

Digital Participation in Scotland: A Review of the Evidence

**DIGITAL PARTICIPATION IN SCOTLAND:
A REVIEW OF THE EVIDENCE**

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EXECUTIVE SUMMARY

Digital participation describes people's ability to gain access to digital technology, and understand how to use it creatively. Increased digital participation can improve people's quality of life, boost economic growth and allow more effective delivery of public services.

Scotland has a lower rate of digital participation compared with the rest of the UK. For example, the Ofcom Communications Market survey in 2011 found that 61% of adults in Scotland had a broadband connection at home, compared to a UK average of 74%.

In October 2010 the Scottish Government set out its Digital Ambition for Scotland.¹ The ambition relating to digital participation is:

That the rate of broadband uptake by people in Scotland should be at or above the UK average by 2013, and should be highest among the UK nations by 2015.

This was followed in March 2011 by Scotland's Digital Future: A Strategy for Scotland, which sets out in more detail how these ambitions will be achieved. This Digital Strategy undertakes to annually review whether its ambitions and objectives are still appropriate. The evidence reviewed in this report is to support the digital participation strand of work on the Digital Strategy and contribute to the review of ambitions and objectives. In developing the evidence base in this area, the Culture Analytical Team undertook two main pieces of research, both of which are presented in this report:

- **A review of data sources on digital participation.** We identified and evaluated all data collected on digital participation in Scotland. The purpose of this was to feed into a review of the best way in which to measure progress on the Digital Ambition relating to digital participation
- **A review of the evidence on barriers to digital participation in Scotland.** This was a review of literature and secondary analysis of data on digital participation to attempt to determine what barriers prevent people from using the internet and why Scotland has a particularly low rate of digital participation compared to the rest of the UK. The results will inform recommendations for how to encourage non-users online

Review of data sources on digital participation

Through our existing knowledge, searching the Survey Question Bank² and searching the internet more generally, we found five main sources of data in Scotland:

¹ <http://www.scotland.gov.uk/Publications/2010/10/Digital/Digital-Ambition>

² The Survey Question Bank is a resource that provides access to the questionnaires from a range of major UK and cross-national social surveys conducted, for the most part, since the mid-1990s.

- **Ofcom: Communications Market Report** – an annual survey on the take-up and use of communications services across the UK. Questions are asked on broadband take-up and use of the internet.
- **Scottish Household Survey** – a continuous survey which collects reliable and up-to-date information on the composition, characteristics and behaviour of Scottish Households. There are two sections of questions on the internet in the SHS. The first of these are asked about the household and cover home internet access and whether the home has a broadband connection. A more detailed series of questions are asked of an individual adult within the household, including questions on personal internet use, how the internet is accessed, where the internet is accessed and reasons for not using the internet, among others. This range of questions gives a fairly detailed picture of internet use and non-use in Scotland.
- **Oxford Internet Survey** – this biennial survey is designed to offer detailed insights into the influence of the internet on everyday life in Britain. It collects a wealth of information from those who use the internet, non-users and ex-users. Small sample size in Scotland.
- **Labour Force Survey** – this survey includes a single question on internet use which focuses on whether someone has ever used the internet.
- **Opinions Survey** – a regular multi-purpose survey carried out monthly with a report on internet use published annually. This survey collects data on the breadth and reach of internet use. Small sample size in Scotland.

Taking into account the advantages and disadvantages of each of the data sources for measuring progress on the Scottish Government's ambition, the Scottish Household Survey was found to be the most robust data source. The one disadvantage of this is that no directly comparable UK data is available.

The main gaps in data on digital participation in Scotland are mainly around depth of use. Data is collected on depth of use through the OxIS survey but the small Scottish sample size means that this data cannot be considered reliable. Arguably, it is important to collect data on this measure as this reveals more about the confidence of people's use, the extent and the full benefits that internet participation can offer.

Evidence on the barriers to participation

We have conducted a review of literature and secondary analysis of data to identify those who do not use the internet in Scotland, why people do not use the internet and what can be done to encourage people online. The findings are used to provide recommendations on how to encourage non-users online.

Analysis of the Scottish Household Survey data from 2009/2010 provides information on internet access and use among different demographic groups. Main findings of the analysis were:

- **Age:** older people were far less likely than younger people to have home internet access or to personally use the internet.

- **Income:** those with a higher income were more likely to have access and use the internet than those on lower incomes
- **Educational qualifications:** those with higher levels of qualifications were more likely to have access and use the internet.
- **Working status:** internet access and use was higher among those who were working compared with those who were not working
- **Disability:** internet access and use was higher among those who do not report having a disability or long-standing illness.
- **Deprivation:** internet access and use was lower among those living in the most deprived areas.
- The SHS shows little difference between **urban and rural** areas.

Although there is no comparable data from the rest of the UK, we can provide some information from the other data sources which give an indication of how things differ in the other UK nations. Ofcom (2011) discuss how, even though broadband take-up is low in the rest of the UK among lower income homes, DE socio-economic groups and older age groups, it is *particularly low* in Scotland. Ofcom argue that the low broadband take-up in Scotland can be almost entirely explained by particularly low take-up by these groups.

The Consumer Framework for Digital Participation developed by the Communications Consumer Panel (2010) brings together all the different reasons people give for not being online and aims to provide a mechanism to enable policy makers and service deliverers to consider digital participation from the perspective of the consumer. The Framework identifies what people need to get online and get the most from the internet:

- To get interested
- To get online
- To make it work
- To enjoy the benefits
- To manage the risks

The Scottish Household Survey includes a question for those who do not use the internet on the reasons why they do not. The responses can be grouped into three main types of reason people give for not using the internet:

- Lack of need or desire to use the internet
- Lack of knowledge of the internet or computers and/or feeling it would be too difficult to learn
- Cost of using the internet

In general, younger people were more likely than others to cite cost as their reason for not using the internet while older people were more likely to mention reasons relating to lack of need or not knowing how to use a computer. Those who would not like to use the internet were generally more likely to mention reasons relating to a lack of need or desire to use the internet. Issues of cost were more likely to prevent people who want to use the internet compared with those who do not. This data suggests there are different typologies of non-user who have different reasons for

not using the internet. Therefore, it is important to consider which groups of non-user to target when attempting to increase internet use and pitch messages accordingly. .

There are real challenges in encouraging non-users to use the internet. The SHS found that 38% of non-users said they would like to use the internet one day, while the majority (62%) said they would not. Three in ten (29%) thought it was likely that they would ever use the internet with 72% thinking it was unlikely. The demographic make-up of the group who do not use the internet and do not want to use it appears to be mainly older people, who have a low household income and are not working.

There have been a couple of qualitative studies (e.g. Essential Research and Ipsos MORI, 2009; Ipsos MORI, 2009) which have probed further into the reasons why people don't use the internet to fully understand what may encourage people to go online. Discussions during the focus groups suggested that it may be possible to engage non-rejecters by:

- Communicating relevant benefits, and being specific about what these benefits are.
- Providing reassurance that the internet is for them. Commonly held perceptions that may need to be challenged are that the internet is time consuming and detracts from everyday life. More positive messages could be that the internet is fun, keeps your mind active and can save money.

