UK mobile networks use the 3G/HSPA standard. However, trials are under way for the launch of super-fast mobile broadband networks using the LTE standard (often referred to as '4G'). LTE networks will offer much higher theoretical speeds (commercial deployments elsewhere in the world are delivering speeds in excess of 50Mbit/s), but also much greater capacity. In part, increased capacity will come from greater spectral efficiency – research commissioned by Ofcom from Real Wireless estimates that initial deployments of LTE will provide a 1.2 times increase over the most efficient 3G technology in deployment in the UK (HSPA+), and forecasts that increased spectral efficiency will enable the networks to carry as much as 5.5 times more traffic in the same spectrum by 2020⁵⁹. However, the main driver of increased capacity will come from the allocation of more spectrum. Ofcom has announced plans to auction spectrum at 800MHz and 2.6GHz (the 'digital dividend' spectrum made available by the switchover from analogue to digital television) in Q1 2012, which should lead to the launch of commercial LTE services from 2013⁶⁰.

In preparation, a number of operators have been running mobile broadband trials using spectrum in the 800MHz and 2.6GHz bands. By June 2011, Ofcom had issued 14 non-operational licences in the 2.6GHz band which were live (eight for test purposes using LTE technology, five for WIMAX and two for rural broadband), with one non-operational licence in the 800MHz band which had recently expired and two more shortly to start (all for LTE technology). The Global Mobile Suppliers Association reported in June 2011 that O2 and Vodafone had made commitments to investing in LTE network infrastructure, while Arqiva and Clear Mobile were engaged in pre-commitment trials⁶¹. In May 2011 Everything Everywhere and BT announced the UK's first live customer trial of LTE-based mobile broadband using 800MHz test spectrum to offer broadband services to up to 100 mobile customers and up to 100 fixed-line customers in a 25km² area of rural Cornwall; the trial will start in September and continue until early 2012⁶².

5.1.6 Overview of recent trends in residential fixed telecoms pricing

In March 2011, BT announced changes to its residential fixed-line pricing, including:

- a 30p a month increase in the standard monthly line rental charge, to £13.90;
- a 9% increase in the cost of a daytime call to a UK landline call, from 7p a minute to 7.6p; and
- an increase in the call set-up fee, from 11.5p to 12.5p.

These came following a 50p increase in line rental and increases in call charges of around 10%, which BT introduced in October 2010, a £1 increase in standard line rental in April 2009 and a 75p increase in standard line rental in April 2008. BT's changes in pricing are

⁵⁹ <http://stakeholders.ofcom.org.uk/market-data-research/technology-research/2011/4G-Capacity-Gains/>

⁶⁰ <http://stakeholders.ofcom.org.uk/consultations/combined-award/>

⁶¹ The GSA Mobile Broadband Update, 16 June 2011, http://www.gsacom.com/gsm_3g/info_papers.php4

⁶² <http://everythingeverywhere.com/2011/05/25/everything-everywhere-and-bt-wholesale-to-deliver-the-uk%e2%80%99s-first-live-customer-trial-of-4g-high-speed-broadband-technology/>

often followed by other operators: Virgin Media increased various residential landline prices in April and will increase its line rental to match BT's £13.90 a month in August 2011, Sky increased line rental from £11.25 to £12.25 in July 2011, and TalkTalk also introduced revised prices in May 2011.

However, these headline price increases do not necessarily mean higher prices for consumers as they have been associated with a raft of other tariff changes such as options to receive inclusive calls in return for higher line rental, reduced line rental for paying 12 months in advance, lower monthly fees for committing to 12-month rolling contracts and 'discounts' for paying by direct debit and not receiving paper bills.

In this part of the report we look at how average residential fixed prices have changed over the last few years. Providers have attempted to maintain revenues and margins while the number of residential fixed lines, and the average use per line, have declined as consumers increasingly use mobile telephony. Ofcom does not regularly collect pricing information (rather, we collect revenue and volume data from operators), so the tariff data that feed into this paper are from Teligen (the data were provided to inform the price benchmarking work which we include in the our *ICMR* and *Consumer Experience* reports⁶³), and from Pure Pricing (which publishes monthly updates covering UK fixed voice and broadband tariffs).

This analysis represents an overview of pricing trends using the data available to us: it is not a definitive assessment of pricing, but is designed to present a summary of key trends. It focuses on stand-alone fixed voice and broadband pricing, but also contains some analysis of the cost of voice and broadband bundles. We make no attempt to relate price changes to the competitive environment and draw no policy conclusions.

Operator revenue data indicate that average residential voice costs have remained broadly stable

Based on data collected from operators, there is evidence that average prices paid for fixed voice services by residential consumers have fallen in real terms, albeit by a very small amount, over the last couple of years. Figure 5.23 shows the changes in the real cost of a basket of residential fixed voice services by calculating the average price per minute for access and calls in a year, and then defining the basket as the average number of monthly minutes used per residential connection in 2010 (227 outbound UK geographic minutes, 17 outbound international minutes and 20 outbound minutes to mobiles).

It indicates that RPI-adjusted prices fell by 1.9% in real terms in 2009 and again by 0.2% in 2010 (these prices include VAT; it is notable that retail prices appear to be largely unaffected by the decrease in VAT from 17.5% to 15% in January 2009 and the increase back to 17.5% in January 2010).

⁶³ Ofcom, International Communications Market Report 2010, Section 2, http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/icmr/ICMR_2010.pdf

Figure 5.23 Cost of a basket of residential fixed voice services



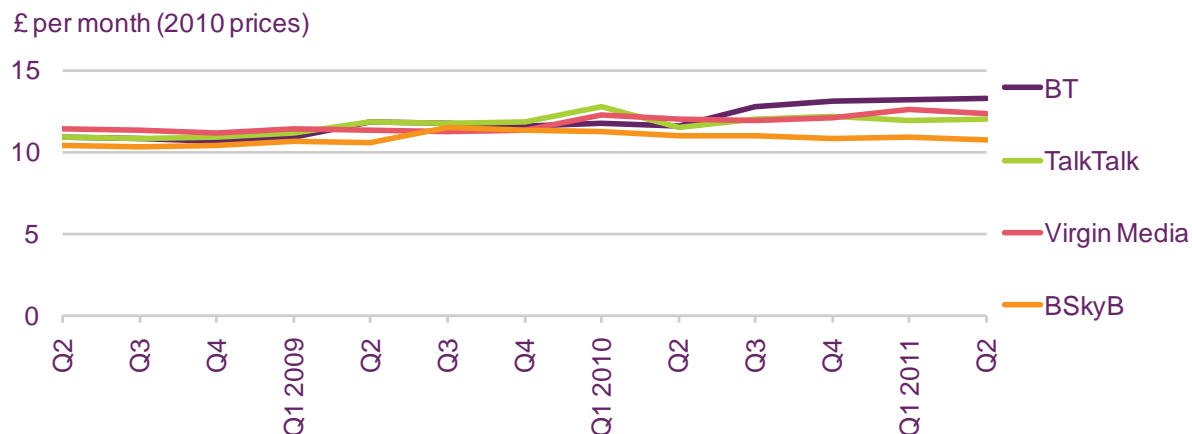
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; excludes non-geographic voice calls; adjusted for RPI; includes VAT

Stand-alone line rental price increases have accelerated since 2008

BT is not alone among landline providers in increasing the prices of its residential prices. Figure 5.24 below shows how the rental cost of a stand-alone basic residential landline, provided by the three largest UK residential suppliers, has changed in the three years to 2010, with all having increased in nominal terms over the period, and these increases having accelerated since 2008.

Figure 5.24 Monthly line rental for a basic residential line, 2007 to 2010



Source: Ofcom analysis of data provided by Pure Pricing

Notes: Figures include VAT and are adjusted for RPI

Tariff data show that basic fixed line call prices are also creeping upwards

Data compiled by Teligen to inform Ofcom’s international price benchmarking work show how the charges for the largest UK residential fixed telephony providers’ basic fixed-line voice services changed between July 2008 and July 2010. For the sake of simplicity, this analysis is based on the costs associated with each provider’s stand-alone fixed-line voice service, but it should be noted that most homes now buy their fixed-line service as part of a bundle which includes broadband.

Figure 5.25 shows that, with the exception of the cost of BT calls to mobiles in 2009, nominal call set-up and per-minute charges increased across the board over the period in question.

Figure 5.25 Estimated average service call costs for basic fixed-line services

| | Monthly line rental (£) | UK call set-up charge (pence) | UK fixed daytime call cost per minute (pence) | Average international daytime call cost per minute (pence) | Average mobile daytime call cost per minute (pence) |
|---------------------|-------------------------|-------------------------------|---|--|---|
| BT | | | | | |
| 2008 | 11.75 | 6.0 | 4.0 | 20.1 | 12.5 |
| 2009 | 12.50 | 8.0 | 4.5 | 19.6 | 12.2 |
| 2010 | 12.79 | 9.9 | 5.9 | 20.0 | 12.5 |
| Virgin Media | | | | | |
| 2008 | 12.00 | 7.0 | 4.0 | 24.8 | 15.0 |
| 2009 | 12.25 | 8.8 | 5.4 | 32.9 | 15.7 |
| 2010 | 13.24 | 11.0 | 8.5 | 38.8 | 19.0 |
| TalkTalk | | | | | |
| 2008 | 11.75 | 6.0 | 3.9 | 14.7 | 12.0 |
| 2009 | 12.50 | 8.0 | 4.5 | 14.7 | 11.7 |
| 2010 | 14.44 | 9.9 | 5.8 | 14.7 | 12.0 |

Source: Ofcom / Teligen

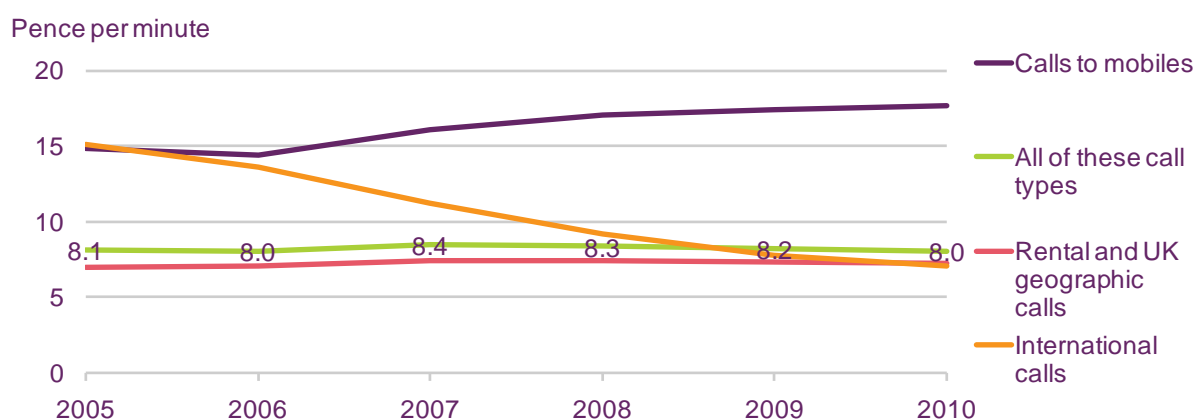
Notes: Figures include VAT, data as at July of each year; TalkTalk tariff changed in 2010 and included bundled evening calls in addition to weekend calls

Overall average voice call costs fell in the five years to 2010

Figure 5.26 below indicates changes in the average cost per minute of an outbound fixed voice call, calculated by dividing total call revenues by total call volumes (and including access revenues in the calculation for all, and UK, geographic calls). This indicates that the average cost of a residential call minute in 2010 was lower than it had been five years previously, although it had risen and then fallen during the intervening period.

A possible explanation is that, although metered call charges have increased, more calls have been bundled in with line-rental tariffs, meaning that a lower proportion of calls are charged on a per-minute basis. The cost per minute of calls to mobiles appears to have increased since 2005, despite reductions in mobile termination rates.

Figure 5.26 Cost per minute of residential fixed-voice calls



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; calculation of total and UK geographic calls costs include line rental revenues; excludes non-geographic voice calls; adjusted for RPI; includes VAT

Changes in headline tariffs and other charges may be increasing the cost of services for some consumers

While the average cost of fixed-line voice services appear to be fairly stable, tariff changes may affect different types of consumers in different ways: for example, it is possible that average costs are being maintained by offering lower prices to higher usage and/or engaged customers (who may have the highest propensity to switch, and may also offer greater up-sell opportunities, for example, to a broadband service), while increasing the prices to lower-usage customers and/or those who are less engaged.

While the tariff data shown above indicate how headline service charges have increased, other billing changes have also had an upward effect on the price that residential fixed-line customers have paid for their service over the past few years. While much price competition focuses on headline prices, providers have increased the prices of service elements that are not at the front of consumers' minds when comparing packages.

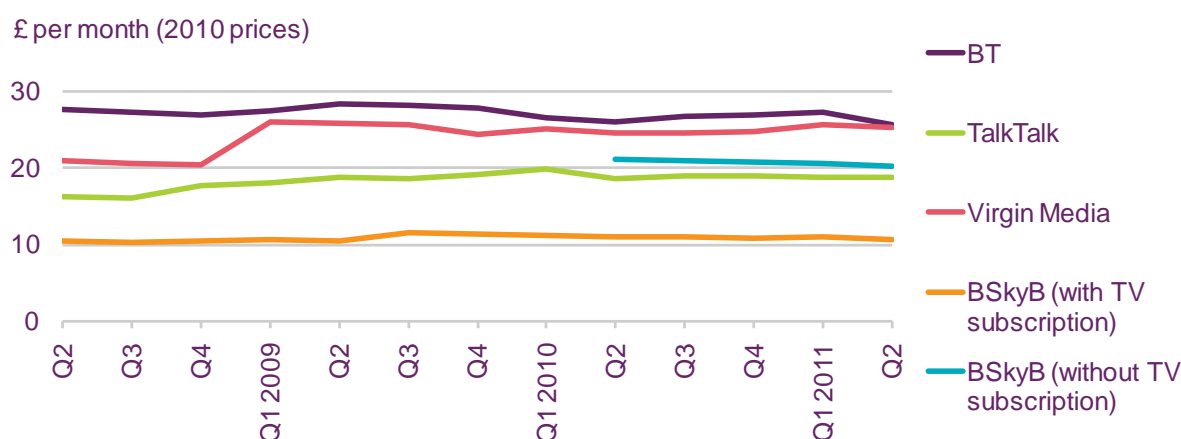
Examples include shifting the start of the evening off-peak period from 6pm to 7pm (as BT, Sky and TalkTalk did in 2010) and the introduction of additional charges for those consumers who do not pay their bills by direct debit (first introduced in 2008) and for those who continue to receive paper bills.

There is upward movement in the cost of bundled landline and broadband services

Over half of all residential UK landlines are bought in conjunction with another service or services from the same supplier, most frequently fixed-line broadband. Figure 5.27 below shows how the monthly cost of a basic landline and broadband bundle, taken from the four largest residential telephony suppliers, has changed over time. This shows that in the three years to Q1 2011, BT was the only one of the three largest UK residential ISPs for which comparable figures were available (BT, TalkTalk and Virgin Media) which had a falling real monthly cost for taking these two services together (note that although BT prices have fallen, in part due to deregulation following Ofcom's 2009 *Fixed Narrowband Retail Services Markets Review*⁶⁴, it is still the most expensive of the three providers).

⁶⁴ http://stakeholders.ofcom.org.uk/consultations/retail_markets/?a=0

Figure 5.27 Monthly cost of a bundled basic residential line and broadband



Source: Ofcom analysis of data supplied by Pure Pricing

Note: Figures include VAT and are adjusted for RPI; BSkyB (with DSAT) figure excludes the cost of the required DSAT service

Conclusions

Overall, average fixed voice prices in the UK have remained fairly stable in the past three years as increases in line rental, per-minute charges and call set-up charges have been offset by the increasing use of ‘bundled’ calls (where some types of calls are included within the access charge).

Changes in tariff structures over the past few years will have affected different types of consumers in different ways. High-using consumers may have seen a reduction in the price of their fixed voice telephony, as increases in line rental and out-of-bundle call charges have been offset by greater numbers of inclusive minutes, and the increasing range of tariff combinations available may have benefited savvy consumers who are willing and able to identify the best tariff for them. And some consumers purchasing voice in a bundle with broadband will have benefitted from an overall reduction in price.

Increases in fixed prices may hit the most vulnerable consumers hardest. Increasing line rental costs will affect those consumers who make low volumes of calls, who buy standalone landline services (and therefore do not benefit from bundle discounts) and those who rely on fixed telephony rather than mobiles. These groups are likely to include, among others, a large number of older consumers.

It is also notable that increases in line rental represent a ‘hidden’ cost of broadband: a fixed voice line is required to receive ADSL broadband services and line rental is rarely included in headline prices.

While an increasing range and complexity of tariffs may increase consumer choice, it also increases the potential for consumer confusion, particularly among more vulnerable consumer groups, and the likelihood of consumers being on sub-optimal tariffs. The “hidden” nature of some of the costs – for example, increases in call connection charges or additional fees for paper billing – is also a potential barrier to consumers understanding the cost of services and making comparisons between them. Confusion over switching processes and contractual lock-ins may exacerbate the difficulty of consumers taking the tariff most suitable for their needs.

There are a number of ways by which consumers can lower their bills, including:

- Shopping around and comparing the increasing range of (in many cases complex) tariffs to find that which best meets their needs (including 'bolt-ons' such as anytime packages, mobile call packages, international call packages and 'friends and family' packages that offer inclusive or discounted calls in return for an increase in line rental).
- Paying for bills by direct debit and opting out of paper bills.
- Negotiating 'loyalty' discounts when out of contract, in exchange for agreeing to stay with a supplier for an additional minimum period.
- Some lower-income users of landline services will be able to take advantage of the BT Basic tariff, which costs £13.80 a quarter (£4.60 a month) and includes £4.50 worth of inclusive calls.
- It is also currently possible to pay the BT line rental fee for a year in advance for £120 (a saving of £46.80) (although it is, of course, likely that lower income households may be less able to take advantage of this tariff due to the high upfront cost). Sky also operates a similar scheme.
- Use of a Voice over internet protocol (VoIP) service over a broadband connection may also enable some consumers to reduce their overall spend on fixed voice services.

5.2 The telecoms industry

5.2.1 Introduction

In this section of the report we examine recent trends in the telecommunications market from an industry and operator viewpoint. This section is structured as follows:

- Section 5.2.2 provides an overview of the industry in its entirety, considering recent developments in revenue growth, and availability and take-up of telecom services.
- Section 5.2.3 covers the latest developments in the roll-out of local loop unbundling (LLU) and the take-up of LLU services.
- Section 5.2.4 looks at the fixed voice telephony market.
- Section 5.2.5 considers the markets for mobile voice and data services.
- Section 5.2.6 looks at the fixed internet market, including fixed broadband services.
- Section 5.2.7 looks at businesses' use of voice and data telephony services in more depth.

The key findings in this section of the report are:

- **Total operator-reported telecoms revenues fell by 2% in 2010.** Retail revenues from mobile services increased slightly (up 1%, having fallen for the first time in 2009), but those from fixed voice and fixed internet services continued to decline, down by 3% and 6% respectively (page 276).
- **BT's share of voice call volumes fell to under 20% during the year.** BT's share of total fixed and mobile voice call volumes fell to 19.4% in 2010, while mobile's share increased to 49.2%, making it likely that more than half of UK voice calls will be mobile-originated in 2011. BT's share of fixed voice call volumes also fell to under 40% for the first time during the year (pages 281 and 286).
- **Total revenues from fixed internet services fell by 6% in 2010.** Total fixed internet revenues were £3.0bn in 2010, down from £3.2bn a year previously. The majority of this fall was due to declining residential broadband prices. (page 294).
- **The number of UK business fixed lines fell to under 10 million in 2010.** The decline in the number of businesses lines accelerated in 2010, falling by 5.2%, the largest annual decline since the number of business lines began to decline in 2008 (page 300).

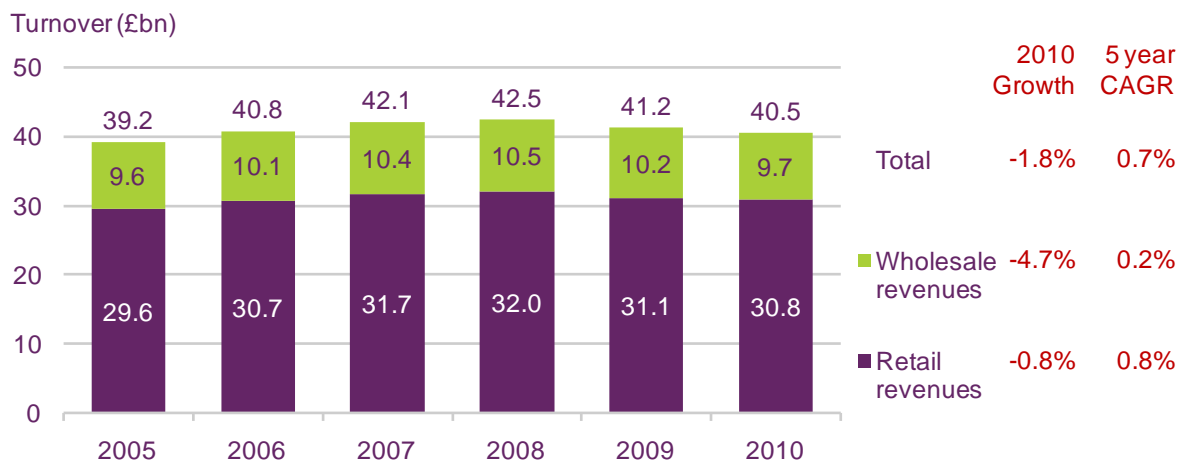
5.2.2 Industry overview

Data reported to Ofcom by telecoms providers suggest that the UK telecommunications industry generated £40.5bn in turnover during 2010, 1.8% less than the corresponding figure for 2009 (Figure 5.28). Of this revenue, £30.8bn (76%) was generated by retail services, while wholesale services accounted for the remaining £9.7bn (24% of the total).

These figures, and the trend in growth shown, are significantly different to the numbers compiled by the Office of National Statistics (ONS), which show total telecoms turnover of £65.6bn in 2010, an increase of 4.6% on 2009. This discrepancy is explained by the fact that

ONS figures include turnover from activities in markets not regulated by Ofcom, such as revenue from the transmission of radio and television programmes, and network installation and maintenance costs.

Figure 5.28 UK telecoms industry revenue overview



Source: Ofcom / ONS / operators

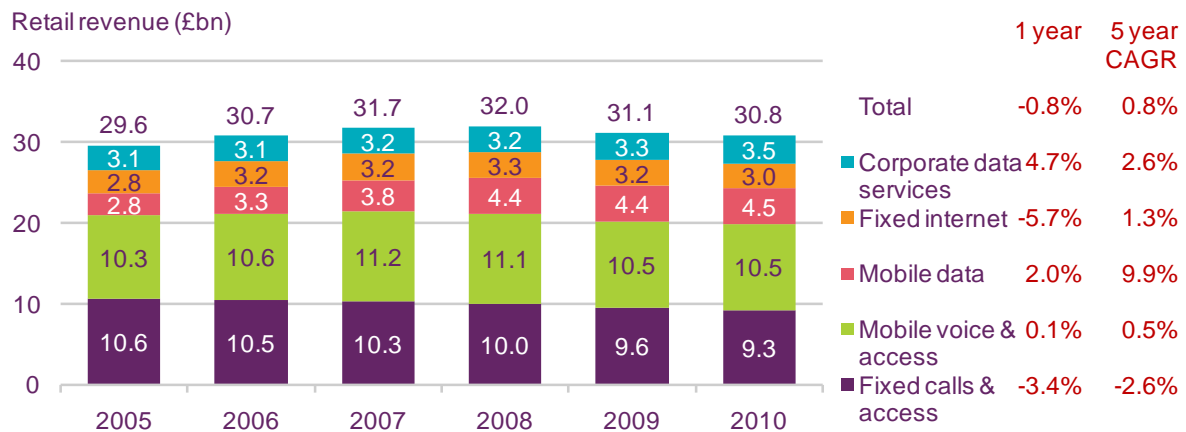
Note: Includes estimates where Ofcom does not receive data from operators

Overall service revenue continues to decline

Ofcom's own figures, collected from operators, show that overall operator revenues from telecoms services continued to decline in 2010, having fallen in 2009 for the first time since market data began to be collected by Oftel in the early 1990s. Figure 5.29 shows that total operator-reported retail revenues fell by 0.8% during 2010 to £30.8bn. The main cause of this fall was the continued decline in revenues from fixed telecoms services; fixed voice revenues fell by 3.4% during the year as the number of landlines continued to decline, while fixed internet revenues fell by 5.7% as a result of consumers switching to lower-cost broadband services.

Mobile voice and data revenues increased in 2010, with mobile voice and access (line rental) revenues increasing marginally (up by 0.1%), following a 5.0% fall in 2009, and mobile data revenues increasing by 2.0%. The return to growth in mobile revenues can be partly explained by growth in the take-up of smartphones (it is commonplace for handsets to be offered to consumers either free or heavily discounted at the start of a contract, with the cost of the handset being recouped in the monthly payments throughout the duration of the contract – these monthly revenues are included in operator-reported revenues, although 'one-off' handset revenues are not), along with the related increases in the proportion of total subscribers who are post-pay and use data services.

Figure 5.29 UK telecoms industry retail revenue

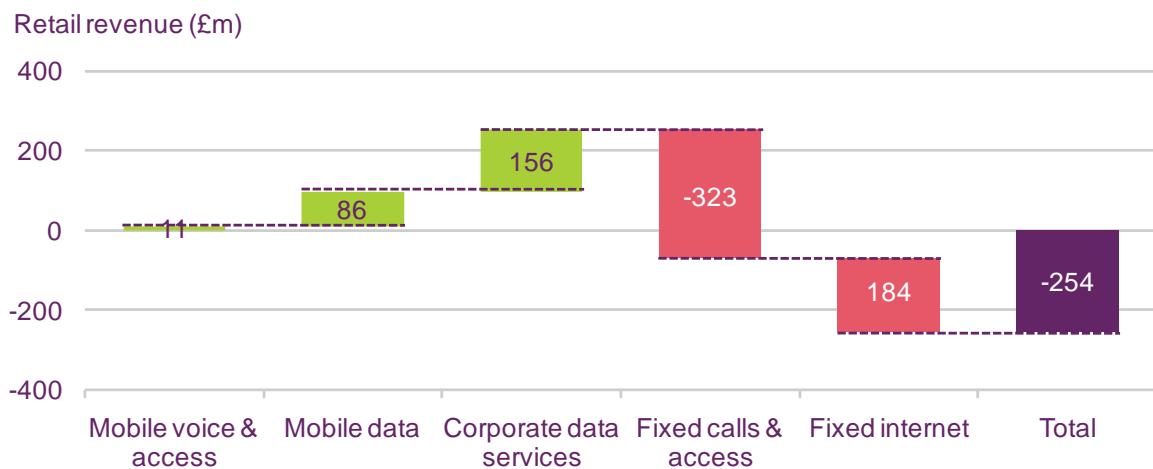


Source: Ofcom / operators / IDC

Operator-reported telecoms revenue fell by over £250m in 2010

Figure 5.30 shows how retail revenue growth of £97m in mobile services and £156m in corporate data services was offset by a £323m fall in fixed voice services and a £184m decline in fixed internet services, resulting in an overall fall in retail telecoms revenue of £254m. While total revenue from data services increased by £58m during the year, total revenue from voice telephony fell by £312m.

