

Exploring the relationship between deep poverty and digital exclusion in the UK

A rapid evidence review

A WPI Economics Report for Trussell Trust and Good Things Foundation

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We are an economics, data insights, policy and impact consultancy, but one that is a little different to many others. We draw on backgrounds in government and the private and charitable sectors to produce work designed to make a difference. We do not do research for research's sake. We are committed to ensuring that everything we do has an impact - which is part of the reason why we recently became a verified B Corporation.

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Introduction

The reasons for digital exclusion can vary significantly, but poverty – and, in particular, deep poverty – is often an underlying factor.¹ In addition, an inability to afford, access or use digital devices and technologies can also drive people into deeper forms of poverty. While the most recent Social Metrics Commission (SMC) data suggests that deep poverty in 2022/23 remains slightly below levels seen prior to the Covid-19 pandemic, this does not significantly change the existing trend or lived experience of people in deep poverty; there has been a marked increase in deep poverty over the last 20 years.² Moreover, 2023/24 saw a record number of emergency food parcels distributed by food banks in the Trussell Trust network (over three million).³

A lack of access to technology for financial reasons stops people of all ages from building and developing the digital skills they need. Moving beyond the skills lens, another challenge is the 'offline premium' where people pay more for core services that they cannot access digitally, further entrenching the financial hardship and exclusion that they already face. The work of organisations like the Good Things Foundation is a critical part of mitigating this, with access to digital inclusion hubs and interventions such as the National Databank and the National Device Bank that create pathways for tackling this double whammy. However, it is important to stress that people *should* be able to afford and access these increasingly essential technologies in order to take part in important aspects of everyday life.

Participatory research with people with lived experience of poverty has also shed light on the impact of digital exclusion on people living in the deepest forms of poverty, with digital exclusion having both material and social impacts.⁴ Materially, it locks people out of accessing vital services and products that would boost their incomes and standard of living. Socially, people without digital access can lack a strong sense of belonging and the ability to take part in 'normal' parts of everyday life, such as speaking and socialising with friends.⁵

It is clear that having access to the digital world is now the passport to many essential services – from paying bills to claiming Universal Credit – as well as becoming more central to education, with many secondary schools now running homework programmes online and primary schools giving children additional online resources. Not having digital access because of affordability or a lack of skills to participate exacerbates existing exclusion and disadvantage.

¹ References to deep poverty in this report are based on the Social Metric Commission's definition of deep poverty as individual and families living 50% or more below the poverty line. See: <https://socialmetricscommission.org.uk/>

² Social Metrics Commission (2024) Measuring Poverty 2024. See: <https://socialmetricscommission.org.uk/wp-content/uploads/2024/11/SMC-2024-Report-Web-Hi-Res.pdf>

³ The Trussell Trust (2024) Year End Stats publication. See: <https://www.trusselltrust.org/news-and-blog/latest-stats/end-year-stats/>

⁴ APLE Collective (2023) Digital Divide Briefing Paper. See: <https://usercontent.one/wp/www.aplecollective.com/wp-content/uploads/2023/10/APLE-Digital-Divide-Briefing-Paper-September-2023-second-draft.pdf?media=1696255220>

⁵ Carnegie UK (2016) The role of digital exclusion in social exclusion. See: https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2016/09/LOW-2697-CUKT-Digital-Participation-Report-REVISE.pdf

Scope

However, further work is needed to understand more fully the relationship between deep poverty and digital exclusion. Through a mixture of desk-based research, an audit of available datasets and a series of interviews with experts, this report seeks to further explore the role of digital exclusion in driving deep poverty and preventing people from exiting the deepest forms of poverty. It does so by addressing the following five research questions:

1. What is the association between deep poverty and digital exclusion?
 - a. How, if at all, does digital exclusion drive people deeper into poverty? In which circumstances does this occur?
 - b. How, if at all, does digital exclusion trap people in deep poverty? In which circumstances does this occur?
2. What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?
3. What gaps in the evidence are there in the association between deep poverty and digital exclusion? How might these be effectively filled?
4. How does the population of people experiencing deep poverty and digital exclusion differ from (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?
5. What do existing trends in deep poverty and digital exclusion tell us about how this issue is likely to develop into the future?

The evidence on the relationship between digital exclusion and deep poverty presented in this report aims to:

- provide an evidence base to support the development of service provision by food banks and the development of local and national partnerships;
- support the policy development in the area of deep poverty / digital exclusion of both Trussell Trust and Good Things Foundation; and
- identify evidence gaps that could be filled by additional research.

Methodology

We used three approaches to gather evidence on the relationship between deep poverty and digital exclusion: 1) a desk-based review of existing literature; 2) qualitative research with key experts and providers of digital inclusion services; and 3) an audit of existing, accessible datasets.

Desk-based review

We reviewed sources drawn from a range of think tanks and research centres. These reports varied in their focus and methodology: some exhibited a policy focus, while others focussed on gleaning insights from available data.

In total, around 30 sources were reviewed, drawn from some of the following organisations:

- Good Things Foundation
- Trussell Trust
- The Minimum Digital Living Standard research project
- Lloyds Banking Group
- The Digital Poverty Alliance
- Institute of Development Studies
- The British Academy
- Ofcom
- Nesta
- The Fabian Society
- The Centre for Social Justice

All sources were reviewed with a focus on the questions – enumerated above – that explore how deep poverty and digital exclusion are interrelated. Some sources put more emphasis on one causal direction of this relationship – either how digital exclusion drives poverty; or how poverty drives digital exclusion. Many sources explored both causative directions. Using these sources, we were able to get a holistic summary of the existing prevailing policy thought in this area.

We also considered the data sources used across the reports and papers reviewed. This allowed us to build up a picture of the available data – survey and non-survey – relating to digital exclusion and the relationship between digital exclusion and forms of poverty. This informed this project's data audit (see below), allowing us to identify where the existing evidence base is incomplete, and where further research or data collection may be necessary.

Interviews and focus group

Alongside the literature review, we conducted several interviews to help enhance our understanding and to point us to other sources or data we could interrogate.

We conducted four in-depth interviews with academic experts – two with Professor Simeon Yates (Liverpool), one with Katherine Hill and Dr Chloe Blackwell (MDLS team, Loughborough) and another with Dr Becky Faith (Institute of Development Studies). With the support of the Good Things Foundation, we also held an online focus group session on 22nd May with

community hub providers to better understand their perspectives.⁶ Both sets of conversations centred on:

- understanding the relationship between digital exclusion and deep poverty.
- determining which operates as the key driver / how they reinforce each other.
- the impacts of this relationship and how it might develop into the future.
- assessing which groups are most at risk of being digital excluded, and how this correlates to groups most at risk of being in deep poverty.
- exploring the biggest knowledge gaps on the relationship between digital exclusion and deep poverty, and discussing what further evidence might be needed.
- looking towards solutions.

The second conversation held with Professor Yates towards the end of the process was to sense check findings to date and to ensure that our understanding of the data and its limitations aligned with his.

Data Audit

We conducted a thorough audit of 15 data sources, including large-scale, national household surveys (such as Understanding Society and Family Resources Survey), as well as smaller, more targeted surveys (such as Lloyds Banking Group Essential Digital Skills Data). We have scoped and analysed each data source to investigate whether it can be used to understand the link between digital exclusion and deep poverty. We report on:

- the origin of the data source; its availability; and some core characteristics of the data source, such as the number of observations, years available, and the way data was collected.
- the variables which might be of interest to explore the relationship between digital exclusion and deep poverty.

We completed a thorough assessment of how effective each data source might be in answering the research questions. For each data source, we present the assessment in a separate table. In addition, based on the completed audit, we identify and report the overarching gaps in the data.

⁶ Hayley Nelson, [Learn for Life](#) (Sheffield); Tom Hill, [Providence Row](#) (London); Nigel Galleary, [Simon Community Scotland](#) (Edinburgh/Glasgow); and Rose Charlton-Peel, [Cambridge Online](#) (Cambridge).

Defining digital exclusion

There is no universally accepted definition of digital exclusion. However, as per the House of Lords Communications and Digital Committee's report on digital exclusion, there are five definitions or measures that are most widely used:⁷

1. **Affordability:** people who struggle to afford access to internet packages or suitable devices, and so either go without it or experience other financial strains to retain access. Ofcom's affordability tracker suggests that in April 2024 around a third (33%) of people were experiencing digital exclusion based on affordability and affordability challenges have been rising significantly since 2021.⁸
2. **Access (device and data):** people who do not have an adequate internet connection at home or elsewhere, or ready access to a device that connects to the internet (for a variety of reasons, not just affordability). 6% of the UK population have no internet access – and this level has remained stable since 2021.⁹
3. **Usage:** can be understood in 'absolute' and 'relative' terms. 'Absolute' is understood as not using the internet in the past three months, whereas 'relative' means a limited number of online activities or relying on others to use the internet – for example, more than half (52%) of people who do not go online at home get someone else to use the internet for them.¹⁰
4. **Ability and Skills:** people who lack the basic digital skills and / or confidence to navigate the online environment safely and knowledgeably. Lloyds Bank's 2024 Consumer Digital Index and Essential Skills Report estimates that around 15% of the UK's population lack Foundation-level Essential Digital Skills, 7% lack Essential Digital Skills For Life and 18% lack Essential Digital Skills for Work.¹¹
5. **Motivation:** The desire to get online shapes the level of digital exclusion a person faces. A motivational measure of digital exclusion primarily focuses upon whether non-users recognise the benefits of being online and see a need to use the internet. However, a

⁷ House of Lords Communications and Digital Committee (2023) Digital exclusion and the cost of living. See: <https://committees.parliament.uk/publications/40662/documents/198365/default/>

⁸ Ofcom (2024) Communications Affordability Tracker. See: <https://www.ofcom.org.uk/phones-and-broadband/saving-money/affordability-tracker>

⁹ Ofcom (2024) Adults' Media Use and Attitudes. See: <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/media-literacy-research/adults/adults-media-use-and-attitudes-2024/adults-media-use-and-attitudes-report-2024.pdf>

¹⁰ Ofcom (2024) Adults' Media Use and Attitudes. See: <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/media-literacy-research/adults/adults-media-use-and-attitudes-2024/adults-media-use-and-attitudes-report-2024.pdf>

¹¹ Lloyds Bank (2024) 2024 UK Consumer Digital Index. See: https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/lb-consumer-digital-index-2024-report.pdf

lack of motivation can be driven by actual or perceived difficulty, including a lack of support, access, digital literacy or affordability.¹²

The Minimum Digital Living Standards (MDLS) project has sought to create a definition of digital inclusion that applies to a range of household types and combines elements of the five definitions included above. During the deliberative phase of the MDLS project that involved focus groups with a broad range of household types, the following definition was agreed:

A minimum digital standard of living includes, but is more than, having accessible internet, adequate equipment, and the skills, knowledge and support people need. It is about being able to communicate, connect, and engage with opportunities safely and with confidence.¹³

The work of the MDLS has initially focused upon households with dependent-age children, providing an overview of the digital goods, skills and services that households with children needed for a certain quality of life and to meet the definition.¹⁴ These are grouped into three categories – 1) Digital goods and services for a MDLS; 2) Functional and practical skills for everyday tasks and activities; and 3) Critical skills for understanding and managing digital risks. The contents of these categories are set out in the following infographic.