The think tank Demos conducted a series of focus groups with older people to further examine this group's use or non-use with the internet (Hannon and Bradwell, 2008). They concluded that the barriers that remain to getting the non-users online are not going to be successfully overcome through strategies that address material aspects of non-use (e.g. providing low cost computers). They argue it will involve a more complex approach that needs to address the multitude of factors influencing older people's internet use such as poor confidence, lack of motivation, low income and disability.

Based on the findings of the secondary analysis and the literature review, we make the following recommendations for actions to encourage non-users online:

- Target non-users who do not want to use the internet
- Focus on messages of the specific benefits of the internet
- Show the internet as something that is easy to use and appropriate for everyone

There are various possible explanations for Scotland's relatively low participation rate. These include:

- Lack of knowledge of computers or the internet among Scottish people – in Ofcom's Communications Market survey, those in Scotland were more likely to chose this as a reason why they did not have a broadband connection compared with those in the rest of the UK. However, this difference has not been found in other surveys.
- Geography and Infrastructure – Scotland's high proportion of rural areas may mean that fewer households have the potential to access the internet.

However, SHS data shows little difference in home internet access between rural and urban areas and Ofcom/BT data shows almost all of Scotland has the potential to receive broadband.

- Demographic composition – if Scotland had a greater proportion of those groups who are unlikely to use the internet (i.e. older people, those with a low income etc) then this would impact on rates of internet usage. However, analysis of demographic data shows this not to be the case. That said, Scotland's participation rate compares favourably to other regions within England and it is possible that the rest of the UK's estimate of digital participation is being positively influenced by particularly high rates in the more affluent areas of south England. Therefore, demography may play a small part.

Future research

Areas for possible future research include:

- An annual updating of the information included in this evidence pack to enable trends in data to be picked up, analysis of the composition of non-users to be tracked and any recent literature to be examined and summarised.
- Investigation of why Scotland has lower levels of participation compared with the UK
- Qualitative research in Scotland to examine strategies to encourage people online

1 INTRODUCTION

- 1.1 Surveys have found that Scotland has a lower rate of digital participation compared with the rest of the UK (e.g. Ofcom, 2011; ONS, 2010). This is a consistent finding across a range of sources and applies regardless of whether we look at home internet access, broadband uptake or personal internet use. For example, the Ofcom Communications Market survey in 2011 found that 61% of adults in Scotland had a broadband connection at home, compared to a UK average of 74%. Similarly, the ONS Opinions survey in 2010 found that 64% of homes in Scotland had access to the internet compared with 73% in the UK.
- 1.2 In October 2010 the Scottish Government set out its Digital Ambition for Scotland.³ The ambition is:
- That next generation broadband will be available to all by 2020, and significant progress will be made by 2015; and
 - That the rate of broadband uptake by people in Scotland should be at or above the UK average by 2013, and should be highest among the UK nations by 2015
- 1.3 This was followed in March 2011 by Scotland's Digital Future: A Strategy for Scotland⁴, which sets out in more detail how these ambitions will be achieved. The Digital Strategy summarises action already being taken and proposes future actions in the four key areas of public service delivery, the digital economy, digital participation and broadband connectivity.
- 1.4 The Digital Strategy undertakes to annually review whether its ambitions and objectives are still appropriate. The evidence reviewed in this report is to support the digital participation strand of work on the Digital Strategy and contribute to the review of ambitions and objectives. In developing the evidence base in this area, the Culture Analytical Team undertook two main pieces of research, both of which are presented in this report:
- **A review of data sources on digital participation.** We identified and evaluated all data collected on digital participation in Scotland. The purpose of this was to feed into a review of the best way in which to measure progress on the Digital Ambition relating to digital participation
 - **A review of the evidence on barriers to digital participation in Scotland.** This was a review of literature and secondary analysis of data on digital participation to attempt to determine what barriers prevent people from using the internet and why Scotland has a particularly low rate of digital participation compared to the rest of the UK. The results will inform recommendations for how to encourage non-users online.

³ <http://www.scotland.gov.uk/Publications/2010/10/Digital/Digital-Ambition>

⁴ www.scotland.gov.uk/Resource/Doc/981/0114237.pdf

- 1.5 This report begins by setting out what we mean by digital participation and why it is important. The following chapters present the findings of the data review and evidence review while the final chapter presents conclusions and future directions for research in this area.

2 DIGITAL PARTICIPATION: DEFINITION AND IMPLICATIONS

What is digital participation?

- 2.1 Digital participation is described in the Digital Strategy as “people’s ability to gain access to digital technology, and understand how to use it creatively”. Traditionally, this would have referred to mainly accessing the internet through computers. However, there is now a greater variety of technologies for accessing the internet such as Digital TV, smartphones, games consoles and public kiosks.
- 2.2 In discussions around digital participation, commentators sometimes present figures on broadband uptake to describe levels of digital participation while others present data on personal internet use. There is an important distinction to be made between these two measures, which will be referred to again in chapters of this report. Arguably broadband uptake is a more limited measure of digital participation, as this is primarily an issue related to infrastructure and availability of necessary technology rather than an accurate estimate of how many people are using the internet. Personal internet use is a measure which includes people who use the internet outside the home (e.g. in libraries, internet cafes) so may be more inclusive than a measure focusing on internet/broadband uptake in a household. It’s also worth noting that a household may have access to the internet but not everyone in that household will use the internet so looking at personal internet use may provide a truer measure of actual internet use. This distinction between broadband uptake and personal internet use links to the argument that the focus on technology has often been at the expense of the more “human” element to the internet and there is a need to redress this balance (Independent Age, 2010).
- 2.3 In 2009 the UK Government published The Digital Britain Report, as part of Building Britain’s Future. This report looks at Digital Participation in terms of Reach, Breadth, Depth and the social and economic impact of using digital technologies:
- Reach covers internet access, the number of households online and numbers of citizens using the internet outside the home.
 - Breadth of use refers to different modes of internet usage and consumption, including communication, transacting, information, entertainment and use of public services.
 - Depth of use refers to using social networks and content creation and sharing, including user-generated content and self-publishing.

The implications of digital participation

- 2.4 The advantages of the internet are wide reaching, impacting on an individual’s wellbeing, education, financial situation and employment opportunities. PriceWaterhouseCoopers (2009) provide an estimate of the monetary value of the economic benefits to government and society of getting everyone

online. They estimate this has a lifetime benefit for the UK in excess of £22 billion. At the level of individual households, analysis for the Post Office estimated that the potential gross savings from bringing digitally excluded households online would be around £560 per household per annum (SQW Consulting, 2008).

- 2.5 The implications of not being online, often referred to as 'digital exclusion' or the 'digital divide', has been the focus of much policy-focused and academic research in the past decade or so (e.g. Newholm et al., 2008; Selwyn, 2003; 2004). A recent report by the Welsh Government reviewed literature regarding the implications of digital exclusion (Welsh Government, 2011) to inform their policy on digital participation. This review summarised the main implications as follows:
- In terms of employment, those who are digitally included are more able to benefit from flexible working practices such as working from home (Dutton et al., 2009).
 - The digitally excluded may be disadvantaged through not being able to search or apply for jobs online (PricewaterhouseCoopers, 2009).
 - Digitally engaged consumers benefit from more competitively priced goods and services online (PricewaterhouseCoopers, 2009).
 - Digitally excluded do not benefit from the improved educational prospects and outcomes associated with internet access (PricewaterhouseCoopers, 2009).
 - Internet use can improve wellbeing through social networking and keeping in touch with family and friends through email (Dutton et al., 2009).
- 2.6 This review concluded that digital exclusion reinforces other existing forms of social and economic deprivation (Communications Consumer Panel, 2009) and as more and more of daily life moves online, e.g. shopping, banking, government services, there is a risk that this increasing internet penetration will increase rather than reduce inequalities.