Figure 5.30 Change in UK telecoms industry retail revenue, 2010



Source: Ofcom / operators / IDC

The proportion of retail revenue generated by data services was 36% in 2010

The growing importance of data services to the telecoms industry is evident in Figure 5.31, which shows that data services contributed 35.7% of total industry service revenue in 2010, up from 29.4% five years previously.

With overall voice revenues in decline, operators are looking to data to drive future growth; although the 0.4 percentage point increase in the proportion of revenues generated by data services in 2010 was less than a third of the 1.4 percentage point increase in 2009, as growth in revenue from mobile data services (up £0.1bn) and corporate data services (up £0.2bn) was offset by falling fixed internet revenues (down by £0.2bn as a result of falling

broadband revenues as consumers switch to bundled services). Nevertheless, it is likely that in the coming years fixed-line operators will look to data services to drive growth, through offering higher-speed connectivity with the roll-out of super-fast broadband, and developing additional revenue streams through offering new services such as IPTV, cloud computing and machine-to-machine services such as smart metering and fleet management.

Mobile network operators (MNOs) face a similar challenge, with mobile voice and access revenues having grown by just £0.1bn in 2010 (following a 5% fall in 2009). MNOs are therefore looking to generate revenue growth from mobile data services on mobile phones, mobile broadband 'dongles' connected to PCs, and new wireless connected devices such as e-readers, 'tablets' and other data-centric devices. Like fixed operators, mobile providers are investing in networks that provide faster data speeds (3G+ and 4G services) and are looking to develop new services that allow for the continued growth of devices connected wirelessly.

Figure 5.31 Voice and data revenue as a proportion of total telecoms revenue



Source: Ofcom / operators

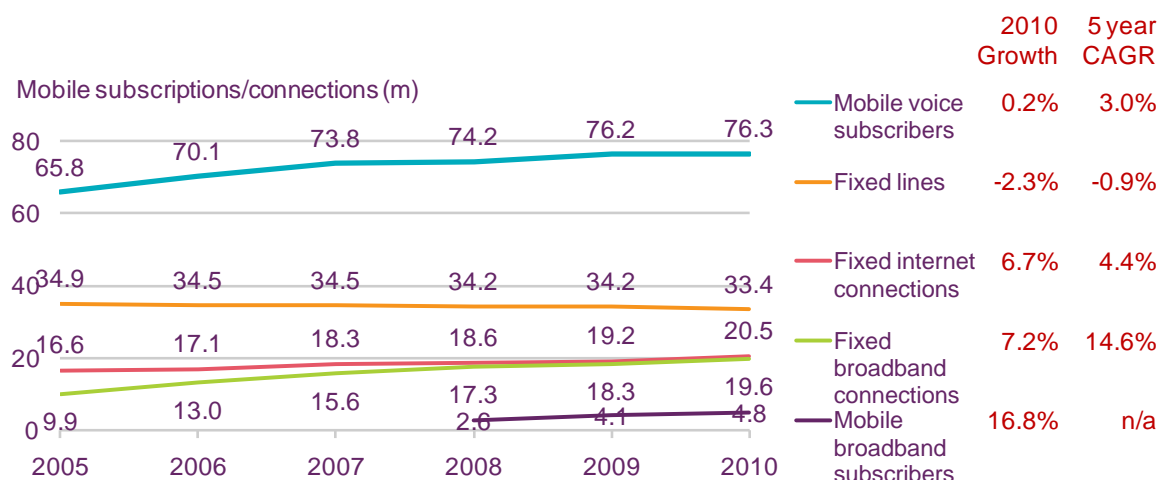
The bundling of messaging and data services in with monthly rental tariffs means voice revenue will include an element of mobile data revenue

Fixed-line decline accelerates as the number of mobile voice and data connections grows

The number of fixed lines continued to decline in 2010, falling by 2.3% (0.8 million) to 33.4 million (Figure 5.32). This was the fastest rate of decline since connections began to decrease in 2002, and the rate of decline in the number of business lines (5.2%) was much higher than that in the residential fixed telephony market (1.0%), suggesting that business users are more likely to switch away from fixed voice to other methods of communication, including VoIP and mobiles.

The total number of mobile connections continued to rise in 2010, increasing by 0.9 million (1.1%) to 81.1 million. The main driver behind this growth was a 0.7 million increase in the number of mobile broadband connections using a USB dongle or datacard. Growth in the total number of residential and SME fixed broadband connections increased to 7.2% in 2010, with 66% of households having a fixed-line broadband connection).

Figure 5.32 Total telecoms connections



Source: Ofcom / operators

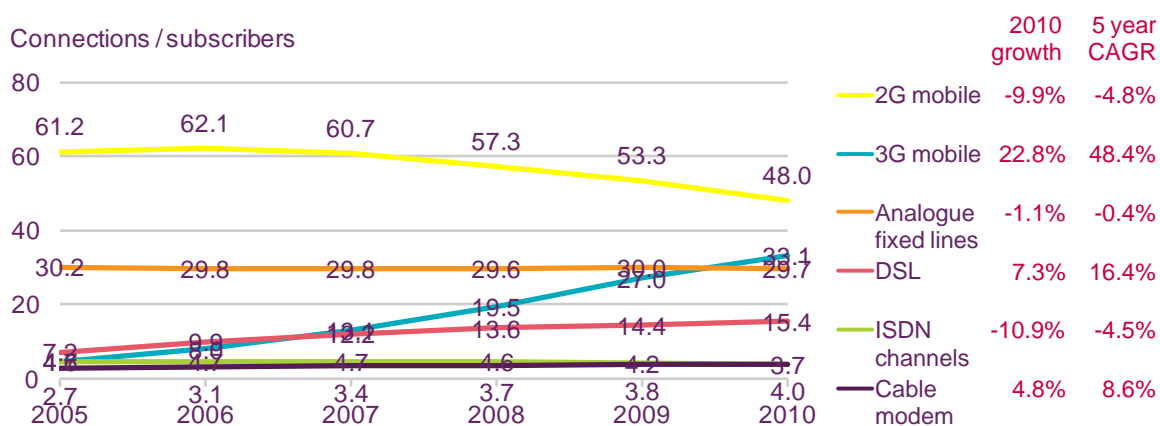
Note: Includes estimates where Ofcom does not receive data from operators; broadband excludes corporate connections; fixed-line connections includes PSTN lines and ISDN channels along with lines reported as 'other' which were previously excluded from the analysis

Growth in the number of 3G and DSL connections continues

The number of digital subscriber-line (DSL) broadband connections continued to grow in 2010, rising by 7.3% to 15.4 million (Figure 5.33), in part driven by the take-up of broadband services 'bundled' with voice telephony ('double-play') or voice telephony and pay-TV services ('triple-play'). In contrast, the decline in ISDN channels accelerated in 2010, suggesting that an increasing number of businesses are using other broadband technologies and switching their voice calls to cheaper alternatives such as VoIP and mobile telephony.

The number of mobile connections able to access third-generation (3G) mobile technology increased by 6.2 million in 2010 to 33.1 million, more than double the number three years previously. 2G connections fell by 5.3 million connections (9.9%) during 2010, to 48.0 million, in part driven by the growth in take-up of smartphones, which use the faster data connections provided by 3G networks.

Figure 5.33 Fixed and mobile connections, by technology



Source: Ofcom / operators

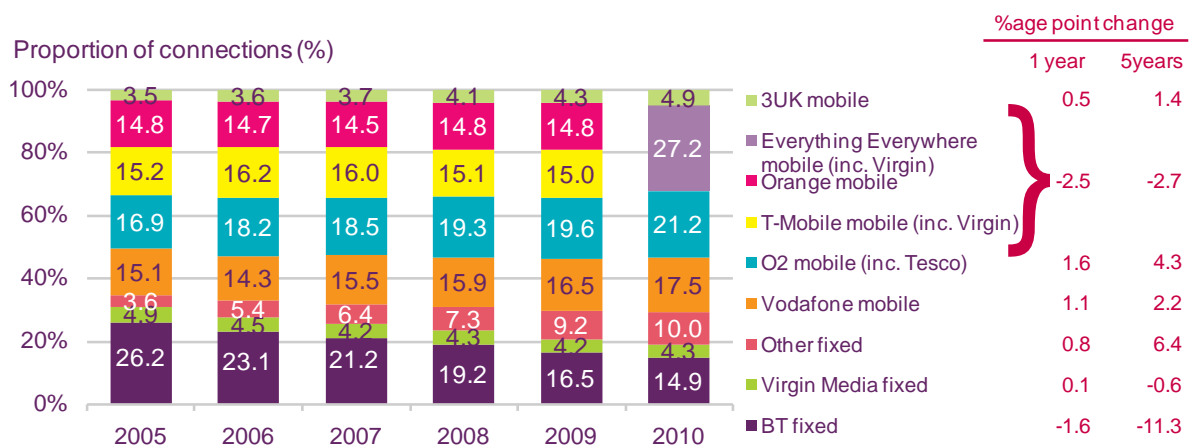
Note: Includes estimates where Ofcom does not receive data from operators; broadband excludes corporate connections; analogue fixed lines include lines reported as 'other' which were previously excluded from the analysis

Mobile's share of total connections continues to grow

Mobile operators made up 70.8% of all telecoms connections at the end of 2010, 5.5 percentage points more than they had five years previously and a 0.7 percentage point increase compared to the end of 2009 (Figure 5.34). This increase is likely to continue as the number of mobile-connected devices - particularly focused on data-centric services - continues to expand. O2 (including Tesco Mobile) reported the largest increase in share among the mobile operators, increasing by 1.6 percentage points due to strong growth in post-pay connections in 2010.

The decline in BT's share of total connections slowed in 2010, falling by 1.6 percentage points to 14.9% (compared to a 2.7 percentage point decline in 2009). BT's share of total fixed lines stood at 51.0% at the end of 2010, down 4.2 percentage points, as alternative operators, particularly those using LLU, continued to take market share.

Figure 5.34 Share of total UK fixed and mobile telecoms connections



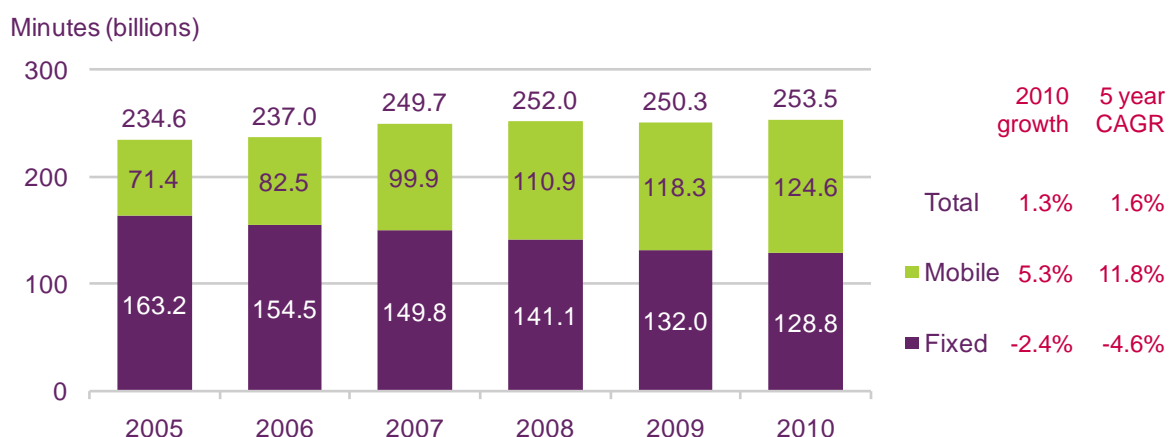
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; 'Other' includes carrier pre-selection and wholesale line rental in addition to fixed other licensed operators. MVNOs and mobile service provider connections are included within the network operator figures

Mobile drives up total voice telephony call volumes

Figure 5.35 shows that over the past few years growth in mobile voice call volumes has more than offset the decline in fixed voice volumes, except in 2009 when total voice call revenues fell by 0.7%. In 2010, total UK voice call volumes returned to growth, increasing by 1.3% to 253.5 billion minutes. Mobile voice call volumes increased by 5.3% during the year (lower than the 11.8% average over the five years to 2010), while fixed volumes fell by 2.4%, a slower rate of decline than the average 4.6% fall in the five years to 2010.

Figure 5.35 Total voice volumes



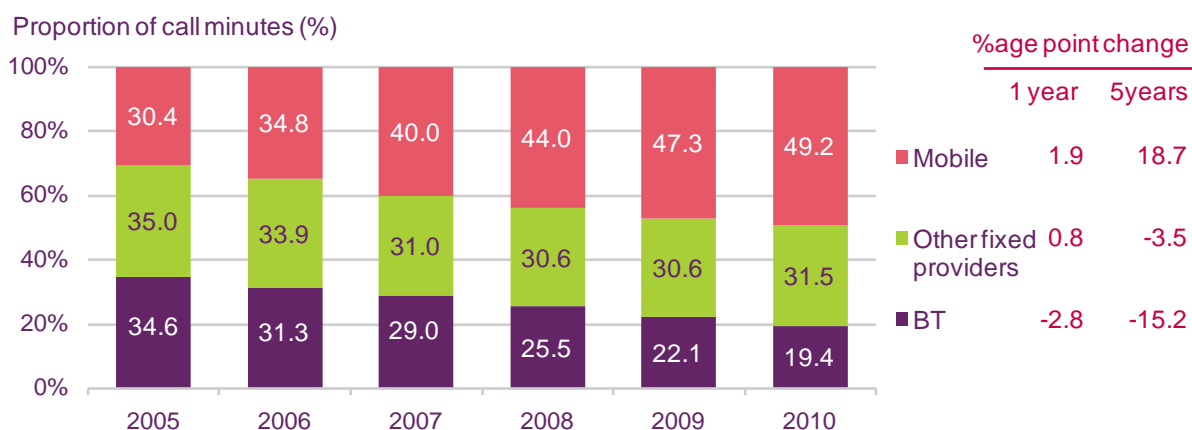
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

Mobile likely to exceed fixed call volumes in 2011

Over the past few years an increasing proportion of total voice volumes have originated on mobile networks. In 2010 49.2% of voice call minutes originated on mobile networks, and based on current trends mobile will generate the majority of outgoing voice call volumes in 2011 (Figure 5.36). In the five years to 2010 mobile's share of originating call volumes increased by 18.7 percentage points, while BT's fell by 15.2 percentage points and other fixed providers' by 3.5 percentage points.

Figure 5.36 Share of total UK voice call volumes



Source: Ofcom / operators

Note: Includes non-geographic voice calls

5.2.3 Local loop unbundling

Growth in proportion of unbundled local exchanges increases

During 2010 the proportion of UK premises connected to an unbundled BT local exchange increased by 4.5 percentage points to 89.0%, compared to increases of 0.3 percentage points in 2009 and 4.0 percentage points in 2008. This reflects LLU providers' renewed focus on rolling out their services, and was rewarded by a 3.0 percentage point increase in

the proportion of lines taking LLU services in 2010, compared to a 2.7 percentage point increase in 2009.

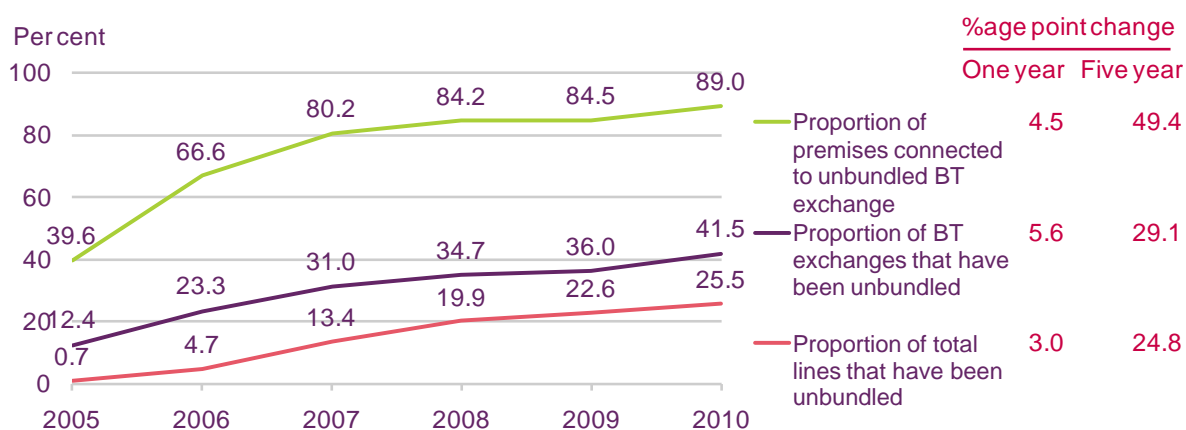
In rolling out LLU, alternative providers have concentrated on unbundling exchanges that are connected to a large number of premises, in order to maximise their potential customer bases, and this is reflected by the fact that while 89.0% of premises are connected to an unbundled local exchange, just 25.5% of exchanges have been unbundled (Figure 5.37). Given the high up-front costs of unbundling an exchange, LLU providers are likely to be less inclined to unbundle the remaining BT exchanges, as these are typically connected to far fewer premises than those which have already been unbundled.

Local loop unbundling (LLU)

LLU enables operators to site their own equipment in the incumbent operator's local exchange, lease the local loop (the twisted copper cable from the exchange to the customer's premises) and, after connecting the local exchange to their own network, provide either DSL broadband or DSL broadband and fixed voice services.

Under partial LLU the unbundling operator and the incumbent share the same line, with the LLU operator providing DSL broadband services and the incumbent providing the voice service. With full LLU the unbundling operator provides both DSL broadband and voice services and the customer's relationship with the incumbent ceases.

Figure 5.37 Proportion of unbundled exchanges and connected premises



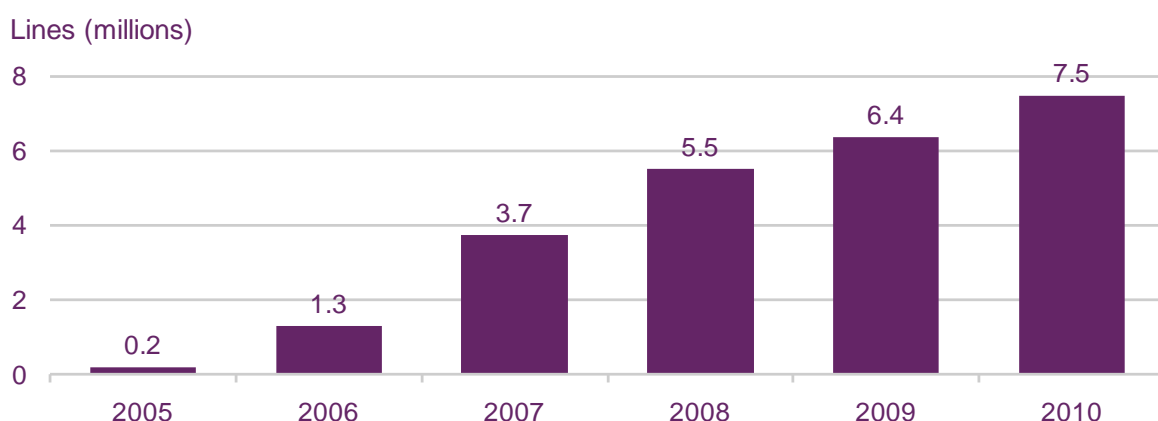
Source: Ofcom / operators

Growth in LLU lines increases to 18% during 2010

There were a total of 7.5 million unbundled lines providing stand-alone broadband or bundled fixed voice and broadband services at the end of 2010, an increase of 1.1 million lines (17.7%) during the year (Figure 5.38). This represented an increase in connection growth compared to 2009, when the number of LLU lines increased by 15.6% (0.9 million).

This acceleration in LLU growth can be attributed to the popularity of bundled fixed voice and broadband services which are often provided using full LLU, and growth in the availability of these services. A number of larger LLU providers (such as O2 and Sky) which previously offered only stand-alone LLU broadband services (leaving BT to provide voice services over the same line), have started to offer bundled fixed voice and broadband LLU services over the past few years, and take-up of these services has been the main driver behind continuing LLU connection growth.

Figure 5.38 Unbundled lines (full and partial unbundling)



Source: Ofcom / operators

5.2.4 Fixed voice services

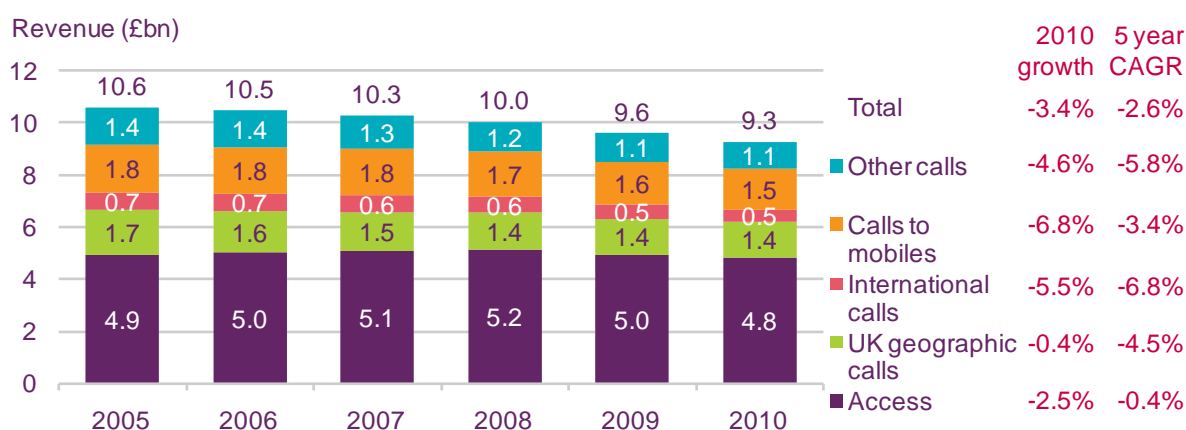
Revenue

Fixed-line voice revenue fell by £0.3bn during 2010

The decline in fixed line voice revenue slowed in 2010, with total fixed voice revenue falling by 3.4% to £9.3bn (Figure 5.39). During the year, revenue from fixed access fell by 2.5%, while fixed call revenue fell by an average of 4.3%, with the decline in revenue ranging from 0.4% for UK geographic calls to 6.8% for calls to mobiles.

The loss of revenue from fixed voice calls is likely to be related to increasing take-up of fixed-line access tariffs that include bundled calls. Most standard fixed telephony line rental tariffs now include some element of bundled calls to UK geographic numbers, and over recent years the availability of tariffs which include bundled calls to these numbers at all times has increased. Some tariffs also include bundled calls to selected international destinations, and falling mobile termination rates should see calls to UK mobiles increasingly being included in fixed line rental services during the coming years.

Figure 5.39 Retail fixed voice telecoms revenues



Source: Ofcom / operators

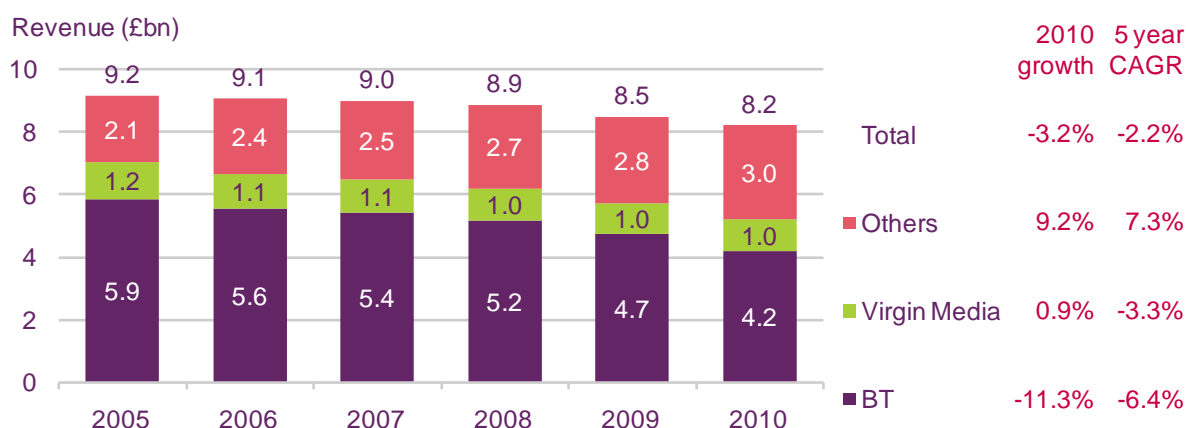
Note: Includes estimates where Ofcom does not receive data from operators

BT's fixed voice revenue fell by over 10% in 2010

Total fixed voice revenue (which here excludes NTS voice calls) fell by 3.2% (£0.3bn) to £8.2bn in 2010 (Figure 5.40). This was a faster rate than the 2.2% average decline over the five years to 2010 and came as a result of a £0.5bn (11.3%) fall in BT's fixed voice revenues which was offset by increasing revenues for Virgin Media (up 0.9%) and 'other' providers (up 9.2%).

Falling total fixed voice revenues reflect the growing use of mobiles, VoIP and other forms of communication such as email and instant messaging. Although BT's retail fixed voice revenues are falling rapidly, growth in the use of services provided by 'other' operators means that BT will benefit from increasing wholesale revenues, as many of these operators use wholesale BT products such as local loop unbundling (LLU), wholesale line rental (WLR), carrier pre-selection (CPS) and its *Wholesale Calls* product.

Figure 5.40 Retail fixed voice telecoms revenues, by provider



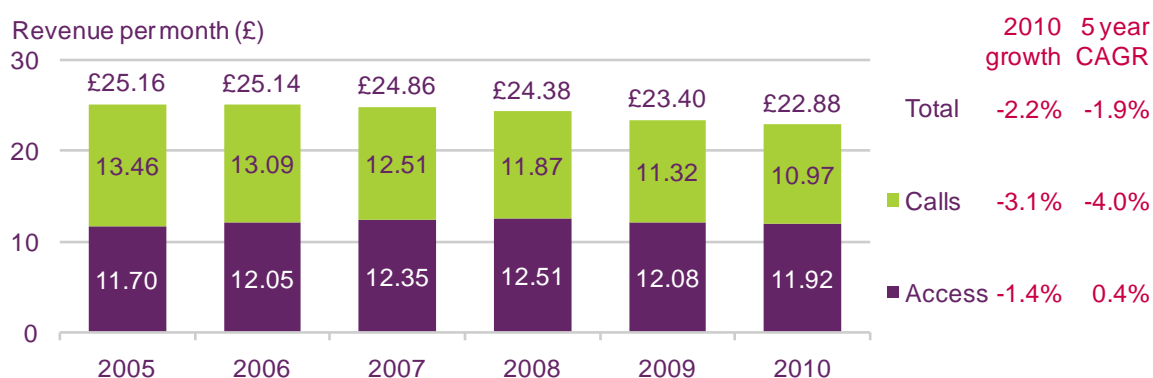
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators, excludes revenues from NTS voice calls

Average revenue per fixed line continues to fall

Average monthly revenue per fixed line fell marginally in 2010, declining by £0.52 to £22.88. Both average call and average rental revenue per line fell during the year, with the 3.1% fall in average call revenue during the year being greater than that in access fees (1.4%) (Figure 5.41). Prior to 2009, average fixed access spend per line had been increasing as providers started to include more bundled calls in their rental packages (and hence average call spend continued to decline). However, in 2009 and 2010 average rental per line spend has fallen as consumers have switched to lower-cost (often LLU-based) bundled services.

