



**The Communications Market:  
Nations and Regions  
Wales**

**Research report**



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## Section 1

# Foreword

This survey is part of Ofcom's Communications Market series of reports. It examines availability, take-up and consumption of communications services across the UK, exploring how citizen and consumer interests are being met and how this picture varies by each of the nations and regions.

This report sets out the findings from the survey for Wales, setting them in the context with the UK as a whole and the other three nations (England, Scotland and Northern Ireland). For the full findings of the survey, please refer to the main report *The Communications Market: Nations and Regions*.

We undertook this project to address stakeholder feedback that Ofcom's work should take into consideration the differences between the nations and regions of the UK. The project is consistent with Ofcom's duties to secure the availability of a wide range of electronic communications services throughout the UK, having regard to the different interests of people living in different parts of the UK and in rural and urban areas.

The survey considers the three basic communications platforms; telecoms (including telephone landlines and second and third generation mobile phones), internet (including broadband and high speed services) and digital broadcasting (including digital TV and radio). It explores the key patterns for these services as they apply to availability, take-up and consumption across the UK, amongst consumers and small and medium-sized enterprises (SMEs).

Most of the data in the report was collated from research undertaken in the second half of 2005, including Ofcom's residential tracking study, the Media Literacy Audit and operator data for mobile phone, digital subscriber line (DSL) and cable coverage.

This report should be seen in the context of a series of complementary research surveys to be published by Ofcom during 2006. These include the Media Literacy Audit, (the main report was published in March 2006 and the supplementary report on media literacy in the nations and regions is being published alongside this report), reports on consumer and SME engagement with digital services and the annual Communications Market report, (all to be published later in the year).

We believe that this report will provide a valuable resource for Ofcom, national, regional and local government and other stakeholders, to tailor their approach to national and regional differences in availability, take-up and consumption of communications services. A series of Rural, Regional and Remote seminars in the nations and regions will be held shortly after publication so they can be used as a forum for discussion of the research findings. Ofcom will then publish a final report which will assess the implications of the research findings on current and planned Ofcom work and, where appropriate, make recommendations.

It is our intention that the nations and regions survey should be repeated on a regular basis and supplemented, where appropriate, by further UK-wide research amongst ethnic minorities, disability groups and key age and social groups.

## Section 2

# Key findings for Wales

- Levels of availability of communications services are generally lower than for the UK as a whole.
- Take-up of three of the four key services together – mobile phone, digital TV and internet, is also lower than the UK average (35% compared to 43%), reflecting lower levels of availability and a higher proportion of C2DEs.
- Owing largely to its higher than average rural population, Wales has lower than average coverage for 2G and 3G mobile phones.
- Wales has lower than UK average adult personal take-up of mobile phones but higher reliance on mobile phones as the household's only method of telephony (14% vs. 8% UK average). Mobile phone customers in Wales are more likely to use pre-pay mobile phone packages than the UK as a whole.
- Wales experiences lower than UK average broadband and internet take-up (49% compared to 57%) despite good basic broadband availability. The proportion of households within 5km of a broadband exchange is slightly less than the UK average (82% compared to 86%). PC take-up is lower than the UK average (59% compared to 66%).
- Digital TV has been widely adopted in Wales, with higher than UK average take-up (72% vs. 65% for the UK as a whole). This is largely driven by high satellite take-up of 46% vs. 32% across the UK.
- Wales has lower levels of availability of DAB digital radio services but self-reported take-up of digital radio as a whole is consistent with the rest of the UK (28% compared to 32%).
- People spend a lower absolute amount of their weekly income on communications services (£14.60 against £15.20 UK average). However, this is higher than the UK average as a proportion of average weekly disposable income (3.6%, compared to 3.2% UK average).
- People in Wales watch more sporting programs than the UK average. While sport did not feature in the top ten programmes for the rest of the UK in 2005, four of the top ten programmes in Wales were related to football or rugby.

## Section 3

# Introduction

## 3.1 Background

This research report sets out the findings from Ofcom's survey of communications across the nations and regions of the United Kingdom as they relate to Wales, setting them within the context of the UK as a whole and relative to the other three nations (England, Scotland and Northern Ireland).

This survey is a commitment included in the 2005/6 Annual Plan. It addresses stakeholder feedback that Ofcom's work should better reflect and demonstrate an understanding of the differences between the nations and regions of the UK. This sentiment was reinforced at our Rural, Regional and Remote seminars in 2005 and Annual Plan consultation events in the nations and regions which took place at the beginning of 2006.

It is also consistent with Ofcom's principal statutory duty; namely, to further the interests of citizens and consumers, where appropriate by encouraging competition and duties to secure the availability of a wide range of electronic communication services and a wide range of television and radio services throughout the UK. In doing this, Ofcom must among other things have regard to the desirability of encouraging the availability and use of high speed internet throughout the UK and the different interests of persons living in different parts of the UK and in rural and urban areas.

The Terms of Reference for the project were published on 10 November 2005 and are available at <http://www.ofcom.org.uk/research/cm/nations/tor/?a=87101>.

This report should be seen in the context of a series of complementary research surveys to be published by Ofcom during 2006. These include the Media Literacy Audit, (the main report was published in March 2006 and the supplementary report on media literacy in the nations and regions is being published alongside this report), reports on consumer and SME engagement with digital services and the annual Communications Market report, (all to be published later in the year).

## 3.2 Objectives

There has been considerable debate about the importance of geographic variations in the availability, take-up and consumption of communications services and the reasons behind these differences. However, the patterns of variance have never been analysed systematically using market research and other secondary data.

This survey of communications across nations and regions seeks to address this by gathering available data relating to telecommunications (landlines, mobile phones), internet (narrowband, broadband) and digital broadcasting (digital TV, digital radio) and analysing patterns of variance by nation and region.

The information collected looks at availability, take-up and consumption across each of these services among consumers by geographic location. The survey also examines take-up of communications amongst small and medium sized enterprises (SMEs).

The main aims of the project are to:

- create an evidence base of key trends in communications markets in the UK in relation to geographic location and selected socio-economic indicators;
- identify options and choices for Ofcom's regulatory approach to reflect national and regional differences;
- engage and involve stakeholders and advisory committees in identifying national and regional differences; and
- engage with national and regional Government to identify issues beyond Ofcom's remit which may merit further consideration.

Ofcom hopes that the research findings presented in this report will establish a robust evidence base for communications services across the UK. This can be used as a benchmark against which to assess the impact of future activity and to inform and guide policy development.

### **3.3 Research methodologies**

This report draws on data from a number of sources, including Ofcom research initiatives and other external sources. Data sources have been selected to ensure that they are as comparable as possible but reference should be made to the source notes relating to each section which clearly identify how the research has been used.

The majority of data used in this report is drawn from surveys conducted between Q1 and Q3 2005.

Ofcom is aware, however, that some markets have seen change notably in penetration levels since Q3 2005. For example, data from Q4 2005 of Ofcom's Residential Communications Tracking Study suggests that Wales' take-up of mobile phones and broadband has increased significantly and at a UK level digital TV take-up has increased to more than 70% as reported in *The Communications Market: Digital Progress Report – Digital TV*.

Throughout this report, both residential consumer and SME data referred to as 'significantly' different has been tested at the 99% level of confidence and therefore can be considered to be robust. Data referred to as showing 'indicative' differences is significant at the 95% level of confidence. We have significance tested all findings resulting from surveys with a limited sample size and only findings that are significant have been identified in this report.

Data has only been analysed on sample sizes of 100 or more. As such, it has not been possible to analyse all aspects within nation or region. For example, the media literacy audit survey was designed to examine English regions only at an indicative level, which means that where data from the audit is used in this report, the North East cannot be included.

All data used is weighted data and un-weighted base sizes are shown on charts and tables to show the number of respondents who were asked the question.

The three key Ofcom research initiatives used in this report are as follows:

#### **Ofcom's Residential Communications Tracking Study**

This survey is a continuous face to face survey, with monthly interviewing of a representative sample of around 700 UK adults aged 15+.

The residential tracker achieved a total sample of 4426 UK adults, 3379 adults in England, 407 adults in Scotland, 292 adults in Wales and 348 adults in Northern Ireland. As Northern

Ireland only accounts for 3% of the UK a representative sample (i.e. 3% of the total sample is insufficient to allow individual analysis of this nation. Therefore, Ofcom's residential tracking study boosts the number of interviews in Northern Ireland to provide a sufficiently robust sample.

Data was collected between January and September 2005.

### **Ofcom's Media Literacy Audit**

This survey was a discrete face to face survey, interviewing a representative sample of 3244 UK adults aged 16+. It achieved a total sample of 1816 adults in England, 437 adults in Scotland, 495 adults in Wales and 496 adults in Northern Ireland.

Data was collected between June and August 2005. Ofcom's Media Literacy Audit did not extend to landline telephones and therefore the landline telephones section does not include any findings about intention to take-up, and voluntary and involuntary exclusion, as detailed in the other sections.

Ofcom carried out a comparison of these two residential studies with various other sources of data, all of which are detailed in the methodology section of this report along with further sampling details of each survey.

### **Small and Medium Enterprises (SME) Tracking Study**

This survey is a continuous telephone survey, with monthly interviews of a representative sample of SMEs (1-250 employees and annual turnover in excess of £50k).

A total sample of 2117 SMEs has been used for analysis in England, 298 in Scotland, 149 in Wales and 147 in Northern Ireland. The latter three are relatively small and therefore caution should be taken when drawing conclusions from this data. Sample size has also limited analysis to take-up figures. However, Ofcom is currently performing a review of this research which will potentially include an increase in sample sizes.

## **3.4 Scope**

Issues relating to content including, the Public Service Broadcasting (PSB) review settlement and broadcast production, are beyond the scope of this report.

This project has not addressed detailed behaviour amongst ethnic minorities, disabled people or specific age groups (like the young). Some of the findings – such as groups involuntarily excluded from digital broadcasting platforms and the internet – suggest there is more work to be done in these areas which is planned to be picked up in the phase two of this project and in future versions of the survey.

## **3.5 Report structure**

This report comprises a current examination of the communications markets in Wales – for telecoms (landlines and mobile phones), internet (including broadband) and digital broadcasting (television and radio). It is accompanied by a main report, which examines the UK overall and compares across nations and regions, and by separate national reports for Northern Ireland, Scotland, and England.

The report begins by describing the geographic, socio-demographic and economic contexts of each communications market. It then presents data on the markets themselves, under three main sections, which consider respectively the availability of communications services,

## **The Communications Market: Nations and Regions – Wales**

the take-up of communications services (including exclusion from services, both voluntary and involuntary), and the consumption of services (including usage patterns and satisfaction levels). The final section presents findings on the SME markets for telecoms and internet.

We recommend that this report be read in conjunction with the main report - *The Communications Market: Nations and Regions*.

Section 4

# Setting the scene

## 4.1 Introduction

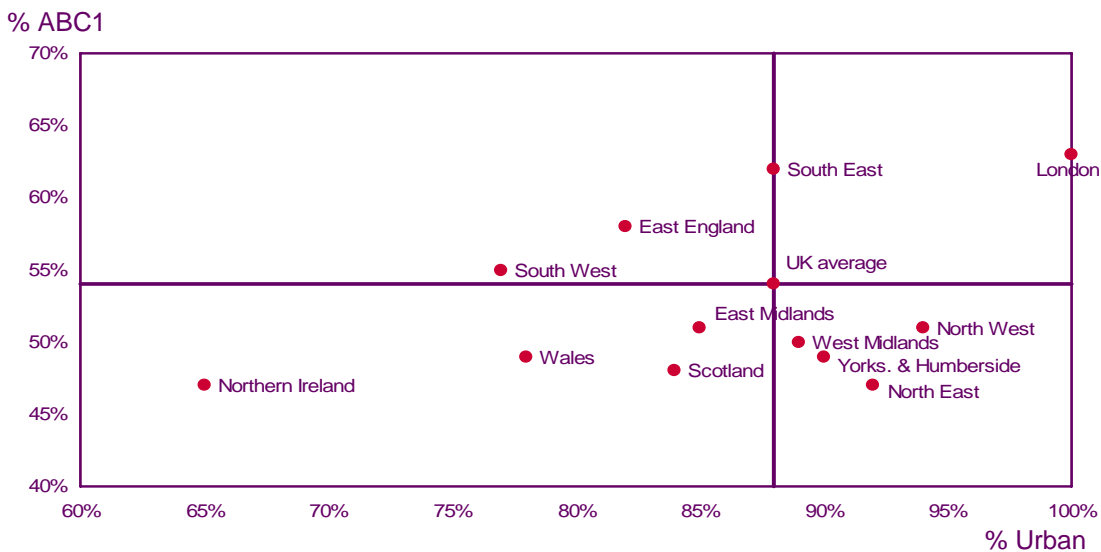
Wales has unique geographic and socio-demographic characteristics which influence and shape its communications services. The following figures analyse some of these features including population, the rural/urban split, socio-economic groups and age. Cultural, geographic and other features also affect communications services. A summary of these as they relate to Wales is provided below.

## 4.2 Socio-demographic features

Figure 1 shows the distribution of the UK population according to the proportion of ABC1s and those living in urban areas.

Due to its post industrial legacy, Wales has a number of key demographic indicators that point to higher levels of deprivation and financial exclusion, compared to the UK as a whole. These factors may influence the economic viability of electronic communications services which in turn impacts take-up and exclusion. For example one key indicator is that 80% of Wales qualifies for EU Objective 1 status (under this scheme, to qualify for economic development help, a region must have GDP per capita below 75% of the EU average).

**Figure 1: The geographic and socio-economic profile of the UK**



Source: Indicative analysis based on Business Geographics 'Urban Indicator' and Office of National Statistics, Census 2001 (National Statistics website: [www.statistics.gov.uk](http://www.statistics.gov.uk) Crown copyright material is reproduced with the permission of the Controller of HMSO)

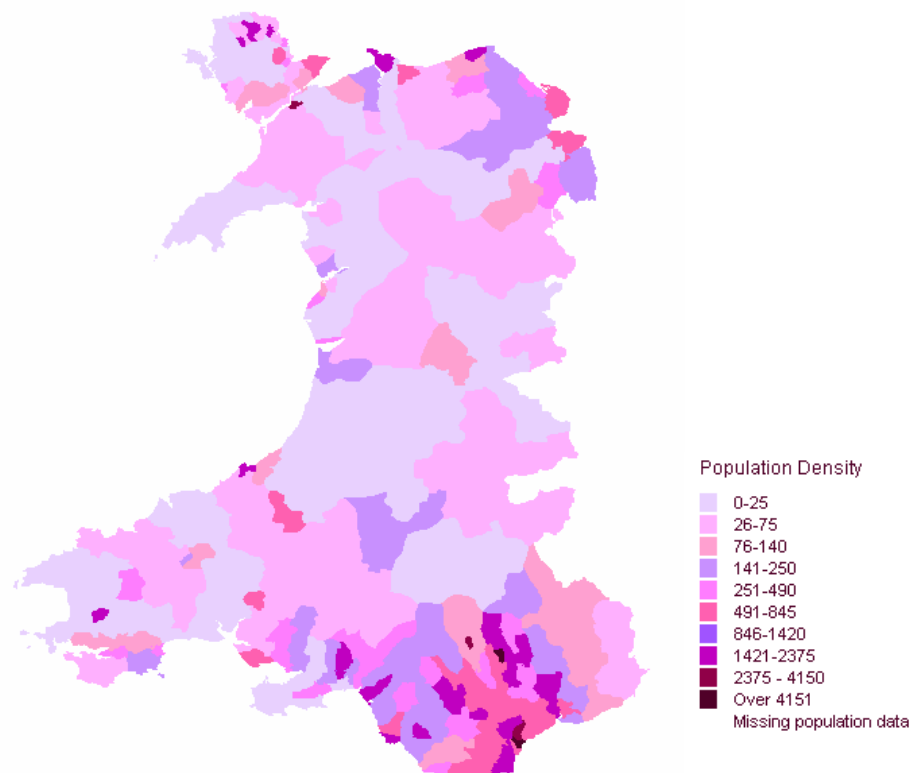
Figure 1 shows the geographic and socio-economic profile of the UK. Wales has a higher proportion of C2DEs (51%) than the UK average (45%) and consequently a lower proportion of the ABC1s (lower than UK average of 54%). Scotland, Wales, Northern Ireland and the North East of England show similar socio-demographic profiles.

Wales has a relatively high rural population when compared to the other nations and regions (22%) compared with 12% UK average. It has a similar rural profile to the south west of

England but is less rural than Northern Ireland. Rural is defined to mean settlements less than 2,000 and more than 10 miles from a larger settlement.

The age make up of the Welsh population is broadly similar to the UK average; however, Wales has a slightly older population. Its median age is 40 compared to 38 for the UK average. Only the south west of England has a higher median age, at 41.

Figure 2: Population density map

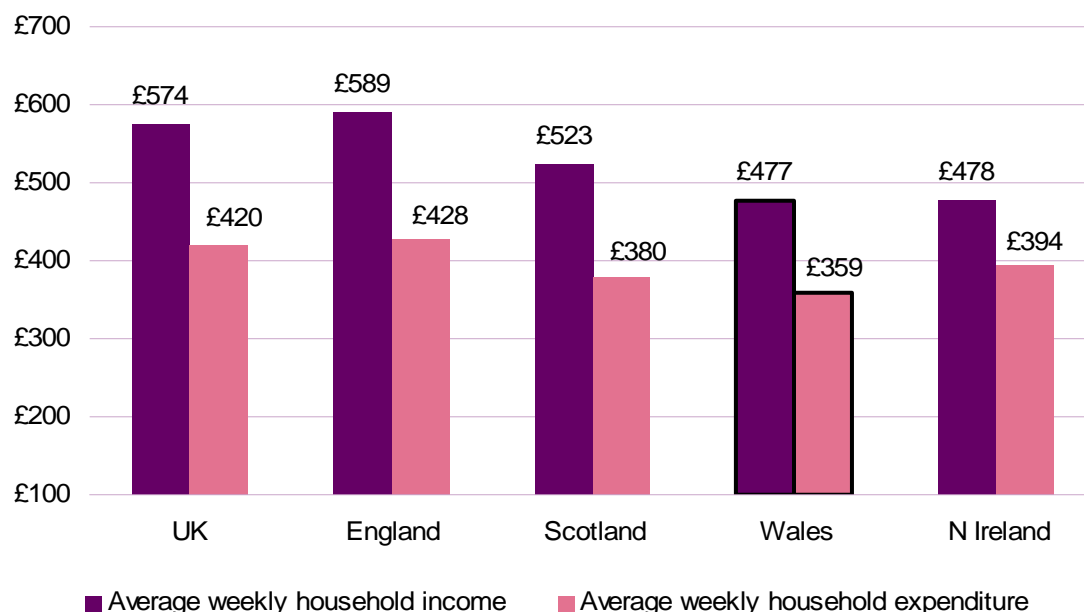


Source: Ofcom, based on Office of National Statistics 2001 Census data (National Statistics website: [www.statistics.gov.uk](http://www.statistics.gov.uk) Crown copyright material is reproduced with the permission of the Controller of HMSO)

Figure 2 shows areas of population density across Wales. It shows that Wales' population is concentrated around Cardiff and Swansea and is also denser in the north east around Wrexham and Deeside. Wales has a population of 2.9 million which represents approximately 5% of the UK . This is spread across a total of 1.19 million households.

Figure 3 shows the average weekly household income and expenditure for Wales. Both income and expenditure in Wales (£477 and £359 respectively) are lower when compared to UK average (£574 and £420). Both are broadly comparable to Northern Ireland but lower than England and Scotland.

Figure 3: Average weekly household income and expenditure



Source: Office of National Statistics, *Family Spending, A Report on the 2004-2005 Expenditure & Food Survey 2005 Edition*. ONS published 10 March 2006 (National Statistics website: [www.statistics.gov.uk](http://www.statistics.gov.uk) Crown copyright material is reproduced with the permission of the Controller of HMSO)

Between half a million and three-quarters of a million people in Wales were calculated to be living in a low-income household in 2001/02. One in five people lived in low income households (20 per cent) before housing costs were taken into consideration. The proportion rose to one in four (25 per cent) after housing costs were deducted.

The unemployment rate in Wales was 6% in 2001/02. Young adults aged 16 to 24 were more than twice as likely to be unemployed (14 per cent) than older adults. Within each age group unemployment rates for men and women were similar. Unemployment rates tended to be higher than average in south Wales, and were highest in Caerphilly and Blaenau Gwent (both 8 per cent). Rates were lowest in Conwy, Wrexham, and Powys (all below 4 per cent).

Adults in Wales had a lower take-up of bank accounts than the UK average<sup>1</sup> and as noted in a recent Welsh Consumer Council survey<sup>2</sup>, paying bills by cash is generally regarded as being more expensive than paying by direct debit.<sup>3</sup> Financial exclusion remains a key issue for many people in Wales. One indicator is that 14% of households do not have a bank account compared to 11% UK average.

Around 4.03% of the Welsh population are from a recognised ethnic minority background with the main groups concentrated in the cities of Cardiff and Swansea. Cardiff Bay has some of the oldest ethnic minority communities in the UK, established over 200 years ago. But overall Wales has a higher white population percentage, (97.88%) compared to the UK average (90.92%).

<sup>1</sup> *Figuring out Finance*, Welsh Consumer Council, November 2005. One in seven adults in Wales do not have a current or basic bank account (14% of households) compared with 11% of UK households

<sup>2</sup> *Figuring out Finance* (p7) Welsh Consumer Council, November 2005

<sup>3</sup> According to a National Consumer Council report, paying household bills by direct debit could save the average consumer £72 each year. *Why do the poor pay more or get less?* National Consumer Council, September 2004

## 4.3 Features of Wales

### Geography

Wales' mountainous terrain provides a significant challenge to the provision of electronic communications services across the country. Mobile phone coverage is particularly patchy in many rural areas across Wales and the shape and nature of the terrain has also had a significant influence on population spread and density, with most of the country's 2.9 million inhabitants living in and around the lowland coastal plains of the south and north. The population outside these areas is thinly scattered across large mountainous areas where, for example, television and radio reception can often be difficult. Although most of Wales' telephone exchanges have been upgraded by BT to carry broadband services, 35 exchanges in rural areas were still not enabled. However, they are due to be upgraded through the Welsh Assembly Government's Regional Innovative Broadband Support Scheme (RIBS) which received EU approval in 2005. Wales' long border with England influences television transmission overlap (affecting approx 40% of population<sup>4</sup>) and post devolution, poor reception of Wales based services and the choice by some viewers to receive services from England in some border areas have raised concerns about citizenship and democratic inclusion. (The Welsh Assembly Government recently announced that, following a tender process, the RIBS contract had been awarded to the BT Group.)<sup>5</sup>

### Politics

The National Assembly for Wales is comprised of 60 members (29 Lab, 12 PC, 11 Con, 6 LD, 2 Other). The Welsh Assembly Government is responsible for over £11bn expenditure covering economy, transport, health, education, agriculture, culture, the Welsh language, environment, planning, local government and public services. Within Wales, there are 22 Unitary Local Authorities. At a United Kingdom level, Wales has a parliamentary representation of 40 MPs (29 Lab, 3 PC, 4 LD, 3 Con, 1 Other). In the European Parliament Wales is represented by four members based on a single all Wales constituency. (2 Lab, 1 PC, 1 Con).

<sup>5</sup> Based on various estimates by Broadcasters in Wales

<sup>5</sup> In addition to enabling the 35 exchanges, RIBS has been specifically designed to enable those areas of Wales described as 'broadband blackspots' that have lacked access to broadband services.

## Section 5

# Availability of communications services

## 5.1 Introduction

This section details the availability of communications services in Wales, when compared to the UK and the other nations. It considers telecoms (landline and mobile phones), internet (including broadband) and broadcasting (digital TV and digital radio).

We have analysed data provided to us by operators, supplemented by Ofcom research.

## 5.2 Key findings for Wales

- Second generation (2G) mobile phone services are widely available across Wales – 99.8% of the population in Wales live within postal districts that have at least one operator with at least 75% area coverage. However, Wales has fewer people living in areas reporting coverage by all four operators (79.8%). This figure is lower than the UK average (94.6%) and lower than England and the English regions, Scotland, Northern Ireland.
- Corresponding geographic coverage levels for 2G services where all four operators report at least 75% area coverage are also lower than UK average in Wales (60.8%, compared to 82.4%). Geographic coverage by all four operators is only lower in Scotland (56.4%).
- Rollout of third generation (3G) mobile phones services has focused on more urban areas first. Wales has lower than UK average 3G geographic coverage (in this case defined by the proportion of postal districts with at least 25% coverage) by one operator (75.9%, compared to 90.5%) but particularly when measuring coverage by at least four operators (10.1% compared to 75.9%)
- Ofcom consumer research into mobile phone reception shows respondents in Wales reporting the highest incidences of reception problems in the UK.
- BT data from January 2006 shows that 99.5% of premises in Wales are connected to DSL enabled exchanges. However, some premises within these exchange areas are not suitable for delivery of broadband services, or only at very low speeds, due to local technicalities such as distance from exchange or poor quality of networks.
- Digital cable availability in Wales is the lowest in the UK (23%, compared to an average of 45%)
- 60% of homes are able to receive digital terrestrial television (DTT) in Wales (lower than UK average 73%).
- Wales had lower than UK average availability of DAB digital radio services, for each of BBC UK multiplex (54%), Digital One (53%) and Local Commercial (73%) services. Availability of each of these services is lower than the UK average (85%, 86% and 89% respectively).

