OFFICE OF COMMUNICATIONS

The Communications Market 2008: Nations and Regions

Scotland

Research Document

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Foreword

This is Ofcom's third annual review of the markets for television, radio, and telecommunications, showing detailed data for the nations and regions across the UK.

Its aim, like that of its predecessors, is to provide the context for Ofcom's own policy thinking and to inform debates and decisions taken by stakeholders in the public and private sectors.

This year's review takes place against the background of significant policy debates on issues as diverse as the future of public service broadcasting and the future regulatory framework for high-speed broadband. It is increasingly the case that distinct versions of these debates are taking place in Scotland, Northern Ireland, Wales and in the regions of England.

That is why Ofcom continues to seek, within the resources available, to deepen the geographical detail of its research, as well as to reflect on new themes and patterns of consumer behaviour, brought about by the convergence between fixed and wireless communications technologies.

The story that emerges from this year's research is that the pace of change continues to be rapid, but that some previously strong distinctions have shaded to grey.

For example, broadband. In the first two years that we have reported, we found that take-up was strikingly lower in rural than in urban areas. This year, the data suggest that, taken as a whole, rural areas have caught up – in fact, slightly overtaken urban areas. Overall, 57% of UK homes now have a broadband internet connection, up from 45% a year earlier.

There are other striking patterns; in the UK's biggest cities, such as Belfast, Birmingham, Cardiff, Glasgow, Liverpool, and Manchester, an ever-larger segment of the population is living without the use of fixed-line telephony. Across the UK as a whole, 87% of homes have a fixed-line telephone (down three percentage points from last year). The 12% of homes which rely on mobile phones only are able, increasingly, to access broadband through wireless technology.

People are also using broadband to download video. This report suggests that 30% of adults have taken advantage of video downloading, although on a city-by-city analysis, the hottest hotspots are Aberdeen, Dundee and Edinburgh.

There are many other such fascinating points of detail in the pages that follow. Social networking, as Ofcom has previously reported, is now enjoyed by one in five UK adults. This report suggests that the people of Northern Ireland are among the UK's most avid social networkers. Across the UK, these sites are most popular among young people.

Another big trend is the fact that more than 85% of UK homes now have digital television – ten percentage points higher than a year ago and a significant milestone to have passed in the year in which digital switchover began, in Copeland, Cumbria.

At the same time, take-up of digital radio continues to grow, with one in five adults reporting that they have a DAB digital radio at home.

On the whole, consumers are satisfied with the quality of the communications services they buy. Across the UK, 89% of broadband users say they are satisfied and 94% of consumers say they are satisfied with their mobile phone service. But our data show differences across the UK in levels of satisfaction.

As this year's report contains more detailed data, two other points need to be made. Firstly, care needs to be taken in drawing excessively far-reaching conclusions from data based upon small sample sizes. Secondly, this Ofcom exercise now involves so much data that we have decided to publish much of it separately, as a complement to this report. You can find the full data set by going to the following link: http://www.ofcom.org.uk/research/cm/cmrnr08.

I hope that you will find this research useful and that it will encourage you to take the fullest possible part in the debates it is designed to support and stimulate.

Ed Richards
Chief Executive

The information set out in this report does not represent any proposal or conclusion by Ofcom in respect of the current or future definition of markets and/or the assessment of licence applications or significant market or dominant position for the purposes of the Communications Act 2003, the Competition Act 1998 or other relevant legislation. We endeavour to ensure that the data in this report are the most accurate currently available.

Key themes

Broadband take-up grows across Scotland but remains much lower in Glasgow

Since our last survey in 2006, broadband take-up in Scotland has risen by 11 percentage points to 53% of homes. This compares to 58% in England, 52% in Northern Ireland and 45% In Wales. However, there was considerable variation across the country; Aberdeen (64%), Dundee, Edinburgh and Highlands & Islands (all 62%) were substantially ahead of the UK average of 57%. But this contrasted with Glasgow where penetration was 32%, constrained by the low ownership of PCs in the city (44%, compared to the Scottish average of 64%) and probably also by low average household incomes. Broadband take-up was higher, at 59%, in Scotland's rural areas than in urban areas (52%).

Non-ownership of telecommunications services is due to cost and lack of interest

Consumers who do not have fixed-line phones, mobile phones or broadband typically say that this is because they don't want them or that the cost is too high. Less than 1% of survey respondents said that lack of service availability was a reason for not having a broadband connection.

Use of converged services is high in Aberdeen, Dundee and Edinburgh

Consistent with the high use of broadband in these areas, consumers in Aberdeen, Dundee and Edinburgh are among the most likely to have experimented with a variety of converged communications services.

Almost half of adults in Edinburgh (45%) have watched television or video clips online, compared to the UK average of 30%. Those in Dundee and Edinburgh are more likely than the UK average (20%) to have experience of social networking sites (at 31% and 28% respectively) while those in Aberdeen (31%) and Dundee (34%) are likely to have used their mobile phone to access the internet compared to the UK average of 20%.

Viewers in Scotland are the heaviest TV viewers in the UK…

Viewers in Scotland joined those in the North East of England as the heaviest viewers of television in the UK during 2007 – taking in an average of 4 hours per person per day, significantly higher than the UK-wide average of 3.6 hours. However, viewing levels in Scotland fell by 5% between 2003 and 2007, almost double the 2.7% reduction experienced across the UK as a whole. In contrast to this, Scotland had the lowest level of radio listening in the UK, at an average of 22.9 hours a week, compared to 23.5 in England, 24.4 in Wales and 23.1 in Northern Ireland.

…and are also the most likely to have a pay television service

Fifty-six per cent of individuals in Scotland have pay television at home. This is a higher proportion than anywhere else in the UK and is seven percentage points greater than the UK average figure of 46%.

Commercial radio in Scotland generated the most revenue per head

Scotland's commercial market generated more revenue per head than any of the other nations with an average of £8.11 per person in 2007. This reflected the local commercial share of all radio hours, which at 43%, was significantly higher in Scotland than the UK average of 32%.

Key points: converged communications

- **Three in ten adults in Scotland have watched video content online**
  Broadcasters operating in Scotland are repackaging regional content for distribution over the internet; the BBC and stv both offer Scotland-focused programmes, and many radio stations offer listen-live functionality over the internet. Thirty per cent of adults in Scotland have used the internet to watch television or video content, with a higher proportion in the cities, apart from Glasgow, where use is significantly lower than in Scotland as a whole.

- **One in ten adults in Scotland have listened to the radio online…**
  Eleven per cent of adults in Scotland have used the internet to listen to radio. Use is generally higher in urban areas, and is also above average (16%) in the Highlands and Islands.

- **…and one in ten have made VoIP telephone calls**
  Eleven per cent of adults in Scotland have used the internet to make VoIP calls, a similar level to the UK overall (12%). Use is highest in Aberdeen (26%) and lowest in Glasgow, where there is lower than average take-up of the internet.

- **Few adults in Scotland have accessed mobile internet**
  Just over one in seven (15%) adults in Scotland have used a mobile phone to access the internet, compared to 20% in the UK. Use is higher in Northern Ireland, and lowest in Scotland. This figure probably reflects the lower than average ownership of 3G phones in Scotland.

- **11% of adults in Scotland have listened to audio on a mobile handset**
  Using a mobile phone to listen to audio content (such as radio, MP3 files and podcasts) is less common in Scotland, (11%), than in the rest of the UK (17%).

- **Aberdeen and Dundee adults watch most video on mobiles**
  Four per cent of adults in Scotland have used their mobile to watch television or video clips, with 1% having watched live television – the same as the UK overall. Consumers in Aberdeen and Dundee (both at 12%) report particularly high levels of use.

- **Social networking less popular in Scotland than in the UK overall**
  Fewer adults use social networking sites in Scotland than in the UK as a whole – 15% compared to 20%. Across Scotland, use is highest in urban centres, with the exception of Glasgow, where it is just 9%. This is unsurprising, given the relatively low broadband penetration in Glasgow.

- **Over 5,000 Gaelic pages on Wikipedia**
  Speakers of Gaelic and Ulster Scots can access and edit versions of Wikipedia in their own language. As of January 2008 there were over twice as many articles written in Gaelic as in Ulster Scots, but there were more active Wikipedians editing and adding articles in Ulster Scots.

Key points: television

- **DTV take-up rising in Scotland**
  85% of households in Scotland now have digital television, up nearly 10 percentage points since 2006 – both in line with the UK-wide averages.

- **Access to pay-TV higher in Scotland than the rest of the UK…**
  Fifty-six per cent of individuals in Scotland had access to pay television in Q1 2008. This represented the highest proportion across the UK, and 7 percentage points higher than the UK average (46%).

- **…and viewers in Scotland watch more TV than UK average**
  Viewers in Scotland joined those in the North East of England as the heaviest television viewers in the UK during 2007, at an average 4 hours per person per day; significantly higher than the UK-wide average of 3.6 hours. Average viewing hours fell by 5% between 2003 and 2007, compared to a 2.7% reduction across the UK.

- **The BBC and stv spent £65m on Scotland-originated output in 2007**
  The BBC and stv together spent £65m on originated output for viewers in Scotland during 2007, accounting for 20% of BBC/ ITV's UK-wide spend on nations and regions' output. This represents a fall of 0.5% in real terms on 2006, against a UK-wide reduction of 3%, and was driven principally by stv's declining spend on non-news/non-current affairs output for viewers in Scotland, which fell by nearly 30% between 2006 and 2007.

- **Current affairs output in Scotland has decreased**
  The level of spend on originated current affairs output for viewers in Scotland fell by 41% (or £2m) in real terms between 2002 and 2007, compared to the UK average reduction of 19%. Spend on news in Scotland fell by 6% (or £1m) over the same period, roughly in line with the UK-wide reduction of 5%.

- **Out-of-London production quotas met by the BBC, Channel 4 and Five but shortfall by ITV**
  The BBC Channel 4 and Five each met their out-of London production quotas by value and by volume in 2007. While ITV1 met its 50% volume quota, achieving 53%, the proportion of ITV1 spend outside London in 2007 was 44% - significantly below the 50% minimum. ITV's failure to meet the value element of its out-of-London quota is a serious matter, and one which is the subject of further consideration by Ofcom with a view to regulatory action.

Key points: radio

- **Local commercial radio listening highest in Scotland**
  At 43%, the 2007 share of all local commercial radio hours in Scotland was 11% higher than the UK average of 32%. Radio services are accessed by 88.6% of the Scottish population on a weekly basis, slightly below the UK average of 90.1%. Average listening was 22.9 hours per week per head during 2007, again slightly below the UK average of 23.5. The BBC's networked and national services account for 44% of all radio listening in Scotland – lower than the UK average of 54%.

- **BBC Radio Scotland the most popular non-UK-wide radio station**
  Of the local and nation-based stations in Scotland, the most popular station by five-minute weekly reach is BBC Radio Scotland, with almost a million adults listening on a weekly basis in 2007. Of the commercial stations, Real Radio attracted 789k, followed by Radio Clyde (620k) and Radio Forth (316k). Radio Borders has the highest local area reach, with 55% in the Border area (also covering North Northumberland in England).

- **Listening to digital radio via DTV and online, higher in Scotland**
  According to latest research, just over one in five (21%) individuals in Scotland now owns a DAB digital radio set. This was higher than ownership in Northern Ireland (13%) and Wales (14%) and similar to that in England (22%). Listening to radio via digital television was more popular in Scotland, than in the other nations with over a third (36%) having used this feature by 2007. Listening to radio via the internet was also the highest in the UK at almost one in four (24%).

- **Local commercial revenues highest in Scotland, and fastest growing**
  The 39 local commercial stations operating in Scotland generated revenues of £56m in 2007; up from £49m in 2006, and equivalent to £11.46 per person; compared to £9.93 per head in 2006. This was the largest revenue increase among the UK nations, and is the highest revenue per head; the UK average is £8.11.

- **BBC radio spend per head low in Scotland, but high on a per-hour basis**
  BBC nations/ local radio spend in Scotland totalled £34.6m in 2006/07, equating to around £7.07 per person, and was up by £2.3m (£0.47 per head) on the previous year. Spend per head is lower than in Wales (£10.48) and Northern Ireland (£9.64). On a cost-per-hour basis, however, expenditure was highest in Scotland, with BBC Radio Scotland and Radio nan Gaidheal costing an average £1.16 per listener hour. Comparable spend in Wales and Northern Ireland in 2006/7 was 97p and 55p respectively.

- **Community radio growing in Scotland**
  The number of community radio stations in Scotland continued to grow in 2007/08, with 14 community licences awarded over the past year. This took the total number awarded in Scotland to 20, with 11 community stations already broadcasting to local communities in Aberdeen, Cumbernauld, Edinburgh, Glasgow, Govan, Leith, Midlothian and Orkney.

Key points: telecoms

- **Take-up of telecoms services in Scotland consistent with UK average**
  Nearly nine in ten adults in Scotland (87%) have access to a fixed-line phone at home, in line with the UK average. Take-up is higher in rural areas (93%) than in urban areas (86%), again consistent with the UK average; rural areas appear to be more reliant on fixed telephony.

- **Mobile take-up highest in Dundee**
  Mobile phone take-up was marginally lower in Scotland than the UK average (81% compared to 84%). While there was no overall difference in take-up between urban and rural areas, the level was highest in Dundee (91%) and lowest in the Scottish Borders (70%).

- **Broadband take-up lowest in Glasgow**
  Broadband take-up in Scotland is below the UK average (53% compared to 57%). Although it is relatively consistent across geographic areas, the overall urban penetration figure is constrained by low take-up (32%) in Glasgow.

- **93% of fixed-line customers in Scotland satisfied with service**
  More than nine in ten (93%) customers in Scotland with a fixed-line are satisfied with their fixed-line service. Levels of 'very satisfied' responses vary across the nation, with Dundee and Glasgow having the highest satisfaction levels.

- **Satisfaction with broadband lower in Edinburgh**
  Overall satisfaction with broadband service is higher than the UK average, at 92%, and relatively consistent across the country, but it is significantly lower in Edinburgh (73%), where it appears to be related to broadband speeds. Only 39% of broadband users in Edinburgh said they were 'very satisfied' with the speed of their connection, compared to an average of 49% across the UK.

- **Satisfaction with mobile reception varies across Scotland**
  Overall, satisfaction with mobile reception is higher in Scotland than the UK average, although responses differ by area. Mobile users in the Highlands and Islands are least satisfied with their mobile reception.

- **67% of households in Scotland connected to an unbundled exchange**
  Two-thirds (67%) of households in Scotland are connected to an unbundled exchange, the second highest level after England (84%).

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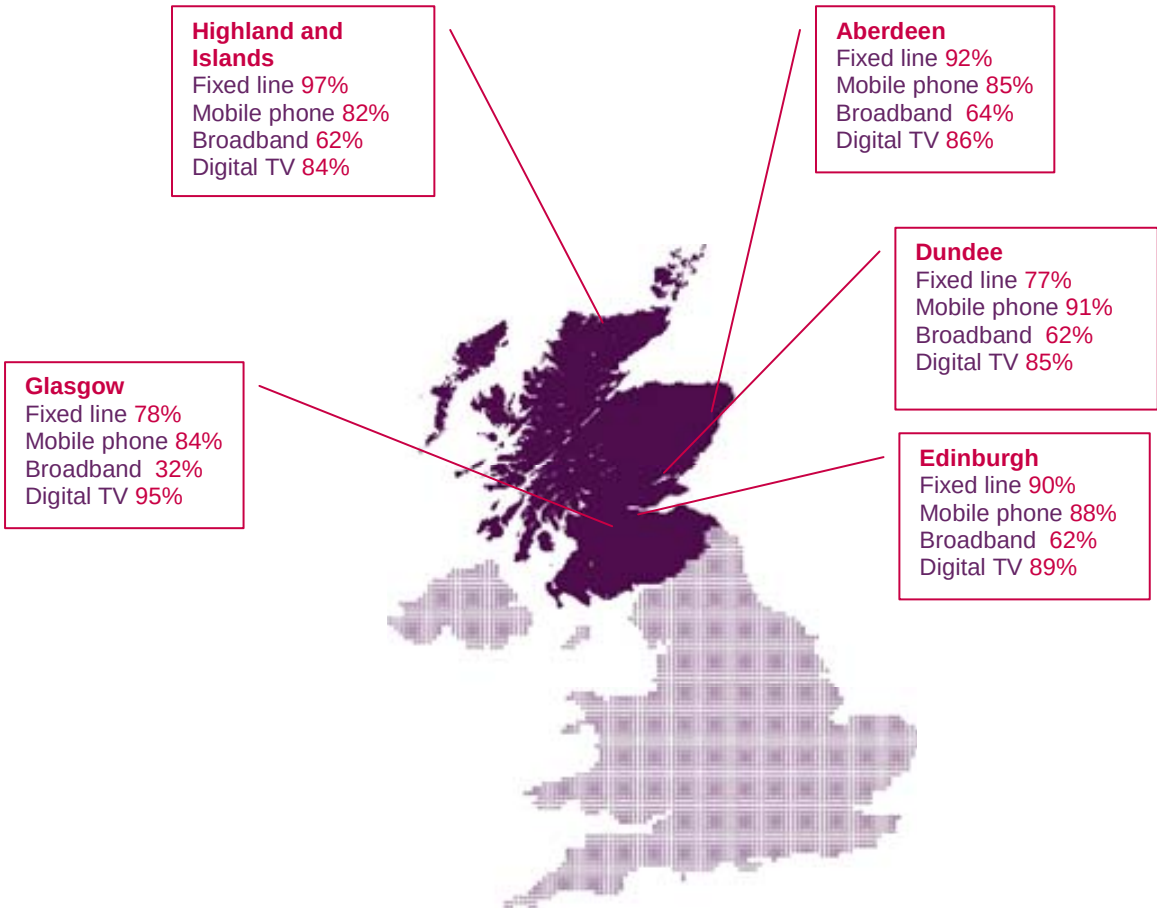
1.1 Profile of Scotland



Size	78,772 km^2
Population	5.1 million
Population density	65 persons per km^2
Households	2.2 million
Average age (median)	39

1.2 Introduction

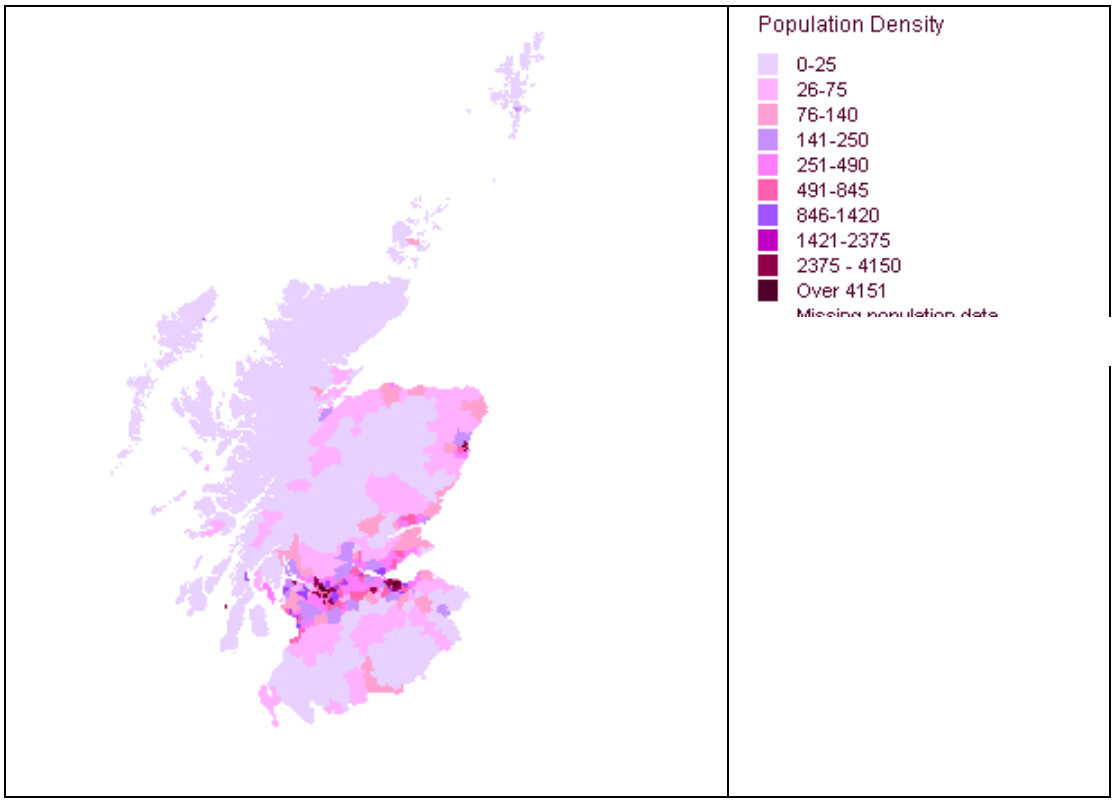
Scotland is subject to many different specific geographic, cultural and socio-demographic characteristics which influence the development of its communications services. The following section looks at some of these socio-demographic features, including population, rural/urban split, socio-economic profile and age. Much of the data in this section comes from the most recent Census in 2001, and as such will not have changed materially from the 2007 report.

1.3 Socio-demographic features

Population

Scotland has a population of 5.1m, which represents approximately 9% of the UK total. This population comprises 2.2m homes, and Figure 1.1 shows that it is primarily concentrated around Edinburgh and Glasgow, and more along the coast than inland.

Figure 1.1 Population density map



Source: Ofcom, based on Office of National Statistics 2001 Census data

Socio-economic group

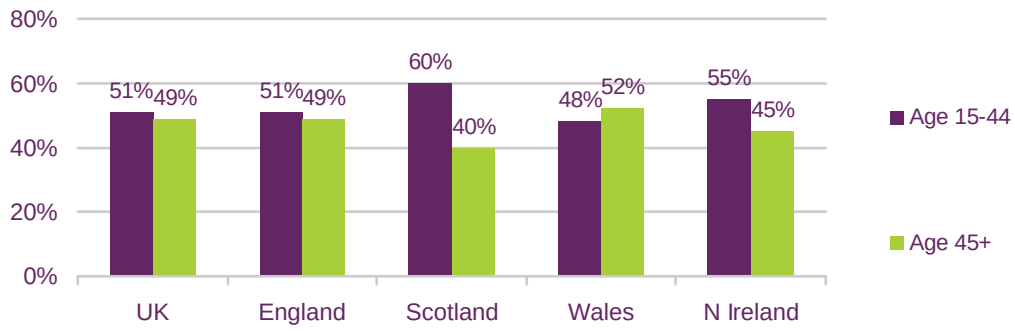
Scotland has a higher proportion of C2DEs (52%) than the UK average of 45%, and proportionally more people living in rural locations – 16%, above the UK average of 12% (although lower than either Wales or Northern Ireland). “Rural” areas are defined as settlements with fewer than 2,000 people and less than ten miles from a larger settlement. More than a

quarter (27%) of Scotland's population live in the four main cities of Edinburgh, Glasgow, Dundee and Aberdeen.

Age profile

The Scottish population has a relatively large proportion of adults aged 15-44 compared to the UK average. The south of Scotland (Dumfries and Galloway, and the Scottish Borders) has an unusually high percentage of over 65s – around 20% of the total population. Age can be related to take up of some new communications services, so age profile should be considered when comparing use of communications services in different geographical areas.

Figure 1.2 Age profiles across the UK's Nations



Source: Office of National Statistics, Census 2001

Both weekly household income and expenditure in Scotland (£618 and £444 respectively) are lower than the UK average (£642 and £456). Nineteen per cent of adults in Scotland, around 960,000 people, live in low-income households. This may adversely affect take-up of some communications services and, as a result, also affect the economic viability of providing services to these areas.

Figure 1.3 Average weekly household income and expenditure

Source: Office of National Statistics, Family Spending: 2007 edition.
National Statistics website: www.statistics.gov.uk Crown copyright material is reproduced with the permission of the Controller of HMSO

Employment

The employment rate in Scotland (for people of working age) was 76.5% in December 2007. Comparing economic activity in the quarter July to September 2007 with the same quarter in 2006 shows that the number of economically active people had risen by 10,000 and total employment increased by 19,000 to 2.532m, an increase of 0.4%[1].

1.4 Geography

The landscape and topography of Scotland, particularly in the Highlands and Islands, affect television, radio and mobile phone coverage in these areas. The central and north west Highlands, which feature the highest peaks in the UK, can pose particular difficulties for communications providers, although initiatives are ongoing to improve and extend quality and quantity of service. Areas in the south of the country also face many of the same problems as those in the north.

The major cities in Scotland are: Edinburgh (capital city), Glasgow, Aberdeen, Dundee, Inverness and Stirling. Other major towns include: Ayr, Dumfries, East Kilbride, Falkirk, Greenock, Paisley, Perth, Fort William, Kirkwall, Lerwick and Stornoway.

Language and culture

An estimated 92,000 people in Scotland, approximately 2% of the Scottish population, say they have some Gaelic language ability[2], with these being predominantly concentrated in the Eilean Siar, Highland and Argyll and Bute areas, with pockets of Gaelic speakers in the major cities. Other dialects include Lallans (the term given to the variety of Scots spoken in the Lowlands), and Doric – a name once given to any rural dialect, but now applied only to that from the north-east of Scotland in Aberdeenshire.

[1] Office of National Statistics, February 2008
[2] Scotland's Census 2001 – Gaelic report

Scottish broadcasting seeks to reflect Scotland's traditionally strong sense of identity, both at a national level and within the strong regional identities around the country.

1.5 Politics

Scotland currently has 59 members of the UK parliament – 39 Labour, 12 Liberal Democrat, six Scottish National Party (SNP), one Conservative and Speaker of the House, Michael Martin, who represents the Glasgow North East constituency.

Following the election held in May 2007, the Scottish Parliament comprises 47 Scottish National Party MSPs (SNP), 46 Labour, 17 Conservative, 16 Liberal Democrat, two Scottish Green and one independent. These MSPs were elected by a mixed member proportional representation system, with 73 representing individual constituencies, and 56 from eight member regions.

The Scottish Parliament has responsibility for areas such as health, local government (including education, housing, social work, roads and planning), sport and arts, agriculture, forestry and fishing, economic development, tourism, heritage, emergency services, environment, public records and some aspects of transport. The Parliament has taken an interest in broadcasting, primarily within its remit for culture while the Scottish Government is also active in the field of broadband provision.

There are 32 Unitary Local Authorities in Scotland. Following last year's elections very few have majority administrations. Most operate either as coalitions or minority administrations.

2 Recent Developments in Scotland

2.1 Broadcasting

The Scottish Broadcasting Commission (SBC) was established in 2007 by the First Minister to conduct an independent investigation into the current state of television production and broadcasting in Scotland. In January 2008 the SBC published its first interim report, on the economic context of broadcasting and is focusing attention on:

- Defining a strategic and ambitious way forward for the industry;
- Verifying the expected new commitments to Scotland by the UK broadcasters;
- Pursuing the issue of what legitimately counts as a "Scottish" production;
- Continuing to assess whether mandatory quotas for Scotland are necessary;
- Stressing the importance of network commissioning editors being based in Scotland;
- Examining potential for closer links between TV production companies and the wider digital media sector;
- Identifying the benefits of a talent and training strategy to develop and strengthen the creative and business base in Scotland for the future;
- Clarifying roles and responsibilities needed from the main support agencies.