Figure 5.41 Average monthly voice revenue per fixed line



Source: Ofcom / operators

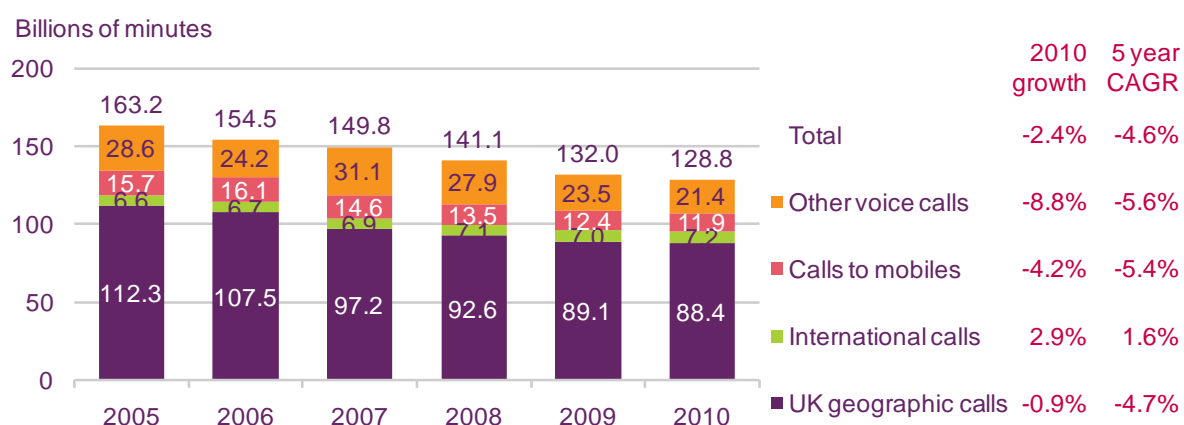
Note: Includes spend on non-geographic voice calls

Fixed-line call volumes

Decline in fixed voice call volumes slows to 2.4%

Fixed call volumes fell by over 20% to 128.8 billion minutes in the five years to 2010, largely as a result of the decline of calls to UK geographic numbers (Figure 5.42). The annual rate of decline in total fixed call volumes slowed to 2.4% in 2010, compared to a 6.5% fall in 2009, and the largest fall in fixed-line originated call volumes during 2010 was in 'other' voice calls, in which category volumes declined by 8.8% to 21.4 billion minutes. This is likely to be a result of the decline in calls to directory enquiries and premium rate numbers, as consumers increasingly use the internet to access information. The only type of fixed-line call for which volumes increased in 2010 was international calls, which grew by 2.9% to 7.2 billion minutes.

Figure 5.42 Fixed telecoms voice call volumes



Source: Ofcom / operators

BT's share of fixed voice call volumes falls under 40% for the first time

BT's share of total fixed-line voice call volumes fell below 40% for the first time in 2010, with its market share declining by 3.5 percentage points to 36.5% during the year. Virgin Media also lost share during 2010 (down 0.9 percentage points to 12.1%), while other direct providers (up 3.7 percentage points) and indirect access providers (up 0.8 percentage points) both increased their shares (Figure 5.43).

This was something of a reversal, as in 2009 other indirect operator market share growth (up 2.6 percentage points) was higher than that of direct access providers (up 1.7 percentage points). The change in 2010 came as a result of strong growth in the use of full LLU-based telephony services, which are included in the 'other direct' category. Other indirect calls (which include those made using CPS and BT's Wholesale Calls service) accounted for a third of all fixed voice call volumes in 2010, only a few percentage points short of BT's own retail share.

Figure 5.43 Share of retail fixed voice call volumes

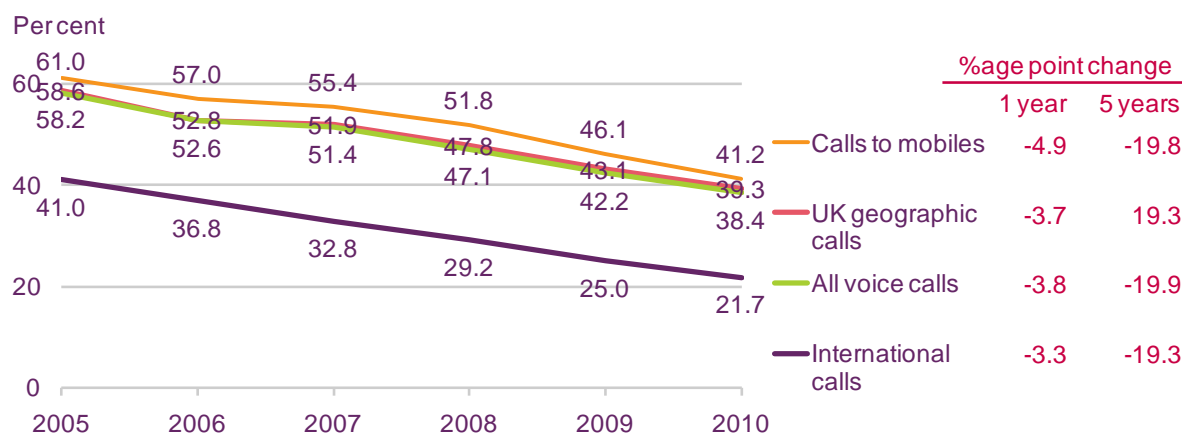


Source: Ofcom/operators
 Note: Excludes NTS voice calls

BT's share of retail residential UK voice call volumes falls below 40%

BT continued to lose residential retail market share in 2010; its share of fixed voice calls (excluding NTS voice calls) falling by 3.8 percentage points to 38.4% during the year (Figure 5.44). The largest fall in BT's share of residential calls was in calls to mobiles (down 4.9 percentage points to 41.2%), while its share of UK geographic and international calls fell by 3.7 and 3.3 percentage points respectively. BT's combined share of all of these call types has fallen by 20 percentage points since 2005, reflecting the competition it faces from LLU-based fixed voice services in the residential market.

Figure 5.44 BT share of residential fixed-voice call volumes, by type



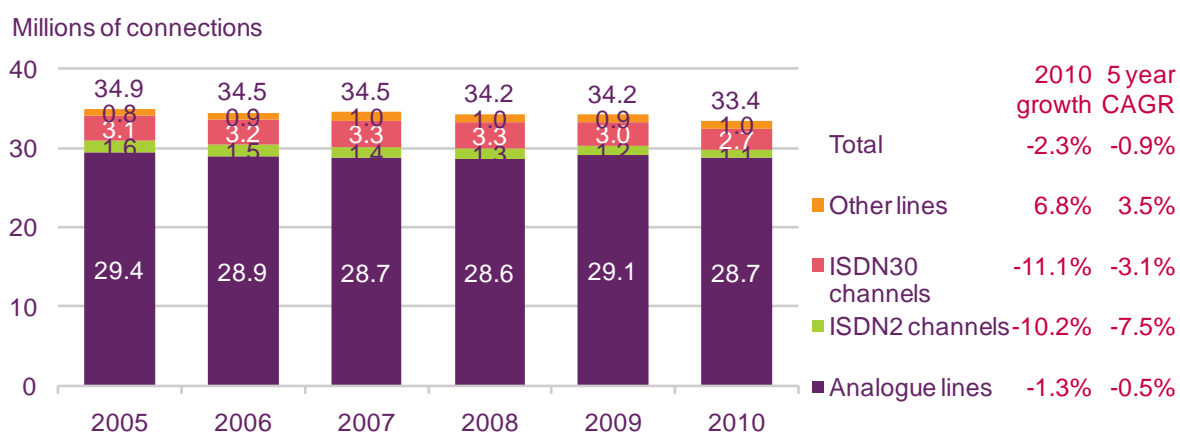
Source: Ofcom / operators
 Note: Includes estimates where Ofcom does not receive data from operators; excludes NTS voice calls

Fixed-line voice connections

The total number of fixed lines fell by 2.3% in 2010

There were 33.4 million UK fixed lines at the end of 2010, 0.8 million (2.3%) fewer than a year previously (Figure 5.45). This represented an increase in the rate of decline, both compared to 2009 (when the number of fixed lines fell by just 0.1%) and the 0.9% average fall over the five years to 2010. The largest fall in connections was for analogue lines (down by 0.4 million), although the percentage rate of decline was lower than that for ISDN channels.

Figure 5.45 Fixed-line connections, by type



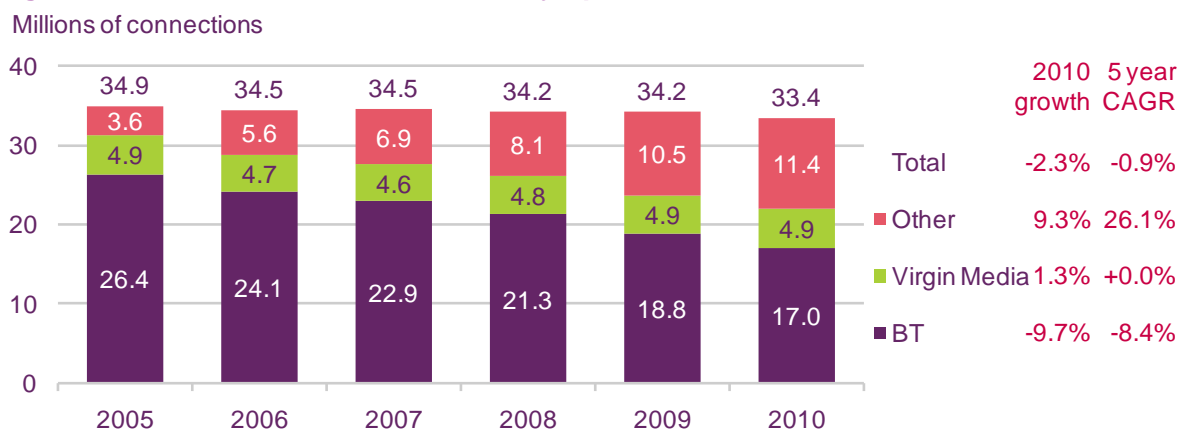
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

BT's share of retail fixed voice connections likely to fall below 50% in 2011

At the end of 2010 BT had 17.0 million retail analogue lines and ISDN channels, equating to a market share of 51.0% (Figure 5.46). This was 4.2 percentage points lower than at the end of 2009 and if this trend continues BT's share is likely to fall below 50% for the first time in 2011. Virgin Media's share of fixed lines increased by 0.5% to 14.7% during 2010, following the fourth successive year in which it increased its fixed-line subscriber numbers, while the number of lines provided by operators other than BT and Virgin Media had grown to 11.4 million by end of 2010, a 34.3% share of total fixed-line connections.

Figure 5.46 Fixed-line connections, by operator



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

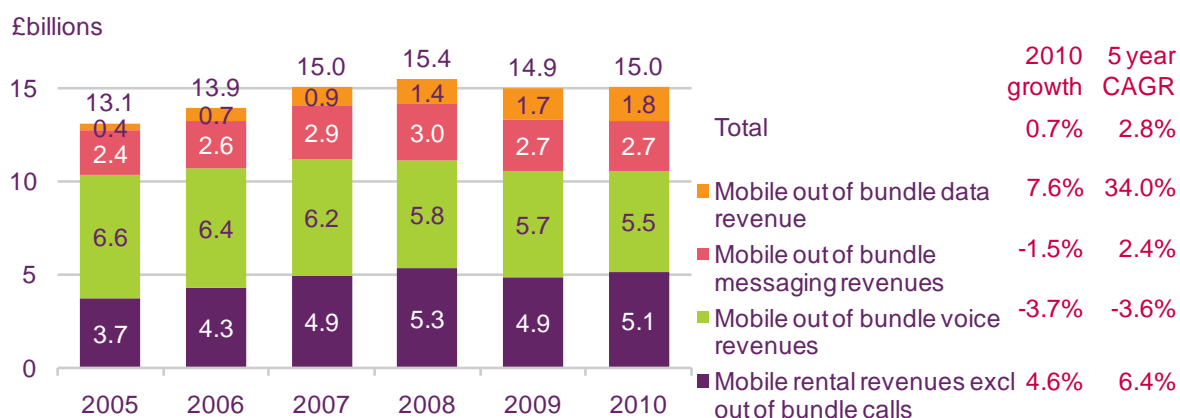
5.2.5 Mobile services

Mobile revenues

Mobile revenues returned to growth in 2010

Having fallen by 3.3% in 2009, mobile revenues returned to growth in 2010, although the rate of increase (0.7%) was a quarter the 2.8% average over the five years to 2010. The largest revenue increase was in rental revenues, which grew by £0.2bn as the proportion of mobile subscribers with post-pay contracts increased, as shown in Figure 5.47. However, revenues from out-of-bundle services fell as a higher proportion of users received voice, messaging and data allowances. The one exception to this was out-of-bundle data revenue, which increased by 7.6%, probably as a result of growth in the use of smartphones, particularly among pre-pay users, and smaller data allowances / unpredictable levels of data use among consumers.

Figure 5.47 Mobile telecoms retail revenues



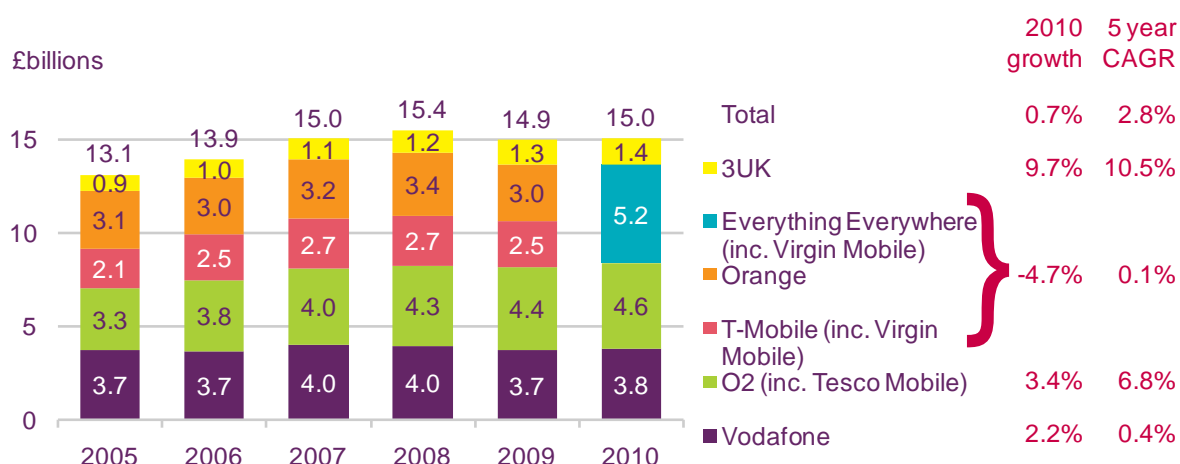
Source: Ofcom / operators

Everything Everywhere becomes the UK's largest network in terms of revenue

The merger of T-Mobile and Orange made Everything Everywhere, the resulting provider, the largest UK mobile network in 2010, with revenues of £5.2bn, 34.8% of total mobile retail revenue (Figure 5.48). However, comparing revenue growth across the networks in 2010 shows that Everything Everywhere had the worst revenue performance among the UK MNOs in 2010, with total revenues 4.7% lower in 2010 than the combined 2009 revenues for Orange and T-Mobile (including Virgin Mobile).

The smallest network, 3UK, had the strongest percentage growth in revenues in 2010, up an estimated 9.7% to £1.4bn, corresponding to a market share of 9.5%, 0.8 percentage points higher than a year previously. Vodafone and O2 also increased their revenues during the year.

Figure 5.48 Mobile telecoms retail revenues, by provider



Source: Ofcom / operators

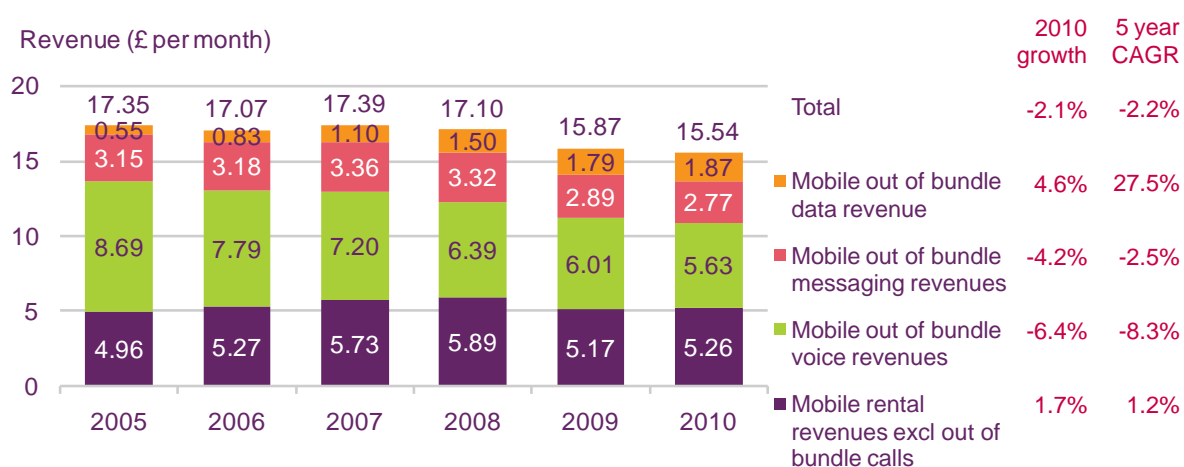
T-Mobile/Orange merger – Everything Everywhere

In September 2009 the European owners of Orange and T-Mobile UK (France Telecom and Deutsche Telekom) announced that they would merge their UK businesses to create a 50/50 joint venture under the company name Everything Everywhere Ltd. The European Commission granted clearance to the proposed merger in March 2010, after commitments were given on spectrum and network sharing. The new entity merged its accounts in April 2010 and was officially launched on 1 July.

Revenue per connection fell by 2.1% in 2010

Average voice and data revenue per mobile connection has fallen steadily since 2007 as a result of falling prices and the introduction of more generous pay-monthly call, messaging and data allowances. Average monthly spend per mobile subscription fell by 2.1% in 2010, in line with the 2.2% average fall in the five years to 2010 and, at £15.54, it was more than 10% lower than the £17.35 figure for 2005, despite increasing average use over the period (Figure 5.49).

Figure 5.49 Average monthly retail revenue per mobile subscription

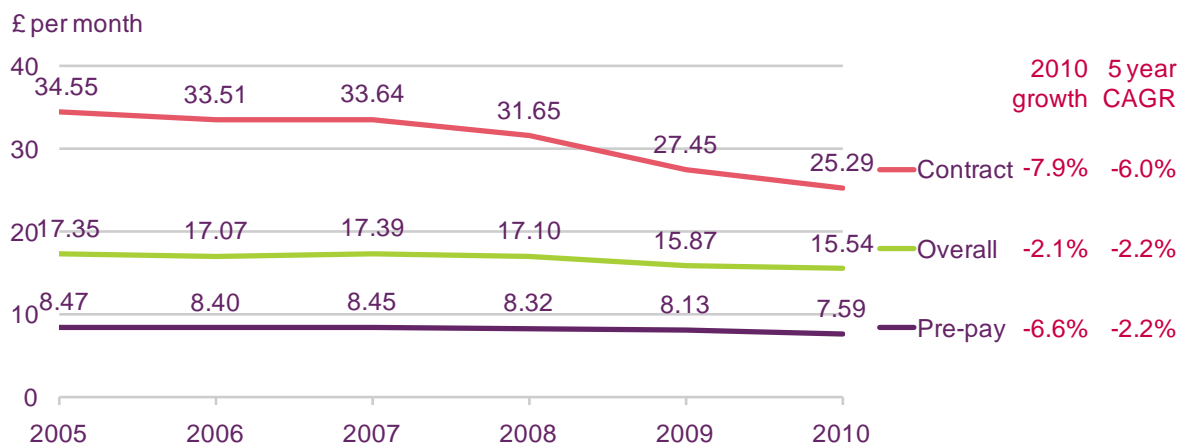


Source: Ofcom / operator data

Average spend per post-pay subscription is three times that of pre-pay

Retail revenue per pay-monthly (contract) subscriber fell by 7.9% in 2010, while revenues per pre-pay user fell by 6.6%. However, average monthly spend per contract user (£25.29) was still more than three times that of a pre-pay user (£7.59) (Figure 5.50).

Figure 5.50 Average monthly retail revenue per mobile subscription, by type



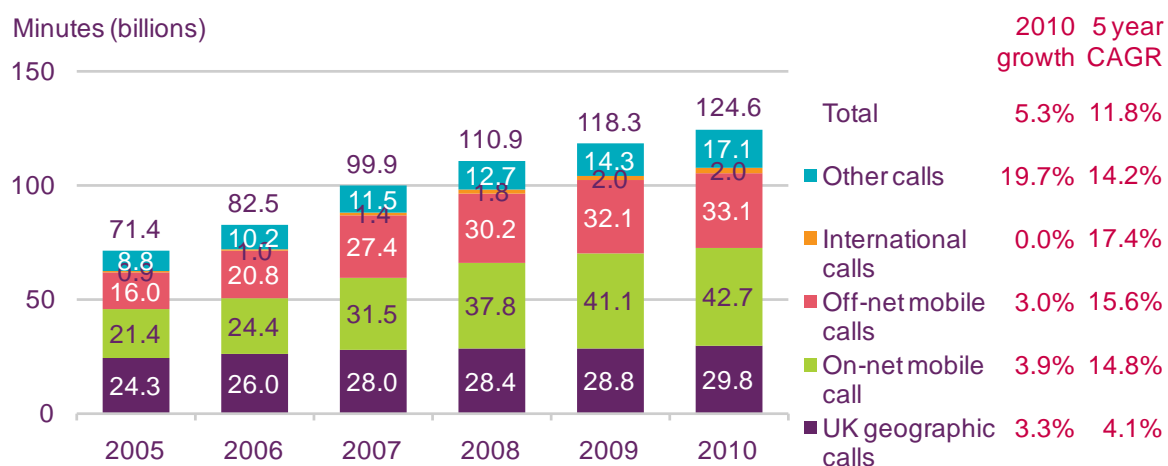
Source: Ofcom / operator data

Mobile call volumes

Growth in mobile voice call volumes slows

The volume of voice call minutes originating on mobiles increased by 5.3% to 124.6 billion during 2010, following a 6.7% growth in 2009 and 11.0% growth in 2008 (Figure 5.51). Mobile-originated call volumes increased for all call types except international calls, which were unchanged. Among the other call types, rates of growth ranged from 3.0% for calls to other mobile networks to 19.7% for 'other' calls.

Figure 5.51 Mobile originating voice call volumes



Source: Ofcom / operators

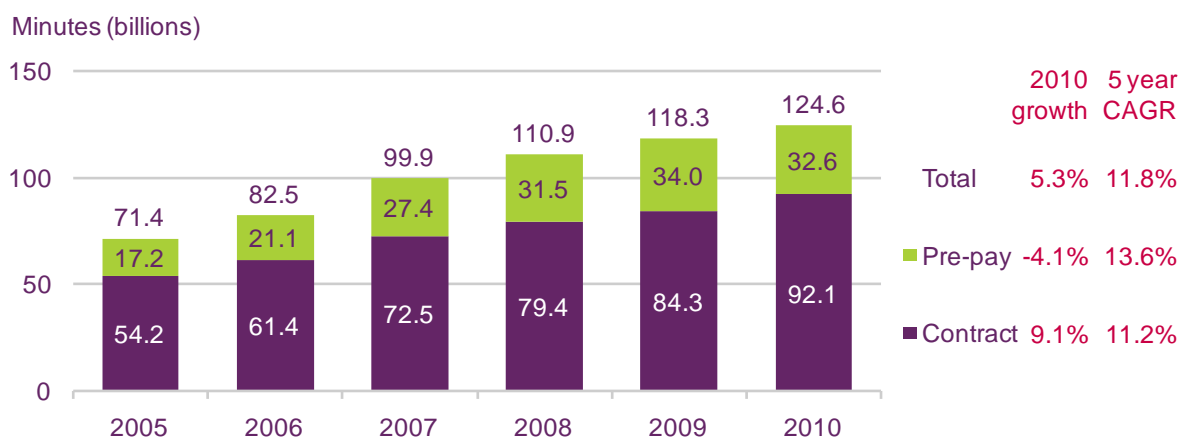
Note: Includes estimates where Ofcom does not receive data from operators

Pre-pay call volumes decline for the first time

Call minutes made from pre-pay phones fell for the first time in 2010, declining by 4.1% to 32.6 billion minutes (Figure 5.52). This was a result of a fall in pre-pay mobile subscribers as an increasing number of customers subscribed to pay monthly contracts (see Section 5.1.4 above).

In 2010 pre-pay accounted for 26.1% of outgoing mobile call volumes, down from 28.7% in 2009, while contract customers' share of total mobile call volumes increased to 73.9% as total contract call volumes increased by 9.1%, to 92.1 billion minutes. This shift came despite falling average monthly use per contract connection (down 5.3% to 212 minutes) and increasing average pre-pay use (up 1.5% to 61 minutes a month).

Figure 5.52 Mobile telecom call volumes, by subscription type



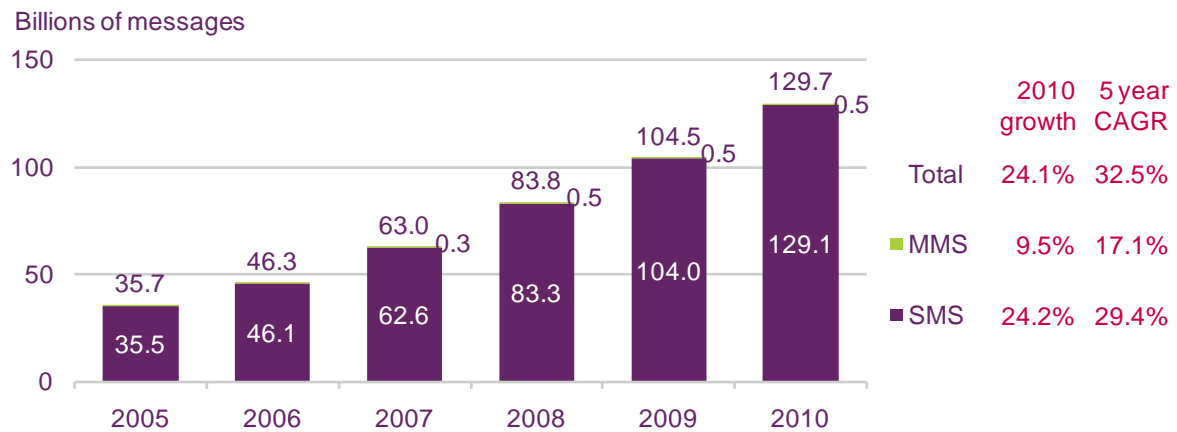
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

Messaging use increases by 24% in 2010

Despite the increasing use of internet-based communications services such as social networking sites and instant messaging, the numbers of text messages sent by mobile users continued to climb in 2010, growing by 24.1% to 129.1 billion messages representing an average of over five a day for every person in the UK and a similar rate of growth to 2009 (24.9%). Meanwhile, the volume of MMS messages grew by 9.5% during 2010 to just over half a billion messages, equivalent to just 0.02 messages per person per day (Figure 5.53). Increasing take-up of smartphones may have a downward effect on the use of MMS, as these handsets allow users to send pictures using email without additional cost (assuming that their tariff includes a data allowance).