## 5.3 Availability of telecoms services

### 5.3.1 Telephone landlines

Telephone services over the public switched telephone network (PSTN) are available to 100% of the population living in Wales. The universal service obligation (USO) is currently provided by BT. All households in Wales have access to a landline at a standard charge, although additional connection charges apply when they are so remote that installation would cost over £3,400. Further detail is provided in the main report. As noted, there remain a very small number of single dwellings in remote locations that may have difficulties with connection to the PSTN.

### 5.3.2 Mobile phones - 2G

Ofcom requested data from mobile network operators for second generation (2G) coverage across the UK as of Q3 2005. The data was provided at postal district level and we have analysed it first by population coverage and second by geographic coverage.

Our benchmark for 2G mobile phone availability was 75% area coverage within an individual postal district. For each of population coverage and geographic coverage, we identified postal districts where there was 75% coverage by at least one operator, indicating that people living in that district had access to at least one 2G mobile phone service. Then we identified postal districts where there was 75% coverage by all four operators.

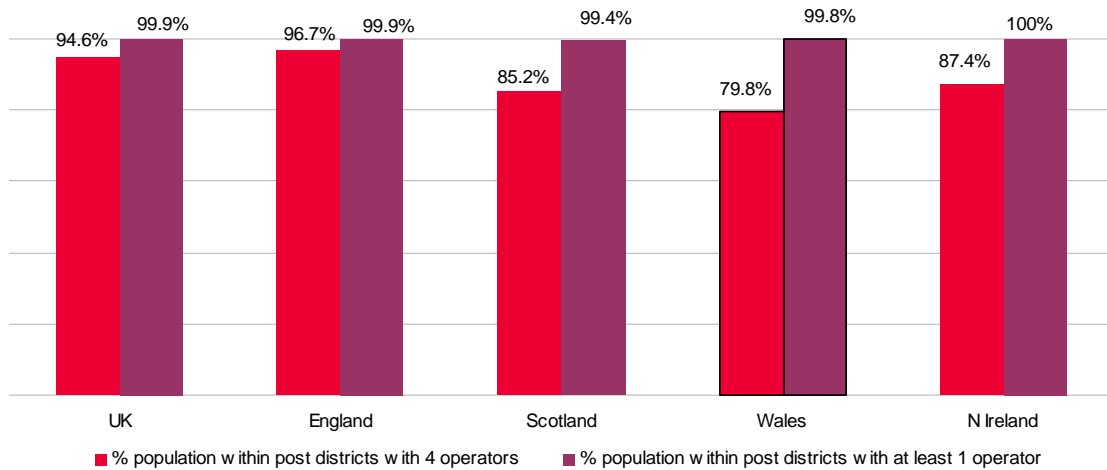
#### Population coverage

There was a consistently high level of network coverage across the UK population as a whole with each of the four 2G mobile phone operators stating that they covered 99% of the UK's population.

Figure 4 shows that 99.9% of the UK population lived in postal districts which had at least 75% area coverage by at least one mobile phone operator. In Wales, this figure was 99.8%.

Most people in the UK also had a choice of operator in their area: 94.6% of the population lived in postal district areas which had at least 75% area coverage by four operators. This is lower than UK average in Wales (79.8%, compared to 94.6%) and is also lower than in England (96.7%), Scotland (85.2%) and Northern Ireland (87.4%).

Figure 4: 2G mobile phone population coverage by postal district\*



Source: Ofcom, operator data, Q3 2005. \*Note: figure shows percentage of population within postal districts where at least one operator and four operators report at least 75% area coverage

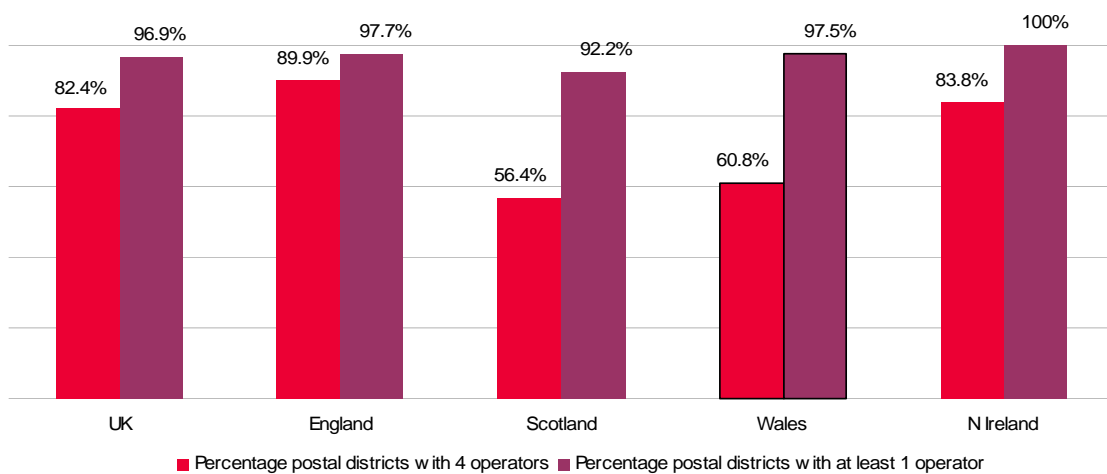
### Geographic coverage

As well as looking at population coverage for 2G mobile phones, we also measured geographic coverage of the UK, to understand where there were coverage gaps.

Figure 5 shows that geographic coverage by at least one 2G mobile phone operator was high, but not as high as population coverage: 96.9% of postal districts across the UK had at least 75% area coverage by at least one mobile phone operator. In Wales this figure was 97.5%.

82.4% of postal districts across the UK had at least 75% area coverage by all four mobile phone operators. This was lower in Wales (60.8%), but lowest in Scotland (56.4%).

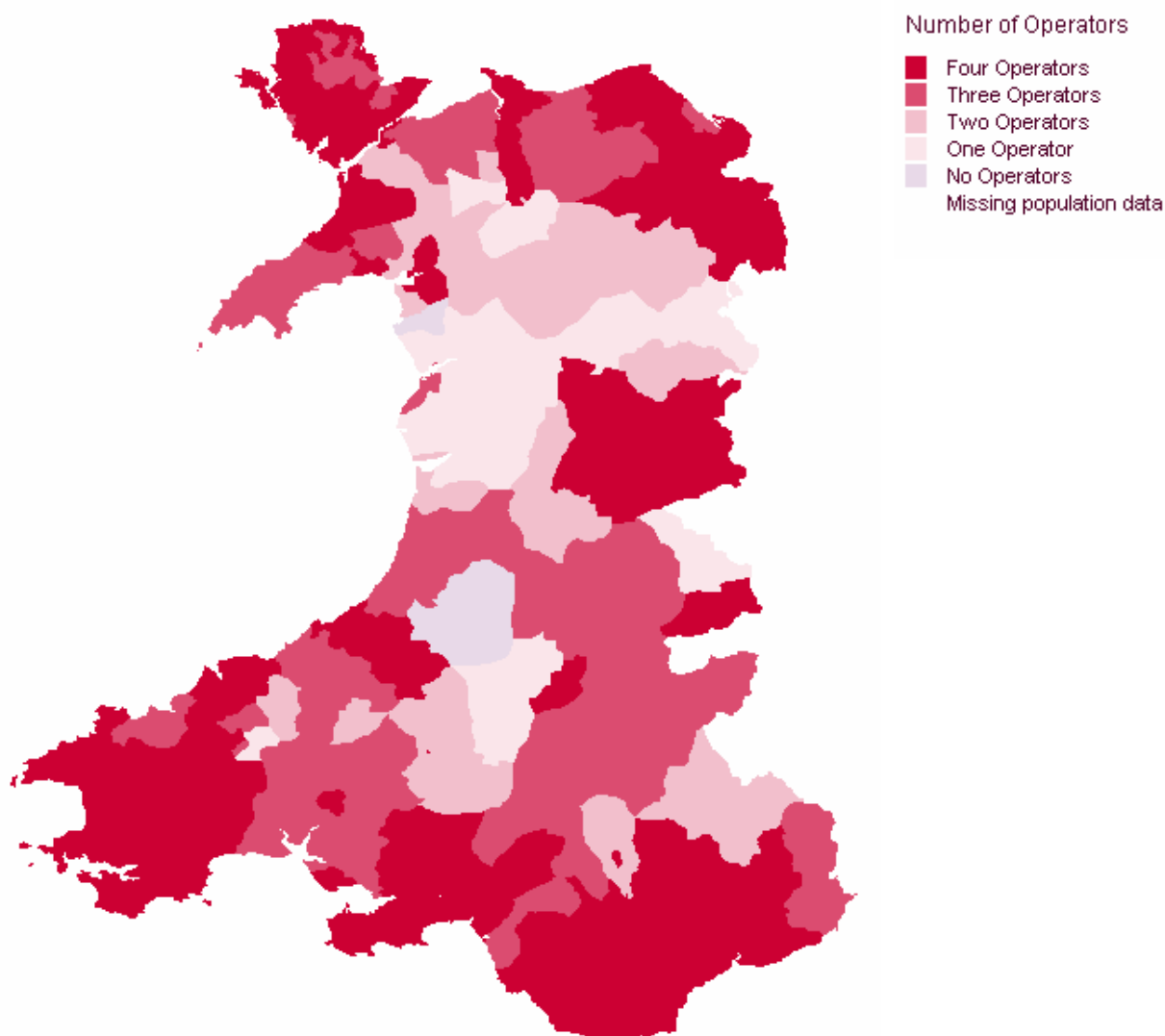
Figure 5: 2G mobile phone geographic coverage by postal district\*



Source: Ofcom, operator data, Q3 2005. \*Note: figure shows the percentage of postal districts where at least one operator and four operators report at least 75% area coverage

Figure 6 illustrates geographic coverage of the UK by number of 2G mobile phone operators. It shows that all four operators had greater than 75% coverage across large sections of the Wales. However, areas of mid Wales had two or fewer operators reporting these levels of coverage – and there were certain areas which had >75% coverage limited to two or fewer operators.

**Figure 6: 2G mobile phone coverage in Wales by number of operators (postal districts with at least 75% area coverage)**



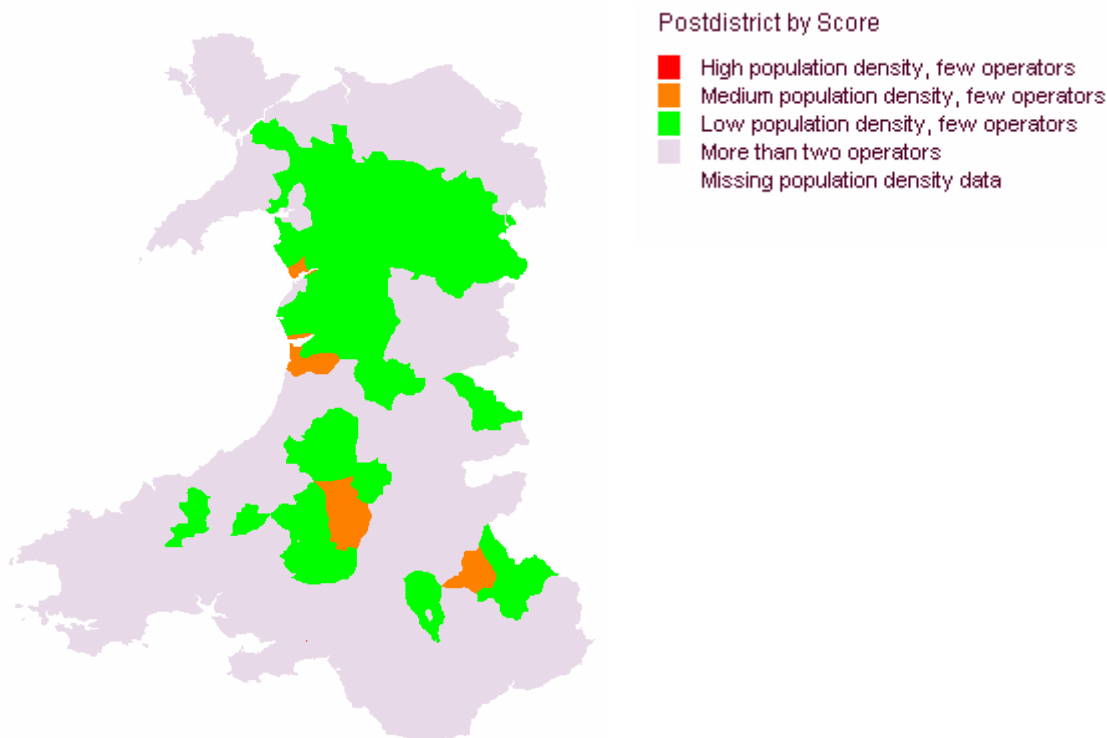
*Source: Ofcom, operator data, Q3 2005. Shows the postal districts where the number of operators identified report at least 75% area coverage*

In general, areas with reported coverage lower than the UK average were those where population density is also very low. Whilst lower coverage in deeply rural areas may concern those that live there, or those visiting, it is often difficult for the mobile network operators to commit to the costs of network build in these areas (often areas with hilly terrain) in the light of low additional expected returns. It is worth noting that less than 1% of the UK population live where there is no coverage according to the criteria defined above.

A small number of areas had higher population density coupled with lower levels of 2G geographic coverage. Figure 7 shows an overlay of the postal districts where fewer than

three operators reported the defined level of geographic coverage, against relative population density in those areas. It shows that the majority of the areas with lower coverage were those where population density was also low (the green areas on the map). However, the amber areas on the map show areas of lower geographic coverage with medium population density.

**Figure 7: 2G mobile phone coverage in Wales against population density (postal districts with at least 75% area coverage)**



Source: Ofcom, operator data, Q3 2005

### 5.3.3 Mobile phones - 3G

Ofcom also requested data from the mobile network operators for 3G coverage across the UK. The data was provided at postal district level and we have analysed it by geographic coverage across postal districts.

For this purpose our benchmark for 3G mobile phone availability was 25% area coverage within an individual postal district to a speed of at least 128 kbit/s outdoors. 3G coverage is not simply a 'yes or no' answer, in the way that 2G coverage is. A number of factors affect the quality of 3G service, including distance from the base station, the number of simultaneous users of a given base station and whether the user is indoors or outdoors. We asked mobile network operators to give us details of those areas where they provide 3G services at sufficient bandwidth to enable data and video services (>128kbit/s), rather than their total 3G coverage areas which would include areas where the 3G network could be used for lower bandwidth services. The way 3G technology transmits data signals means that 3G transmission speeds deteriorate significantly over distance. A 3G base station typically serves a significantly smaller area than an equivalent 2G base station - especially for higher-speed 3G services (>128 kbit/s).

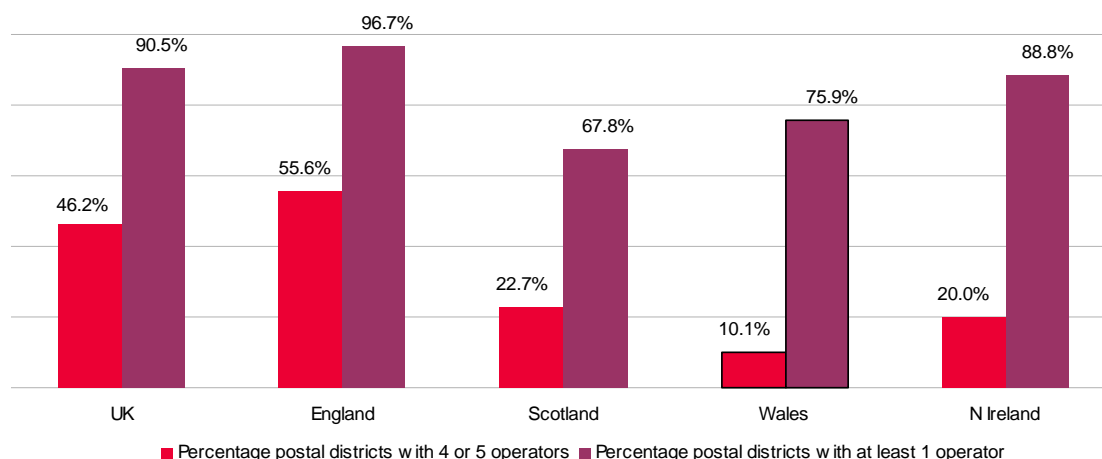
Using this 25% area coverage threshold means that it has not been possible to calculate meaningful statistics about 3G population coverage. In this case the geographic extent of coverage may be more significant than the population covered.

When evaluating 3G coverage, it is worth noting that all current 3G handsets also have the capability to operate on 2G networks. This means that subscribers with 3G devices will be able to use higher-bandwidth data and video services in the areas where there is 3G network coverage, and will also be able to use 2G networks for voice and simple data when they are outside of a 3G coverage area but still within a 2G coverage area.

Figure 8 shows 3G geographic coverage by postal district. Geographic coverage levels were consistent with 3G rollout occurring in urban parts of the UK first. Some 46.2% of postal districts in the UK had the defined level of coverage by at least four 3G operators and 90.5% of postal districts had such coverage by at least one operator. In Wales this figure was lower than UK average at 75.9%.

Wales also had lower than UK average 3G coverage when measuring the coverage by at least four operators. Here the figure was 10.1%, and lower than all other nations and regions.

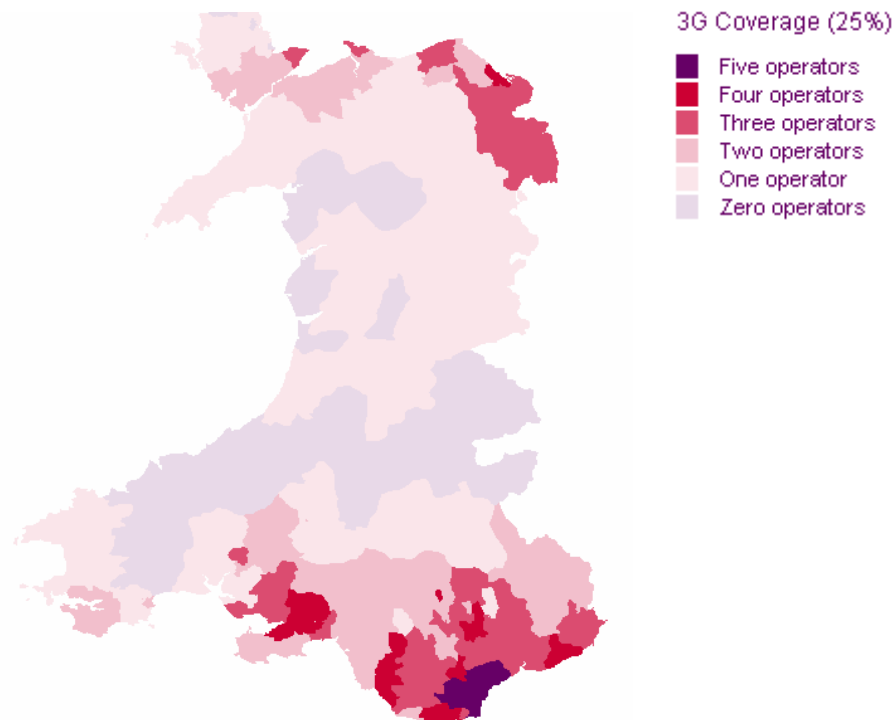
**Figure 8: 3G mobile phone geographic coverage by postal district\***



Source: Ofcom, operator data, Q3 – Q4 2005. \*Note: figure shows percentage of population within postal districts where at least one operator and four operators report at least 25% area coverage

The map in Figure 9 shows that, although 3G operators have achieved significant coverage to date, they are still in rollout stage. Naturally, areas of higher population have been targeted first. For Wales, rollout has centred in the Cardiff and Swansea urban areas in the south.

**Figure 9: 3G mobile phone coverage in Wales by number of operators (postal districts with at least 25% area coverage)**



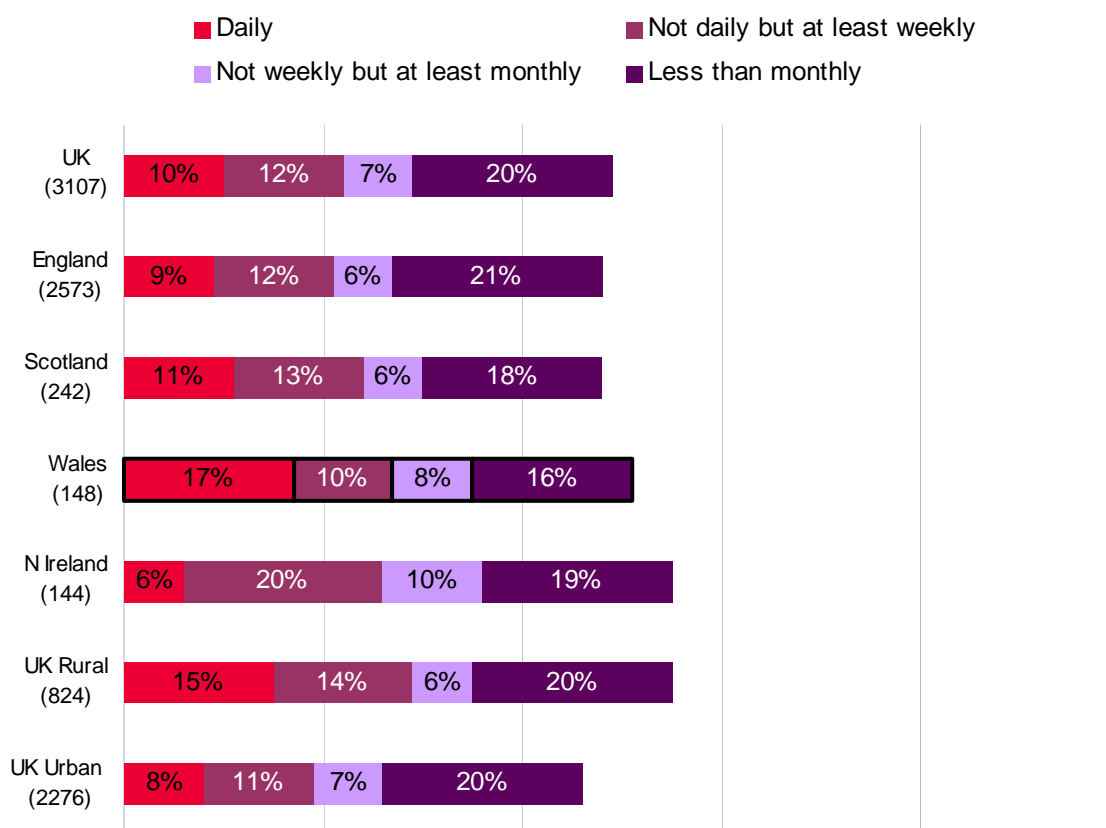
*Source: Ofcom, operator data, Q3 - Q4 2005. Shows the postal districts where the number of operators identified report at least 25% area coverage*

### **5.3.4 Consumer perceptions of their mobile phone reception**

Figure 10 shows the proportion of mobile phone users reporting reception problems by nation.

Consistent with the coverage data above, Figure 11 shows that mobile phone customers in Wales were more likely to say they experienced reception issues in their local area on a daily basis, the highest of all the nations (17%, compared with UK average 10%). This is consistent with operator data shown above.

Figure 10: Proportion of mobile phone users reporting reception problems



Source: ICM survey, 3-16 February 2006

## 5.4 Availability of internet services

### 5.4.1 Total internet

Availability of internet services at low speed via a narrowband connection is the same as landline voice services – in other words virtually ubiquitous throughout the UK (we define ‘narrowband’ as an internet connection achieved by means of dialup over twisted copper pair or coaxial cable at speeds of less than 128kbit/s).

However, whilst many consumers are currently satisfied with this type of connection, there has been a rapid increase in appetite for higher speed broadband connections. Ofcom’s latest market data (September 2005) shows that 57% of the UK’s 15.5 million internet connections were over broadband connections (up from less than 10% at the end of 2002; broadband is defined as any connection in excess of 128 kbit/s); the trend towards broadband is likely to continue as a larger proportion of websites and internet applications require higher connection speeds to function effectively. In this context, we will focus on the availability of broadband services.

### 5.4.2 Broadband

BT data from January 2006 shows that 99.5% of premises in Wales were connected to DSL enabled exchanges. However, some premises within these exchange areas are not suitable for delivery of broadband services, or only at very low speeds, due to local technicalities such as distance from exchange or poor quality of networks.

