7 Internet

Main Findings

Home internet access has increased steadily over time, reaching an all-time high of 85 per cent of households in 2017.

Thirty per cent of households with internet access had a subscription to a superfast broadband service.

Households with lower incomes and households in Scotland's most deprived areas continue to be less likely to have home internet access than higher-income households and those in less deprived areas, but the gap has narrowed in recent years.

Around one in seven adults do not use the internet at all.

Older adults continue to be less likely to use the internet, but the divide in internet use between younger and older adults has narrowed over time.

Internet access and internet use amongst adults living in social-rented accommodation improved considerably over the year.

The use of smartphones to access the internet increased again in 2017, and is now equally as common as the use of a PC or laptop to access the internet.

The most common activities undertaken by those who have access to the internet include sending and receiving emails (90 per cent) and searching for information (86 per cent).

Over one third of internet users stated that security concerns made them less likely to share personal information online.

Not liking or not needing to use the internet or computers remain the main reasons for not using the internet.

7.1 Introduction and Context

The Scottish Government is committed to ensuring that all of Scotland is well positioned to take full advantage of all opportunities offered by the digital age. This includes a vision of a Scotland where businesses and individuals are making effective use of digital tools, public services are designed around the needs of users, high quality connectivity is provided across the whole of the country, the current gender gap in digital skills and careers is addressed and where digital technology is supporting inclusive economic growth, fair and rewarding work, social cohesion and future innovation.

Part of the Scottish Government's Digital Strategy[44] is to increase digital participation in order to enable social mobility and tackle persistent inequalities. Digital participation refers to people's ability to gain access to digital technology and use it effectively, creatively and with confidence. Being able to use the internet provides access to a range of political, educational, cultural and economic resources and is thereby an important facilitator of social inclusion. Ultimately, increased digital participation can improve people's quality of life, boost economic growth and allow for more effective delivery of public services.

The SHS provides information on a number of relevant areas of digital participation that can be used to measure progress. This chapter begins by looking at take-up of internet and broadband by households in Scotland, with a focus on how this varies by income and area. It then looks at personal use of internet – including where and how the internet is accessed – by key demographic factors, such as age, health status, income and deprivation. Next, there is coverage of some more specific use, in order to understand the activities for which the internet is being used and how confident users are undertaking different activities.

The next section looks at the reasons why adults do not use the internet and at use of Government and local authority websites to access information and services.

The final part of the chapter looks at the online security measures taken by internet users, and explores how security concerns are affecting the way in which people use the internet.

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[44] http://www.gov.scot/Publications/2017/03/7843

7.2 Internet Access and Use

7.2.1 Internet Access

In 2017, the proportion of households with home internet access was 85 per cent (Figure 7.1). This was an increase from 82 per cent of households surveyed in 2016, **and** the share **has increased steadily from 42 per cent of households surveyed in 2003.**

Figure 7.1: Households with home internet access by year

2003-2017 data, Households (minimum base: 3,190)
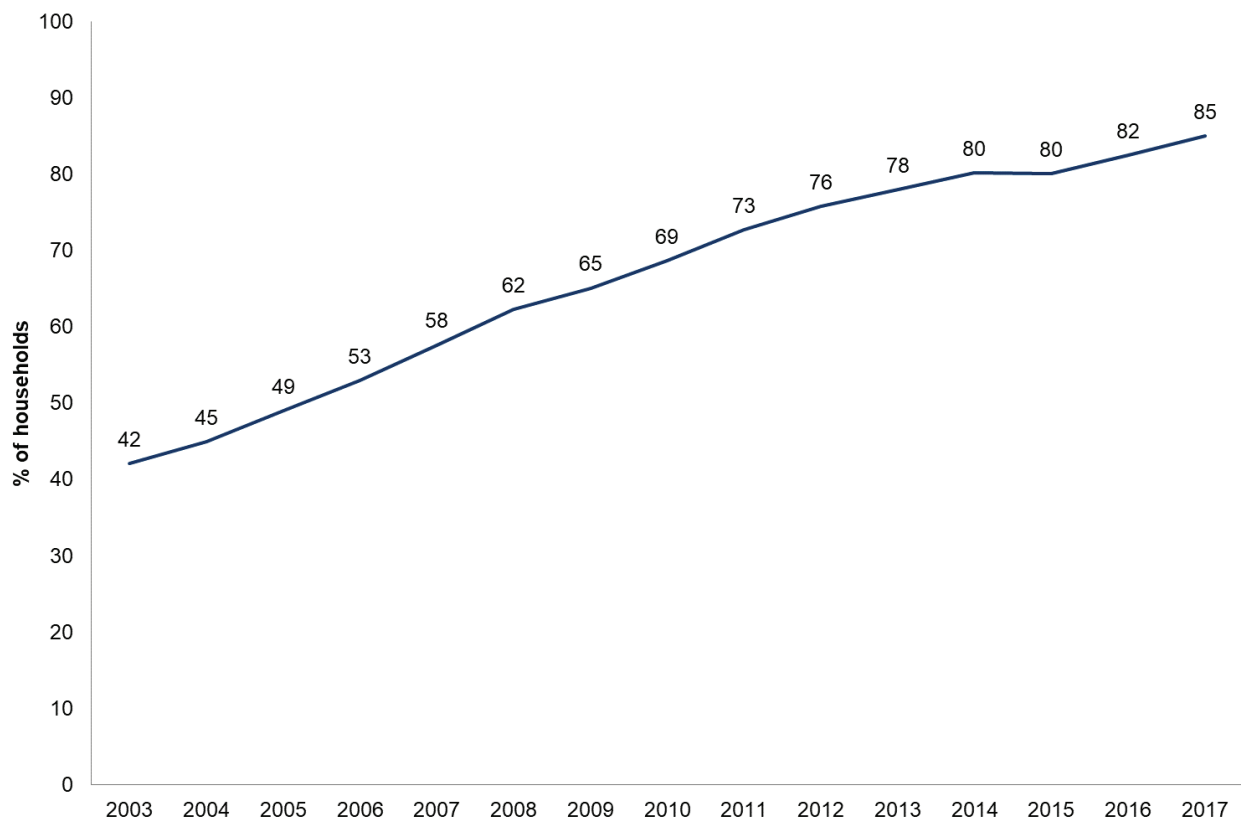
7.2.2 Variations in internet access

Home internet access tends to increase with household income (Figure 7.2), with the exception of households in the lowest income bracket (£0-£6,001). This result is likely to be driven, in part, by overrepresentation of students in this income bracket (of whom 97 per cent have home internet access).