Figure 5.53 Mobile messaging volumes



Source: Ofcom / operators

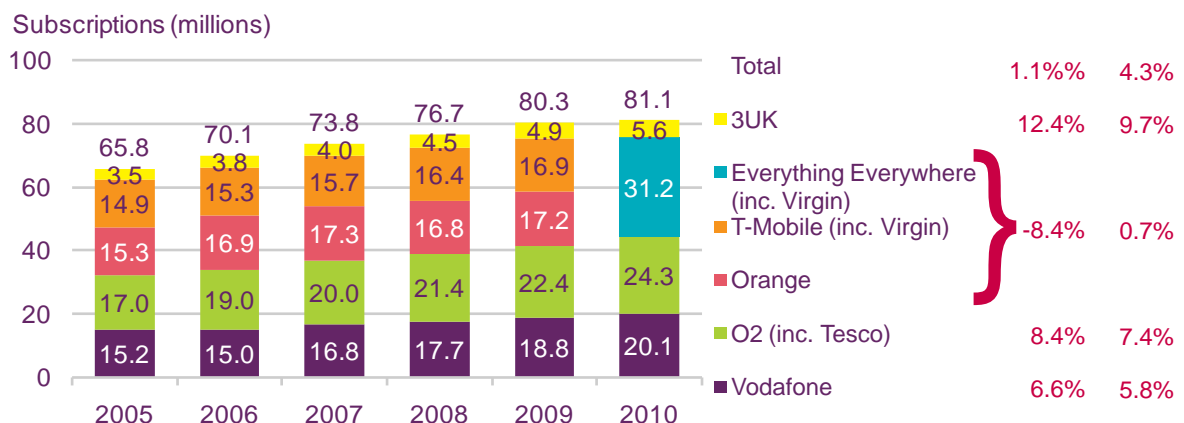
Mobile connections

O2 achieves the largest increase in mobile connections in 2009

At the end of 2010 Everything Everywhere (created by the merger of T-Mobile and Orange in 2009) had the largest number of mobile subscribers on its network, at 31.2 million (including Virgin Mobile and subscribers of other MVNOs that use the network). However, Everything Everywhere had 8.4% fewer subscribers at the end of 2010 than the combined number of T-Mobile and Orange subscribers at the end of 2009. But part of this fall is the result of a change in the methodology used to define active subscribers for the ex-T-Mobile part of Everything Everywhere's customer base (Figure 5.54).

3UK had the highest subscriber growth rate in 2010, at 12.4%, although it remained the smallest UK network in terms of subscribers, with an estimated 5.6 million users (a 6.8% market share) at the end of the year. O2 (including Tesco Mobile and other MVNOs) had the highest net increase in subscribers (1.9 million) in 2010, bringing its total to 24.3 million. Vodafone's rate of subscriber growth in 2010 was 6.6%, unchanged from 2009, and at the end of the year it had 20.1 million mobile subscribers, making it the third largest UK mobile network.

Figure 5.54 Mobile connections, by operator



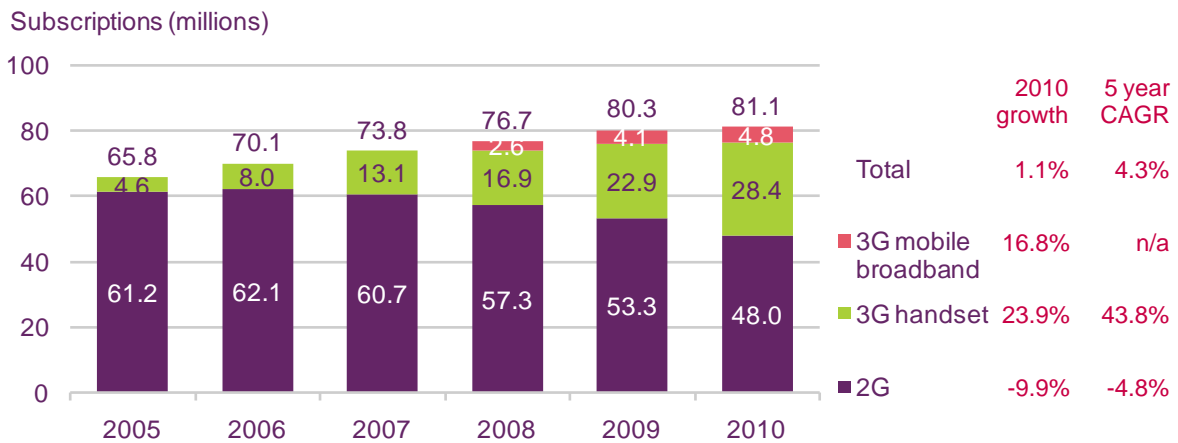
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

Migration from 2G to 3G continues...

At the end of 2010 there were 33.1 million 3G mobile connections (including 4.8 million mobile broadband dongles and datacards), 6.2 million (22.8%) more than a year previously (Figure 5.55). Surprisingly (given the growth in popularity of smartphones over the year) this rate of increase was slower than that in 2009, both in terms of the net increase in 3G subscriptions and in percentage point terms. This is possibly a reflection of the increasing prevalence of longer minimum term mobile contracts, which means that contract mobile users upgrade their handsets less frequently, although slowing growth in the number of mobile broadband connections will also be a major contributing factor.

Figure 5.55 Mobile subscriptions, by technology

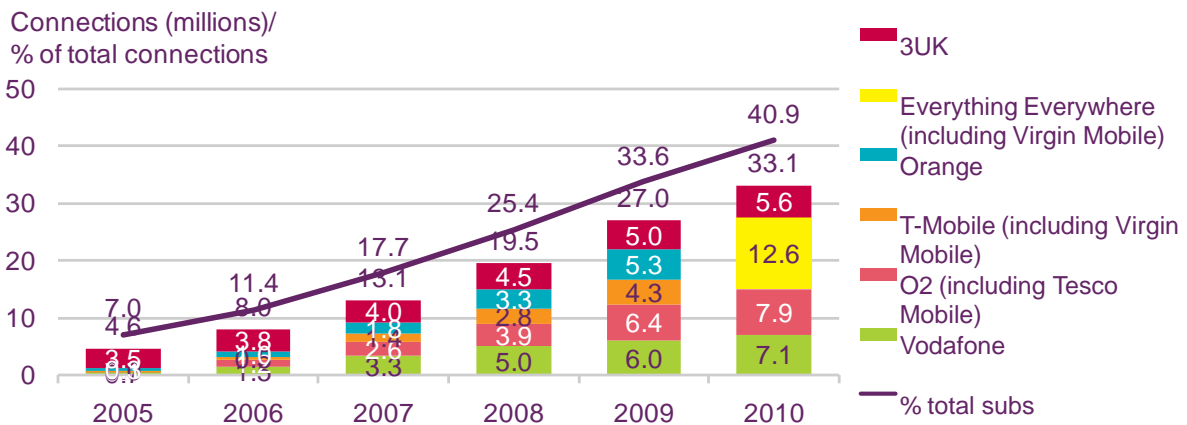


Source: Ofcom / operators

Four in ten mobile subscriptions were 3G-enabled at the end of 2010

Around four in ten UK mobile connections (40.9%) were 3G-enabled at the end of 2010, compared to just 4.6% five years previously (Figure 5.56). The merger of Orange and T-Mobile meant that Everything Everywhere had the most 3G connections (12.6 million, a 38.0% share). O2 had 7.9 million 3G connections, and 3G-only operator 3UK (the largest 3G provider before 2009) now has the smallest share, with an estimated 5.6 million 3G connections.

Figure 5.56 3G connections, by network operator



Source: Ofcom / operators

Note: 3G includes connections made via laptops/dongles as well as mobile handsets

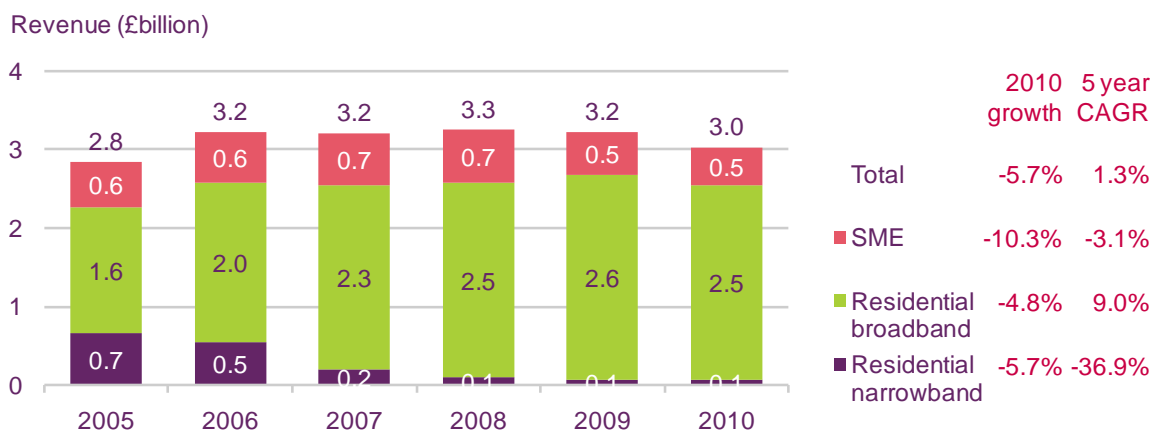
5.2.6 Fixed data services

Fixed-line internet revenue

Fixed-line broadband and internet revenues fall by £0.2bn

Revenues from fixed-line internet and broadband services declined by 5.7% to £3.0bn in 2010, mainly driven by a 4.8% fall in residential broadband revenues, but also as a result of a 5.7% decrease in residential narrowband revenues and a 10.3% fall in SME internet revenues due to falling SME broadband prices (Figure 5.57).

Figure 5.57 Estimated UK internet and broadband retail revenue



Source: Ofcom / operators

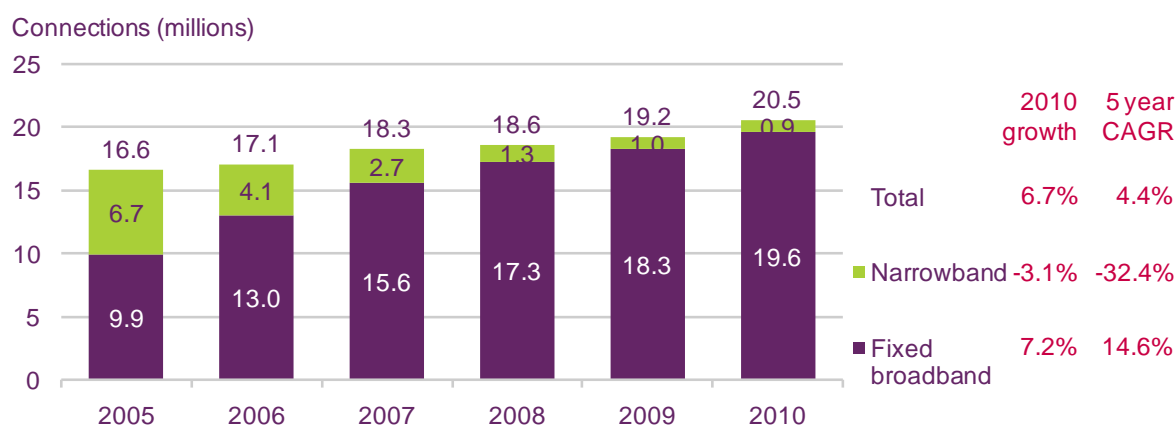
Fixed internet connections

Total fixed-line internet connections increase by 24% over five years

At the end of 2010 there were 20.5 million broadband and narrowband fixed UK internet connections, compared to 16.6 million five years before (Figure 5.58). Despite a maturing market and the increase in mobile broadband take-up, fixed-line broadband connections continued to increase, and in fact the growth rate of 7.2% in 2010 was higher than the 5.7% growth rate in 2009. Narrowband internet connections fell by 30,000 in the year, but nearly a million households and SMEs still connect to the internet through a narrowband dial-up connection.

Around two-thirds (66%) of households now have a fixed-line broadband connection, and while there is still potential for significant growth, further take-up of fixed-line broadband may be constrained by some households opting to take only a mobile broadband connection (Figure 5.71 in the Telecoms User section of this report shows that 7% of UK households had a mobile but not a fixed broadband connection in Q1 2011). In addition, some households may rely on a mobile handset/s for an internet connection while others may not have any devices capable of connecting to the internet.

Figure 5.58 Estimated UK residential and SME fixed internet connections

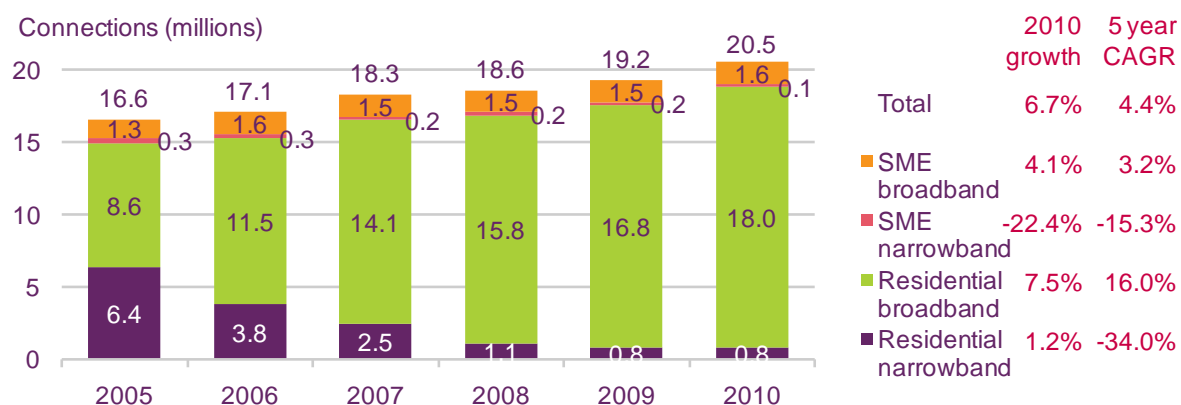


Source: Ofcom / operators

Fewer than a million households use dial-up internet

Ninety-five per cent of residential fixed internet connections were broadband at the end of 2010, compared to 59.7% five years previously (Figure 5.59). Among small and medium-sized enterprises (SMEs), fixed broadband was also the main method of access, with just over 8% still relying on a narrowband connection. The number of residential narrowband connections was unchanged in 2010 at 0.8 million, suggesting that there remains a significant minority of online UK homes which are either unable to receive fixed broadband services, or for which a narrowband connection is sufficient for their needs

Figure 5.59 UK residential and small business fixed internet connections



Source: Ofcom / operators

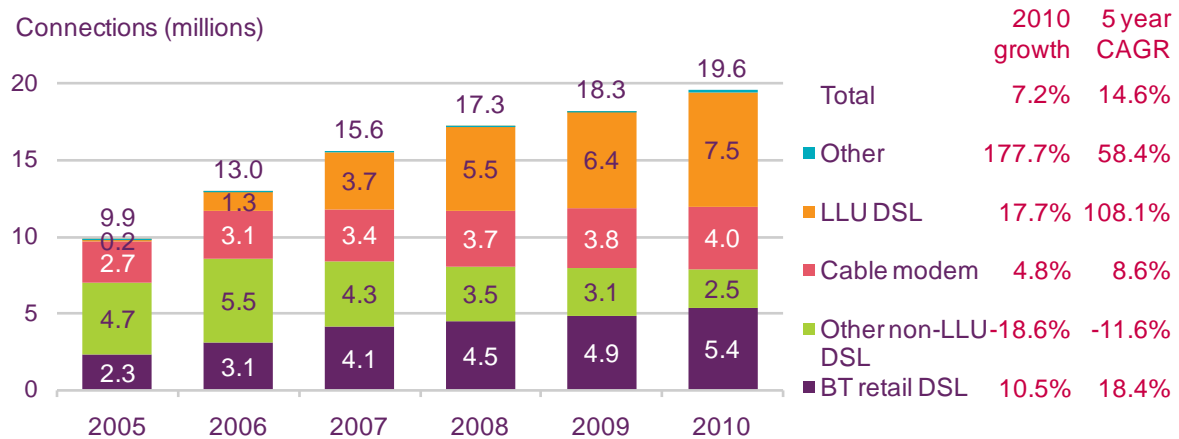
Note: SME broadband includes some connections over leased lines

LLU providers continue to gain market share

The proportion of fixed broadband connections using local-loop unbundling (LLU) grew by 3.4 percentage points to 38.2% in 2010; this compares to less than 2% five years earlier (Figure 5.60). However, BT Retail continued to have the largest share of broadband subscribers and increased its share by 0.8 percentage points during 2010, to 27.5%. Growth in the number of fixed broadband connections using cable increased by 4.8% to 4.0 million in 2010, as Virgin Media continued to market its services based on the faster speeds that cable can offer compared to ADSL services. However, cable broadband's share of

connections continued to fall during the year, down to 20.9% (although as cable is available to only 48% of households, this represents a share of over 40% in the areas where a cable service is available).

Figure 5.60 UK residential and small business fixed broadband connections



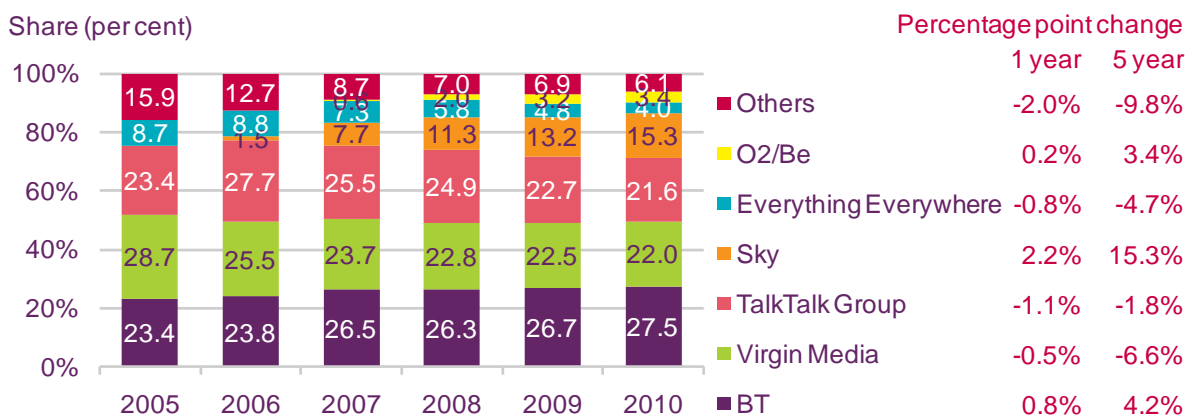
Source: Ofcom / operators

Note: Excludes connections made over cellular networks

Sky had the highest growth in broadband market share in 2010

While BT continued to be the largest UK broadband provider in 2010 with a market share of 27.5% (0.8 percentage points higher than a year previously), Sky had the largest increase in market share during the year, up by 2.2 percentage points to 15.3%. O2/Be also increased its market share in 2010, up 0.2 percentage points to 3.4%. Virgin Media, TalkTalk Group and Everything Everywhere’s market shares all fell in 2010, by 0.5, 1.1 and 0.8 percentage points respectively, and this led to Virgin Media overtaking TalkTalk Group to become the UK’s second largest broadband provider with a market share of 22.0%, compared to TalkTalk Group’s 21.6% (Figure 5.61).

Figure 5.61 UK residential and small business broadband connection shares



Source: Ofcom / operators

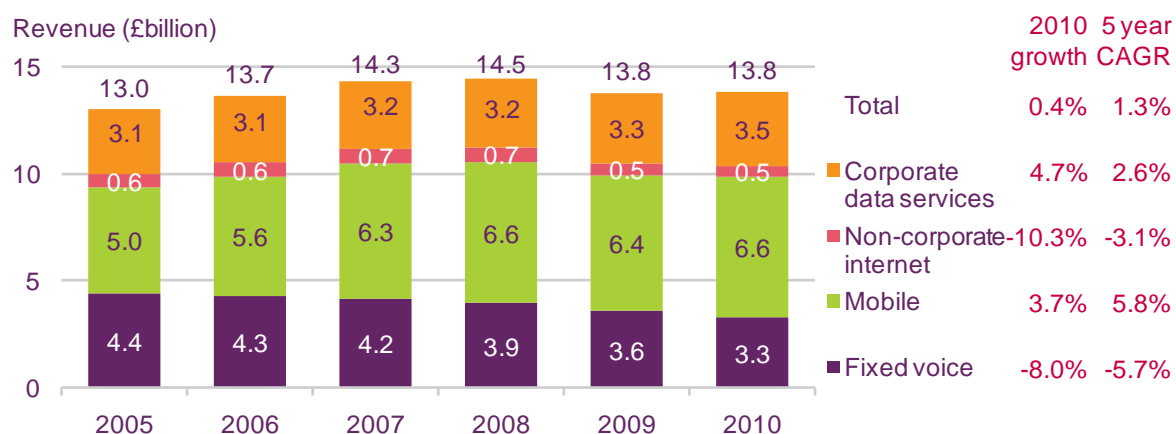
Note: Where providers have merged, historical data are included under the ISP in operation at the end of 2010; excludes connections made over cellular networks

5.2.7 Business markets

Business retail telecoms revenues unchanged in 2010

Business spend on telecoms services was unchanged at £13.8bn in 2010, having fallen by £0.7bn (4.7%) in 2009 (Figure 5.62). Growth in revenues from business mobile services (up 3.7%) and corporate data services (up 4.7%) were offset by falling spend on non-corporate internet (down 10.3%) and fixed voice services (down 8.0%).

Figure 5.62 Business telecoms service revenue

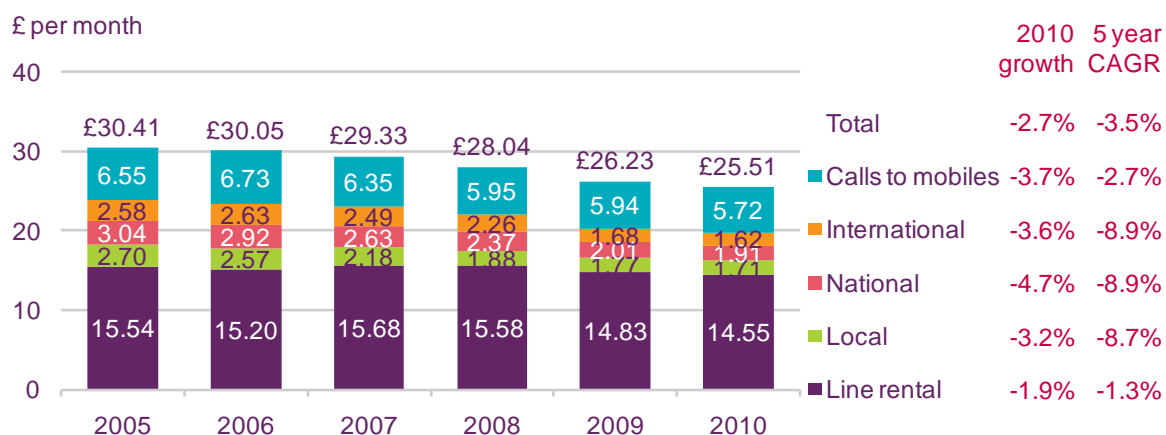


Source: Ofcom / operators / IDC

Average monthly revenue per business fixed line fell by £0.71

Average monthly revenue per business line continued to fall in nominal terms in 2010, down by 2.7% to £25.51, a much lower rate than the 6.5% decline in 2009 (Figure 5.63). The largest reduction in spend during 2010 was in national calls (down 7.3%), followed by calls to mobiles (down 3.7%), calls to international destinations (down 3.6%) and local calls (down 3.2%). Line rental revenues, which account for over half of business fixed-line revenue, fell by 1.9% during the year, a slower rate than the 4.9% decline in 2009. In the five years to 2010, line rental revenues have declined at a much slower rate than call revenues, indicating a change in tariff structures as businesses increasingly subscriber to packages with some inclusive calls.

Figure 5.63 Average monthly voice revenue per business fixed line



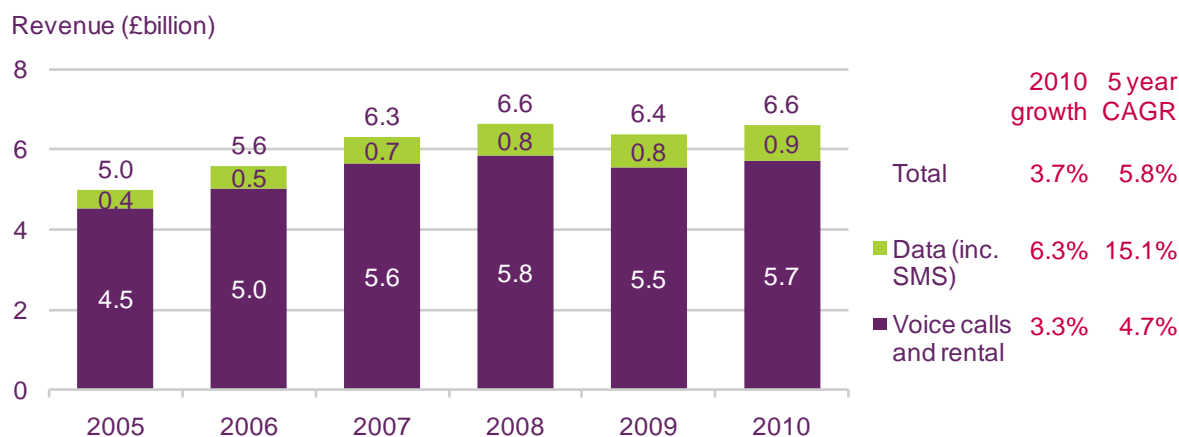
Source: Ofcom / operators

Note: Excludes revenues from non-geographic voice calls

Business spend on mobile voice increases by 3.7%

Revenue from business spend on mobile services increased by £0.2bn to £6.6bn in 2010, following a 3.9% decline in 2009 and a 5.1% increase in 2008 (Figure 5.64). The majority of this growth was due to a £0.2bn increase in revenues from rental and voice calls, although data revenues increased at a greater rate, up 6.3% to £0.9bn.