All exchanges that BT had deemed commercially viable had been upgraded for digital subscriber line (DSL) in Wales by July 2005. Wales DSL coverage for first generation services were by then on a par with the UK average.

Wales currently has the largest proportion of exchanges deemed to be commercially unviable for broadband upgrade in the UK<sup>6</sup>. Out of the 439 exchanges in Wales, 35 commercially unviable exchanges remain unable to provide a DSL service, but this is being addressed by the Welsh Assembly Government's Regional Innovative Broadband Support scheme (RIBS) which received European approval as being compatible with state aid in June 2005. Under the RIBS scheme, the Assembly Government announced on 14 March 2006 that the BT Group has been selected to provide the infrastructure for the remaining exchanges in Wales to be upgraded so they can provide broadband services.<sup>7</sup>

By September 2005, BT had upgraded 19 exchanges in Wales to provide SDSL services to households and businesses in Wales including Cardiff, Bridgend, Newport, Wrexham, Swansea, Neath, Caerphilly and the Vale of Glamorgan. Currently Wales falls below the UK average for symmetrical service availability with 21% of sites in Wales having access to symmetrical 2Mbps service compared with a UK average of 42%<sup>8</sup>. BT has also recently conducted ADSL 2+ trials in 4 exchanges in Wales.

Operator data shown in Figure 11 demonstrates that around 23% of households in Wales could access cable modem services. This figure was the lowest of the nations.

Cable modem broadband services are provided by NTL and account for approximately 115,000 connections within the south east Wales cable franchise area. NTL offered cable modem services along the M4 corridor covering Newport, Cardiff, the Vale of Glamorgan and Swansea. The company offered services between 150 Kbps and 3Mbps. The Broadband Wales Observatory estimates that there are around 350,000 sites within the NTL catchment area, representing around 25% of all households and businesses in Wales. Higher bandwidth services were only available to 23% of delivery points in Wales – all within the NTL cable area.<sup>9</sup>

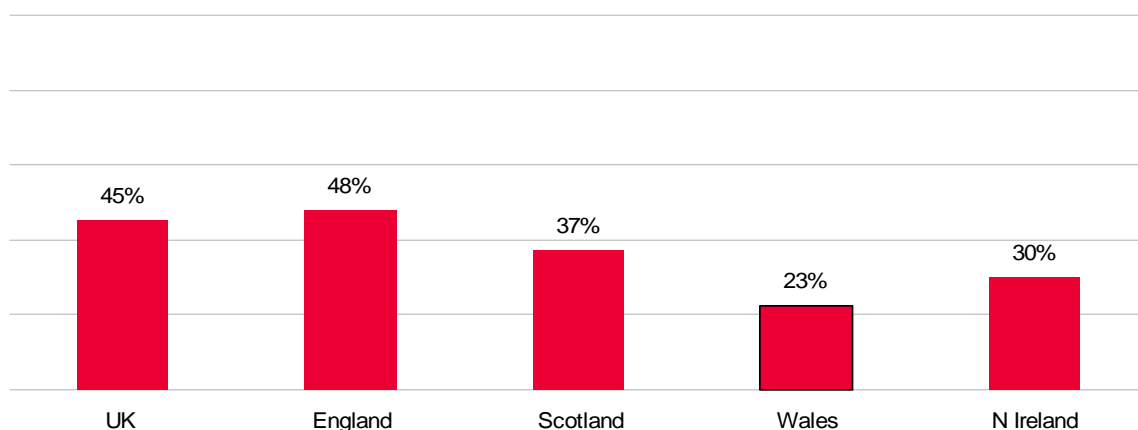
<sup>6</sup> Broadband Wales Observatory: Benchmarking Update Q3 2005

<sup>7</sup> For the purposes of the RIBS tender, the Welsh Assembly Government has defined first generation broadband as any connection in excess of 512 kbit/s.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*, p. 22

Figure 11: Percentage of delivery points passed by ntl or Telewest digital cable



Source: Ofcom, operator data, January 2006

### Local Loop Unbundling (LLU)

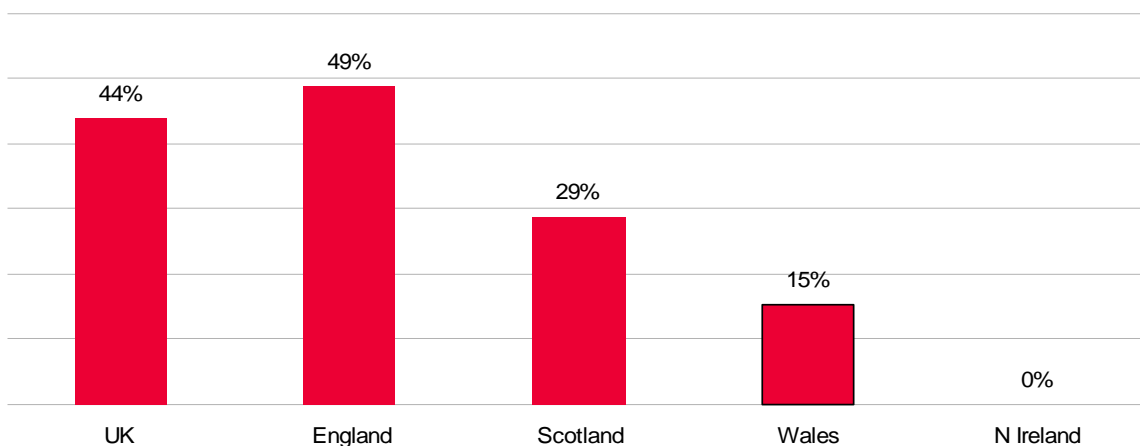
A significant factor affecting choice of DSL broadband services is the presence in the local exchange of an alternative operator with the ability to “unbundle” the local loop line. In simple terms, this means that the alternative operator takes over from BT the local line connecting the exchange and the household. The operator places its own equipment in the exchange to connect to the trunk network and facilitate services including DSL.

Bulldog remains the only LLU company to have rolled out DSL broadband in Wales. It offers broadband services up to 8Mbps to nearly 21% of all sites in Wales, to sites located within the unbundled exchange areas of Cardiff and Wrexham.

Figure 12 shows the percentage of delivery points within the footprint of an LLU enabled exchange.

Wales had a lower than UK average percentage of delivery points within the footprint of an LLU enable exchange, at 15% compared to 44% UK average, lower than Scotland (29%) but higher than Northern Ireland (0%).

Figure 12: Percentage of delivery points connected to an LLU enabled exchange



Source: Ofcom, operator data, January 2006

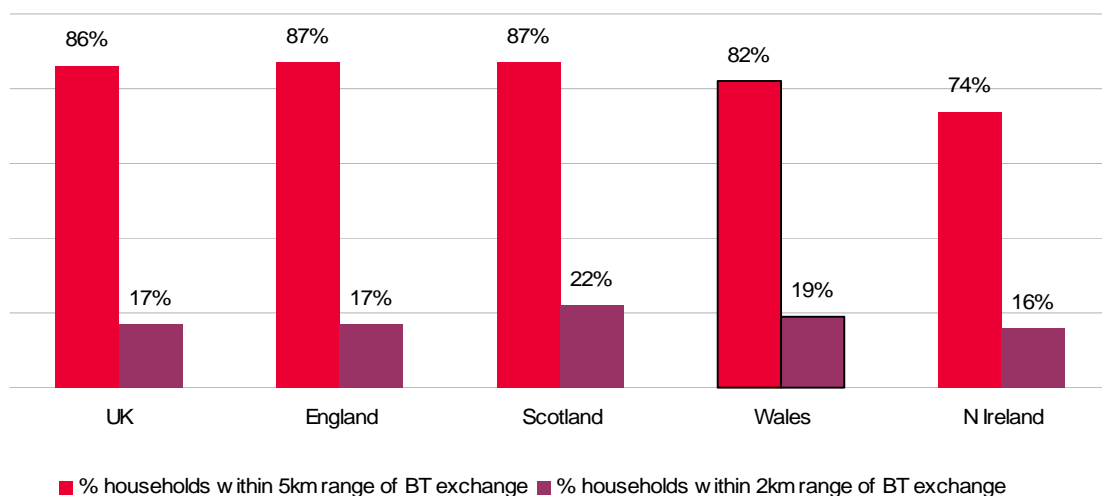
### Distance from exchange

Over DSL, potential connection speeds are constrained by one major factor: the customer’s line to the exchange. In general, the further a customer’s home is from the exchange, the worse the quality of the line will be. This in turn has an impact on the speed of service available to a customer. The greater the distance from the exchange, the slower the potential speed that can be achieved. However, this relationship is complex and depends on a number of other variables, including the condition of the copper wire network and how directly the line is routed to the customer’s home. Speed of service will also depend on the technology employed.

Ofcom commissioned research to estimate network distances from the exchange in Wales. The proportion of premises within 5kms and 2kms of an exchange is shown in Figure 13. Note that these distances are measured as the length of the copper wire network, not “as the crow flies” - modelling suggests that on average the network length is 1.4 times the straight-line distance.

At the 5km level, Wales at (84%) was just below the UK average of 87%, with 16% of Welsh premises outside the range of 5kms from an exchange. At the 2km level, Wales was relatively consistent with the other nations, with 15% of households within 2km range of an exchange.

**Figure 13: Percentage of premises within a 2km and 5km ‘implied’ local loop length range of a BT exchange**



Source: Point Topic, BroadBand User Service, June 2005

### 5.4.3 Other broadband technologies

Satellite broadband has been available to over 99% of all households and businesses in Wales since 2002, with a wide choice of 67 providers. The technology has also been used successfully to support community based broadband initiatives across Wales including Reynoldston on the Gower peninsula.

Wireless broadband is offered by a limited number of niche providers in Wales, including TNS, Gaia Technologies, Arwain, WB Net, Dragon Net and Deudraeth Cyf. However, the Broadband Wales Observatory estimates that less than 1% of all households and businesses in Wales are currently able to access fixed wireless broadband.

The BT Openzone website lists over 400 wireless hotspots in Wales. But the technology remains a niche product, covering less than 1% of Welsh households<sup>10</sup> 150 hotspots are located in Cardiff through BT and other providers, with a further 350 located across Wales. However it is likely to be some years before wireless broadband is ubiquitous in Wales.

## 5.5 Availability of digital broadcasting services

### 5.5.1 Digital TV

Digital TV is available in Wales on three of the four main digital TV platforms in the UK: digital terrestrial television (DTT), cable and satellite. A recently established company based in south east Wales is developing a niche TV over broadband service aimed at university students in Wales and across the UK.

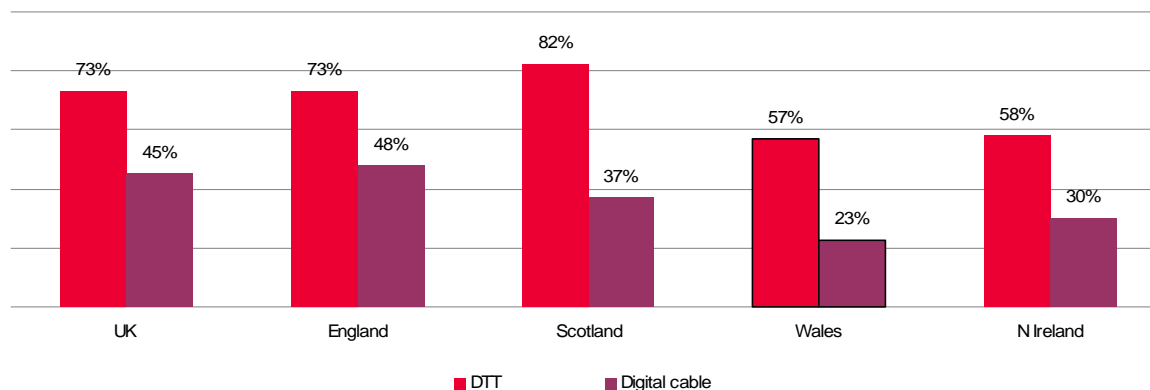
<sup>9</sup> Broadband Wales Observatory benchmarking update Q2 2005, quoting Ovum

## Satellite

The digital TV platform with the greatest coverage in Wales is digital satellite which covers approximately 98% of the population. The service is in effect ubiquitous throughout Wales but reception at some sites may not be possible due to local obstructions, for example in deep valleys with steep south facing hills.

## Digital terrestrial television and digital cable television

Figure 14: Digital terrestrial television and digital cable availability



Source: DTT: Ofcom, BARB, BBC, April 2004, updated regional coverage 2005. Estimates are based on ITV areas. EM and WM are combined figures. Base is number of households

As noted above, digital cable, provided by NTL, is available in the urban areas of the south east mainly in Cardiff, Newport, Swansea and parts of the Vale of Glamorgan. A cable service is available to around 23% of households in Wales, which is well below the UK average of 45%.

DTT services in Wales are broadcast from ten sites and core coverage (where all 6 multiplexes can be received) is currently around 57 per cent of the Welsh population (which is well below the UK average of 73%). Although DTT is carried by the 6 main transmitters serving Wales, due to its mountainous terrain the country also has 207 relay transmitters, of which only 4 carry DTT. The plan at digital switchover is to at least replicate the current level of analogue coverage in Wales and this will require the conversion of the remaining relays to DTT. (Analogue coverage in Wales is slightly below the UK core coverage of around 98.5 per cent at 97.4%, with 96.7% being served from transmitters based in Wales.)

3.3% of households are currently un-served by the Wales based transmitter network i.e. 36,000 households or around 85,000 people. A further 7,700 households are served by England based transmitters, leaving 28,300 households un-served by the transmitter network.

However, there around 38 licensed Self-Help-Schemes operating in Wales, either as relays or active deflectors which provide some additional fill-in coverage<sup>11</sup>

<sup>11</sup> Ofcom has written to all (around 200) Self Help WTA licensees to (a) inform them that Ofcom has taken over the administration of their licences from the DCMS and (b) inform them of Ofcom's digital switchover consultation, *Planning Options for Digital Switchover*, 1 June 2005

## Overlap viewing

The television transmission overlap area down the length of eastern Wales, in which services from England can be received, covers about 40% of the population. By contrast, due to a narrower border area, English based transmitters cover only 2.8 % of the Scottish population<sup>12</sup>.

A tradition of viewing programmes from across the border developed during the 1950s and 1960s when television first arrived in Wales. When ITV began in the north in 1956, the area was, for a period, served by Granada television, based in Manchester. However Wales was later established as a single service area by the Independent Television Authority served by its own broadcaster, TWW<sup>13</sup> (and after 1967, by HTV Wales., now known as ITV 1 Wales)..

During the 1970s there was a growth in Welsh language programming, which was screened in peak time on both BBC and ITV in Wales and many viewers who did not speak Welsh opted to receive services from England where possible.

The creation of S4C in 1982 provided Welsh speakers with a comprehensive service and addressed the issue of having Welsh language programmes screened in peak on the main English language channels in Wales. But it also generated a new issue: deprivation of the full Channel 4 service, which was not available in Wales because the fourth channel had been allocated to S4C. During the late 90s, viewers in the overlap areas were also able to receive five from transmitters in England, a service that has only very patchy analogue coverage in Wales.

Research by the broadcasters in Wales during 1998 suggested that the public were not always aware of the reception options open to them and that aerial installers were making assumptions about consumer preferences, often fitting aerials for England based services without asking. The three broadcasters undertook several information campaigns during this period, including one in conjunction with the Wales Tourist Board directed at hotels and guesthouses in overlap areas.<sup>14</sup>

### 5.5.2 Digital radio

Digital radio is available via the internet and digital TV as well as DAB digital radio. The availability of DAB digital radio services in Wales is shown in Figure 15 below.

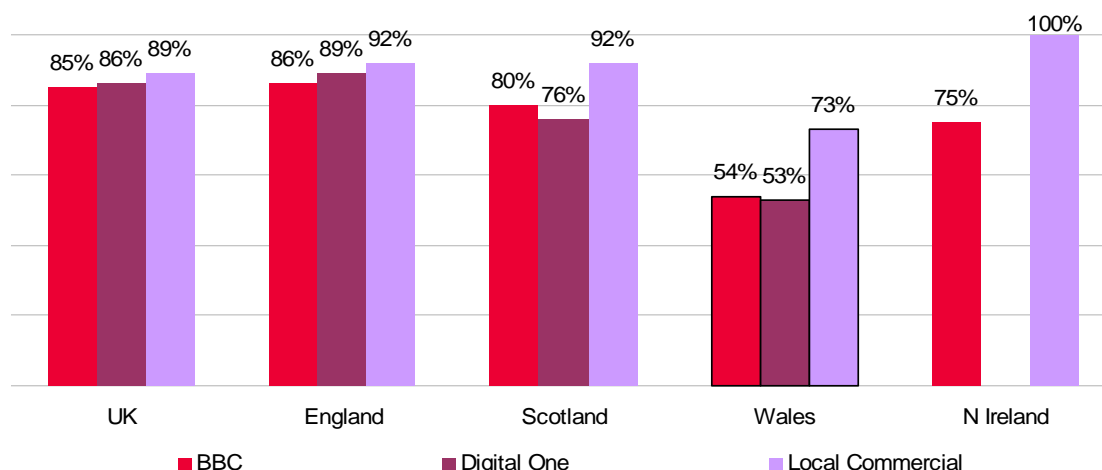
Figure 15 shows that Wales had lower than UK average availability of DAB digital radio services, for each of BBC UK multiplex (54%), Digital One (53%) and Local Commercial (73%) services. Availability of each of these services is lower than the UK average (85%, 86% and 89% respectively).

<sup>12</sup> *Not by Bread Alone, Information, Media and the National Assembly*: Geraint Talfan Davies, Wales Media Forum., 1999

<sup>13</sup> During 1962 - 1963 west and north Wales was briefly served by WWN (Wales West and North) but this service area was later merged with the area served by TWW (Television Wales and the West).

<sup>14</sup> BBC Wales, evidence to the Welsh Assembly Culture Committee, 13 December 2000

Figure 15: DAB digital radio population coverage by nation



Source: BBC, Digital One, Ofcom, June 2005. Figure for Digital One UK shows the percentage coverage of Great Britain (Digital One’s licence does not include N Ireland). Population coverage for local commercial digital multiplexes shows the percentage of population living within licensed areas. Not everyone living within these areas will be able to receive the services at present as transmitter networks are not complete. Actual coverage varies by multiplex and ranges between around 70% and 95% of the licensed area.

Historically, DAB digital radio services have been comparatively slow to roll out in Wales. Wales is served to some extent by one UK-wide BBC Multiplex, one commercial multiplex operated by Digital One and three local commercial digital multiplexes. Although a partial service is now available to over 70% of the population, its geographic spread is limited to the highly populated areas in the south east, including Cardiff, Newport, the Vale of Glamorgan and Swansea, with some limited coverage in the north east. However, both the BBC and the commercial operator Digital One are due to extend their networks significantly in Wales during 2006.

DAB digital radio has thrown up a serious issue for the BBC in relation to its radio services for Wales. Historically the BBC did not generally develop a local radio strategy in Wales. Instead it established two national all-Wales services, Radio Wales broadcasting in English and Radio Cymru broadcasting in Welsh. Radio Wales is carried on AM, and in parts of Wales on FM whilst Radio Cymru is carried exclusively on FM throughout most of Wales.

Under the terms of the 1996 Broadcasting Act<sup>15</sup>, the BBC can secure carriage for its local services on local commercial DAB digital radio multiplexes operating in the UK, a model that has worked to some extent in England, although the mapping of BBC local services onto commercial multiplexes has not been an exact fit. In line with this statutory requirement, BBC Radio Wales and Radio Cymru are carried on two local commercial DAB digital radio multiplexes in Wales, serving Cardiff/Newport and Swansea (but not on the South Wales and Severn Estuary multiplex.)

Following the additional roll out expected in 2006/7, most areas of Wales will be able to receive the BBC UK and Digital One multiplexes, but Radio Wales and Radio Cymru will only be available on DAB digital radio in parts of the south east of Wales. The south east is the most densely populated area of Wales, but large numbers of Welsh speakers live in the west, mid and north.

<sup>15</sup> Section 49, Broadcasting Act 1996

In our recently published Radio Review Phase 2 report, *Radio - Preparing for the Future*, we proposed creating 6 new DAB digital radio multiplexes for Wales, allocated in such a way as to maximise the likelihood that bids will be received to operate them if and when they are advertised. When all these multiplexes are eventually licensed they will cover the rest of Wales, providing an opportunity for the BBC's services for Wales to also increase their DAB digital radio coverage under the must carry provisions. Other technologies such as DRM may also provide a solution for rural areas in the future.

## Section 6

# Take-up of communications services

## 6.1 Introduction

The following section reports take-up levels of each of the three categories of communications services. A number of factors are likely to influence the take-up of communications services such as location, income, age and attitudes (as discussed in Section 4 – Setting the scene). This section explores patterns in take-up of services in Wales, compared to UK average, and also considers consumers who are potentially excluded from taking up services. Demographic and attitudinal data are also examined to highlight key factors impacting on take-up of communications services in Wales and across the UK.

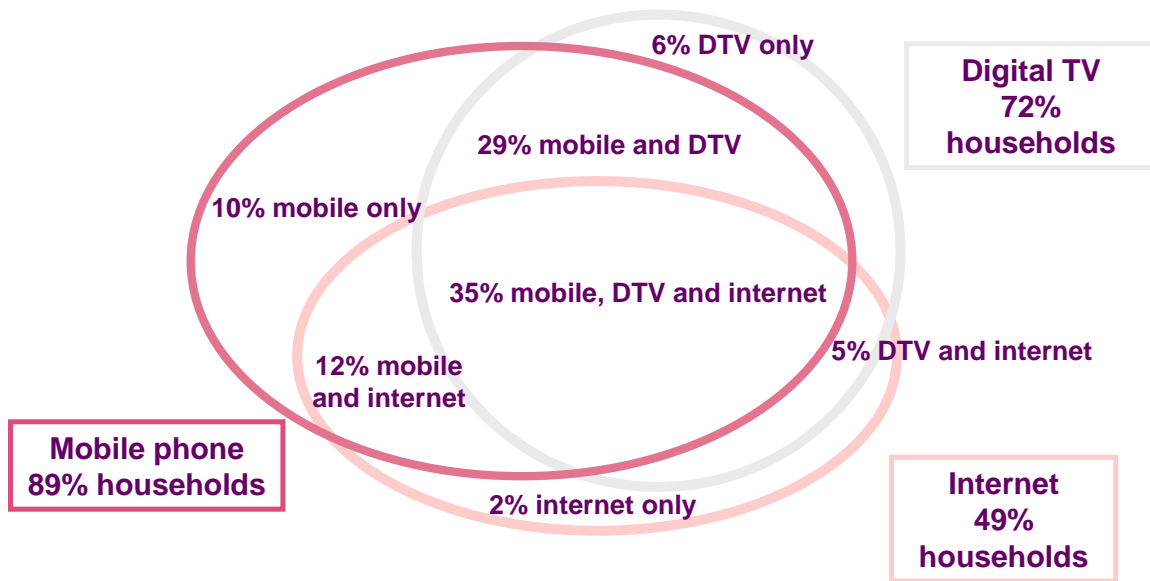
## 6.2 Key findings for Wales

- Wales is second only to Northern Ireland for the fewest number of people that have all three of the communications services together (mobile phones, digital TV and the internet) (35%, after Northern Ireland at 34%, compared to a UK average of 43%).
- People living in Wales are more likely to own a mobile phone and digital TV only than the UK as a whole, with 29% saying that they own these two services compared to 19% for the UK.
- In spite of its higher rural population, Wales has the joint lowest take-up (with Scotland and Northern Ireland) of landlines across the UK, at 87% (UK average 91%).
- 73% of Welsh say they personally use a mobile phone, lower than UK average (80%).
- 13% of Welsh population say they rely solely on mobile phones for their telecommunications needs, higher than UK average (8%).
- Internet take-up is 49% in Wales, the second lowest in the UK (after Northern Ireland at 48%, UK average 57%).
- 54% of internet households have broadband in Wales, the second lowest in the UK (after Northern Ireland at 52%, UK average 63%).
- Take-up of digital TV is highest in Wales (72%, compared to UK average of 65%).
- Of the various digital TV platforms, take-up of satellite is highest, at 46% of Wales' households.
- The claimed level of access to digital radio in Wales is 28% which is slightly below the UK average of 32%.

## 6.3 Cross platform take-up

Figure 16 shows cross platform take-up amongst households in Wales. Just over one third of adults in Wales (35%) had taken up three of the four key communications services – mobile phone, digital TV and internet – at home. A little under one third (29%) had access to a mobile phone and digital TV, and a smaller number, nearer one in ten (12%) had mobile phone and home internet access. Consistent with UK findings internet owners in Wales rarely purchased this service in isolation (2%); however, digital TV owners in Wales were comparatively more likely only to have digital TV (6%).