3 REVIEW OF DATA SOURCES ON DIGITAL PARTICIPATION

Introduction

3.1 There are a variety of different surveys that collect data on digital participation in Scotland. To have an understanding of what data is available for Scotland, the quality of the available data and how we can use this data, we conducted a review of all data sources on digital participation in Scotland. This review also aims to feed into consideration of measurement of the ambition on digital participation, which is currently measured through data collected by Ofcom. Also of interest is how these surveys differ in their estimates of digital participation in Scotland, therefore this chapter presents a table showing the results from each survey and discusses how these compare with each other. We also considered data sources outwith Scotland that were particularly large or noteworthy.

Sources of data on digital participation in Scotland

3.2 Through our existing knowledge, searching the Survey Question Bank⁵ and searching the internet more generally, we found five main sources of data in Scotland. The main details of each of these are summarised, the type of questions that are asked (i.e. whether they measure the reach, breadth and/or depth of internet use) along with their advantages and disadvantages in Table 3.1 overleaf. These are also discussed in turn below.

⁵ The Survey Question Bank is a resource that provides access to the questionnaires from a range of major UK and cross-national social surveys conducted, for the most part, since the mid-1990s.

Table 3.1: Summary of data sources on digital participation

	Sample size in Scotland	Frequency of data collection / reporting	Questions included	Advantages	Disadvantages
Ofcom	Approx 500 per year	Annual.	Reach – broadband uptake, whether ever use the internet Breadth – how the internet is accessed Also questions for non-users on reasons for not being connected to the internet	Comparable with UK data Report with Scottish data provided	Quota sampling method which does not yield as reliable estimates as random sampling. Sample size in Scotland has decreased since 2010 meaning demographic and geographic comparisons are limited
SHS	Approx 15,000 per year	Continuous survey with Annual report. Quarterly update of data available	Reach – internet access in home, broadband uptake, personal use of internet Breadth – how the internet is accessed Also questions for non-users on reasons for not using the internet	Large sample size meaning demographic comparisons possible. Local authority level data available every two years. Robust sampling method	No comparison with UK
OxIS	Approx 200 per year	Survey every two years.	Reach – internet access in home, broadband uptake, personal use of internet Breadth – how the internet is accessed Depth – what people use the internet for, how they interact with others using the internet Questions for non-users and ex-users on reasons for not using. Questions on attitudes towards the internet.	Survey dealing with only Internet use so provides more detailed information than is available from other sources. Robust sampling method. Can compare with rest of UK and some other countries through the World Internet Project.	Data is only collected every two years. Scotland is not reported on specifically – this is only available from the dataset which becomes available 18 months after the report. Small sample size in Scotland
Labour Force Survey	Approx 800 per quarter	Continuous survey with Quarterly updates	Reach – whether have ever used the internet	Comparable with UK data Robust sampling method Quarterly updates provided	Only one question included which is limited as it only measures whether someone has <i>ever</i> used the internet Scotland is not reported on – Scottish data has to be requested from ONS Possibly won't continue beyond 2012
Opinions Survey	Approx 300 per year	Annual	Reach – personal use of the internet (when last used, freq of use) Breadth – how the internet is accessed Depth – what people use the internet for	Comparable with UK data Robust sampling method	Scotland is not reported on – Scottish data has to be requested from ONS Small sample size in Scotland Does not cover the whole of Scotland (excludes areas north of Caledonian Canal)

Ofcom: Communications Market Report

- 3.3 Ofcom are required to publish an annual factual and statistical report to fulfil its requirements set out in the Communications Act (2003). This is an extremely well publicised source of data on the take-up and use of communications services across the UK which often receives considerable media attention. It also impacts on policy making: its data on broadband uptake is currently used to measure progress on the Scottish Government's ambition on digital participation, it informs the UK's National Plan for Digital Participation and features in the evidence supporting the Welsh Assembly Digital Strategy.
- 3.4 In 2011 the Communications Market Report was based on a survey of 3,474 respondents aged 16+ in the UK, with a sample of 487 in Scotland. This represents a drop in sample size from previous years, e.g. in 2010 the corresponding sample sizes were 9,013 for the UK and 1,468 for Scotland. The reasons for this drop in sample size were largely budgetary, and these budgetary pressures are continuing over the next few years.⁶
- 3.5 A sample size of 487 in Scotland does not greatly reduce the reliability of the overall figures for Scotland on broadband uptake, however it does mean that it is not feasible to "dig deeper" into the data and conduct reliable geographic and demographic comparisons. Of course, if the sample size is further cut this will greatly affect how confident we can be in the Scotland-wide figures and makes comparisons with other UK nations less reliable. A further cautionary note related to this data is the use of a quota sampling method to select respondents. It has been argued that while quota sampling is an acceptable method to use for attitudinal data, a random sampling approach is preferred for providing estimates (Ipsos MORI, 2006).

Scottish Household Survey

- 3.6 The Scottish Household Survey (SHS) is a continuous survey which collects reliable and up-to-date information on the composition, characteristics and behaviour of Scottish Households. The survey collects information on a wealth of topics including transport, cultural engagement, etc. Information on internet use has been included in the SHS since 2003, with a review of internet questions carried out in 2007. Data are published annually as part of the annual report, of which a chapter focuses on internet use.
- 3.7 There are two sections of questions on the internet in the SHS. The first of these are asked about the household and cover home internet access and whether the home has a broadband connection. A more detailed series of questions are asked of an individual adult within the household, including questions on personal internet use, how the internet is accessed, where the internet is accessed and reasons for not using the internet, among others.

⁶ OfCom are committed to a 28.2% cut in expenditure in real terms over 2011-15.
<http://media.ofcom.org.uk/2011/03/31/ofcom-announces-budget-reduction-and-savings>

This range of questions gives a fairly detailed picture of internet use and non-use in Scotland. Data are reported each quarter. Further, as the sample size of the SHS is substantial, it is possible to provide results by local authority area (every two years) and to conduct detailed demographic comparisons.

- 3.8 The SHS is a valuable source on use of the internet in Scotland and can be used to track progress on the digital strategy more generally. As we can conduct demographic comparisons we can provide in-depth information on the characteristics of non-users and the reasons they do not use the internet. This depth of information is not available from other sources. Analysis of the SHS is included in the following chapter as part of the evidence on barriers to participation. The SHS is also managed and owned by the Scottish Government meaning we have a greater degree of control over the future of this data source compared with other sources. The one drawback to the SHS is that there is no comparable data available for the rest of the UK. Tracking progress against UK nations is a particularly important part of benchmarking progress on the digital ambition as it allows comparisons to be drawn.