Figure 5.64 Breakdown of business mobile revenue



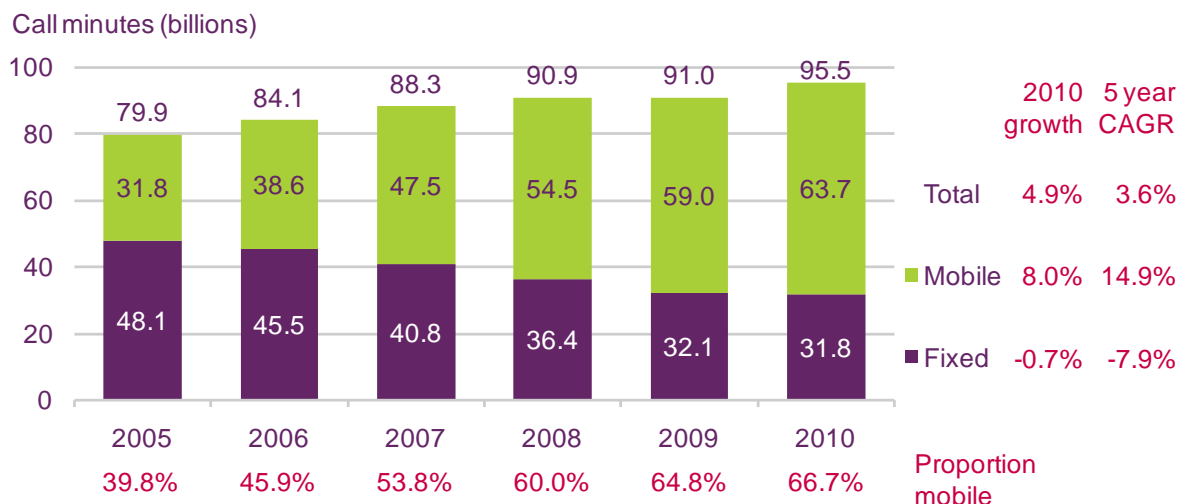
Source: Ofcom / operators

Two-thirds of business voice calls originate on mobiles

Total business call volumes increased by 4.9% to 95.5 billion minutes in 2010, driven by an 8.0% rise in mobile-originated business call volumes to 63.7 billion minutes (Figure 5.65). Over two-thirds (66.7%) of all calls made by business users (excluding VoIP calls, for which figures are not available) were mobile-originated during 2010, compared to 39.8% five years previously. The shift towards mobile telephony by business users is partly driven by growth in mobile-to-mobile call volumes, as an increasing number of mobile business plans provide free on-net calls, meaning that businesses incur no incremental cost when employees call each other.

Fixed-originated call volumes continued to decline in 2010, falling by 0.7% to 31.8 billion minutes. In addition to the increasing use of mobile for voice telephony, the use of cheaper VoIP services is also likely to be a contributory factor in driving down call volumes made from traditional PSTN lines.

Figure 5.65 Business voice call volumes



Source: Ofcom / operators

Note: Fixed data excludes NTS voice call volumes

The number of business fixed lines fell by 0.5 million in 2010

The decline in the number of fixed lines used by businesses accelerated in 2010, falling by 5.2%, the largest annual decline since 2004 (Figure 5.66). The rate of decline in the number of ISDN2 and ISDN30 channels was higher than that for analogue lines, a reflection that businesses are starting to move away from ISDN technology towards cheaper and faster data connections for internet access, VoIP services and/or mobile services.

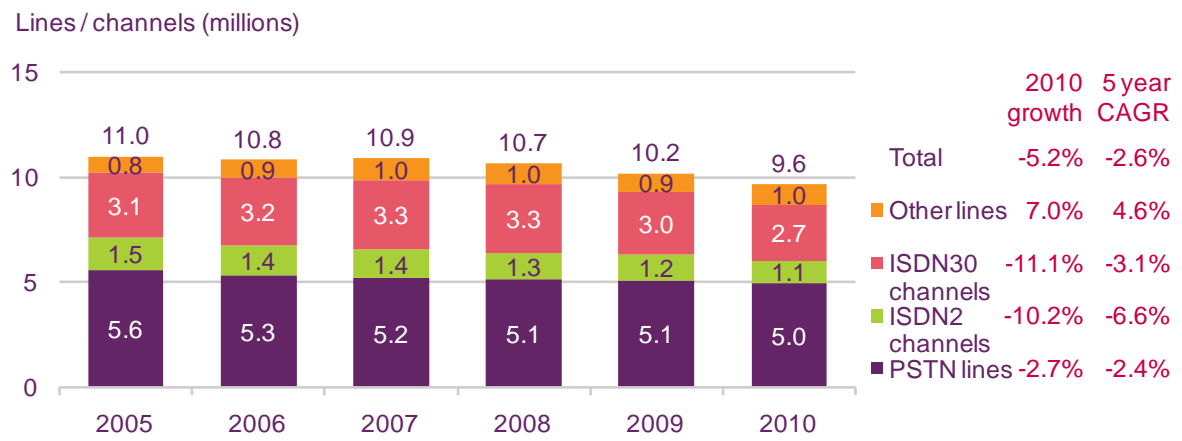
ISDN

ISDN is a set of standards for digital transmission over ordinary telephone copper wire (and other media). The key feature of the ISDN is that it integrates speech and data on the same lines, resulting in better voice quality than a conventional analogue phone.

ISDN offers connections in increments of 64kbit/s (the equivalent of a standard analogue line). In the UK there are two main types of ISDN: ISDN2 (which consists of two 64kbit/s channels and a 16kbit/s signalling channel) and ISDN30 (thirty 64kbit/s channels and a 64kbit/s signalling channel). Each channel can be used independently, so an ISDN2 line can be used as two voice lines, one voice line and a 64kbit/s data connection, or as a 128kbit/s data connection.

Cheap broadband means that ISDN2 has largely been superseded as a method of internet connection, but it is still used in some industries, as an ISDN data connection is always a fixed, reliable 64kbit/s. ISDN30 remains popular as a way for large businesses to obtain multiple fixed-voice lines for a set cost.

Figure 5.66 Business fixed lines, by type



Source: Ofcom / operators

5.3 The telecoms user

5.3.1 Introduction

In this section we consider the major consumer trends in the use of telecoms services over the past few years. We base our analysis on data received from telecoms providers, our own consumer research and third-party suppliers. While consumers can be split into two broad categories, residential and business, in this section we focus solely on the residential sector. The latest edition of Ofcom's *Business Consumer Experience* report⁶⁵, published in December 2010, covers the experiences and views of consumers within UK businesses.

The section is split into three main areas; the first provides a general overview of the general trends in take-up and spend on telecoms services, while the next focuses on developments in fixed-line services, including fixed broadband. The final part looks at trends in the use of mobile services among consumers in terms of voice and data use on mobile handsets, as well as the use of mobile broadband services via dongles and PC datacards.

The key findings of this section are:

- **Average monthly household spend on telecoms services fell by 4.3% in 2010 to £63.10.** Spend on telecoms services accounted for 3.1% of household outgoings in 2010, the lowest proportion over the past five years (page 302).
- **Total broadband take-up increased by three percentage points to 74% by the end of Q1 2011.** Two-thirds of households (66%) have a fixed broadband connection (page 304).
- **Growth in the take-up of mobile broadband slowed in the year to Q1 2011, up two percentage points to 17% of households.** However, growth in take-up remained strong among younger age groups, up six percentage points among 16–24 year-olds to nearly one-third; more than half of users in this age group rely on a mobile rather than fixed broadband connection for their internet access (page 304).
- **Over half of 15–34 year-olds and one-third of 35–54 year-olds have used their mobile to access the internet.** Growth in the take-up of the internet on mobile devices is strongest among AB households, up 14 percentage points in 2010, compared to only a two percentage point increase among DE households (page 325).
- **Nearly two-thirds claim to access the internet on their mobile phone while in the home.** Our research showed that one in seven 'mainly' or 'always' use the mobile internet while at home, while nearly one-third mainly or always use it outside the home (page 325).
- **Over 90% of users are satisfied with fixed and mobile services.** The levels of satisfaction with fixed broadband and mobile broadband services were lower, at 86% and 88% respectively, although satisfaction with the speed of mobile broadband increased by seven percentage points to 80% (pages 310, 322 and 327).

⁶⁵ <http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-10/business-consumer-experience.pdf>

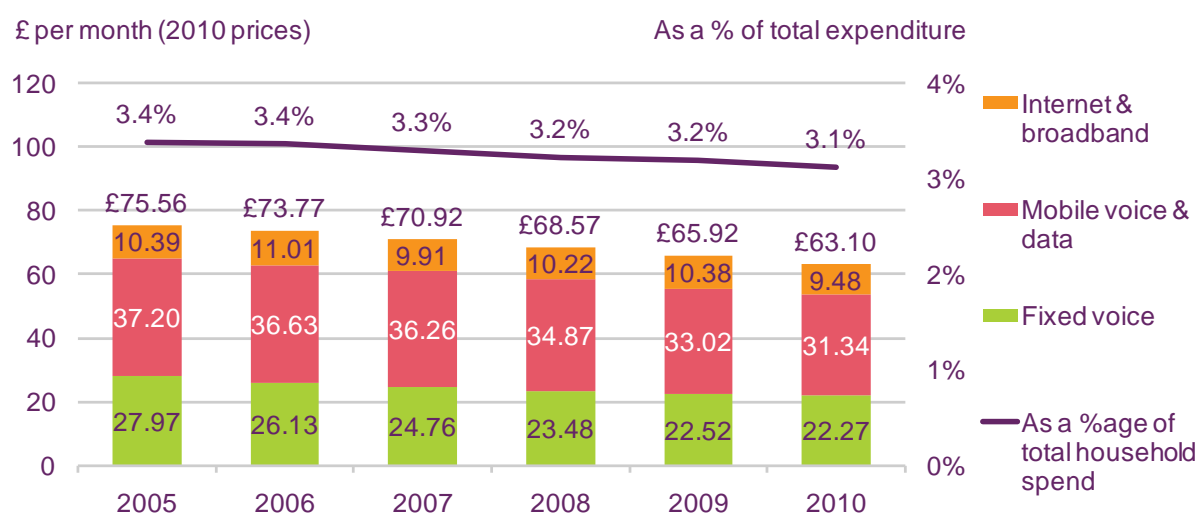
5.3.2 Residential sector overview

Average household spend on telecoms services falls by over 5%

Monthly average household spend on telecoms services fell in 2010 by £2.82 to £63.10, a fall of 4.3% - the largest annual decline over the five years since 2005 (Figure 5.67). As in previous years, the majority of the fall was on mobile services, where average spend fell by £1.68 a month to £31.34. Average spend on fixed voice services also fell, down by £0.25 to £22.27 while, in contrast to 2009 when spend increased, average spend on fixed internet and broadband services fell in 2010 by £0.90 to £9.48.

At 3.1% of total household spend, telecoms services represented a lower proportion of the average household's outgoings in 2010 than in any of the previous five years covered in this analysis.

Figure 5.67 Average household spend on telecoms services



Source: Ofcom / operators / ONS

Notes: Includes estimates where Ofcom does not receive data from operators; adjusted to RPI; includes VAT

Fixed-call per-minute charges fall as declines in mobile charges slow

Fixed and mobile voice call per-minute charges both fell during 2010, as shown in Figure 5.68. Call charges on fixed lines declined by 0.2 pence to 7.6 pence in 2010, in contrast to the previous five years, when average cost per minute increased in each successive year. The increased use of bundled minutes may be the main driver behind this fall, although fixed call volumes continued to decline in 2010, albeit at a slower rate than previous years (see Figure 5.35 in the Telecoms Industry section above). The average price per minute on mobile continued to fall in 2010, down by 0.4 pence to 8.5 pence per minute; the smallest annual decline since 2005.

Figure 5.68 Comparison of average fixed and mobile voice call charges



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; fixed calculation excludes non-geographic voice calls

Nearly three-quarters of households have a broadband connection

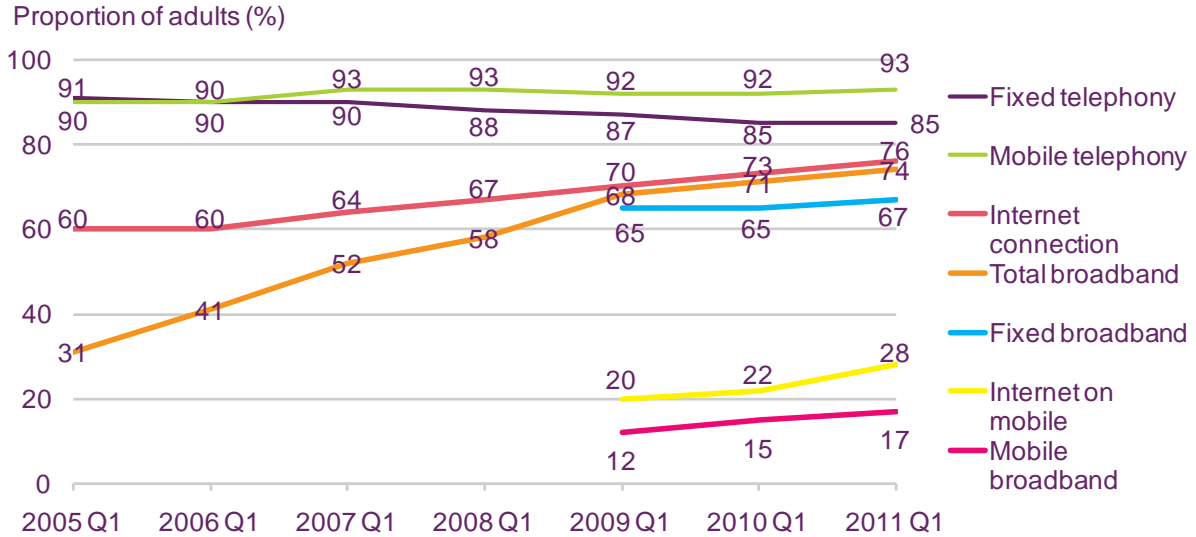
Take-up of all telecoms services increased during 2010, with the exception of fixed voice telephony, which remained stable at 85% of all households in 2010 following three years of falling penetration (Figure 5.69). The requirement to have a fixed voice line for DSL broadband acts as a constraint on households giving up their fixed phone.

Over three-quarters (76%) of households had an internet connection in Q1 2011, and 74% used broadband (either fixed broadband or mobile broadband on a PC) as their main method of accessing the internet, up from 71% in Q1 2010. The number of households using fixed broadband in Q1 2011 increased by two percentage points to 67% while those using PC-based mobile broadband rose by a similar amount to 17%. More than a quarter of households access the internet on a mobile phone – for the large majority this is in addition to PC-based internet access.

Mobile telephony continued to have the highest penetration among households of any telecoms service; take-up increased by one percentage point to 93% by Q1 2011. In addition over one in four households (28%) used their mobile to access the internet in Q1 2011.

Figure 5.69 Household penetration of key telecom technologies

QE1: Does your household have a PC or laptop computer? / QE2: Do you or does anyone in your household have access to the internet/World Wide Web at home (via any device, e.g. PC, mobile phone etc)? / QE6: Which of these methods does your household use to connect to the internet at home?

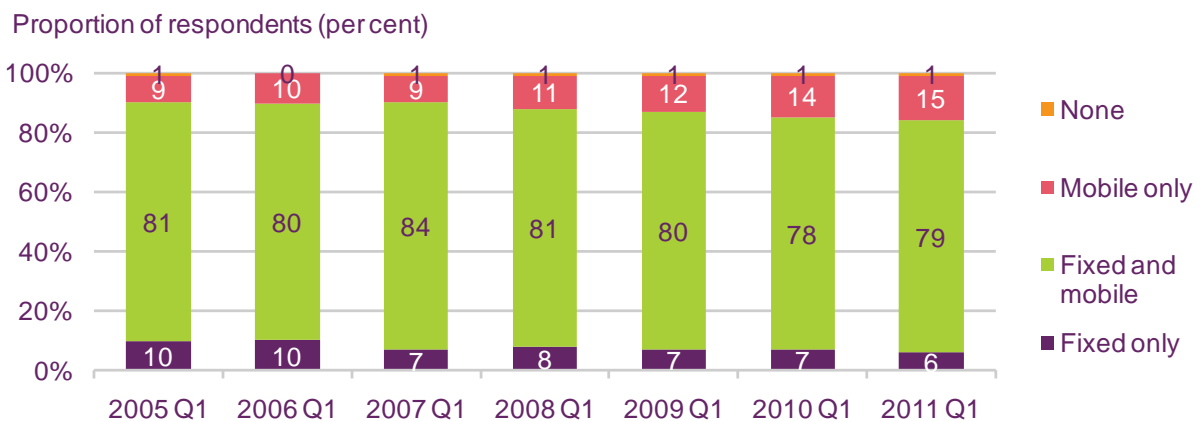


Source: Ofcom technology tracker, Q1 2011
 Base: All adults aged 16+ (n=3474)

Fifteen per cent of UK households are mobile-only

The proportion of households relying on mobile as their only means of voice telephony increased slightly (+1%) during 2010 to 15% in Q1 2011, while those with only a fixed line decreased from 7% to 6% over the same period (Figure 5.70). Around eight in ten (79%) of households have both a fixed and a mobile phone.

Figure 5.70 Household penetration of fixed and mobile telephony



Source: Ofcom research
 Base: All adults aged 16+ (n=3474)

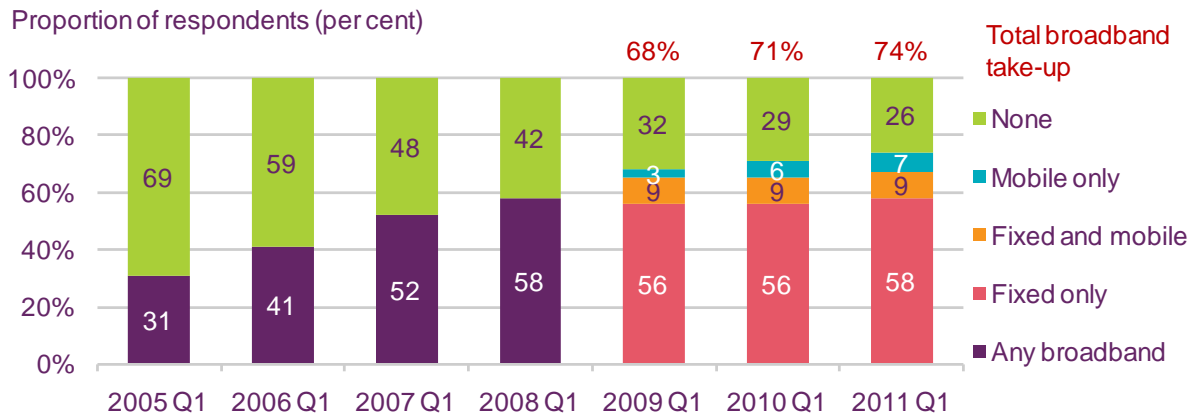
Fixed and mobile broadband drive household take-up of broadband services

Since Q1 2009 the number of households using both fixed and mobile broadband has been stable, at just under one in ten households, while those using solely fixed broadband have

increased by two percentage points to 58% in Q1 2011 (Figure 5.71). Seven per cent of UK households have only a mobile connection.

A quarter of households (26%) had no broadband access at the end of Q1 2011, although this was down from nearly a third (32%) of households in Q1 2009.

Figure 5.71 Household penetration of fixed and mobile broadband



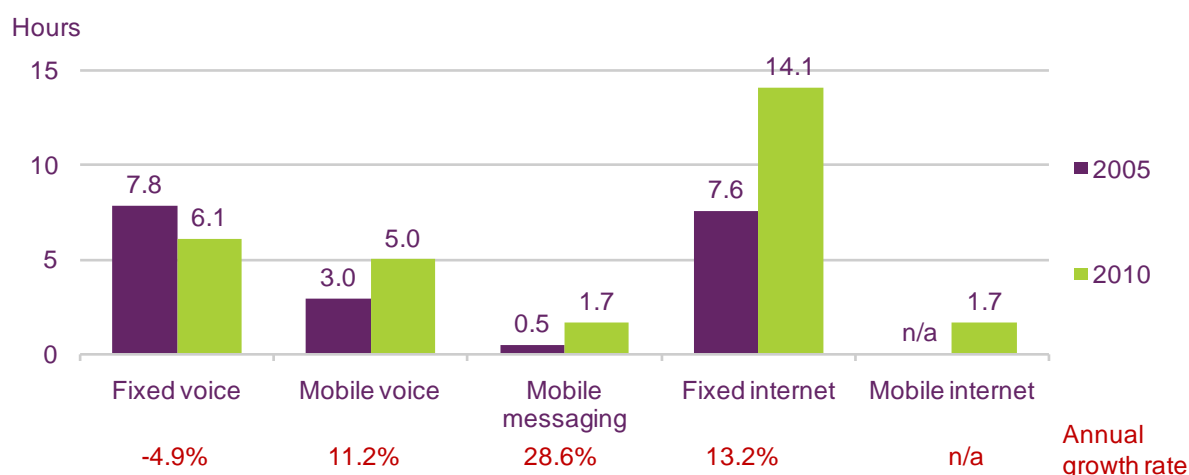
Source: Ofcom research
Base: All adults aged 16+

Time spent per month on telecom services increases by ten hours since 2005

Time spent using fixed internet services accounted for the largest increase in time spent on telecoms services, with usage almost doubling to over 14 hours between 2005 and 2010 (Figure 5.72). Calls made on landlines made up the second-largest share, although this fell from just under eight hours in 2005 to 6.1 hours in 2010. Conversely, mobile call minutes per person increased over the five-year period, with average annual growth of 11.2% to 5.0 hours per month.

The number of hours spent using mobile messaging services such as SMS recorded the largest average annual increase, at nearly 30% per annum to 1.7 hours per person per month (based on an estimated average of 35 seconds per text message), the same amount of time as was spent on mobile internet services in 2010.

Figure 5.72 Average monthly time spent using telecoms services, per person,



Source: Ofcom / operators / Nielsen / UKOM/ Comscore

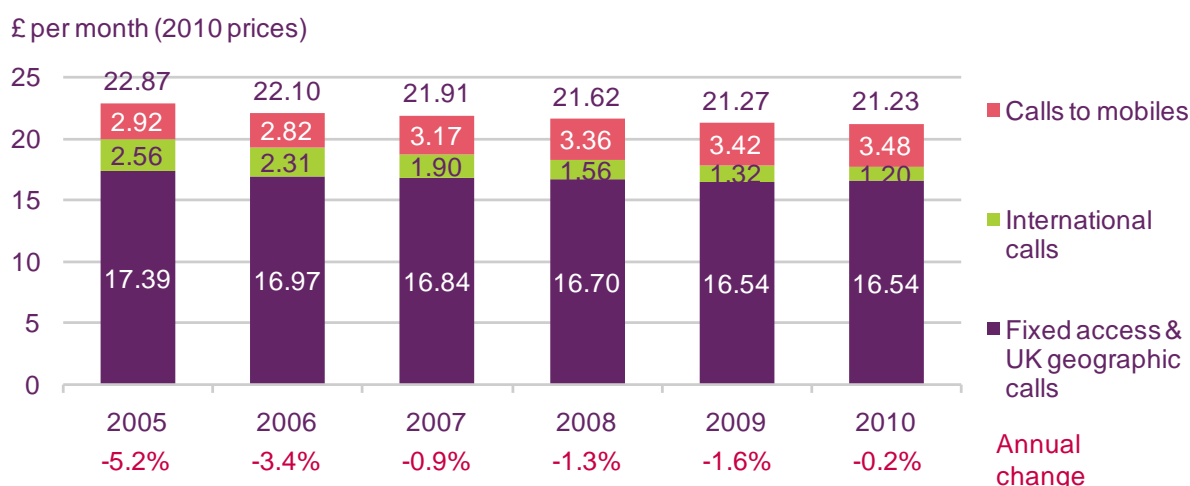
Note: Includes estimates where Ofcom does not receive data from operators; fixed voice call figures include NTS voice calls; mobile messaging figures assume an average of 35 seconds per message; Ofcom estimate of fixed internet use per person is based on Nielsen data on the average monthly time spent online at home including the use of applications across the online population only; Nielsen's methodology changed in October 2006 so comparisons before this period should be treated with caution; fixed internet use figures are for May of the following year.

5.3.3 Fixed-line services (including fixed broadband)

Cost of a basket of fixed-line services remains unchanged in 2010

The average cost of a basket of residential fixed voice services remained relatively flat in 2010, falling by just 0.2% to £21.23 (Figure 5.73). A 1.8% increase in the cost of calls to mobiles, to £3.48 per month, was offset by an 8.9% fall in the cost of international calls to £1.20 (despite call volumes having increased, as shown in Figure 5.42). This is a reflection of operators increasingly offering fixed tariffs that include low-cost charges to popular international destinations. The average cost of fixed access plans and calls to UK destinations was unchanged during the year, at £16.54.

Figure 5.73 Real cost of a basket of residential fixed voice services



Source: Ofcom / operators

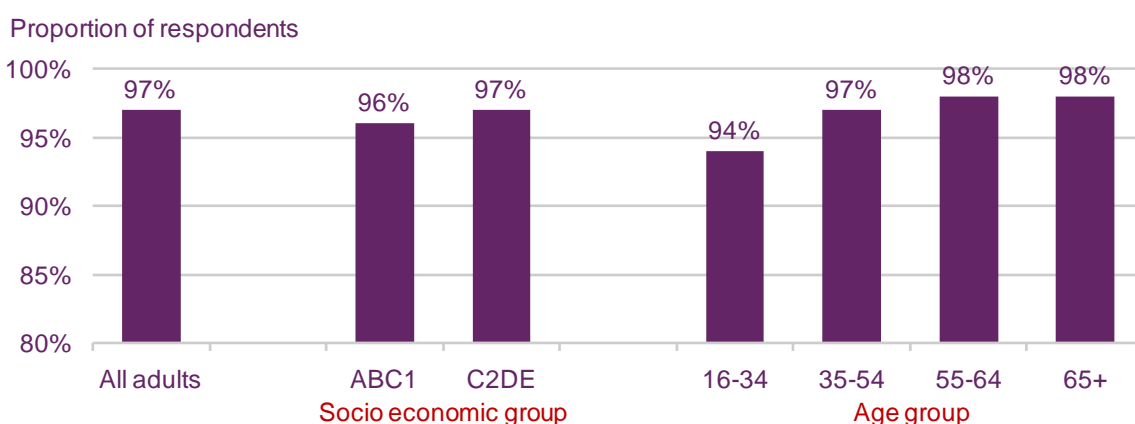
Note: Includes estimates where Ofcom does not receive data from operators; excludes non-geographic voice calls; adjusted for RPI; includes VAT

Most people continue to make and receive calls on their landlines

Although more than nine in ten adults have a mobile phone, nearly all adults who have a landline (97%) claim to use it for voice calls (Figure 5.74). Use varies slightly by age; older people are more likely to use the service. At the end of Q1 2011 98% of those aged 55 and over claimed to use a fixed line for voice calls; this compares with a slightly lower figure among 16 to 34 year-olds at 94%. Use varied little by socio-economic group.

Figure 5.74 Use of landline for voice communications services in the home

QC2A. Do you ever use this landline phone at home yourself to make and/or receive calls, for internet access or both?