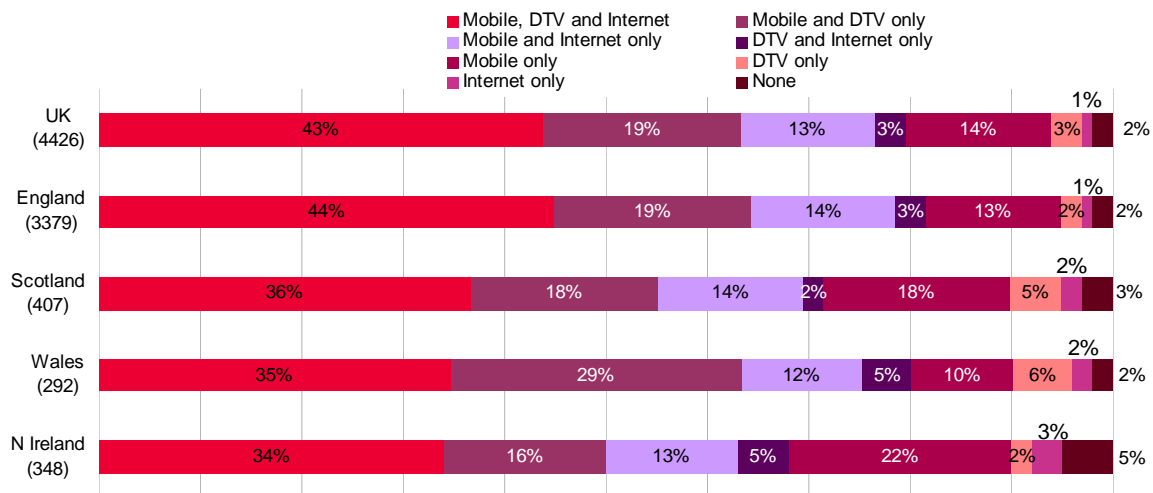
Figure 16: Cross ownership of mobile phones, digital TV and internet in Wales



Source: Ofcom residential tracking survey, based on rolled data from Q2 and Q3 2005. Note individual % do not total the overall penetration figures precisely due to rounding of the data. Mobile phone only figures include consumers that have a landline at home. Base: 292 UK adults aged 15+

Figure 17 shows that the cross platform take-up picture in Wales was different to that of the other nations. Consumers in Wales were significantly less likely to have all three services, but were more likely to own both a mobile phone and digital TV. Levels of non-ownership of any of these platforms were broadly similar across each of the nations.

Figure 17: Cross platform take-up of communication services



Source: Ofcom Communications Tracking Study, Q2/Q3 2005

## Exclusion from taking up services

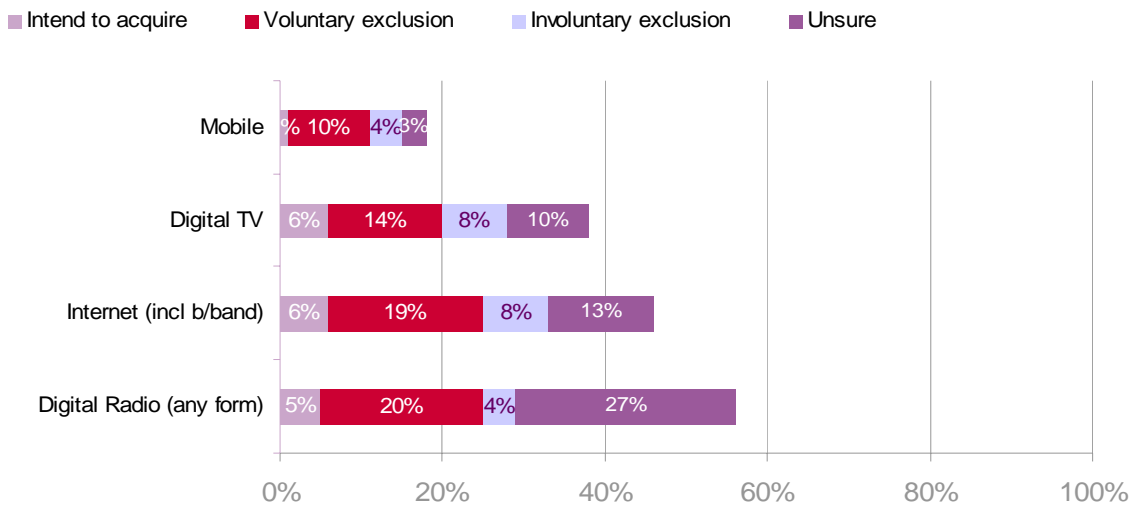
This section examines the intentions and reasons for lack of take-up of mobile, internet, digital TV and digital radio<sup>16</sup>. It focuses on the issue of exclusion and whether this is for voluntary or involuntary reasons. People who said they have no intention of getting the platform were asked their reasons for this. Those classified as *voluntarily excluded* gave responses which include being happy with current provision, see no need, or are not interested: in other words, saying that they made a positive choice.

Those classified as involuntarily excluded gave responses that included affordability, perceived lack of digital coverage, perceived difficulty in using and lack of understanding. Those who gave a mix of voluntary and involuntary responses were classed as involuntarily excluded.

At a UK level, reasons for not taking up digital TV and the internet were around twice as likely to be voluntary as involuntary. For every platform, levels of involuntary exclusion were less than 10% of adults surveyed. For mobile phones and digital radio, levels were less than 5%. For digital radio and internet, the percentage of those voluntarily excluded was much higher than the other two platforms (20% and 19% respectively). The lowest level of exclusion overall was for mobile phones.

Figure 18 sets out the all-UK picture of those who did not take-up any of the main communications services, with specific technologies and the data for Wales being covered in more detail in the following sections.

**Figure 18: Levels of voluntary and involuntary exclusion by platform (whole of UK)**



Source: Media Literacy Audit, Ofcom-SRB, June-August 2005 Base: All UK adults (3244)

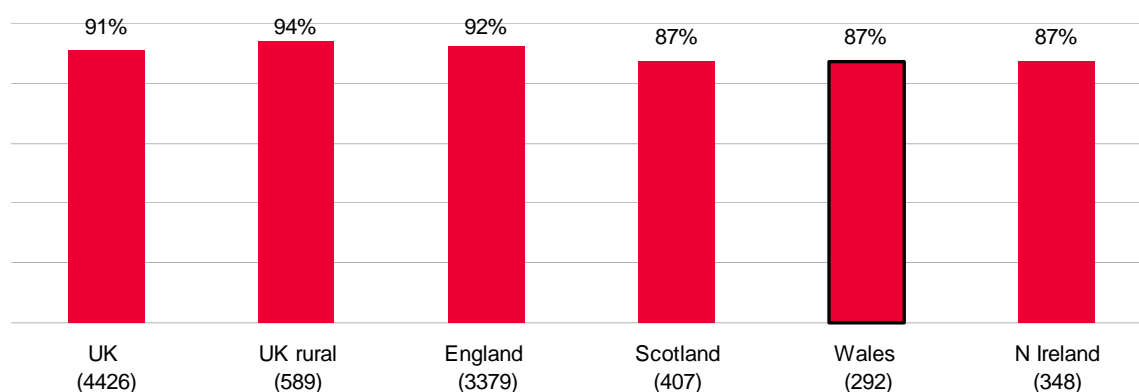
<sup>16</sup> The data is taken from Ofcom's Media Literacy Audit survey of 3244 adults aged 16+ June-August 2005

## 6.4 Telecoms

### 6.4.1 Telephone landlines

Figure 19 shows home landline take-up across the nations and in UK rural areas. Households in Wales were less likely to have a landline at home than in the UK as a whole, and subsequently more likely than other nations to rely solely on a mobile phone.

**Figure 19: Home landline take-up**



Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

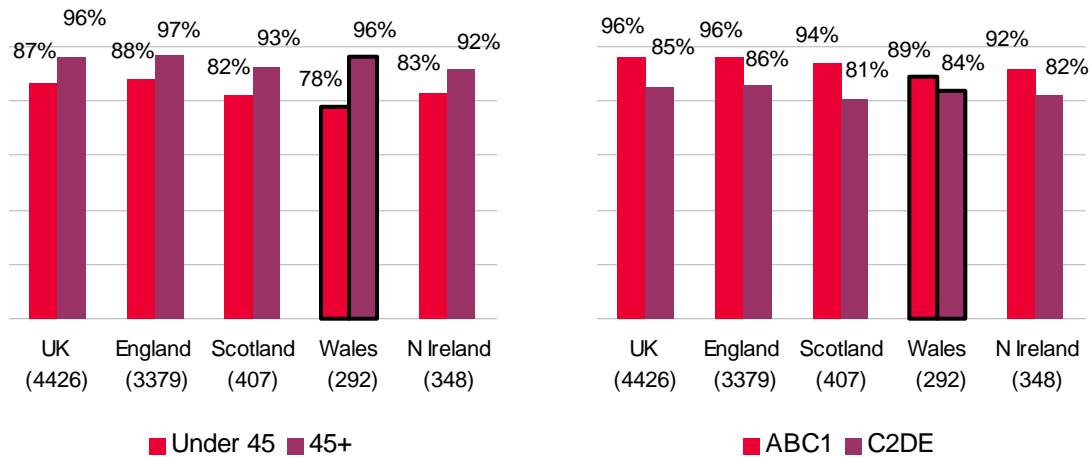
Figure 20 shows levels of landline take-up by age and by socio-economic group. Fewer adults under 45 had landlines in Wales (78%) than the UK average for this age group (87%), while the share of older adults in Wales with a landline at home was the same as the UK average of 96%.

Overall landline take-up in Wales was lower amongst ABC1s (89%) compared with the UK average of 96% for ABC1s. C2DEs (84%) in Wales were as likely as the UK average to have a landline at home; the fact that this group makes up a higher proportion of the population of Wales (51%) compared with the UK average of 43% may also impact on the overall landline take-up. Adults in the C2DE social group may have had difficulty in obtaining credit<sup>17</sup> and despite its USO obligations, BT does not have to offer landline contracts to individuals with a poor credit history<sup>18</sup>. Consequently, subscribing to a landline service could be more difficult for low income groups.

<sup>17</sup> Low income families in Wales have more limited access to credit than their more affluent counterparts. *Credit Use in Wales*, Whyley, Claire, Welsh Consumer Council 2003.

<sup>18</sup> To address this issue BT is evaluating the use of its pre-pay product, 'pay and call' for people with a debt history. The scheme is currently limited to 700,000 subscribers in the UK.

Figure 20: Home landline take-up by age and socio-economic group

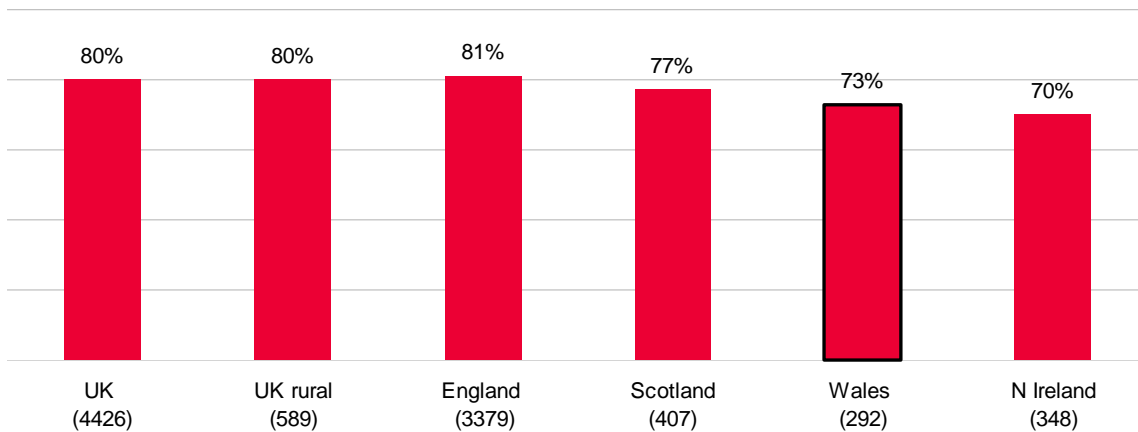


Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

### 6.4.2 Mobile phones

Figure 21 shows take-up of mobile phones. Take-up of mobile phones in Wales has shown steady growth since 2002, according to trend figures shown below in Figure 41. However, Figure 21 shows that take-up was lower than the UK average (73%) although at a broadly similar level to Northern Ireland.

Figure 21: Personal take-up of mobile phones



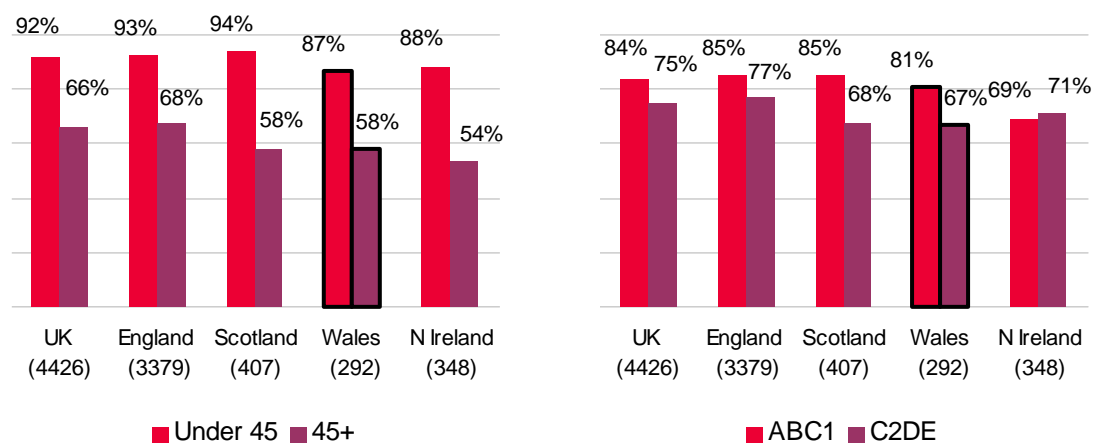
Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

Figure 22 shows personal take-up of mobile phones by age and socio-economic group. There are indications that older people (45+) were less likely to own mobile phones in Wales (58%) compared with the UK average for this age group of 66%. Younger consumers across the UK were equally as likely as each other to own a mobile phone.

In addition to potentially lower mobile phone take-up amongst older consumers in Wales, those in social groups C2DE were significantly less likely than average to own a mobile phone (67% in Wales compared to 75% for C2DEs across the UK as a whole). The higher

incidence of these social groups in Wales means that lower take-up amongst them would have a greater impact on overall take-up in Wales.

**Figure 22: Adults that personally use a mobile phone by age and socio-economic group**

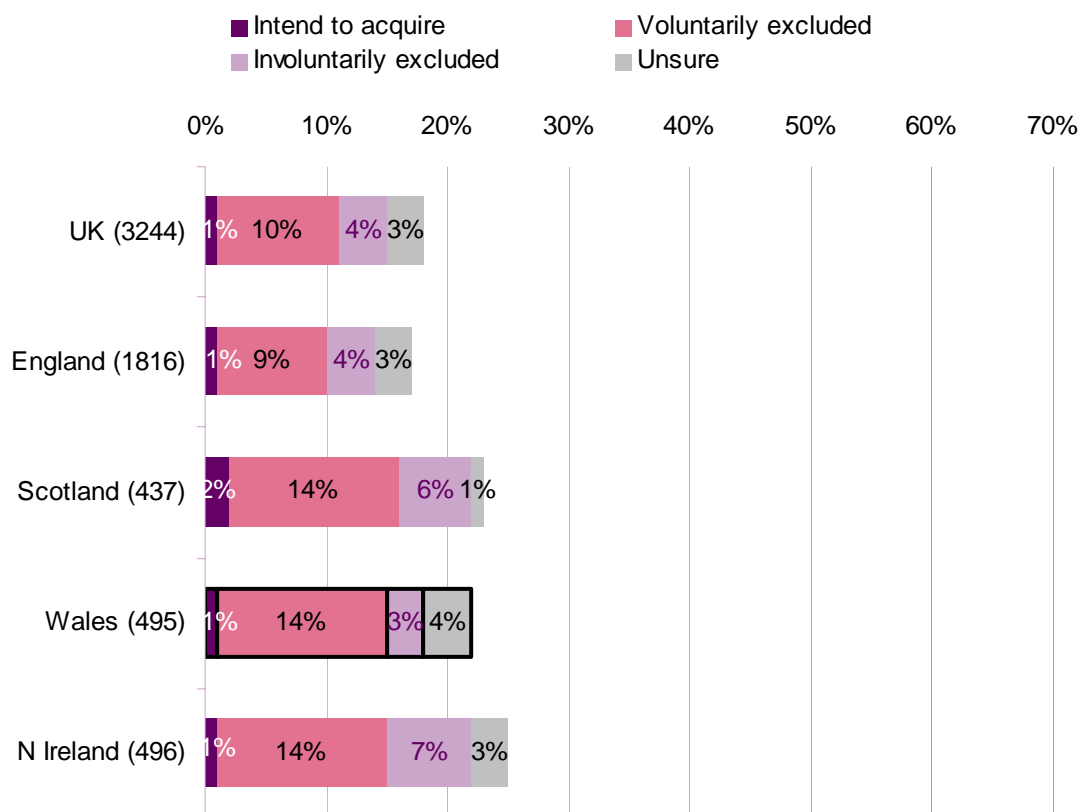


Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

### Analysis of those not taking up mobile phone services

Figure 23 shows levels of exclusion from taking up mobile phones in Wales and across the UK. There are very few differences between the different parts of the UK. 1% of adults across the UK said they were likely to get a mobile phone in the next 12 months. Claimed consumer intentions using market research are rarely achieved in practice and this figure should be read as a 'best-case' estimate of future take-up of mobile phone services.

Figure 23: Mobile phone exclusion - voluntary, involuntary and unsure



Source: Media Literacy Audit, Ofcom-SRB, June-August 2005

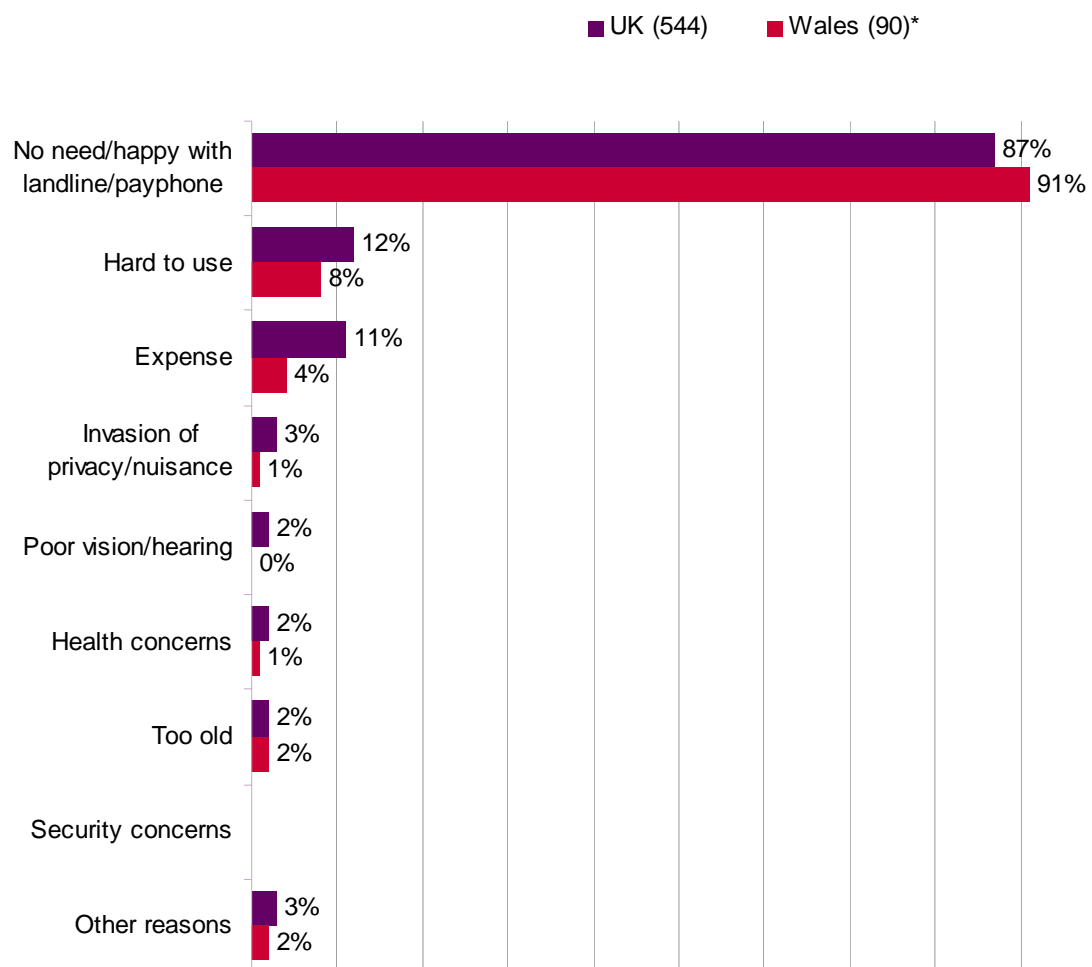
Figure 24 examines the reasons for not acquiring a mobile phone. Reasons given by survey respondents in Wales not to get a mobile phone were broadly consistent with UK reasons, although there are indications<sup>19</sup> that people in Wales were less likely to cite expense as a reason not to have a mobile phone. Around 90% of respondents without a mobile phone saw no need for one, or said that they were happy with their existing services.

A 2002 report by the Welsh Consumer Council<sup>20</sup> suggested that poor reception was no longer a reason for consumers in Wales not to purchase a mobile phone. In keeping with this, of reasons cited by those who did not intend to own a mobile, coverage was not a sufficiently common response to warrant its own category, as shown in Figure 24 below.

<sup>19</sup> Not statistically significant at the 99% confidence level.

<sup>20</sup> *Mobile Phones in Wales* - Welsh Consumer Council 2002

Figure 24: Reasons for not acquiring a mobile phone

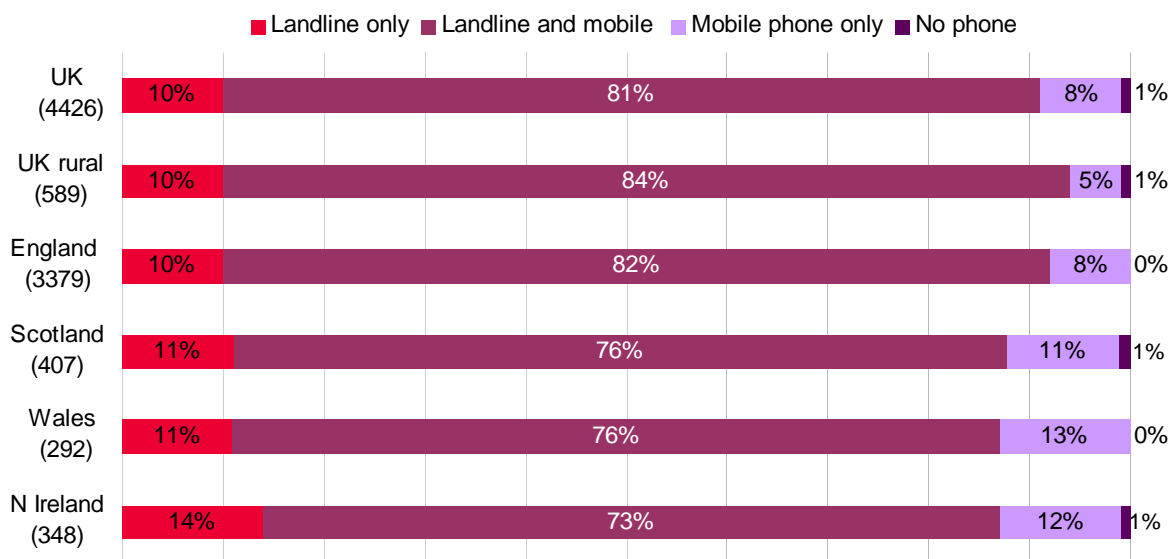


Source: Media Literacy Audit, Ofcom-SRB, June - August 2005 Base: All adults who do not intend to get a mobile phone in the next 12 months

### 6.4.3 Combined take-up of mobile phones and landlines

Figure 25 shows a comparison of household phone take-up. Consumers in Wales were significantly more likely to rely solely on a mobile phone for their home telecommunications than the UK average, although recent indications of a fall in landline take-up in Northern Ireland now means consumers in this nation were as likely as those in Wales to rely solely on a mobile phone.