Digital goods and services		Functional skills		Critical skills	
Home Broadband	• With sufficient reliability and speed to support all family members to access the internet at the same time	Using digital devices, programmes and the internet	1 Using device functions 2 Using apps and programmes 3 Downloading apps and programmes 4 Saving and recovering documents 5 Connecting devices to the internet/hotspots 6 Changing settings	Managing security	1 Using secure passwords 2 Knowing about and avoiding in-app purchases (e.g. 'triple tap' or 'SOS') 3 Using phone safety features out and about 4 Monitoring banking activity online 5 Removing bank card details to avoid accidental purchases
Mobile phone and data	• An entry-level smart phone per parent and secondary school age child + 5GB data per month each • An extra 3GB of data per month if they have a child of pre-school or primary school age.	Engagement online	1 Using Zoom/Teams/Google classrooms 2 Performing browser searches 3 Using school apps (homework, school-home communication) 4 Creating an email account and sending emails 5 Online bookings and forms (e.g. appointments) 6 Cashless/online payments	Interacting with others	1 Evaluating what details to share online 2 Identifying risks (e.g. scams, unsafe links, catfishers, groomers) 3 Evaluating friend requests 4 Managing social pressures and time online
Large screen device	• A laptop, tablet or PC per household – parent(s) and first child share one device. • An additional device for every further school age child.	Managing and monitoring digital devices and data usage	1 Creating and sorting files and folders 2 Turning off devices properly 3 Deleting old files to manage device storage 4 Monitoring and managing phone data usage	Sharing and receiving information	1 Evaluating quality of information (e.g. identifying mis/disinformation or unrealistic images) 2 Knowing how to avoid and report inappropriate/offensive content 3 Understanding digital footprint
Headphones	• A set of headphones for school age children	Skills The skills outlined below are needed by parents, and colours indicate the age/stage by which children need to begin developing these skills, according to parents and young people. 1 Pre-school 2 Early primary school 3 Late primary school 4 Early secondary school 5 Late secondary school			
Television and TV subscription	• A smart TV, entry-level 32" screen • An entry-level TV subscription service (e.g. Netflix, Disney+) in addition to a TV licence				
Access to online gaming	• An adequate large screen device and access (via an entry-level subscription or other means) for school age children to be able to participate in online gaming with their peers				

Within our review of the existing evidence, all of these definitions or measures have been accounted for.

¹² British Academy (2022) Understanding digital poverty and inequality in the UK. See: https://www.thebritishacademy.ac.uk/documents/4427/Understanding_Digital_Poverty_and_Inequality_in_the_UK_full_report_2.pdf

¹³ Minimum Digital Living Standards (2023) A UK Minimum Digital Living Standard for Households with Children: Interim report. See: https://mdls.org.uk/wp-content/uploads/2023/03/MDLS-UK-report_Final-2.pdf

¹⁴ Minimum Digital Living Standards (2024) A Minimum Digital Living Standard for Households with Children: Overall Findings Report. See: <https://mdls.org.uk/wp-content/uploads/2024/03/MDLS-final-report-v1.11-1.pdf>

Findings from existing literature

In this section, we provide an overview of existing literature on the relationship between deep poverty and digital exclusion. We have grouped the findings around four of the five key research questions.¹⁵

1. How does the population of people experiencing deep poverty and digital exclusion differ from (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?

Of those people living in poverty, a quarter (26%) are living in deep poverty – equivalent to 4.1 million people (6% of the population) in 2022/23.¹⁶ The number of people considered to be digitally excluded depends on the definition used. Lloyds Bank's 2024 Consumer Digital Index shows that around 12.1 million people (23% of the population) have very low digital capabilities, of whom 41% earn less than £20,000 a year. In addition, 1.6 million people (3% of the population) are offline.¹⁷ This represents an improvement on the 2023 situation, with the 2023 Consumer Digital Index reporting the first yearly increase in the proportion of people who were offline since the Consumer Digital Index began in 2016.¹⁸

The increased issue of affordability has also been captured in Ofcom's Communications Affordability Tracker. Between 2020 and 2022, the proportion of UK households with a fixed broadband finding it difficult to afford their service was no more than 6%. However, since 2023 there has been a rise in the proportion of UK households reporting difficulties affording a fixed broadband service to between 8-10%.¹⁹ It is only since July 2024 that affordability issues with broadband are returning to levels seen between 2020 and 2022.

¹⁵ Findings related to the research question 'what role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?' cut across a number of the other research questions and, as a result, are discussed throughout rather than as a separate section.

¹⁶ Social Metrics Commission (2024) Measuring Poverty 2024. See: <https://socialmetricscommission.org.uk/wp-content/uploads/2024/11/SMC-2024-Report-Web-Hi-Res.pdf>

¹⁷ Lloyds Bank (2024) 2024 UK Consumer Digital Index. See: https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/lb-consumer-digital-index-2024-report.pdf

¹⁸ Lloyds Bank (2023) 2023 UK Consumer Digital Index. See: https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/231122-lloyds-consumer-digital-index-2023-report.pdf

¹⁹ Ofcom (2024) Communications Affordability Tracker. See: <https://www.ofcom.org.uk/phones-and-broadband/saving-money/affordability-tracker>

Digital exclusion is clearly related to income poverty and to the risk factors of income poverty. Analysis of Ofcom data by the Fabian Society found that adults with very low household incomes (less than £11,500 per year) were more than twice as likely as adults in general to not have access to the internet at home (15% vs 6%).²⁰ Similarly, the Trussell Trust's Hunger in the UK survey found that having no internet access was more prevalent amongst food bank users – at 16% – than for the general population.²¹ Ofcom's 2020 Use of Communication Services survey suggests that digital exclusion for people aged 70+ (40%), people living alone (28%) and disabled people (23%) was higher than for people who are 'most financially vulnerable' (19%).²²

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However, there is little existing literature that seeks to create robust estimates of how many people living in poverty are digitally excluded, or of how many people digitally excluded are living in poverty. There is, therefore, little existing evidence on how people experiencing deep poverty and digital exclusion differ from others who are digitally excluded. This seems to stem from an assumption that people on the very lowest incomes are most likely to be digitally excluded. Where income and digital exclusion are considered together, it is largely in terms of the relationship between income and the likelihood of experiencing digital exclusion.²⁴ The impact of income on the experience of digital exclusion, when it does arise, is infrequently explored.

Likewise, limited research exists that disaggregates people living in deep poverty who are digitally excluded from those who live in deep poverty and are not. This is largely because the existing literature on digital exclusion does not typically consider people in income poverty who are not digitally excluded alongside those who are digitally excluded. Where comparisons are made, they are more generally to the population as a whole.²⁵ In deep poverty literature more generally, digital exclusion is rarely a significant focus of the analysis.²⁶

²⁰ Fabian Society (2022) Bridging the divide: tackling digital inequality in a post-pandemic world. See: <https://fabians.org.uk/wp-content/uploads/2022/04/Bridging-the-Divide-web-file-Fabian-Society.pdf>

²¹ Trussell Trust (2023) Hunger in the UK 2023. See: <https://www.trusselltrust.org/wp-content/uploads/sites/2/2023/08/2023-The-Trussell-Trust-Hunger-in-the-UK-report-web-updated-10Aug23.pdf>

²² Ofcom (2021) Use of communication services, consumer omnibus 2020. See: <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/accessibility-research/use-of-communication-services-consumer-omnibus/use-of-communication-services-consumer-omnibus.pdf>

²³ Financial Vulnerability is a measure devised by Ofcom to better understand the impact of financial vulnerability on the ownership and use of communication services. The measure combines household income, working status and the size of the household to create three distinct groups based on expected financial vulnerability. The most financially vulnerable group are those who have a low household income relative to household size.

²⁴ Institute of Development Studies (2022) Digital Poverty in the UK. See: <https://www.ids.ac.uk/publications/digital-poverty-in-the-uk-accessible-version/>

²⁵ Digital Poverty Alliance (2022) UK Digital Poverty Evidence Review 2022. See: <https://digitalpovertyalliance.org/uk-digital-poverty-evidence-review-2022/introduction-myths-and-shifts/>

²⁶ Joseph Rowntree Foundation (2023) Destitution in the UK 2023. See: <https://www.jrf.org.uk/deep-poverty-and-destitution/destitution-in-the-uk-2023>

2. What is the association between deep poverty and digital exclusion?

How, if at all, does digital exclusion drive people deeper into poverty? In which circumstances does this occur?

Income poverty has a strong association with a lack of connectivity and digital skills. However, the causal direction of the association is largely unevidenced: it is likely both that income poverty increases digital exclusion, and that digital exclusion increases people's chances of living in poverty and reduces their likelihood of moving out of it. There are many ways in which digital exclusion may lead people to struggle financially, and as a result increase their chances of falling into poverty.