Source: Ofcom research, Quarter 1 2011

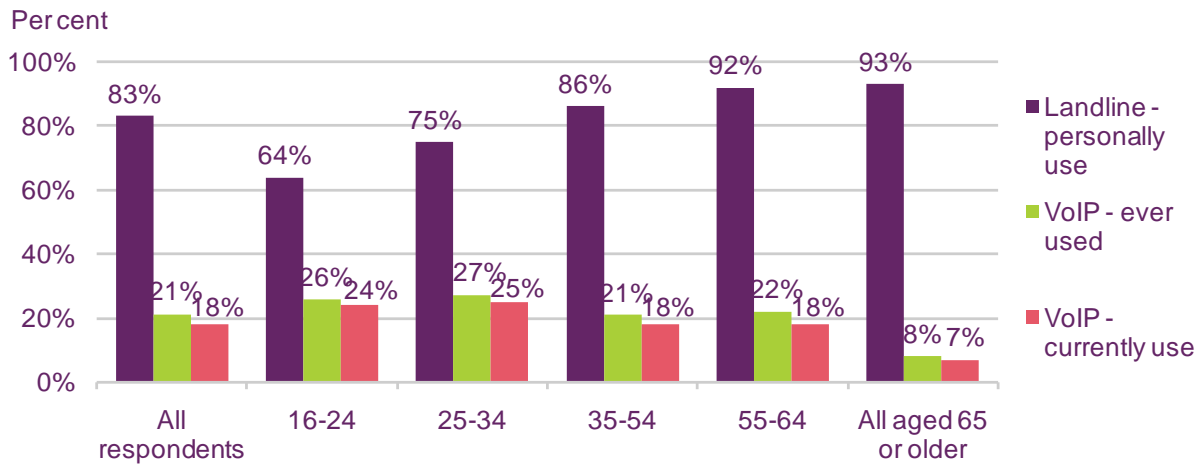
Base: All adults aged 16+ with a landline phone at homes (n = 3474 All, 1798 ABC1, 801 C2DE, 537 16-34s, 680 35-54s, 312 55-64s, 381 65+)

Eighteen per cent of UK adults claim to use VoIP regularly

Nearly one in five adults (18%) claimed to regularly make voice calls over a broadband internet connection (VoIP) in Q1 2011 (including PC-to-PC calls) with only a small variance

in take-up between age groups under 64 (Figure 5.75). Just over one in four 16 to 34 year-olds and one in five 35 to 64 year-olds use VoIP compared to just one in 12 aged 65 and over.

Figure 5.75 Use of fixed voice communications services in the home, Q1 2011



Source: Ofcom research Q1 2011

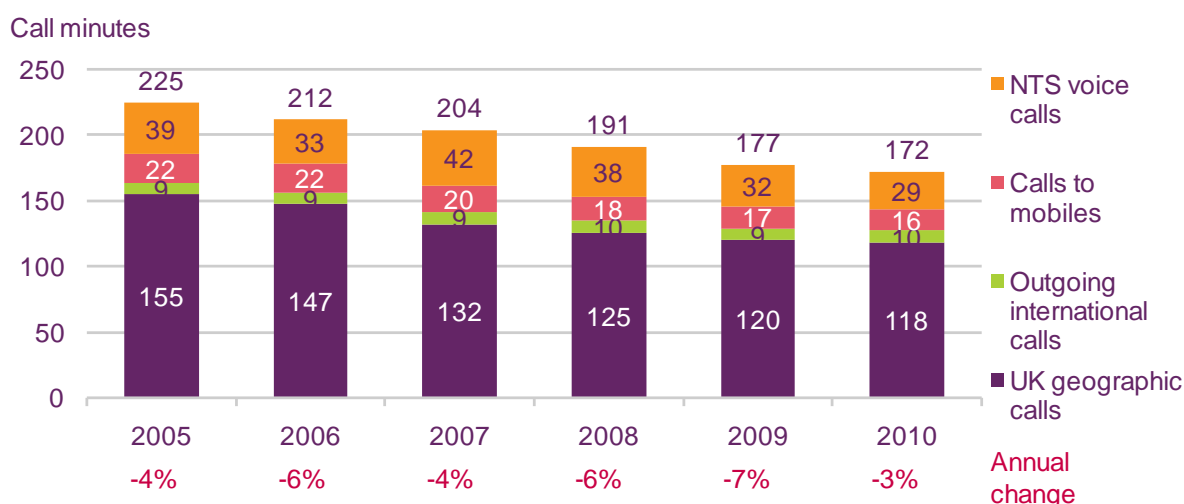
Base = All respondent s: 3474; 16-24s = 460; 25-34s = 540; 35-54s = 1204; 55-64 = 535; 65+ = 735

Decline in fixed-line call minutes per person slows in 2010

Average monthly fixed voice call volumes per person fell by 3% in 2010 to 172 minutes in 2010, the slowest rate of annual decline over the past six years (Figure 5.76). The volume of fixed outbound calls to mobiles and number translation services (i.e. NTS special services numbers - broadly, numbers that start with 08 or 09) remained static in 2010, while calls to UK geographic numbers declined slightly (-1.4%) to 118 minutes per month. This was despite the fact that many standard line rental tariffs, including those from BT and TalkTalk, include 'free' off-peak calls minutes to other UK-based landlines as well as to 0845/0870 numbers

Only outgoing calls to international destinations increased in 2010, up by one minute to an average of ten minutes per person, the same level as in 2008.

Figure 5.76 Average monthly outbound fixed voice call volumes, per person



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

Rises in fixed-line costs vary among providers

A comparison of the lowest-cost fixed-line tariffs available from a selection of providers in March 2010 and March 2011 is shown in Figure 5.77 below. The table gives some indication of the price trends in fixed phone and call charges but it should be noted that many consumers (51%) purchase their fixed line as part of a bundle of communications services.

In nominal terms, stand-alone fixed phone tariffs from all the main providers, including those tariffs with inclusive minutes, increased during 2010. Some of these increases can be attributed to the effect of the increase of VAT to 20% at the beginning of 2011 along with inflation, as in real terms most of the tariffs increased only marginally over the year.

At the same time as tariff charges have increased, the inclusion of flat-rate call charges, either for no extra charge (usually off-peak calls), or for an additional monthly cost (typically around £5/month for calls to other fixed lines at any time), have benefited consumers who make regular outgoing calls to other landline numbers. Consumers who primarily use their landline for incoming calls, and those who make more calls to mobiles are less likely to have benefited from the recent move towards flat-rate use and price increases.

We look at residential fixed telephony prices in more detail in section 5.1.6 above.

Figure 5.77 Fixed-line tariff analysis: 2010 and 2011

| Provider | 2010 | | | 2011 | | |
|--------------|------------------|---------------------------|--------------------------|---------------------|---------------------------|--------------------------|
| | Fixed phone only | with fixed calls off-peak | with fixed calls anytime | Fixed phone only | with fixed calls off-peak | with fixed calls anytime |
| BT | - | £11.54* | £16.54 | - | £13.60 ¹ | £18.60 |
| O2 | - | - | - | £7.66 | £9.70 | £12.77 ² |
| Orange | £10.25 | - | - | £11.50 | - | - |
| Sky | - | £11.00 | £16.00 | - | £11.25 | £16.25 |
| TalkTalk | £11.49 | £14.44 | £16.98 | £12.30 | £15.91 | £18.51 ³ |
| Virgin Media | £11.99 | £15.44 | £19.94 | £12.99 ⁴ | £16.99 ⁴ | £20.99 ^{3,4} |

Source: Pure Pricing UK Broadband Pricing Factbook, March 2010 and March 2011

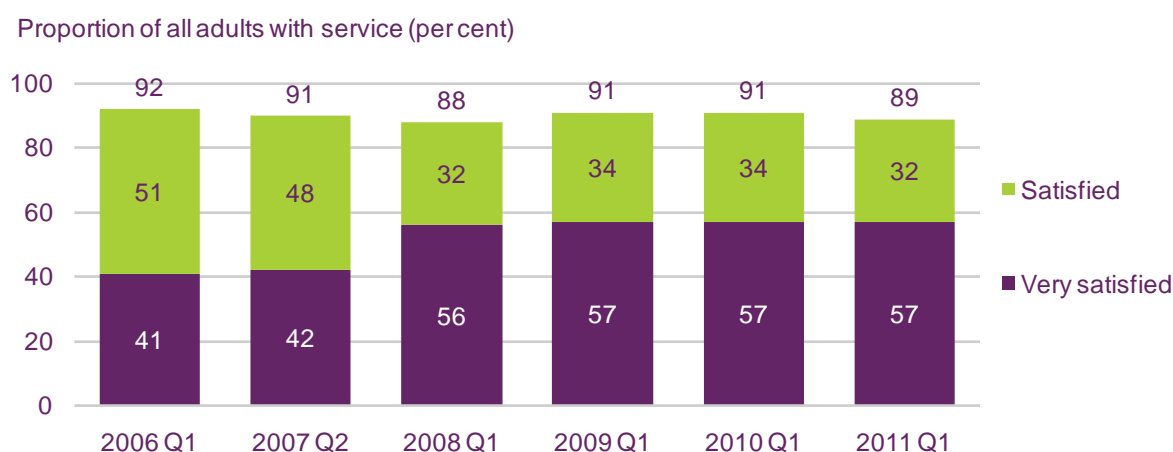
Notes: All tariffs exclude activation charges and promotional discounts and include VAT; all tariffs are the lowest price available, contract lengths vary. ¹Off-peak only applies to weekends ²Also includes 600 minutes to selected international destinations, + 600 minutes to 0845/0870 numbers (O2 only). ³ includes calls to TalkTalk/Virgin mobile numbers. ⁴ Set to increase by £1.00 on 1 August 2011.

Three in five consumers were very satisfied with their landline service in Q1 2011

Despite the rising cost of basic fixed-line tariffs, the proportion of consumers either satisfied or very satisfied with their fixed-line services remained high at 89% and fell only slightly in 2010 by two percentage points (Figure 5.78).

In line with the previous two years, the proportion of consumers who were very satisfied with the overall service remained flat, at just under three in five (57%), indicating that the majority of consumers continue to be very satisfied with the overall service being delivered by their fixed-line providers, and satisfied with the inclusion of more call minutes within their line rental packages.

Figure 5.78 Overall consumer satisfaction with residential fixed-line services



Source: Ofcom research

Base: All adults aged 15+ with a fixed-line phone

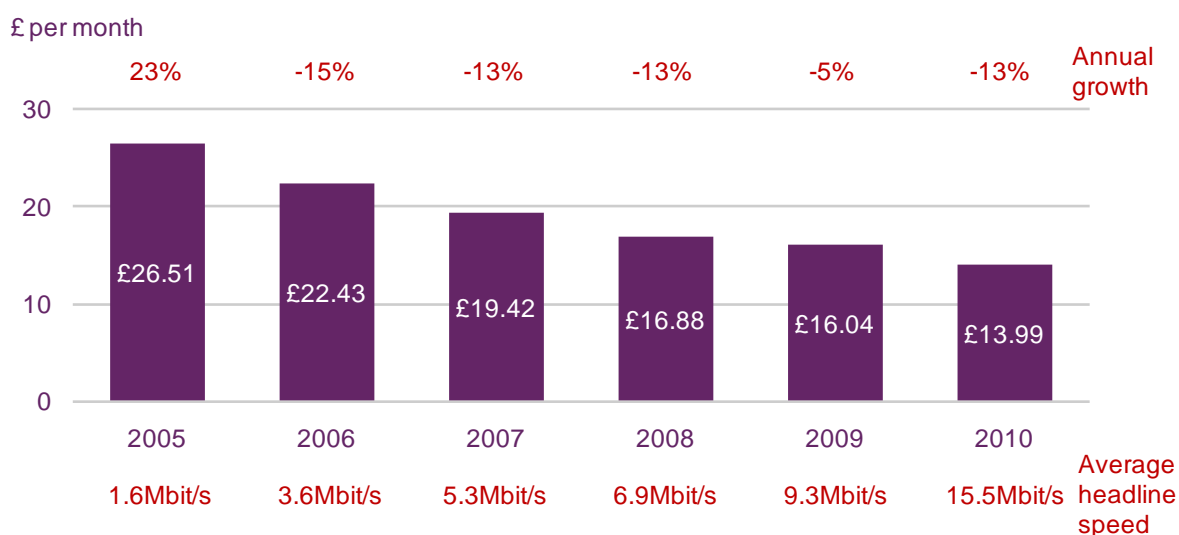
Note: Includes only those who expressed an opinion

Decline in the cost of fixed broadband connection accelerates in 2010

We calculate the average cost of a broadband connection from the total retail revenues and the total number of connections reported by operators. This finds that the average monthly cost of a residential fixed broadband connection fell by 13% to £13.99 in 2010 (Figure 5.79), representing a faster decline in the cost of fixed broadband than in 2009 (-5%) even though the average headline speed increased during the year. This suggests that there was significant price competition from providers during 2010; many broadband providers offer various forms of discounts on broadband connections including reduced or free monthly charges over the first few months of the contract, while discounts are generally offered when broadband is purchased in a 'bundle' with another service (note that these data include the revenues from bundled services that operators themselves attribute to broadband; typically this does not include any element of line rental, which is attributed to fixed voice). From September 2009, BT has been able to offer bundled broadband services, following deregulation by Ofcom.⁶⁶

Despite the average headline speed of a connection rising from 1.6Mbit/s to 15.5Mbit/s over the five-year period, the cost of a broadband connection in 2010 was nearly half the 2005 cost.

Figure 5.79 Estimated average monthly cost of a residential fixed broadband



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operator; includes VAT

Consumers have a wide range of fixed-broadband packages to choose from

Figure 5.80 summarises the lowest-cost broadband tariffs from a selection of the UK's largest ISPs, as at June 2011, including the cost when bundled with other communications services. Most UK consumers have a wide choice when deciding what broadband service to purchase alongside a fixed line (as is required with all providers except Virgin Media cable), with different broadband speeds available in addition to various TV packages and discounts on mobile tariffs.

Broadband speeds available on basic packages can vary from 'up to' 8Mbit/s or 10Mbit/s to higher speeds of 'up to' 20Mbit/s or 24Mbit/s (where available). Some ISPs also bundle in

⁶⁶ Ofcom Fixed Narrowband Retail Services Market Review:

http://stakeholders.ofcom.org.uk/binaries/consultations/retail_markets/statement/statement.pdf

inclusive call minutes when consumers purchase a broadband package (instead of including them in the landline rental) while several mobile providers (O2, Orange and Virgin Media) offer discounts to consumers when they purchase a mobile tariff alongside their broadband service.

Figure 5.80 Lowest-cost fixed broadband options from major suppliers, June 2011

| Provider | Broadband only | Broadband and fixed calls | Broadband and fixed line | Broadband and mobile | Broadband and pay-TV | Broadband, fixed line and mobile | Broadband, fixed line and pay-TV |
|--------------|---------------------|---------------------------|--------------------------|----------------------|----------------------|----------------------------------|----------------------------------|
| AOL | £15.31 ¹ | £10.20 ¹ | £19.09 | - | - | - | - |
| BSkyB | £15.00 ¹ | £15.00 ¹ | £21.25 | - | - | - | £30.75 |
| BT | £25.60 | £25.60 | £26.90 | - | - | - | £31.90 |
| O2 | £13.50 ¹ | - | £21.00 | £8.50 ^{1,2} | - | £16.00 ² | - |
| Orange Home | £15.00 ¹ | - | £24.00 | £10.00 ² | - | £19.00 ² | - |
| Plusnet | £6.49 ¹ | - | £18.48 | - | - | - | - |
| TalkTalk | £6.50 ¹ | - | £22.70 | £16.50- | -- | £29.10 | - |
| Virgin Media | £21.00 | - | £26.49 | £26.00 | £45.99 | £31.49 | £32.99 |

Source: Pure Pricing UK Broadband Pricing Factbook, June 2011

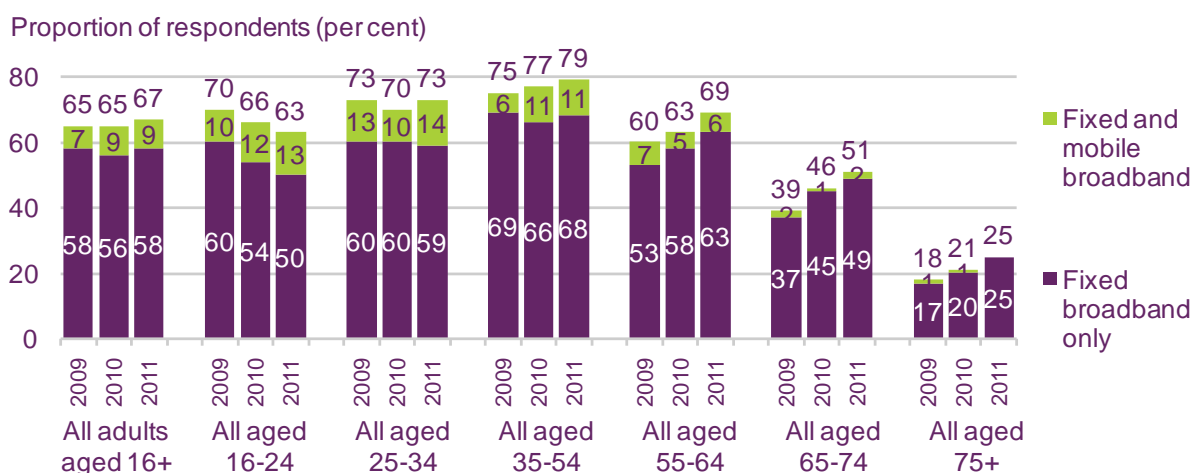
Notes: All tariffs exclude activation charges and promotional discounts and include VAT; all tariffs are the lowest price available, contract lengths vary; allowances for fixed-line and mobile calls, plus availability of TV channels included within packages may differ by operator and option; ¹Also requires BT fixed line rental at £13.90 a month; ² plus cost of mobile tariff.

Older age groups drive take-up of fixed broadband

Figure 5.81 shows that, overall, take-up of fixed broadband increased slightly to 67% in Q1 2011, due to an increase in fixed-broadband-only take-up, while the penetration of adults taking both fixed and mobile broadband services remained stable at 9% of all households.

Within the different age groups covered by our research there were differences in take-up of fixed-broadband services among the youngest and oldest age groups over the year to Q1 2011. Among older age groups there was a six percentage point rise among those aged 55–64 and a five percentage point increase among 65-74s. There was also an increase among over-75s, with one in four taking a fixed broadband connection in Q1 2011, compared to one in five in the previous year. The 16-24 year old age group was the only age group in which overall fixed broadband take-up declined (to 63%), largely driven by a fall in take-up of fixed broadband only (-4%). There is always a statistical error margin associated with consumer research, so we should treat an apparent seven percentage point fall in household broadband take-up among 16-24s with some caution, but it may be indicative that increasing numbers in this age group are relying on their mobile phone for internet connectivity.

Figure 5.81 Household take-up of fixed broadband, by age



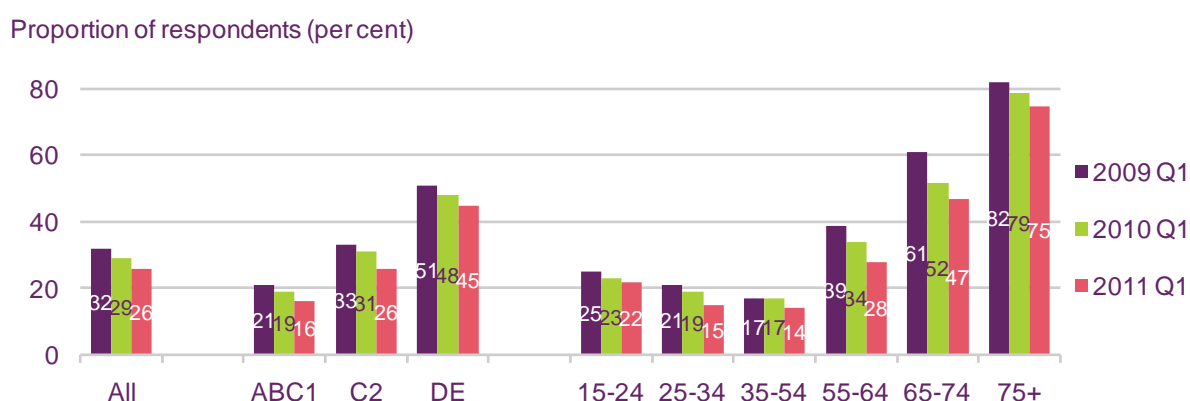
Source: Ofcom research, data as at Q1 of each year
Base: All adults aged 16+

Non-ownership of fixed-broadband remains high among older age groups

Non-ownership of fixed broadband varies considerably by socio-economic group and age (0). Among DE households, 45% did not have a fixed-broadband connection, down from just over half in Q1 2009; this compares to only one in six ABC1 households not having fixed broadband in Q1 2011.

The difference in take-up between age groups is even more marked. Only around one in seven of those aged 25-54 did not have broadband in their household in Q1 2011, compared to nearly half of 65-74 year-olds and three-quarters of those aged 75+. It is notable, however, that broadband take-up among older age groups has increased significantly in the past two years. More detail on broadband take-up and how it varies by demographic factors is included in Section 4.2.3 of this report.

Figure 5.82 Non-ownership of home broadband, by socio-economic group and age



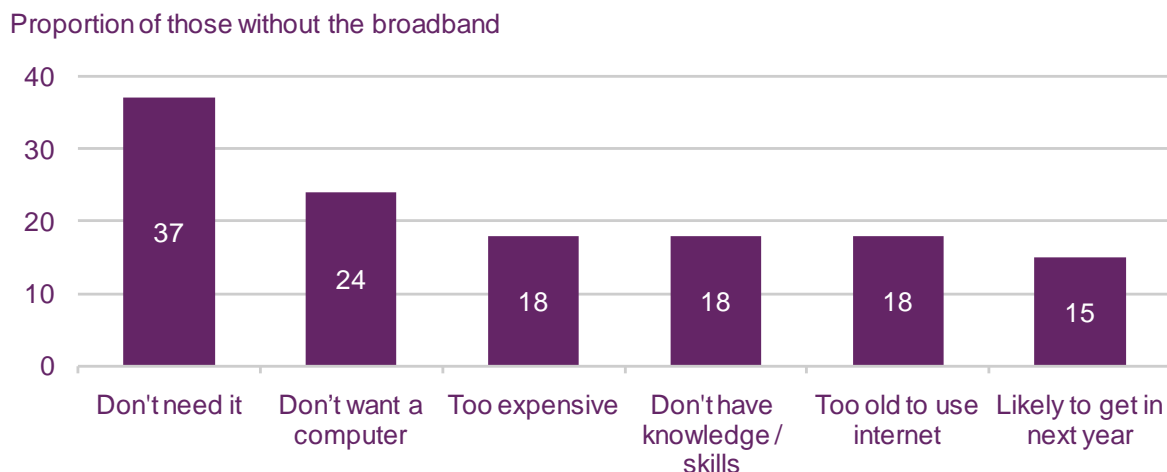
Source: Ofcom research, Q1 2011
Base: All adults 16+

Wide variety of reasons given for not accessing the internet

One in three of those without an internet connection stated that they did not need it, while nearly one in four believed that they were either ‘too old to use the internet’ or did not want a

computer (Figure 5.83). A significant majority (36%) stated involuntary reasons for not accessing the internet, with half of these saying that connecting to the internet is 'too expensive' while the remainder believed they did not have the necessary knowledge or skills. Nearly one in seven (15%) signalled their intention to connect to the internet in the next year.

Figure 5.83 Main reasons for not taking up the internet



Source: Ofcom research

Note: 6% of people without the internet did not know what their main reason was or provided an 'other' reason

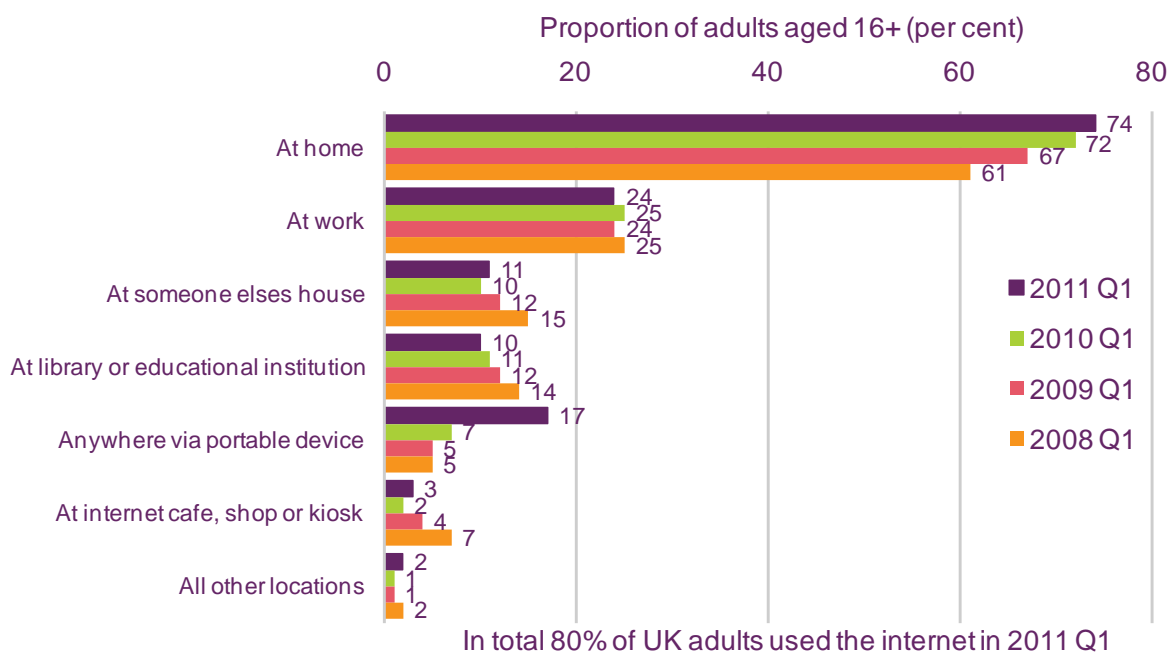
Base: All adults without the internet aged 16+ (n=920)

Most access the internet at home while nearly one in five use a portable device

Nearly three-quarters of adults (74%) accessed the internet while at home in Q1 2011, compared to 61% in the same quarter in 2008 (Figure 5.84). Accessing the internet at work has remained static over the last four years at one in four, while the proportion using an internet connection in a library, educational institution or at someone else's house has declined since 2008, as more people access the internet in the home.

Those accessing the internet via a portable device reached 17% in Q1 2011, a ten percentage point increase on the year before. This large increase in internet connectivity via portable devices is likely to be the result of the increasing penetration of smartphones as well as other portable data-centric devices such as tablets and e-readers (the use of smartphones is detailed in Section 0 of this report, and the use of other devices in Section 4.2.2).

Figure 5.84 Location of internet access

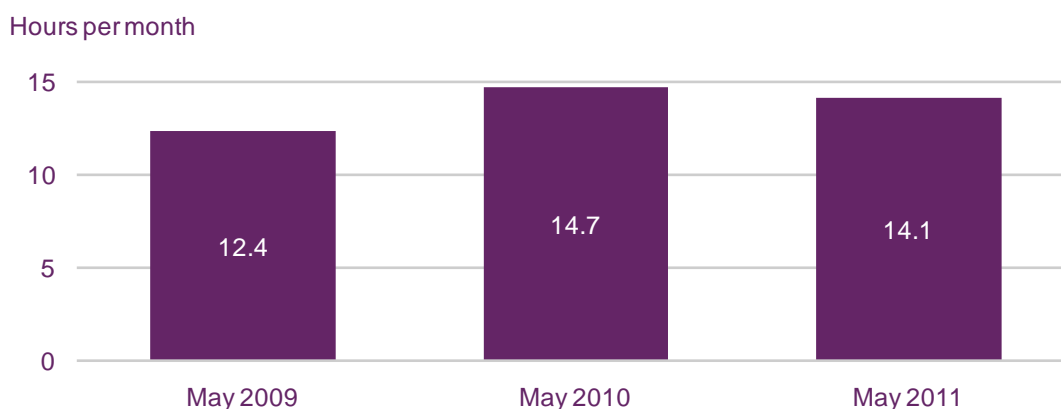


Source: Ofcom research
Base: All internet users aged 16

Time spent on fixed internet is event-driven

Figure 5.85 below shows the average number of hours spent per person on internet access via a fixed PC in the month of May, from 2009 to 2011. As has already been shown in Figure 1.6, use has generally increased over a five-year period and reached a peak of 14.7 hours in 2010; however, in May 2011 time spent was 4% less, at 14.1 hours. This is largely explained by several factors driving particularly high use of internet services in May 2010, notably the General Election and also the build-up to the football World Cup, rather than indicating a general decline in use in 2011. More detail on time spent online is available in 4.2.4 of this report.