Ofcom has been providing evidence for consideration by the SBC.

In March the SBC published its second interim report – considering the cultural importance of Scottish broadcasting. The SBC's conclusion was that television programmes have lacked imagination and creativity in presenting the full range of Scottish culture, heritage and creativity.

Digital media

In August 2007 the BBC completed its move into its new purpose-built headquarters at Pacific Quay, Glasgow, leaving Queen Margaret Drive where it had been based since 1935. The BBC's presence on the Clyde may also provide a focal point which is intended to encourage the growing digital media community in Scotland and play a major role in the regeneration of the area. The plans for a media village on the banks of the Clyde also include a major film and broadcast hub, based at the old Govan Town Hall.

In January 2008, the BBC Trust announced that it was giving the go-ahead for BBC Scotland and Gaelic Media Service (GMS) to launch their planned Gaelic Digital Service (GDS). Ofcom last year conducted a Market Impact Assessment into the GDS which concluded that that the proposal would

have a significant positive market impact, most notably for the Gaelic media sector. The BBC Trust said its approval was subject to certain conditions - including that it launch on cable, satellite and broadband initially, with a review of the service to be carried out before it is considered for broadcast on Freeview. Without provision on Freeview, the BBC's new contribution to the service will be approximately £3.5 million per year. The total cost of the service will be £20.8 million per year, of which GMS will contribute £10.1 million and the BBC £10.7 million. The BBC's funding will consist of £7.2 million already allocated to existing Gaelic services, £2.5 million for new content and related spend, and just over £1 million for distribution costs.

Internet TV

The Scottish Premier League highlights on the BBC website continue to be popular, although no exact figures for viewings or downloads were available. Ofcom's survey shows that viewing of online video content is above average in Aberdeen, Dundee and Edinburgh. This is discussed further in section 3.2 of the report.

Scottish Premier League matches are also available over the internet with subscritption to Setanta's broadband service.

In the internet TV sector, the Scottish Internet Television (www.sit1.tv) channel was re-launched in March, following an initial launch in 2007. The Daily Record also announced plans to expand its digital offering by launching a daily live news broadcast online. In addition, the Glasgow Evening Times doubled the number of its community-based websites in March 2008.

Radio

A number of high-profile Scottish radio stations changed ownership during the last year. In December 2007 seven stations, including Radio Clyde, Radio Forth, Northsound Radio and Radio Tay, were purchased by German group Bauer from previous owner Emap.

There has also been much activity in the community radio sector, with new licences throughout Scotland. Eleven stations are now on air with a further nine pending. The stations have recently organised themselves into the Scottish Community Broadcasting Network.

2.2 Telecommunications

Broadband initiatives

Broadband Reach Project

On 5 October 2007, the Scottish Government announced that it would take forward a new programme of work, which will aim to deliver an affordable, sustainable, broadband service to those households and businesses currently without access (mainly due to their distance from their serving telephone exchange).

A procurement process is underway and the Government has had meetings with a number of potential suppliers. A preferred supplier has

been selected and the Government aims to conclude a contract by June, with delivery of broadband services to out of reach customers by the end of 2008.

A press and radio marketing campaign was undertaken by the Government in December 2007 in order to ensure awareness of the project and to encourage affected people to register their demand by the deadline of 18 January 2008. Public responses more than doubled the Government's database of access problems and it is now aware of around 3,000 eligible premises that will be included in the project.

Exchange Activate

A number of rural and remote areas throughout Scotland provide broadband using the *Exchange Activate* broadband service, a product which was installed in 148 small Scottish exchanges in 2005 as part of the (then) Scottish Executive's *Broadband for Scotland* intervention. Under *Exchange Activate* there are restrictions on the types of wholesale broadband products offered to ISPs; the number of ISPs that can provide services; the number of customers that can be served; and the bandwidth available. High broadband take-up in the intervention area has resulted in capacity issues being experienced in a number of these exchanges which will be alleviated through an agreement between the Scottish Government and BT to increase broadband availability by upgrading 45 of these exchanges. The upgrade programme progressed well, with all 45 completed by the end of April 2008.

Pathfinder Projects

Since the publication of the Communications Market Report: Nations & Regions 2007, progress has been made on both Scottish-Government funded Broadband Pathfinder Projects, which use an aggregated approach to provide high-capacity broadband links to schools, libraries, local authorities and other public sector sites throughout rural areas.

The South of Scotland Broadband Pathfinder Project, run jointly by Dumfries and Galloway Council and Scottish Borders Council has made progress since it started in November 2006. The £32 million roll-out, which is being carried out by THUS plc is currently on-track, with 229 sites of the contracted 410 connected as at 31 March 2008.

Pathfinder North, involving local authorities in Argyll and Bute, Highland, Moray, Orkney Islands and Shetland Islands, is a £70 million project also contracted to THUS plc which will eventually connect over 800 sites. Towards the end of 2007 the project experienced delays. However the partners are now understood to be working to ensure that the programme of site delivery returns to schedule, agreeing a revised rollout strategy that aims to deliver within the original two year period.

More information about these projects can be found at www.pathfindernorth.co.uk – for Pathfinder North and www.dumgal.gov.uk/dumgal/broadband/default.aspx - for the South of Scotland Broadband Pathfinder Project.

Connected Communities

The Connected Communities Broadband Network in the Outer Hebrides continues to grow with 35 new relay sites significantly expanding network coverage to many of the smallest villages and hamlets throughout the islands. As well as enhancing the coverage within the Connected Communities area the service now provides to many areas already enabled by BT but beyond the distance from an exchange where it would be possible to receive ADSL services. When complete, the Outer Hebrides would expect to have the most complete coverage of any rural area in Scotland. The network connects hospitals, schools, health centres, fire service, airports and learning centres, as well as business and residential subscribers.

Project Atlas

Last year's Communication's Market Report for Scotland referred to Project Atlas, a Scottish Enterprise initiative with an EU-approved strategic investment in telecommunications technology using advanced fibre-optic infrastructure and equipment co-location facilities. It gives SMEs access to high bandwidth e-business services on six business parks, in Aberdeen, Dundee, Edinburgh, Glasgow, Bellshill and Dumfries. Service providers (telcos, ISPs and other service providers such as off-site data storage) can use the neutral open-access network to reach customers over advanced broadband connections. The service started in early 2007 and the open access networks are now being offered to telcos and other service providers on a supplier-neutral basis. Several service providers have already connected, introducing the provision of services to on-park businesses, with others in the process of connecting.

City-Wide Wireless Initiatives

A number of communities have announced their intention to improve and expand the provision of wireless services over the past year. Glasgow City Council, in conjunction with industry partners, published a strategy document outlining plans to offer wireless broadband services throughout the city centre and beyond. Edinburgh City Council has already announced similar plans as part of the BT Wireless Cities initiative, and there are plans for a scheme in Dundee.

Strathclyde Partnership for Transport has also announced plans to develop a mobile and Wi-Fi network for the Glasgow underground railway system.

Case Study – Glasgow Subway WiFi

In January 2008, Strathclyde Partnership for Transport (SPT), and communications infrastructure operator Arqiva, announced a deal to provide a combined cellular and WiFi network in Glasgow's subway stations. Under the contract, Glasgow will become the first underground transport system in a UK city to provide passengers with combined 2G and 3G cellular mobile and WiFi access.

A trial was successful and SPT is working towards a full deployment of WiFi and mobile phone coverage across the subway network. The first public evidence of the project was expected at Buchanan Street subway

station in the form of flat screen technology carrying streamed advertising and local area information.

SPT is the owner and operator of Glasgow's subway system and this particular project is part of an ongoing programme of subway modernisation and development. SPT believes that WiFi technology has the potential to deliver operational efficiencies by migrating some of its existing applications and services, including ticketing and CCTV, onto the network. The work is expected to be completed by the end of 2008.

Wireless Innovation

In 2003 Wireless Innovation, a National Initiative, was created to increase the economic growth of the wireless and mobile sector across Scotland. Managed by Innovation Centres (Scotland) a private-public joint venture, Wireless Innovation helps Scotland's wireless and mobile companies identify market opportunities and industry partners to accelerate their business growth. Currently Wireless Innovation advises over 180 indigenous small to medium enterprise companies developing new wireless and mobile applications and is funded by Scottish Enterprise to provide this specialised sectoral support to all companies. Clients include companies in the mobile gaming, and TV/broadcast sectors.

Glasgow - Edinburgh Collaboration Project

Set up by Scottish Enterprise Glasgow, Scottish Enterprise Edinburgh and Lothians, City of Glasgow Council and City of Edinburgh Council, the collaboration between Glasgow and Edinburgh has a three-fold purpose:

- to close the gap with cities that currently boast superior economic performance;
- to make a disproportionate contribution to improving Scotland's economic performance; and
- to keep pace with other cities already collaborating to compete.

The project has identified that communication and connectivity is key to economic growth and that the quality of service of mobile coverage across the rail route between the two cities was impacting communication connectivity. Improving this connectivity would create new industries, occupations and technologies. Glasgow and Edinburgh now want to raise their game by developing the critical mass seen as being key to success, by borrowing scale and diversity from each other.

Research by SQW Consulting has concluded that improved connectivity on the Edinburgh-Glasgow rail route would result in time savings worth £3.5 million by 2011/12 due to improved data and voice connectivity. The research was carried out on behalf of the Glasgow-Edinburgh Collaboration project. In addition to these relatively modest economic benefits, the research also pointed out that there are wider reputational issues for Scotland to ensure that there is seamless wireless connectivity on the rail journey between the country's two major cities. Wi-fi rollout is under active consideration for the route. The report recommends that a number of mobile operators work together to fill in the voice coverage blackspots, through shared infrastructure where possible, which would address a voice

connectivity issue, improve 3G/GPRS coverage and improve any potential wireless communication offering from First Scotrail.

Other transport initiatives

In March 2008 Stagecoach announced that it had installed devices on 38 of its vehicles to enable passengers to stay online by using their laptops. A fleet of buses operating between Fife and Edinburgh have been fitted with WiFi network technology. The bus company said it invested in the technology so it could target business travellers commuting into the capital. The same WiFi link will also be used to enable managers to identify the exact locations of each of the buses using global positioning software. The technology will be available on six express routes which operate across the Forth Road Bridge.

Citizen-Centred Initiatives

Learning and Teaching Scotland (LTS) has used social media (Really Simple Syndication (RSS), blogs, wikis, podcasts, video podcasts) to both provide and obtain information on an ongoing basis, effectively utilising the expertise of teachers and learners around Scotland.

Within the last year, educational institutions in Scotland announced plans to upgrade their communications networks. The Scottish regional educational network ClydeNET will have a National Ethernet Wide Area Network (WAN) connecting the University of Glasgow to 12 higher and further education colleges throughout the West of Scotland. The network enables remote access and greater collaboration between users of the ClydeNET network, benefiting students. The University of Paisley awarded a contract to deliver data services to four campuses and its central data centre hosted by South Lanarkshire Council. Both of these educational contracts were awarded to THUS plc.

3 Comparative Analysis

3.1 Key Statistics

Figure 3.1 Key statistics

	Scotland 2007*	Scotland 2008	Scotland % point change	UK 2008
Convergence	**% of adults (unless stated)**	**% of adults (unless stated)**		**% of adults (unless stated)**
Use of VoIP at home	11%	11%	11%	12%
Watching video content online	Not available	30%	Not available	30%
Listening to the radio online	Not available	11%	Not available	13%
Internet access with a mobile phone	Not available	15%	Not available	20%
Watching video on a mobile phone	Not available	4%	Not available	4%
Listening to audio content on a mobile phone	Not available	11%	Not available	17%
Use of social networking sites	Not available	15%	Not available	20%
Television				
Digital Television ownership	76%	84%	+9%	85%
Pay TV subscription	50%	56%	+6%	49%
Average hours viewed per day	4.1 hours	4 hours	- 0.1 hour	3.6 hours
Radio				
DAB set ownership (among radio listeners)	20%	21%	+1%	22%
Average hours listened to per week	23.2 hours	22.9 hours	- 0.3 hours	23.5 hours
Telecommunications				
Fixed line phone at home	85%	87%	+2%	87%
Mobile phone ownership	82%	81%	-1%	84%
3G phone ownership	12%	14%	+2%	17%
Internet at home	57%	60%	+3%	65%
Broadband at home	42%	53%	+11%	57%

*Survey data reported in the 2007 report was based on data from a survey conducted during 2006

A note on the Scotland survey data

We conducted a face to face survey of 5,812 adults in the UK with 925 interviews conducted in Scotland. Fieldwork took place in January and February 2008.

Some of the survey data in this section of the report are split by geographic areas of Scotland.

The survey sample in Scotland has error margins of approximately +/- 3-5% at the 95% confidence interval.

In specific geographic areas survey error margins are approximately +/- 6-10%.

Glasgow is defined as the Glasgow City Council area.

Annex 1 contains full details of the survey methodology and error margins.

In addition to the survey data, this section of the report refers to data from a range of other sources, including data provided to Ofcom by stakeholders.

3.2 Converging communications markets

Introducing convergence

This chapter analyses what convergence means for the supply and demand of communications content and services in Scotland.

Figure 3.2 Delivering audiovisual and voice services to consumers

Source: Ofcom

Content and packaging

This section looks at how radio stations, television channels and local and regional newspapers are taking advantage of the ways in which content is being created, distributed and received. We then look at ways in which consumers are creating and interacting with content based on their regional interests.

Radio

Many local and regional radio stations in Scotland use the internet to appeal to a wider audience for their content, and repackage their content for this purpose. In addition to 'listen live', visitors to the Real Radio (Guardian Media Group) and Clyde Radio (Bauer) websites are also able to:

- listen again;
- view photo galleries; and
- read news and sport headlines in text format.

Tay Radio (also Bauer) does not offer listen again, but does syndicate music videos from YouTube website.

Regional and local radio stations in Scotland look set to continue to develop their online propositions. For example in February 2008 GCap, owner of a number of regional stations, announced that it would focus on broadband as a platform for expansion, and in March 2008 it announced that it had acquired a majority stake in the local social networking website company welovelocal.com. Similarly, in February 2008 UTV Media announced the acquisition of Tibus, a web development company which UTV said would enhance the online proposition of its television and radio stations, and facilitate the integration of media across online and broadcast platforms. BBC local radio stations are also available over the internet.

Television

The stv website allows visitors to watch selected broadcast programming again, including *Scotland Today*, *the five thirty show* and *Conquer the Castle*. It also hosts exclusive video clips, interviews and fora to accompany some of these programmes. The website also offers news in the form of text, still pictures and video, as well as text and video blogs from its journalists.

The BBC offers Scotland-focused audiovisual content over the internet via its local news websites, as well as via the BBC Scotland website, which also features blogs and RSS feeds. The content offered by the BBC's iPlayer, the corporation's download and streaming service, does not include regional news and weather, but it is possible to view regional bulletins such as *NewsNight Scotland* from the BBC's Scotland news website. In October 2007, as part of its Delivering Creative Future plan, the BBC announced that it planned significant investment in developing an online multimedia interactive offer, called MyLocalNow. This project would be subject to approval by the BBC Trust.

In January 2008 the BBC Trust approved the Gaelic Digital Service (GDS), a joint venture between the BBC and the Gaelic Media Service (GMS) to launch a mixed-genre digital TV channel in Gaelic and enhanced Gaelic content for users of bbc.co.uk. The BBC Trust approved the launch of the GDS on satellite, cable and broadband subject to three conditions as specified at:

http://www.bbc.co.uk/bbctrust/assets/files/pdf/consult/gaelic_digital_service/final_conclusions.pdf

The BBC Trust noted that the broadband offer would initially be on-demand only (via the iPlayer) on the BBC website as part of BBC Scotland's 10 hours per week allocation, potentially with some further content on the GMS website, although this may increase over time as the iPlayer develops. The Trust also comments that "it remains open-minded as to whether linear channels are necessarily the most appropriate way of serving smaller audiences. Broadband and on-demand may prove more effective methods of delivery; however, the Trust recognises the cultural significance attached to a linear channel."

Newspapers

Digital publishing is increasingly becoming a core part of the regional newspaper business. According to the Newspaper Society, at the end of 2006 there were 1,303 regional newspaper hard copy titles and 1,102 regional newspaper websites offering a wide range of content and functionality. The table below lists some of the online services provided by newspapers in the regions where we conducted consumer research. The newspapers selected are not intended to be representative of the entire output of either the relevant region or the newspaper group, but only to indicate the range of digital services on offer.

Figure 3.3 Online content and functionality offered by selected newspapers

Region	Newspaper	Group	Website	Video	Blogs	RSS	UGC photos/video	Forum	Digital edition
National	Herald	NQ	Yes	Yes	Yes	Yes	Yes	Yes	Yes
National	Scotsman	JP	Yes			Yes			
National	Daily Record	MG	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aberdeen	Aberdeen Press and Journal	NN	Yes			Yes			
Dundee	Evening Telegraph	DCT	Yes						
Glasgow	Glasgow Evening Times	NQ	Yes	Yes					Yes
Edinburgh	Edinburgh Evening News	JP	Yes	Yes		Yes			
Border	Southern Reporter	JP	Yes	Yes	Yes	Yes	Yes		
Highlands and Islands	Oban Times	-	Yes						

Source: Ofcom
Note: Newspaper websites are evolving continuously. This functionality is accurate as of March 2008.
Key: NQ = Newsquest; JP = Johnston Press; MG = Mirror Group; NN = Northcliffe Newspapers; DCT = DC Thomson

In March 2008 the Evening Times doubled the number of websites in its community series, from 12 to 24. These are intended to let readers know what is going on in their particular area of Glasgow and to provide links to local events, information and history.

The audiovisual content available on newspapers' websites in Scotland comes from a variety of sources. National news is generally syndicated from a national source such as the Press Association. For regional news, Newspapers often obtain the rights to video content produced by third parties, for example the Edinburgh Evening News and the Scotsman. Some newspapers, like The Herald package the content with their own branding.

Regional newspapers' investment in digital media has not yet translated into significant revenues. At £2.8bn, advertising and sponsorship accounted for almost 75% of UK regional newspapers revenues in 2006, but only 2.5% of this (£71m) was generated by online advertising.

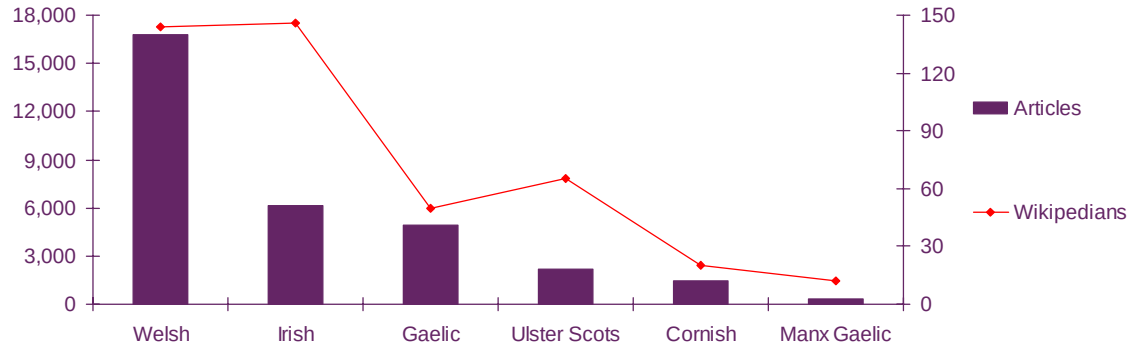
However, there are now signs that the regional newspaper groups are seeking to increase their online advertising revenues, particularly in classified advertising. For example Archant, Johnston Press and Trinity Mirror have all recently launched websites dedicated to key classified categories such as property, jobs and cars. Trinity Mirror's 2007 annual report cites the launch of such sites as being one of the contributory factors to a year-on-year increase in digital revenues of 33.3%.

User-generated content

As the level of user-generated content available on many local newspaper sites demonstrates, we are not only consumers of content with a regional focus, but also creators of it. Many websites offer individuals the opportunity to upload content relating to a particular regional area or interest. For example anyone can upload photos to the Flickr website and label or 'tag' them with a particular region e.g. Shetland, Skye or Dundee.

Another website which allows a large group of users to contribute online content is Wikipedia, versions of which exist in many different languages including most of the indigenous languages spoken in the UK. The numbers of articles on Wikipedia in these languages, as well as the number of contributors to each linguistic version, are shown in Figure 3.4. Although there are over twice as many articles written in Gaelic as in Ulster Scots, there are more active Wikipedians editing and adding articles in Ulster Scots.

Figure 3.4 Indigenous language Wikipedia articles and contributors, Jan 2008



Source: Wikipedia

Note: English is not shown as the high numbers make it impossible to show on the same scale as other indigenous languages.

Consumption

This section begins by looking at the types of communications services that are purchased and consumed together in 'bundles'. We will then review how consumption of selected converged services varies by region. The services covered are:

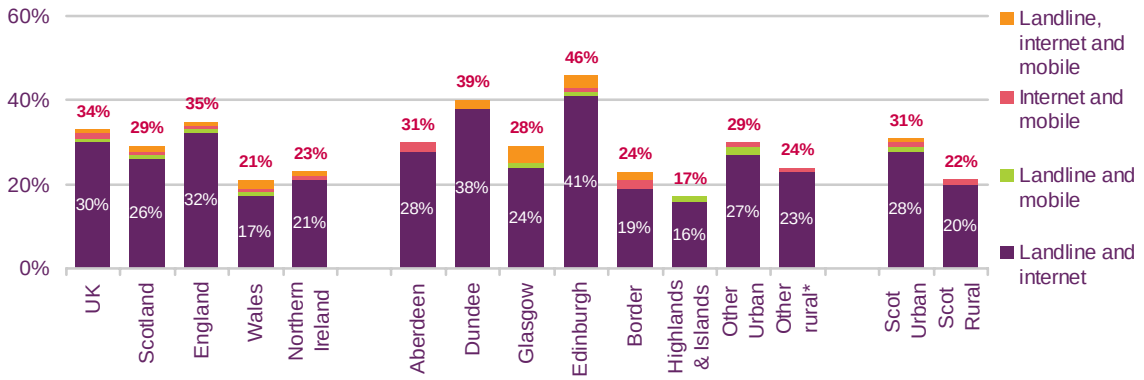
- those delivered over the internet, including voice calls, audio and audiovisual content;
- those delivered to the mobile handset, including data in the form of web pages, audio and audiovisual content; and
- social networking sites, which can be accessed via several distribution networks including internet and 2G and 3G mobile technologies.

Communications service bundles

Convergent technologies allow delivery of multiple content types over multiple networks. Many operators are seeking to exploit this by expanding into adjacent markets and offering 'bundles' of communications services.

Over a quarter of adults (29%) in Scotland have purchased two or more of their fixed, mobile or internet services from the same supplier, below levels in England, but significantly higher than in both Wales and Northern Ireland.

Figure 3.5 Bundling of telecoms services



Source: Ofcom Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.

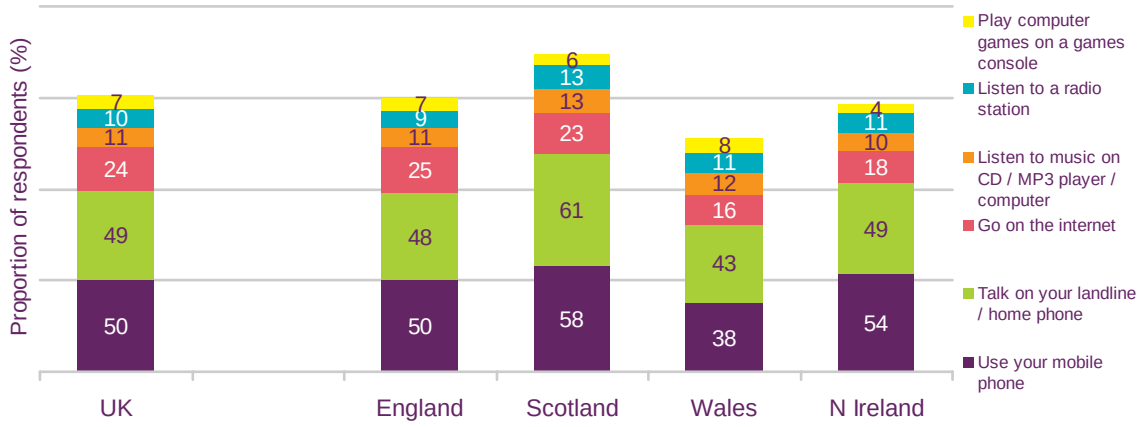
Generally the incidence of purchasing a 'bundle' of services was higher in urban areas of Scotland (31%) than in rural areas (22%). This varied significantly ranging from below one fifth (17%) of adults in the Highlands and Islands to 39% of adults in Dundee and around half (46%) of adults in Edinburgh. The proportion of adults purchasing a bundle of services was higher in rural areas of England (28%) than in rural areas of Scotland (22%), Wales (22%) or Northern Ireland (16%).

Media stacking

With the increasing range and ubiquity of communications services, multiple media can be used concurrently. This is often termed 'media stacking', and is a widespread phenomenon among UK adults' as indicated by Figures 3.6 and 3.7.

The most popular activity to combine with watching TV is talking on the phone, either a mobile phone or a landline. Approximately six in ten adults in Scotland say that they have combined these activities, which is a higher share of the adult population than in the other nations.

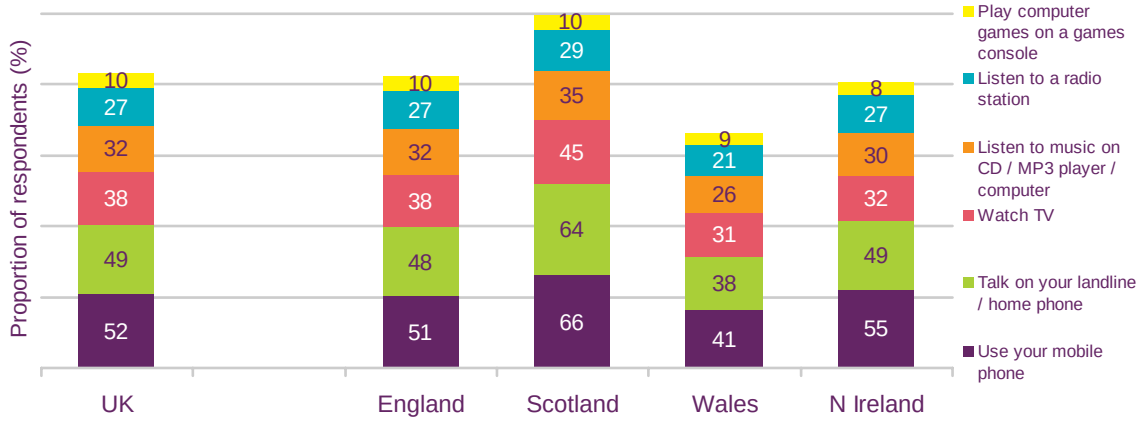
Figure 3.6 Use of other media while watching TV



Source: Ofcom

Similar trends can be seen in the use of other media while using the internet, with roughly two in three adults in Scotland saying that they have talked on a mobile phone or landline while using the internet. Again, this is a higher proportion of the adult population than for the other nations.