The House of Lords Communication and Digital Committee's inquiry into digital exclusion and the cost of living crisis heard that more than 90% of jobs are advertised only on the internet.²⁷ As a result, people who are digitally excluded are more likely to struggle to access employment opportunities, due to job search difficulties. This is not only from not knowing what jobs are available, but also many job applications now require online document submission or interviewing. A lack of essential digital skills may affect employability, reducing earnings when in employment and increasing a person's likelihood of being unemployed.²⁸

Being disconnected also cuts off access to lower online prices and discounts, forcing people to pay higher prices for goods than would otherwise be the case, as well as reducing choice. Sometimes, discounts are only available through smartphone apps: Lloyds Bank's 2024 Consumer Digital Index suggests that people with higher digital skills and access are able to save over £1,100 a year – a savings figure that has been rising year on year.²⁹ This has been noted as an example of how digital exclusion acts as a poverty premium for people on the lowest incomes.³⁰

It is frequently noted that many essential services – especially those that are most beneficial to or needed by people on low incomes – are now more easily (or only) accessible online. These include GPs, social security and job searches, as well as applications for housing and jobs.³¹ In

²⁷ House of Lords Communications and Digital Committee (2023) Digital exclusion and the cost of living. See: <https://committees.parliament.uk/publications/40662/documents/198365/default/>

²⁸ Deloitte (2023) Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK. See: https://digitalpovertyalliance.org/wp-content/uploads/2023/09/Deloitte-Digital-Poverty_FinalReport_29092023.pdf

²⁹ Lloyds Bank (2024) 2024 UK Consumer Digital Index. See: https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/lb-consumer-digital-index-2024-report.pdf

³⁰ Centre for Social Justice (2023) Left Out: How to tackle digital exclusion and reduce the poverty premium. See: <https://www.centreforsocialjustice.org.uk/wp-content/uploads/2023/08/CSJ-Left-Out.pdf>

³¹ Institute of Development Studies (2022) Digital Poverty in the UK. See: <https://www.ids.ac.uk/publications/digital-poverty-in-the-uk-accessible-version/>

many cases, this prevents people who are digitally excluded from accessing the same opportunities as people who are online. Even when offline equivalents exist, people who are digitally excluded experience a time cost of not using online services, which are often quicker and more convenient.

The inability to access essential services in-person during the Covid-19 pandemic presented significant issues for people who experience digital exclusion, especially for people in the most precarious and financially difficult situations. Citizens Advice in Bath & North East Somerset, for example, were often only able to support individuals after the intervention of another person who overcame the issue of digital exclusion. This included in severe cases, such as people being made redundant and falling into rent arrears who were unable to afford digital devices, or victims of abusive relationships whose access to digital devices was controlled or monitored.³²

Universal Credit (UC) is now almost exclusively accessed online. While the design of UC as a digital by default system was intended to simplify the benefit system for claimants, research has suggested that UC has introduced new and significant barriers for people who need to interact with the welfare system but are digitally excluded. The ambitions of a simplified and more accessible welfare system through UC has not been realised for all – with the move to online portals only compounding existing problems and failing to materially change benefit claimants' circumstances since UC was introduced.³³ As the Department for Work and Pensions' (DWP) own research has found, there remains a significant minority (16%) of all DWP users who said they were currently offline – 9% who had never accessed the internet and 7% who no longer accessed it.³⁴

Some researchers have compared the experience of UC claimants with claimants who still operate within the legacy welfare system. Qualitative research suggests that, when compared to legacy benefit claimants, UC claimants without digital skills or access experience passivity and interact distantly and transactionally with the welfare system. In contrast, legacy benefit claimants who lacked digital access and skills feel better able to comprehend and act upon their claims – and, in some cases, feel better supported to work through complexities. This is because the legacy benefit system was based more on physical correspondence and interaction.³⁵

³² Citizens Advice Bath & North East Somerset (2021) A spotlight on digital poverty. See:

<https://www.citizensadvicebanes.org.uk/a-spotlight-on-digital-poverty/>

³³ APLE Collective (2023) Digital Divide Briefing Paper. See:

<https://usercontent.one/wp/www.aplecollective.com/wp-content/uploads/2023/10/APLE-Digital-Divide-Briefing-Paper-September-2023-second-draft.pdf?media=1696255220>

³⁴ DWP & Government Social Research (2024) Digital Skills, Channel Preferences and Access Needs of DWP Customers. See: <https://assets.publishing.service.gov.uk/media/65eee72a3649a23451ed6335/digital-skills-dwp-customers-10-benefits.pdf>

³⁵ Alistair Sheldrick (2023): Digital exclusion and distance in the British welfare system. See:

<https://www.sciencedirect.com/science/article/abs/pii/S0016718523002099>

Garry's experience from ethnographic observation of DWP JobCentre Plus

"Garry, the claimant, said that he'd come in as he didn't even have an email address, let alone the ability to do the UC application without help. It took James, the caseworker, a while to set up the email address and UC account and Garry became a bit restless not knowing exactly what James was doing on the computer. James clocked this, explained that he had just set up his email and turned the screen round so Garry could see. I've noticed this a few times, especially with older service users."

Source: Alistair Sheldrick (2023) Digital exclusion and distance in the British welfare system.

The rigidity of the digital by default approach to UC leads to some claimants saying they lack the capabilities and / or the confidence to use the system. This can have serious financial ramifications, as people may not claim all that they are entitled to.³⁶ In extreme cases, this may deter people from claiming altogether or complete critical elements of their claim without being offered alternative methods. This, as CPAG has extensively documented, could be considered a breach of the rule of law principle of procedural fairness.³⁷

Experience from CPAG's Early Warning System

"My client is a lone parent who works part-time. Her UC award was brought to an end for not accepting a revised claimant commitment. She is computer illiterate and was previously supported by a family member to manage her UC journal until her family member could no longer help her. She called UC to explain she had a problem with her Wi-Fi, needed support to set up a new email address and could not access her journal. The claimant called the DWP twice and neither of the DWP officials she spoke to provided her with the option of agreeing her revised claimant commitment over the phone when she told them she could not access her UC account."

Source: Child Poverty Action Group (2023) You reap what you code: Universal credit, digitalisation and the rule of law

While some job coaches may support UC claimants to access devices and data to alleviate digital exclusion challenges, this usage can often be restricted to a 'narrow' focus on job-search activities. As one UC claimant told an academic research project: *"My coach did advise me,*

³⁶ Centre for Social Justice (2023) Left Out: How to tackle digital exclusion and reduce the poverty premium. See: <https://www.centreforsocialjustice.org.uk/wp-content/uploads/2023/08/CSJ-Left-Out.pdf>

³⁷ Child Poverty Action Group (2023) You reap what you code: Universal credit, digitalisation and the rule of law. See: <https://cpag.org.uk/sites/default/files/2023-08/You%20reap%20what%20you%20code.pdf>

*when he first got me the laptop, he did advise me to just use it for job searches. You know, don't use it for looking at YouTube or anything like that. It'll use more data, he said".*³⁸ This restrictive digital usage is itself a form of digital exclusion, and reinforces feelings of isolation and stigma that benefit claimants often report, as well as holding them back from a fuller, more exploratory, use of the internet that is key to boosting digital inclusion.

The challenges of claiming UC online are compounded by the fact that people in receipt of UC are more likely to struggle to maintain digital access, largely due to affordability challenges. A 2023 survey by Citizens Advice found that UC claimants were six times more likely to have stopped spending on broadband altogether in the last 12 months than people not on Universal Credit. UC claimants were also four times more likely to be behind on their broadband bills.³⁹

Increasingly, healthcare services are accessed online or through mobile apps. The NHS app is a convenient way for many to access healthcare services, and many individual GP surgeries now provide online portals for booking appointments. People who cannot access these services are required to phone surgeries or attend in person to ask about appointments. People who cannot access services online may not be able to access appointments as easily or as quickly as people who can. There is some concern that this issue may get worse as reliance on digital healthcare services increases. This inequality in healthcare access may in turn worsen health outcomes for the digitally excluded, as well as increasing people's likelihood of falling into poverty (which has its own negative health impacts).⁴⁰ In addition, there are often no agreed principles within public services that the same level of support and response will be made available whether someone is interacting digitally or through offline equivalents. Within the NHS, for example, qualitative research by the King's Fund with patients in England and Scotland found more needed to be done by the NHS to address digital exclusion through supporting patient access to devices and data and learn basic digital skills; designing digital services in a way that offers choice and flexibility depending upon levels of digital competency; and tackling inconsistencies across the NHS's digital services and systems.⁴¹

It can also be difficult for people who are digitally excluded to access housing. Many estate agents will advertise private rental properties online and will require applications to be made through online portals. The picture is little better in the social rented sector: the process of applying for a council or housing association property is also primarily done online and can be difficult on some devices. A participant in the New Horizons programme – a coaching programme that supports people into employment and to manage their money by addressing

³⁸ Hannah Holmes and Gemma Burgess (2022). Digital exclusion and poverty in the UK: How structural inequality shapes experiences of getting online. See:

<https://www.sciencedirect.com/science/article/pii/S2666378322000162#s0040>

³⁹ Citizens Advice (2023) One million lose broadband access as cost-of-living crisis bites. See:

<https://www.citizensadvice.org.uk/about-us/media-centre/press-releases/one-million-lose-broadband-access-as-cost-of-living-crisis-bites/>

⁴⁰ Cambridge Centre for Housing & Planning Research (2022) Digital Poverty in the UK: a review of literature. See: https://www.cchpr.landecon.cam.ac.uk/files/dp_lit_review.pdf

⁴¹ The King's Fund (2023) Connection lost: People's experiences of using digital technology in health and care. See: <https://features.kingsfund.org.uk/connection-lost/>

digital exclusion – explains that: *“the company that gave us the house, they said that the application, you cannot open it on a phone.”* The individual was only able to submit the housing application by borrowing a laptop from a relative.⁴² By preventing people from accessing adequate, decent housing, digital exclusion may cause people to fall deeper into poverty.

How, if at all, does digital exclusion trap people in deep poverty? In which circumstances does this occur?