Figure 5.85 Average fixed PC/internet time online at home, per person



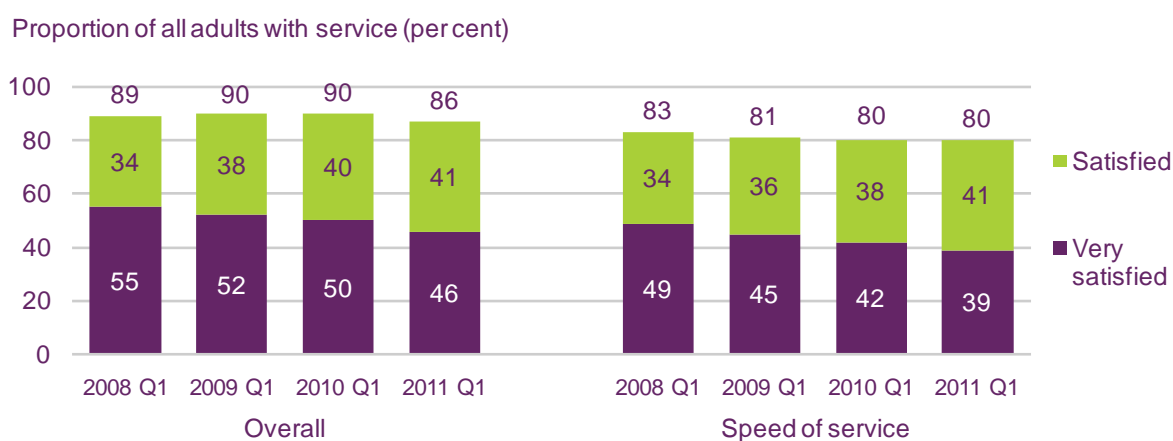
Source: Ofcom / Nielsen / UKOM
Note: Ofcom estimate of fixed internet use per person is based on Nielsen data on the average monthly time spent online at home including the use of applications across the online population only; data are for May of each year

Satisfaction with overall fixed-broadband service falls during 2010

Overall satisfaction with fixed-broadband services, although high at 86% in Q1 2011, fell by four percentage points over the year, while satisfaction with the speed of fixed-broadband services remained unchanged in 2010 at 80%, slightly below the 83% reported satisfaction in 2008 (Figure 5.86). This fall in satisfaction comes in the context of increasing average broadband speeds⁶⁷, so it may be the consequence of changing consumer expectations, or consumers increasingly using services such as video streaming which benefit from a higher speed connection.

Less than half of respondents in Q1 2011 were 'very satisfied' with the overall service and speed of their broadband connection, with both measurements registering a decline each year since 2008. The largest fall is related to speed, down ten percentage points over the four-year period to 39% in Q1 2011.

Figure 5.86 Residential consumer satisfaction with aspects of fixed-broadband services



Source: Ofcom research

Base: All adults aged 16+ with a fixed broadband connection

Note: Includes only those who expressed an opinion

5.3.4 Mobile services (including mobile broadband)

Cost of mobile services continues to decline

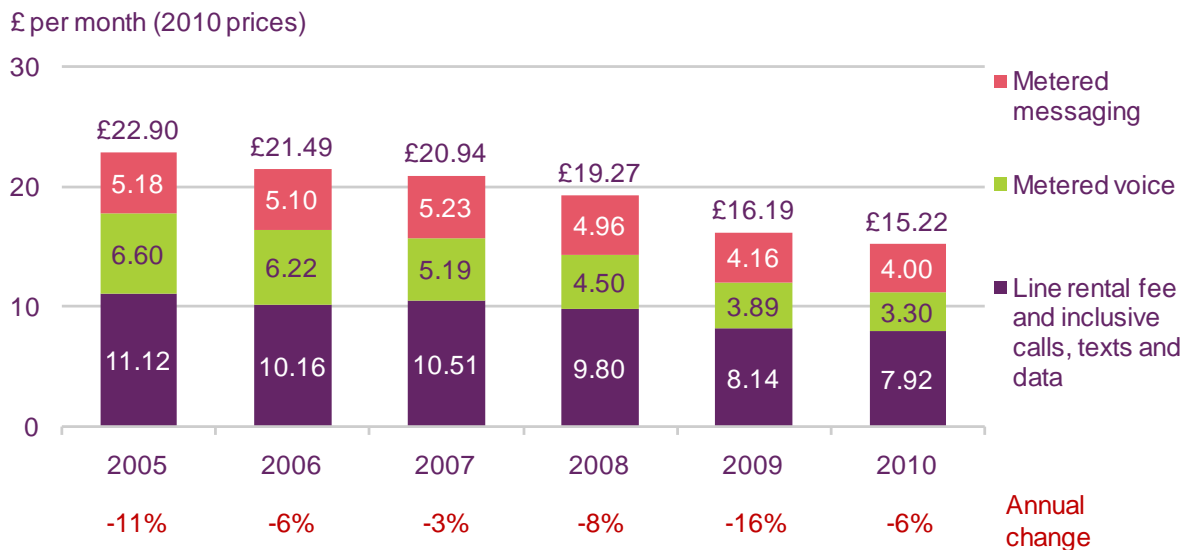
The cost of a basket of mobile services fell again in 2010, by 6% to £15.22, although the rate of decline slowed compared to 2008 and 2009 (Figure 5.87). The largest fall in mobile spend was on metered voice, down 15% to £3.30 over the year, while spend on texts outside any bundled services declined by 6% over the period. It is notable that this fall came despite increasing use of the both voice (up 5%) and texts (up 24%) (see Figure 5.51 and Figure 5.53 above), so is likely to be driven by increasing numbers of inclusive voice minutes and texts being used within pay-monthly contracts, with the proportion of mobile connections on pay-monthly contracts (rather than pay-as-you-go) increasing from 41% at the end of 2009 to 49% at the end of 2011 (see Figure 5.16 above).

Spend on line rental and bundles (voice calls, text and mobile data), which accounted for approximately half of total spend in 2010, fell by just 3% in 2010. This is significantly less

⁶⁷ See Ofcom's research into broadband speeds, <http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/broadband-speeds/>

than the 17% fall during 2009, again indicative of the migration of customers from pay-as-you-go to pay-monthly subscriptions.

Figure 5.87 Real cost of a basket of mobile services



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; excludes non-geographic voice calls; adjusted for RPI; includes VAT

Cost of per minute on pre-pay and contract continues to fall

The average cost per voice minute on a contract and pre-pay tariff fell to 8.9p and 7.3p respectively in 2010; however, the difference in the cost per minute for each customer type widened by 0.2p to 1.6p in 2010. This can be explained by the accelerated decline in pre-pay charges in 2010, down by 8% or 0.6 pence over the year (Figure 5.88).

However, these costs should be treated with caution; it is likely that the cost per minute for contract calls is overstated as it includes the monthly rental fee. This means that, in addition to voice calls, other inclusive services such as text messages and/or data use are included within the calculation for price per minute. In addition, many pay-monthly contracts also include a free or discounted handset, with the cost of the handset factored into the monthly payments – so the price per minute will include some payment for handsets.

Figure 5.88 Average mobile cost per mobile voice minute, by customer type



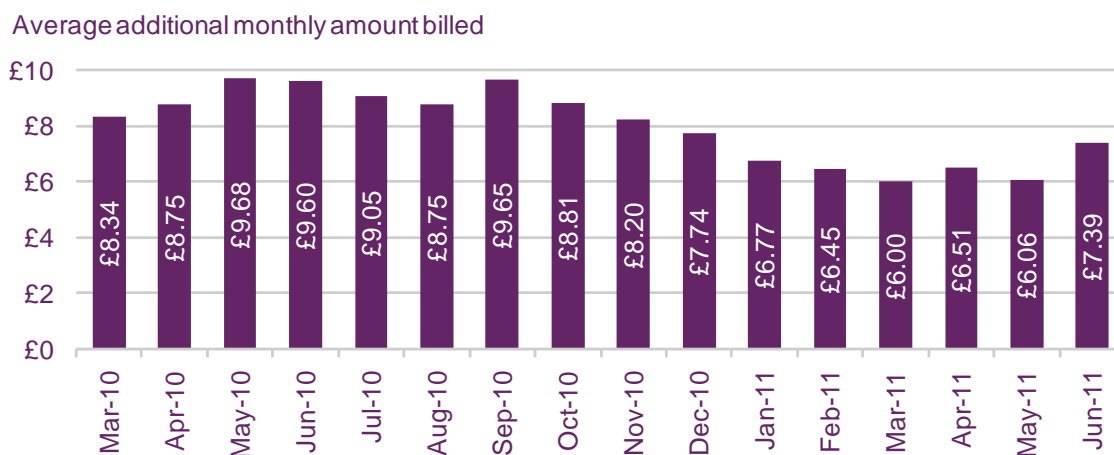
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; contract calculation includes rental element which will often include a number of inclusive messages and data allowance; calculations use actual minutes of use

Pay-monthly mobile users spend an average of around £6 to £10 a month in addition to their monthly fee

In Q1 2011, the majority (51%) of new pay-monthly contracts had a fee of less than £25 a month (see Figure 5.17 above). However, in addition to monthly fees users pay for calls, messaging and data services that are not included in their monthly allowance. Figure 5.89 is compiled from data collected by price comparison service billmonitor and is based on between 3,000 and 10,000 bills submitted by mobile customers every month. It indicates that, on average, mobile users were billed between about £6 and £10 a month in addition to their contractual monthly fee – and there are some indications that this has been falling since Q3 2010. These out-of-allowance charges represent on average about 20-30% of average mobile bills (data supplied to Ofcom from the mobile operators show that average revenue per contract subscription was £25.29 in 2010 – see Figure 5.50 above - which equates to an average bill of around £30 once VAT is added).

Figure 5.89 Average out-of-allowance costs billed to pay-monthly customers



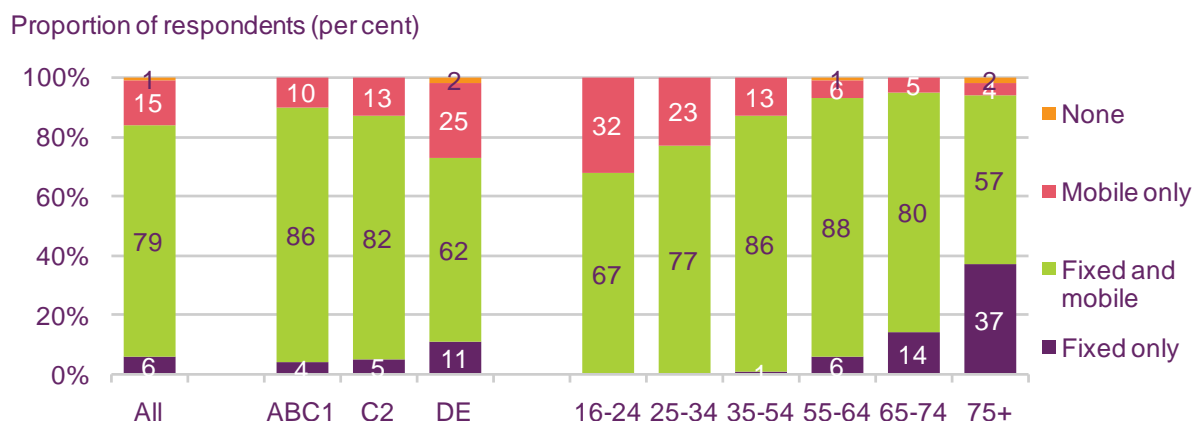
Source: billmonitor

One in three 16 to 24 year-old households were mobile-only in Q1 2011

In Q1 2011 15% of UK households relied solely on mobile for their communications needs, up slightly from 14% in Q1 2010 (Figure 5.90). Within the different socio-economic and age groups there is wide variation in the proportion of mobile-only households, with those in the DE socio-economic group and younger respondents most likely to solely use mobile telephony. According to our research, one in four DE households (25%) and nearly one-third of 16-24 year-olds (32%) were mobile-only in Q1 2011, compared to 10% of ABC1 households and just 5% of 65-74 year-olds.

Most households (79%) had both fixed and mobile telephony connections in Q1 2011, with the highest proportion of ownership of both services among ABC1 households (86%) and those aged 55-64 (88%). Our research shows there is also a strong correlation between age and fixed-only households for voice telephony, with over one-third of over-75s using only a landline; in contrast, less than 1% of households with 16-35 year-olds had no mobile connection.

Figure 5.90 Household penetration of fixed and mobile telephony, by socio-economic group and age



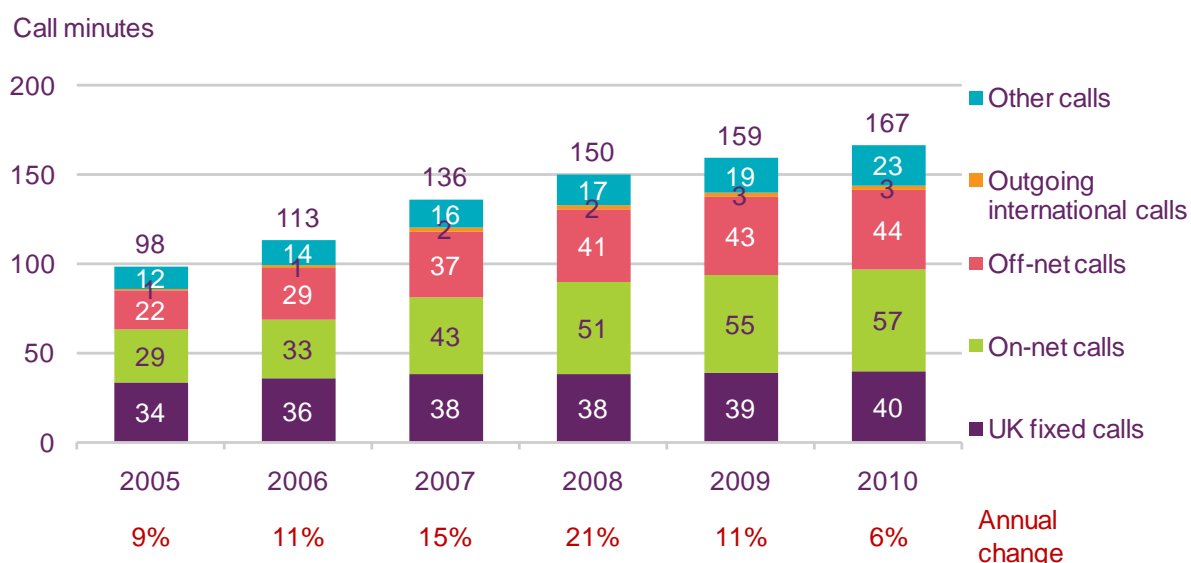
Source: Ofcom research
Base: All adults aged 16+

Monthly mobile call volumes per person rise to 167 minutes in 2010

The average person in the UK made over 70% more outgoing mobile call minutes in 2010 than in 2005, although growth has slowed in recent years (Figure 5.91). In 2010 people in the UK made an average of 167 minutes of outgoing mobile calls per month, a 5% increase compared to 2009 (growth was 11% in 2009 and 21% in 2008).

Mobile-to-mobile call volumes per person rose by three minutes to 101 minutes during 2010, representing 61% of total use. On-net call volumes continued to account for the largest proportion of both mobile-to-mobile calls (56%) and overall call volumes (34%). Outgoing international call minutes remained flat in 2010 at just three minutes per month, compared to an average of ten minutes a month per fixed-line connection, as landlines remain the most popular way of making international calls (see Figure 5.76 above).

Figure 5.91 Average monthly outbound mobile voice call volumes per person



Source: Ofcom / operators

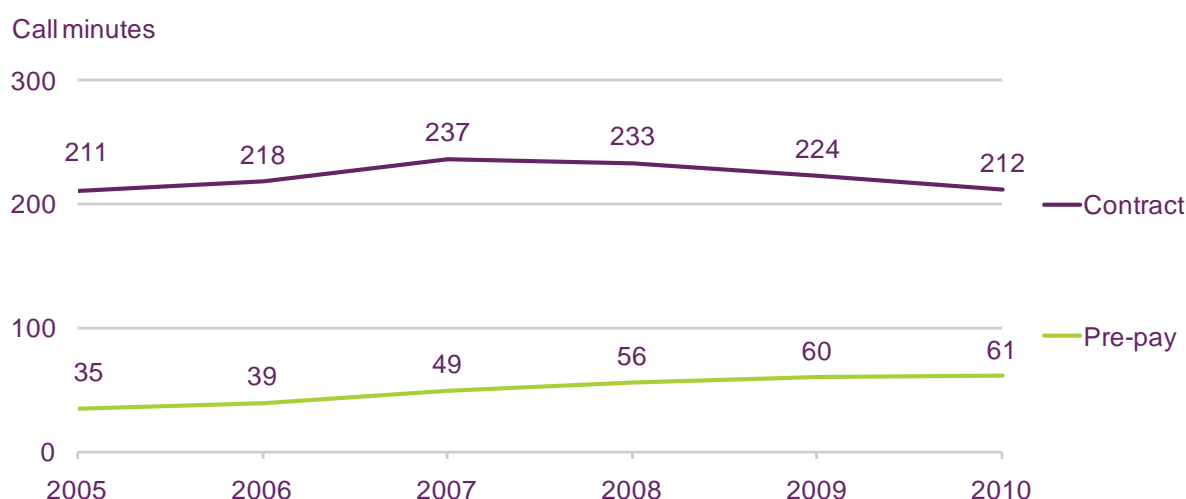
Note: Includes estimates where Ofcom does not receive data from operators; excludes 3UK; calculation excludes mobile broadband connections

Call minutes per contract connection in 2010 fall back to 2005 levels

The average number of call minutes per contract connection fell by 5% to 212 in 2010, while pre-pay call volumes remained relatively static, up by one minute to 61 minutes per month (Figure 5.92). A contract connection, on average, generated over three times as many voice call minutes as a pre-pay connection in 2010; this compares with over six times the number of call minutes in 2005, when monthly contract call volumes amounted to 212 minutes compared to just 35 minutes on pre-pay.

Call volumes per contract connection have been in decline since 2007, but this reflects a change in the proportion of users on contract tariffs (see Figure 5.16 above), rather than a fall in overall contract minutes. Lower-volume voice users are now moving to pay-monthly contracts, attracted by low-cost tariffs (often SIM-only) which typically include a relatively small number of inclusive minutes and unlimited text messages, while the rising popularity of smartphones (see Section 0) means that consumers whose primary use of a phone may be for data services are taking up pay-monthly tariffs which include a handset and a monthly data allowance.

Figure 5.92 Average monthly outbound mobile call minutes, by subscription type



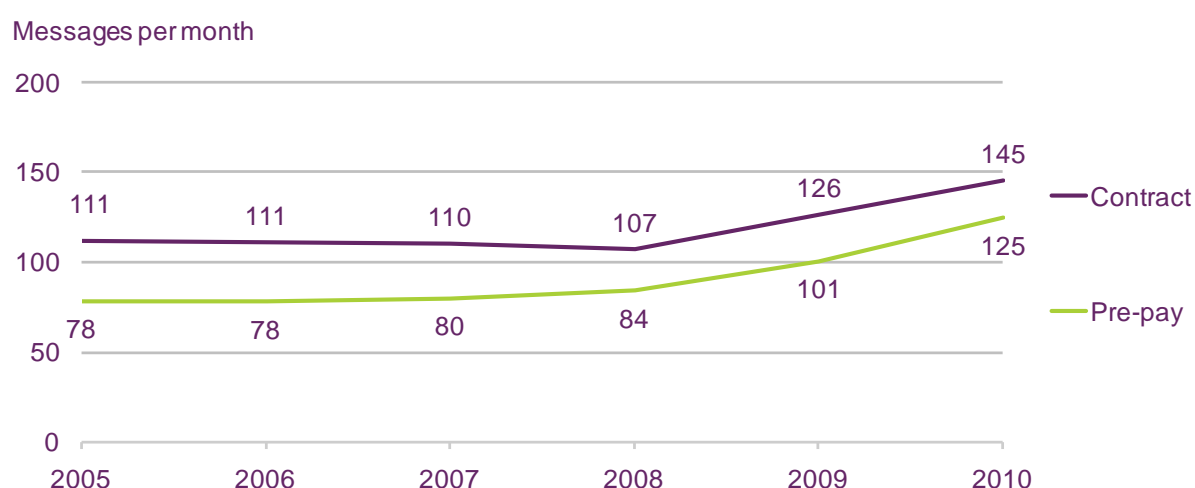
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators; excludes 3UK; calculation excludes mobile broadband connections

Strong increase in messaging volumes per connection in 2010

Our analysis of the number of SMS and MMS messages sent per connection type shows an upturn in volumes from 2008 onwards after several years of stability (Figure 5.93). The average number of texts sent by a pre-pay user over a month increased by nearly half (49%) since 2008 to 125 messages, and by 36% on contract connections to 145 messages over the same period. This growth is likely to be linked to the inclusion of more text messages within both pre-pay and pay-monthly tariffs (with many contract tariffs, including £10-a-month SIM-only tariffs, including unlimited text messages), in addition to text messaging becoming increasingly easy to use on smartphones that include keyboards and present text messages in the form of a ‘conversation’, almost equivalent to instant messaging interfaces.

Figure 5.93 Average monthly messaging volumes, by connection type



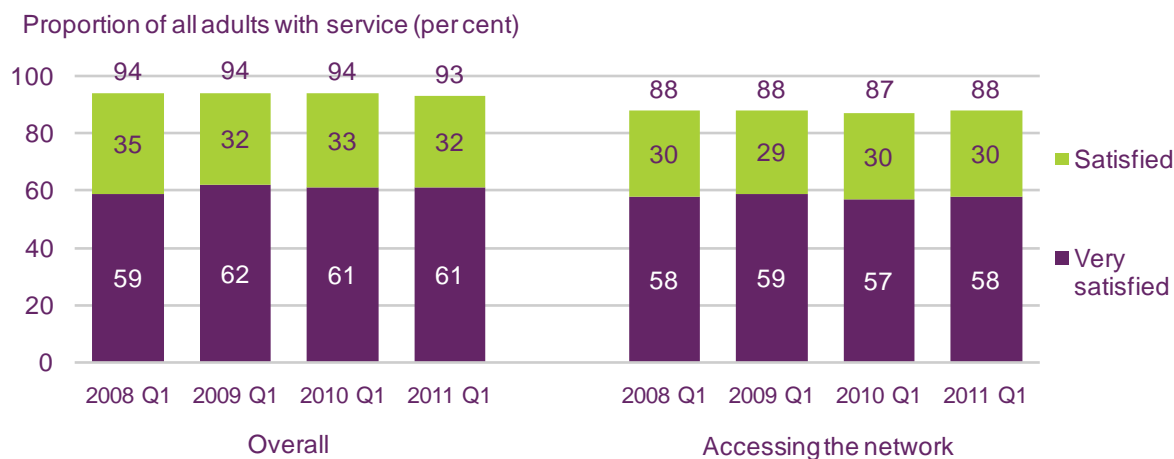
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators.

Satisfaction with overall mobile phone services remains stable at 93% in Q1 2011

Levels of satisfaction with mobile phone services were unchanged in the year to Q1 2011 (Figure 5.94). Overall satisfaction with mobile services remained stable, with 93% of respondents either very satisfied or satisfied; as with previous years three in five respondents were very satisfied with the overall service. Satisfaction with being able to access the network was slightly lower than overall satisfaction levels, at 88%, with 58% saying they were very satisfied and 30% satisfied.

Figure 5.94 Residential consumer satisfaction with aspects of mobile service



Source: Ofcom research

Base: All adults aged 16+ with a mobile phone

Note: Includes only those who expressed an opinion

Nearly one-third of younger people use mobile broadband

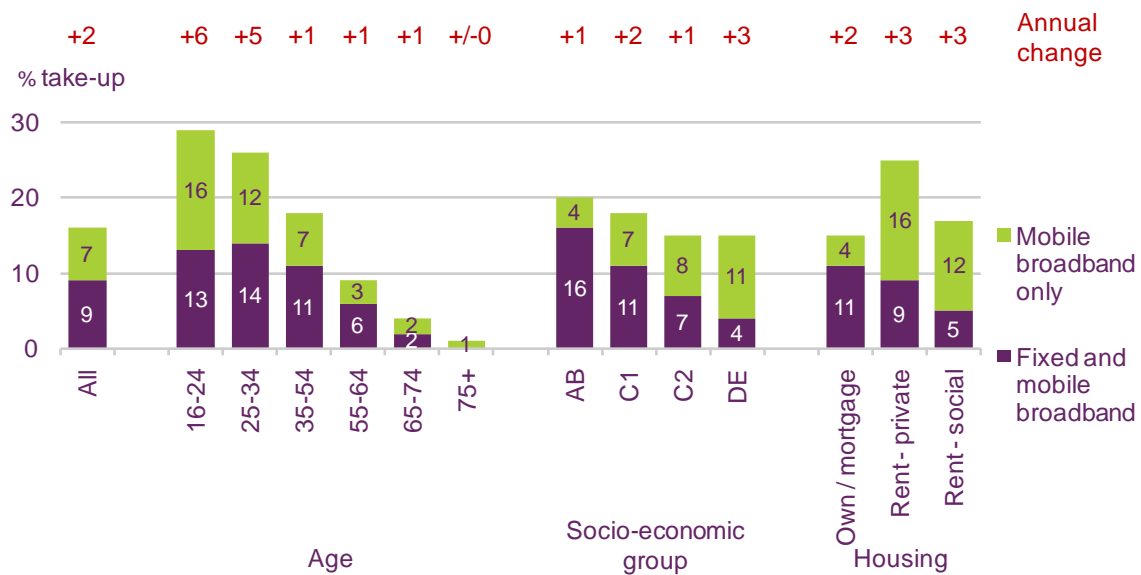
Figure 5.95 below shows the proportion of households that had a mobile broadband connection using a dongle or PC datacard in Q1 2011 and how these break down by socio-economic group, age and type of housing. It shows that, overall, 16% of households had a mobile broadband connection, with the majority of these (9% of all households) having it in addition to a fixed-line broadband connection. Seven per cent of households have a mobile broadband connection as their only PC-based broadband connection.

Take-up of mobile broadband was highest among younger age groups, with nearly a third (29%) of 16 to 24 year-olds using mobile broadband, and more than half of these relying solely on mobile broadband. Pre-pay and monthly mobile broadband contracts are particularly suited to those living in short-term accommodation for which longer-term 12 or 18 month fixed-broadband contracts may not be viable options. People living in rented private accommodation are therefore more likely to have mobile broadband (24%) with 16% of such households only using mobile broadband; this compares with only 15% of owned or mortgaged households having a broadband connection, and only 4% using mobile broadband only. This reflects how mobile broadband is typically a personal purchase, whereas fixed-line broadband (which uses the fixed voice line and is usually purchased in association with voice services and sometimes also with television services) is typically a household purchase.