Figure 3.7 Use of other media while using the internet



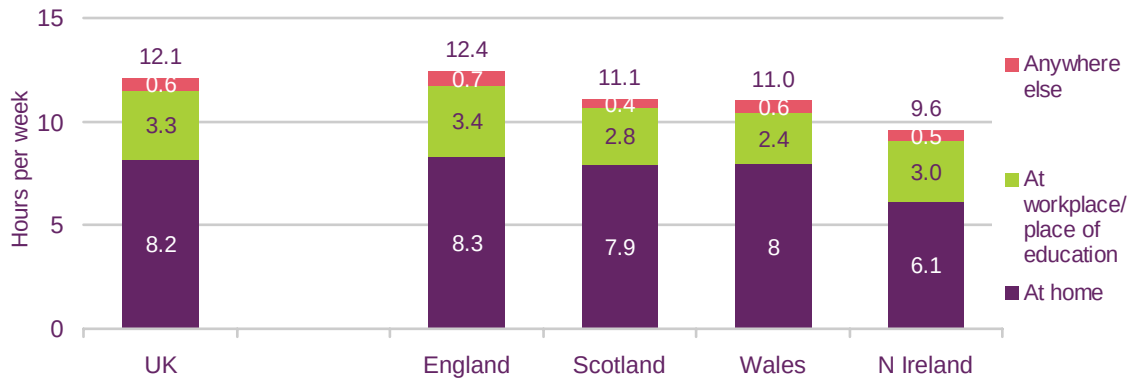
Source: Ofcom

Internet

Consumers can make phone calls, listen to the radio, and watch video over the internet. This section looks at time spent and activities carried out on the internet, before looking at the consumption of voice, audio and audiovisual content.

According to self-reported estimates, the average time spent online by an adult in Scotland who uses the internet is 11.1 hours a week, with over two-thirds of this time spent online at home. These figures are broadly in line with those in Wales, although lower than those in England.

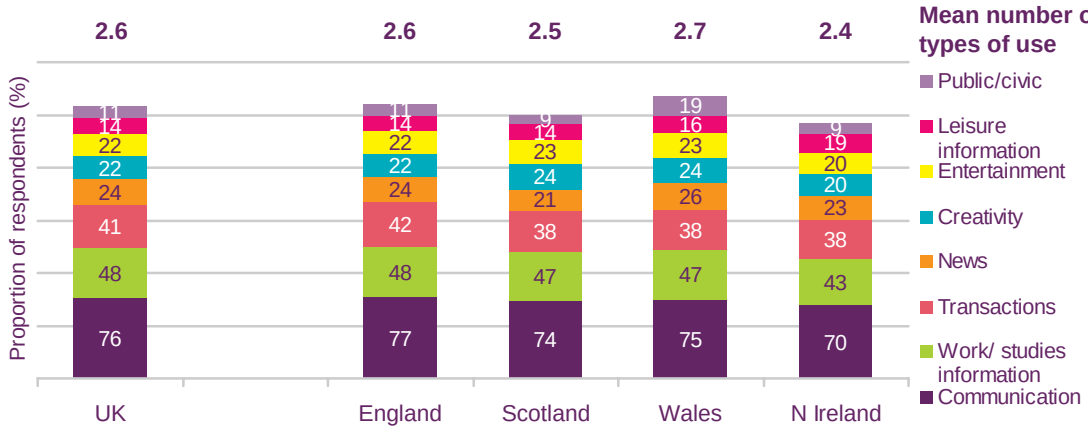
Figure 3.8 Time spent online



Source: Ofcom. Base: All adult internet users.

Across all the UK nations, the internet is most commonly used for communication; for example in the form of email, instant messaging or chat rooms, with 74% of adults in Scotland saying they use it for this reason. The proportion of adults going online for different reasons was broadly consistent across the nations, with the average user reporting using the internet for 2.6 different functions.

Figure 3.9 What the internet is used for

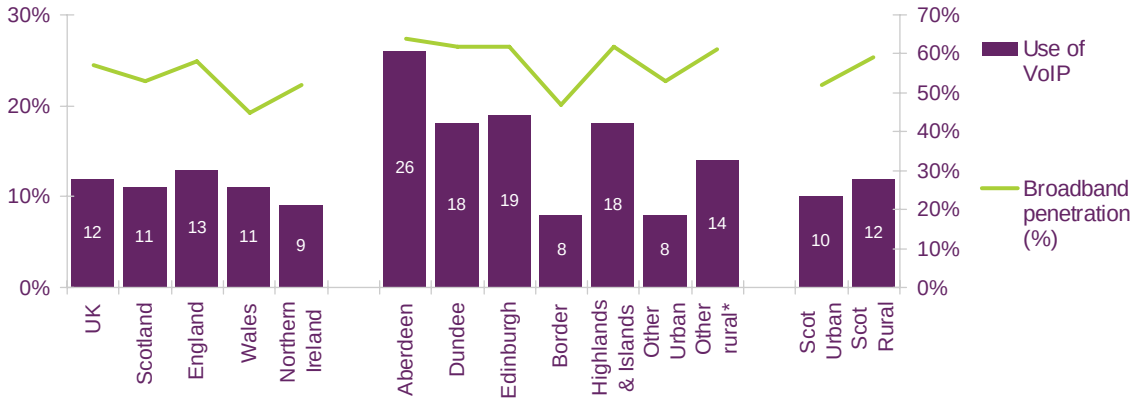


Source: Ofcom

Use of internet to make phone calls (VoIP)

Eleven per cent of adults in Scotland use the internet to make telephone calls, similar to the rest of the UK (12%). This has remained stable in Scotland since 2006, when it stood at 12%. Use was similar in rural areas (12%) and urban areas of Scotland (10%), but within the Scottish cities use of the internet to make telephone calls was highest in Aberdeen (26%)

Figure 3.10 Proportion of adults living in a household that has used Voice over IP



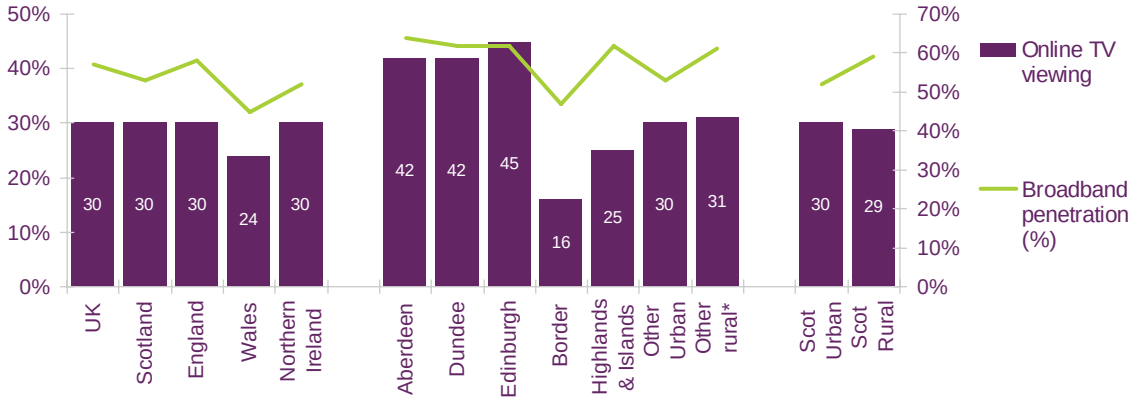
Source: Ofcom Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.
Sample size too small to report on Glasgow

Use of internet to watch television and video content

Just less than one in three people (30%) in Scotland have used the internet to watch television or video content – the same as the UK overall. There was no difference between rural (29%) or urban areas (30%), although higher use was apparent in most of the Scottish cities. The exception was Glasgow, where reported use was significantly lower than for Scotland as a whole. This is unsurprising, as broadband and internet take-up is well below average in Glasgow, especially among the C2DE social groups.

The higher use in Aberdeen, Dundee and Edinburgh might be partly due to the availability of Scottish Premier League highlights on the BBC website. Anecdotal evidence suggests that Dundee has a culture of early adoption of digital media, fuelled in part by the presence of the University of Abertay, which offers courses in computer games technology and design.

Figure 3.11 Proportion of adults living in a household that has used the internet to watch TV or video content



Source: Ofcom Base: Adults aged 15+

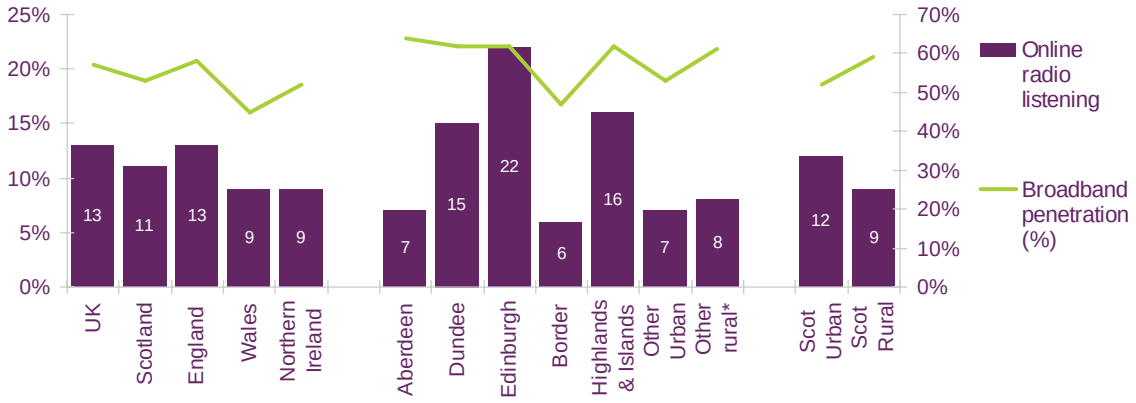
* Sample size less than 100. Apply caution and treat as indicative only.
Sample size too small to report on Glasgow

Use of internet to listen to the radio

One in ten (11%) adults in Scotland have used the internet to listen to the radio, a similar proportion to adults in the other nations; England (13%), Wales (9%) and Northern Ireland (9%). Across Scotland, use was only marginally higher in urban areas. Lower use of the internet to listen to radio was found in Aberdeen in comparison to the other cities in Scotland. Use in the Highlands and Islands (16%) was also relatively high.

Above average use of the internet to listen to the radio in the Highland and Islands is possibly related to some areas being unable to receive FM or DAB radio transmissions.

Figure 3.12 Proportion of adults living in a household that has used the internet to listen to radio



Source: Ofcom: Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.
Sample size too small to report on Glasgow

Mobile phone

The core 2G and 3G mobile phone technologies are able to carry voice, data and audiovisual content. In addition, the mobile handset can incorporate many more functions such as the ability to play music and games, and technologies such as Wifi, Bluetooth and GPS. This section looks at the proportion of adults who use their mobile phone to access the internet, watch video and listen to audio content.

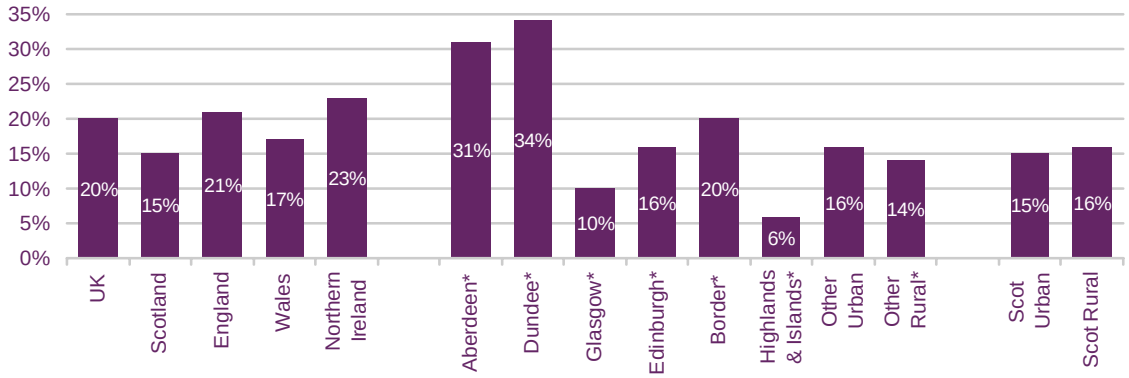
Use of a mobile phone to access the internet

Just over one in seven people (15%) in Scotland had used a mobile phone to access the internet, compared to 20% in the UK. Use was higher in Northern Ireland, and lowest in Scotland. The ability to access the internet with a mobile device is likely to be a factor here, as 3G ownership was below average in Scotland (and the lowest of the four nations).

By Scottish area, use of a mobile phone to access the internet was highest in Dundee (34%) (perhaps linked to a culture of early adoption of digital media) and in Aberdeen (31%), and lowest in the Highlands and Islands

(6%), although there were no significant differences between rural and urban areas overall. While mobile phone penetration was broadly similar in Dundee and Aberdeen to the rest of Scotland, 3G ownership was above average in these areas within Scotland.

Figure 3.13 Proportion of adults who have used a mobile phone to access the internet



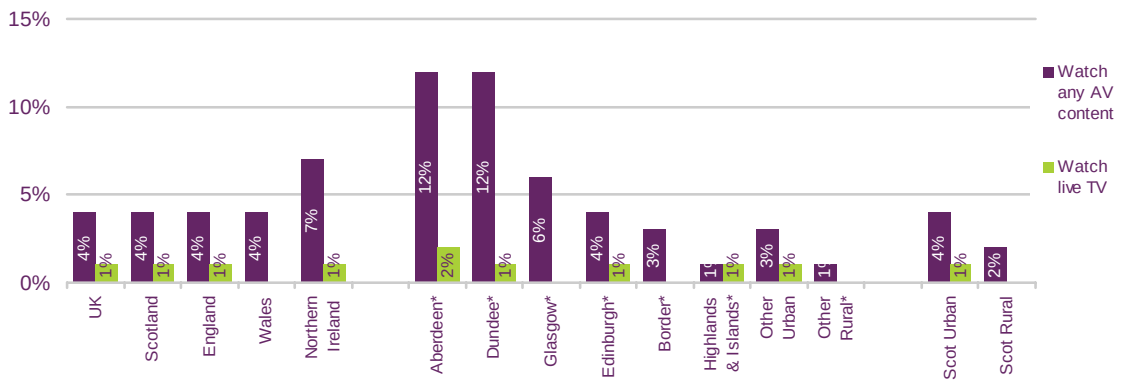
Source: Ofcom. Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.

Use of a mobile phone to watch audiovisual content

Four per cent of adults in Scotland claim to have had used their mobile to watch audiovisual content, with 1% saying that they had watched live television – the same as the proportion in England and Wales. In Northern Ireland a greater proportion of people claimed to have watched audiovisual content on their mobile phones.

Adults in urban areas of Scotland were more likely to be watching audiovisual content on their mobiles than those in rural areas (4% compared to 2%), whereas this difference was not seen between rural and urban areas in the other nations. Again, Aberdeen and Dundee reported the highest use (both 12%).

Figure 3.14 Proportion of adults that have used a mobile phone to watch audiovisual content



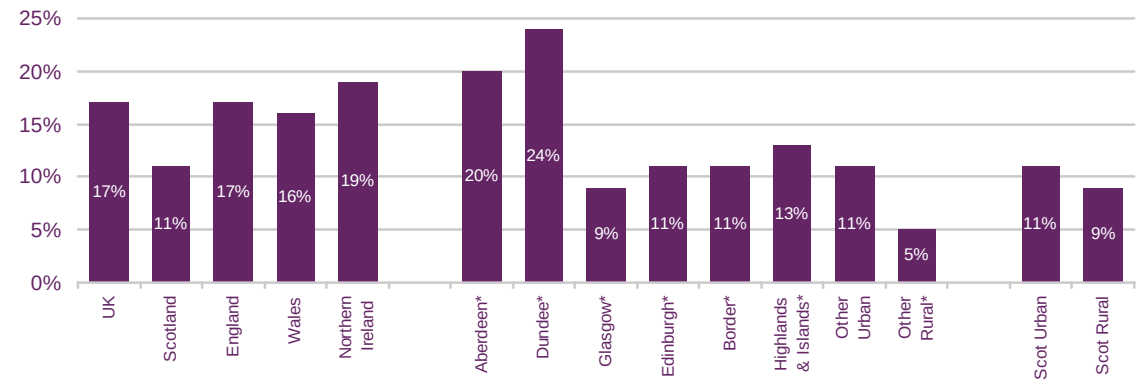
Source: Ofcom. Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.

Use of a mobile phone to listen to audio

Using a mobile phone to listen to audio content (such as radio, MP3 files and podcasts) was less common in Scotland (11%) than in the other nations; Northern Ireland (19%), England (17%) and Wales (16%) (Figure 3.15)

There was no significant difference between urban and rural areas, but again, there was above average use in Dundee (24%) and Aberdeen (20%), with little difference across other areas of Scotland. Greater 3G ownership is the most likely reason for higher use in these areas.

Figure 3.15 Use of mobile phone to listen to audio



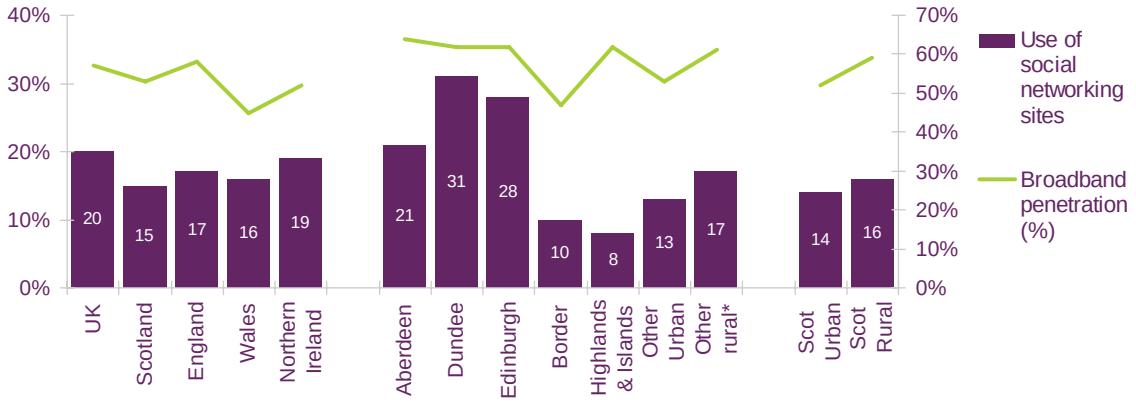
Source: Ofcom Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.

Social networking sites

Social networking sites are websites where users can create their own profiles using text, graphics and photos, join groups of people with common interests and send messages to other site members.

Despite wide media coverage, social networking through sites such as Bebo, Facebook or MySpace remains a minority activity among adults aged 15 years old and older. There are lower levels of use in Scotland than in the UK as a whole – 15% and 20% respectively. Scotland saw levels of use similar to Wales (15%) but lower than England and Northern Ireland (21% and 22% respectively).

Figure 3.16 Proportion of adults in a household that has used social networking sites



Source: Ofcom. Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.

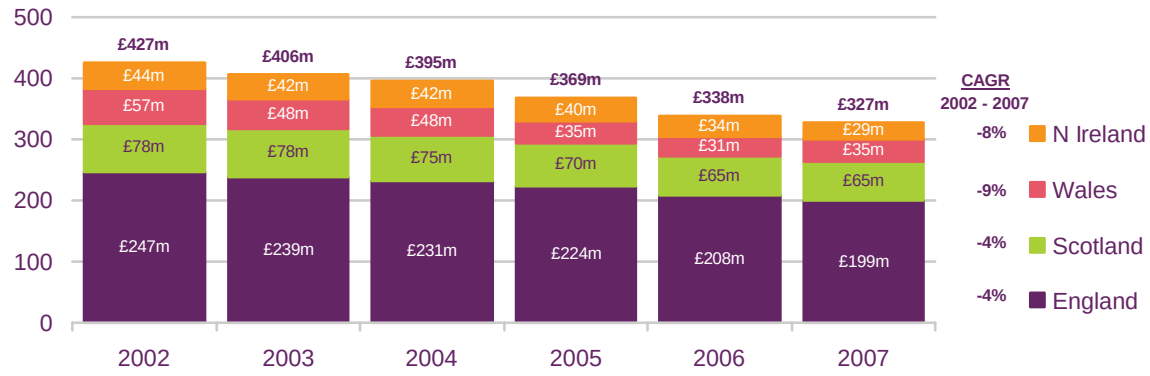
Across Scotland, use of social networking sites was highest in urban centres (Aberdeen, Dundee, Edinburgh), the exception again being Glasgow, where use was just 9%. This is unsurprising given the relatively low broadband penetration in Glasgow. Although 16% of adults in rural areas claim to use social networking sites and 14% of those in urban areas do this, the difference is not significant.

3.3 Television

PSB spend on originated output for the nations and English regions

In 2007 stv (Central and North) and the BBC spent a total of £65m on originated hours of television output for viewers in Scotland, accounting for 20% of BBC/ITV's UK-wide spend on national and regional output (while Scotland's population was 9% of the UK total). This represented a real-terms reduction of 0.5% on 2006, compared to a UK-wide reduction of 3%. With reductions in both Northern Ireland and in England, only in Wales did spend rise over the period (by 13%). The fall in Scotland was driven principally by stv's declining spend on non-news/current affairs output, which fell by nearly 30% between 2006 and 2007. Note that a proportion of ITV1 Border's hours and spend should also be included in the total for Scotland, but an allocation of its figures to England and Scotland is not available; as a result, they have all been allocated to England.

Figure 3.17 Total spend on nations and regions output by the BBC, ITV/stv/UTV



Source: Broadcasters. All figures expressed in 2007 prices.
Note: The BBC changed the way it calculated its spend figures from 2005 onwards. The figures for 2002 – 2004 are based on cost per hour averages, while those for 2005 - 2007 are actual spend figures. Comparisons over the period 2002-2007 should therefore be exercised with caution.

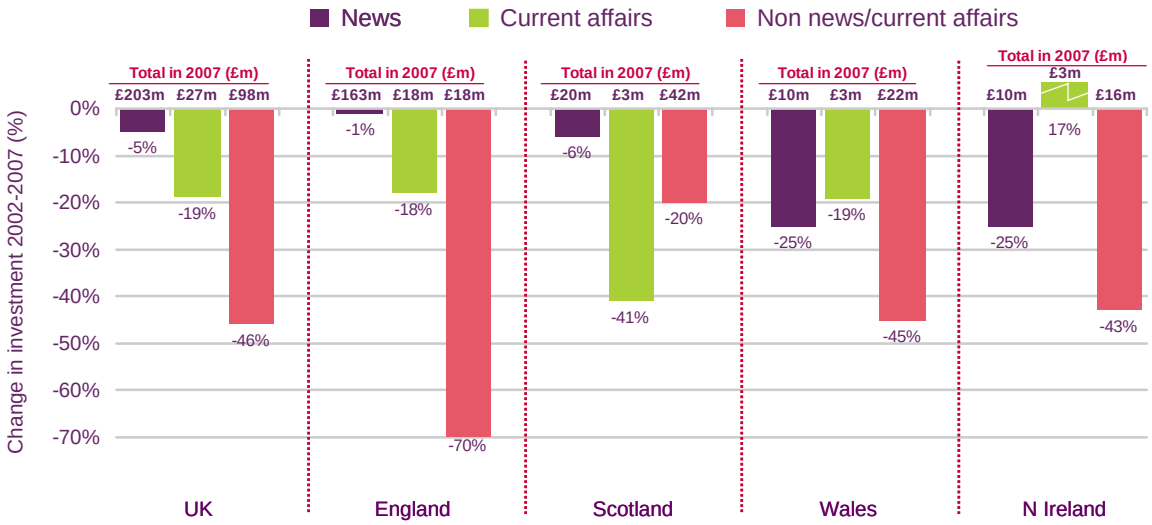
Other components of television spend have also shifted over the last five years, as new platforms (such as the internet and mobile) have been used to distribute nations and regions content to consumers. Since 2003 the level of spend on originated current affairs output for TV viewers in Scotland fell by 41% in real terms between 2002 and 2007. This reduction followed Ofcom's decision to allow stv to share its current affairs and non-news/current affairs programming between its two licences. Compared with the UK-wide average of 19% in this genre, this represented the highest proportional reduction across the UK's four nations – in Wales the reduction amounted to 19% and in England 18%; spend actually rose by 17% in Northern Ireland. But this reduction must be put into the context of the relatively small spend devoted to current affairs output in Scotland (and

in the other nations). In 2007, it totalled £3m and represented only 5% of the total spend by stv and the BBC on output for viewers in Scotland.

Spend on non-news/current affairs output fell least in Scotland, by 20% (or £11m) over the same period (spend fell by 43% in Northern Ireland, 45% in Wales and by 70% in England). Because of the large volume of spend that this genre attracts in Scotland, it accounted for much of the overall reduction between 2002 and 2007. Please note that the analysis here is concerned with combined BBC/ITV spend; the BBC changed the way it calculated its spend figures from 2005 onwards. The figures for 2002 – 2004 are based on cost per hour averages, while those for 2005 - 2007 are actual spend figures. Comparisons over the period 2002-2007 should therefore be exercised with caution.

Spend on TV news in Scotland fell by 6% (or £1m) over the same period, roughly in line with the UK-wide reduction of 5% but significantly less than the reduction in Wales and Northern Ireland (25% in each case).

Figure 3.18 Total TV spend on nations and regions output by the BBC, ITV/stv/UTV 2002 - 2007



Source: Broadcasters and Ofcom calculations. All changes are expressed in real terms.

Note: The BBC changed the way it calculated spend figures from 2005 onwards. The figures for 2002 – 2004 are based on cost per hour averages, while those for 2005 - 2007 are actual spend figures. Comparisons over this time period should therefore be treated with caution.

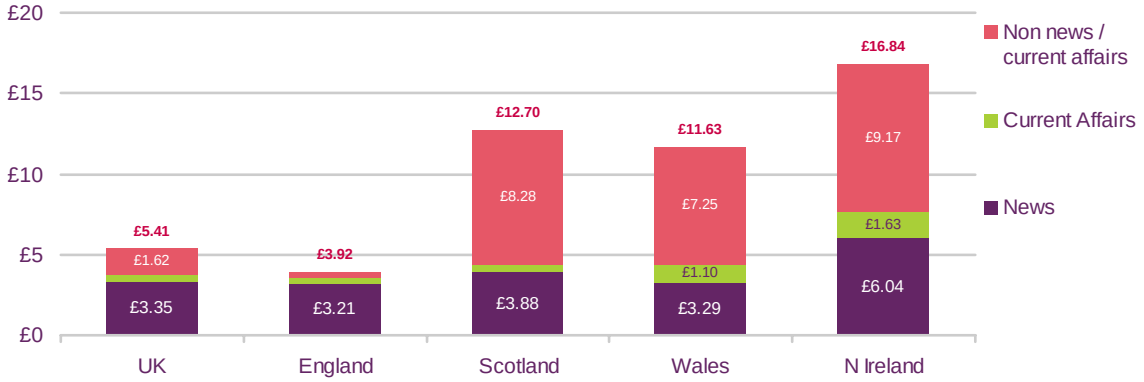
Not only was total originated spend in Scotland the second highest among the four nations, adjusting for population size reveals that viewers in Scotland also benefited from the second highest level of per-capita spend in 2007.