In 2017, 66 per cent of households with incomes of £15,000 or less had home internet access, increasing to 99 per cent of households with incomes over £40,000. **Since 2007, the gap in home internet access between the income bracket with the lowest rate of internet access (£6,001 - £10,000), and the highest income bracket, has decreased from 69 percentage points to 42 percentage points in 2017.**

Figure 7.2: Households with home internet access by net annual household income
2017 data, households (minimum base: 80)
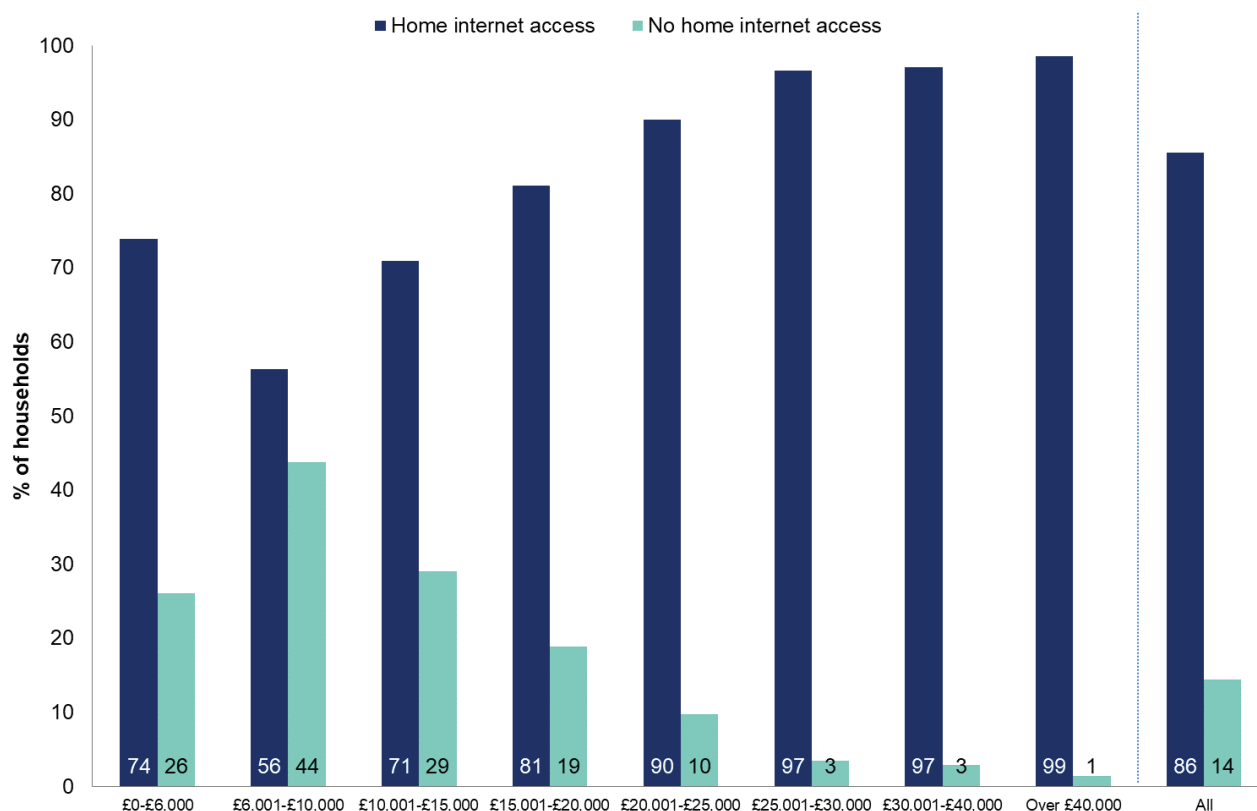
Households in the 20 per cent most deprived areas[45] in Scotland continue to be less likely than those in the 20% least deprived areas to have access to the internet at home (77 per cent and 93 per cent respectively in 2017).

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[45] As defined by the Scottish Index of Multiple Deprivation.

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However, the gap in home internet access between households in Scotland's 20% most deprived areas, and 20% least deprived areas, has decreased gradually over time from 36 percentage points in 2006 to 16 percentage points in 2017 (Figure 7.3)

Figure 7.3: Households with home internet access by area deprivation
2006 - 2017 data, Households (minimum base: 560)
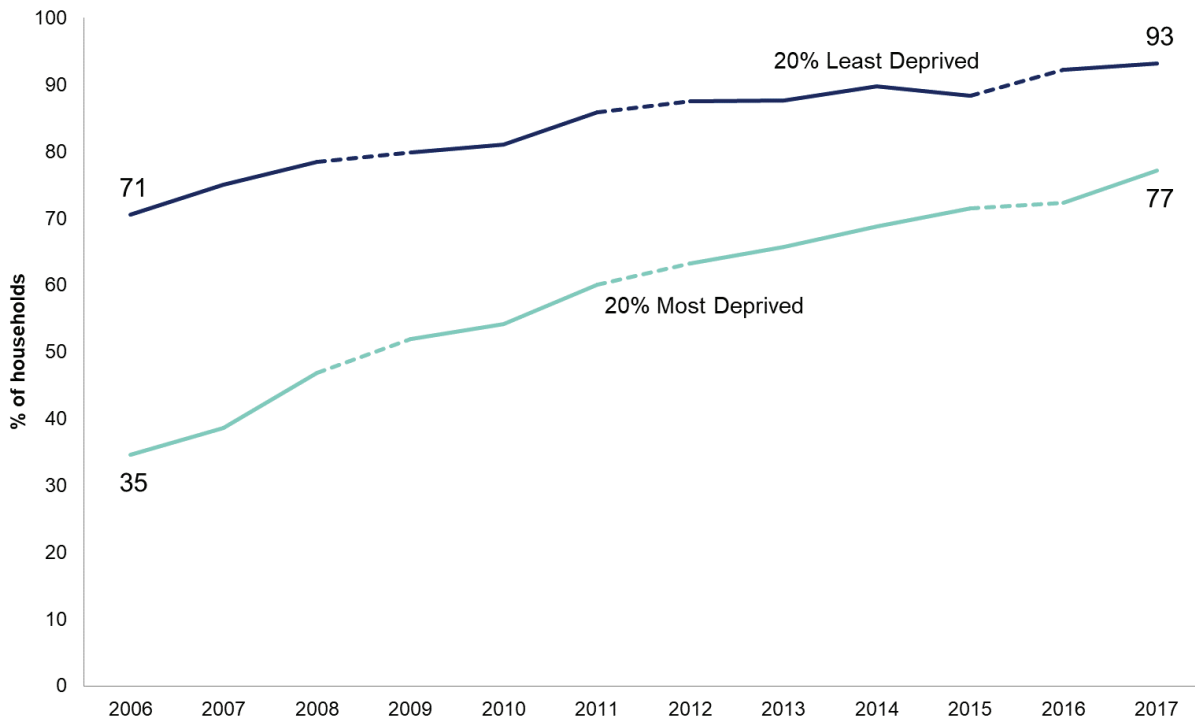
Note: Dashed lines denote updates to SIMD measure

Figure 7.4 shows how **home internet access varied by tenure.** Ninety per cent of households who own their home had home internet access, compared to 88 per cent of those in private rented housing and 71 per cent of those in social rented housing.