Of the 4.1 million people living in deep poverty, 57% are also living in persistent poverty – defined by the SMC as a person or household currently living in poverty and having also lived in poverty for two of the last three years. In total, this means 2.2 million people (3% of the population) are living in both deep and persistent poverty.⁴³ People who are most likely to experience persistent and deep poverty are parents – both lone parents and couples with children – and people who are either unemployed or work part-time. As set out below, there is evidence that digital exclusion is a key contributing factor to the persistent poverty experienced by these groups.

Research by Deloitte estimated that 47% of people who are unemployed are in ‘digital poverty’ – defined in this case as “the inability to interact with the online world fully, when, where, and how an individual needs”.⁴⁴ A lack of digital skills, or access to online services, can significantly reduce people’s ability to search for work, with many jobs primarily advertised over online platforms. Many job postings will require that people submit documents or complete interviews online, which can prevent or deter people in ‘digital poverty’ from completing or progressing applications.⁴⁵

Many people without digital skills, therefore, will face diminished job prospects *because* they do not have adequate digital skills. Unemployed (and retired) individuals are 5–7 times more likely than employed individuals to lack work-essential digital skills.⁴⁶ This can reduce their employability: many jobs will now require some basic digital skills. This can trap people in unemployment and deeper forms of poverty. People who are digitally excluded may also have more difficulty in accessing adult learning or training materials. This may, in turn, make it harder for people to find employment. There is a clear economic case for addressing digital exclusion. Research by the Centre for Economics and Business Research (CEBR) for the Good Things Foundation has suggested that investing in basic digital skills for jobseekers who need them

⁴² Hannah Holmes and Gemma Burgess (2022) Digital exclusion and poverty in the UK: How structural inequality shapes experiences of getting online. See:

<https://www.sciencedirect.com/science/article/pii/S2666378322000162#s0040>

⁴³ Social Metrics Commission (2024) Measuring Poverty 2024. See: <https://socialmetricscommission.org.uk/wp-content/uploads/2024/11/SMC-2024-Report-Web-Hi-Res.pdf>

⁴⁴ Deloitte (2023) Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK. See: https://digitalpovertyalliance.org/wp-content/uploads/2023/09/Deloitte-Digital-Poverty_FinalReport_29092023.pdf

⁴⁵ Nesta (2020) What is data poverty? See: https://media.nesta.org.uk/documents/What_is_Data_Poverty.pdf

⁴⁶ Deloitte (2023) Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK. See: https://digitalpovertyalliance.org/wp-content/uploads/2023/09/Deloitte-Digital-Poverty_FinalReport_29092023.pdf

could directly lead to increased earnings equal to £179 million by 2032.⁴⁷ In total, CEBR's research suggests that an investment of £1.4 billion in basic digital skills could deliver up to £13.7 billion in economic benefits – a return of £9.48 for every £1 invested.

Digital exclusion may also contribute to intergenerational poverty. The MDLS research on households with dependent-age children suggests that just under half (45%) do not meet the MDLS – equivalent to 3.7 million households with children in the UK. As many digitally-excluded children come from disadvantaged backgrounds, this is likely to embed existing inequalities. In fact, the MDLS research found that the main predictors of being below MDLS are living in poverty, being a lone-parent household, a household with more than two children, a household led by someone with disability, and / or with non-white ethnicity.⁴⁸

Tracey's experience

"When children reach school age it is increasingly becoming essential for them to have access to the ever-changing world of technology! This used to be the case when they reached high school, but now we find that it is expected of children from nursery age up to have access to a laptop or tablet, data and printers to be able to keep up with their work and homework! As you know, access to these things has never been cheap and seems to get more and more expensive every day ... Without access to laptops, tablets, printers and the data and knowledge to use them, children can quickly fall behind with their work and the gap between what they and their peers can achieve grows ever wider. Enter the cost-of-living crisis and the cracks that were already there become chasms that are swallowing families up! What seemed unattainable before, now disappears into the sunset along with their dreams and potential! Our safety net is threadbare, out of date and in dire need of replacing. We must recognise that access to the internet is now an essential, not a luxury. If our society does not start to reflect that then the ever-widening chasms will become canyons, creating further disparity."

Source: APLE Collective (2023) Digital Divide Briefing Paper

During the Covid-19 pandemic, many children were unable to participate in schooling on equal terms due to a lack of either home internet connection or essential digital skills. Sutton Trust research showed that 15% of teachers in schools with the most deprived intakes claimed that over a third of their students would not have access to a device for online learning, compared to

⁴⁷ Good Things Foundation, Capita & Centre for Economic and Business Research (2022) The economic impact of digital inclusion in the UK. See: <https://www.goodthingsfoundation.org/policy-and-research/research-and-evidence/research-2024/digital-inclusion-uk-economic-impact.html>

⁴⁸ Minimum Digital Living Standard (2024) A Minimum Digital Living Standard for Households with Children: Overall Findings Report. See: <https://mdls.org.uk/wp-content/uploads/2024/03/MDLS-final-report-v1.11-1.pdf>

just 2% of people with the most affluent intakes.⁴⁹ These inequalities in access to education will not have fully receded since the Covid-19 pandemic: while schools are now open, many educational resources are primarily available online. In particular, children often struggle to complete homework without access to online resources. This will lead these children to experience worse educational outcomes, which will increase their chances of living in poverty in adulthood.

However, although the importance of digital access is clearly seen by many low-income households, spending money on broadband or data can lead some to cut back on other essentials. Price inflation for broadband and phone contracts has outstripped that for other goods by design – tariffs are often indexed to CPI or RPI, plus some real-terms increases (typically 3.9%). Institute of Development Studies (IDS) research found one in 10 (9%) low-income households reduced spending on food or clothes in order to afford phone or home internet. IDS describes having to make these choices as trapping people on the lowest incomes in a ‘vicious cycle of poverty’.⁵⁰ More generally, households on low incomes who pay for broadband and phone contracts spend more of their income on these goods than higher-income households – about £478 a year – meaning a form of ‘poverty premium’ exists on these goods and services.⁵¹

Social tariffs for broadband services are designed, in part, to help address affordability concerns and boost digital inclusions. However, research by Ofcom has found that only 5.1% of eligible households (people who are claiming benefits) are on a social tariff. A major factor in the poor uptake of social tariffs is low levels of awareness amongst eligible households, with Ofcom finding more than half (53%) of UK adults in receipt of benefits had not heard of the cheaper broadband services they could access.⁵² On average, eligible households are missing out on saving £200 on broadband costs each year in unclaimed social tariffs – in total, that is £824 million of support going unclaimed.⁵³

New research has also shown the strong correlation between a lack of access to the internet and a lack of participation in offline economic, social and cultural activities and how this prolongs the experience and severity of poverty.⁵⁴ Carnegie’s research on the relationship between digital and social participation found that 41% of people without internet access took

⁴⁹ Sutton Trust (2021) Different lockdown, same problems? See: <https://www.suttontrust.com/news-opinion/all-news-opinion/different-lockdown-same-problems/>

⁵⁰ Institute of Development Studies (2022) Digital Poverty in the UK. See: <https://www.ids.ac.uk/publications/digital-poverty-in-the-uk-accessible-version/>

⁵¹ Centre for Social Justice (2023) Left Out: How to tackle digital exclusion and reduce the poverty premium. See: <https://www.centreforsocialjustice.org.uk/wp-content/uploads/2023/08/CSJ-Left-Out.pdf>

⁵² Ofcom (2023) Affordability of communications services. See: <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/multi-sector/affordability-of-communications-services/2023/april/2023-april-affordability-of-communications-services.pdf?v=329560>

⁵³ Ofcom (2023) Half of low-income households in the dark over broadband social tariffs. See: <https://www.ofcom.org.uk/phones-and-broadband/saving-money/half-of-low-income-households-in-dark-over-broadband-social-tariffs/>

⁵⁴ Massimo Ragnedda, Maria Laura Ruiu and Felice Addeo (2022) The self-reinforcing effect of digital and social exclusion: The inequality loop. See: <https://www.sciencedirect.com/science/article/pii/S0736585322000855>

part in no – or just one – active living activity (covering sports participation, cultural participation and voluntary activities) compared to only 11% of people who did have internet access.⁵⁵ Carnegie reported that the relationship between digital access and active living activities resulted in the biggest divergence amongst the set of variables they analysed. As such, social isolation and loneliness are compounded by digital exclusion. Trussell Trust's Hunger in the UK survey found that 44% of people without any access to the internet and who had been referred to food banks reported being severely socially isolated.⁵⁶

Rob's experience

"Not having the internet affects me enormously; from not being able to apply for jobs to my social life and my mental health, because I feel very isolated. I haven't had access to the internet in the past mainly because I am unable to afford the cost of broadband. It's more difficult to enjoy any aspect of life since the cost-of-living crisis and certainly the internet is something that's out of my reach."