UK-wide spend stood at £5.41 per head in 2007, down 3% in real terms since 2006; the equivalent figure for Scotland (£12.70) contracted by 1% over the same period – only the figure for Northern Ireland was higher in 2007 at £16.84. In news and in non-news/current affairs, viewers in Scotland benefited from the second-highest levels of spend, at £3.88 and

£8.28 respectively per head of population. In common with Wales and Northern Ireland, spend on non-news/current affairs output accounted for a significant proportion of total spend.

Figure 3.19 Spend on nations and regions output by the BBC, ITV1/stv/UTV, 2007

Investment (£)



Source: Broadcasters and Ofcom calculations, 2007 prices

Programme output

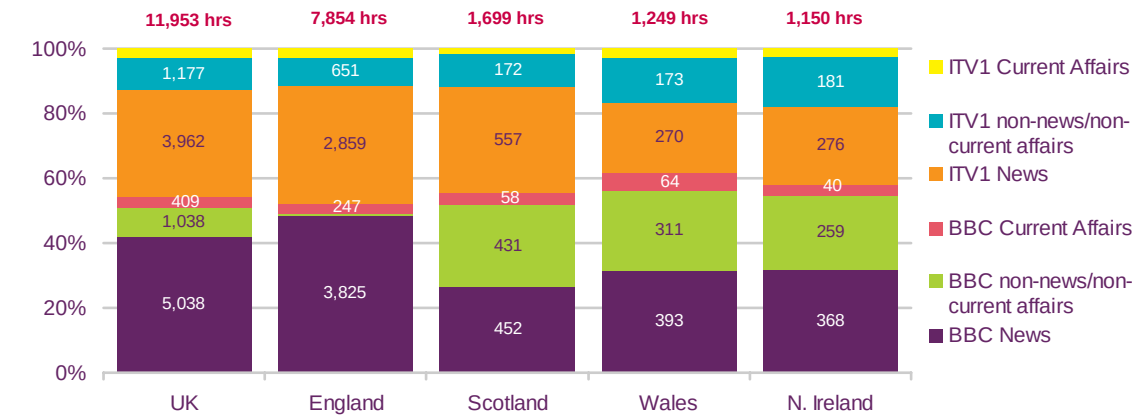
Hours of nations and regions news down by 10% since 2006

Across the UK, ITV1/stv/UTV and the BBC broadcast 11,953 hours of originated nations and regions' output in 2007, a figure that was almost unchanged on 2006. Fourteen per cent or 1,699 of those hours were broadcast in Scotland, up 25 hours, or 2%, on 2006 (66% were broadcast in England; 10% in Wales and 10% in Northern Ireland).

News output in Scotland accounted for 59% of the total – stv broadcast 557 hours during 2007, while the BBC contributed a further 452 hours. Non-news/current affairs output accounted for a further 603 hours or 35% of the total hours of originated output in 2007. Stv's output mix included a greater proportion of news in 2007 relative to Wales and Northern Ireland – because there are two stv licences in Scotland, each of which broadcasts its own regional news bulletin.

Figure 3.20 Hours of nations and regions output by genre and broadcaster, 2007

Proportion of output (%)

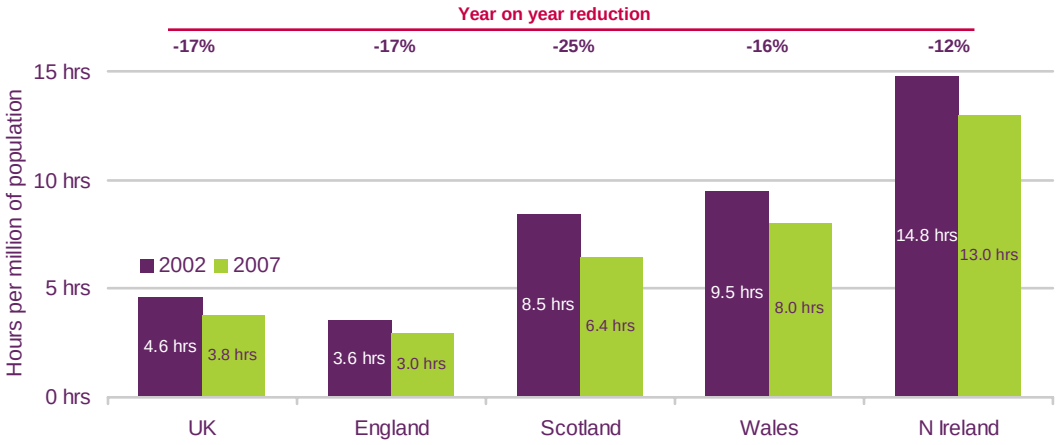


Source: Broadcasters

Per million viewers, hours of nations output fell most significantly in Scotland in 2007

Taking account of population size, ITV and the BBC broadcast 6.4 hours of output for every million viewers in Scotland in 2007. The equivalent figure for England was 3.0 hours, 8.0 hours for Wales and 13.0 hours for Northern Ireland. Output per million viewers in Scotland fell by 2 hours or 25% between 2002 and 2007; the most significant reduction in the UK. In England the equivalent proportional reduction was 17%, in Wales it was 16% while in Northern Ireland it amounted to 12%.

Figure 3.21 Total hours of nations and regions output



Source: Broadcasters

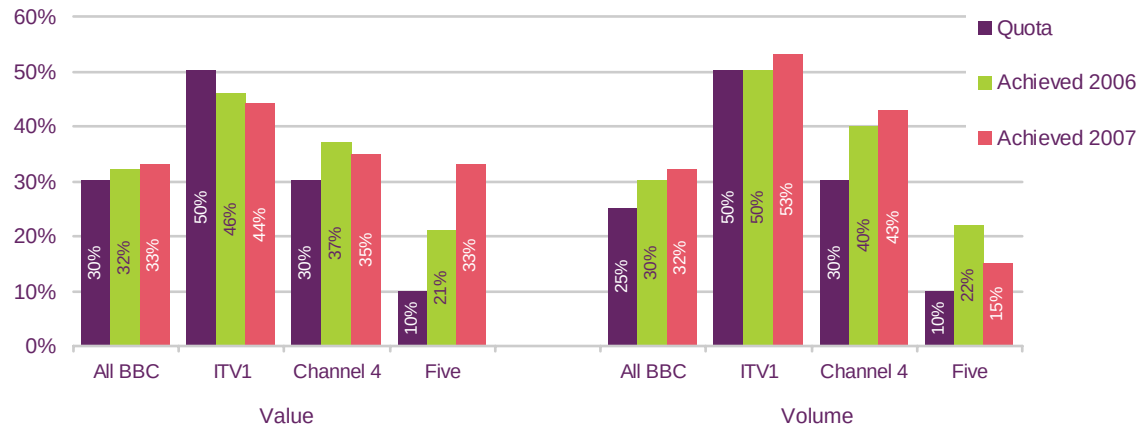
Out-of-London production quotas

In terms of network production in the nations and regions the Communications Act introduced a requirement for Ofcom to ensure that a suitable proportion and range of programmes are made outside the M25 and that a suitable proportion of money is spent in a range of production centres. The requirement applies across all PSBs (apart from S4C) and is represented in the form of volume and value quotas for out-of-London network production. In order to qualify against the out-of-London quota, programmes should comply with Ofcom's Regional Production Definition. This establishes three criteria: having a production base, and achieving

minimum spending levels for production budget and for production talent, in the nation or region concerned. Programmes must meet at least two of the criteria to qualify.

Figure 3.22 Performance against the Out-of-London production quotas

Percentage of network production produced outside London, by value and by volume



Source: Broadcaster returns[3]
Note: Figures for 2006 have been restated following Ofcom's audit of out-of-London production (see below)

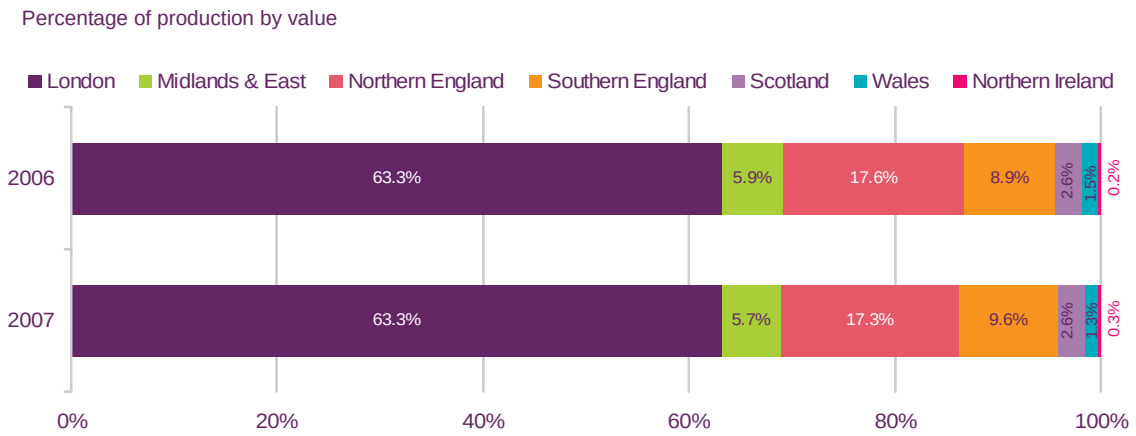
The out-of-London quotas apply by value and by volume. The BBC, Channel 4 and five each met their value and volume quotas in 2007.

While ITV1 met its 50% volume quota, achieving 53%, the proportion of ITV1 spend outside London in 2007 was 44% - significantly below the 50% minimum and therefore ITV1 failed to meet the value element of its out-of-London production quota in 2007. Ofcom believes it is important that broadcasters meet the minimum requirements set out in their licences (or in the case of the BBC their service licences). ITV's failure to meet the value element of its out-of-London quota is a serious matter, and one which is the subject of further consideration by Ofcom with a view to regulatory action.

The percentages shown in Figure 3.23 take account of changes made as a result of Ofcom's audit of out-of-London production (see below) and include restated figures for 2006. The post-audit data shows that ITV1 also failed to meet the quota by value in 2006, achieving a level of 46%.

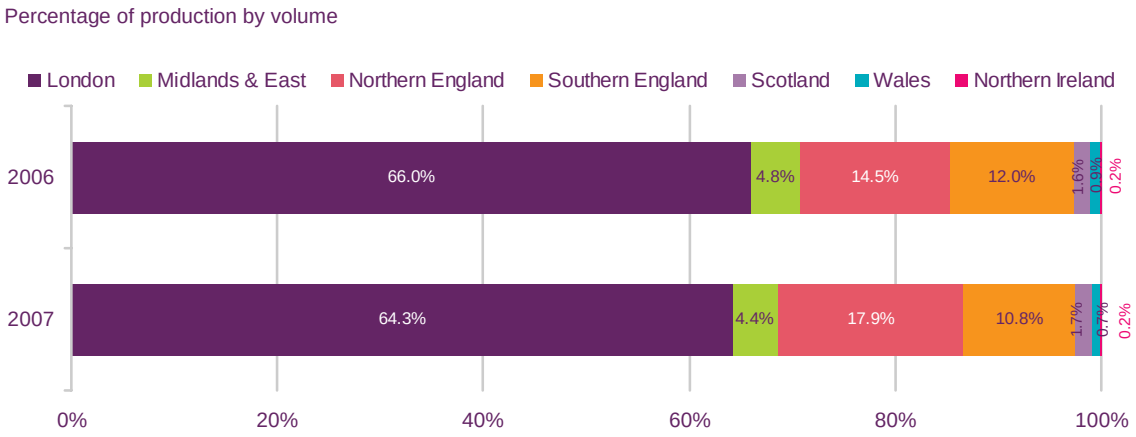
[3] These figures reflect data provided to Ofcom by the PSBs as at 2 May 2008 and may be subject to further minor amendments.

Figure 3.23 Expenditure on out-of-London production



Source: Broadcaster returns[1]
Note: Figures for 2006 have been restated

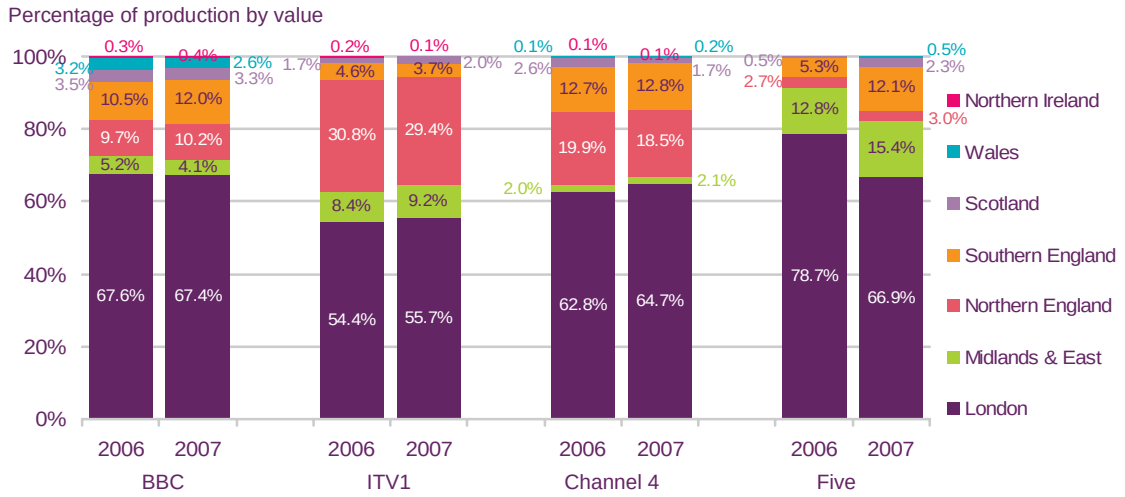
Figure 3.24 Volume of out-of-London production



Source: Broadcaster returns[1]
Note: Figures for 2006 have been restated

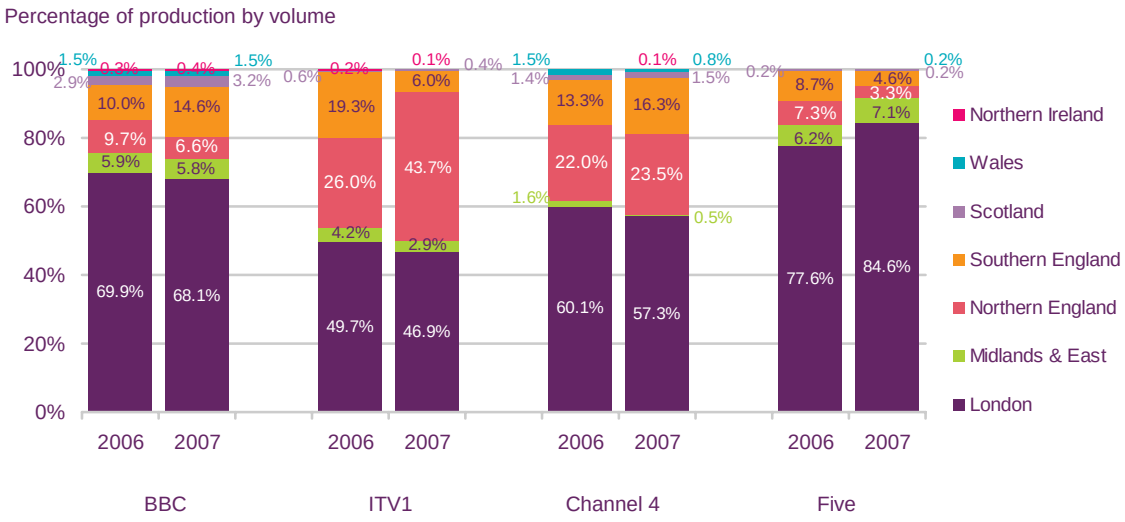
Across all of the PSBs out-of-London production and spend are concentrated in the English regions, with low levels of network production and spend in the three devolved nations. The level of network production and spend from Scotland remains low at under 3% by value and under 2% by volume in each of the last two years, which is a matter of concern. Ofcom will consider this issue further in the second phase of its PSB review, to be published in the autumn.

Figure 3.25 Breakdown of expenditure on production by broadcaster



Source: Broadcaster returns[1]
Note: Figures for 2006 have been restated

Figure 3.26 Breakdown of production volume, by broadcaster



Source: Broadcaster returns[1]
Note: Figures for 2006 have been restated

Ofcom audit of the out-of-London quotas

Pact and the Scottish Broadcasting Commission have each raised queries recently about some BBC programmes that appear to be labelled on-screen as nations and regions productions. On investigation by Ofcom, it was apparent that these programmes had not been reported to Ofcom as qualifying against the out-of-London production quota, despite their misleading on-screen credits.

However, recognising the importance of this issue, Ofcom decided to carry out a full audit of those programmes returned by the broadcasters as

qualifying against the out-of-London quotas in 2006 and 2007. We identified some programmes returned against the quota that we believed merited further investigation and asked the broadcasters to provide evidence to show the basis on which each one had qualified as an out-of-London production. Broadcasters also carried out their own reviews to check that all programmes had been correctly allocated.

On reviewing responses and evidence from the BBC and Channel 4, we found a small number of programmes that were wrongly returned against the out-of-London quotas. These changes resulted in relatively modest adjustments to the percentages achieved and the data presented in this section reflects those adjustments, including restated figures for 2006. There were no errors found in the data received from five.

In ITV's case, the number of programme amendments was more significant and ITV1 failed to meet the quota by value in 2006, as well as in 2007, as noted above. In addition, an issue arose over the methodology ITV1 used in calculating the quota figures. This concerned ITV's *Nightscreen* output – a text based service shown in the late night hours. This had been excluded from the total amount of originated programming for the purposes of calculation of the out-of-London quota percentage, on the basis that it is not a television programme, but simply a rolling teletext service. Ofcom's view is that this output cannot be excluded from the out-of-London production quota calculations and therefore the level of production by volume in 2006 and 2007 is several percentage points lower than would otherwise have been the case. The quota by value is not affected by this change in methodology.

Ofcom plans to assess whether and what further data might need to be sought from the broadcasters in relation to compliance with the out-of-London production quotas.

Digital TV penetration

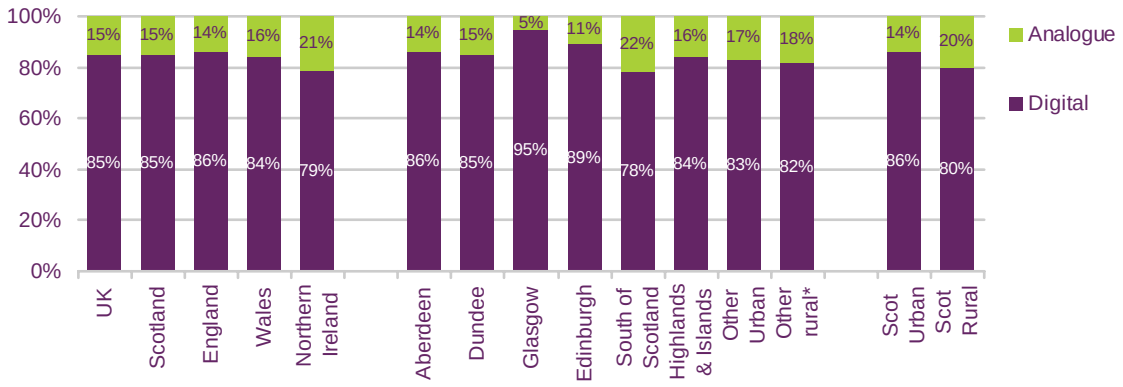
85% of households in Scotland now have DTV

By Q1 2008 digital television (DTV) penetration stood at 85% of individuals in Scotland (on a par with the UK average), and up nearly ten percentage points (pp) since 2006 – again in line with the UK-wide increase. This was higher than the equivalent figure for Wales (84%) and for Northern Ireland (79%) but fell just short of the figure for England where we estimate that 86% of homes have DTV.

Within Scotland, DTV take-up in urban regions stood at 86% - six percentage points ahead of the equivalent for rural areas (80%). Individuals in Glasgow and Edinburgh were most likely to have DTV (95% and 89% respectively) while those in the South of Scotland were the least likely (78%) (Figure 3.27).

Figure 3.27 Individuals' access to digital television at home, 2008

Proportion of individuals (%)



Source: Ofcom. Base: Adults aged 15+ with a TV in the household
* Base size less than 100. Apply caution.
Note: 'South of Scotland' is described as 'Border' in the telecommunications section.

DTV viewers in Scotland were more likely than those in the other UK nations to take a pay television package in Q1 2008. Fifty-six per cent of individuals there had access to pay TV - 7 percentage points higher than the UK average figure of 49% and 11 percentage points ahead of viewers in England, where the smallest proportion of DTV viewers took a pay package in the same period.

Among viewers paying for additional channels, those in Scotland were the most likely to take a cable service. Sixty-one per cent chose satellite, while 34% took cable (compared to the UK average of 29%) [1] The remainder took a pay television service over DTT.

Television consumption

Viewers in Scotland watched more TV than in any other nation during 2007

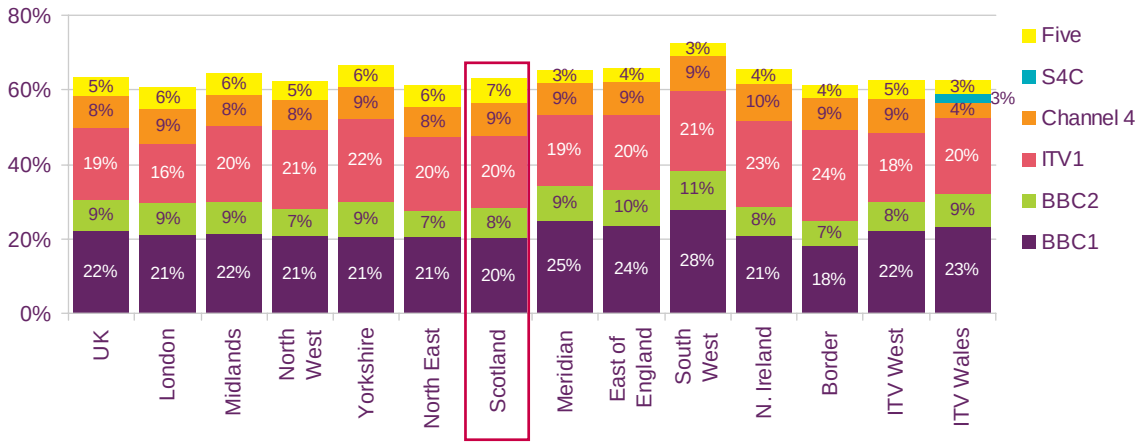
People in Scotland joined those in the North East of England as the heaviest television viewers in the UK during 2007 – watching an average of 4 hours per person per day – significantly higher than the UK-wide average of 3.6 hours. That said, average levels of viewing in Scotland fell by 5% between 2003 and 2007, running significantly ahead of the UK-wide reduction of 2.7% over the same period. TV reach in Scotland – which

totalled 92% in 2007 (0.5% below the UK average) – also fell by 2.5pp in the four years to 2007, ahead of the UK average reduction of 1.4 pp.

In 2007, the five main PSB channels commanded 63% of all television viewing in all homes in Scotland, matching their UK-wide average. On a channel-by-channel basis, BBC One attracted a share of 20% - 2 percentage points below the national average, while five put in its highest share in Scotland – 7% versus a national average of 5%.

Figure 3.28 Share of the five PSB channels in all homes, 2007

Audience share (%)



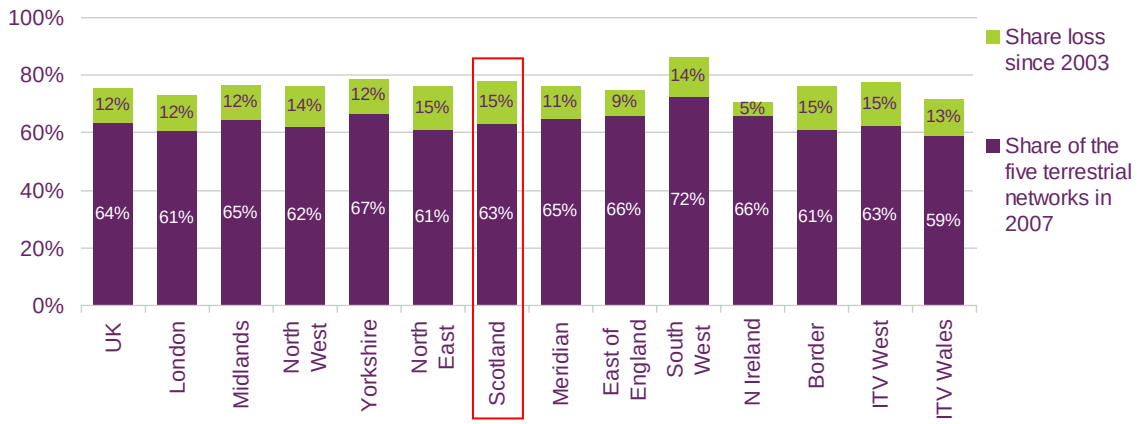
Source: BARB

The five main channels has lost 15 percentage points of share in Scotland since 2003

Across the UK, the five main channels collectively experienced a share reduction of 12 percentage points between 2003 and 2007. But along with the North East, ITV West and Border regions, the five main channels lost more share in Scotland – 15 percentage points – than anywhere else over the period (Figure 3.29).