Households in social rented housing experienced the greatest increase in internet access over the year, from 65 per cent of households surveyed in 2016 to 71 per cent in 2017.

Figure 7.4: Households with home internet access by tenure

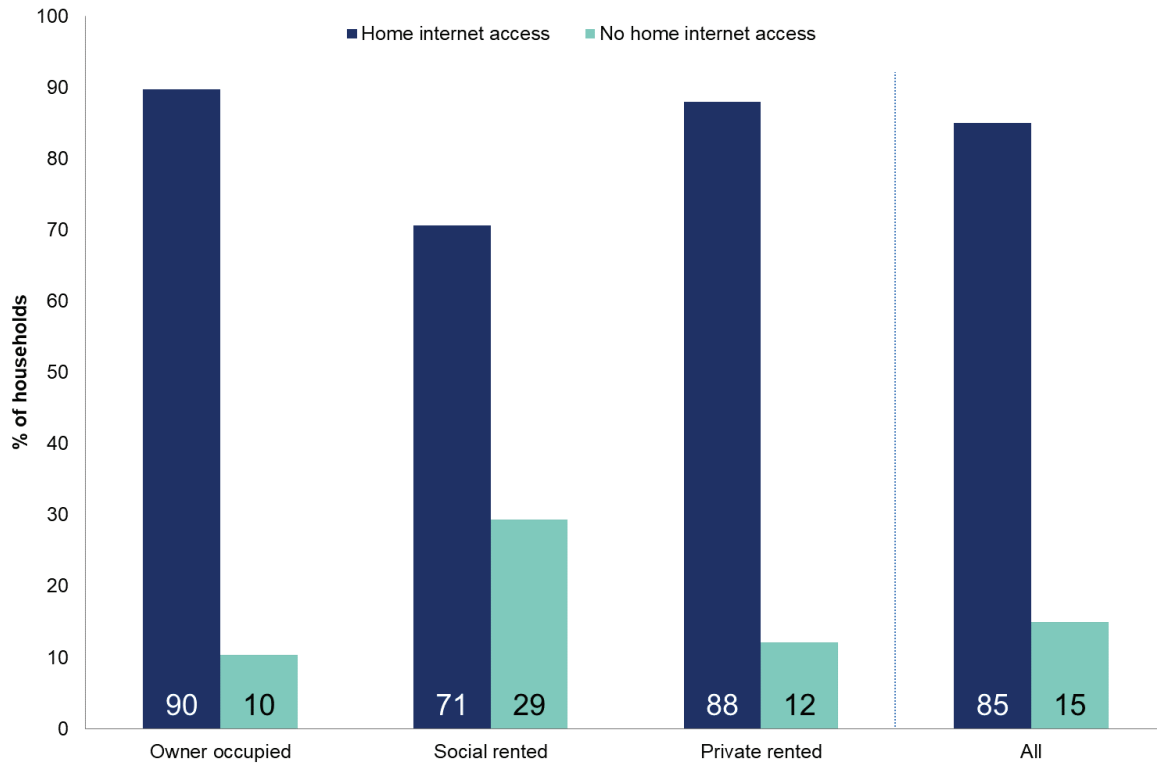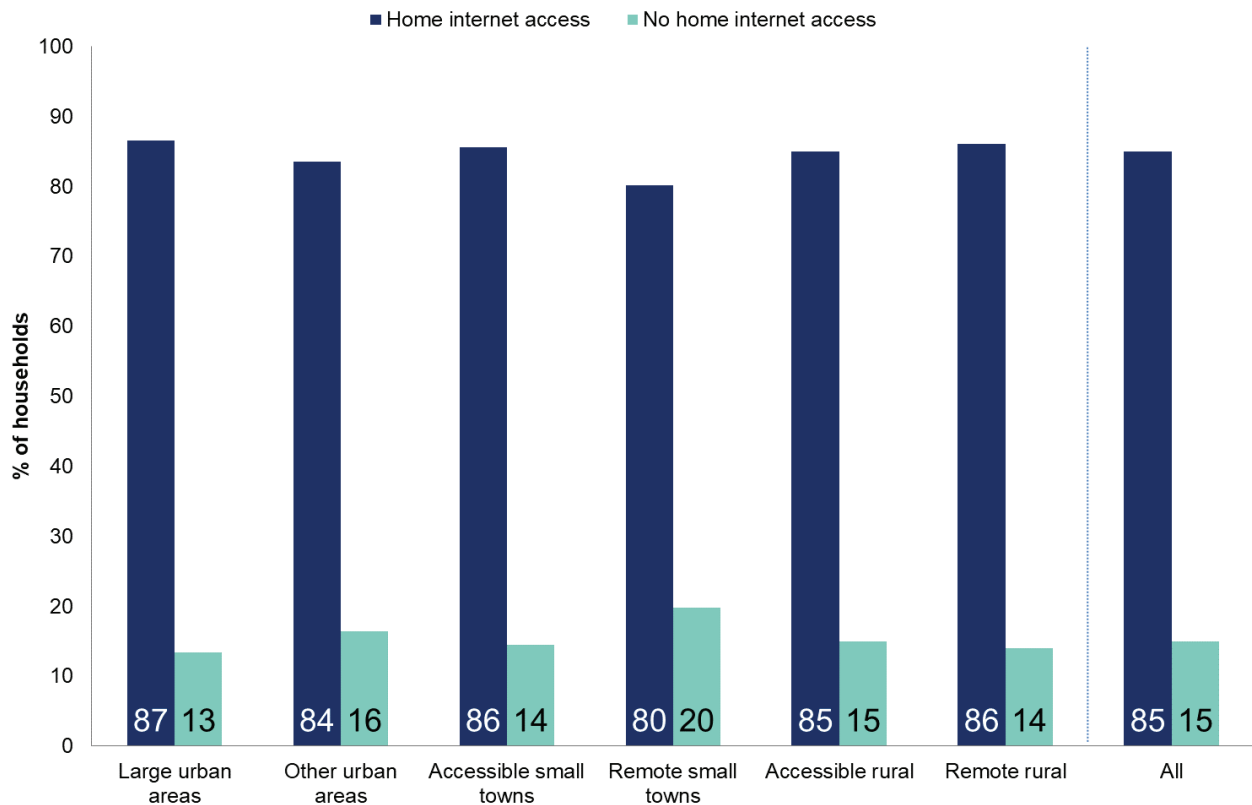2017 data, Households (minimum base: 380)

Figure 7.5 shows the prevalence of home internet access by area, based on Urban Rural Classification. There was no significant variation in access across households in different types of area.