Oxford Internet Survey

- 3.9 The Oxford Internet Survey (OxIS) was launched by the Oxford Internet Institute in 2003. The survey is designed to offer detailed insights into the influence of the Internet on everyday life in Britain. Surveys have been undertaken every two years since 2003 (the 2011 results will be published in October 2011). Data from the survey informs the UK's National Plan for Digital Participation. OxIS represents the UK's input into the World Internet Project,⁷ an international collaborative project that studies the social, economic and political implications of the Internet. As part of this project OxIS results are compared with findings from surveys from over two dozen nations.
- 3.10 This survey collects a wealth of information.⁸ The survey comprises four sections: Part 1 is a general questionnaire, asked of all respondents, including questions on Internet access in the home (including broadband access) and use of the Internet. Part 2 is administered only to Internet users and covers a number of aspects of internet use. Part 3 is for ex-users. Topics covered include reasons for using the Internet and reasons for stopping using the Internet. Part 4 is administered to non-users. It asks for reasons for not using the Internet, whether anyone had used the Internet on their behalf and likelihood of using the internet in the future.

⁷ The World Internet Project (WIP) is an international collaborative project which studies the social, economic and political implications of the Internet, carried out at over twenty universities and research centres around the world. The WIP carries out detailed panel surveys in every member country to help understand how individuals adopt and use the Internet and other technologies, and what implications this has on their everyday lives — from their use of time to their role within their community. <http://www.worldinternetproject.net/#about>

⁸ The full questionnaire can be viewed here: <http://microsites.oii.ox.ac.uk/oxis/sites/microsites.oii.ox.ac.uk.oxis/files/OxIS%202009%20questionnaire%20all%20parts.pdf>.

- 3.11 The survey provides robust data at a national UK level with potential for some demographic comparisons. However, the sample size for Scotland is around 200 (197 in 2009). While this should be enough to provide overall figures for Scotland, the structure of the survey with the different sections only asked of sub-samples of participants means that Scotland level results can only be considered reliable for Part 1 of the questionnaire on general internet use. As this data is collected already through a range of other surveys, this data source has limited usefulness for Scotland.

Labour Force Survey

- 3.12 Since the beginning of 2011 the Labour Force Survey (LFS) has included a question on internet use. The purpose of the LFS is to provide information on the UK labour market that can then be used to develop, manage, evaluate and report on labour market policies. It is conducted by the Office for National Statistics. The single question on the LFS was brought in due to user demand, but there is currently no indication how long the question will remain on LFS. It is due to run for five quarters, but if there is still significant user demand for the question it could remain for a longer period.
- 3.13 The question focuses on whether or not someone has ever used the internet. This is a measure of personal internet use but does not consider whether people *still* use the internet. The sample size is large enough to provide reliable estimates for Scotland and compare with other UK nations. Reports are provided each quarter and experimental analysis is carried out to provide population estimates of the number of internet users and internet non-users. Despite the large sample size and robust methodology, the type of question asked in this survey means it is of limited use for Scotland in terms of measuring progress on the Digital Strategy.

Opinions Survey

- 3.14 The Opinions Survey, conducted by the Office for National Statistics, is a regular, multi-purpose survey that is carried out monthly. A report on internet use is published annually. Data from this survey is used by the UK government to inform the National Plan for Digital Participation.
- 3.15 This survey collects data on the breadth and reach of internet use. However, comparisons between the nations are not common due to the comparatively small sample size. For instance Wales has a sample of less than 200, compared to Scotland with 300. A further issue with this survey is that it does not cover the whole of Scotland – the Highlands and Islands north of the Caledonian Canal are excluded.

Measuring digital participation in the Scottish Government

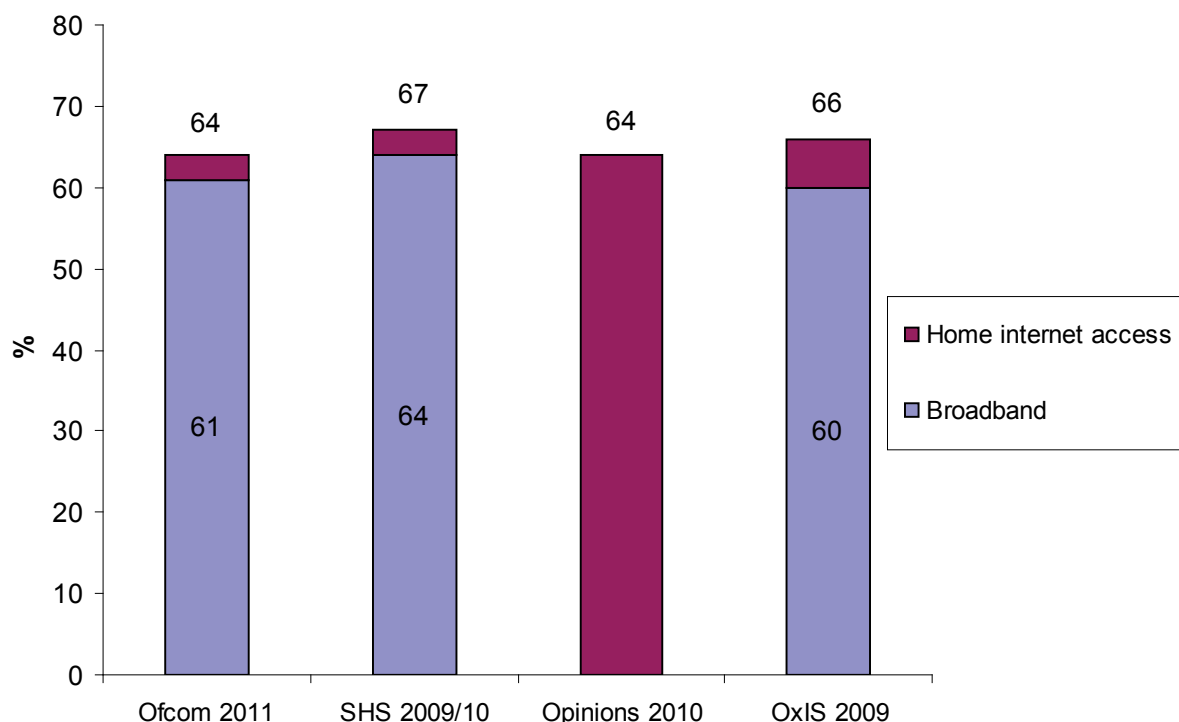
- 3.16 Taking into account the advantages and disadvantages of each of the data sources for measuring progress on the Scottish Government's ambition, the Scottish Household Survey was found to be the most robust data source. The one disadvantage of this is that no comparable UK data is available.

- 3.17 Currently the data used to measure progress on the current ambition is the Ofcom data, which is comparable with the rest of the UK nations. In 2011 the sample size for Scotland reduced from around 1,500 in 2010 to around 500 and any further reductions in this sample size would make this an untenable data source.
- 3.18 A further point is that the current ambition focuses on broadband uptake. However the Digital Strategy is not solely about computers and broadband, rather it is “about ensuring that all people in Scotland are able to benefit as fully as possible from the use of digital technology.” For this reason, it may be more appropriate to consider a ambition relating to personal internet use. However, the available data for Scotland does not allow the combination of use of SHS data, a measure of personal internet use and a comparison across UK nations. One possible way forward would be to continue to use the Ofcom data to track the ambition on broadband uptake and use the Scottish Household Survey data for a fuller understanding of trends of digital participation in Scotland and tracking progress on the policy more generally. Furthermore, looking at the policy interventions and actions outlined in the digital participation section of the Digital Strategy, it is clear that tracking a measure of personal use would also be useful for tracking progress on the full range of these interventions and actions.

Summary of the results of the surveys

- 3.19 This section presents the estimates from each of the surveys on home internet access and personal internet use.