Source: Citizens Advice (2023) One million lose broadband access as cost-of-living crisis bites

⁵⁵ Carnegie UK (2016) The role of digital exclusion in social exclusion. See: https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2016/09/LOW-2697-CUKT-Digital-Participation-Report-REVISE.pdf

⁵⁶ Trussell Trust (2023) Hunger in the UK 2023. See: <https://www.trusselltrust.org/wp-content/uploads/sites/2/2023/08/2023-The-Trussell-Trust-Hunger-in-the-UK-report-web-updated-10Aug23.pdf>

3. What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?

According to Ofcom's Affordability Tracker, there has been a significant worsening of digital affordability issues since early 2021. From a low of 15% in April 2021, the proportion of people reporting affordability issues reached a high of a 33% – a third of the population – in April 2024 and has been consistently above 27% since April 2022. However, recent quarterly data suggests that affordability pressure may be subsiding. In July 2024, 24% of the population reported difficulty affording communications services – a significant fall on April 2024. Despite this, digital affordability issues remain well above levels seen before early 2021.⁵⁷

The UK Digital Poverty Evidence Review 2022 argued that digital services will increasingly cut across all areas of life. There are concerns that people with poor digital literacy, and people who are offline for long periods of time, will increasingly be overlooked.⁵⁸ The Digital Futures at Work Research Centre argues, for example, that digital inclusion will become an increasingly important element of addressing inequality. It adds that more research is needed to ensure that the most marginalised communities are not left behind by digital service delivery.⁵⁹

One area of particular concern is healthcare, with digital healthcare services taking on an increasingly significant role post-pandemic. The Good Things Foundation found that a third of people with basic digital skills made fewer visits to a doctor after being told of available online health resources, such as NHS Choices, suggesting there is some demand for these services that is unmet because of a lack of digital skills.⁶⁰ Qualitative research by National Voices has found that while people can understand the reason for – and potential benefits of – remote care, poorly-delivered digital care often led to negative experiences. The research found this was especially the case for people from marginalised groups or with complex health needs who often struggle to access the health services they need if they are provided exclusively in a digital format.⁶¹

As these digital health services become a more important part of how we access healthcare, the impact of digital exclusion on healthcare access, health outcomes and inequalities will only widen unless the digitally-excluded receive in-person support to access digital services and /

⁵⁷ Ofcom (2024) Communications Affordability Tracker. See: <https://www.ofcom.org.uk/phones-and-broadband/saving-money/affordability-tracker>

⁵⁸ Digital Poverty Alliance (2022) UK Digital Poverty Evidence Review 2022. See: <https://digitalpovertyalliance.org/uk-digital-poverty-evidence-review-2022/introduction-myths-and-shifts/>

⁵⁹ Digital Futures at Work Research Centre (2022) Measuring digital exclusion. See: <https://digit-research.org/wp-content/uploads/2022/04/Measuring-digital-exclusion.pdf>

⁶⁰ Housing Associations' Charitable Trust (2022) Digital Poverty in Social Housing. See: <https://hact.org.uk/wp-content/uploads/2022/06/Digital-poverty-in-social-housing-2022-Whitepaper-LR.pdf>

⁶¹ National Voices (2021) Unlocking the Digital Front Door: Keys to inclusive healthcare. See: https://s42139.pcdn.co/wp-content/uploads/unlocking_the_digital_front_door_-_keys_to_inclusive_healthcare_report.pdf

or alternative access routes. Healthcare settings should not fail to recognise that not everyone will want to – or be able to – use digital health tools, and people must retain a sense of independence, choice and control over how they access the healthcare system.⁶²

Caroline's experience

"I phoned the doctor for an appointment and was told to send him a photo of my growth by email. Then he would decide if he would see me or not with a face-to-face meeting but my mobile phone has no camera or internet access and even if I could take a photo I would not know how to upload it to my computer. Luckily my daughter did it for me on her computer or else the consequences would have been serious as I would not have followed it up. I realised issues like this need to be highlighted and rectified. It is digital exclusion."

Source: APLE Collective (2023) Digital Divide Briefing Paper

⁶² Good Things Foundation (2024) Mitigating risks of digital exclusion in health systems. See: <https://www.goodthingsfoundation.org/policy-and-research/research-and-evidence/research-2024/health-inequalities-digital-exclusion.html>

4. What gaps in the evidence are there in the association between deep poverty and digital exclusion? How might these be effectively filled?

Research has often found it difficult to determine the causal direction between digital exclusion and (deep) poverty. Most research focuses on their relationship and interconnectedness without a major discussion of causality. There has been no research that focuses clearly on digital exclusion's relationship with deep poverty – most research focuses on a broader understanding of income poverty, or how digital exclusion interacts with digital or data poverty. The Digital Futures at Work Research Centre has suggested that, in the first instance, more tailored qualitative research could help address this gap, followed by longer-term changes to Ofcom and ONS survey questions to help build a more robust quantitative picture on the causal relationship between digital exclusion and deep poverty.⁶³

The UK Digital Poverty Evidence Review 2022 found it difficult to describe a relationship between digital exclusion and low income because the data on digital exclusion and poverty is still fairly limited. Surveys on digital exclusion often lack information on incomes and personal finances, whereas income surveys lack adequate information on people's digital skills, access and usage. Where national surveys do exist, they lack the necessary sample sizes or necessary granular detail. Different stakeholders have plugged this data gap by commissioning surveys, case studies and qualitative research for individual research projects. As a result, what evidence base exists is fragmented and potentially inaccessible for secondary research.⁶⁴

Similarly, reviews by Nesta and Deloitte both found that no publicly available studies or datasets exist that captured all relevant dimensions of digital exclusion, or that capture fully the affordability, or sufficiency of data or device accesses at the household or individual level.⁶⁵

As a result, Nesta concluded that three major gaps exist:⁶⁶

1. We do not know how much individuals and households pay for data, or how this varies according to their circumstances;
2. We do not know who, or how many people, are data poor;
3. We do not know which groups are most vulnerable to data poverty.

⁶³ Digital Futures at Work Research Centre (2022) Measuring digital exclusion. See: <https://digit-research.org/wp-content/uploads/2022/04/Measuring-digital-exclusion.pdf>

⁶⁴ Digital Poverty Alliance (2022) UK Digital Poverty Evidence Review 2022. See: <https://digitalpovertyalliance.org/uk-digital-poverty-evidence-review-2022/introduction-myths-and-shifts/>

⁶⁵ Deloitte (2023) Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK. See: https://digitalpovertyalliance.org/wp-content/uploads/2023/09/Deloitte-Digital-Poverty-FinalReport_29092023.pdf

⁶⁶ Nesta (2020) What is data poverty? See: https://media.nesta.org.uk/documents/What_is_Data_Poverty.pdf

While existing literature reviews and data surveys on this topic have suggested there is a paucity of necessary and robust data, as we will go on to show in the next section, it is possible to use existing household survey data to combine income data, poverty estimates and an understanding of levels of digital exclusion – albeit with somewhat narrowly defined questions on the topic and only in certain iterations of the surveys.

Data Audit of quantitative datasets

In this section of the report, we outline the findings of a data audit, intended to help to answer the previous question: how might the evidence gaps be filled? We have scoped and analysed 15 data sources to investigate whether they can be used to answer the research questions in the brief. We report on:

- the origin of the data source; its availability; and some core characteristics of the data source, such as the number of observations, years available, and the way data was collected;
 - the variables which might be of interest to exploration of the relationship between digital exclusion and deep poverty;
 - A thorough assessment of how effective the data source might be in answering the research questions discussed earlier in the report:
1. What is the association between deep poverty and digital exclusion?
 - a. How, if at all, does digital exclusion drive people deeper into poverty? In which circumstances does this occur?
 - b. How, if at all, does digital exclusion trap people in deep poverty? In which circumstances does this occur?
 2. What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?
 3. What gaps in the evidence are there in the association between deep poverty and digital exclusion? How might these be effectively filled?
 4. How does the population of people experiencing deep poverty and digital exclusion differ from (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?
 5. What do existing trends in deep poverty and digital exclusion tell us about how this issue is likely to develop into the future?

Data audit summary

The main findings from our data audit summary indicate that:

- While almost all large-scale survey sources (such as Family Resources Survey, Understanding Society, Labour Force Survey, The English Longitudinal Study of Ageing) contain some questions that relate to digital exclusion, many of those questions are available only for a limited time and / or are very limited in scope (for example, the survey only asks one question on frequency of internet use). Understanding Society is a notable

exception here, as it offers the largest wealth of questions over the most expansive time period.

- Smaller, targeted data sources, such as Lloyds Banking Group's Essential Digital Skills Data or Ofcom's datasets, offer a rich variety of questions relating to digital exclusion, such as access to digital devices and granular digital skills. However, these surveys are limited by the number of years available; relatively small sample sizes; and limited information on poverty available. Additionally, the surveys offer limited access to raw data, and any further analysis might be limited to analysing outputs available online.
- Trussell Trust's Hunger in the UK Survey is a potentially valuable resource, especially if some additional questions on digital skills and availability of devices are added. We suggest that these additional questions could be modelled on the most crucial questions from the MDLS survey.
- The MDLS survey contains some of the richest questions that relate to digital exclusion. However, at the current time, the survey does not collect income information directly (it does use proxy indicators around benefit receipts instead) and is currently limited to one run (for funding reasons), which only included families with dependent-age children and not the whole population. Work is in progress to develop the MDLS for other household types: older households and working-age households without children. This would enable a future survey to be representative of the whole population.

Lloyds Banking Group's Essential Digital Skills Data & Consumer Digital Index

Link to the data source	Essential digital skills data tables
Type of data source	A survey commissioned by Lloyds Banking Group, findings based on self-reports. Collected by Ipsos via telephone interview.
Data availability	Data is available as a digital tool that shows the breakdowns. However, raw data underlying the digital tool is not publicly accessible. Data is available for 2024, 2023 and 2022.
Number of observations	N = 4,173 in 2024; 2023 and 2022 comparable

This data comes from a survey which collects information on digital skills, as well as some basic demographic information, some of which may be relevant to understanding levels of poverty and digital exclusion. These include:

- access to the internet
- education
- age
- impairment
- personal income (NOT household income)
- social grade
- working status

The online tool allows to explore how many people from a given group self-reported the ability to complete a certain digital task. The recorded tasks are very granular, and some may aid in understanding the extent of digital exclusion. Tasks recorded include (but are not limited to):

- 'I can use software to create, write or edit documents (such as Microsoft Word, Google Docs, pages for a CV or letter).'
- 'I can use search engines to find information I'm looking for (such as search for news, the weather, train times).'
- 'I can fill in forms online to access the services I need (such as voting registration, ordering repeat prescriptions, booking doctor appointments, booking train tickets or beauty appointments).'
- 'I can use the internet to improve my skills and ability to do new things (such as using online tutorials, learning platforms and how-to guides).'

The Yes / No answers to these questions are available for various demographic groups, including people with low personal income. Please note that a high proportion of the sample was unwilling to share their personal income.

Annual Consumer Digital Indexes (since 2016) and Essential Digital Skills Reports (since 2019) complement the above data and shows the context and analysis of the findings. There are some estimates here that might be useful for modelling; however, raw data underlying the numbers cannot be accessed.