Figure 7.5: Households with home internet access by Urban Rural Classification
2017 data, Households (minimum base: 180)

Since 2007, the SHS has asked households who reported having access to the internet at home about what type of connection they have. **The vast majority of households with internet access at home had a broadband connection in 2017 (98 per cent), and 30 per cent had access via a superfast broadband subscription, an increase from 26 per cent in 2016.**

Across all households (that is, both households that have access to the internet and those who do not), 84 per cent had broadband at home in 2017.

7.2.3 Internet Use

In addition to the questions on household take-up of internet and broadband, the SHS asks a randomly selected adult in the household whether they use the internet either for work or personal use. **Overall, 86 per cent of adults said that they used the internet in 2017 for work or personal use – an increase from 84 per cent in 2016** (Figure 7.6). Fourteen per cent of adults stated that they did not use the internet at all, and less than one per cent said that they only used it for work purposes.

Older adults are less likely to use the internet, however the divide in internet use between adults aged 16-24 and adults aged 60 and above has fallen over time – from 57 percentage points in 2007 to 36 percentage points in 2017. This result has mainly been driven by an increase in internet use amongst adults aged 60+ (from 29 per cent to 63 per cent).

Figure 7.6: Use of internet by year and age
2007 – 2017 data, Adults (minimum base: 300)
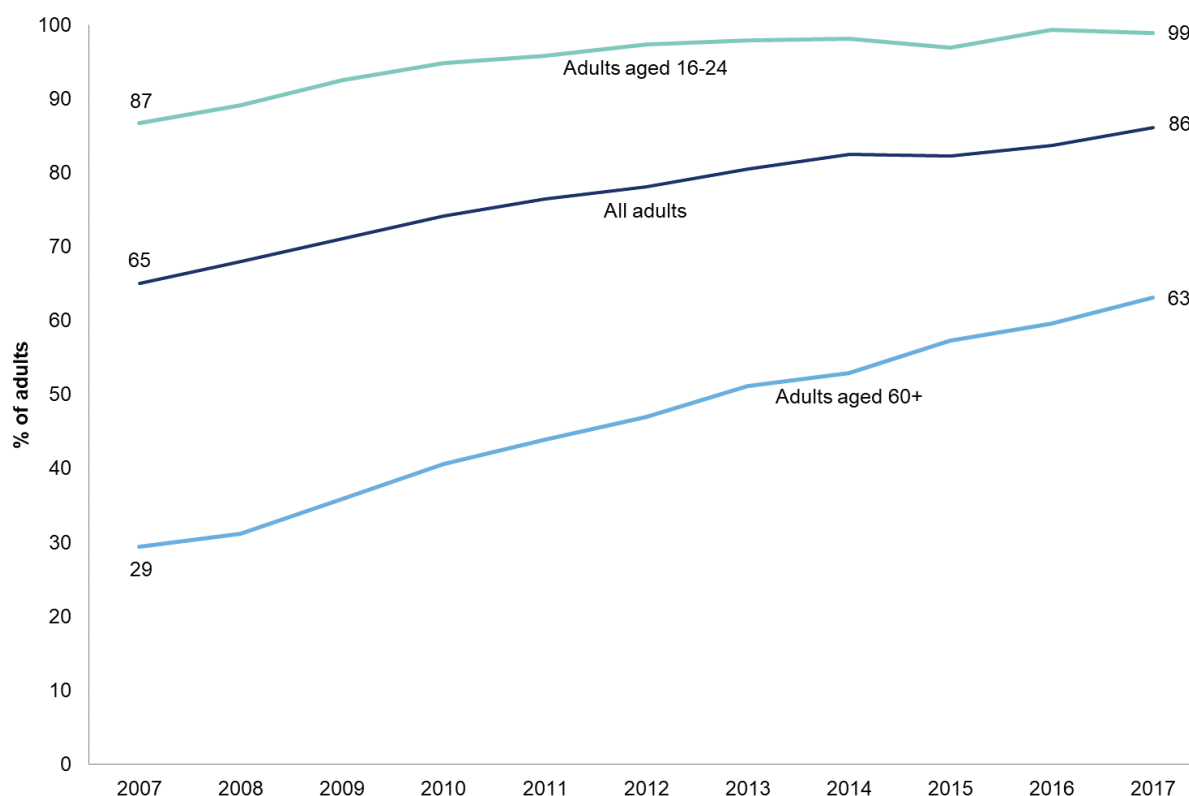
The following section mainly focuses on those who do not use the internet at all. In order to increase digital participation and enable more people to enjoy the benefits that the internet can offer, it is important to identify if there are any groups of society that face barriers accessing or using the internet. In particular, this section looks at those who do not use the internet by age, health, income, level of deprivation and tenure.

Figure 7.7 shows that there is a clear relationship between age and use of internet, with lower rates of internet use among older adults. In 2017, around 1 per cent of adults aged 16 to 24 reported not using the internet, compared to 63 per cent of those aged 75 and over. However, the gap in internet use between younger and older adults has steadily decreased over time (see Figure 7.6 above).