Figure 3.29 Reduction in share of the five PSB channels in all homes, 2003 - 2007

Audience share (%)

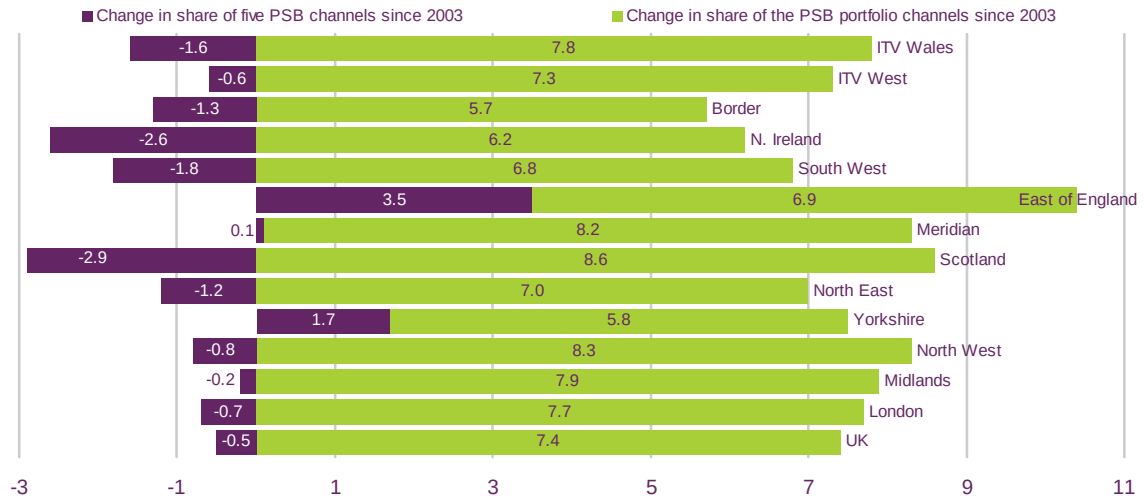


Source: BARB. Note that 'ITV Wales' excludes growth in the share of the full Channel 4 service.

PSB portfolio channels gain the most share in Scottish multichannel homes

In multichannel homes, the five main networks lost more share in Scotland between 2003 and 2007 than in any other part of the UK, shedding 2.9 percentage points of share (compared to the UK-wide average decline of 0.5 percentage points). But their additional portfolio channels (this includes all PSB channels except the five terrestrial channels) have collectively gained 8.6 percentage points of share since 2003. This was the largest increase in the UK (which averaged 7.4 percentage points over the same period) and comfortably offset the losses on the main channels. (Figure 3.30).

Figure 3.30 Net change in the audience share of the five main networks and the PSB portfolio channels, 2003-2007 – multichannel homes



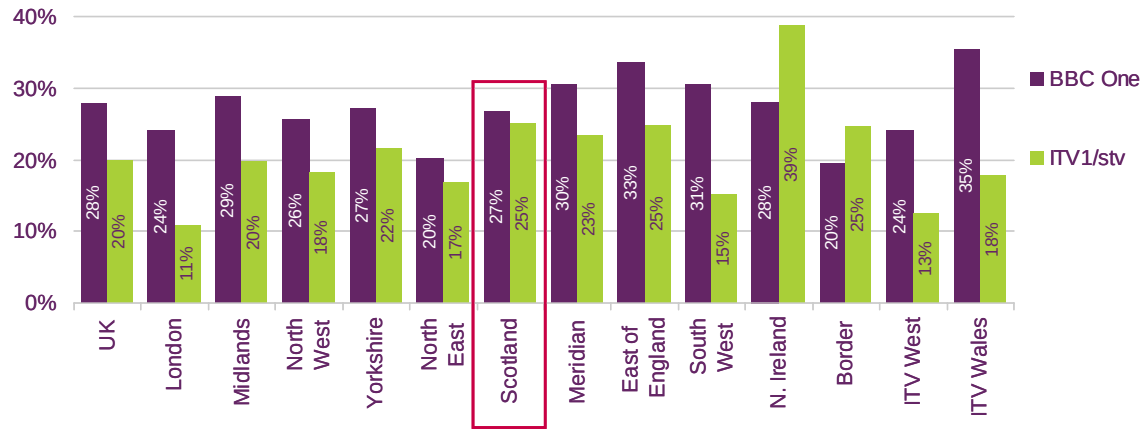
Source: BARB
Note: In the chart, the 'ITV Wales' bar for PSB channels includes Channel 4 *and* S4C. If only S4C is included, the reduction for the five PSB channels would be -2.8pp rather than -1.6pp. Also, the term "PSB portfolio channels" includes all PSB channels except for the five terrestrial channels.

Scottish news is important to viewers in Scotland

Early evening news bulletins on stv and BBC Scotland attracted shares of 27% and 25% respectively during 2007, relative to the UK averages of 28% and 20%, highlighting the success of stv in increasing the popularity of commercially-funded news in Scotland relative to other Channel 3 licensees in other parts of the UK.

Figure 3.31 BBC One and stv early evening news bulletin shares, 2007

Audience share (%)

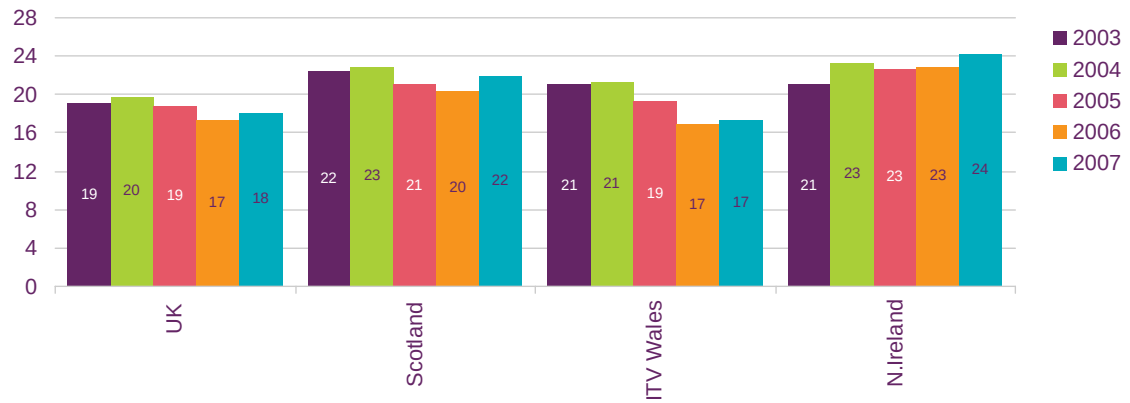


Source: BARB

Viewers in Scotland watched an average of 22 hours of early evening regional news bulletins per capita over 2007 – the second highest level of consumption in the UK after Northern Ireland with 24 hours. While viewing across the UK has fallen by an average of one hour since 2003, the level of consumption in Scotland has remained relatively constant (Figure 3.32).

Figure 3.32 Combined total hours of viewing of early evening regional news bulletins per person per year, all homes in 2003-2007

Hours



Source: BARB
Note: Analysis done on genre regional news, start time 17:55-18:35, 10mins+ duration, channels BBC1 and ITV1 combined, Monday through Friday

Despite relatively high levels of audience share for local television news, just 41% of people in Scotland claimed that TV was their main source for local news. This was 5 percentage points lower than the UK average, with newspapers remaining popular for local news in Scotland, where 30% claimed that it was their primary source relative to a UK average of 27%.

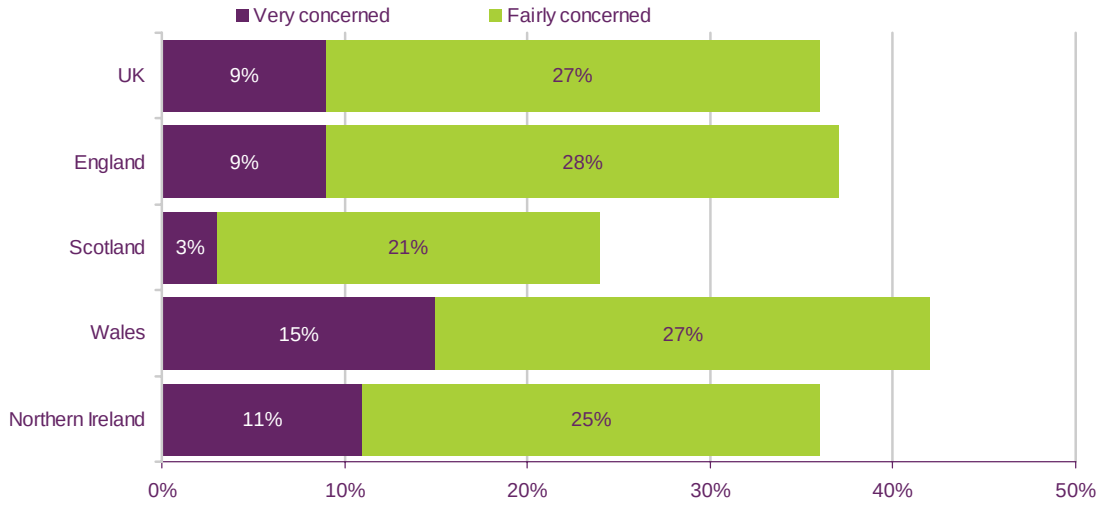
Attitudes towards television content

24% of those in Scotland are concerned about TV content

In May 2008 we published the Adult Media Literacy Audit which found that 24% of individuals in Scotland were either fairly or very concerned about what was on television. This was the lowest level of concern of any nation, and 12 percentage points lower than the UK average.

Figure 3.33 Concern about TV content

Overall, how concerned are you about what is on TV?



Source: Ofcom, Base: All adults aged 16+

3.4 Radio

The radio industry

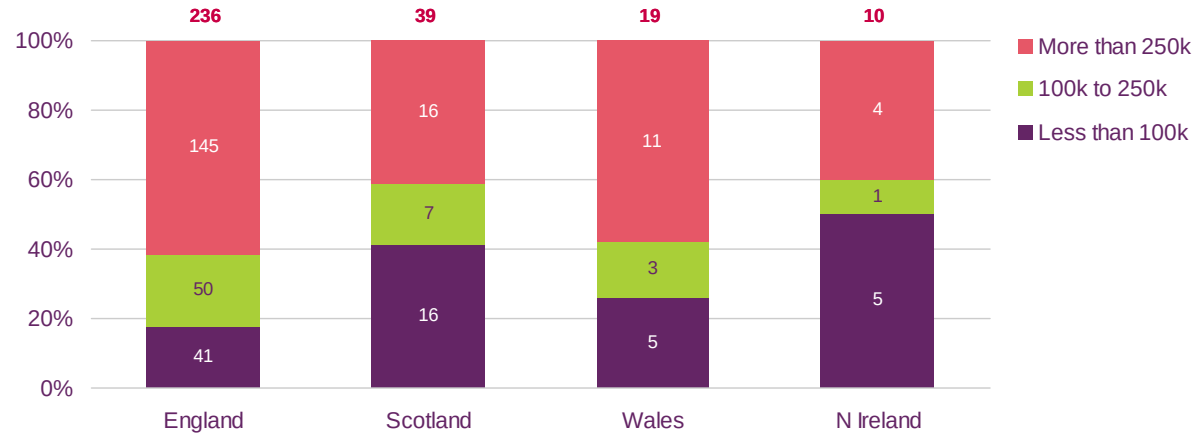
Scotland has higher number of commercial stations per capita than Wales or Northern Ireland

Scotland has 39 local commercial analogue radio stations, equivalent to around 13% of the UK's total of 303. This compares to the ten local commercial stations licensed in N. Ireland, 19 in Wales and 236 in England. By per head of population this means that there is a choice of around 4.0 local commercial stations on average. When including BBC stations; BBC Radio Scotland and nan Gaidheal, listeners in Scotland therefore have access to around 6.0 local or national stations on average. Scotland also currently has 20 community radio stations awarded with 11 of these already broadcasting.

The size of population coverage by commercial stations in Scotland is evenly split between smaller and larger conurbations, with sixteen (41%) of the 39 local commercial stations in Scotland cover smaller populations of fewer than 100,000, while sixteen (41%) cover larger populations of over 250,000 people. With the remaining seven stations covering medium-sized territories of between 100,000 and 250,000 people. This distribution pattern

is similar to the one in Northern Ireland, with many stations serving smaller dispersed communities alongside the larger city stations in Scotland.

Figure 3.34 Distribution of radio stations by population coverage



Source: Ofcom

BBC spend on nations radio lower in Scotland than in Wales and Northern Ireland on a per head basis

BBC nations/local radio spend in Scotland totalled £34.6m in 2006/07, (compared to £29.9m in Wales, £15.9m in Northern Ireland and £129.3m on local radio in England). This equates to around £7.07 per person in Scotland lower than the average spend per head in Wales (£10.48) and Northern Ireland (£9.64) but higher than the average spend per head on nations / local radio in England (£2.65). Expenditure on nations / local BBC radio in Scotland showed an increase of £2.3m on last year, equivalent to £0.47 per head.

Figure 3.35 BBC spend on national / local radio programming 2006-07

Source: BBC Annual Report and Accounts 2006/07

Note: The revenue data above have been compiled on a new basis by the BBC to illustrate UK public services expenditure by service. The annual increase is also calculated using the new basis for consistency.

BBC spend per listener hour highest in Scotland at £1.16 per hour

The cost per listener hour for the BBC national or local stations can be calculated by dividing expenditure on the BBC nations stations or local radio stations in England by the total number of listening hours to those stations.

On a UK-wide basis, BBC nations and local programming cost 47p per listener hour in the financial year 2006/07 (Figure 3.36). In the nations, expenditure was highest in Scotland, where BBC Radio Scotland and Radio nan Gaidheal cost £1.16 per listener hour. This compared with £0.97 per listener hour in Wales for Radio Wales and Cymru. Expenditure in Northern Ireland for BBC Radio Ulster and Radio Foyle was lower at 55p per listener hour.

The cost of the English regional stations was lower than the other nations at 36p per listener hour.

Figure 3.36 BBC spend per listener hour 2006/07

Source: BBC annual report and accounts 2006/07, RAJAR 2006/07

Commercial radio revenues highest in Scotland per capita and fastest growing in 2007

Three main groups own around half (19) of the 39 local commercial stations in Scotland. The Bauer radio group (formerly Emap) holds the most licences with 14, followed by GMG with three and UTV with two. Compared to the other UK nations, a large proportion (45%) of the stations in Scotland are independently owned, with 17 stations not attached to a radio group. Revenue generated by the commercial stations in Scotland reached £56m in 2007, up by 14% from £49m in 2006. This was equivalent to around 10.6% of the UK total of £526m. Adjusting for population size, local commercial revenue in Scotland was equivalent to £11.46 per head in 2007, up by £1.53 on £9.93 in 2006. This was significantly higher than the other nations and the UK average of £8.11 per person.

Figure 3.37 Local commercial radio revenue per head in 2007

Source: Ofcom, operator net broadcasting revenue returns 2007

Note: Chart shows net broadcasting revenues as based on returns received by Ofcom for the year 2007. The UK total also includes revenues for the UK wide commercial stations: Classic FM, TalkSPORT, and Virgin 1215

Radio service availability

DAB coverage increased in Border area to complement digital TV switchover

Analogue radio services are available to most people in Scotland and ownership of analogue radio devices is almost universal. DAB digital radio covered around 80% of the population in Scotland by 2006. Digital One estimated its overall coverage of the UK population to have reached 90% by March 2008, while the BBC estimated its coverage at 86% with plans to increase this 90% in 2008/09.

There are currently ten DAB transmitters broadcasting the two national multiplexes in Scotland (operated by the BBC and Digital One), with transmitters based in areas including Aberdeen, Ayr, Edinburgh, Glasgow, Moray Firth, Perth, Tayside and Selkirk. There are a further 24 local commercial DAB transmitters supporting the seven local multiplexes; based on sites including Inverness, Aberdeen, Dundee / Perth, Central Scotland, Glasgow, Edinburgh, and Ayr. Meanwhile commercial DAB operator Digital One plans to launch new transmitters in areas including the south of Edinburgh and around Dumfries during 2008/09.

In October 2007, the BBC and Digital One launched a new transmitter in the Border region at Selkirk. The transmitter covers around 50,000 people in the area including nearby towns: Hawick, Galashiels, and Melrose. New DAB transmitters in the Border area have been timed to coincide with the digital television switchover process starting in the region during 2008.

Digital radio listeners in Edinburgh and Glasgow currently have a choice of 31 DAB services including the 15 UK-wide stations (11 BBC and 4 commercial UK stations), and a further 16 available via the local and regional multiplexes, including BBC Radio Scotland and BBC Radio nan

Gaidheal. People in Ayrshire have access to a similar number, with 29 DAB services, while listeners in Central Scotland have a choice of 24 and people in the Aberdeen area 22. In the Dundee / Perth region, 22 stations are currently available on DAB, while listeners in the Inverness area have access to 18.

The two national Scottish BBC stations Radio Scotland and Radio Nan Gaidheal, are available on all digital platforms including DAB radio, DTV and the web.

Figure 3.38 National BBC radio stations available on digital radio in Scotland

BBC station	DAB area	bbc.co.uk	Freeview	Sky	Virgin Media
BBC Radio Scotland	Scotland	www.bbc.co.uk/scotland/radioscotland	719	116	930
BBC Radio nan Gaidheal	Scotland	www.bbc.co.uk/scotland/alba/radio	720	139	934

Source: BBC

Radio listening

Radio listening lower in Scotland than in other nations

Radio services reached 88.6% of the adult population in Scotland on a weekly basis in 2007, (down slightly by 0.8 percentage points from 89.4% in 2006), lower than the UK average of 90.1%. Average listener hours per week in Scotland were almost 23 in 2007, again slightly below the UK average (Figure 3.39)

Figure 3.39 Levels of radio listening in 2007

Average weekly listening hours and percentage reach of population

	England	Scotland	Wales	Northern Ireland	UK TOTAL
Average weekly listening	23.5 hours	22.9 hours	24.4 hours	23.1 hours	23.5 hours
Reach	90.3%	88.6%	90.5%	89.6%	90.1%

Source: RAJAR 2007

Radio services consumption by service type

Local commercial the most popular form of radio listening in Scotland

Local commercial radio services accounted for 43% of all listening in Scotland in 2007, more than any other radio sector and higher than the UK average of 32%. This was significantly higher than the UK average of 32% of listening to local commercial radio. Of the commercial radio stations in Scotland, Real Radio covering central Scotland was the most listened to, attracting 789k adult listeners per week. This was followed by Radio Clyde with 620k weekly listeners in the Glasgow and Western Scotland area, then Radio Forth with 316k listening in the Edinburgh, Lothians and Fife areas.

The higher level of listening to local commercial radio was broadly at the expense of the BBC Network stations (Radio 1, 2, 3, 4, Five), which, at 35% of total listening, was 9% lower than the UK average. Meanwhile listening to national services from the BBC (BBC Radio Scotland and nan Gaidheal) and the UK-wide commercial stations (Classic FM, TalkSPORT and Virgin) was broadly in line with the UK average.

Figure 3.40 Share of listening hours by nation

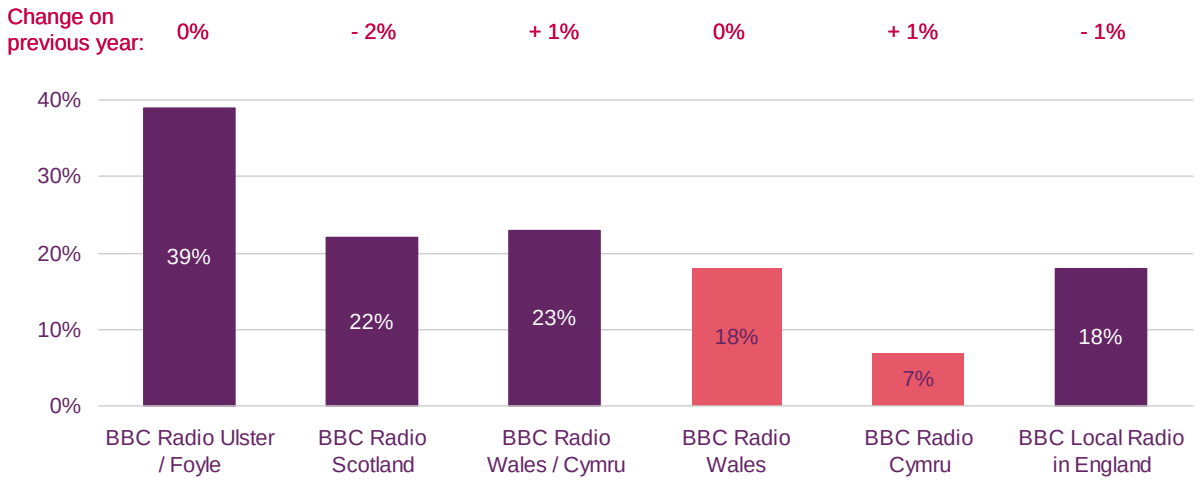
Source: RAJAR 2007

Weekly reach of BBC Radio Scotland / BBC Radio nan Gaidheal falls 4%

930k adults (22%) listened to BBC Radio Scotland/ nan Gaidheal on an average week in 2007, down slightly from an average of around a million listeners per week in 2006. This was similar to Wales, where BBC Radio Wales / Cymru reached 23% of adults a week, but higher than listening to local BBC services in England (18%), and lower than in Northern Ireland (39%). Listening to BBC Radio Scotland/nan Gaidheal showed a decrease on last year, with adult weekly reach down by 4% and listening hours down by 8% year on year.

Figure 3.41 Weekly listening to national / local BBC services

% of adult population reached per week



Source: RAJAR Q4 2007

Ownership of DAB digital radio sets

In 2007 showed 21% of individuals in Scotland owned a DAB digital radio set, marginally less than in England (22%) but higher than in Wales (14%) and Northern Ireland (13%). Ownership in Scotland increased by 1 percentage point during the year. Across the UK, levels of DAB ownership increased most in urban areas, up by 4%.

Awareness of DAB digital radio in Scotland was in line with the other nations, with around 74% of people having heard of the term 'DAB digital radio' compared to a UK average of 75%. Meanwhile the claimed likelihood of obtaining a DAB digital radio set was also similar to the rest of the UK, with 15% of respondents saying they would do so in the next six months, the same as in Wales and Northern Ireland but slightly lower than in England (18%).

Figure 3.42 Ownership of DAB digital radios

Source: Ofcom. Base: All who listen to radio

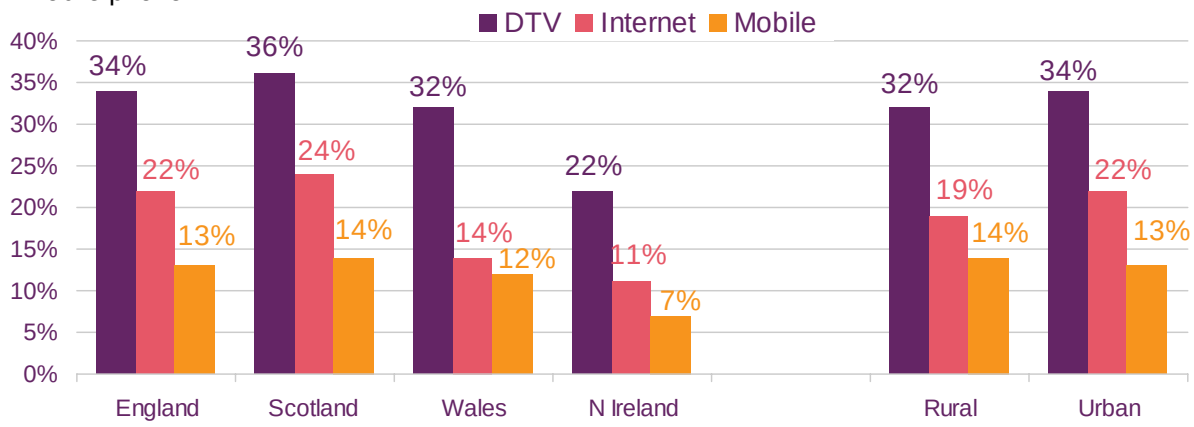
Listening to radio via DTV, internet or mobile phone highest in Scotland

In 2007, just over a third (36 %) of radio listeners in Scotland had used digital television to listen to radio stations, (with 19% using this feature on a weekly basis). This was the highest level of DTV listening of the UK nations, ahead of England (34%) and Wales (32%), and in Northern Ireland (22%).

Listening to radio via the internet had been tried by almost one in four people (24%) in Scotland, (with 13% listening online on a weekly basis). This was slightly higher than online listening in England at 22% and significantly higher than in Wales (14%) and Northern Ireland (11%). Meanwhile listening to radio via mobile phone was a feature used by almost one in seven (14%) of people in Scotland, again higher than in England (13%) and Wales (12%), and Northern Ireland (7%) (Figure 3.43).

Figure 3.43 Listening to radio via DTV, internet, mobile phone

Proportion of respondents (%) who have ever listened to radio via DTV, Internet or mobile phone



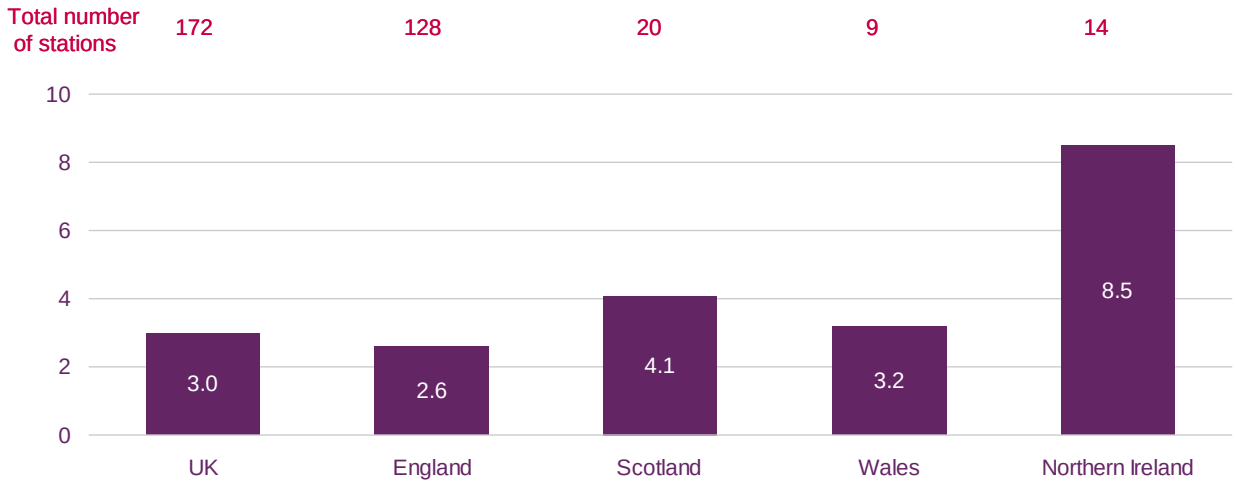
Source: Ofcom . Base: All who listen to radio

Community radio licence awards 2007/08

Community radio licences are awarded to small-scale operators working on a not-for-profit basis to serve local areas or particular communities. The number of community stations has increased over the last couple of years with many new licences issued by Ofcom for services throughout the UK's nations and regions; Scotland currently has 20 community radio stations, with 11 awarded over the past year. Of the 20 stations 11 are already broadcasting to local communities in Aberdeen, Cumbernauld, Edinburgh, Glasgow, Govan, Leith, Midlothian and Orkney. Northern Ireland has more community stations capita at an average of 8.5 per million people, fewer than Northern Ireland. Scotland has the next highest with 4.1, followed by Wales (3.2) and England (2.6) (Figure 3.44).