Figure 25: Combined take-up of mobile phones and landlines



Source: Ofcom Communications Tracking Study, Q2/Q3 2005 rolled data

## 6.5 Internet

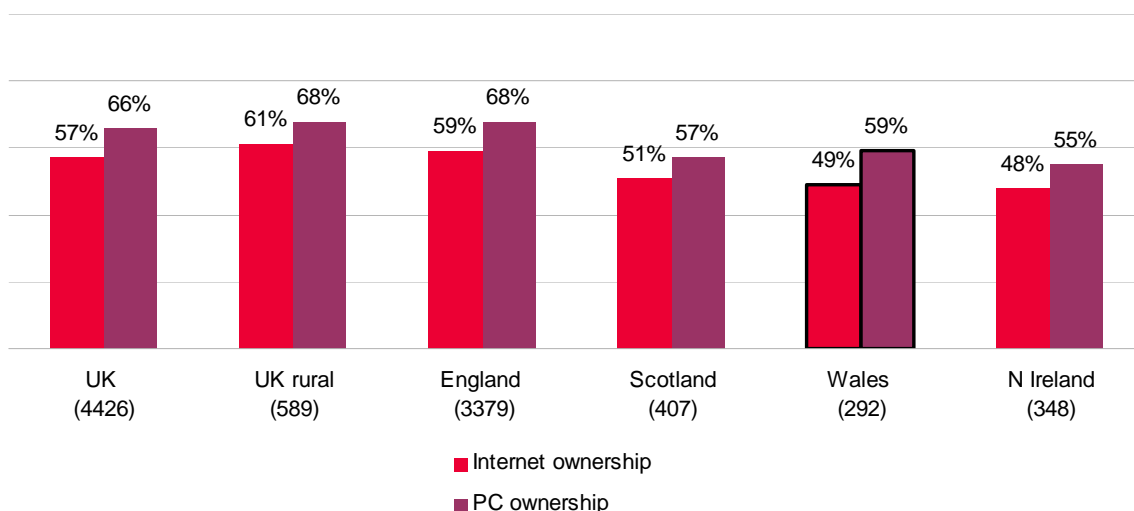
### 6.5.1 PC and internet

Figure 26 shows PC and internet take-up across the nations and in UK rural areas. Internet penetration in Wales (49%) was significantly lower than the UK average (57%), but showed a broadly similar picture to that in Scotland and Northern Ireland<sup>21</sup>. There were also indications of lower PC penetration in Wales (59%) compared to the UK average (66%), figures which were again broadly in line with those for Scotland and Northern Ireland<sup>22</sup>.

21 According to the Broadband Wales Resident Survey Q4 2005 (published by the Welsh Assembly Government in February 2006) 63% of homes with a landline in Wales have internet access.

22 71% of respondents to the Broadband Wales Resident Survey Q4 2005 (conducted amongst homes with a landline) said they own a PC. Ofcom data illustrated above is based on all households and the comparable figures amongst those with a landline are 53% internet take-up and 62% PC take-up. It should be noted that these figures are calculated from amalgamated data collected between Q2 and Q3 2004 and therefore do not take into account any rise in take-up between Q2 and Q4 2005.

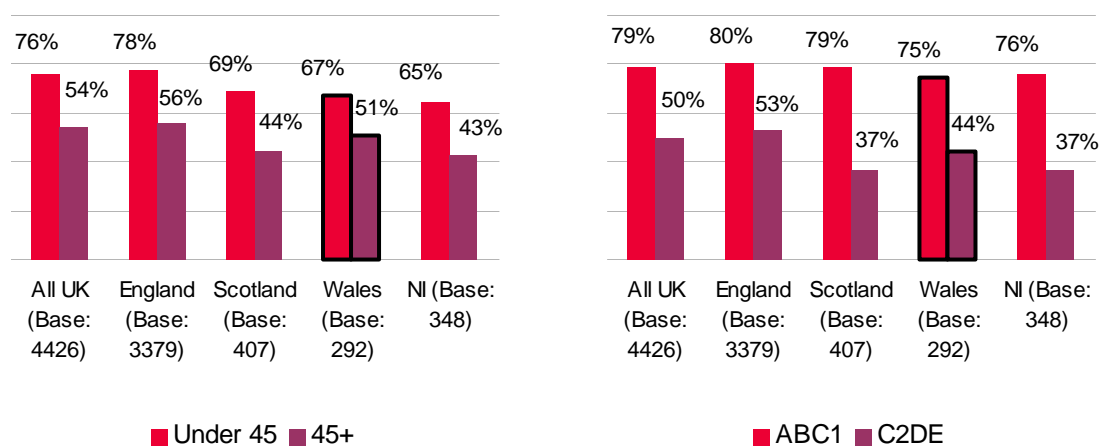
Figure 26: PC and internet take-up



Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

Figure 27 shows PC take-up by age and by socio-economic group. The higher incidence of C2DEs in Wales and the indications of lower take-up of PCs amongst this group (44% in Wales compared with a UK average of 50%) may partly explain the lower than average internet penetration in Wales.

Figure 27: PC take-up by age and socio-economic group



Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

Figure 28 shows internet take-up by age and by socio-economic group. There were indications that the level of internet take-up in Wales for both under 45s (56%) and ABC1 (64%) were not as high as those seen in the UK as a whole (66% and 72% respectively). Internet take-up in Wales may also have been restricted by the lower penetration of landlines in Wales, noted in Figure 25 above.

Figure 28: Internet take-up by age and socio-economic group

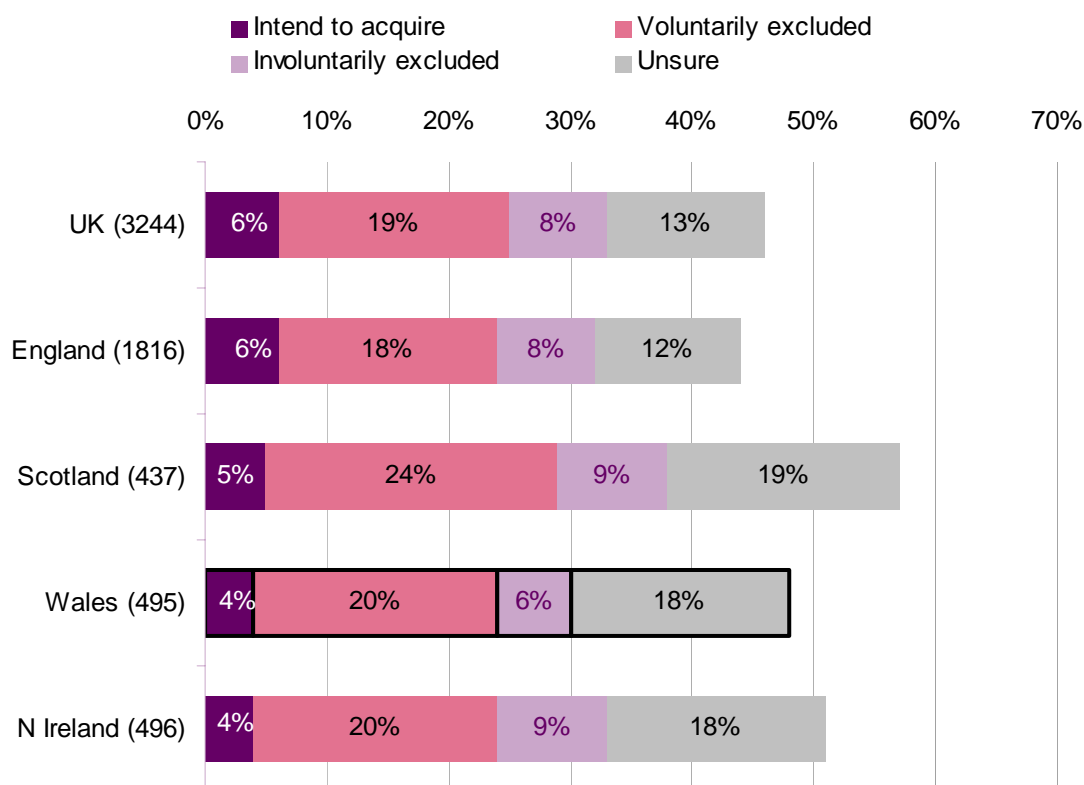


Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

## Analysis of those not taking up internet services

Figure 29 shows that people in Wales, along with other parts of the UK, were more likely to give voluntary reasons for not taking up the internet rather than involuntary reasons such as price, difficulty in using, and so on.

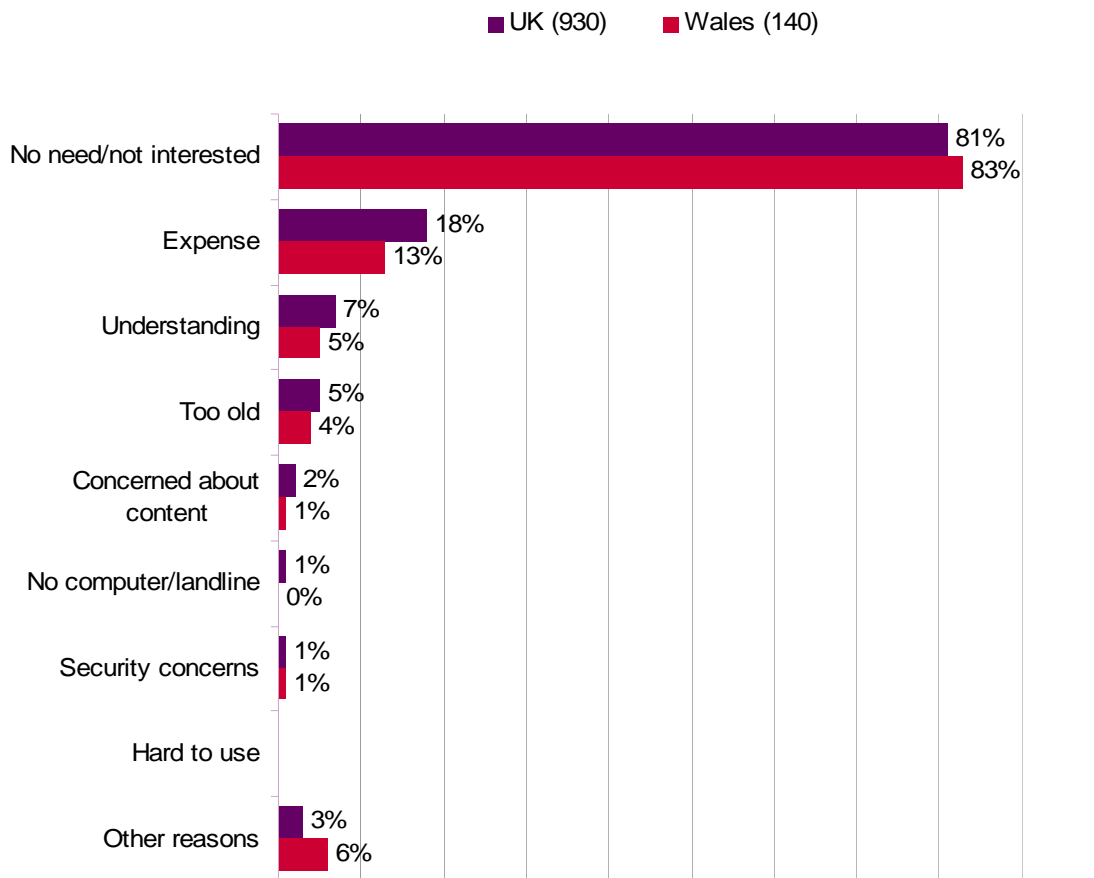
**Figure 29: Internet exclusion - voluntary, involuntary and unsure**



Source: Media Literacy Audit, Ofcom-SRB, June-August 2005

Figure 30 shows reasons for not taking up internet services. The main reason given for not taking up internet services was lack of interest, consistent with the UK as a whole (81% UK average, compared to 83% in Wales). This reason was around four times more common than all the other reasons combined. However, nearly one in five across the UK cited expense as a reason not to have the internet, compared to one in seven in Wales. This was slightly lower but not statistically significant.

Figure 30: Reasons not to take up the internet



Source: Media Literacy Audit, Ofcom-SRB, June-August 2005. Base: adults aged 16+ who do not intend to get internet at home in next year

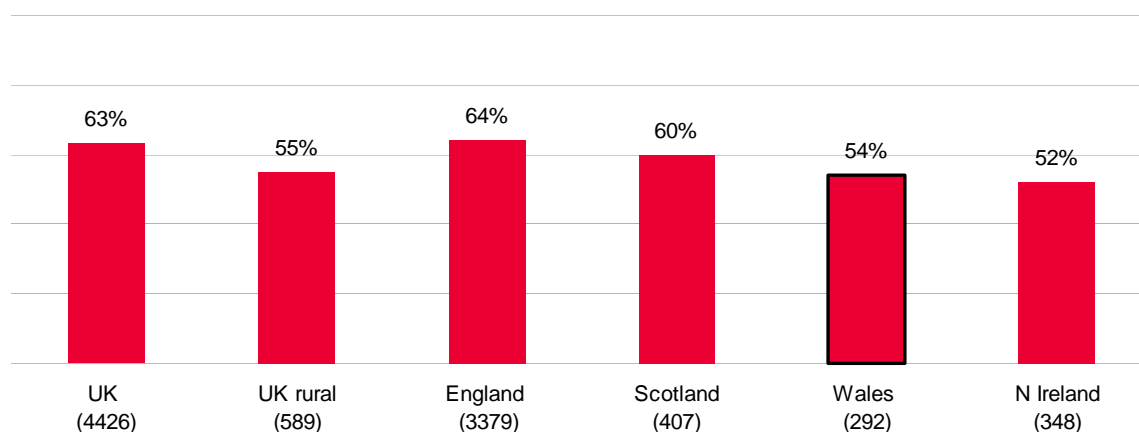
### 6.5.2 Broadband

Figure 31 shows that more than six in ten (63%) homes with the internet used a broadband connection. Use of broadband has overtaken narrowband as internet customers' primary method of connection. However, combined with lower than average take-up of the internet, consumers with the internet in Wales were less likely than average to use a broadband connection (54% compared to 63% UK average)<sup>23</sup>.

Ofcom data indicates a recent rise in broadband take-up in Wales which is not illustrated in this report. Findings are broadly consistent with Q4 2005 data published by the Welsh Assembly.

<sup>23</sup>The Broadband Wales Resident Survey Q4 2005 reports broadband penetration at 39% of landline homes in Q4 2005 – BT estimate that 26.3% of BT landlines were using broadband at this time. The latest Ofcom data collected in Q4 2005 confirms the rise in broadband take-up in Wales, and reports overall broadband penetration figures amongst landline customers in Wales which are broadly similar to those published by the Welsh Assembly Government, and indicative broadband penetration figures amongst BT customers in Wales which are comparable to those estimated by BT.

Figure 31: Broadband take-up among internet homes



Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

## 6.6 Digital broadcasting

### 6.6.1 Digital TV

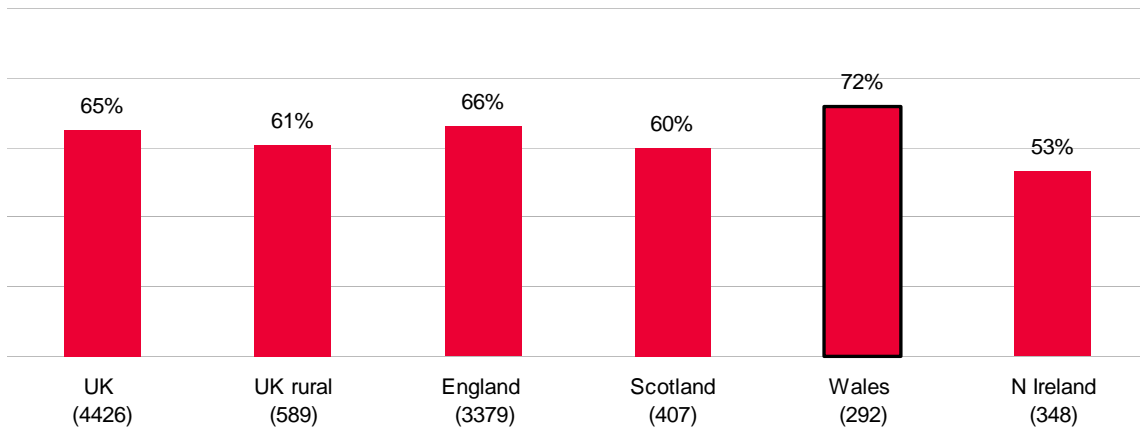
Figure 32 shows take-up of digital TV. Adults in Wales were more likely than the UK average to have digital TV at home (72% compared to 65%).

It is reasonable to assume that the growth of digital TV in Wales, on all three platforms, is due, in part, to the lack of terrestrial services receivable via analogue reception. Digital TV also provides additional benefits for Welsh speakers. The S4C digital service broadcasts around 80 hours per week of Welsh language programmes, compared with around 32 hours per week on the S4C analogue service.

Digital satellite homes which subscribe to Sky Digital in Wales automatically receive BBC1 Wales as the main default BBC1 service (on channel 101). In evidence presented to the National Assembly<sup>24</sup>, BBC Wales claimed that as a consequence of the take-up of Sky Digital in Wales, share for BBC 1 Wales increased from 75% in 1998 to 80% in 2000.

<sup>24</sup> Paper for Assembly Culture Committee meeting, BBC Wales, 13 December 2000

Figure 32: Digital TV take-up

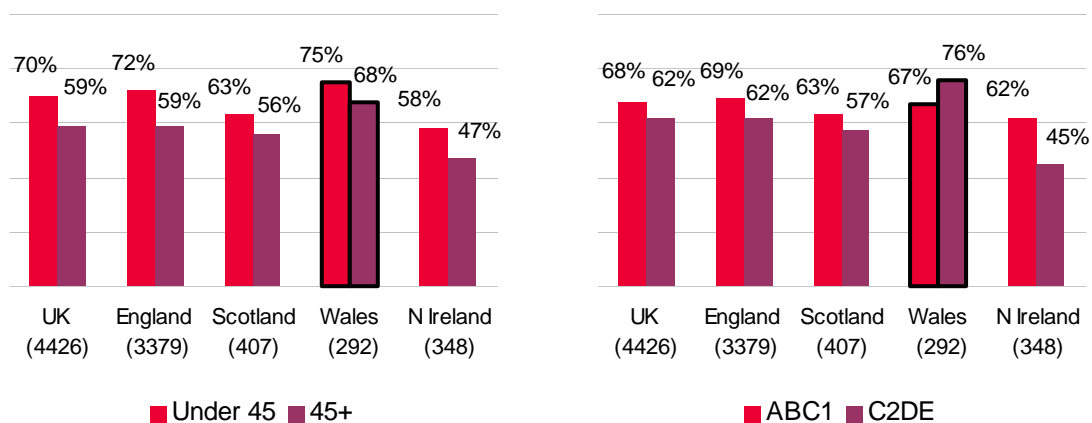


Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

Given the lower availability of DTT in Wales it is no surprise that digital satellite take-up in Wales (46%) was the highest of each of the platforms. Despite lower availability, take-up of DTT in Wales (21%) was the same as the UK average. Only digital cable had a lower penetration in Wales than the UK average, with 8% of homes compared to the UK average of 10%.

Figure 33 shows digital TV take-up by age and by socio-economic group. Take-up amongst under 45s (75%) and over 45s (68%) in Wales was higher than the UK average of under 45s (70%) and over 45s (59%). Take-up in Wales amongst ABC1s (67%), was virtually the same as the UK average of 68%. It is amongst the C2DEs where the trend was markedly different to the other nations (76% compared with the UK average of 68%). In Wales take-up amongst C2DEs was higher than ABC1s (76% compared with 67%).

Figure 33: Digital TV take-up by age and by socio-economic group

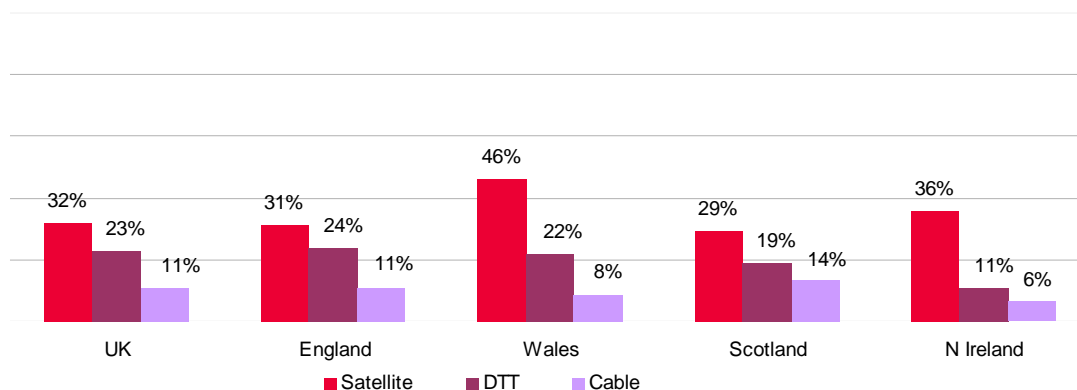


Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

## Digital TV take-up by platform<sup>25</sup>

Figure 34 shows take-up of digital TV by platform. Take up of satellite television in Wales was higher than the UK average at 46% compared to 32%. Take-up of other platforms was broadly consistent with UK average levels (22% DTT and 8% cable).

**Figure 34: Take-up of digital TV by platform**



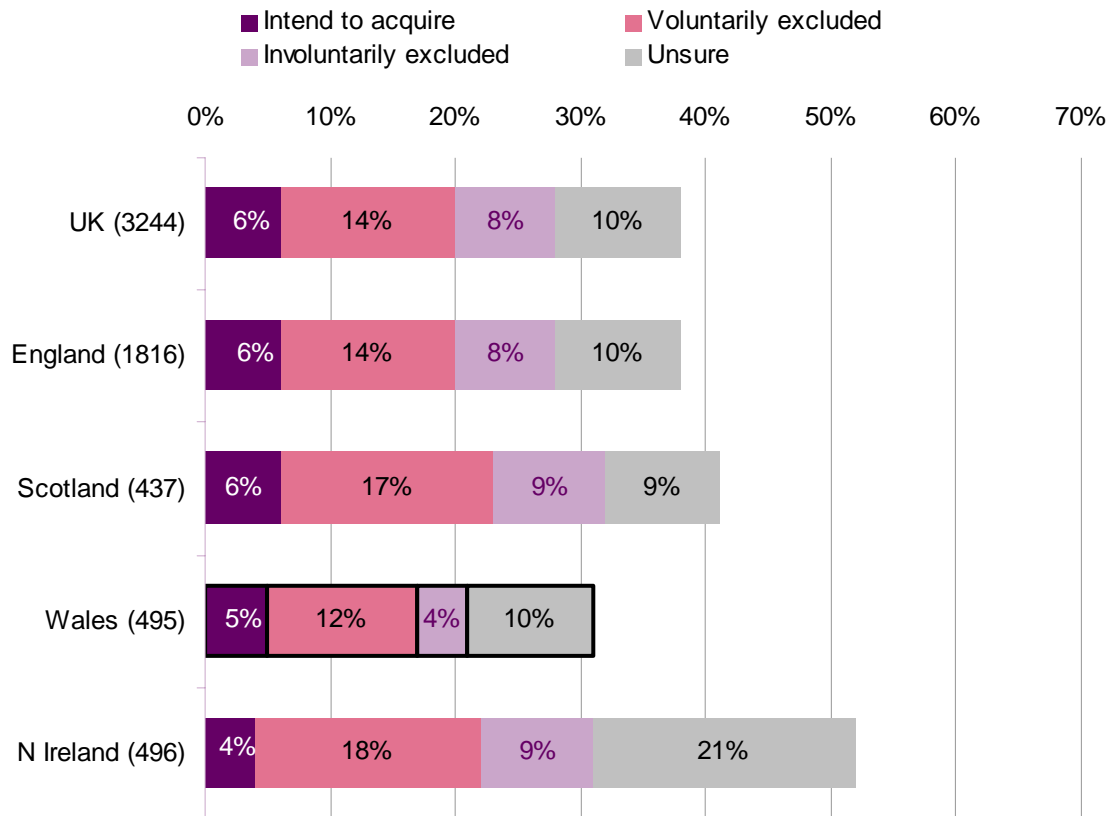
Source: Operator data / BARB Regional homes data Q3 2005. (Please note that the data in this chart has been derived from BARB's TV regions rather than the government regions)

## Analysis of those not taking up digital TV services

Figure 35 shows levels of voluntary and involuntary exclusion from owning digital TV. The exclusion from digital TV services was broadly consistent across the UK, but Wales had the lowest level of involuntary exclusion.

<sup>25</sup> Data by platform is based on a combination of operator data and BARB data and includes a minority of homes using analogue multi-channel – estimated at around 1% across the UK with slight variations by nation and region. Due to these differences this data is not directly comparable to overall take-up.