Figure 7.7: Use of internet by age
2017 data, Adults (minimum base: 300)
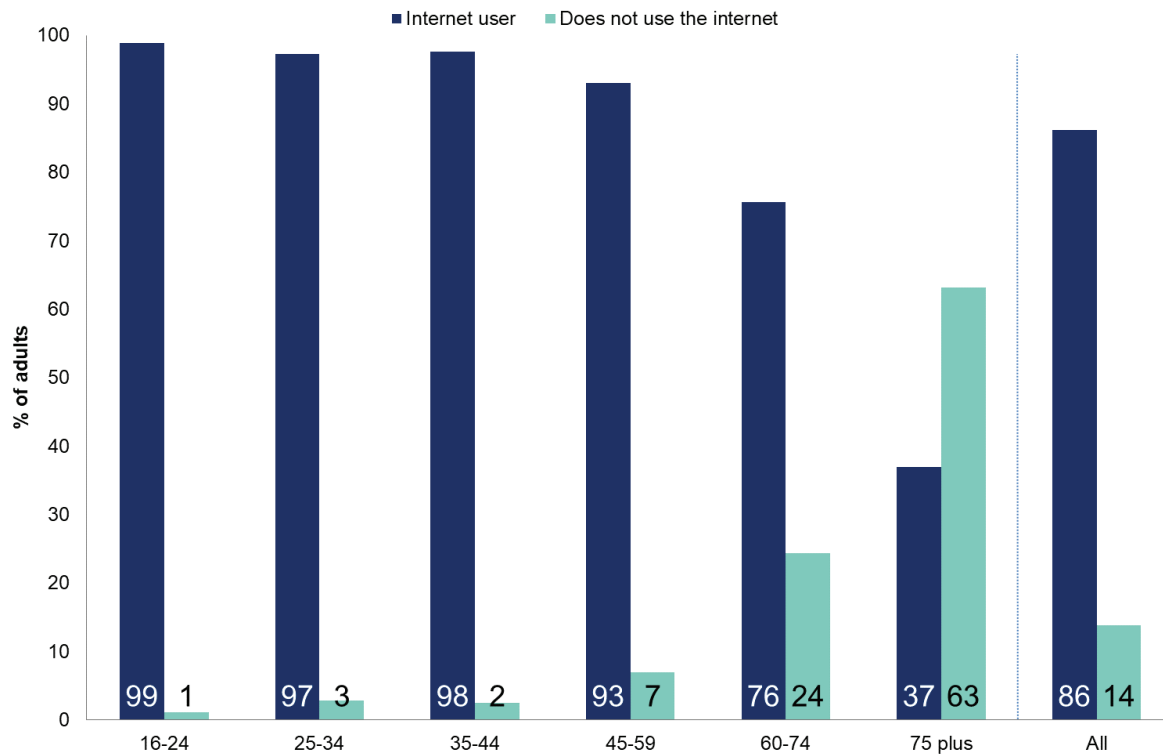
Twenty-eight per cent of adults who have some form of longstanding physical or mental health condition or illness reported not using the internet, compared with eight per cent of those who do not have any such condition (Table 7.1). This divide in internet use is more marked among the older age groups, but is prevalent across all age bands to some extent.

Table 7.1: Proportion of adults who do not use the internet by age and whether they have a physical or mental health condition lasting or expecting to last 12 months or more

Column percentages, 2017 data

	Does not have a physical or mental health condition or illness	Has a physical or mental health condition	All
16-24			
Internet user	99	*	99
Does not use the internet	1	*	1
Base	*260*	*40*	*300*
25-34			
Internet user	98	92	97
Does not use the internet	2	8	3
Base	*510*	*90*	*590*
35-44			
Internet user	98	94	98
Does not use the internet	2	6	2
Base	*500*	*140*	*640*
45-59			
Internet user	96	86	93
Does not use the internet	4	14	7
Base	*790*	*390*	*1,180*
60-74			
Internet user	80	70	76
Does not use the internet	20	30	24
Base	*680*	*510*	*1,200*
75+			
Internet user	44	32	37
Does not use the internet	56	68	63
Base	*300*	*410*	*710*
All			
Internet user	92	72	86
Does not use the internet	8	28	14
Base	*3,040*	*1,570*	*4,610*

Excludes 'Don't know'/'Refused' statements

Figure 7.8 shows that, as with internet access, **there is a broadly positive relationship between internet use and income**, with a break in the trend for the lowest income bracket (this feature of income is discussed in the internet access section above).

Two per cent of adults living in a household with a total net income of £40,000 or more did not use the internet in 2017 compared with 40 per cent of those in the £6,001-£10,000 bracket. **Since 2007, the gap in internet use between adults in the income bracket with the lowest internet use (£6,001-£10,000) and highest income brackets has fallen from 62 to 38 percentage points.**

Figure 7.8: Use of the internet by net annual household income
2017 data, Adults (minimum base: 120)
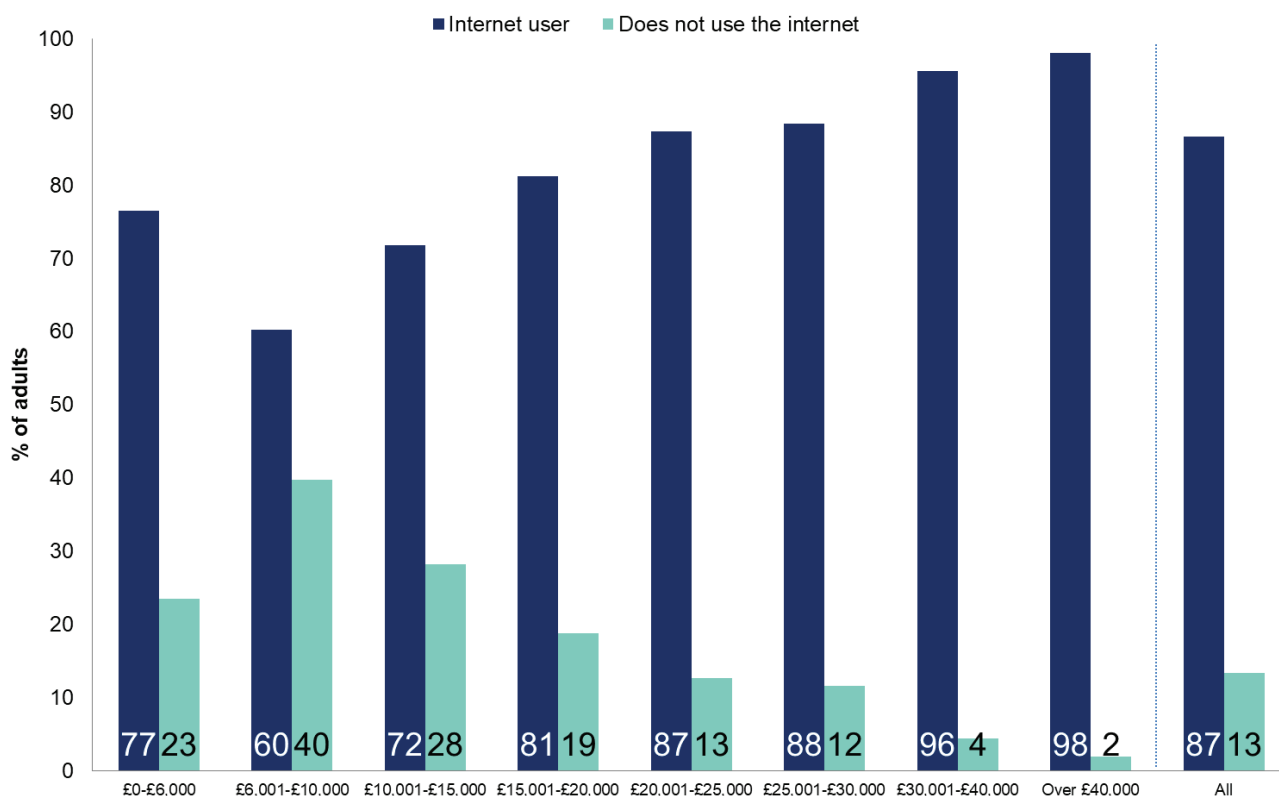
As with internet access, there is a difference in internet use by area deprivation 20 per cent least deprived areas (Figure 7.9). Nineteen per cent of adults living in the 20 per cent most deprived areas in Scotland reported not using the internet in 2017, compared with seven per cent in the 20 per cent least deprived areas.