Overall household take-up of mobile broadband increased by just 2% in 2010; this follows three years of initially strong growth since the services launched in 2007. Among over-35s and AB households, take-up was largely flat while there was increased take-up among younger age groups, DE households, and those living in rented accommodation. This

slowdown in take-up of PC-based mobile broadband may reflect that some users consider internet access on their phone to be sufficient for their mobile internet needs.

Figure 5.95 Take-up of mobile broadband, by socio-economic group: Q1 2011



Source: Ofcom research, Q1 2011

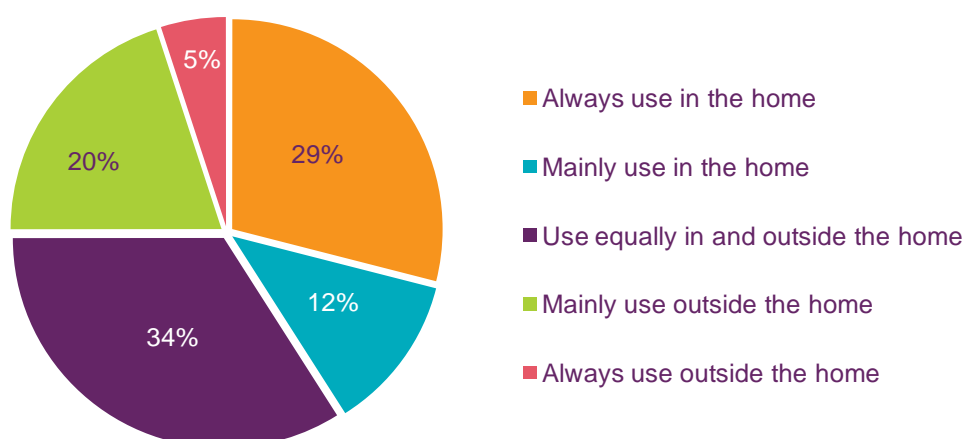
Note: Sum of 'All' does not total 17% due to rounding issues.

Base: All adults aged 16+ (n=3474)

Most consumers are more likely to use their mobile broadband service within the home than outside

A key benefit of mobile broadband is that it enables users while 'out and about' to connect to the internet at any location where there is 3G network coverage. However, while one in four mobile broadband users (25%), 'mainly use' or 'always use' the service while outside the home, a greater proportion (41%) claimed to either 'mainly use' or 'always use' mobile broadband while in the home (Figure 5.96). The reasons for consumers' use of mobile broadband in the home are likely to be factors other than mobility, including being a mobile broadband-only household due to shorter contract lengths or perceived lower costs, lack of access to a fixed connection, or the greater convenience of laptop-based mobile broadband compared to fixed broadband. Two-thirds of mobile broadband users (64%) say they use mobile broadband both in and out of the home, with a third (34%) saying that they use it equally inside and outside the home.

Figure 5.96 Location of those using mobile broadband to access the internet



Source: Ofcom research, Q1 2011
Base: All adults aged 16+ (n=750)

More than half of under-35s access the internet on their mobile phone

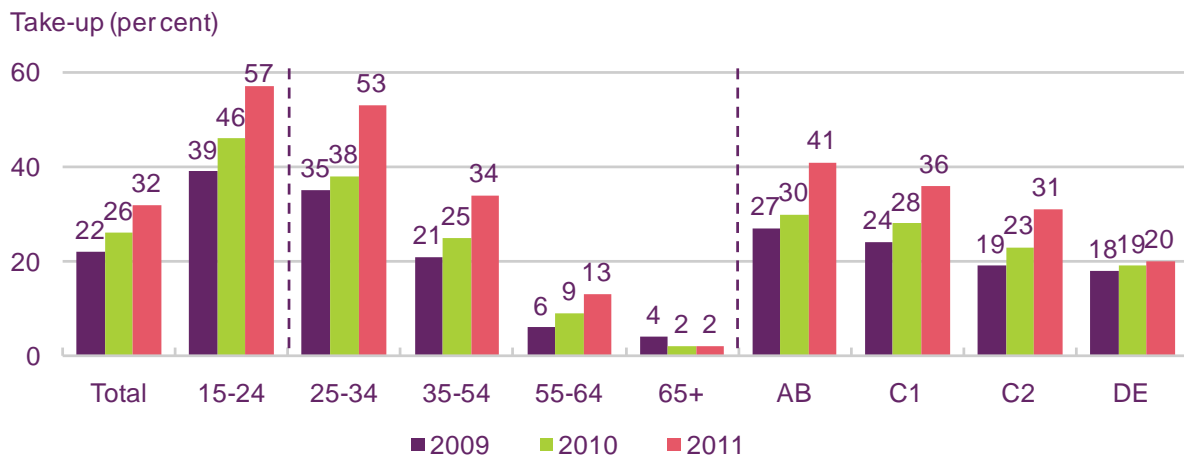
Figure 5.97 shows the proportion of mobile users who accessed the internet on their mobile phone, split by age and socio-economic group. It shows that mobile internet use increased from 22% in Q1 2009 to 32% in Q1 2011 and that over half of 15-34s and a third (34%) of 35-54 year-olds had used their mobile handset to access the internet. In line with take-up of mobile services (see Figure 5.97), older age groups were less likely to use mobile phones to access the internet, with only one in eight 55-64s and one in 50 over-65s accessing the internet in this way.

Our research indicates a two percentage point increase in the proportion of people in the DE socio-economic group accessing the internet on mobile phones between Q1 2010 and Q1 2011 (up to 20%), but a 14 percentage point increase among AB households over the same period, to 41%. This suggests that those within DE households are less likely to access the internet from their mobile phone; this is likely to be because a significant proportion of this group are over 65 and therefore less likely to use mobile services. In addition this group comprises lower-income households with less disposable income to spend on mobile internet access, whether smartphones or mobile data tariff plans.

More detail on take-up and use of the internet on mobile phones is provided in Section 4.1.2 of this report.

Figure 5.97 Use of the internet on mobile phones, by age and socio-economic group

QD28A: Which if any, of the following activities, other than making and receiving voice calls, do you use your mobile for?



Source: Ofcom technology tracker, Q1 2011

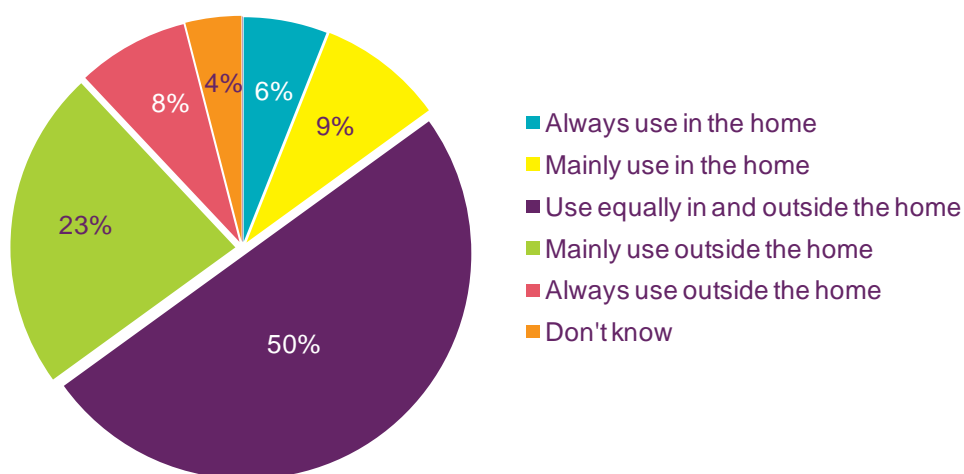
Base: All adults 16+ (n = 3474 UK, 460 16-24, 540 25-34, 1204 35-54, 535 55-64, 735 65+, 784 AB, 1014 C1, 701 C2, 975 DE, 1679 male, 1795 female)

Note: Web/data access includes accessing the internet, downloading and streaming content, connecting using WiFi and using VoIP.

Nearly two-thirds use mobile internet access at home

Over 80% of those that access the internet on their mobile device have done so outside the home at some point and nearly one-third (31%) ‘mainly’ or ‘always’ use the mobile internet outside the home (Figure 5.98). The largest proportion (50%) said they used the service equally inside and outside the home. Interestingly, nearly two-thirds claim to access the mobile internet at home, with one in seven ‘mainly’ or ‘always’ using their mobile device at this location. It should be noted that this research includes users accessing the internet from their mobile device over a WiFi connection, which may partly explain the use of mobile devices within the home.

Figure 5.98 Location of internet access using a mobile device



Source: Ofcom research, Q1 2011

Base: All adults aged 16+ (n=471)

Operators target low-use consumers with new mobile broadband tariffs

A summary of the lowest-cost mobile broadband tariffs from mobile providers is shown in Figure 5.99 below. This shows that over the past year Vodafone, O2 and Orange have launched tariffs at lower price points but with less inclusive data, while T-Mobile has reduced its price and its fair-use policy (customers who exceed this limit can still use some services such as email and web browsing, but services such as file downloading and streaming services may be restricted). See Section 5.1.5 for more information on mobile data use. Overall, this indicates a gradual migration towards usage-based charging, which is prompted by the need to manage capacity as mobile data use increases (see Section 5.1.5 above), but may also increase revenue by developing a price-based segmentation between light and heavy users.

Along with O2, which includes unlimited access to its network of WiFi 'hotspots' as part of its mobile broadband tariffs, Vodafone has begun to include monthly WiFi allowances in some of its mobile broadband offers, with 1GB of WiFi access now included within the lowest-priced plan.

Figure 5.99 Lowest-cost stand-alone mobile broadband contracts, by provider

| Provider | | Monthly charge | Data allowance | Minimum contract length | Charges above allowance | WiFi hotspot use |
|---------------|------|----------------|----------------|-------------------------|---|------------------|
| Vodafone | 2009 | £14.68 | 1GB | 1 month | £7.50 / 500MB | Not included |
| | 2010 | £15.00 | 3GB | 1 month | £15.00 / GB | Not included |
| | 2011 | £7.50 | 500MB | 1 month | £15.00 / GB | 1GB |
| O2 | 2009 | £14.69 | 3GB | 1 month | 19.6p / MB | Unlimited |
| | 2010 | £10.00 | 1GB | 1 month | 2.4p / MB | Unlimited |
| | 2011 | £5.11 | 500MB | 1 month | Bundles available e.g. £5.11 / 500MB | Unlimited |
| T-Mobile | 2009 | £14.68 | 3GB fair use | 18 months | n/a | Unlimited |
| | 2010 | £15.00 | 3GB fair use | 18 months | n/a | Unlimited |
| | 2011 | £10.00 | 1GB fair use | 18 months | n/a | Not included |
| Orange | 2009 | £9.79 | 1GB | 18 months | 1.43p / MB | Not included |
| | 2010 | £10.00 | 1.5GB | 18 months | 2p / MB | Not included |
| | 2011 | £10.00 | 500MB | 1 month | Bundles available e.g. £5.00 / 500MB | Not included |
| 3UK | 2009 | £9.79 | 1GB | 12 months | 10p / MB | Not included |
| | 2010 | £7.50 | 1GB | 18 months | 10p / MB | Not included |
| | 2011 | £7.89 | 1GB | 18 months | 10p / MB | Not included |
| Virgin Mobile | 2009 | £14.68 | 3GB | 18 months | £14.68 / GB | Not included |
| | 2010 | £10.00 | 1GB | 2 months | £15 / GB | Not included |
| | 2011 | £10.21 | 1GB | 2 months | £15 / GB | Not included |

Source: Pure Pricing

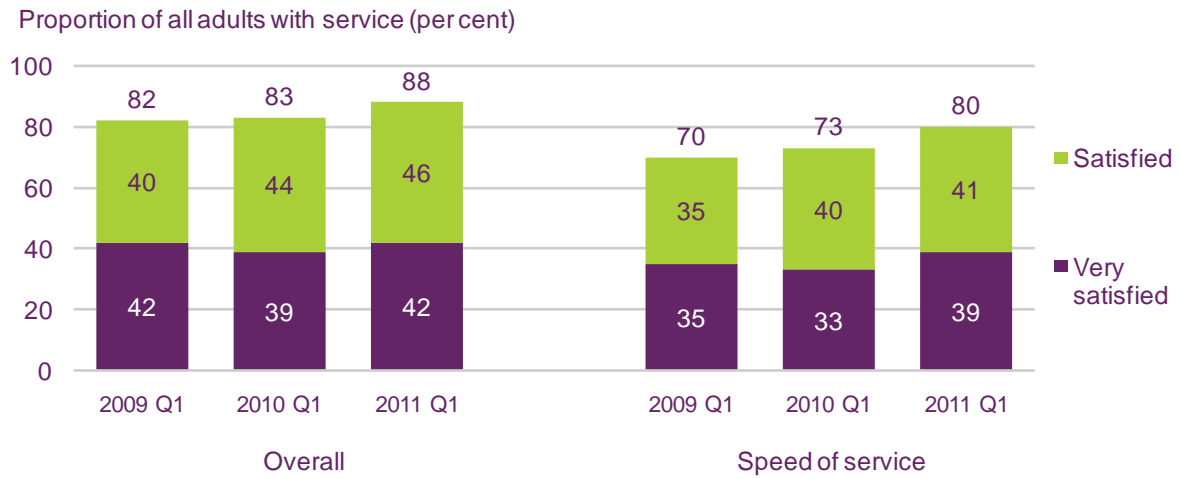
Note: Data as at March of each year.

Almost nine in ten consumers satisfied with mobile broadband service

Levels of satisfaction with mobile broadband services have risen since 2009, with a significant rise in satisfaction with the speed of the service in the year to Q1 2011, up by seven percentage points to 80% (Figure 5.100). This may be a result of improvements in the

quality of service delivered to consumers, but may also reflect greater consumer awareness of the type of services suited to mobile broadband, and more realistic expectations of the levels of speed the service can deliver.

Figure 5.100 Residential consumer satisfaction with aspects of mobile broadband



Source: Ofcom research

Base: All adults aged 16+ with a mobile broadband connection

Note: Includes only those who expressed an opinion



The Communications Market 2011

Glossary

Glossary

2G Second generation of mobile telephony systems. Uses digital transmission to support voice, low-speed data communications, and short messaging services.

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.

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.

3.5G Refers to evolutionary upgrades to 3G services, starting in 2005-2006, that provide significantly enhanced performance. High Speed Downlink Packet Access is expected to become the most popular 3.5G technology (see HSDPA).

3G LTE See LTE

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).

802.11 see Wireless LANs (WiFi)

Access network An electronic communications network which connects end-users to a service provider; running from the end-user's premises to a local access node and supporting the provision of access-based services. It is sometimes referred to as the 'local loop' or 'last mile'.

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/

ADS-RSLs Audio distribution systems restricted service licences. These licences are issued for broadcast radio services using spectrum outside the 'traditional' broadcast bands (i.e. FM and AM). Typically offering commentary and other information for attendees within a stadium or venue on specially-designed radio receivers for sale at the event (as they do not use standard broadcast frequencies).

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)). The term AM is also used to refer to the medium frequency band (see MF, below).

ARPU Average revenue per user. A measurement used by pay-television or mobile companies to indicate the average monthly revenue earned from a subscriber.

ATT Analogue terrestrial television. The television broadcast standard that all television industries launched with. Most countries in this study are planning to phase out ATT in the next ten years.

BARB Broadcasters Audience Research Board. The pan-industry body that measures television viewing.

Bit-rates The rate at which digital information is carried within a specified communication channel.

BitTorrent A peer-to-peer file sharing protocol which uses 'trackers' on websites to index content and is used by a number of BitTorrent clients to download and upload content.

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.

Bluetooth Wireless standard for short-range radio communications between a variety of devices such as PCs, headsets, printers, mobile phones, and PDAs.

Broadband A service or connection generally defined as being 'always on' and providing a bandwidth greater than narrowband.

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 $CAGR = (\text{present value}/\text{base value})^{(1/\#\text{of years})} - 1$

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.

Communications Act Communications Act 2003, which came into force in July 2003.

'Connected' TV A television that is broadband-enabled to allow viewers to access internet content.

Contention ratio An indication of the number of customers who share the capacity available in an ISP's broadband network. Figures of 50:1 for residential broadband connections and 20:1 for business are typical).

CPS Carrier pre-selection. The facility offered to customers which allows them to opt for certain defined classes of call to be carried by an operator, selected in advance and with whom they have a contract. CPS does not require the customer to dial a routing prefix or use a dialler box.

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.

Data packet In networking, the smallest unit of information transmitted as a discrete entity from one node on the network to another.

DCMS Department for Culture, Media and Sport

Digital Britain The government report, published in June 2009, outlining a 'strategic vision for ensuring that the UK is at the leading edge of the global digital economy'.

Digital switchover The process of switching over the analogue television or radio broadcasting system to digital.

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).

DRM Digital rights management. The technology that controls access and use of digital content.

Dongle A physical device, attached to a PC's USB port, which adds hardware capabilities.

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, HDSL (high data rate digital subscriber line) and VDSL (very high data rate digital subscriber line) are all variants of xDSL).

DTR See DVR

DTT Digital terrestrial television. The television technology that carries the Freeview service.

DVB Digital Video Broadcasting. A set of internationally-accepted open standards for digital broadcasting, including standards for distribution by satellite, cable, radio and hand-held devices (the latter known as DVB-H). The DVB Project develops the standards.

DVB-T2. The latest digital terrestrial transmission technology developed by DVB. The technology is being used to facilitate the introduction of HDTV on DTT in the UK. DVB-S2 (satellite) and DVB-C2 (cable) are also available.

DVD Digital versatile disc. A high-capacity CD-size disc for carrying audio-visual content. Initially available as read-only, but recordable formats are now available.

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.

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.

Fibre-to-the-building A form of fibre-optic communication delivery in which an optical fibre is run directly onto the customer's premises.

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.

Format The type of programme service broadcast by radio stations. Also, the part of a radio station's licence which describes the programme service.

Free-to-air Broadcast content that people can watch or listen to without having to pay a subscription.

GDP Gross Domestic Product.

GPRS General packet radio service, a packet data service provided over 2.5G mobile networks.

GPS The GPS (global positioning system) is a 'constellation' of 24 well-spaced satellites that orbit the Earth and make it possible for people with ground receivers to pinpoint their geographic location.

GSM Global standard for mobile telephony, the standard used for 2G mobile systems.

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.

HSPA Jointly, downlink and uplink mobile broadband technologies are referred to as HSPA (High Speed Packet Access) services.

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.

IDTV Integrated digital television set. A television set that includes a digital tuner (as well as analogue) and therefore does not require an additional set-top box to receive digital television. IDTVs are most commonly capable of receiving DTT but also digital satellite (Freesat).

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 mobile phone A mobile phone which allows its user to access the internet via in-built access technology such as GPRS or WCDMA.

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.

ISDN Integrated services digital networks. A standard developed to cover a range of voice, data, and image services intended to provide end-to-end, simultaneous handling of voice and data on a single link and network.

ISP Internet service provider. A company that provides access to the internet.

ITC Independent Television Commission, one of the regulators replaced by Ofcom in 2003

ITV licensees ITV Broadcasting Limited, STV, UTV and Channel Television.

ITV All references to ITV1 should be read as including STV, UTV and Channel Television.

LAN (Local area network) A network for communication between computers covering a local area, like a home or an office.

L-Band A range of frequencies within which an allocation has been made in much of the world for broadcasting (1452 to 1492 MHz), generally by satellite, but in Europe for terrestrial digital sound broadcasting in the range 1452 to 1480 MHz. Some DAB digital radio receivers can tune to this range.

Leased line A transmission facility which is leased by an end user from a public carrier, and which is dedicated to that user's traffic.

LLU (local loop unbundling) LLU is the process where the incumbent operators (in the UK it is 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.

L-RSL See also S-RSLs – Long Term Restricted Service Licences. L-RSLs are a means of providing a radio service for a non-resident population within a defined establishment such as hospital patients and staff, students on a campus, or army personnel. They are available on demand, provided they meet the licensing criteria and that a suitable frequency is available. Licences are renewable after the initial five-year term.

LTE (Long-term evolution). Part of the development of 4G mobile systems that started with 2G and 3G networks.

Microblogging Short-form blogging. The term is commonly associated with the Twitter service, on which messages are no longer than 140 characters.

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 Various types of wireless high-speed internet access through a portable modem, telephone or other device.

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.

MPEG Moving Picture Experts Group. A set of international standards for compression and transmission of digital audio-visual content. Most digital television services in the UK use MPEG2, but MPEG4 offers greater efficiency and is likely to be used for new services including TV over DSL and high-definition TV.

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.

MW See MF and AM above.

Narrowband A service or connection providing data speeds up to 128kbit/s, such as via an analogue telephone line, or via ISD.

Near video on demand (NVoD), a service based on a linear schedule that is regularly repeated on multiple channels, usually at 15-minute intervals, so that viewers are never more than 15 minutes away from the start of the next transmission.

Net neutrality The principle that all traffic on the internet should be treated equally, regardless of content, site or platform.

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

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 networks using fibre optic technology.

Non-linear Content that is delivered 'on demand' as opposed to linear, broadcast content.

Ofcom Office of Telecommunications, whose functions transferred to Ofcom on 29 December 2003.

'Over-the-top' video Refers to audio-visual content delivered on the 'open' internet rather than over a managed IPTV architecture.

Pact Producers Alliance for Cinema and Television, the UK trade association for independent film, television, animation and interactive media companies.

Pay-per-view A service offering single viewings of a specific film, programme or event, provided to consumers for a one-off fee.

PDA Personal Digital Assistant.

Peak time The period during which: a radio station broadcasts its breakfast show and, on weekdays only, also its afternoon drive-time show; a television station broadcasts its early- and mid-evening schedule, typically used by Ofcom to refer to the period between 18:00 and 22:30 each day (including weekends).

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.

'Pull' VOD A video-on-demand system where content is delivered in real time to the viewers. The approach is usually favoured on platforms that have a high-speed return path, such as cable or IPTV

'Push' VOD A video-on-demand system where content is downloaded to the hard disk of a set-top box rather than streamed in real time via a wired network. The approach is usually favoured on platforms that do not have a high-speed return path, such as satellite or terrestrial.

PSB Public service broadcasting, or public service broadcaster. The Communications Act in the UK defines the PSBs as including the BBC, ITV1 (including GMTV1), Channel 4, Five and S4C.

PSTN Public switched telephone network. The network that manages circuit-switched fixed-line telephone systems.

PVR See DVR

RAJAR Radio Joint Audience Research – the pan-industry body which measures radio listening.

RSL Restricted service licence. A radio licence serving a single site (e.g. a hospital or university campus) or serving a wider area on a temporary basis (e.g. for festivals and events).

Service bundling (or multi-play) A marketing term describing the packaging together of different communications services by organisations that traditionally only offered 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 Identify 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.

Share (radio) Proportion of total listener hours, expressed as a percentage, attributable to one station within that station's total survey area.

Share (TV) Proportion of total TV viewing to a particular channel over a specified time, expressed as a percentage of total hours of viewing.

Simulcasting The broadcasting of a television or radio programme service on more than one transmission technology (e.g. FM and MW, DAB and FM, analogue and digital terrestrial television, digital terrestrial and satellite).

Smartphone A mobile phone that offers more advanced computing ability and connectivity than a contemporary basic 'feature phone'.

SME Small to medium-sized enterprise. A company with fewer than 250 employees.

SMS Short Messaging Service, usually used to refer to mobile text messaging (see text message below).

Social networking site (SNS) A website that allows users to join communities and interact with friends or to others that share common interests.

S-RSLs Short-term restricted service licences (S-RSLs) are issued for temporary local radio stations which usually serve a very localised coverage area, such as an education campus, a sports event, or a music or religious festival site. These licences are also used for temporary trials of community stations, sometimes to gauge interest before applying for a five-year community licence.

Streaming content Audio or video files sent in compressed form over the internet and consumed by the user as they arrive. Streaming is different to downloading, where content is saved on the user's hard disk before the user accesses it.

Super-fast broadband Sometimes known as next-generation broadband, super-fast 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 sent between mobile devices.

Time-shifting The broadcasting of a television service on more than one channel with a specified delay (typically an hour), to provide more than one opportunity for viewers to watch the service. Alternatively, the recording of programmes by viewers (using DVRs, recordable DVDs or VCRs) to watch at another time.

Transmitter A device which amplifies an electrical signal at a frequency to be converted, by means of an aerial, into an electromagnetic wave (or radio wave). The term is commonly used to include other, attached devices, which impose a more simple signal onto the frequency, which is then sent as a radio wave. The term is sometimes also used to include the cable and aerial system referred to above, and indeed the whole electrical, electronic and physical system at the site of the transmitter.

TSA Total survey area. The coverage area within which a radio station's audience is measured by RAJAR.

TV over DSL/TV over broadband A technology that allows viewers to access TV content – either in a linear programme schedule, or on demand – using internet protocol via broadband services, either on a PC or (via a set-top box) on a TV set.

TVWF Television Without Frontiers. A range of provisions designed to achieve coordination of the legal, regulatory and administrative frameworks of European Union member states with respect to television broadcasting, adopted by the European Council in 1989 and amended in 1997. TVWF was replaced by the Audio Visual Media Services (AVMS) Directive in December 2007.

UKOM UK Online Measurement. A media industry measurement of UK consumers' online activity, specified by UKOM Ltd and delivered by Nielsen.

UMA Unlicensed Mobile Access, a technology that provides roaming between GSM and 802.11 WiFi

UMTS Universal mobile telecommunications system. The 3G mobile technologies most commonly used in the UK and Europe.

Unbundled A local exchange that has been subject to local loop unbundling (LLU).

Usage caps Monthly limits on the amount of data which broadband users can download, imposed by some ISPs.

Unique Audience The number of different people visiting a website or using an application.

UWB Ultra-wideband A technology developed to transfer large amounts of data wirelessly over short distances, typically less than ten metres.

VCR Video cassette recorder.

VHF Very High Frequency The part of the spectrum between 30 MHz and 300 MHz. FM radio is broadcast on part of this band (87.6 MHz to 107.9 MHz) and DAB digital radio is broadcast on another (Band III: 217.5 MHz to 230 MHz in the UK, and over a wider range, but shared with TV services, elsewhere in Europe).

VoD Video-on-demand A service or technology that enables TV viewers to watch programmes or films whenever they choose to, not restricted by a linear schedule (also see 'push' VOD and 'pull' VOD).

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.

WAP Wireless application protocol.

Web 2.0 A perceived 'second generation' of web-based communities and hosted services - such as social networking sites and wikis, which facilitate collaboration and sharing between users.

WiFi hotspot A public location which provides access to the internet using WiFi technology.

WiMAX A wireless MAN (metropolitan area network) technology, based on the 802.16 standard. Available for both fixed and mobile data applications.

Widget Widgets are small chunks of code embedded on desktops, web pages, mobile phones and TVs to enable content to be distributed.

Wireless LAN or WiFi (Wireless fidelity) Short-range wireless technologies using any type of 802.11 standard such as 802.11b or 802.11a. These technologies allow an over-the-air connection between a wireless client and a base station, or between two wireless clients.

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.

XHTML (Extensible HTML) A mark-up language for Web pages from the W3C. XHTML combines HTML and XML into a single format (HTML 4.0 and XML 1.0).