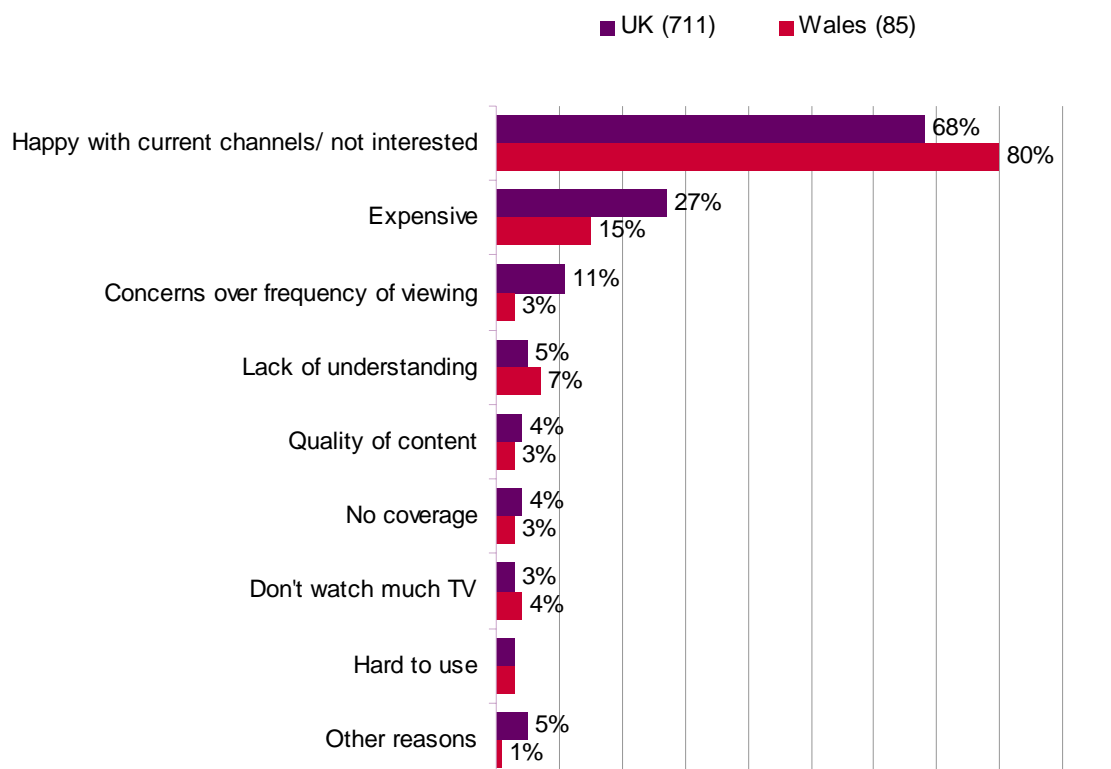
Figure 35: Digital TV exclusion - voluntary, involuntary and unsure



Source: Media Literacy Audit, Ofcom-SRB, June - August 2005

Figure 36 shows reasons not to get digital TV. The key reason for not getting digital TV was a satisfaction with the current terrestrial offering, with the expense of hardware/subscription as the next significant factor. Differences between Wales and the UK were not statistically significant.

Figure 36: Reasons not to get Digital TV



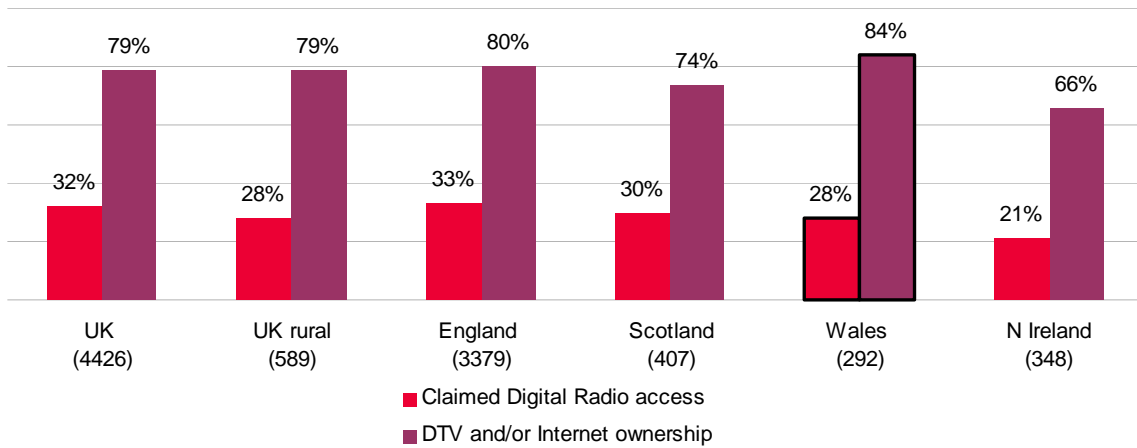
Source: Media Literacy Audit, Ofcom-SRB, June - August 2005. Base: those who do not intend to get digital TV in the next 12 months

### 6.6.2 Digital radio

Figure 37 shows take-up of digital radio. As noted in the main report, there were marked differences when comparing take-up of internet and/or digital TV (both provide access to digital radio) with stated take-up of digital radio services. This highlights an issue of awareness amongst consumers regarding the functionality of the internet and digital TV.

In Wales, actual access to digital radio services was 84% - the highest across each of the Nations and driven by the higher than average take-up of digital TV services. In Wales 28% of adults were aware that they had access to a digital radio, broadly consistent with the UK average of 32%.

Figure 37: Digital radio take-up

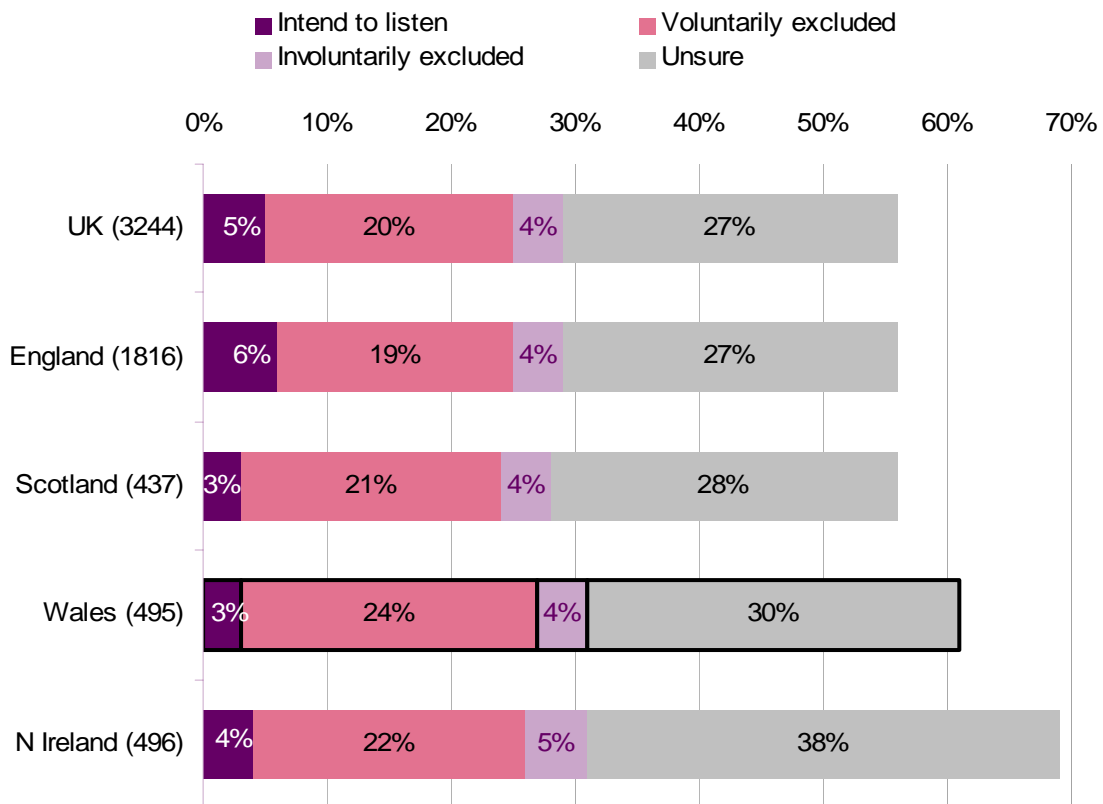


Source: Ofcom Residential Communications Tracking Study, Q2/Q3 2005

**Analysis of those not taking up digital radio services**

Figure 38 shows levels of voluntary and involuntary exclusion from owning digital radio services. Voluntary exclusion in Wales was the same as for the UK as a whole, as was the percentage involuntarily excluded.

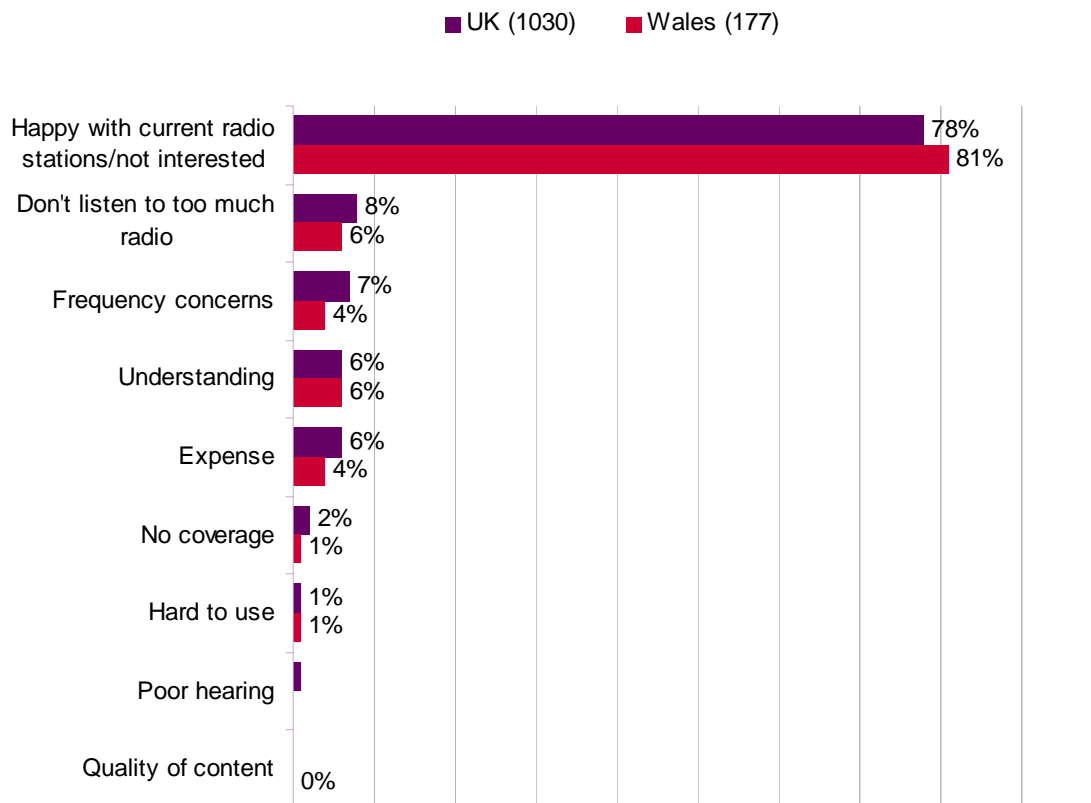
Figure 38: Digital radio exclusion - voluntary, involuntary and unsure



Source: Media Literacy Audit, Ofcom-SRB, June - August 2005

Figure 39 shows the reasons people gave for not starting to listen to digital radio. As with digital TV, the key reason for not getting digital radio was satisfaction with the current analogue offering. Levels of involuntary exclusion were relatively low.

**Figure 39: Reasons not to start listening to digital radio**



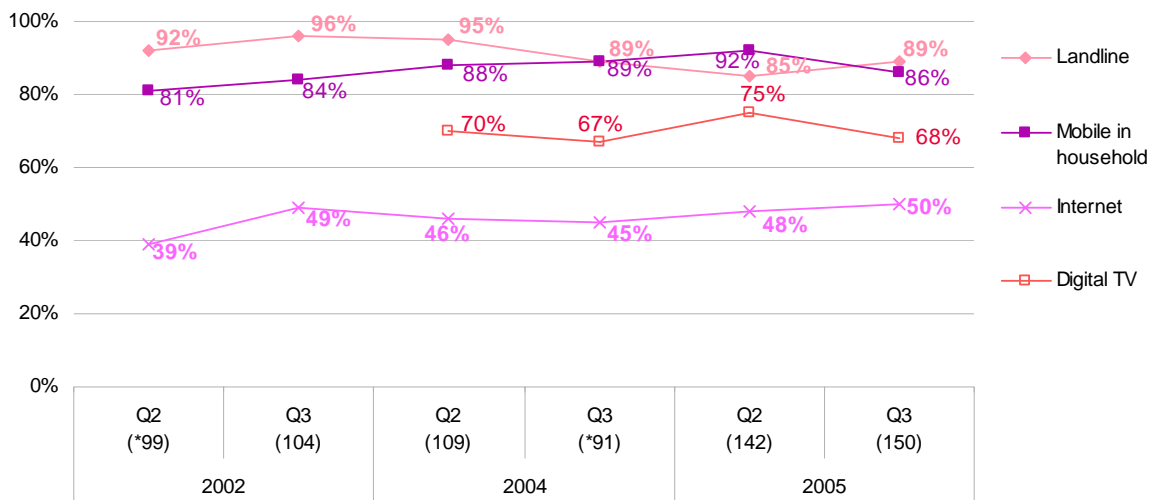
Source: Media Literacy Audit, Ofcom-SRB, June - August 2005

### 6.7 Take-up of services over time in Wales

Figure 40 shows the trend in take-up of services over time in Wales. This is based on relatively small sample sizes and should therefore be treated as indicative of trends only. However, it illustrates that over the past three years, there appears to have been a downward trend in home take-up of landlines in Wales. This has been combined with a gradual rise in mobile phone take-up (between 2002 and 2004) – although there has been no significant change since then.

Internet take-up showed an upward trend in take-up during 2002 but has remained relatively stable since and currently stands at half of households. Alongside this, (although due to small base sizes this is not illustrated on the chart below) there has been a significant increase in use of broadband – indications are that this has more than doubled since early 2004.

**Figure 40: Trend in take-up of services in Wales**



Source: Ofcom/Ofcom Residential Tracking Survey, conducted by MORI, 2003-2005. Base sizes in figure

## Section 7

# Consumption of communications services

## 7.1 Introduction

Against the background of availability and take-up of communications services, this section considers the consumption of telecommunications, internet and digital broadcasting services. Where possible, we consider the extent of spend on communications across the nations and regions, extent of use of those services, and consumer satisfaction with both service and value for money.

Research is drawn from a range of sources, including Ofcom Residential Tracker data, BARB in relation to digital TV, RAJAR in relation to radio, and the Media Literacy Audit for extent of use of mobile phone and internet services.

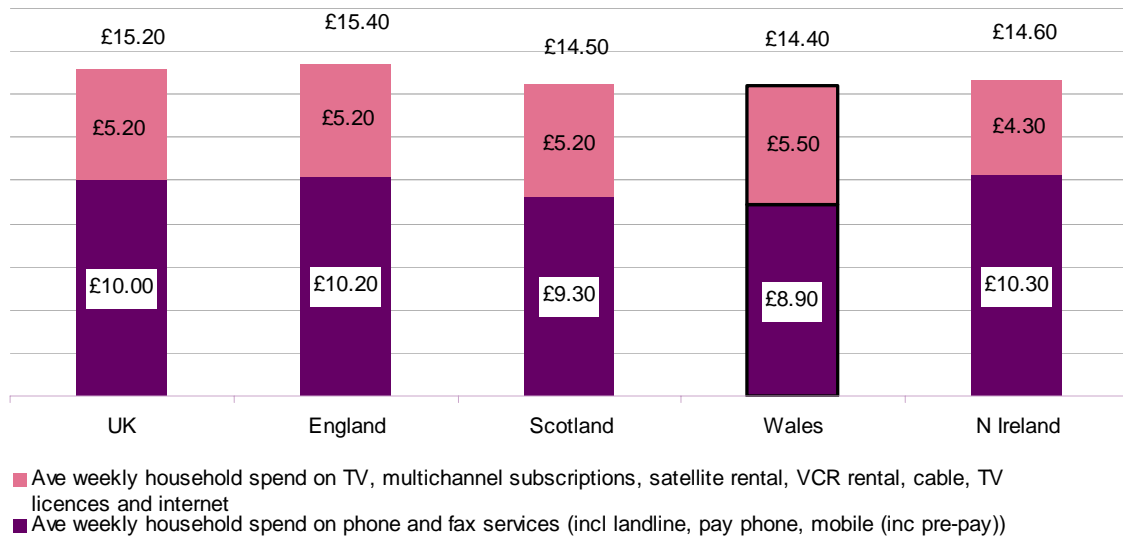
## 7.2 Key findings for Wales

- People spend a lower absolute amount of their weekly income on communications services (£14.60 against £15.20 UK average). However, this is higher than the UK average as a proportion of average weekly disposable income (3.6%, compared to 3.2% UK average).
- People in Wales make the lowest average number of mobile phone calls (18.4) and send the lowest number of text messages (23.5) per week when compared to England, Scotland and Northern Ireland. They are more likely to use pre-pay mobile phone packages.
- At 10.1 hours a week, people in Wales spend a similar amount of time on the internet as the UK average (9.9 hours).
- Wales has the highest proportion of digital TV viewing at 69%, more than 10% higher than the national average (57%) for 15 minute consecutive reach.
- People in Wales watch more sporting programmes than the UK average. While sport did not feature in the top ten programmes for the rest of the UK in 2005 despite availability of a variety of free to air sports programmes, four of the top ten programmes in Wales were related to football or rugby.
- People in Wales listen to slightly less radio on an average weekly basis, at 23.3 hours a week, compared to UK average, 24.1 hours.
- Levels of satisfaction with internet and telecoms services in Wales were generally high, consistent with UK average (which ranged from 89% for internet services).

## 7.3 Communications spend

Figure 41 shows that Wales had the lowest average weekly spend on communications amongst the nations. The average spend in Wales was £14.40 a week, close to the Scotland and Northern Ireland spend levels, but less than the England total of £15.40 a month. However, this is higher than the UK average as a proportion of average weekly disposable income (3.6%, compared to 3.2% UK average).

Figure 41: Average gross weekly household communications expenditure



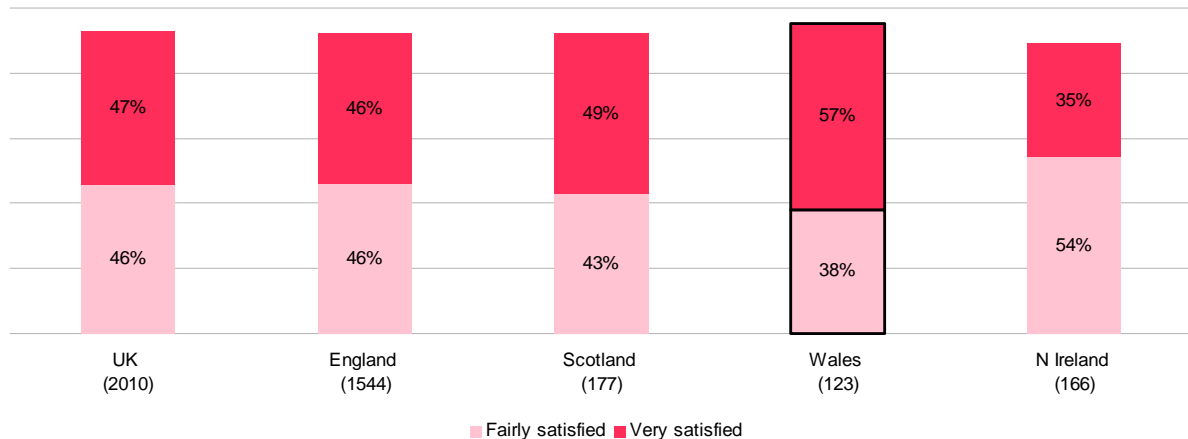
Source: Office of National Statistics, Family Spending, 2005 Edition

## 7.4 Consumption of telecoms services

### 7.4.1 Telephone landlines

Figure 42 shows levels of satisfaction with telephone landline services. On average 93% of landline customers were satisfied with their landline service. There were no significant differences in satisfaction across the UK although landline customers in Wales were more likely to cite they were 'very satisfied' with their overall service (57%) compared to average (47%).

Figure 42: Home landline satisfaction



Source: Ofcom Residential Communications Tracking Study, Q2 2005

Figure 43 shows satisfaction with landline value for money. Across the UK, consumers tended to be less satisfied with the value for money of their landline services (80%). Compared with satisfaction levels across the UK at (80%), landline customers in Wales were significantly less satisfied with this aspect (73%) than average but reported broadly similar levels to Scotland and Northern Ireland (75%).

Figure 43: Home landline satisfaction with value for money

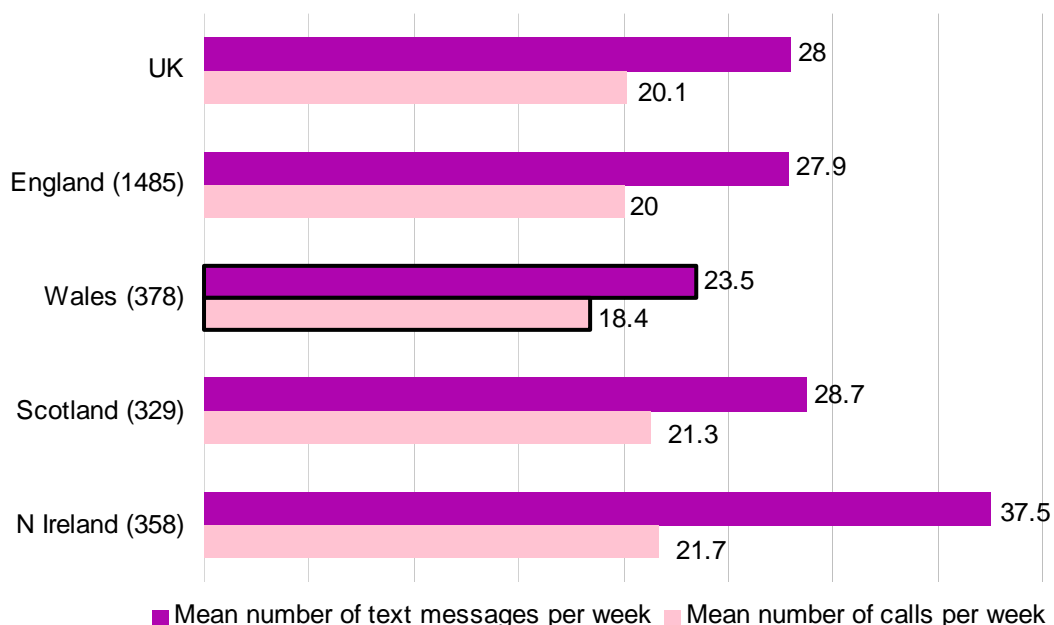


Source: Ofcom Residential Communications Tracking Study, Q2 2005

### 7.4.2 Mobile phones

Figure 44 shows the number of mobile phone calls and texts per week across the UK. 14% of consumers living in Wales relied solely on a mobile phone compared with a UK average of 8%. Despite this, the weekly numbers of both calls and texts were lower than UK average, at 23.5 and 18.4 respectively (compared to the averages of 28 and 20.1).

Figure 44: Number of mobile phone calls and texts per week

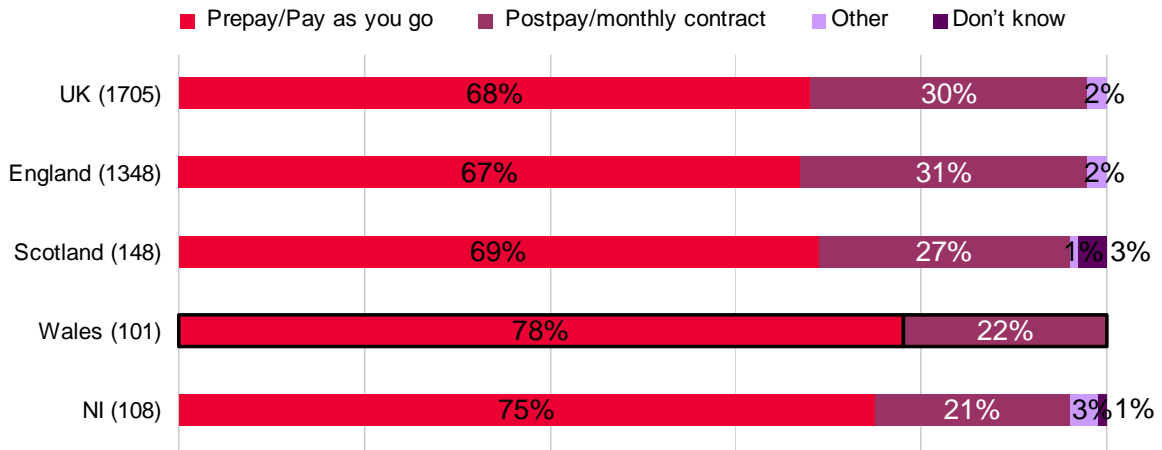


Source: Media Literacy Audit, Ofcom-SRB, June-August 2005

Figure 45 shows usage of pre-pay mobile phone packages against contract. Mobile phone customers in Wales were more likely to opt for a pre-pay mobile phone package (78%) than mobile phone customers in other parts of the UK (68% UK average) including Northern Ireland.