Figure 7.9: Adults in the 20% most and 20% least deprived areas who do not use the internet
2017 data, Adults (minimum base: 870)
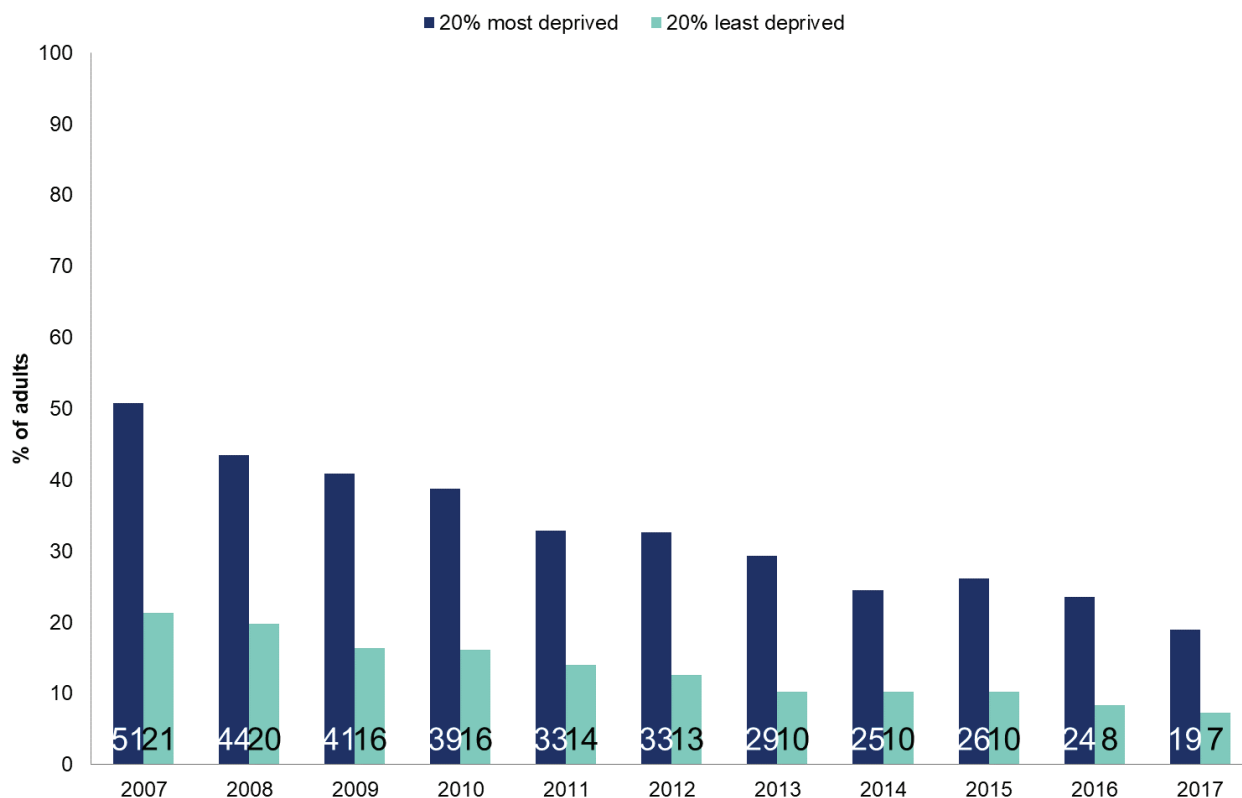
Twenty six per cent of adults in social rented housing reported not using the internet in 2017, compared to only seven per cent of those in private rented housing and 11 per cent of those that own their own homes (Figure 7.10). Internet use amongst social rented housing tenants increased over the year, from 69 per cent in 2016 to 74 per cent in 2017.

Figure 7.10: Use of the internet by tenure
2017 data, Adults (minimum base: 70)
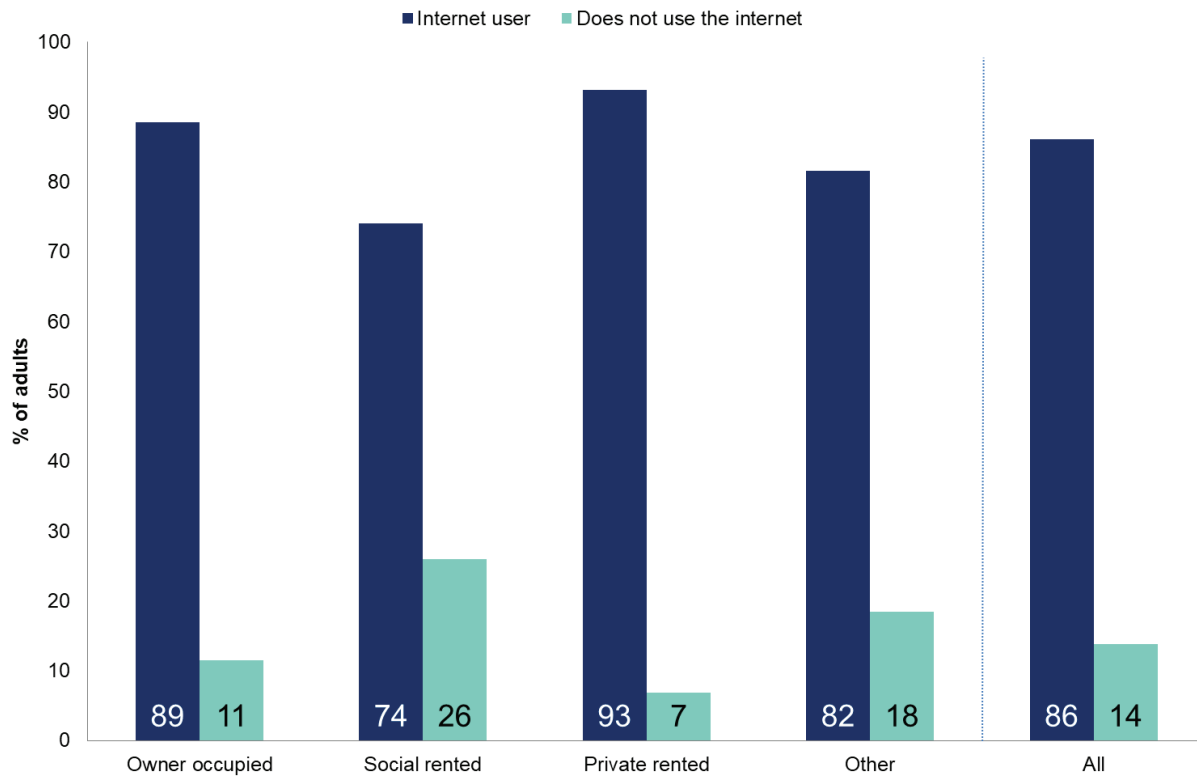
7.3 Where and How Users Access the Internet

The ways in which people access the internet are becoming increasingly diverse. Since 2007, the SHS has asked adults who use the internet for personal use about the location where they access it and the methods they use.