Some of the insights include:

- Judging by the analysis, the skills survey has a longitudinal element, but only across two years.
- The report also breaks down reasons for which people are offline.
- The report gives some evidence that people who are better at using the internet are better at managing money.

Research Question	Does this data source help answer the question?
What is the association between deep poverty and digital exclusion?	This dataset allows us to understand the digital skills of people on low personal income, but that group will not necessarily be representative of people living in deep poverty.
How, if at all, does digital exclusion drive people deeper into poverty?	No
How, if at all, does digital exclusion trap people in deep poverty?	No
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	This data can help understand what proportions of different demographic groups are cut off from digital access to some services. For example, 'what % of people on personal income <13,500 / year can fill in online forms?'.
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	We can see how digital skills of people on low incomes differ from digital skills of people on higher incomes to a granular level. This, however, does not address this research question directly.
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	There are not enough data points to check for trends.

Ofcom datasets

Ofcom's technology tracker

Link to the data source	Ofcom's technology tracker data tables You can also access the respondent-level data file here , so bespoke analysis would be possible.
Type of data source	Annual survey looking at awareness, ownership and use of technologies. Survey conducted face-to-face (with a small

	number of postal returns) for 80% of sample and push-to-web for 20% of sample by BMG Research.
Data availability	Data from 2024 (and previous years). Raw data is available.
Number of observations	N = 4,019

In terms of variables that could shed some light on poverty, these include:

- household income bands (under 10.4K, 10.4K-15.59K, 15.6K-25.99K, 26K+)
- social group (AB, C1, C2, DE)
- working status (working / not working)
- whether people receive benefits (quite granular, includes ESA, UC, PIP, DLA, etc.) – however, sample sizes get very small for specific benefit recipients
- a question, 'How well would you say your household is managing financially at the moment?', with options 'doing well', 'getting by', 'struggling'

As for the variables to do with digital exclusion, this dataset broadly provides information on:

- household ownership of digital devices (laptops, tablets, phone, smartwatch, etc.)
- use of the devices (who uses them, what functions do you personally use it for, etc.)
- internet use (frequency, providers, whether using VPN, video calling, etc.)

For research questions discussion, please see the end of this section on Ofcom's datasets.

Ofcom's affordability tracker

Link to the data source	.sav data is available here, and the data tables can be downloaded here as well.
Type of data source	Quarterly survey exploring consumer affordability issues in the UK communications markets. Collected via Computer Assisted Telephone Interview survey run by Ipsos MORI.
Data availability	Raw data available. Quarterly, latest release 14 November 2024 showing Q3 2024. New releases every 3 months.
Number of observations	Latest N = 1,104

In terms of variables that could shed some light on poverty, these include:

- household income bands (under 10.4K, 10.4K-15.59K, 15.6K-25.99K, 26-36.39K, 36.4-51.19K, 52K+)
- social group (AB, C1, C2, DE)
- working status (working / not working / looking for work)

- receipt of benefits and means-tested benefits
- whether eligible for broadband social tariff
- changes to financial situation
- financial vulnerability
- whether household has any affordability issues

As for the variables to do with digital exclusion, this dataset broadly provides information on:

- whether internet is used at home
- device ownership (phone, laptop, etc.)
- whether the household changed provider recently and if they could no longer afford the old one
- any missed payments for communications services
- confidence that the household will be able to pay for communications services in the next three months
- awareness of cheaper broadband options

For research questions discussion, please see the end of the section on Ofcom's datasets.

Ofcom Adults' Media Literacy Tracker

Link to the data source	Adults' media literacy tracker Separately, a children's tracker is also released.
Type of data source	Adults' media literacy surveys: media use, attitudes and understanding among the 16+ adult population of the UK. Split into: • core survey (face-to-face interview) • online behaviours and attitudes (online panel) • online knowledge and understanding (online panel)
Data availability	Raw data available for each survey. Latest release January 2024 for 2023 data; annual.
Number of observations	Latest N = 3,600

In terms of variables that could shed some light on poverty, these include:

- social group
- financial well-being / vulnerability
- income (but this is not shown in data tables, which might mean there are sample size issues)
- respondents' working status

As for the variables to do with digital exclusion, this dataset broadly provides information on:

- time spent online each week
- whether children can do homework on devices when needed
- where / who people ask for help if they can't do something online
- online awareness (such as recognising advertising on Google searches)
- frequency of AI use
- whether people play online games
- whether people watch or upload online content – at a very granular level – they distinguish between streaming versus uploading, and ask about use of specific platforms such as TikTok and Facebook, and even the more obscure ones like Vimeo
- social media site use
- whether people purchase things online
- whether people can recognise scam / online advertising / bots – based on some pre-selected examples that are shown
- whether people understand what social media algorithms are

In addition, the survey has a qualitative element called '[Ofcom's Adults' Media Lives](#)', a study set up in 2005 to provide a small-scale, rich and detailed qualitative complement to Ofcom's quantitative surveys of media literacy. The project follows the same 20 individuals over time and interviews them on camera each year about their media habits and attitudes. This has so far been done over 2018-2024. This data is very granular, but it only offers a very imperfect and limited understanding of deep poverty.

Research Question	How does this data source help?
What is the association between deep poverty and digital exclusion?	This data can be used to understand affordability of broadband, access to digital devices for people on low incomes, as well as media and online literacy. However, the direct link to deep poverty cannot be studied. Moreover, early investigation suggests sample sizes might be an issue.
How, if at all, does digital exclusion drive people deeper into poverty?	This data can be used to understand how certain groups interact with the online world; for example, their online literacy and risk of scams or falling victim to false advertising. This might be helpful.
How, if at all, does digital exclusion trap people in deep poverty?	
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	It is possible to understand from this data how digital exclusions affect, for example, people's ability to shop online, or children doing their homework. It is not possible to cleanly relate this to deep poverty, however.
How does the population of people experiencing deep poverty and digital	It might be possible to study the characteristics of people on low incomes

exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	who are digitally excluded. However, we recommend a lot of caution given the small sample sizes.
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	It might be possible to look at past trends in broadband affordability, access to devices, internet use and online and media literacy using this data, which could be helpful.

ONS data on internet usage

Link to the data source	ONS internet usage data tables Previously released in 2019, 2018, 2017 and 2016.
Type of data source	This dataset shows how many people as a % of the population used the internet in the given year. This data looks to come from the Labour Force Survey, and so bespoke analysis that goes beyond the data tables could be provided. For more information, please see the Labour Force Survey section .
Data availability	2016, 2017, 2018, 2019 and 2020 data is available.
Number of observations	(see the section on Labour Force Survey)

Please see the Labour Force Survey section for details of the available variables and suitability for the research questions.

Minimum Digital Living Standard (MDLS)

Link to the data source	Minimum Digital Living Standard Survey report Map Overview report from March 2024
Type of data source	A self-reported survey. Interviews were conducted using face-to-face recruitment and in-home CAPI interviews. “MDLS is a response to the significant challenges experienced by households in accessing digital technology whether it be for work, education, leisure, health, or wellbeing.

	"We define a MDLS as the basket of 'digital goods, services and skills' that facilitate an individual's digital capabilities to effectively live a life they value." The current survey includes ONLY families with children.
Data availability	Professor Simeon Yates has access to underlying survey data and has agreed to provide bespoke analysis if needed.
Number of observations	N = ~1,500 households

The MDLS survey includes only families with children (~1,500 households). The responses were given by household representatives for the entire household. The survey recorded some demographic variables, including social grade and postcode (but not income). However, postcodes could be used to model other variables, including income and likelihood of poverty.

The survey also recorded access to digital devices (including who in the household was able to use them), as well as digital skills. Differences in digital use were not captured. In our conversation with Professor Simeon Yates, he expressed his reservations about self-reports of use frequency, as digital exclusion is about the ability to go online. Reports of frequency use might obscure how some people choose to be offline, in spite of their ability to use the internet, which does not qualify as exclusion (namely, if a person can access the internet, but does not want to, they are not excluded).

Digital skills are based on self-reports, and it is one household representative that self-reports for everyone. Data for adults (beyond just households with children) is likely to be released next year, but there is no set timeframe for this and data has not been collected yet. Professor Yates explained that this expansion of the survey depends on funding.

Research Question	How does this data source help?
What is the association between deep poverty and digital exclusion?	We cannot easily investigate the association between digital exclusion and deep poverty using this data. Postcodes and other characteristics may be used to model incomes, as well as by relating digital exclusion to deprivation. An important limitation is that this would only be available for families with children.
How, if at all, does digital exclusion drive people deeper into poverty?	This dataset might provide some information on how people with certain demographic characteristics use the internet, and might provide information on their access to learning, online banking, and similar services that might
How, if at all, does digital exclusion trap people in deep poverty?	

	affect their ability to escape poverty. An important limitation is that this would only be available for families with children.
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	This might help a little, but any answers will be limited to families with children.
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	This data might offer some information on how people who live in the most deprived areas differ from people who live in other areas, but there is no direct information on deep poverty.
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	Not currently.

Trussell Trust Hunger in the UK Survey

Link to the data source	Hunger in the UK – The Trussell Trust
Type of data source	A self-reported survey of people referred to food banks in the Trussell Trust network. Survey collected through a novel self-completion methodology via including questionnaire packs in food parcels. General population survey collected via Ipsos's in-house online panel KnowledgePanel.
Data availability	Raw data is available through the UK Data Service .
Number of observations	N = 3,949 in general population and N = 2,563 people who have been referred to a Trussell Trust food bank

There is one question in the survey relevant to digital exclusion:

- Do you have access to the internet? Answers: Yes, through a mobile phone network (3G, 4G or 5G); Yes, through broadband or wi-fi at home; Only through communal or shared services (library, provision at hostel etc); No access.

In terms of income information, available variables are:

- granular income information
- food bank use
- whether or not respondent is able to afford essentials
- granular information on benefits.