Average gross weekly earnings were lower in Wales than anywhere in the UK except Northern Ireland<sup>26</sup> and the flexibility of a mobile phone pay as you go service could be a more viable option for people on low or irregular incomes. The availability of free minutes may also make using a mobile phone more attractive compared to a landline phone service.

**Figure 45: Average use, pre-pay compared with contract**

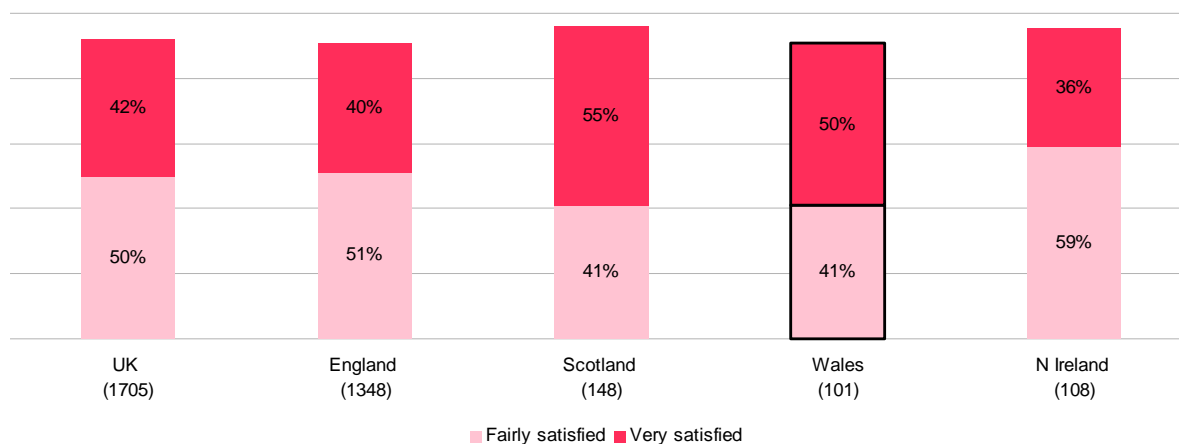


Source: Ofcom Residential Communications Tracking Study, Q2 2005

<sup>26</sup> See Welsh Assembly Government, [www.statswales.wales.gov.uk](http://www.statswales.wales.gov.uk)

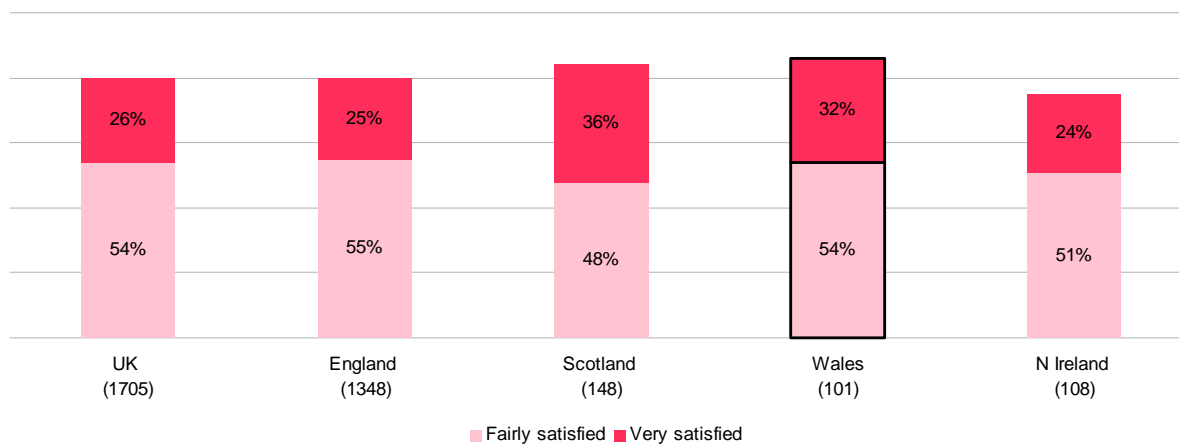
Figure 46 and Figure 47 show levels of satisfaction with mobile phone services. On average mobile phone customers across the UK were less satisfied with the value for money of their mobile phone service (80%) than they were overall (92%). These levels of satisfaction did not vary significantly across the UK, with the comparable figures in Wales of 86% for value for money and 91% satisfied with their overall service.

**Figure 46: Satisfaction with mobile phone service**



Source: Ofcom Residential Communications Tracking Study, Q2 2005

**Figure 47: Satisfaction with value for money of mobile phone**



Source: Ofcom Residential Communications Tracking Study, Q2 2005

## 7.5 Internet

Figure 48 shows average weekly usage of the internet. People in Wales used the internet for 10.1 hours per week, which was consistent with the UK average of 9.9 hours.

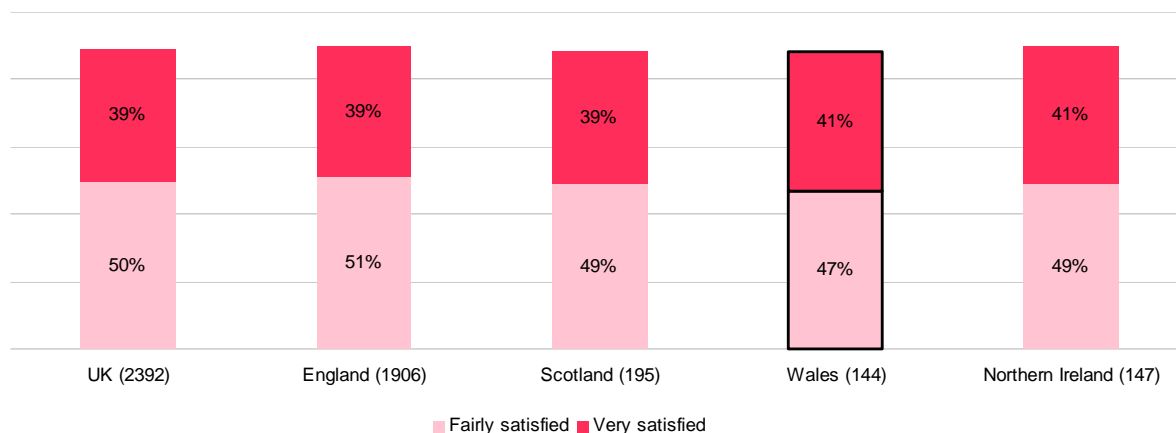
**Figure 48: Weekly hours of use of internet**



*Source: Media Literacy Audit, Ofcom-SRB, June - August 2005. Base: adults aged 16+ who use the internet*

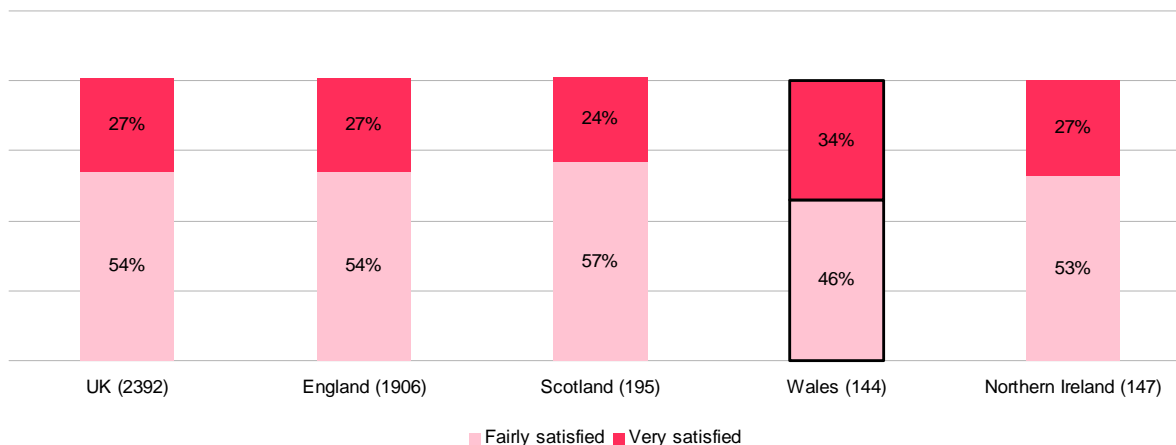
Figure 49 and Figure 50 show satisfaction with internet services and value for money of internet. 89% of internet customers across the UK were satisfied with their internet services. Satisfaction with value for money was slightly lower at 81%. Satisfaction levels were broadly consistent across the UK – 88% in Wales for overall service and 80% for value for money.

Figure 49: Satisfaction with internet service



Source: Ofcom Residential Communications Tracking Study, Q1/Q3 2005

Figure 50: Satisfaction with value for money of internet



Source: Ofcom Residential Communications Tracking Study, Q1/Q3 2005

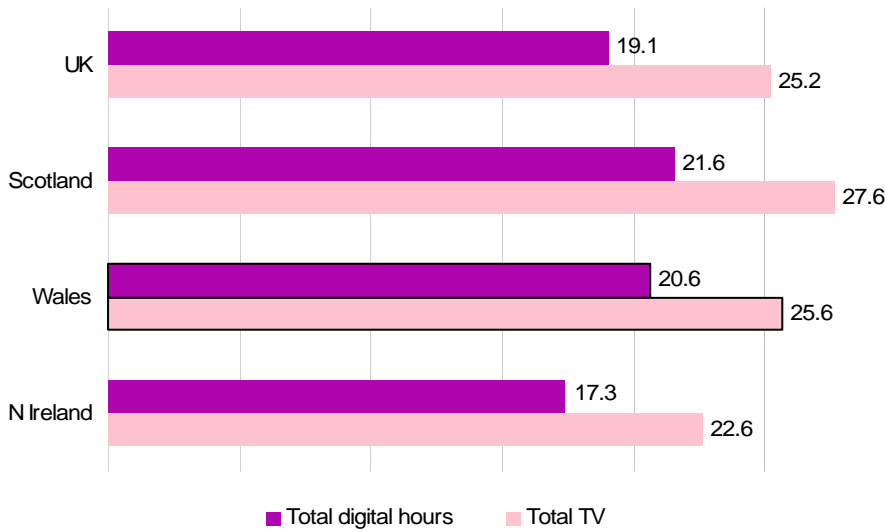
## 7.6 Digital broadcasting

### 7.6.1 Digital TV

Figure 51 shows average weekly hours of viewing TV by ITV region. Average weekly viewing on digital platforms was higher in Wales at 20.6 hours a week than the UK average of 19.1 hours.

Note that figures in this section refer to the following areas: Wales - HTV Wales; Scotland - Grampian and STV regions; Northern Ireland – the UTV area.

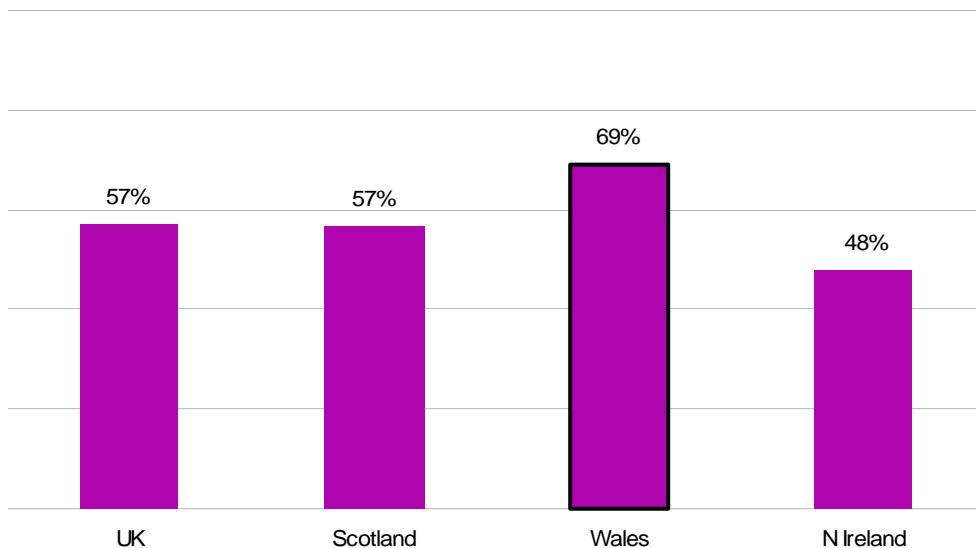
**Figure 51: Average weekly hours of viewing TV by ITV region**



Source: BARB 2005. All digital individuals (4+) in multichannel homes by region and across multichannel network

Figure 52 shows the 15 minute consecutive average weekly reach of viewing digital TV by ITV region. Wales showed a considerably higher level of digital viewing as a proportion of total TV viewing. Wales had 69% of TV viewing over any digital platform compared to the total Network level of 57%. This is also higher than in Scotland and Northern Ireland.

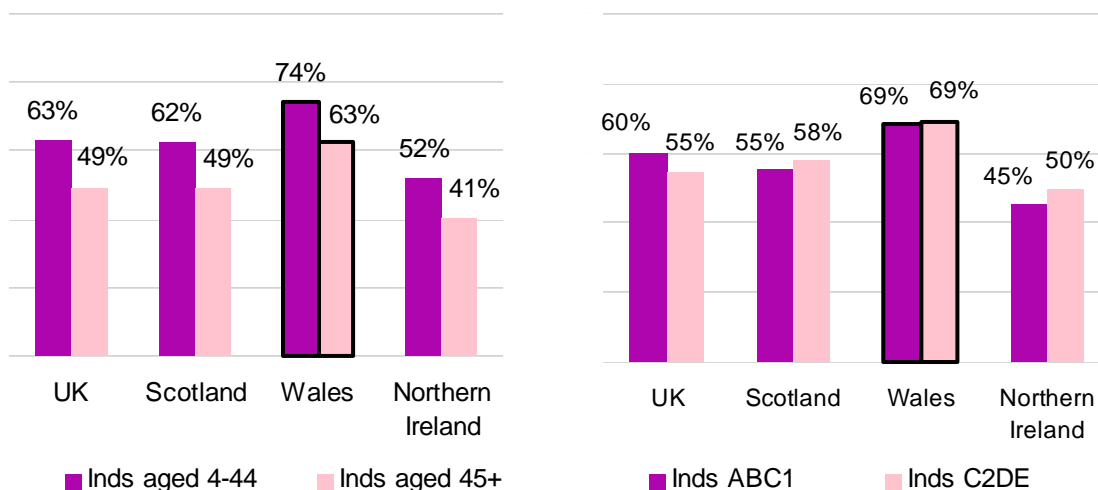
**Figure 52: Average weekly reach to total TV via any digital signal by ITV region (15 minute consecutive)**



Source: BARB 2005. Figure shows 15 minute consecutive average weekly reach via any digital signal to total TV. All individuals (4+)

Figure 53 shows digital TV reach by age and socio-economic group. The demographic breakdown by age for digital TV reach showed that younger age group watched more digital TV as a proportion of total TV than the older group, and this difference was closely aligned to the UK average. For socio-economic group the difference was much less, and in the opposite direction to the UK average, with a greater digital TV reach for C2DEs compared to ABC1s.

**Figure 53: Average weekly reach to total TV via any digital signal by age and by socio-economic group by ITV region (15 minute consecutive)**

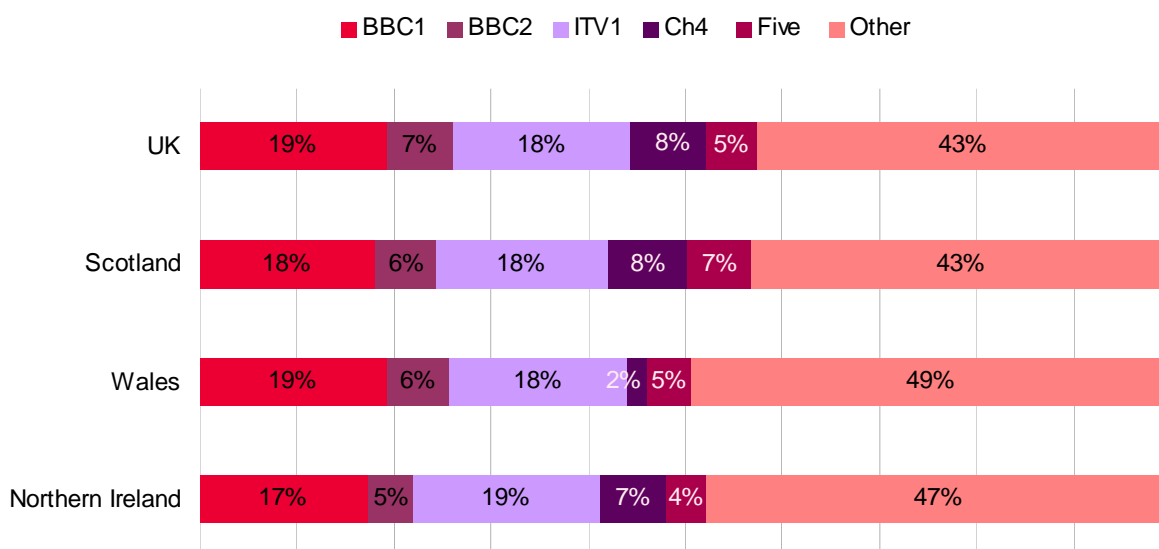


Source: BARB 2005. Figure shows 15 minute consecutive average weekly reach via any digital signal to total TV. All individuals (4+)

The demographic breakdown by age for digital TV reach showed that the younger age group watched more digital TV as a proportion of total TV than the older group. Although ITV Wales showed the highest percentages, the difference between older and younger age groups was closely aligned to other parts of the UK. When compared for socio-economic group the difference was much less, with ITV Wales showing hardly any difference between the ABC1 and C2DE groups.

Figure 54 shows the percentage share of digital viewing by channel. Although there were broad similarities in viewing patterns for the five UK channels across the nations and regions, a significant factor in Wales was the low share of viewing for Channel 4 which is three times less than for the next closest TV area, UTV. Channel 4 is not broadcast as an analogue service in Wales as the fourth channel is allocated to S4C. However both services are available on the digital platforms in Wales. Channels in the 'other' category were watched significantly more by people in Wales.

Figure 54: Percentage share of digital viewing by channel



Source: BARB 2005

Figure 55 shows the top ten rated programmes by audience size in 2005 by ITV region. The main difference between the ITV Wales area and the UK regarding top ten programmes was the presence of four sport related programmes, especially football and rugby related programmes. The overall UK figures recorded no sport at all in the top ten.

Figure 55: Top 10 rated programmes in 2005 by ITV region

UK overall	ITV Wales Area
1. Coronation Street (ITV1)	1. Eastenders (BBC1)
2. Eastenders (BBC1)	2. Rugby Six Nations (BBC1)
3. I'm A Celebrity - Get Me Out Of Here! (ITV1)	3. Coronation Street (ITV1)
4. The Vicar Of Dibley (BBC1)	4. I'm A Celebrity - Get Me Out Of Here! (ITV1)
5. Emmerdale (ITV1)	5. Rugby Build-Up (BBC1)
6. Weather (BBC1)	6. Wales On Saturday (BBC1)
7. Comic Relief: Red Nose Night Live 05 (BBC1)	7. Rugby Union (BBC1)
8. Doctor Who (BBC1)	8. Emmerdale (ITV1)
9. Strictly Come Dancing (BBC1)	9. A Touch of Frost (ITV1)
10. A Touch of Frost (ITV1)	10. Little Britain (BBC1)

Source : BARB, 2005. Programmes analysed on highest occurrence only, ranked by audience numbers, programmes under 10 minutes in duration were excluded

### 7.6.2 Radio

Figure 56 shows the average weekly listening to radio by number of hours. The average weekly listening hours for radio was 23.3 hours in Wales. This is the joint lowest level with Scotland. The average for the UK was 24.1 hours.

**Figure 56: Radio average weekly listening hours**



Source: RAJAR, Q3 2005, all adults (15+) and average hours of listening per week to all radio station  
Note: Figures only available for total radio listening, not available for digital only

Figure 57 shows 5 minute reach to total radio by nation. Radio reach shows little variation between the nations. Wales reach was 89%, fractionally less than the UK average of 90%.

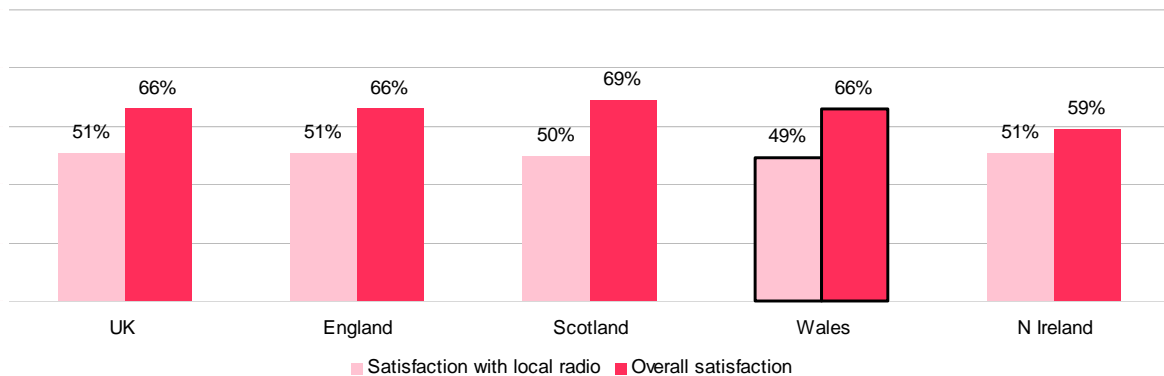
**Figure 57: Average weekly reach to total radio (5 minute consecutive)**



Source: RAJAR, Q3 05 - radio reach of all adults (15+) based around the Rajar regions. Note: Figures only available for total radio listening, not available for digital only

Figure 58 shows satisfaction with radio services. Satisfaction with radio again showed very similar trends across the nations. In Wales, 49% of people questioned were satisfied with what they listen to on their local radio while 69% expressed satisfaction with radio overall.

**Figure 58: Percentage of adults satisfied with overall service and local radio content**



Source: MORI, July-August 2004. Note: A score of 8-10 by respondents was taken to mean satisfied

## Section 8

# Small and Medium-sized Enterprises

## 8.1 Introduction

This section sets out research relating to take-up and consumption of mobile phone and internet services by SMEs in the nations and regions.

Research undertaken in this survey shows that there is relatively little information available about SMEs (either Ofcom data or third party research) at a level that allows full comparison across the nations and regions. Studies have been generally designed to produce findings representative of the UK as a whole, rather than broken down by nation and region. Comparison of data across different sources is also difficult, due to the different definitions of SMEs used by the research.

To enable comparison across nation and region, this report draws 2005 data from Ofcom's SME Tracking Study for the nations and regions. We have supplemented this research with a summary of other useful sources of SME information available in the UK.

Ofcom will be undertaking further research to understand SMEs and their behaviour, needs and attitudes towards communications. A research project 'The Digital Small and Medium-Sized Enterprise' (The Digital SME) will be published later in 2006 and will involve both qualitative and quantitative research. A major outcome of this piece of work will be a refinement in the current SME Tracking Study to ensure that important issues for SMEs are understood and monitored at both a UK level and within the nations and regions.

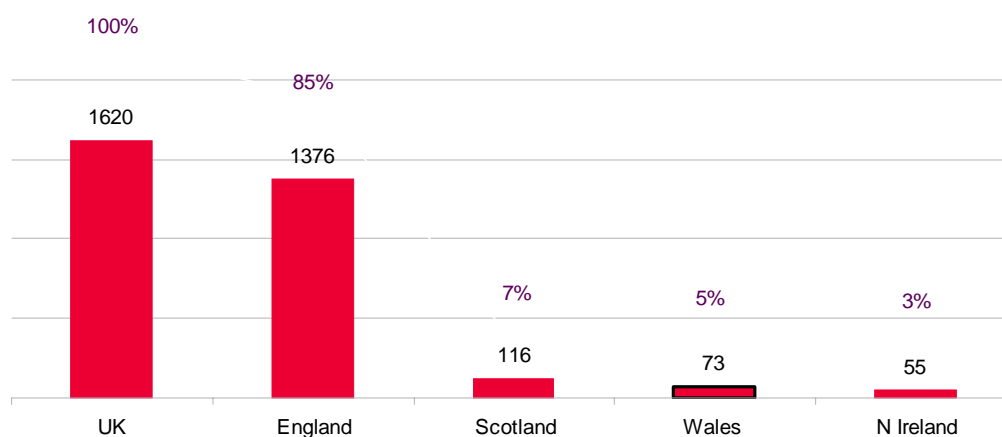
The 2004-5 Ofcom Annual Report outlines Ofcom's commitment to ensure that our policy development and regulatory actions are informed by the views of all those with an interest in the outcome, including engagement with SMEs.