7.3.1 Where internet users access the internet

Almost all internet users (97 per cent) said that they use the internet at home (Table 7.2.) **Those reporting that they access the internet on the move using a mobile phone or tablet has continued to rise, increasing by seven percentage points over the year to 58 per cent in 2017.** Over a quarter of internet users (28 per cent) said that they make personal use of the internet at work.

There is a broadly positive relationship between household income and the share of internet users accessing the internet on the move via a smartphone or tablet. A positive relationship is also displayed between income and the share of internet users making personal use of the internet at work.

Table 7.2: Where adults who use the internet access it for personal use by annual net income
Column percentages, 2017 data

Adults who make personal use of the internet	£0-£6,000	£6,001-£10,000	£10,001-£15,000	£15,001-£20,000	£20,001-£25,000	£25,001-£30,000	£30,001-£40,000	Over £40,000	All
At home	94	91	96	97	98	98	97	99	97
On the move via a mobile phone/smartphone/tablet	50	49	43	50	49	58	62	69	58
At work	26	8	11	16	23	23	29	46	28
At another person's home	18	23	11	11	12	16	16	20	16
School, college, university, other educational institution	16	13	7	9	6	4	4	7	7
Internet café or shop	10	9	4	5	2	3	5	9	6
Public library	8	8	6	5	3	2	4	4	4
Somewhere else	1	-	1	2	2	1	1	2	2
Community or voluntary centre/organisation	1	1	1	0	1	1	0	0	1
A government/council office	-	3	0	1	0	-	2	1	1
Base (minimum)	*60*	*140*	*290*	*330*	*310*	*220*	*380*	*540*	*2,260*

7.3.2 How internet users access the internet

Table 7.3 shows which methods are used to access the internet for personal use by age. **The proportion of internet users reporting that they access the internet using a smartphone continued to increase** (from 72 per cent in 2016 to 78 per cent in 2017), **and is now broadly the same as the share of internet users using a PC or laptop to go online** (79 per cent).

Over the year, the 45-59 age group showed the largest increase in accessing the internet by a method other than a PC or laptop (up nine percentage points). This was driven mainly by an increase in the use of mobile phones to access the internet (from 70 per cent in 2016 to 79 per cent in 2017). **There was also an increase in the use of mobile phones to access the internet amongst 60-74 year olds** (from 45 per cent in 2016 to 53 per cent in 2017).

Table 7.3: Methods used by adults who use the internet for personal use by age

Column percentages, 2017 data

Adults who make personal use of the internet	16-24	25-34	35-44	45-59	60-74	75 plus	All
A personal computer or laptop	74	75	84	80	80	76	79
Mobile phone/iPhone/Smartphone	93	90	91	79	53	19	78
A tablet - iPad/Playbook or similar	47	54	61	55	57	46	54
Digital, cable or satellite television	16	26	24	18	11	4	18
A games console	27	25	21	7	2	0	14
Another way	0	1	0	0	0	1	1
Other than a personal computer or laptop	97	95	93	88	74	51	88
Base (minimum)	*180*	*380*	*390*	*680*	*550*	*160*	*2,330*

7.3.3 Common internet activities and online confidence

As shown in Table 7.4, the **most common activities** undertaken by those who have access to the internet **include sending and receiving emails** (90 per cent of all adults who make personal use of the internet), **searching for information** (86 per cent), **buying goods or services** (75 per cent), using social media (72 per cent) and internet banking (64 per cent). Adults renting private housing were more likely than average to use the internet for making telephone/video calls and looking/applying for jobs. Those in social rented housing were less likely than average to use the internet for banking and buying goods or services.

Table 7.4: Reasons for using the internet by tenure

Column percentages, 2017 data

Adults who make personal use of the internet	Owner occupied	Social rented	Private rented	Other	All
Send and receive e-mails	92	79	91	*	90
Search for information	87	79	88	*	86
Buy goods or services	80	60	72	*	75
Use social media	69	72	85	*	72
Internet banking	67	45	69	*	64
Play or download games, films or music	50	50	59	*	51
Make telephone/video calls over the	49	38	62	*	49
Look for/apply for jobs	23	29	37	*	26
Create websites or blogs	11	8	18	*	11
None of these	1	2	2	*	2
Base (minimum)	*1,580*	*310*	*420*	*30*	*2,330*

Among those that use the internet, **a lower proportion of adults in social housing were confident in their ability to use any of the activities** listed in Table 7.5 than those in private rented housing and those who own their own home. Confidence also declined with age across all listed activities, with internet users aged 75+ reporting the lowest levels of confidence online.

Table 7.5: Confidence in pursuing activities when using the internet by tenure
Column percentages, 2017 data

Adults who make personal use of the internet	Owner occupied	Social rented	Private rented	Other	All
Send and receive e-mails	94	86	96	*	93
Use a search engine	96	92	97	*	95
Shop online	89	83	93	*	88
Use public services online	87	79	92	*	86
Identify and delete spam	86	78	90	*	85
Be able to tell what websites to trust	83	73	88	*	82
Control privacy settings online	78	76	88	*	80
Base (minimum)	*1,530*	*390*	*300*	*30*	*2,250*

7.4 Why People Do Not Use the Internet

Among those adults who made no personal use of the internet, not liking or not needing to use a computer remained the most commonly reported reasons for non-use (Table 7.6).

Over the year, there was a decrease in the share of non-internet users stating that they did not know how to use a computer as a reason for not going online, from 21 per cent in 2016 to 17 per cent in 2017.

Table 7.6: Reasons why people do not use the internet (other than for work)
Column percentages, 2017 data

Adults who make no personal use of the internet	
I don't like using the internet or computers	42
I don't need to use the internet or computers	32
I don't know how to use a computer	17
There's nothing of interest to me on the internet	15
It would be too difficult to learn how to use the internet	12
I prefer to do things in person rather than use computers	6
I can't afford a computer	8
Other reason	4
I am concerned about privacy e.g. keeping credit card or personal details safe	5
I have a disability or illness that prevents me	4
Internet connection would be too expensive	3
I am worried about unsuitable or inappropriate material on the internet	2
Base (minimum)	*640*

7.5 Use of Public Services Websites

It is possible to access an increasing number of public services and information online. Online services can be quicker and more convenient for people to use, and can be provided at a lower cost than other methods. However, a person's use of websites to access public services is dependent both upon internet access and their tendency to access information or services online. The SHS explores people's use of digitally delivered public services by asking which, if any, things they have used the websites for.