Figure 3.1: Home internet access and broadband uptake in Scotland

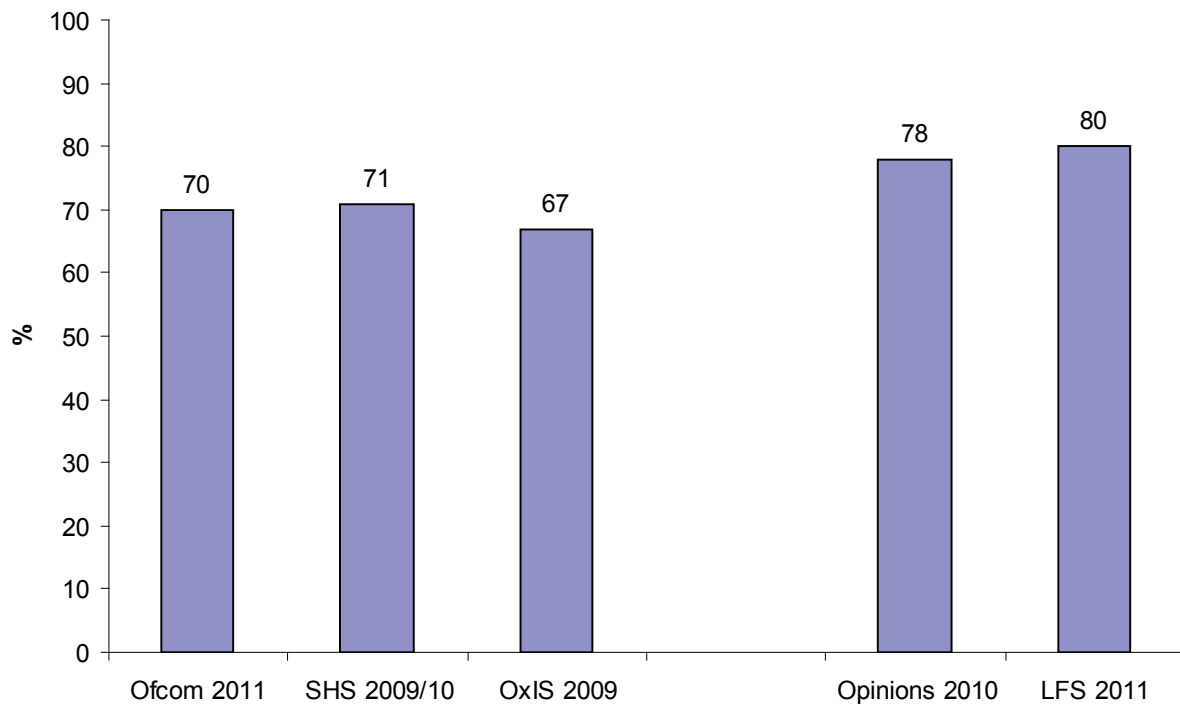


3.20 Figure 3.1 shows the figures for home internet access and broadband uptake in Scotland from four surveys (this information is not collected in the Labour Force Survey). Each of these surveys use different question wording so are not directly comparable. However, it can be seen that findings are generally quite consistent across the surveys with broadband uptake ranging from 60% as measured by the OxIS survey to 64% as measured by the SHS, and home internet access varying between 64% from Ofcom and the Opinions survey to 67% from the SHS.

3.21 Figure 3.2 shows the findings for personal internet use from all five surveys. In this case, not only do the questions have different wording but they also measure different things – Ofcom, SHS and OxIS all focus on current internet use, while the Opinions survey and LFS ask when the internet was last used, from which measures of ever and never used are derived. Questions asked are:

- Ofcom: How often do you personally use the internet nowadays either at home or elsewhere? (asked of those who had previously stated they had access to the internet)
- SHS: Do you use the internet at all these days, either for your work or for your own personal use?
- OxIS: Do you personally use the internet?
- Opinions Survey: When did you last use the Internet?
- Labour Force Survey: When did you last use the Internet?

Figure 3.2: Personal internet use in Scotland



3.22 As would be expected the estimates derived from the Opinions Survey and LFS are broadly similar (the two percentage points difference may be because of the difference in timing between the data collection of the two surveys) and higher than the others as these measures consider people who have ever used the internet. There is very little difference between the measures from Ofcom and the SHS, while the OxIS survey records a slightly lower figure (again – this may be due to the fact this data was collected two years previously).

Other sources of data on digital participation

3.23 There are other sources of data on digital participation that do not necessarily cover Scotland, or deal with specific populations (e.g. young people). Some that may be of relevance for comparison purposes are:

- **Understanding Society.** This is a longitudinal survey of 40,000 households across the UK which collects data on home access to the internet and personal internet use of household members. The survey started in 2009 and it incorporated the sample from the British Household Panel Survey which had collected data on internet use since 2001.
- **Eurostat Information Society Statistics.** Eurostat is the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions. The Community survey on ICT usage in households and by individuals collects data on the use of information and communication technologies (ICT), the internet, e-government and electronic skills in households and by individuals across the EU.
- **Pew Internet.** The Pew Internet and American Life Project produces reports exploring the impact of the internet on families, communities, work and home, daily life, education, health care, and civic and political life in the US. Each survey used in the report uses a specific methodology, more information on which can be obtained from their website.
- **ITU Statistics.** As a United Nations agency, one of ITU's roles is to identify, define, and produce international official statistics covering the telecommunication/ICT sector. This is in line with other specialized agencies that produce statistics covering their respective field of operations and forms part of the global statistical system of the UN.
- **Ofcom's Children and parents: media use and attitudes report.** Ofcom publishes an annual report which looks at media use, attitudes and understanding among UK children aged 5-15. It also documents the views of parents/carers about their child's media use, and the rules and tools that parents use to manage such use.

Gaps in data on digital participation in Scotland

3.24 We have identified five datasets that represent the main sources of data on digital participation available for Scotland, along with other data sources that

provide information on other countries or different populations. Going back to the types of data that are collected on digital participation, reach, breadth of use and depth of use, we can see that Scotland is fairly well served with data on reach and breadth of use, collected through the SHS and Ofcom. The data provided is not perfect though: the SHS is a superior data source in terms of sample size and methodology but it does not allow the same comparison across UK nations as the Ofcom data does.

- 3.25 Data is collected on depth of use through the OxIS survey but the small Scottish sample size means that this data cannot be considered reliable. Arguably, it is important to collect data on this measure as this reveals more about the confidence of people's use, the extent and the full benefits that Internet participation can offer.

4 EVIDENCE ON THE BARRIERS TO DIGITAL PARTICIPATION

Introduction

4.1 The Digital Strategy published in March 2011 outlined a number of actions the Scottish Government would take to increase digital participation among people in Scotland. The purpose of this chapter is to review available evidence (both literature and survey data) to attempt to determine what barriers prevent people from using the internet. By considering three questions – who are the internet non-users, why do they not use the internet and what can be done to encourage people online – we can inform what groups should be targeted and potential messages that would encourage non-users online. In this chapter we also consider some of the possible explanations for why Scotland has a lower digital participation rate than the rest of the UK.

Who are the internet users and non-users?