## 8.2 Key findings for Wales

- Research shows that similar proportions of SMEs owned or rented mobile phones across the nations (51% UK average). In Wales, this figure was 47%.
- The majority of businesses in the UK had, or were in the process of gaining, access to the internet (79%). This was broadly consistent in Wales (83%).

### 8.3 Setting the scene - SMEs in Wales

Figure 59: Prevalence of SMEs (000s of businesses)



Source: Office of National Statistics, 2005

Figure 59 shows the location and number of business across the UK (1.6m) and in the nations. These were VAT registered businesses with up to 250 employees.

The data shows that in 2005, SMEs were predominantly located in England, with 85% based, or with their head office, there. Wales was home to 5% of the UK's SMEs.

One industrial policy goal is to encourage more effective and productive use of information communications technology. But many SMEs in Wales appear reluctant to adopt more sophisticated eCommerce applications, possibly because they remain unconvinced of the return on investment<sup>27</sup>.

Small and medium enterprises (SMEs) defined as firms employing up to 250 people<sup>28</sup>, represent over 99% of Welsh businesses<sup>29</sup>. SMEs<sup>30</sup> account for approximately 70% of all Welsh private sector employment and 60% of business turnover<sup>31</sup>. With the exception of Northern Ireland, Wales has a greater percentage of employees (60%+) working in businesses employing 0-49 employees compared to the other nations and regions of the UK (e.g. London has 38%).<sup>32</sup>

A major public policy objective by the Welsh Assembly Government and other public bodies in Wales is to encourage SMEs to adopt eCommerce in order to drive economic growth.

The eCommerce Innovation Centre in Wales adopts a broad definition of eCommerce, referring to all forms of business transactions through digital means, not simply businesses selling on line.

<sup>27</sup> *How Small Businesses in Wales Measure the value of their eCommerce Activities*. eCommerce Innovation Centre, Cardiff University. September 2005

<sup>28</sup> European Commission, Definition of Micro, Small and Medium Sized Enterprises, May 2003

<sup>29</sup> Small Business Service: National Omnibus Survey, Wales, Autumn 2002

<sup>30</sup> SMEs are sub-divided as follows: Micro=1-9 employees; small=10-49 employees; medium=50-249 employees

<sup>31</sup> Small Business Service, SME Statistics 2001

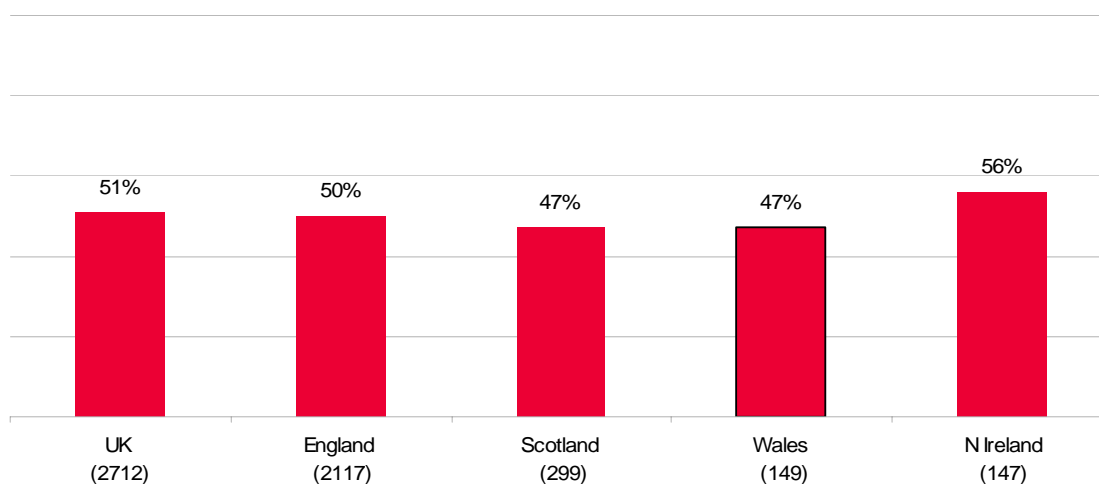
<sup>32</sup> DTI News Release, 22 December 2004. URN 04/402

## 8.4 SME take-up of mobile phones

Figure 60 shows that a similar proportion of SMEs across the nations owned or rented mobile phones in 2005. Take-up in Wales was 47%, consistent with UK average (51%) and the nations of Northern Ireland (56%) and Scotland (47%).

The availability of good mobile phone coverage is crucial to many of the smaller SMEs including sole traders. A report produced in 2003, suggested that poor reception was quite a common problem amongst businesses in rural Wales, impacting on a surprisingly wide variety of sectors<sup>33</sup>.

Figure 60: Mobile phone take-up for SMEs



Source: Ofcom SME Tracking Study, 2005

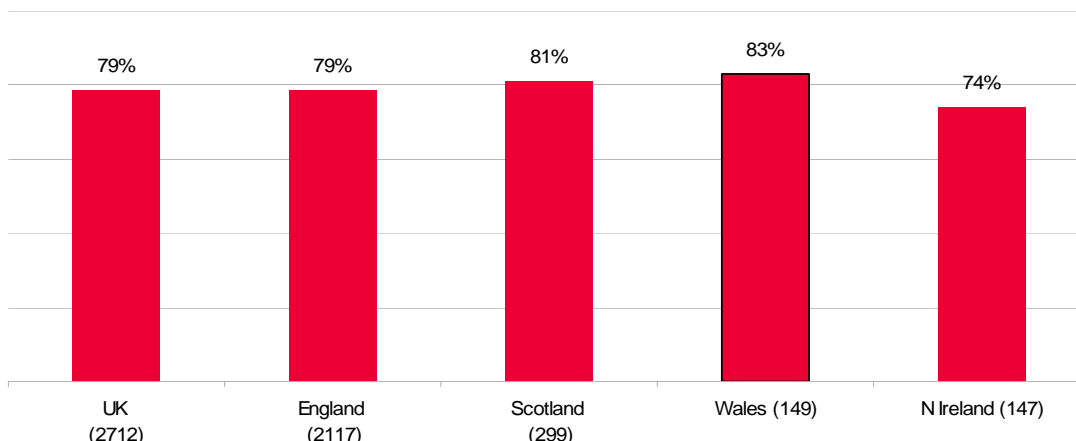
## 8.5 SME take-up of internet

### 8.5.1 Total internet

Figure 61 shows that 79% of SMEs across the UK had taken up the internet. Take-up was broadly consistent across the nations, with 83% of SMEs using the internet in Wales.

<sup>33</sup> *The Impact of Poor Mobile Telephony Coverage on Businesses in Rural Wales*, (MORI) Wales Advisory Committee on Telecommunications, November 2003

Figure 61: SME internet take-up



Source: Ofcom SME Tracking Study, 2005

The *eCommerce in Welsh SMEs: The State of the Nation report 2005*<sup>34</sup> found that 66.4% of Welsh SMEs indicated they had an internet connection and 5.1% planned to connect in the next 12 months, and that internet access ranged from 66.1% of micro, 72.4% of small and 71.4% of medium sized businesses<sup>35</sup>.

Internet access varies by industry sector. Of connected businesses 59.8% had access for more than 3 years, 30.6% for 1 to 3 years and 3.7% for less than 1 year. 31.6% were using a dial-up connection, 41.9% used DSL, 7.5% cable broadband, 0.4% satellite broadband, 8.6% wireless broadband, 5.9% ISDN, 0.2% leased line. Connection type varied by location e.g. Region 3 showed the smallest proportion of businesses using analogue dial-up and the greatest proportion using cable broadband and wireless broadband<sup>36</sup>; Region 6 indicated the smallest proportion of businesses using a DSL connection.

This is likely to be due to the fact that SMEs included in the Ofcom Tracker Survey had a turnover of £50K or more. Therefore the tracking study was looking at a different sample.

A business survey commissioned by the Broadband Wales Unit suggested that 24% of businesses in Wales did not use personal computers. It found that use of PCs by businesses across Wales varied significantly. Although only 11% of businesses in Cardiff had no PC, this percentage rose to 48% in the case of businesses based in Merthyr Tydfil, one of the poorest areas in Wales<sup>37</sup>.

<sup>34</sup> The report is based on results from a telephone survey of 2,537 small and medium-sized enterprises across Wales selected from the Experian National Business database. The survey provides results for Objective One and non-Objective One areas and for the 7 main regions of Wales

<sup>35</sup> Businesses were asked how many employees they have including themselves therefore those indicating 1 employee are sole traders

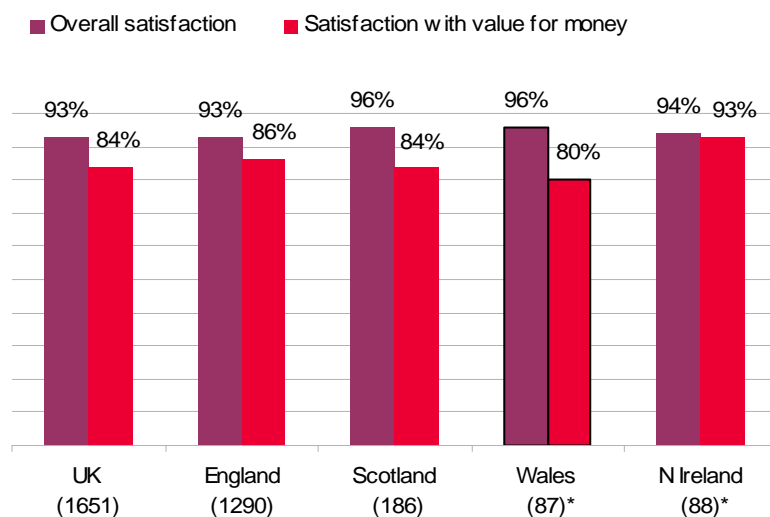
<sup>36</sup> The report included analysis by region based on the seven key regions/unitary authorities of Wales. Non-objective One areas: 1. Flintshire, Wrexham, Powys 2. Monmouthshire, Newport, 3 Cardiff, Vale of Glamorgan and Objective 1 areas: 4. Swansea, Bridgend, Neath Port Talbot, 5 Rhondda Cynon Taff, Merthyr Tydfil, Caerphilly, Blaenau Gwent, Torfaen, 6 Pembrokeshire, Carmarthenshire, Ceredigion, 7 Anglesey, Gwynedd, Conwy, Denbighshire.

<sup>37</sup> Broadband Wales, Business Survey (Quarter 4 2004) ORC International

Figure 62 shows that SMEs in Wales were satisfied with the overall quality of their internet services (96% were either ‘fairly’ or ‘very’ satisfied). This trend was consistent with UK average (93%) and consistent across the nations.

80% of SMEs in Wales also reported being ‘fairly’ or ‘very’ satisfied with value for money of internet services, consistent with UK average (84%).

**Figure 62: SME satisfaction with internet**

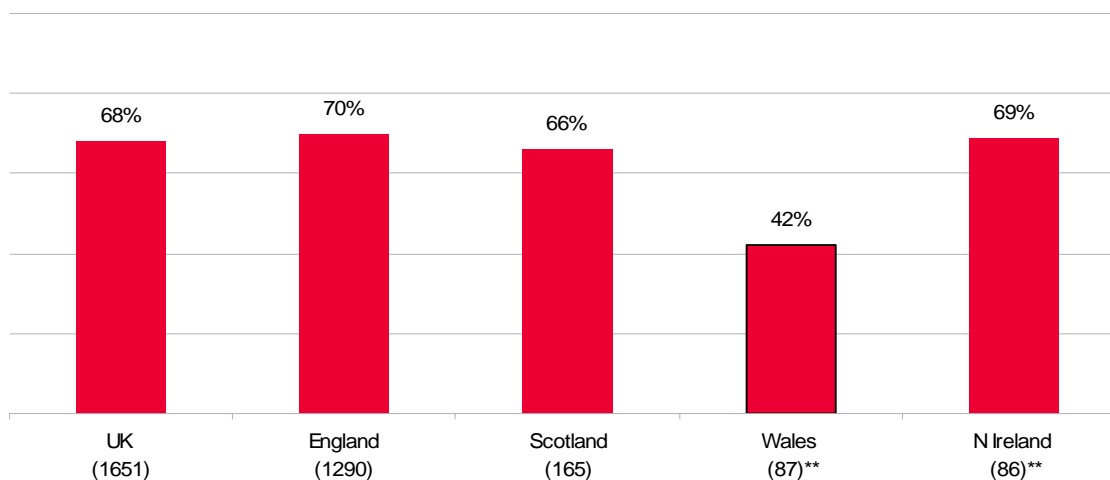


Source: Ofcom SME Tracking Study, 2005 \*Base sizes small so care to treat as indicative only

### 8.5.2 Broadband

Figure 63 shows that SME take-up of broadband amongst SMEs varied across the nations. Take-up in Wales was significantly lower (42%). In Scotland and Northern Ireland, take-up was consistent with UK average (68%) at 66% and 69% respectively.

Figure 63: SME broadband take-up among internet-using SMEs



Source: Ofcom SME Tracking Study, 2005 \*\*Base sizes small so care treat as indicative only

According to the Broadband Wales Business Survey 2004 Q4, 27% of businesses in Wales had a broadband connection. 36% of businesses without it stated that they were likely to get a broadband connection within the next six months. The most common reason for not considering broadband were the lack of business need and lack of sufficiently frequent use of the Internet to justify switching from dial-up<sup>38</sup>.

<sup>38</sup> Broadband Wales Business Survey Q4 2004 February 2004, ORC International.

## Annex 1

# Research methodologies

Research sources quoted within this report are outlined below:

### **Ofcom's Residential Communications Tracking Study conducted by MORI**

This study is a continuous face to face survey, with monthly interviewing of a representative sample of around 700 UK adults aged 15+.

The residential tracker achieved a total sample of 4426 UK adults, 3379 adults in England, 407 adults in Scotland, 292 adults in Wales and 348 adults in Northern Ireland. Northern Ireland was over-sampled to provide a sufficient sample to analyse individually.

The study was conducted amongst a representative sample of UK adults aged 15+, reflecting the UK profile of sex, age, socio-economic group, region and employment status and representative of cabled/non cabled areas, rural/urban areas and levels of deprivation. Data reported at a UK level has been weighted to ensure the sample is representative of the UK adult population and data reported at a national level has been weighted to ensure it is nationally representative.

Data was collected between January and September 2005. The sample sizes have dictated the level of possible analysis. Where socio-economic group is assessed - this is a comparison between ABC1s and C2DEs - and where age is analysed, this is split between younger (15-44) and older (45+) consumers.

Statistics for this report are largely based on rolling data over 6 months, combining data from two quarters of 2005 fieldwork where identical questions were asked. Combining periods increases the sample size and allows data to be analysed and interpreted with greater confidence.

### **Ofcom's Media Literacy Audit conducted by saville rossiter-base**

This study was a discrete face to face survey, interviewing a representative sample of 3244 UK adults aged 16+. It achieved a total sample of 1816 adults in England, 437 adults in Scotland, 495 adults in Wales and 496 adults in Northern Ireland.

Data was collected between June and August 2005. As with the residential tracking survey the data is weighted for each nation individually, according to age, gender, socio-economic group, working status and region.

Ofcom carried out a comparison of these two residential studies with various other sources of data, all of which are detailed below.

### **Small and Medium Enterprises (SME) Tracking Study conducted by Continental Research**

This study is a continuous telephone survey, with monthly interviews of a representative sample of SMEs (enterprises with 1-250 employees and annual turnover in excess of £50k).

A total sample of 2117 SMEs has been used for analysis in England, 298 in Scotland, 149 in Wales and 147 in Northern Ireland. The latter three are relatively small and therefore caution should be taken when drawing conclusions from this data. Sample size has also limited

analysis to take-up figures. However, Ofcom is currently performing a review of this research which will potentially include an increase in sample sizes.

As small businesses make up 97% of the UK SME market data for small businesses closely resembles SMEs as a whole. Medium businesses were over-sampled in the survey in order to provide a sufficient sample to analyse individually. Overall data was re-weighted to reflect the profile of SMEs as a whole in the UK. Data for individual nations was weighted to the profile of SMEs within that nation.

Data for this report is based on rolling data over nine months, from January to September 2005. Given the range of questions asked, questions are rotated and changed between quarters. Data has been amalgamated over the period where possible to create sample sizes large enough to be analysed and interpreted.

### **Broadband User Service – Point Topic**

A combination of official statistics and primary research to estimate broadband take-up by any desired geography in the UK. Further details of the methodology can be found on their website at [www.point-topic.com](http://www.point-topic.com).

### **The BARB establishment survey**

A consumer survey of 4000 homes per month, resulting in 48,000 homes per year being surveyed. The report monitors TV programmes.

### **RAJAR**

Information is collected by means of a seven day self-completion diary. Diaries are personally placed with one selected adult (aged 15+) and up to two children (according to the number of children present) in each selected household. Approximately 130,000 respondents per year are asked to complete a diary.

Further details on the methodology used by RAJAR can be found on their website at: <http://www.rajar.co.uk/>

#### **A1.1 Statistical Reliability**

In a survey, you ask a representative number of people questions, to represent the views of the population as a whole. Since you cannot ask everybody, you cannot be certain.

So survey results are valid with limits on accuracy, the quoted figure + or – a percentage change, or with the comment significant at the 99.1% confidence level. This statistic says if you asked 100 people from the population, 99 of them would give you a response within the accuracy range of the survey.

The size of the accuracy range is dependent on the number of people you ask, and the level of agreement between them.

The sample tolerances that apply to some of the percentage results in this document are given in the table below. This table shows the possible variation that might be anticipated because a sample, rather than the entire population of adults, was interviewed. As indicated, sampling tolerances vary with the size of the sample and the size of the percentage results.

For example, on a question where 50% of the all respondents in a sample of 4,426 respond with a particular answer, the chances are 99 in 100 that this result would not vary more than

1.9 percentage points, plus or minus, from a complete coverage of the entire population using the same procedures.

	<b>Approximate sampling tolerances applicable to percentages at or near these levels</b>					
	<b>10% or 90%</b>		<b>30% or 70%</b>		<b>50%</b>	
<b>Size of sample on which survey result is based</b>	±		±		±	
	95%	99%	95%	99%	95%	99%
UK (4,426)	0.9	1.2	1.4	1.8	1.5	1.9
England (3,379)	1.0	1.3	1.6	2.0	1.7	2.2
Scotland (407)	2.9	3.8	4.5	5.9	4.9	6.4
Wales (292)	3.4	4.5	5.3	6.9	5.7	7.5
Northern Ireland (348)	3.2	4.1	4.8	6.3	5.3	6.9
<i>Source: Ofcom</i>						

Tolerances are also involved in the comparison of results from different parts of the sample. A difference, in other words, must be of at least a certain size to be considered statistically significant. The following table is a guide to the sampling tolerances applicable to comparisons.

	<b>Differences required for significance at or near these percentage levels</b>			
		<b>10% or 90%</b>	<b>30% or 70%</b>	<b>50%</b>
<b>Size of the sample compared</b>		±	±	±
Wales vs UK (292 vs. 4,426)	95%	3.6	5.4	5.9
	99%	4.7	7.1	7.8
<i>Source: Ofcom</i>				

Significance testing has been conducted on the data contained in this report.

### **Comparability assessment**

Ofcom conducted a comparison of the data contained within this report with various data sources:

- Ofcom's Consumer Panel tracking survey, Q4 2004
- Broadband Wales Resident survey, Broadband Wales Unit, Q1 and Q4 2005
- MORI's technology tracker, Q2 2005
- BMRB's Target Group Index (TGI), April 2004 to March 2005
- NISR, Northern Ireland omnibus, Q2 2005

Ofcom concludes from this comparison that the data obtained via its Residential Communications Tracking Study and Media Literacy Audit contained within this report, provides an accurate comparison of the attitudes and behaviours of consumers living in different parts of the UK.

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## Annex 3

# Glossary of terms and definitions

**2G** Second generation of mobile telephony systems using digital encoding. 2G networks support voice, low speed data communications, and short messaging services.

**3G** Third generation of mobile systems. Provide high-speed data transmission and supporting multimedia applications such as full-motion video, video-conferencing and Internet access.

**ABC1** The aggregate of socio economic groups A, B and C1 (see SEG).

**ADSL** Asymmetric Digital Subscriber Line. A digital technology that allows the use of a copper line to send high bandwidths in one direction and a lesser bandwidth in the other.

**BARB** The pan-industry body which measures television viewing.

**BBC** British Broadcasting Corporation.

**Broadband** A service or connection generally defined as being "always on" and providing a bandwidth greater than 128kbit/s.

**BSkyB** British Sky Broadcasting Ltd, operator of the satellite television platform in the UK and broadcaster of the Sky channels.

**BT** British Telecommunications plc.

**C2DE** The aggregate of social grades C2, D and E (see SEG).

**CBN** Community Broadband Network.

**DAB** Digital Audio Broadcasting. The brand name for the technology by which terrestrial Digital Radio multiplex services are broadcast in the UK.

**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)

**DTI** Department for Trade and Industry.

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

**GOR** Government Office Region. The highest level of sub-national government in England; the nine GORs were created in 1994.

**GSM** Global Standard for Mobile Telephony.

**HFC** Hybrid fibre coaxial. A technology by which telecommunications networks incorporate both optical fibre and coaxial cable to create a broadband network.

**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.

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

**ITV1** The television service broadcasting on analogue on Channel 3. The nationwide service is operated by a network of independent licences issued by Ofcom on a regional basis (plus a single nationwide breakfast-time licence).

**Kbit/s** Kilo bits per second (1,000 bits per second). A unit of measurement of data transmission speed.

**Leased Line** A transmission facility which is leased by an end user from a public carrier, and which is dedicated to that user's traffic.

**LLU** Local Loop Unbundling. A process by which BT's exchange lines are physically disconnected from BT's network and connected to other operators' networks. This enables operators other than BT to use the BT local loop to provide services to customers.

**Local Loop** The access network connection between the customer's premises and the local PSTN exchange, usually a loop comprised of two copper wire

**Mbit/s** Mega bits per second (1,000,000 bits per second). A unit of measurement of data transmission speed.

**Multichannel** 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.

**Narrowband** A service or connection providing data speeds up to 128kbits, such as via an analogue telephone line, or via ISD.

**Ofcom** Office of Communications. The regulator for the communications industries, created by the Communications Act.

**ONS** Office for National Statistics.

**PC** Personal computer.

**Postal district** The geographic area identified by letters and numbers which appears as the first part of a post code, e.g. SW8.

**PSB** Public Service Broadcasting, or Public Service Broadcaster. The Communications Act 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.

**RDA** Regional Development Agency. A public body established for the purpose of development, primarily economic, of one of England's Government Office Regions (see GOR).

**Reach (Radio)** The number of adults aged 15+ who listen to at least five minutes of radio in a 15 minute period during a week.

**Service provider** A provider of electronic communication services to third parties whether over its own network or otherwise.

**SME** Small or Medium sized Enterprise.

**SMS** Short Messaging Service

**Socio Economic Group (SEG)** A social classification, classifying the population into social grades, usually on the basis of the Market Research Society occupational groupings (MRS, 1991). The groups are defined as follows.

- A.** Professionals such as doctors, solicitors or dentists, chartered people like architects; fully qualified people with a large degree of responsibility such as senior civil servants, senior business executives and high ranking grades within the armed forces. Retired people, previously grade A, and their widows.
- B.** People with very senior jobs such as university lecturers, heads of local government departments, middle management in business organisations, bank managers, police inspectors, and upper grades in the armed forces.
- C1.** All others doing non-manual jobs, including nurses, technicians, pharmacists, salesmen, publicans, clerical workers, police sergeants and middle ranks of the armed forces.
- C2.** Skilled manual workers, foremen, manual workers with special qualifications such as lorry drivers, security officers and lower grades of the armed forces.
- D.** Semi-skilled and unskilled manual workers, including labourers and those serving apprenticeships. Machine minders, farm labourers, lab assistants and postmen.
- E.** Those on the lowest levels of subsistence including all those dependent upon the state long-term. Casual workers, and those without a regular income.

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

**TV over DSL/TV over Broadband** A technology that allows viewers to access TV content – either in a linear programme schedule, or on-demand – using Internet Protocol via broadband services, either on a PC or (via a set-top box) on a TV set.

**Unbundle** See LLU.

**USO** Universal Service Obligation. The requirement, currently upon BT and Kingston Communications, to provide every household in the UK with access to a land line telephone.

**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.

**WiMax** Improved standard wireless LAN technology, capable of operating over wider distances than WiFi. Still in a test phase.

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