Figure 3.44 Community radio stations in the UK

Number of community radio stations, (average per million head of population)



Source: Ofcom

Community station awards in 2007/08

Scotland community awards: 2007 saw further community station awards for Scotland with 11 licences granted between May and September 2007. New stations covered many different areas of the country including communities in: Aberdeenshire, Argyll, Ayrshire, Borders, Dumfries, Glasgow, Isle of Bute, Inverness, Queensferry, Renfrewshire and Strathspey (Figure 3.45).

Figure 3.45 Community station awards for Scotland 2007/08

Community station	Location
Alive Radio	Dumfries
Bute FM	Isle of Bute
Jubilee FM	North and South Queensferry
Ness FM	Inverness
Speysound Radio	Badenoch & Strathspey
Mearns FM	Stonehaven and the Mearns, South Aberdeenshire
Pulse FM	East Renfrewshire
Brick FM	St Boswells, Borders
Dunoon Community Radio	Dunoon, Argyll
Celtic Music AM	Glasgow
3TFM	Stevenston, Saltcoats and Ardrossan, North Ayrshire

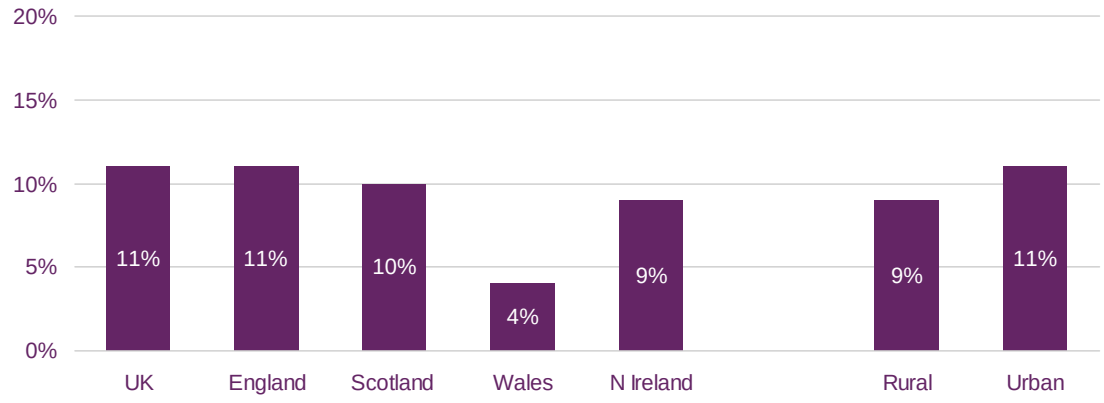
Source: Ofcom

Use of radio for local news - Scotland

Ten per cent of people in Scotland cited radio as their main source of local news, similar to the UK average (11%).

Figure 3.46 Use of radio for local news

What, if anything, is your main source of news about what is going on in your area? (Local and regional news)



Source: Ofcom Base: All who listen to radio

3.5 Telecommunications

Availability

Fixed-lines

Fixed telephony services over the public switched telephone network (PSTN) are available to all of the UK population as a result of the universal service obligation (USO) which is provided by British Telecom (BT) and Kingston Communications in Kingston-upon-Hull.

Under the USO all UK households have access to a landline at a standard charge, although additional charges for connection apply where the cost of installation is in excess of £3,400. The USO mandates BT and Kingston to provide affordable telephone services for poorer and less well-advantaged members of the community in the form of special pricing schemes.

As a result of the USO, there are no significant issues relating to the availability of fixed voice telephony services anywhere in the UK, although a small number of single dwellings in remote locations may have difficulty in connecting to the network.

Narrowband internet

The availability of narrowband internet services (defined as an internet connection achieved by means of dial-up over a twisted copper pair or coaxial cable at speeds of less than 128kbit/s) is the same as that of fixed-line voice services as the only equipment required to access narrowband services (apart from a standard fixed-line) is a suitably equipped personal computer.

Over recent years the use of narrowband internet services has declined severely as the availability of broadband internet services has increased and as prices for these faster services has fallen. According to the Office for National Statistics[4], at the end of 2007 less than 10% of UK internet connections were narrowband, compared to 56% three years previously.

Broadband internet

The two main technologies used to supply broadband services in the UK are digital subscriber line (DSL), supplied over a standard copper twisted pair connected to a local telephone exchange, or using cable modem technology over a cable operator's hybrid fibre-coaxial network.

Ofcom figures show that at the end of 2007 DSL connections, including those provided using Local Loop Unbundling (LLU), accounted for 78% of non-corporate broadband connections, compared to 76% a year previously. Cable modem broadband connections made up 22% of total connections at the end of 2007. Despite growth in the availability and take-up of wireless and satellite broadband services, in particular those using WiMAX and cellular technology, such connections accounted for less than 1% of the total at the end of 2007. Data are not currently available on take-

[4] http://www.statistics.gov.uk/pdfdir/int0208.pdf

up of cellular wireless broadband connection, and these are excluded from our connection figures.

DSL broadband availability

Figure 3.47 shows that almost all UK households (over 99.9%) were connected to a DSL-enabled BT local exchange at the end of December 2007, although not all of these will be able to obtain broadband services (see the box on "not-spots" below). DSL availability is higher than that of cable modem services in all areas of the UK, meaning the availability of DSL can be used as a model for overall UK broadband availability.

Broadband "not-spots"

Not all delivery points in an area served by a DSL-enabled area exchange will be able to obtain broadband services, for reasons including distance from the exchange and network quality.

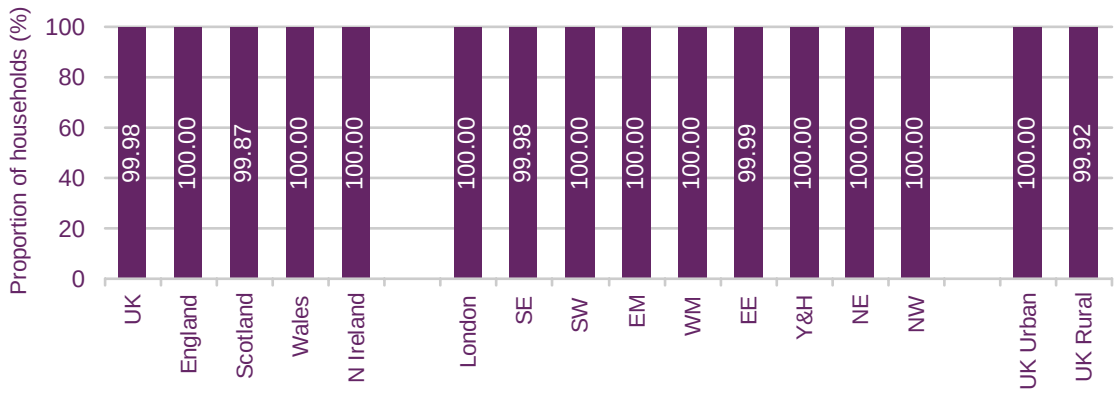
BT estimates that 99.6% of its network is able to support broadband speeds of 512kbit/s and above. However, even with availability at this high level there will still be a significant number of households in so-called "not-spots", that is areas unable to receive DSL broadband services, although the exact scale of the problem is difficult to quantify.

Households in "not-spots" will not be able to access or obtain the full experience of using services which require higher or consistent bandwidth such as VoIP and video streaming. As such, these consumers suffer a substantial detriment, and as both broadband take-up and the use of higher-bandwidth services increases, the scale of the problem is becoming more apparent.

The proportion of households connected to a DSL-enabled exchange was 99.9% in Scotland at the end of 2007, slightly lower than levels in England, Wales and Northern Ireland (all above 99.9%). The proportion of households connected to a DSL-enabled exchange in Scotland was over 99.9% in urban areas and 99.5% in rural areas. This pattern was reflected in the UK-wide figures, where the proportion of households in urban areas connected to a DSL-enabled exchange was slightly higher than in rural areas.

In all of the individual UK nations the proportion of households connected to a DSL-enabled exchange was above 99.9% in both urban and rural areas except Scotland. The figures therefore suggest that the availability of broadband services may be more of an issue in rural areas of Scotland than it is across the rest of the UK.

Figure 3.47 Proportion of households connected to a DSL-enabled exchange



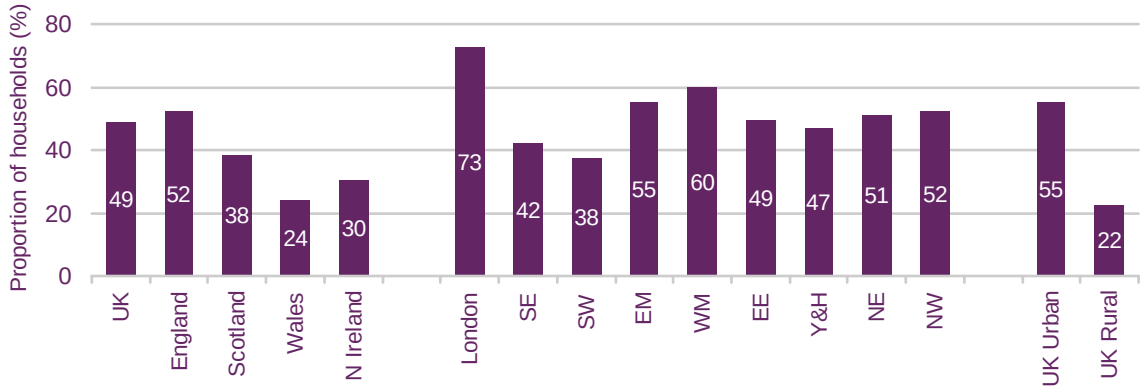
Source: Ofcom/BT, December 2007 data

Cable modem broadband availability

Data obtained from Virgin Media show that at the end of 2007 almost half of UK households (49%) were passed by its broadband-enabled cable network, although a small proportion of these will not be able to receive cable broadband services (Figure 3.48).

The proportion of households passed by Virgin Media's broadband-enabled cable network was highest in England among the nations at 52%, and lowest in Wales at 24%. In Scotland the figure was 38%.

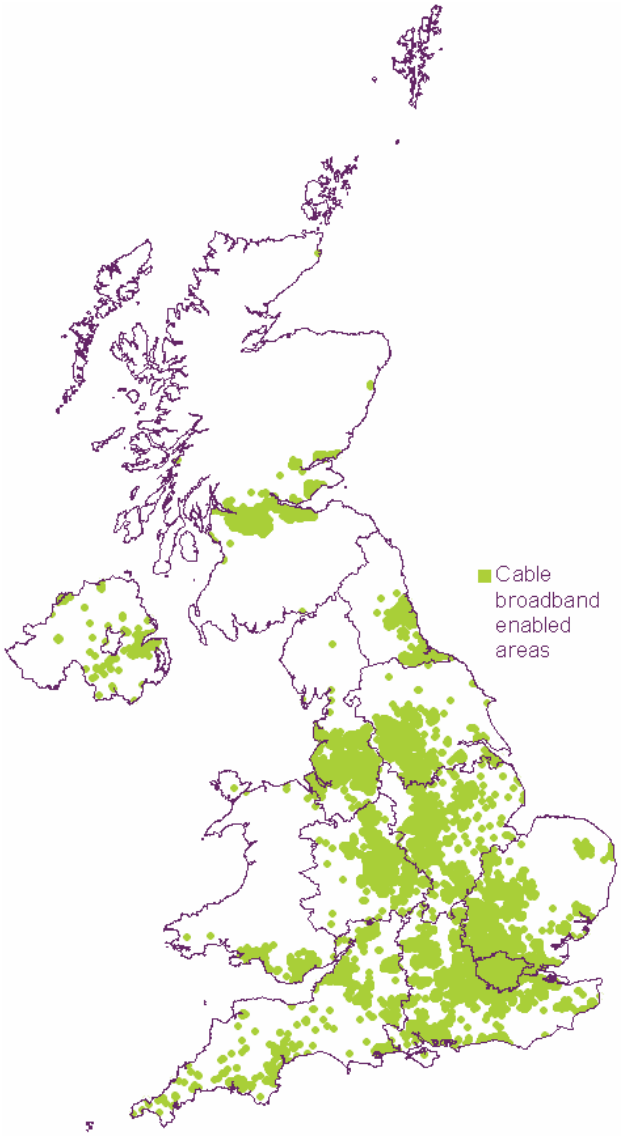
Figure 3.48 Proportion of households passed by Virgin Media broadband



Source: Ofcom/Virgin Media, December 2007 data
Note: The basis on which figures have been calculated is different to that used in the 2007 report

When rolling out their networks the original cable franchisees concentrated network build in areas with high population density in order to maximise the potential return on their investment. This is clearly reflected in Figure 3.49 below, which shows that availability of Virgin Media cable broadband services is concentrated in large urban conurbations.

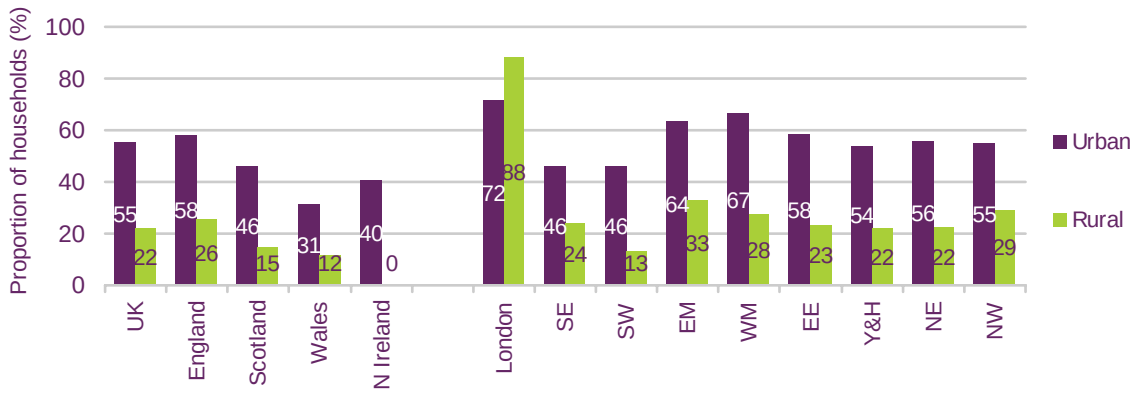
Figure 3.49 Map showing areas where Virgin Media cable broadband is available



Source: Ofcom/Virgin Media, Q4 2007 data

Households located in urban areas in the UK were more than twice as likely to be able to receive cable broadband services as those in rural areas (Figure 3.50). This pattern was reflected in Scotland, where just under half (46%) of households in urban areas were passed by Virgin Media's broadband network, compared to just 15% in rural areas.

Figure 3.50 Coverage of urban and rural areas by Virgin Media broadband



Source: Ofcom/Virgin Media, December 2007 data
Note: The basis on which figures have been calculated is different to that in the 2007 report; The urban rural split for Northern Ireland is based on the location of the local exchange rather than the area which it covers (as is used for the other nations). As such, the rural figure is likely to be understated and data are not directly comparable to those for the other nations

Local loop unbundling broadband availability

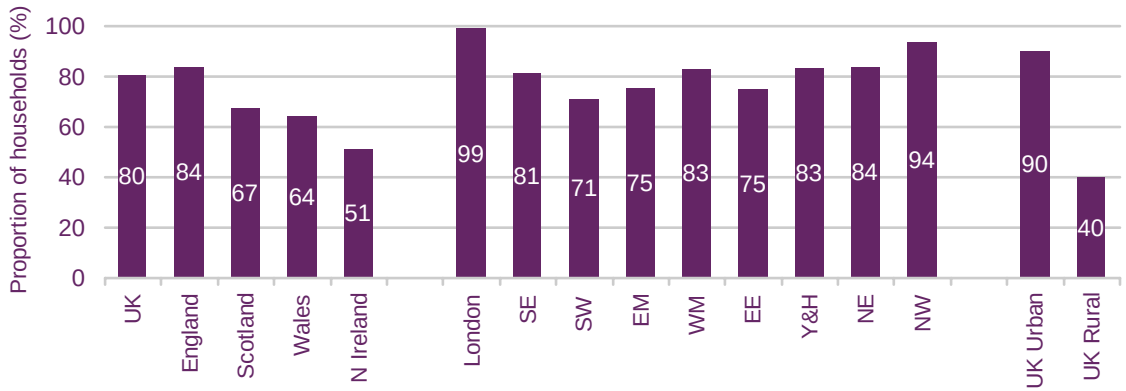
Local loop unbundling (LLU) involves an alternative operator taking over the twisted copper pair between the BT or Kingston Communications local exchange and a customer's premises and placing their own equipment in the exchange. This allows the LLU operator to connect the end-user to its own network and provide voice and DSL services without investing in an expensive access network over the so-called "last mile".

Unbundling an exchange allows operators to offer services without being tied to BT or Kingston's wholesale products, enabling greater differentiation in services and tariffs. It also gives operators access to economies of scale which are not available to them when purchasing wholesale products on a per-unit basis.

Consumers living in an unbundled exchange area are likely to have access to a wider range of suppliers and retail propositions than those living in an area which has not been unbundled, and in the last quarter of 2007 LLU services were responsible for over 85% of the growth in the total number of non-corporate UK broadband connections.

At the end of 2007, 80% of UK households were connected to an unbundled local exchange as shown in Figure 3.51, an increase from 67% at the end of 2006. The proportion of households connected to an unbundled exchange was highest in England among the nations at 84%, while it was lowest in Northern Ireland at 51% (Figure 3.51). At the end of 2007 two-thirds (67%) of households in Scotland were connected to an unbundled exchange, again the second highest proportion after England.

Figure 3.51 Proportion of households connected to an unbundled exchange

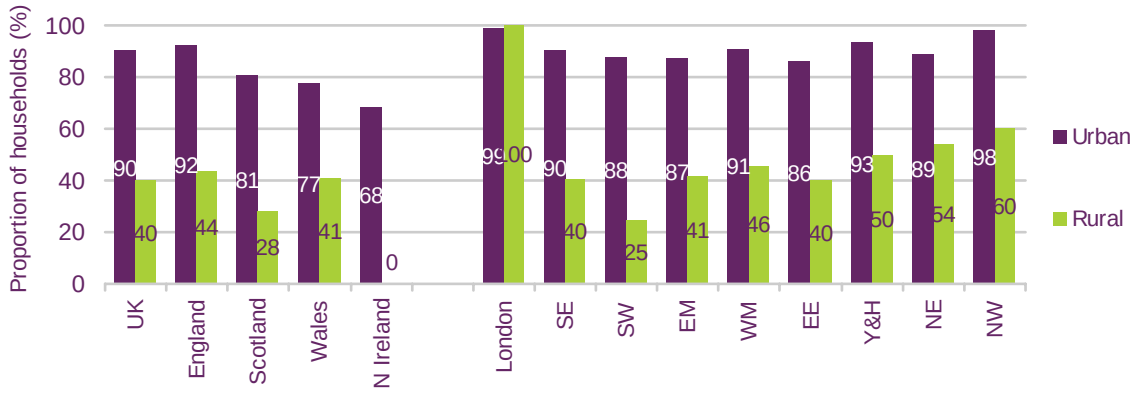


Source: Ofcom/BT, December 2007 data

The high fixed costs associated with unbundling a local exchange (siting of the equipment in the local exchange, the equipment itself and providing connectivity to the LLU provider's network) and the low rental cost per line (currently £1.30 a month for DSL services and £6.67 per month for DSL and voice services) mean that in order for an unbundled exchange to generate profit it needs to have a large number of customers.

This being the case, LLU operators have tended to unbundle exchanges serving a large number of delivery points, and typically these are found in urban areas. This is reflected in the fact that 90% of households in urban areas are connected to an unbundled local exchange, compared to just 40% in rural areas. This pattern was also evident in Scotland, where more than four-in-five (81%) of households in urban areas were connected to an unbundled exchange, compared to just over a quarter (28%) in rural areas.

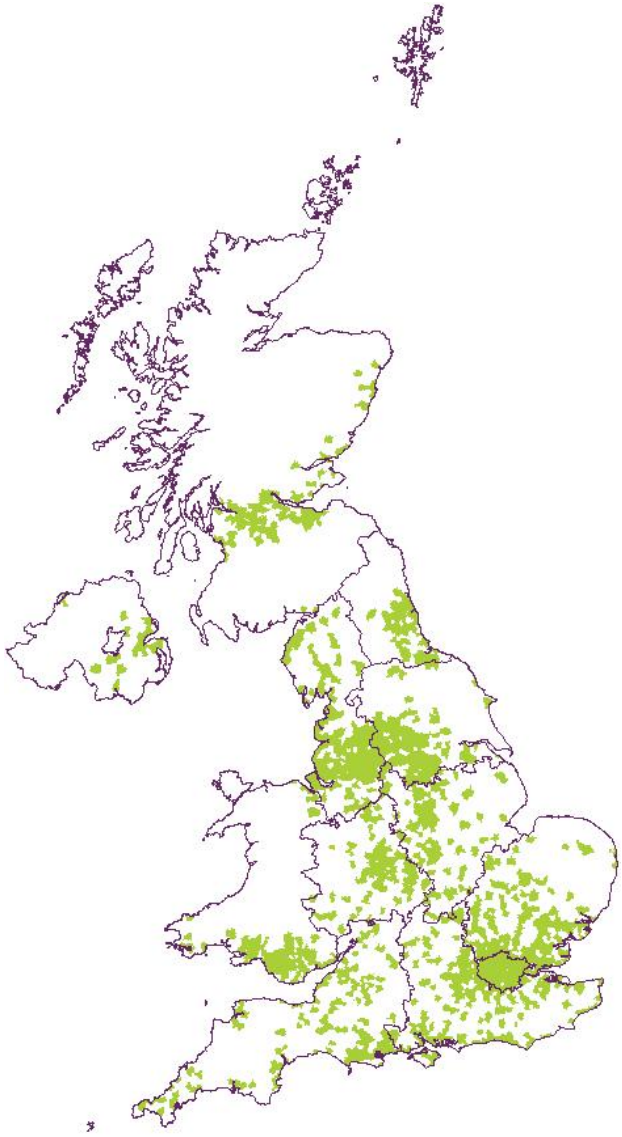
Figure 3.52 Proportion of households in urban and rural areas connected to an unbundled exchange



Source: Ofcom/BT, December 2007 data
Note: The urban rural split for Northern Ireland is based on the location of the local exchange rather than the area which it covers (as is used for the other nations). As such, the rural figure is likely to be understated and data are not directly comparable to those for the other nations

Figure 3.53 shows the UK distribution of areas able to receive LLU-based voice and broadband services and shows the concentration of unbundled exchange area in urban locations.

Figure 3.53 Areas served by unbundled exchanges



Source: Ofcom/BT, Q4 2007 data

Mobile availability

In order to evaluate the availability of mobile telephony services across the UK we examine the number of mobile networks with second generation (2G) and third generation (3G) coverage in each postcode district. For an operator to be counted as having coverage its network footprint has to cover at least 75% of the postcode district, and by using this data conjunction with population figures we are able to calculate the proportion of people living in such postcode districts. The 75% threshold is different to those used in the 2007 report (when we used 95% for 2G services and 50% for 3G) for the following reasons:

- to allow direct a comparison of 2G and 3G coverage levels;
- to reflect that the availability of 3G services is now widespread; and
- analysis of the data at a 95% area threshold revealed that small changes in the way in which the 2008 coverage figures had been compiled by the mobile network operators led to marked differences in the output figures.

It is important to note that just because a postcode district does not have 75% mobile coverage it does not necessarily follow that mobile services are not available there.

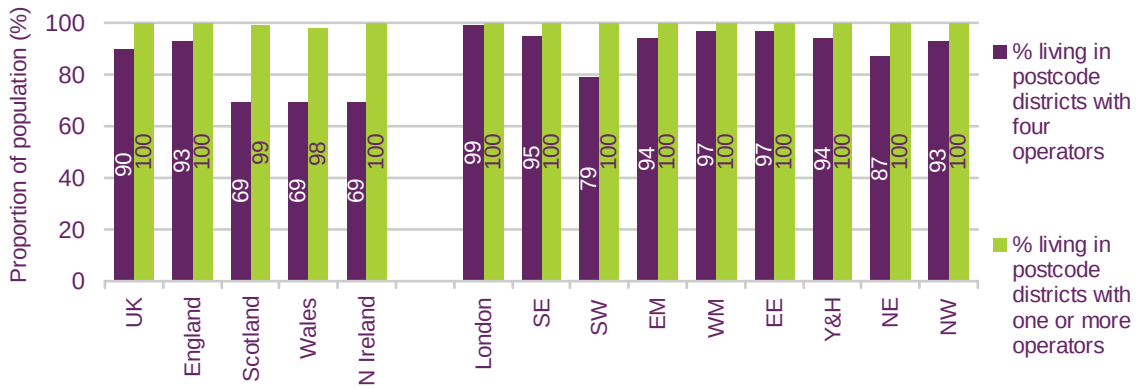
2G availability high across most of the UK

For 2G services we identified postcode districts where a) at least one and b) all four of the 2G networks had area coverage over the 75% threshold. It is important to note that the figures for Q1 2008 are not directly comparable with those published in the 2007 report as a result of the changes to the area coverage threshold outlined above.

The data show that across the UK almost all of the population (over 99%) lived in a postcode district where there was at least 75% 2G area coverage from one or more of the mobile networks in Q1 2008 (Figure 3.54). The data show that in Scotland the proportion living in an area with 2G coverage from at least one operator was 99%, a similar level to that in the other nations.

There was greater variation in the proportion of people living in a postcode district with at least 75% coverage from all four 2G mobile networks. Across the whole of the UK 90% of people lived in such an area, while in Scotland more than two-thirds (69%) did. This was identical to levels in Wales and Northern Ireland but lower than in England (93%).

Figure 3.54 2G mobile phone population coverage



Source: GSM Association / Europa Technologies; Q1 2008
Note: Figures show the percentage of population within postcode districts where at least one or four operators had at least 75% 2G area coverage; data not directly comparable to that published in the 2007 report.

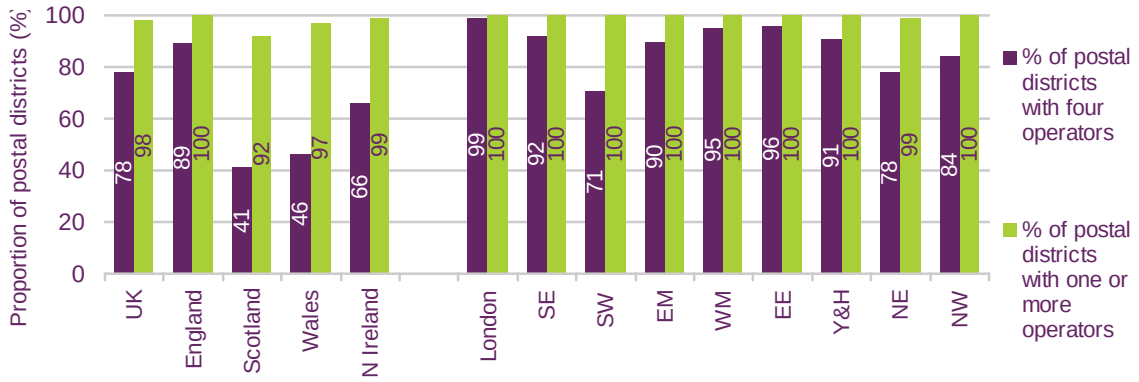
2G geographic coverage lowest in Scotland

In addition to population coverage we also calculated geographic 2G coverage (using the same 75% area coverage threshold) in order to understand where there were gaps in coverage. Figure 3.55 shows that, although 2G mobile geographic coverage was high across most of the UK in Q1 2008, it was not as high as population coverage. This is a result of the networks concentrating network build in areas of higher population density.