4.2 A large amount of data on internet access and use is collected in Scotland. The data review reported in the previous chapter identified five main sources of data:

- Ofcom Communications Market Survey
- The Scottish Household Survey
- Labour Force Survey
- Opinions Survey
- Oxford Internet Survey

4.3 The review found that the Scottish Household Survey (SHS) was the most robust source of data on digital participation in Scotland. One of the main advantages of this data is the large sample size which enables detailed demographic and geographic comparisons. Table 4.1 presents data on internet access and use in Scotland from the 2009/2010 SHS. Main findings were:

- **Age:** older people were far less likely than younger people to have home internet access or to personally use the internet.
- **Income:** those with a higher income were more likely to have access and use the internet than those on lower incomes
- **Educational qualifications:** those with higher levels of qualifications were more likely to have access and use the internet.
- **Working status:** internet access and use was higher among those who were working compared with those who were not working
- **Disability:** internet access and use was higher among those who do not report having a disability or long-standing illness.
- **Deprivation:** internet access and use was lower among those living in the most deprived areas.

Table 4.1: Home internet access and personal internet use

	Home internet access	Personal internet use
<i>Base:</i>	21,352	24,988
	% Yes	% Yes
All	67	71
Male	68	73
Female	64	69
16 to 24	76	93
25 to 34	81	90
35 to 44	83	86
45 to 59	77	75
60 to 74	52	48
75 plus	19	15
£0-20,000	54	53
£20,001-£40,000	87	83
£40,001+	98	95
15% most deprived	52	58
Rest of Scotland	70	74
Urban	66	71
Rural	70	73
No qualifications	36	34
School qualifications	67	74
FE qualifications	80	85
HE qualifications (incl. professional qual)	86	91
Working	84	86
Unemployed	55	73
Not working	42	43
In education/training scheme	87	97
Disability and/or long-standing illness	44	46
No disability/illness	74	79

Source: Scottish Household Survey 2009/2010

- 4.4 There was little difference between urban and rural areas.
- 4.5 Although there is no comparable data from the rest of the UK, we can provide some information from the other data sources which give an indication of how things differ in the other UK nations. Ofcom (2011) discuss how, even though broadband take-up is low in the rest of the UK among lower income homes, DE socio-economic groups and older age groups, it is *particularly low* in Scotland. Ofcom argue that the low broadband take-up in Scotland can be almost entirely explained by particularly low take-up by these groups.
- 4.6 From this analysis we have an idea of how many people in each group do not use the internet. However, often there is cross-membership of these groups, i.e. someone may be disabled and old and from a low socio-economic group. To determine which of these demographic variables are actually related to digital participation, we used the Scottish Household Survey data to conduct a regression analysis.⁹
- 4.7 Based on the analysis above, we chose the following variables for the statistical analysis:
- Age
 - Gender
 - Income
 - Educational Qualification
 - Working status
 - Disability
 - Deprivation
- As urban/rural did not appear to have any effect on digital participation this was not included in the analysis.
- 4.8 The regression analysis found that all the variables, except gender, were good predictors of personal internet use.
- 4.9 As well as providing support to what we already knew about the characteristics of those who do not use the internet, this analysis also tells us that each of these demographic characteristics are important in their own right. That is, we can be sure each of these variables (apart from gender) has an effect on internet use independent of each other. For example, it is not only that a large proportion of disabled people do not use the internet because a large proportion of disabled people are old – disability is having an independent effect on internet use as well as age.
- 4.10 In addition to this, it is also useful to know how these groups overlap. Of those that do not use the internet, 44% are over 60, have a low income and are not working while 26% are over 60, have a low income, are not working and have no qualifications.

⁹ Regression analysis is a type of analysis that shows how well we can predict some characteristic or behaviour of a respondent (in this case use of the internet) from knowledge of their scores on other survey questions. This technique takes into account relationships between the different independent variables (for example, between education and income, or social class and housing tenure).

Why do some people not use the internet?

- 4.11 The previous section shows that there are specific groups among the Scottish population who do not use the internet. This section considers literature and data from the SHS and Ofcom media monitor to discuss potential reasons why people do not use the internet.
- 4.12 Newholm et al. (2008) argue that there are high barriers for people to overcome in getting online – and these go beyond physically acquiring a computer and home internet access. Van Dijk and Hacker (2003) used research conducted in America and Holland to distinguish between four different types of barrier to access:
1. lack of digital experience (“mental access”)
 2. no possession of computers and network connections (“material access”)
 3. lack of digital skills (“skills access”)
 4. lack of usage opportunities (“usage access”)
- 4.13 According to Van Dijk and Hacker (2003), the problems associated with starting to use the internet gradually shift from the first two kinds of access to the last two kinds. When the problems of mental and material access have been addressed, the problems of skills and usage access may come to the fore.
- 4.14 These barriers are similar to those identified in the Consumer Framework for Digital Participation developed by the Communications Consumer Panel (2010). This Framework brings together all the different reasons people give for not being online and aims to provide a mechanism to enable policy makers and service deliverers to consider digital participation from the perspective of the consumer.
- 4.15 The Framework identifies what people need to get online and get the most from the internet:
- To get interested
 - To get online
 - To make it work
 - To enjoy the benefits
 - To manage the risks
- 4.16 The report considers different demographic groups and shows how the framework can help identify which groups face the biggest barriers and what kind of help they need.
- 4.17 While the literature gives some idea of the types of barriers experienced by people in getting online, we found no literature on why people in Scotland have relatively low levels of participation. However, some of the population surveys which cover internet use in Scotland include a question for non-users on the reasons why people do not use the internet.

- 4.18 The Scottish Household Survey includes a question for those who do not use the internet on the reasons why they do not. The responses can be grouped into three main types of reason people give for not using the internet:
1. Lack of need or desire to use the internet
 2. Lack of knowledge of the internet or computers and/or feeling it would be too difficult to learn
 3. Cost of using the internet
- 4.19 The table overleaf shows responses to this question by age and whether or not people would like to use the internet. In general, younger people were more likely than others to cite cost as their reason for not using the internet while older people were more likely to mention reasons relating to lack of need or not knowing how to use a computer. Those who would not like to use the internet were generally more likely to mention reasons relating to a lack of need or desire to use the internet. Issues of cost were more likely to prevent people who want to use the internet compared with those who do not.
- 4.20 There were few differences in the reasons given by men or women, or by people who have a disability compared with those who do not. There was also little difference by area of deprivation or between urban and rural areas.
- 4.21 These results support the assertion that it is not just about providing people with the means to get online. In particular, there is a group of older people who make up a sizeable proportion of non-users who do not want to use the internet, do not see the relevance of the internet, and have no interest in using the internet. In terms of the van Dijk and Hacker model of barriers to participation, it is possible that these older people have yet to pass the first barrier of mental access. A different type of non-user, mainly characterised by being younger, may have passed this first barrier (not many people in the younger age groups chose reasons related to lack of interest or desire) but are held up by the second barrier of material access, mainly due to reasons of cost. This data suggests there are different typologies of non-user who have different reasons for not using the internet. Therefore, when taking action to increase internet use, it is important to consider which groups of non-user to target and pitch messages accordingly.