Research Question	How does this data source help?
What is the association between deep poverty and digital exclusion?	This survey might be helpful, as the majority of the sample are people who have used food banks and are therefore much more likely to be in poverty. However, the survey only asks one question on internet access.
How, if at all, does digital exclusion drive people deeper into poverty?	No
How, if at all, does digital exclusion trap people in deep poverty?	No
What current role does digital exclusion have in cutting off access to services, support, or opportunities to get on?	No
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	It might be possible to understand this if sample sizes are large enough. We can use the survey to understand how people without internet access and in deep poverty are different to other groups along various demographic dimensions, as well as financial situation.
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	No

English Longitudinal Study of Ageing

Link to the data source	English Longitudinal Study of Ageing
Type of data source	The English Longitudinal Study of Ageing (ELSA) began in 2002. It is a large-scale longitudinal panel study of people aged 50 and over and their partners, living in private households in England. The ELSA is a unique and rich resource of information on the dynamics of health, social, wellbeing and economic circumstances in the English population aged 50 and older. As digitally-excluded people tend to be older, this dataset might offer a more targeted sample. All ELSA interviews are conducted face-to-face using computer-assisted interviewing (CAPI), combined with self-completion questionnaires completed using pen and paper (PAPI).

Data availability	Data for waves 1-9 (up to 2018/2019) are available to download from the UK Data Service .
Number of observations	Wave 10: N = 7,586

Available variations for income and digital access / use are presented in the table below:

Variable	Description	Years available
HOBB	Whether respondent has an internet connection at present	Wave 10 - ?
SCINT	On average, how often do you use the internet or email?	Wave 10 - ?
SCIND	On which of the following devices do you access the internet?	Wave 10 - ?
SCINA 1:X	For which of the following activities did you use the internet (e.g., reading, shopping, etc.)	Wave 10 - ?
SCINNO 1:X	Why do you not use the internet? (e.g., IT skills not enough, afraid of fraud, no broadband access, no equipment, vision not good enough)	Wave 10 - ?
Income / wealth variables	Very good information on income and wealth	All waves

Research Question	How does this data source help?
What is the association between deep poverty and digital exclusion?	This data can show how digital exclusion and poverty are associated for older people.
How, if at all, does digital exclusion drive people deeper into poverty?	No
How, if at all, does digital exclusion trap people in deep poverty?	No
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	It is possible to understand the types of tasks older people struggle with when using the internet.
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	It might be possible to understand this for older people if sample sizes are large enough.

What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	No
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Understanding Society

Link to the data source	Understanding Society
Type of data source	Understanding Society is a longitudinal annual household survey that started with a sample of around 40,000 households. The survey provides data on income, including total household net income (sample of around ~16,000 households in the most recent survey). Therefore, deep poverty variables could be derived. The survey also provides some information on benefits and deprivation, as well as postcode information. The survey is now mixed mode. Until wave 6, interviews were mostly conducted face-to-face with a small number of telephone conversations. From wave 7, web interviewing was introduced. From wave 8, some were able to complete online. In mid-March 2020, face-to-face interviewing was suspended due to the Covid-19 pandemic and resumed from April 2022.
Data availability	Data is available on UK Data Service .
Number of observations	N = 28,000 in most recent wave

The following variables relevant to digital exclusion are available (note: wave 13 covers 2021–2022, wave 12 2020–2021, etc.):

Variable	Description	Waves available
Netpuse	How often do you use the internet for your personal use? Several categories, including ~6–11% who say they never use the internet (proportion has fallen over the years)	3–11
Netpusene w	See above	12–13

Jul4x3	Searched for jobs / information about jobs on the internet	1-13
Nethow1:5	How household accesses the internet at home? (home computer, laptop, netbook, table computer, digital tv, mobile phone, games console, other)	8-13 (hhresp)
Browse Email Gaming Onlinebank Smlook Smpost Streammusic Onlinebuy	Frequency of using the internet: - browsing websites - email - gaming - online banking - looking at social media - posting on social media - streaming music - online buying	11-13
Dsktcomp Ereader Ftphone Laptop Smtphone Smtwatch Tablet Othdevice	Access to mobile technology: - desktop computer - e-book reader - feature phone / non-touchscreen mobile phone - laptop - smartphone - smartwatch - tablet - other	11-13
Pcnet	Has access to internet from home	BH10-18 and 1-13 USOC (hhresp)
Ypcintnt	How often do you use the computer at home for connecting to the internet?	1, 3, 5, 7, 10 (youth)
Income data	Rich income data	All waves
Benefits	Rich benefit information	All waves

Research Question	How does this data source help?
What is the association between deep poverty and digital exclusion?	This dataset should allow us to understand the relationship between deep poverty and internet access, device access and usage, and some purposes of internet use (such as job searches and online buying) for adults. There is some data for internet use available for children.

How, if at all, does digital exclusion drive people deeper into poverty?	Because this survey is longitudinal (it follows the same cohort of people over multiple years) it might be possible to conduct some analysis of how past digital exclusion affects future poverty (although the robustness of this analysis will be influenced by the specific sample sizes of people in deep poverty, and their attrition).
How, if at all, does digital exclusion trap people in deep poverty?	
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	This survey collects a rich variety of personal characteristics, which means it might be possible to understand how these different populations differ across a set of dimensions (although, again, the extent to which this is possible could be limited due to sample size).
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	The longitudinal nature of the survey would allow us to study and project past trends although, again, this might be limited by sample sizes.

Labour Force Survey / Annual Population Survey

Link to the data source	Labour Force Survey
Type of data source	Labour Force Survey is a quarterly survey with a sample size of around 40,000 households and 100,000 individuals. Labour Force Survey provides robust data on the labour force participation, as well as a range of demographic characteristics. The ONS published breakdowns of internet use by various characteristics based on LFS. The series was last released in 2021 using 2020 data, and no new publication date is announced. Considering the internet use variable is no longer available in the survey, future releases are unlikely. Interviews are conducted face-to-face and via telephone, with recall interviews carried out via telephone.
Data availability	Data available for example via NOMIS
Number of observations	N = 100,000

Available variations for income and digital access / use are presented in the table below:

Variable	Description	Years available
INTUSE	How long since last used internet: - within the last 3 months, - between three months and a year ago - more than one year ago - never used it - don't know (proxy only)	Each quarter from JM11 to OD16, then JM only from JM17 to JM20 COVERAGE: Applies to all respondents over the age of 15 NOTES: Available on ONS datasets only for JM11. Available ONS and Government only files only from AJ11 onwards. As of JM22, this variable has been removed from the questionnaire
INTPROB	Whether respondent has problems with using the internet	Each quarter from JM12-JM14 As of AJ14, this variable has been removed from the questionnaire
INTPROB2	Possible reasons behind problems with internet: - you have difficulty seeing - you have difficulty hearing - you have difficulty reading or writing - you have difficulty using a keyboard or mouse - or some other reason	Each quarter from JM12-JM14
(other)	Information on individual characteristics, details of employment / unemployment, benefits, education and training, health and earnings.	

Research Question	How does this data source help?
What is the association between deep poverty and digital exclusion?	The data does not allow the construction of household-level poverty variables, but we would be able to relate earnings and job details to internet use (for the years when the internet variable is available).
How, if at all, does digital exclusion drive people deeper into poverty?	No
How, if at all, does digital exclusion trap people in deep poverty?	No

What current role does digital exclusion have in cutting off access to services, support, or opportunities to get on?	No
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	No
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	No

Family Resources Survey / Households Below Average Income

Link to the data source	Family Resources Survey
Type of data source	An annual report that provides facts and figures about the incomes and living circumstances of households and families in the UK. FRS is collected via face-to-face interviewing, except for the whole of the 2020 to 2021 survey year where telephone interviewing was used due to the Covid-19 pandemic.
Data availability	Available via the UK Data Service; 2022/23 data has been released in March 2024.
Number of observations	~25,000 households

Available variations for income and digital access / use are presented in the table below:

Variable	Description	Years available
INTERNET (then INTERNT in 22/23)	Can you use the internet at home for online services? - Yes - Yes, but with help - No, I would need someone to do it - No, I can't access online services at home	2021/22 2022/23
Income data	Rich income data	All waves
Benefits	Rich benefit information	All waves

Research Question	How does this data source help?
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What is the association between deep poverty and digital exclusion?	Yes, as long as digital exclusion is understood as the ability to access the internet at home for online services.
How, if at all, does digital exclusion drive people deeper into poverty?	No
How, if at all, does digital exclusion trap people in deep poverty?	No
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	No
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	Might be possible, as long as digital exclusion is understood as the ability to access the internet at home for online services and sample sizes allow.
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	No (only two data points)

Nominet's Digital Youth Index

Link to the data source	The Nominet Digital Youth Index
Type of data source	The Nominet Digital Youth Index is a free-to-use national, annual benchmarking research identifying and monitoring the key drivers, issues and opportunities in young people's relationship with digital technology across the UK. Only looks at people aged eight – 25 years. Online panel, with several offline interviews to include young people who had limited access to internet.
Data availability	Breakdowns available via online tool, but no access to underlying raw data.
Number of observations	N = 4,000

Covers topics such as:

- access to devices and quality of said devices
- internet connection
- digital skills (homework, basic, job searching, etc.)

- internet safety (e.g., setting privacy settings, recognising suspicious emails)
- digital well-being (frequency of internet use for various tasks, isolation, impact of social media)

In terms of poverty variables, data answers:

- whether cost of living crisis affected the family (unable to replace broken device, change or cancel internet package, struggle to pay bills)
- annual household income
- working status of primary earner

However, the data tool does not allow for the cross-checking of income variables with other variables.