The majority of postcode districts in the UK (98%) had 2G area coverage from one or more mobile networks (Figure 3.5). Geographic 2G coverage was lowest in Scotland among the UK nations (92%) and highest in England (over 99%). The lower coverage in Scotland reflects the fact that large areas of the sparsely populated Highlands and Islands are without coverage.

The proportion of postcode districts with 75% area coverage from all four 2G networks varied across the UK nations and English regions. In all of the nations except England (89%) less than two-thirds of postcode districts had 2G coverage at a 75% area threshold from all four 2G networks. Scotland had the lowest level of geographic 2G coverage from all four providers at just 41% of postcode districts.

Figure 3.55 2G mobile phone geographic coverage

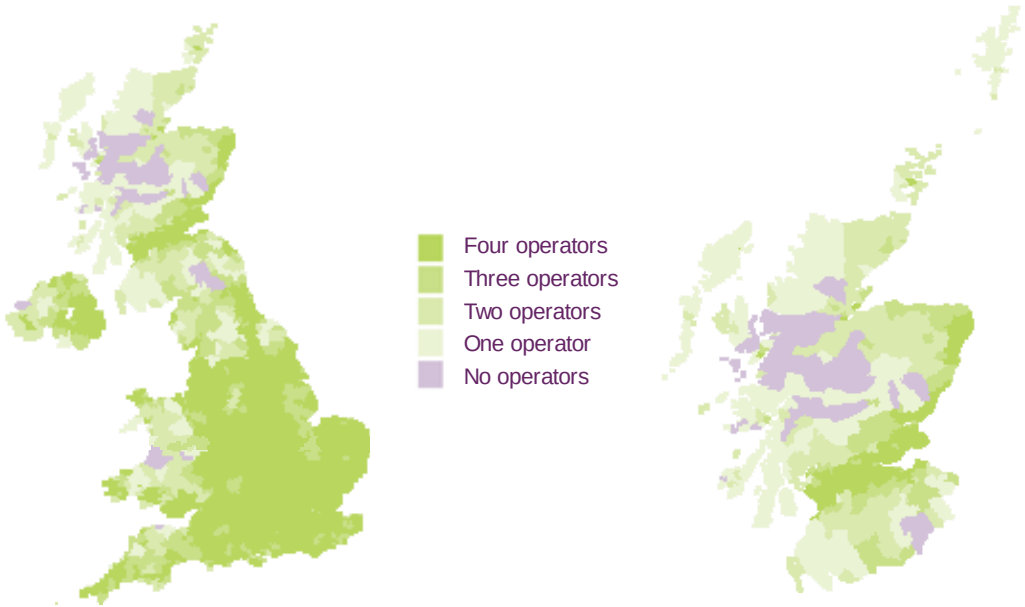


Source: GSM Association / Europa Technologies; Q1 2008
Note: Figures show the percentage postcode districts where at least one or four operators had at least 75% 2G area coverage; data not directly comparable to that published in the 2007 report.

Figure 3.56 shows that although most of the UK was covered by 2G services there were still sizeable areas where coverage was less than 75% or where 2G services were only available from one or two mobile networks. These regions included the Highlands and Islands, areas of mid-Wales and the west of Northern Ireland, many of which have poor coverage as a result of topographies that limit the range of cellular masts.

In Scotland, the main areas affected by lower levels of network 2G coverage included the Highlands and Islands, parts of South of the country and some areas of Argyll.

Figure 3.56 Map of 2G mobile phone geographic coverage by number of operators



Source: Ofcom / GSM Association / Europa Technologies; Q1 2008
Note: Maps show the number of 2G operators with at least 75% area coverage; not directly comparable to those published in the 2007 report.

3G availability concentrated around urban areas

The 75% postcode district network footprint threshold was also used when analysing 3G mobile availability. In the 2007 report a 50% area threshold was used for 3G services to reflect ongoing network rollout ahead of the end 2007 deadline for achieving 80% population coverage as stipulated in the five 3G licences. This means that that the data in this year's report are not comparable to those published last year.

Similarly, it should be noted that the methodology used to derive the coverage data in this report is different to that which was used to ascertain whether the 3G networks had met the coverage obligations outlined in their 3G licences earlier this year. The data in this report are based on postcode district coverage estimates provided to the GSM Association by the mobile networks, while the methodology used to establish whether the 3G licence coverage obligations had been met can be found at:

http://www.ofcom.org.uk/consult/condocs/3g_rollout/3GRolloutobligation/

In the case of 3G services there are five network operators (rather than four as there are for 2G) and we identified postcode districts where a) at least one and b) at least four of the 3G networks had area coverage above the 75% threshold.

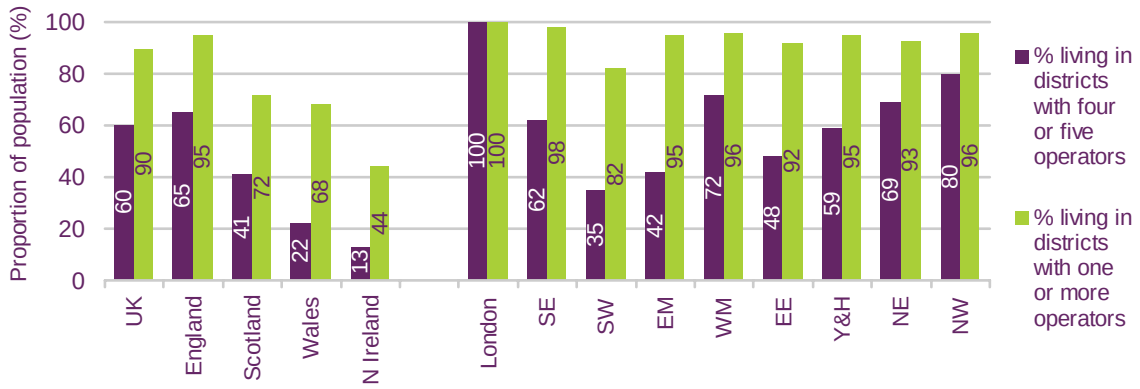
90% of the UK population lives in an area where 3G services are available

Across the UK, 3G coverage figures were lower than those for 2G services, the only exception being in London where the proportion of postcode areas with 2G and 3G coverage from at least one network at the 75% threshold was the same (over 99%) and the proportion with 3G coverage from four or more networks at the same threshold was higher than for 2G.
The data show that 90% of the UK population lived in a postcode district with at least 75% area coverage from one or more 3G networks, and the proportion among the UK nations varied from 44% in Northern Ireland to 95% in England (Figure 3.57). Scotland had the second highest 3G coverage at 72% of the population.

60% have a choice of four or more 3G networks

Across the UK, 60% of people lived in postcode districts with 75% 3G area coverage from at least four mobile networks. The proportion living in these areas was highest in England (65%) and lowest in Northern Ireland (13%). In Scotland 41% of people lived in an area with 3G coverage from four or more networks, again the second highest among the nations.

Figure 3.57 3G mobile phone population coverage



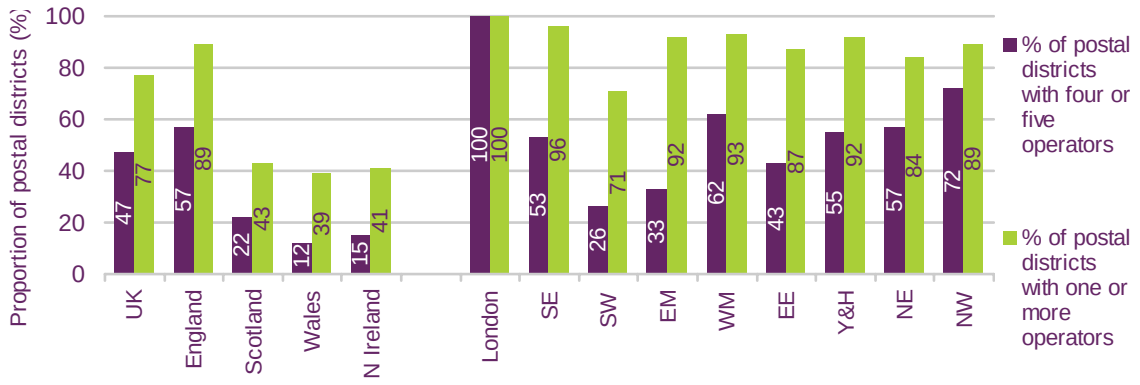
Source: GSM Association / Europa Technologies; Q1 2008
Note: Figures show the percentage of population within postcode districts where at least one or four or five operators had at least 75% 3G area coverage; data not directly comparable to that published in the 2007 report.

Geographic 3G coverage varies widely across the UK

Analysis of geographic 3G coverage showed that in Q1 2008 over three-quarters (77%) of UK postcode districts had 75% 3G area coverage from one or more of the mobile networks (Figure 3.58). Among the UK nations the geographic 3G coverage ranged from 89% in England to 39% in Wales. The proportion of postcodes with at least 75% area 3G coverage in Scotland was 43%, a similar level to those found in Wales and Northern Ireland (41%).

Across the UK, just under half of postcode districts (47%) had 75% 3G area coverage from at least four of the UK 3G networks. The proportion in England (57%) was, again, much higher than in the other nations, where it ranged from 22% in Scotland to 12% in Wales.

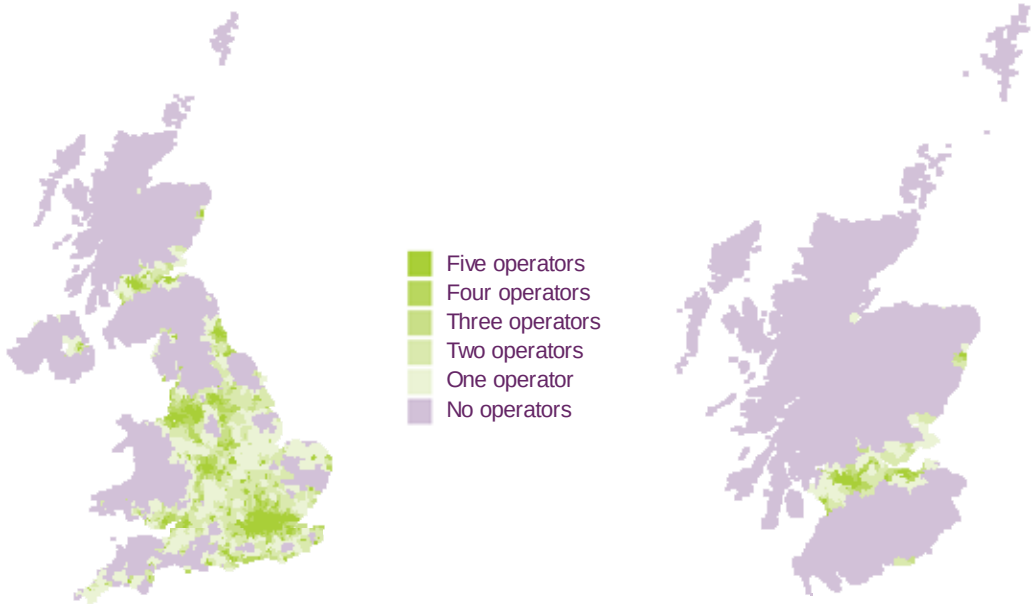
Figure 3.58 3G mobile phone geographic coverage



Source: GSM Association / Europa Technologies; Q1 2008
Note: Figures show the percentage postcode districts where at least one or four or five operators had at least 75% 2G area coverage; data not directly comparable to that published in the 2007 report.

Figure 3.59 shows where the mobile operators have implemented their 3G networks. Across the UK 3G network rollout has been concentrated in urban areas to enable the networks to meet the population coverage obligations outlined in the 3G spectrum licences. The result of this is that there are still large areas with a low population density where 3G services are not available. In Scotland this includes most of the country, and 3G coverage being concentrated in the Central Belt, Dundee and Aberdeen.

Figure 3.59 Map of 3G mobile phone geographic coverage by number of operators



Source: Ofcom / GSM Association / Europa Technologies; Q1 2008
Note: Map shows the number of 3G operators with at least 75% area coverage; not directly comparable to that published in the 2007 report.

Service take-up

Nearly nine in ten adults in Scotland (87%) had access to a fixed-line phone at home in 2007, in line with the UK average of 87% (Figure 3.60). (Wales was the only nation that had lower levels of fixed-line access, at 79%).

Take-up was higher in rural areas of Scotland (93%) than in urban areas (86%), again consistent with the UK average position. In particular, Glasgow and Dundee have lower levels of fixed-line access.

Mobile phone take up was marginally lower in Scotland than the UK average (81% compared to 84%), and was lower than in both England and Northern Ireland (both 85%). While there was no difference in overall take-

up between urban and rural areas of Scotland, mobile phone take-up was highest in Dundee (91%) and lowest in the Scottish Borders (70%).

Figure 3.60 Take up of communications services 2008

		UK	England	Scotland	Wales	N. Ireland	UK Urban	UK Rural
Individual								
Voice telephony	Fixed Line	**87%**	87%	87%	79%	88%	86%	93%
	Mobile	**84%**	85%	81%	82%	85%	84%	84%
Internet	PC	**69%**	70%	64%	60%	65%	68%	73%
	Total Internet	**65%**	66%	60%	55%	61%	64%	69%
	Broadband	**57%**	58%	53%	45%	52%	57%	59%

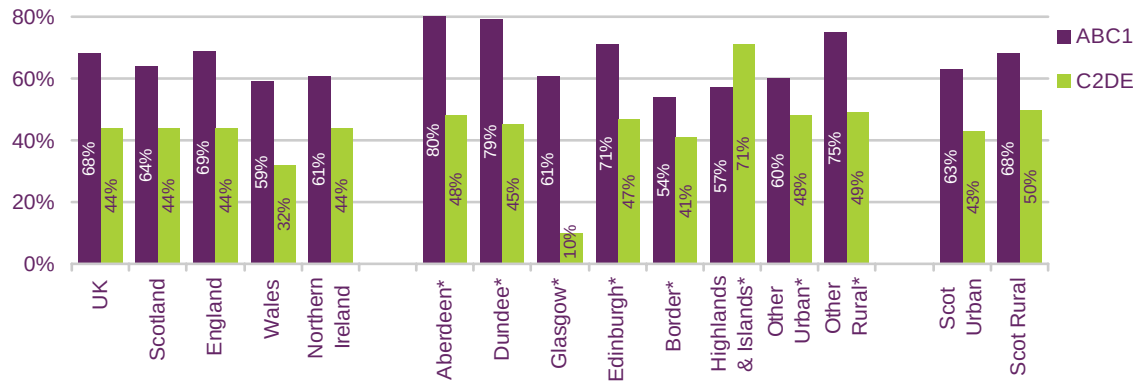
		UK	Scot	A'deen	D'dee	G'gow	Eb'gh	B'rder	H'lds & I'lds	Other Urban	Other Rural*	Scot Urban	Scot Rural
Individual													
Voice telephony	Fixed Line	**87%**	87%	92%	77%	78%	90%	84%	97%	86%	90%	86%	91%
	Mobile	**84%**	81%	85%	91%	84%	88%	70%	82%	78%	85%	80%	84%
Internet	PC	**69%**	64%	75%	72%	44%	75%	64%	73%	63%	64%	63%	67%
	Total Internet	**65%**	60%	68%	65%	36%	71%	54%	70%	61%	65%	59%	66%
	Broadband	**57%**	53%	64%	62%	32%	62%	47%	62%	53%	61%	52%	59%

Source: Ofcom
* Sample size less than 100. Apply caution and treat as indicative only.

PC ownership was significantly lower in Scotland than the UK average (64% compared to 69%), with broadband take-up also lower (53% against 57%). Scotland had similar levels of PC ownership, internet access and broadband take-up to Northern Ireland while these tended to be higher in England and lower in Wales.

Within Scotland, broadband take-up was relatively consistent across geographic areas, but urban penetration (52%) was constrained by low take up in Glasgow (32%). The relatively low PC and broadband take-up in Glasgow in linked to low-income. In Glasgow, a significant majority of C2DEs in Glasgow did not have a broadband connection at home, although ABC1s in Glasgow also tended to be less likely than ABC1s in other cities to have a broadband connection.

Figure 3.61 Broadband take-up by socio-economic group

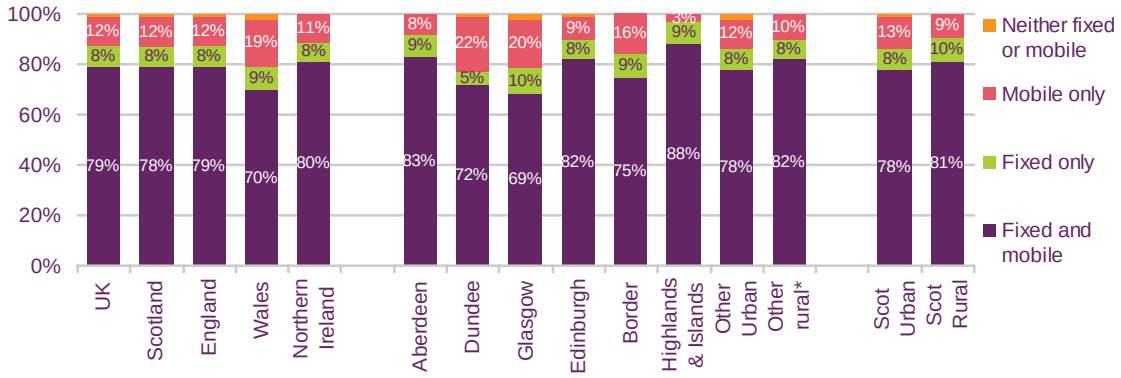


Source: Ofcom. Base: Adults aged 15+
* Sample size less than 100. Apply caution and treat as indicative only.

The proportion of mobile-only households in Scotland (12%) was on a par with the rest of the UK (12%), and remains broadly consistent with the 2006 research (14%). Wales tended to have more mobile-only households, linked to its lower access to fixed-line telephony, while Scotland was more consistent with England and Northern Ireland.

The cross-ownership of telephony was similar in the rural and urban areas in Scotland, although, Dundee (22%) and Glasgow (20%), which both have lower than average income levels, had the highest proportion of mobile-only households (Figure 3.62).

Figure 3.62 Cross-ownership of household telephony services



Source: Ofcom * Sample size less than 100. Apply caution and treat as indicative only.

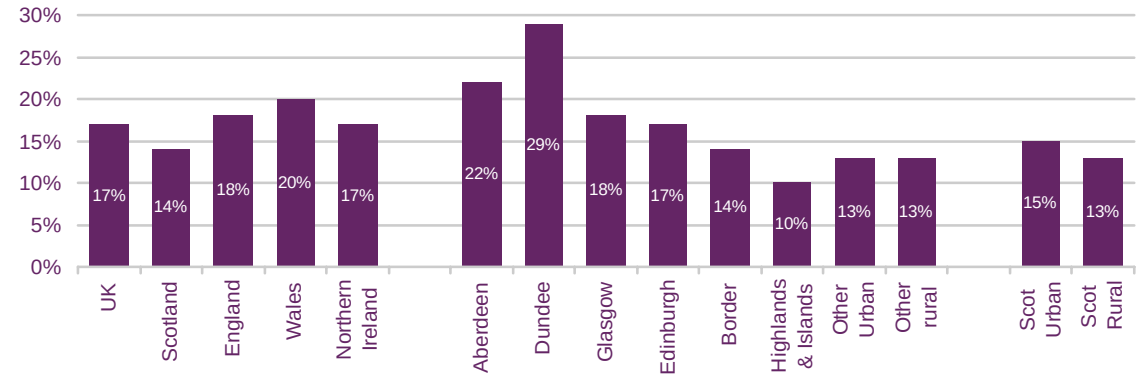
Non-ownership of communications services

Consumers who do not have fixed-line phones, mobile phones or broadband typically said that this is because they didn't want them or that the cost was too high. Less than 1% of survey respondents in Scotland said that lack of service availability was a reason for not having a fixed-line, mobile phone or broadband connection.

3G mobile take-up

3G ownership in Scotland stood at 14%, lower than the UK average (17%), and the lowest of the four UK nations; Wales (20%), England (18%) and Northern Ireland (17%) (Figure 3.63).

Figure 3.63 Take up of 3G services



Source: Ofcom Base: Adults aged 15+

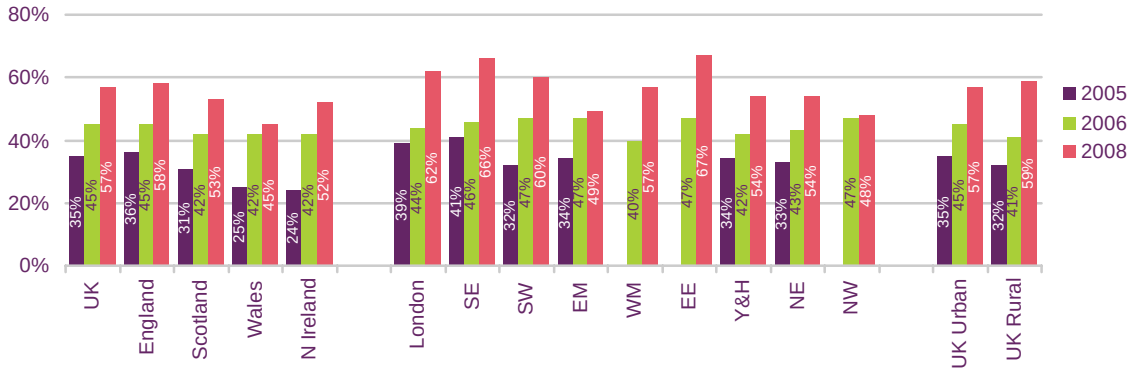
Figure 3.63 shows that 3G ownership was similar in Scotland's urban areas (15%) and rural areas (13%) and take-up of 3G was lower in both types of areas in Scotland compared to these in the other nations.

Take-up of 3G services in Dundee and Aberdeen was significantly higher than in Scotland overall, at 29% and 22% respectively. In recent years the rollout of 3G services in Scotland concentrated around the central belt, possibly explaining the notable differences in these two areas.

Broadband

Broadband growth in Scotland since 2005 has mirrored that in the rest of the UK (Figure 3.64), although in 2008 penetration in Scotland was 4% below the UK average (53% compared to 57%).

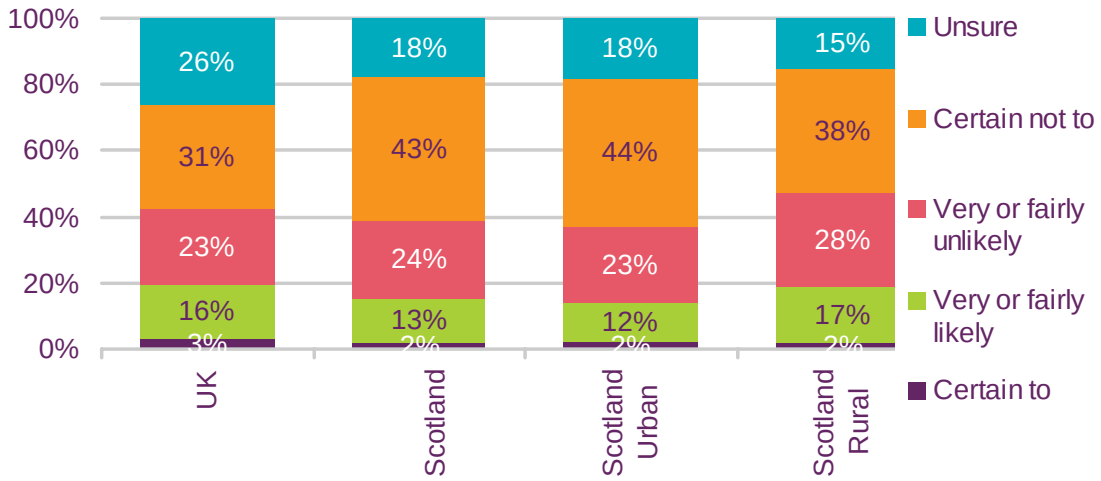
Figure 3.64 Broadband take up trend



Source: Ofcom Base: Adults aged 15+

Intentions to get broadband in the next year did not suggest that the gap between Scotland and the UK average will reduce in 2008. Just one in seven (15%) non-owners in Scotland said that they were likely to get broadband, with two-thirds (67%) unlikely, a substantially higher level than the UK average of 54% (Figure 3.65). Non-owners in England (20%) were the most likely to say that they intend to get broadband in the next year, which in fact could lead to a further increased gap between this and the devolved nations.

Figure 3.65 Intention to get broadband in next year

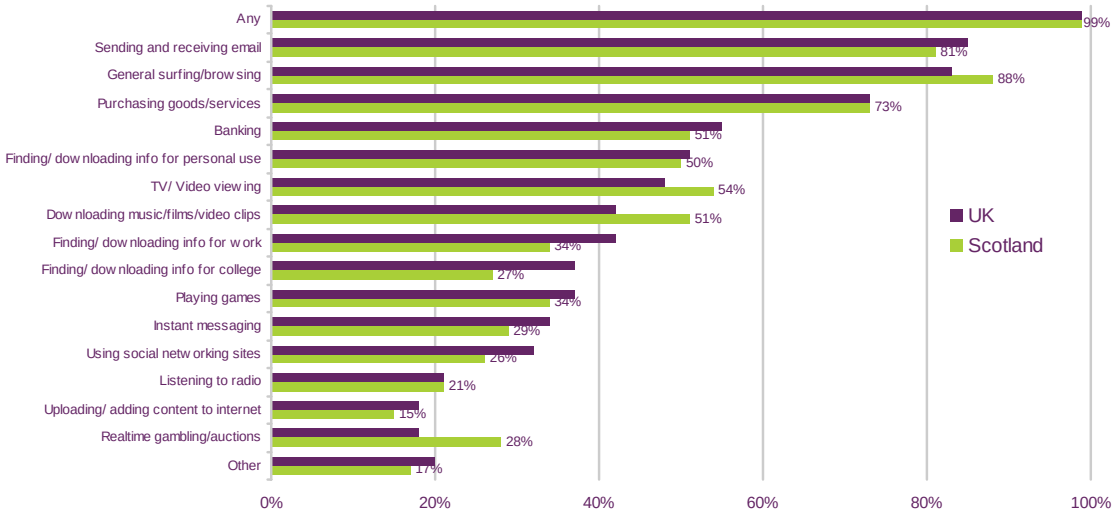


Source: Ofcom Base: Adults aged 15+ without a broadband connection at home

Figure 3.66 shows that broadband users in Scotland used the internet for a variety of purposes. The most commonly cited reasons were general surfing/ browsing (88%) and sending/ receiving email (81%), with online purchasing also widely used (73%). It appeared that broadband users in Scotland were capitalising on the benefits offered by greater bandwidths and download speeds, with over half (54%) having watched television and video content over their broadband connection and a similar proportion (51%) having used the internet to downloaded audio and video files.