Table 4.2: Reasons why people might not use the internet by age and whether or not would like to use the internet

	All	16-34	35-59	60+	Would like to use internet	Would not like to use internet
<i>Base: Those who do not use the internet</i>	4,508	305	1,130	3,073	1,508	3,002
	%	%	%	%	%	%
Lack of need or desire						
I don't like using the computer or internet	28	13	27	30	15	35
I don't need to use the internet or computers	25	12	22	28	17	29
There's nothing of interest to me on the internet	14	4	12	16	8	17
I prefer to do things in person	7	4	8	8	9	6
Lack of knowledge						
I don't know how to use a computer	24	9	22	27	24	24
It would be too difficult to learn how to use the internet	8	3	6	10	5	9
Cost						
I can't afford a computer	13	37	16	9	21	9
Internet connection would be too expensive	4	13	5	2	7	2
Other reasons						
I am concerned about privacy	4	1	5	5	6	4
I have a disability or illness that prevents me	2	3	2	2	2	3
I am worried about unsuitable or inappropriate material on the internet	2	5	2	2	1	2

Source: Scottish Household Survey 2009/2010

Why does Scotland have relatively low levels of digital participation?

4.22 As the Scottish Household Survey does not provide any comparison with UK data we cannot attempt to answer why Scotland has lower levels of internet use or broadband take-up in comparison to other UK nations using this data source. However, Ofcom collects data on why people are unlikely to get an internet connection in the next 12 months. Table 4.3 shows results for Scotland, England, Wales and Northern Ireland.

Table 4.3: Reasons why people are unlikely to get internet access by UK region

	All	Scotland	England	Wales	Northern Ireland
<i>Base (Those unlikely to get an internet connection in the next 12 months)</i>	687	118	349	114	106
	%	%	%	%	%
Lack of need or desire					
No need	52	47	52	59	68
Don't want a computer	34	29	35	38	24
Friends/family member checks things on the internet for me	7	8	6	15	2
Lack of knowledge					
Don't know how you use the computer / internet	25	45	21	28	24
Cost					
Too expensive to set up	16	18	16	20	9
Computer is too expensive to buy	11	16	10	12	3
Charges are too expensive	7	13	6	9	6
Other reasons					
Too old to use the internet	26	26	26	26	22
Worries/concerns about privacy issues	7	2	8	2	-
Concerned about security/fraud	5	-	7	-	-
Don't have a phone line	5	5	5	7	4
Satisfied with using the internet elsewhere	3	4	3	3	4
Satisfied with using the internet at work	1	-	-	1	-

Source: Ofcom 2011

- 4.23 Like the SHS, the most common reasons given in this survey were relating to a lack of need, interest or desire to use the internet. A particularly striking finding was that 45% of people in Scotland cited not knowing how to use a computer or internet as a reason compared with only 21% in England (28% in Wales, 24% in Northern Ireland). In Scotland, lack of knowledge was the second most common reason given, second only to “no need”. Whereas in England it was the fifth most common reason.
- 4.24 Before we assume that this provides the answer to why Scotland’s participation is lower than the rest of the UK, we need to bear in mind that our data review found some drawbacks with the way in which Ofcom collect their data (i.e. small sample size in Scotland, not the strongest sampling technique). In the SHS, the most comparable reason was “I don’t know how to use a computer” which 24% of Scottish people gave as a reason. This is more in line with the findings from England in the Ofcom survey. Data from the Oxford Internet Survey also found that there was not such a striking difference (the sample is too small for us to consider this data reliable and therefore we are using for reference only) between Scotland and the other UK nations on their measure relating to lack of knowledge (“It’s too difficult to use”). Nevertheless, it is worth bearing in mind that there may be a demand for more training in computer use and the internet in Scotland.
- 4.25 Another possible explanation is that Scotland’s lower levels of digital participation are as a result of infrastructure issues. Scotland has more rural areas than the rest of the UK which may mean that fewer households have the potential to access the internet. However, figures from the SHS show no difference in home internet access or personal internet use between urban and rural areas. Further, data from Ofcom/BT found that 99.87% of homes were connected to an ADSL-enabled exchange (which is a good indicator of broadband availability). Therefore, it is unlikely that Scotland’s participation rate is influenced to a great extent by its infrastructure.
- 4.26 The demographic composition of Scotland may provide part of the explanation. For example, if Scotland is composed of more older people, more people on a low income etc. then this would impact on Scotland’s rates of digital participation. Table 4.4 provides information on age, employment, income and qualifications from the Office of National Statistics October 2011 release: Region and Country Profiles, Key Statistics¹⁰. From this we can see that Scotland has a broadly similar composition to the rest of the UK. Further analysis of demographic data from the Labour Force Survey showed that Scotland and the rest of the UK also had similar proportions of people who were older, economically inactive *and* had no qualifications (i.e. overlapping groups).

¹⁰ <http://www.ons.gov.uk/ons/rel/regional-trends/region-and-country-profiles/key-statistics/index.html>

Table 4.4: UK country profile: Key statistics

	% aged 65 and over	Employment rate (2010) (%)	Unemployment rate (2010) (%)	Median gross weekly earnings (2010) (£)	% of working age population with no qualifications (2009)
UK	16.6	70.5	7.9	498.80	11.8
Scotland	16.8	71.1	8.0	486.90	13.0
England	16.5	70.7	7.8	506.00	11.2
Wales	18.6	67.6	8.4	456.40	14.3
Northern Ireland	14.5	65.7	8.0	442.20	21.4

Source: ONS 2011

4.27 The Labour Force Survey allows breakdown by regions within the UK on personal internet use (see Table 4.5). This analysis shows that Scotland's participation rate is in line with many regions of England. England's high rate of internet usage is mainly due to especially high usage in the more affluent south regions. This suggests that different demographic compositions across the UK may provide part of the explanation, albeit a small part, for differences in internet usage.

Table 4.5: Internet use across regions of the UK

	Ever used it	Never Used it
North East	79%	21%
North West	84%	16%
Merseyside	79%	21%
Yorkshire & Humberside	82%	18%
East Midlands	83%	17%
West Midlands	80%	20%
Eastern	86%	14%
London	86%	14%
South East	87%	13%
South West	84%	16%
Wales	80%	20%
Scotland	82%	18%
Northern Ireland	73%	27%

Source: Labour Force Survey July to September 2011

How to get people online

4.28 There are real challenges in encouraging non-users to use the internet. The SHS found that 38% of non-users said they would like to use the internet one day, while the majority (62%) said they would not. Three in ten (29%) thought it was likely that they would ever use the internet with 72% thinking it was unlikely. Taking this finding alongside the reasons people gave for non-use, indicates there is a fairly large proportion of non-users who will be difficult to encourage to use the internet. The demographic make-up of the group who do not use the internet and do not want to use it appears to be mainly older people, who have a low household income and are not working:

- 76% are aged over 60 years
- 78% have a household income of less than £20,000
- 80% are not working
- 60% have no qualifications
- 35% fall into all of the above groups.

4.29 There have been a couple of qualitative studies which have probed further into the reasons why people don't use the internet to fully understand what may encourage people to go online. The recommendations developed through these research projects take into account that there are some non-users who are resistant to using the internet.

4.30 Essential Research and Ipsos MORI (2009) conducted a research project for the BBC aimed at encouraging home broadband adoption. This involved focus groups with non-users and provided some direction for the types of messages that may be successful in persuading non-users online. The research identified three types of non-user, those who fundamentally reject the internet; those who do not reject the internet but are not considering it and those who are actively considering take-up. This report did not reveal any methods to encourage those who reject the internet to start using the internet. However, it did find some opportunities for non-rejecters and active considerers by understanding more about the barriers faced at each stage.