In 2017, the most commonly visited public services websites were Local Authority websites (44 per cent of internet users), NHS websites (37 per cent) and the Scottish Government website (22 per cent). Seventeen per cent of internet users reported accessing the Visit Scotland website.

Thirty-six per cent of internet users had not used any public services websites over the past 12 months, broadly the same share as in 2015.

Table 7.7 presents the proportions of internet users who reported having used a Local Authority or Scottish Government website over the past 12 months, and the reason for doing so. **The most common reason for using Local Authority and Scottish Government websites was looking for information** (33 per cent and 17 per cent respectively).

Table 7.7: Use of public services on the internet in the past 12 months
Column percentages, 2017 data

Adults who make use of the internet	Local Authority Website	Scottish Government Website
Any purpose	44	22
Look for information	33	15
Download forms	6	2
Send completed forms	5	1
Ask a question	5	1
Make a complaint	4	0
Access services like report a fault, renew library books, planning application	6	1
Make a payment (council tax etc)	8	1
Apply for a job	2	1
Apply for funding (housing benefit, legal aid or student funding)	1	0
Report a crime	0	0
Participate in a consultation	1	1
Another reason	3	2
Base	*2,530*	*2,530*

As shown in Table 7.8, the **main perceived benefits of public services websites were the time savings** (86 per cent of adults who used a public service website). **Eighty-three per cent** of these adults were fairly or very **satisfied with the overall quality** of the public services they had used online, **and 80 per cent were** fairly or very **satisfied with the ease of finding information**. These findings were broadly the same as those in the 2015 survey.

Table 7.8: Perceptions of using public services websites
Column percentages, 2017 data

Adults who make use of the internet	% who agree	
	2015	2017
Accessing public services online helps me save time	89	86
Accessing public services online helps me save money	54	56
It is easier to access public services online than in person	78	80
I am satisfied with the ease of finding information on public services websites	80	80
Public services websites are easy to use	77	77
I am satisfied with the overall quality of the public services I have used online	86	83
Base (minimum)	*1,440*	*1,480*

Excludes Don't know/Refused responses

7.6 Online safety and security

Since 2015, the SHS has asked about the security measures adults take to protect themselves whilst online and how security concerns are impacting on internet use.

7.6.1 Security measures used online

Some online security measures remain more popular than others. The most common online security measures taken were avoiding opening emails or attachments from unknown people (69 per cent), avoiding giving personal information online (67 per cent), and using different passwords for different online accounts (62 per cent). The share of internet users who say they make sure their mobile phone has up-to-date anti-virus software increased from 34 per cent to 40 per cent over the year.

Use of the various online security measures varied by age, with **those aged 60 and above generally less likely to adopt each of the measures** than those in younger age groups as shown in Table 7.9. In particular, internet users aged 75+ were notably less likely to use online security measures, with **19 per cent** stating that they **did not take any of the suggested actions**. Moreover, whilst 69 per cent of internet users aged 16-24 said that they set complex passwords for online accounts, this is true for only 41 per cent of those aged 60-75 and 29 per cent of those aged 75 and above.

Table 7.9: Online security measures taken by age and deprivation

Column percentages, 2017 data

Adults who make use of the internet	16-24	25-34	35-44	45-59	60-74	75 plus	20% Most	20% Least Deprived	All
Avoid opening emails or attachments from unknown people	72	70	68	72	65	55	57	64	69
Avoid giving personal information online	70	68	67	69	65	54	57	77	67
Use different passwords for different accounts	73	61	59	63	57	45	52	69	62
Make sure my home wi-fi is protected with a username and password	59	64	66	63	52	43	50	62	60
Make sure my computer has up-to-date anti-virus software	58	55	62	64	60	47	45	41	60
Download and install software updates/patches when prompted	62	58	58	54	48	38	43	74	55
Set complex passwords	69	61	56	51	41	29	45	69	54
Back-up important information	55	46	46	43	35	25	32	41	44
Make sure my mobile phone has up-to-date anti-virus software	51	40	40	43	30	16	35	70	40
Change passwords for online accounts regularly	43	36	36	37	30	21	33	54	35
None of these	6	6	6	7	10	19	13	5	8
Base (minimum)	*180*	*380*	*390*	*680*	*550*	*160*	*390*	*470*	*2,330*

Adults living in the 20 per cent most deprived areas of Scotland were less likely than those in the 20% least deprived areas to adopt each of the security measures, and **more likely to say that they took none of the suggested actions**. For example, 57 per cent of those living in the 20 per cent most deprived areas stated that they avoided giving out personal information online, compared to 77 per cent of those in the rest of Scotland.

7.6.2 Impact of security concerns on internet use

Overall, 47 per cent of internet users stated that security concerns had not caused them to change their internet use, broadly the same as in 2016 (46 per cent).

Table 7.10 shows that, in general, younger people (particularly those aged 16-24) were less likely to have changed their use of the internet as a result of security concerns. For example, **only four per cent of** those aged **16-24** said that **security concerns made them less likely to bank online**, compared to **11 per cent of 45-59 year-olds**, **22 per cent of** those aged between **60-74**, and **21 per cent of those aged 75 and above**.

The impact of security concerns on internet activity was generally greater for internet users with a long-term physical or mental health condition. For example, 17 per cent of internet users with a long-term condition reported that they were less likely to bank online due to security concerns, compared to 10 per cent of those without such a condition.

Table 7.10: Impact of security concerns on internet use by age and physical or mental health condition

Column percentages, 2017 data

Adults	Age						Long-term physical or mental health		All
	16-24	25-34	35-44	45-59	60-74	75+	Yes	No	
Less likely to give personal information on	28	32	32	36	41	41	39	33	34
Only visit websites you know and trust	25	29	29	35	36	31	34	31	31
Only use your own computer/mobile device	9	13	18	23	26	24	20	18	19
Less likely to bank online	4	10	9	11	22	21	17	10	12
Less likely to buy goods online	5	7	7	9	12	18	10	8	9
Less likely to use the internet	0	2	2	3	4	5	3	2	2
No, none of the above	58	52	45	43	41	44	41	49	47
Base (minimum)	*180*	*380*	*390*	*680*	*550*	*160*	*640*	*1,680*	*2,330*