Research Question	Does this data source help answer the question?
What is the association between deep poverty and digital exclusion?	There might not be enough information on income to do this effectively.
How, if at all, does digital exclusion drive people deeper into poverty?	There might not be enough information on income to do this effectively.
How, if at all, does digital exclusion trap people in deep poverty?	There might not be enough information on income to do this effectively.
What role does digital exclusion currently have in cutting off access to services, support, or opportunities to get on in life?	It might be possible to use this survey to check how many children might be excluded from doing homework / socialising due to digital exclusion.
How does the population of people experiencing deep poverty and digital exclusion differ from: (i) the overall population of people experiencing digital exclusion; and (ii) people experiencing deep poverty and not digital exclusion?	No
What do existing trends in deep poverty and digital exclusion tell us about how this is likely to develop into the future?	No

The 2019 Oxford Internet Survey

Link to the data source	Oxford internet survey
Type of data source	"OxIS is the longest-running academic survey of internet use in Britain, describing how internet use has evolved from 2003 to the present day. Run by the Oxford Internet Institute, a social sciences department at the University of

	Oxford, this survey provides unrivalled data, rigorous analysis and policy-relevant insights into key aspects of life online." See report here Interviews conducted face-to-face in people's homes by ICM.
Data availability	Availability (inquire here): "The 2003, 2005, 2007, 2009, 2011 and 2013 datasets can be made available to interested parties. We expect that the 2019 dataset will be available in late summer 2020. To request a dataset, please fill in the form below and we will contact you. Please be aware that even though the datasets are freely available for academic purposes there are contractual restrictions as regards to who we can provide datasets to. We have to decide on a case-by-case basis whether or not an application fits these requirements. In two or three sentences, please describe your intended research in the Message box below."
Number of observations	N = ~2,000 people in the latest report

Covers variables on:

- internet use / non-use
- online risk perception
- income
- educational qualification

The executive summary of the most recent report, in summary, mentions:

- Internet users have rapidly increased banking, commercial and entertainment activity.
- Almost everyone under the age of 50 uses the internet.
- There remain higher proportions of non-users below the median income (£28,400/year in 2018).
- There are also disproportionate percentages of non-users among less-educated groups.
- Most users are not strongly concerned about the possibility of being a victim of fraud as a result of their internet activity.
- Most non-users are not interested in going online—they are non-users by choice.
- A small group of non-users (10%) say that the most important reason they are not online is because they are worried about their privacy.

Our ability to use this data is dependent on data owners' willingness to share the dataset. In addition, scoping suggests that the latest data currently available might be from 2019 (five

years old). Given the general improvements in digital literacy observed in other datasets since then, the data might not be the most optimal.

Since our initial assessment suggests that there might be significant obstacles in using this data for further research, the research question table is omitted in this section. However, the report remains a valuable source that gives additional context to our research.

Digital Exclusion Risk Index

Link to the data source	Digital Exclusion Risk Index
Type of data source	Spatial tool that estimates (models) digital exclusion risk for Lower Layer Super Output Areas (LSOAs).
Data availability	The code is available on GitHub.
Number of observations	N/A – data is modelled, therefore no sample sizes to report.

The measure constructs Digital Exclusion Risk out of:

- % of population aged 65+
- % of population aged 75+
- proportion of over 65 residents on guaranteed Pension Credit
- proportion of 16+ with no qualifications
- alternative unemployment rate
- IMD score
- proportion of homes unable to receive 30Mbit/s broadband
- proportion of connections receiving less than 10Mbit/s broadband
- average download speed

Our assessment is that this is of limited use to this research, considering the measure of digital exclusion used is modelled on other variables and therefore assumes a correlation between variables such as age, deprivation, education and unemployment with digital exclusion. Therefore, this cannot really be used to study such correlations.

Because of this, the research question table is omitted in this section.

What gaps in the evidence are there in the association between deep poverty and digital exclusion? How might these be effectively filled?

Based on our data audit, we revisit the research question of the evidence gaps and opportunities to effectively fill these. We find:

- The availability of information on digital access and use is good. There are some questions on internet use in big household surveys. USOC has the largest variety, but broad questions on internet use are available in most surveys, especially recent waves. The availability in LFS has been discontinued.
- Connecting deep poverty to some more granular questions on digital exclusion (particularly understanding drivers) is more difficult with available data sources. This is because data sources which are more focused on digital exclusion overwhelmingly do not have good income information (although some income variables are included).
- Some other data sources, such as MDLS, offer more context and allow for an investigation of the drivers of digital exclusion and deep poverty. However, these surveys currently suffer from limited reporting of direct income information. The collection of direct income information is challenging beyond household surveys. To address this challenge, MDLS has sought to use poverty-related variables such as benefit receipts, postcode data and related deprivation.
- Large household surveys – which do include direct income information – have an opportunity to meet this challenge by including a core set of indicators around digital exclusion within their surveys. This will better allow comparisons between income groups and different poverty experiences – namely, comparing digital exclusion amongst people living in deep poverty and people living in ‘shallower’ forms of poverty.
- Longitudinal analysis might be possible with USOC and possibly ELSA, but would likely have to be quite limited in scope due to unavailability of variables.
- In our conversations, Professor Simeon Yates questioned the validity of questions on frequency of internet use, as lack of use might not necessarily indicate digital exclusion. In this context, some household surveys which only collect information on internet use frequency (such as old LFS) might be unhelpful in further research.
- The future Trussell Trust Hunger in the UK survey could make a very valuable contribution to the currently available data. We believe the question currently posed in the Hunger in the UK survey is very appropriate, as it concerns the ability to access the internet (as opposed to the frequency of use). The most crucial questions to be added would include:
 - Information on digital skills, including the ability to access basic tools, websites, online services such as banking, and the ability to do work and homework online; as well as the ability to be safe online, including the ability to recognise spam and

scams. This is important, as someone who has access to the internet but does not have the skills to use it would be considered digitally excluded.

- Access to digital devices, such as laptops, tablets, and smartphones, as well as data and being able to afford a consistent connection.

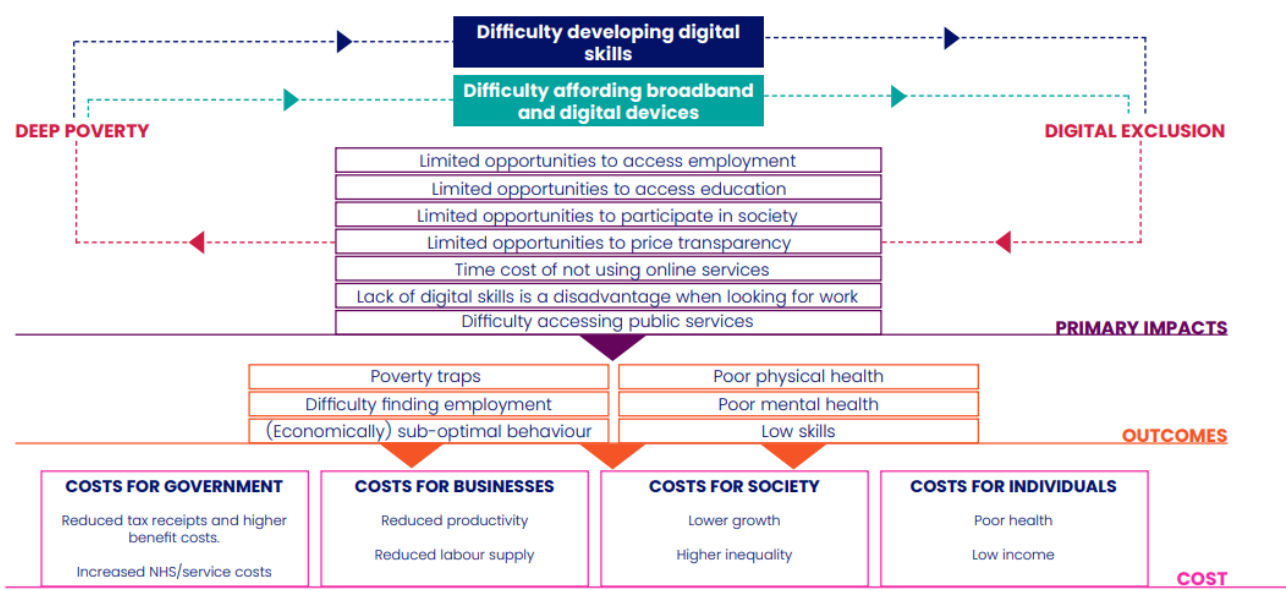
Towards solutions

A Theory of Change for tackling digital exclusion amongst people living in deep poverty

We have mapped a summary of the relational impacts of digital exclusion and deep poverty in the Theory of Change below:



A Theory of Change for Tackling digital exclusion amongst people living in deep poverty



While it is possible to develop additional Theories of Change for different excluded groups, it is not clear that the impacts, outcomes or costs will be materially different. This consolidated Theory of Change creates an initial mapping, which could be built on in future work.

How might the evidence gaps in existing research be effectively filled by additional research?

Existing research

According to our data audit, the currently available quantitative data that allows for a nuanced investigation of the link between digital exclusion and deep poverty is quite limited. Large-scale household surveys provide large sample sizes and in-depth income information but are usually lacking in well-designed questions that investigate digital exclusion. On the other hand, data sources which give a thorough understanding of digital exclusion lack income information and suffer from smaller sample sizes which might make it difficult to investigate inequalities.

Of the currently available data sources, Understanding Society offers the most balanced range of questions that can identify individuals who are in deep poverty at the same time as providing the most exhaustive choice of questions that investigate digital exclusion.

In terms of the depth of information on digital exclusion and how it affects individuals, the recently collected MDLS dataset is the best data identified. However, this dataset has important limitations: (i) it only explores the circumstances of families with children; and (ii) it lacks the income and wealth information necessary to link digital exclusion and deep poverty directly.

Additional research

Adding another module of questions to the Trussell Trust Hunger in the UK survey has potential to plug some of the existing gaps. However, we recommend that any additional questions should be very carefully designed to:

- focus sharply on the crucial building blocks of digital exclusion (access to broadband / digital devices and digital skills), disregarding the less useful but commonly-seen questions on use frequency;
- aid understanding of the primary consequences of digital exclusion which exacerbate experiences of poverty, such as limited access to online banking, online shopping and online job listings.

In the first instance, robust and tailored qualitative research can help to determine and direct these questions – as well as providing initial insights into plugging some of the existing gaps.

While it is possible to develop additional Theories of Change for different excluded groups, it is not clear that the impacts, outcomes or costs will be materially different. This consolidated Theory of Change creates an initial mapping, which could be built on in future work.