4.31 Discussions during the focus groups suggested that it may be possible to engage non-rejecters by:

- Communicating relevant benefits, and being specific about what these benefits are.
- Providing reassurance that the internet is for them. Commonly held perceptions that may need to be challenged are that the internet is time consuming and detracts from everyday life. More positive messages could be that the internet is fun, keeps your mind active and can save money.

This report goes on to say that once interest has been sparked non-users will need further help and advice to progress to becoming a competent internet user.

- 4.32 A similar research project, conducted by Ipsos MORI for Ofcom in 2009, used a qualitative approach with people who did not have the internet at home. This research identified a group of people, known as “core resisters” who were not at all interested in the internet and had no intention to get the internet. Similar to what we found with the SHS data, this group tended to be older, retired or in a lower socio-economic group. Qualitative research with this group gave some ideas how they could be encouraged to use the internet. First they need to become interested in the internet – the best way of doing this may be to show what can be done on the internet and make the internet personally relevant to people. Second, it seemed that giving people the opportunity to experience the internet may be beneficial in giving people experience of what the internet can do for them.
- 4.33 The think tank Demos conducted a series of focus groups with older people to further examine this group’s use or non-use with the internet (Hannon and Bradwell, 2008). Similar to the two research projects described above, they also concluded that the barriers that remain to getting the non-users online are not going to be successfully overcome through strategies that address material aspects of non-use (e.g. providing low cost computers). They argue it will involve a more complex approach that needs to address the multitude of factors influencing older people’s internet use such as poor confidence, lack of motivation, low income and disability. They also recognise that a simple dichotomy of users and non-users is not entirely helpful as there are different types of user, particularly among older people. Getting people online does not necessarily mean that they are using the internet to its full potential for their needs and they argue that policies should look to continue to provide support beyond encouraging access.

Recommendations for encouraging non-users online

- 4.34 Based on the findings of the secondary analysis and the literature review, we can make the following recommendations for encouraging non-users online.
- 4.35 First, any actions will need to be very carefully targeted to reach the group of people who do not use the internet. This is based on the fact that the majority of the population already use the internet. However, we have a fairly good idea of who the groups of people are who do not use the internet and can use this knowledge to target messages effectively.

Recommendation: action targets non-users who do not want to use the internet

- 4.36 *Evidence this is based on:* We can roughly group internet non-users into two categories: those who want to be online and those who do not. Those who want to be online are already interested in the benefits of the internet and are being restrained by issues of cost and access. This group do not have any defining characteristic; they are from a range of age groups, income groups and working status.
- 4.37 Those who do not want to be online are easier to identify; they are mainly older people, who have a low household income and are not working. The

reasons this group give for non-use are primarily related to a lack of interest/need/want and also a lack of knowledge of how to use the internet and computers. This group are an identifiable target for action, and a good starting point would be to communicate the messages of the benefits of the internet .

- 4.38 Ofcom argues that low participation in these groups (older people, lower income, not working) is responsible for Scotland's lower levels of participation so targeting these groups directly should hopefully help address these differences.

Recommendation: action focuses on messages of the specific benefits of the internet

- 4.39 *Evidence this is based on:* As discussed above key reasons for the target group for not using the internet are a lack of interest in the internet or a belief that they do not need or want the internet. Qualitative research found that this group are often very resistant to using the internet and may be difficult to persuade. However, these research studies also found that people would be more likely to be persuaded if the internet was explained to them in simple terms and they could see the specific benefits for them. For example, an older person may be more likely to take up the internet if they are told they can use internet video calling to see their grandchildren, or they can sell their old vinyl records on ebay, or send photos to their friends etc.

Recommendation: action that shows the internet as something that is easy to use and appropriate for everyone

- 4.40 *Evidence this is based on:* Many people hold the belief that the internet or computers are too difficult for them to use. The obvious way to address this is through training but communication can also help to address these beliefs by portraying the internet as something that anyone can use. For example if images are included of older people using the internet, this may help encourage older people to see the internet as more accessible to them.

5 CONCLUSIONS AND FUTURE DIRECTIONS FOR RESEARCH

Conclusions

- 5.1 This evidence pack brings together a variety of sources of evidence on digital participation in Scotland to inform aspects of the Scottish Government's Digital Strategy. We conducted a data review with the aim of firstly collating all data on digital participation to act as a useful reference, but also to review the way in which progress is measured on the Digital Ambition (that Scotland will have the highest rate of broadband uptake among the UK nations by 2015). The Data Review identified and assessed five main sources of data on digital participation in Scotland.
- 5.2 Taking into account the advantages and disadvantages of each of the data sources, the Scottish Household Survey was found to be the most robust data source. It has the largest sample size, it reports frequently and uses a robust methodology. In terms of the Scottish Government's current ambition, the one disadvantage of this data source is that no comparable UK data is available.
- 5.3 As the Digital Strategy is not solely about broadband uptake, it may be more appropriate to consider an ambition relating to personal internet use. However, the available data for Scotland does not allow the combination of use of SHS data, a measure of personal internet use and a comparison across UK nations. One possible way forward would be to continue to use the Ofcom data to track the ambition on broadband uptake and use the Scottish Household Survey data for a fuller understanding of trends of digital participation in Scotland and tracking progress on the policy more generally.
- 5.4 From the evidence review on barriers to digital participation, we have provided a number of recommendations for how to encourage non-users online. The analysis of the data showing the prevalence of internet use and non-use among different groups is also relevant to the Digital Strategy overall. This makes it explicit that internet non-use is not related to infrastructure or to having the right "materials" as the majority of non-users are yet to pass the first barrier of recognising the benefits and need for the internet. The review concludes that actions should be focusing attention on older people, those of low incomes, those who are not working and those with low levels of educational qualification.

Future research

- 5.5 There are a number of possible avenues for future research in this area. Digital Participation is a fast-moving policy area with a lot of academic, think-tank and policy research being published every year on the topic. Taking this into account, along with the need to understand the potential impact of all the actions outlined in the Digital Strategy, it would be pertinent to conduct an annual updating of some of the evidence contained in this pack. This would enable trends in the data to be picked up, analysis of the composition of non-users to be tracked and any recent literature to be examined and summarised in a comprehensive and concise report.

- 5.6 In the review of barriers to participation, we found a clear gap in the evidence relating to why Scotland has lower levels of participation compared with the rest of the UK. There is a considerable amount of literature on barriers to participation but nothing that considers Scotland's low participation rate specifically. The Carnegie UK Trust is proposing to carry out research in 2012 to explore in greater depth the reasons why some people may not take up digital technology; and highlight effective interventions which have been successful in encouraging and supporting more people to get online. This research may go some way to filling this gap. There may also be scope for further research in Scotland similar to the Ipsos MORI qualitative projects for Ofcom and the BBC. This would provide further information to identify what could be done to encourage people online.
- 5.7 Another area for research which may be relevant to contributing towards the Digital Strategy would be to look in more depth at people who do use the internet; this could incorporate a consideration of those who have just started to use the internet and also those in the typically non-user groups who do use the internet. In order to fully realise benefits of the internet, there are still barriers to overcome in terms of access, confidence, trust in the internet, skills etc. A fuller investigation of how people are using the internet in Scotland would tease out policy implications along the lines of encouraging better usage and ensure people are well-placed to benefit from what the internet has to offer.

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