There were some differences between the use of online applications in Scotland and in the UK as a whole. General surfing/ browsing, TV/ video viewing, downloading music/ films/ video clips and realtime gambling/ auctions were more common activities in Scotland than the UK average (Figure 3.66).

Figure 3.66 Use of online applications amongst Scotland broadband users

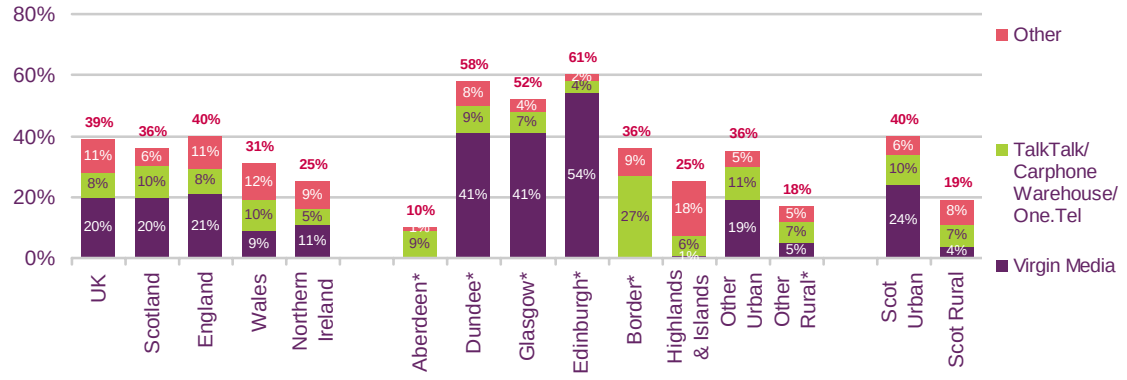


Source: Ofcom Base: Adults aged 15+ with a broadband connection at home

Suppliers

Over a third (36%) of households in Scotland used a company other than BT as their main fixed-line supplier, slightly below the UK average of 39% (Figure 3.67). More households in Scotland use an alternative to BT than in Wales (31%) or Northern Ireland (25%). Across the UK, the gap between rural and urban areas was substantial (25% in rural areas compared to 41% in urban), partly as a result of differing levels of availability.

Figure 3.67 Fixed-line supplier use



Source: Ofcom, Base: Adults aged 15+
Sample size less than 100. Apply caution and treat as indicative only.

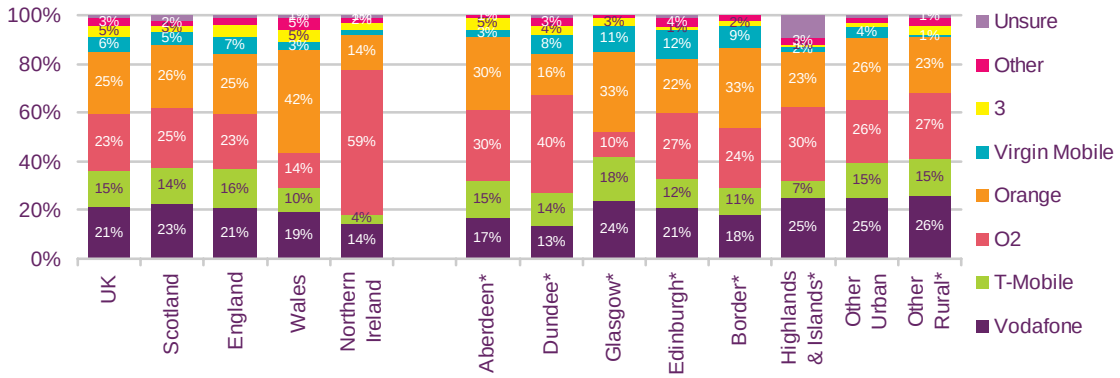
Within Scotland, respondents with a fixed-line in urban areas were more than twice as likely as those in rural areas to use suppliers other than BT at 40% and 19% respectively. This is because consumers in urban areas typically have a greater choice of suppliers, both as a result of local loop unbundling and higher cable coverage, with Virgin Media's network available to 24% of households in urban areas compared to 4% in rural areas. Virgin Media's penetration in Scotland as a whole is on a par with the UK overall (both 20%).

Across Scotland there was much higher penetration of non-BT suppliers in three of the four main urban areas (Edinburgh, Dundee and Glasgow), with Aberdeen returning the lowest levels at just 10% (probably related to the non availability of cable telephony). This correlates to consumers' use of Virgin Media cable services, which ranged from 41% to 54% in Edinburgh, Dundee and Glasgow, while there was no reported use in Aberdeen.

While use of other suppliers (i.e. neither Virgin Media nor BT) was fairly consistent across urban areas, there were some noticeable differences in rural areas (Figure 3.67). More than a quarter (27%) in the Borders used TalkTalk/Carphone Warehouse/One.Tel as their main supplier, and one in five (18%) in the Highlands and Islands used another supplier, compared to 10% and 6% respectively in Scotland overall.

Use of mobile phone networks was similar in Scotland to the UK as a whole (Figure 3.68). Orange had a 26% share of the mobile base in Scotland, closely followed by O2 (25%) and Vodafone (23%). The major differences between the use of networks between nations were higher use of O2 in Northern Ireland and a higher use of Orange in Wales. There were few differences between rural and urban areas, although Vodafone had a marginally higher share in rural areas overall.

Figure 3.68 Mobile network operator used



Source: Ofcom. Base: Adults aged 15+ with mobile phone
* Sample size less than 100. Apply caution and treat as indicative only.

Telecoms spend

Claimed monthly fixed telephony spend in Scotland averaged £21, the same as the UK-wide figure, while claimed spend in Northern Ireland was highest at £27 per month. Average monthly spend was lowest in Dundee, and highest in the Highlands and Islands (Figure 3.69), where a higher dependency on fixed-line telephony is suggested by almost all (97%) of households in this area having fixed-line access and it having the lowest proportion of mobile-only households across Scotland. Overall households in rural areas in Scotland claimed to spend a little more per month on fixed-line telephony than urban areas (£21 compared to £23). The amount spent in urban areas in Scotland was similar to urban areas across the UK.

Figure 3.69 Average monthly household spend on fixed-line telephony

Source: Ofcom. Base: Adults aged 15+ with a fixed line
* Sample size less than 100. Apply caution and treat as indicative only.

Claimed average monthly internet spend in Scotland was £19, while this figure for Northern Ireland was £17, and England and Wales was £18., as shown in Figure 3.70. There was some variation in this figure across rural and urban regions and across the Scottish regions, with evidence of lower spend in rural areas. The lowest claimed spend was in the Borders, where broadband take-up was among the lowest.

Figure 3.70 Average monthly household spend on internet service

Source: Ofcom, Base: Adults aged 15+ with internet access at home
* Sample size less than 100. Apply caution and treat as indicative only.
The sample size in Glasgow was too small to report

Claimed average mobile phone spend for adults in Scotland (£21) was slightly lower than for adults in the other nations; Wales (£25), England (£23) and Northern Ireland (£23). While there was no significant difference in spend between rural and urban areas, there were some key differences by region (Figure 3.71). Mobile users in Edinburgh claimed to spend £8 more per month than the Scotland average, while customers in the Highlands and Islands claimed to spend £6 less than average per month. These differences are explained to some extent by subscription type, since Edinburgh had more contract customers than the rest of Scotland (44% compared to 35%) and the Highlands and Islands had more pre-pay customers (82% compared to 65%).

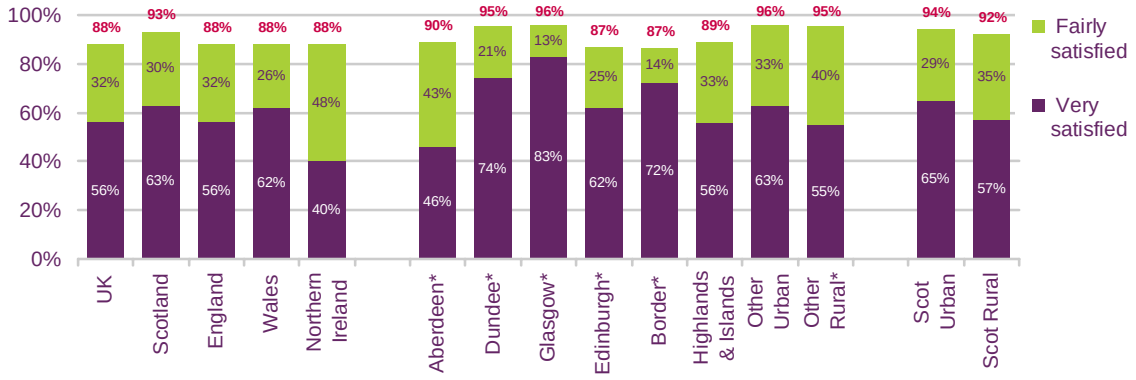
Figure 3.71 Average monthly individual spend on mobile phone

Source: Ofcom. Base: Adults aged 15+ with a mobile phone
* Sample size less than 100. Apply caution and treat as indicative only.

Satisfaction

More than nine in ten (93%) of those in Scotland with a fixed-line were satisfied with their service, with a significantly higher proportion being very satisfied than in the UK overall (63% compared to 56%). People living in urban areas of Scotland were more likely to say they were very satisfied than those in rural areas and the levels of very satisfied responses varied across the individual Scottish areas, with Dundee and Glasgow having the highest satisfaction levels (Figure 3.72).

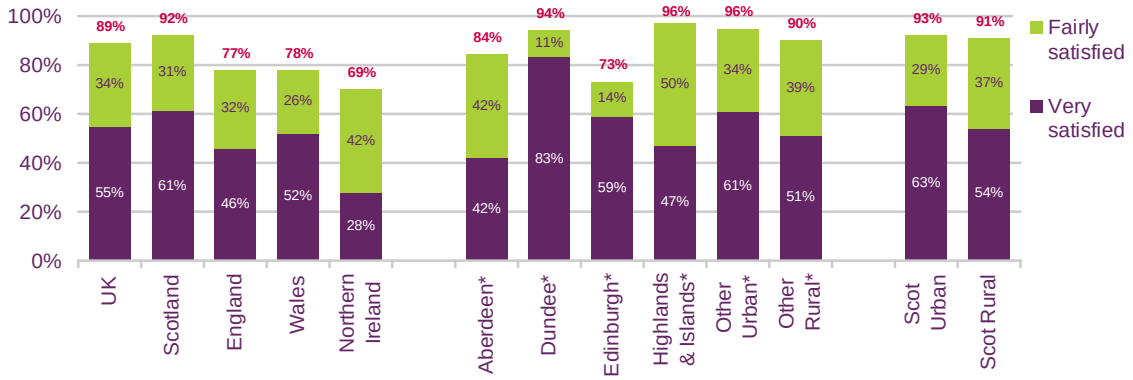
Figure 3.72 Overall satisfaction with fixed-line service



Source: Ofcom. Base: Adults aged 15+ with a fixed line
* Sample size less than 100. Apply caution and treat as indicative only.

Overall satisfaction with broadband service among consumers in Scotland was high (92%) and was higher than the average for consumers in the UK overall (89%) (Figure 3.73). The proportion of broadband users who were either fairly or very satisfied was relatively consistent across regions, but was significantly low in Edinburgh (73%).

Figure 3.73 Overall satisfaction with broadband service



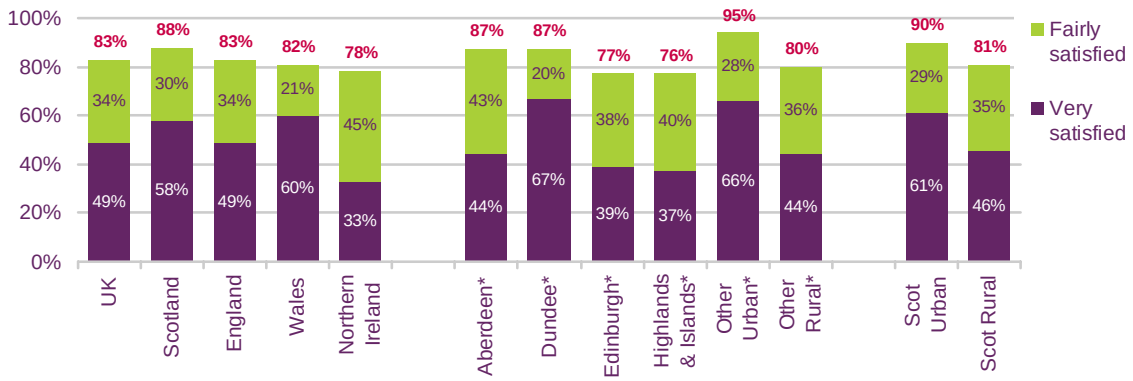
Source: Ofcom Base: Adults aged 15+ with a broadband connection at home
* Sample size less than 100. Apply caution and treat as indicative only.
The sample size in Glasgow and Border was too small to report

Satisfaction with broadband connection speed in Scotland was higher than the UK as whole, with significantly more broadband users claim that they were very satisfied. Comparing the individual nations shows that 89% of users in Scotland were satisfied compared to 84% in Wales, 82% in England and 78% in Northern Ireland.

The lower overall satisfaction reported in Edinburgh may be related to lower satisfaction with the speed of broadband connection (Figure 3.74) as 39% of broadband users in Edinburgh said they were very satisfied the speed of their connection (19% percentage points lower than the average across Scotland). The reasons for this are unclear, as, with distances from exchange to premises typically shorter than in other less densely populated regions, the speeds available in Edinburgh should generally be higher than average. Higher levels of dissatisfaction may be related to higher levels of contention experienced in these regions (when speed is reduced by multiple users sharing the same bandwidth), or it could simply reflect dissatisfaction as a result of higher expectations.

There was a similar low level of satisfaction in the Highlands and Islands, with just 37% saying they were very satisfied with speeds. Here, this is likely to be the result of longer distances from exchange to premises constraining the speeds available.

Figure 3.74 Overall satisfaction with speed of broadband connection



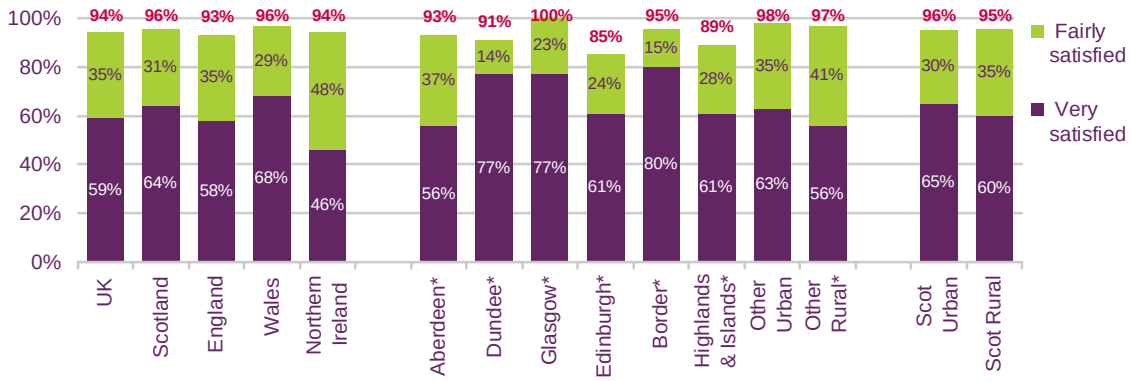
Source: Ofcom Base: Adults aged 15+ with a broadband connection at home

The sample size in Glasgow and Border was too small to report
* Sample size less than 100. Apply caution and treat as indicative only.

The level of satisfaction among mobile phone users in Scotland was 96% compared to 92% for broadband and 93% for fixed-line services (Figure 3.75). Overall, satisfaction with mobile phone services in Scotland was in line with the rest of the UK (96% compared to 94%), but with a higher proportion of very satisfied responses (64% compared to 59%).

Although there was no difference in overall satisfaction between urban and rural areas, levels of "very satisfied" responses varied across the individual Scottish regions. Aberdeen had the lowest proportion of very satisfied responses (at 56%) followed by Edinburgh and the Highlands and Islands (both 61%). While cost is a possible factor in the two cities (where average monthly spend was the highest), lack of coverage is more likely to be a cause in the Highlands and Islands.

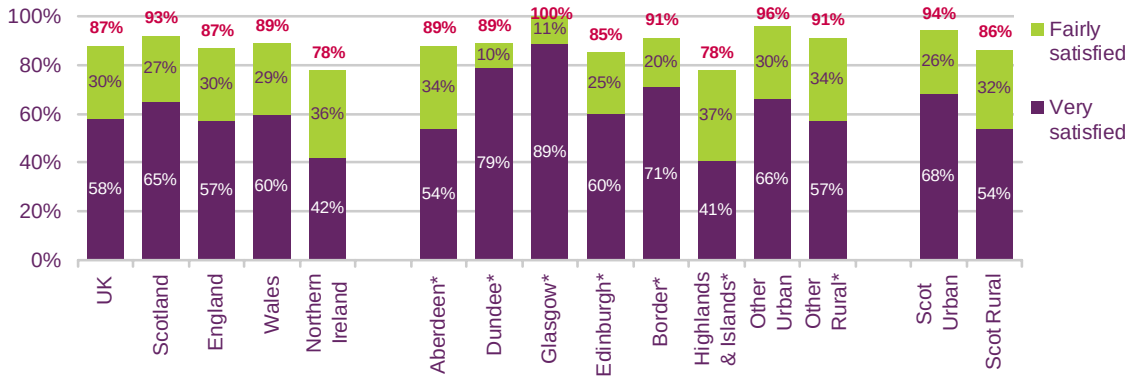
Figure 3.75 Overall satisfaction with mobile service



Source: Ofcom, Base: Adults aged 15+ with a mobile phone
* Sample size less than 100. Apply caution and treat as indicative only.

Overall, satisfaction with mobile reception was higher in Scotland (93%) than in the UK overall and in the individual nations; Wales (89%), England (87%) and Northern Ireland (78%) (Figure 3.76). However, there were varying degrees of "very satisfied" responses by area in Scotland as consumers in urban areas were more satisfied than those in rural areas. The Highlands and Islands had the lowest level of very satisfied mobile users, perhaps providing an explanation as to why overall satisfaction was also lowest in this area. Again, mobile users in Aberdeen and Edinburgh had lower levels of "very satisfied" responses.

Figure 3.76 Satisfaction with reception of mobile service



Source: Ofcom. Base: Adults aged 15+ with a mobile phone
* Sample size less than 100. Apply caution and treat as indicative only.

Survey Methodology

The research survey referred to in this report is the first in a planned series of annual surveys. Respondents were adults, living in the UK, aged 15 or over. A total of 5,812 interviews were conducted; 3,447 in England, 925 in Scotland, 811 in Wales and 629 in Northern Ireland.

In England, the North West, North East and South West regions were over-sampled. This is to allow more detailed analysis within those areas. In future years, other regions will be picked for detailed analysis.

Research agency Saville Rossiter-Base was commissioned to conduct the survey as part of Ofcom's annual residential consumer tracking survey. A specialist sampling agency (UK Geographics) was used to draw the sampling points, using output areas (OAs) as classified by the 2001 Census. In Scotland, due to the smaller size of OAs, UK Geographic used their own aggregation process to create sample areas of a comparable population to English and Wales OAs.

Interviewers were provided with specific addresses to approach regarding the research. All interviews were conducted in the respondents' homes using paper questionnaires and prompt material. The questionnaire took an average of 30 minutes to complete. Parents of respondents aged 15 were free to stay with their child during the interview. In total, 5,812 interviews were conducted across 490 sampling points; 289 in England, 78 in Scotland, 67 in Wales and 56 in Northern Ireland. Fieldwork was conducted between 12 January and 29 February 2008.

Quotas were set according to regional population profiles, so the findings are representative of the regions surveyed. The quotas were set on age, gender, social-economic group, and whether the area was cabled, rural or urban, and the level of deprivation. The indices of rurality and deprivation are UK Geographics' proprietary datasets, to ensure comparability between nations.

Quotas were set to achieve a minimum of 100 interviews in each of the regions and sub-regions of interest. This required the number of interviews to be boosted in many areas, including specific towns and some rural areas. Data analysed on sample sizes below 100 within nation or region are indicated in the charts and tables with an asterisk (*). These findings should be treated with caution and at an indicative level only.

Data weighting

All data have been weighted to match the profile of each of the four nations as detailed in the 2001 Census and to remove the effect of the over-sampling of specific areas mentioned above. Unweighted bases are shown throughout this report to illustrate the number of respondents interviewed.

	Unweighted	Weighted
UK	5,812	3,000

England	3,447	2,510
Scotland	925	261
Wales	811	146
Northern Ireland	629	82

Margin of error and statistical significance

Because the survey was conducted among a sample of people aged 15 or over rather than the whole UK population, the data may be subject to a small margin of error. The error margin for each of the nations and regions of interest covered by the survey are illustrated in the following tables. Error margin rises among smaller sub-groups. Results referred to as 'significantly' different, have been tested at the 95% level of confidence.

UK nations

	Total sample size	Error margin at 95% confidence interval, for questions asked of the full sample
UK	5,812	1-2%
England	3,447	1-2%
Scotland	925	3-4%
Wales	811	3-4%
Northern Ireland	629	3-5%

UK regions - England

	Total sample size	Error margin at 95% confidence interval, for questions asked of the full sample
Total urban	2,224	1-2%
Total rural	1,203	2-3%
London	192	4-7%
South East urban	184	4-7%
Bristol & SW urban	106	6-10%
Plymouth	115	6-9%
Truro	108	6-10%
East Midlands urban	131	5-9%
Birmingham	108	6-10%
West Midlands urban	227	5-8%
East of England urban	142	5-8%
Yorkshire & Humber urban	143	5-9%
Newcastle	108	6-10%
Sunderland	107	6-10%
Middlesbrough	97	6-10%
Greater Manchester	193	6-9%
City of Manchester	108	6-10%
Liverpool	109	6-10%
South East rural	106	6-10%
Devon & Cornwall	108	6-10%
Other South West rural	108	6-10%
East Midlands rural	108	6-10%

West Midlands rural	103	6-10%
East of England rural	107	6-10%
Yorkshire & Humber rural	109	6-10%
Northumberland rural	108	6-10%
Durham rural	108	6-9%
Cumbria rural	109	6-10%
Other North West rural	105	6-10%

UK regions – Scotland

	Total sample size	Error margin at 95% confidence interval, for questions asked of the full sample
Total urban	689	3-5%
Total rural	236	4-7%
Aberdeen	107	6-10%
Dundee	107	6-10%
Glasgow	104	6-11%
Edinburgh	108	6-10%
Border	108	6-10%
Highlands & Islands	116	9-14%
Other urban	191	4-7%
Other rural	84	6-11%

UK regions – Wales

	Total sample size	Error margin at 95% confidence interval, for questions asked of the full sample
Total urban	566	3-5%
Total rural	245	4-7%
Cardiff	108	6-10%
Newport	111	6-10%
Swansea	108	6-10%
Wrexham & urban north	121	6-9%
Other urban south	118	6-9%
Mid Wales	68	8-13%
North Coastal	56	8-14%
Rural North	136	5-9%
Rural South	109	6-10%

UK regions – Northern Ireland

	Total sample size	Error margin at 95% confidence interval, for questions asked of the full sample
Total urban	487	3-5%
Total rural	142	5-8%
West	227	5-8%
East	402	3-5%
West urban	166	6-10%
East urban	321	4-6%

West rural	61	8-13%
East rural	81	7-11%
Belfast	176	4-7%
Londonderry/ Derry	118	5-9%
Small towns	109	6-10%
Border	183	5-9%

Glossary

2G Second generation of mobile telephony systems. Uses digital transmission to support voice, low-speed data communications, and short messaging services.

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.

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.

ADSL1 The first generation of ADSL, capable of data speeds of up to 8Mbit/s towards the customer and up to 640kbit/s from the customer.

ADSL2/ADSL2+ Improved versions of ADSL, offering high speeds, especially on shorter telephone lines. In the case of ADSL2+, up to 24Mb/s can be delivered towards the customer.

Broadband A service or connection generally defined as being ‘always on’ and providing a bandwidth greater than narrowband.

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 that has been selected in advance and has a contract with the customer. 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.

Digital dividend The spectrum that will be released by the switch to all-digital television.

Digital switchover The process of switching over the current analogue television broadcasting system to digital, as well as ensuring that people have adapted or upgraded their televisions and recording equipment to receive digital TV.

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).

DTT Digital Terrestrial Television, currently most commonly delivered through the Freeview service.

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 customers' 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.

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.

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 allows 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. the Internet Protocol), accessed by users with a computer via a service provider.

IP (Internet Protocol) The packet data protocol used for routing and carriage of messages across the Internet and similar networks.

IPTV Internet Protocol Television. 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. We use the term to mean delivery over a ‘closed intranet’, typically operated by ISPs and local-loop unbundlers, rather than over the public internet. IPTV services are hosted on servers placed in the exchange, which means they can be delivered with assured QoS since the ISP has more control over the network.

ISP Internet Service Provider. A company that provides access to the internet.

LLU (Local Loop Unbundling) LLU is the process whereby incumbent operators (in the UK this means BT and Kingston Communications) make their local network (the lines that run from customer's 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.

Multichannel In the UK, this refers to the provision or receipt of television services other than the main five channels (BBC ONE & 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.

Narrowband A service or connection providing data speeds up to 128kbit/s, such as via an analogue telephone line, or via ISDN.

PAYG Pay-as-you-go.

Podcasting Away for digital audio files to be published on the internet, which can then be downloaded onto computers and transferred to portable digital audio players.

PSB Public Service Broadcasting, or Public Service Broadcaster. The Communications Act in the UK defines the PSBs to include the BBC, ITV1, Channel 4, five and S4C.

PSTN Public Switched Telephony Network.

RAJAR Radio Joint Audience Research The pan-industry body which measures radio listening.

RSS is an acronym of either 'Really Simply Syndication' or 'Rich Site Summary'. It refers to a news feed that is generated by the content on a website, but which visitors can select to have delivered to their computer without visiting the source website

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.

Share (Radio) Proportion of total listener hours, expressed as a percentage, attributable to one station within that a defined 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.

Sub-loop unbundling A variant of LLU where a competitive operator takes control of only a portion of a customer's local loop, allowing them to install their equipment closer to the customer and potentially offer higher-speed services. In Sub-loop unbundling, the point of handover is commonly the Primary Connection Point (PCP) or street cabinet.

Telecommunications, or 'Telecoms' Conveyance over distance of speech, music and other sounds, visual images or signals by electric, magnetic or electro-magnetic means.

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.

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.

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.

Table of Figures

Charts and tables in this document

Additional charts and tables are available online at
http://www.ofcom.org.uk/research/cmrnr08