

Ofcom's Technology Tracker 2021 Technical Report

Preface

This volume contains the full computer tabulations for the 2021 Technology Tracker study, which has been run by Critical Research on behalf of Ofcom. The objective of the survey is to track the attitudes and behaviour of UK consumers with respect to residential telecommunications, broadcasting and the internet.

Due to Covid-19, the 2020 method of face-to-face CAPI fieldwork was impossible during 2021, and an alternative approach was needed. Other Ofcom projects had tried various approaches during 2020, and we took learnings from them when deciding which methodology to use. As a result, we used a postal approach, inviting respondents to complete an online interview via a unique serial number or request a self-completion paper questionnaire. At the outset, the potential for a supplementary panel sample was considered, to fill under-represented cells. This had been an approach needed on other studies, but improved procedures leading to better response rates made this unnecessary on this study.

Another difference from 2020 was that multiple responses per household were allowed. This was allowed as it provides better coverage of adults who are not the head of household than the CAPI approach, and the overall level of clustering is lower than with the CAPI approach.

Critical Research interviewed a sample of 5,233 adults, aged 16+, in the UK. Interviews were carried out across the UK, either online (4,825) or through a self completion paper questionnaire (428). All interviews were conducted between 14th January and 31st March 2021.

The data are initially weighted to correct the over-representation of nations, regions and areas to produce a geographically representative sample. They are then weighted by age, gender, social class, working status, and region to match the known population profile. An additional level of weighting was added, covering volume of internet usage – hours per week.

Details of the sampling frame, research methodology, weighting procedures and reporting are outlined in the following pages. A note on statistical reliability is also included.¹ The SPSS files from the study are available on request.

Sample design

Despite the change in method, we tried to maintain as much consistency as possible with previous waves, by using UK Geographics to draw sample based upon the Royal Mail Postcode Address File (PAF) and 2011 Census data. The main "Sample A" sample was drawn by a simple one stage probability sample, with probabilities skewed by nation, English region and urbanity to align with the quotas required by these variables. However, the expectation confirmed by previous 2020 studies conducted for Ofcom is that certain subgroups would see lower response rates, in particular 16-24, 65+, less affluent households identified by social grade DE, and areas of higher deprivation.

¹ See Appendix A – Guide to Statistical Reliability

The last three of these would also lead us to expect reduced coverage of those with limited or no internet usage, particularly with the main response method being online completion. This could potentially lead to heavy weighting of these groups, with serious impact on the overall ESS.

For this reason, the main sample was supplemented by two samples, skewed by drawing sample across sampling units (SUs) formed by grouping OAs (Output Areas) – the sampling process used for previous waves of the study. These samples were drawn from areas known (from the 2011 census) to have high proportions of these types of individual, specifically:

- Sample B, containing SUs with at least 65% aged 55+ plus or 55% SEG DE, falling within the 30% highest scores on the SAD index of deprivation
- Sample D, containing SUs in the top 5% in terms of the % aged 16-34

Quotas

Given the method of response, it would have been difficult if not impossible to control the final sample through quotas, and therefore no controls were applied post-sampling, relying on respondent weighting to align the sample with the UK population on the “normal” quota variables of nation, region, urbanity, age, SEG and gender.

Fieldwork/Methodology

Fieldwork was conducted in two phases, with an initial mailout on 14th January 2021 and a second mailout on 1st March 2021. This was to allow us to identify any differences in response between nation and English regions, to allow the profile of the sample to be tweaked if necessary. As a result, the sampling fractions in London and Northern Ireland were increased for the second mailout. Reminder letters were sent to households which had not responded to the invitation letter on 1st February for the first mailout and the 15th March for the second mailout.

Weighting

In previous waves, the data were weighted to the national UK profile using target rim weights for age, gender, SEG, working status, region and cable/ non-cable. Targets for all these variables were available from the ONS, normally through 2011 Census data, or 2017 updates. However, an additional level of weighting was required in 2021, to ensure the sample was representative in terms of internet usage. An issue here is that there was no official published data to provide weighting targets.

Our initial targets were based upon data from a study conducted for Liverpool University in 2018, and the targets used for another Ofcom study reported in 2020 (BBC Performance Tracker Year 3 conducted by Ipsos MORI). This was across the UK rather than within nation, as reliable national figures were not available. The categories have been inflated by around 10% from those used previously, to reflect an increase in average usage during the Covid-19 lockdown (reported by Ofcom in April 2020). So, for example, the target of 10% shown below for 9-11 hours per week is taken from an original target of 10% for 8-10 hours per week.

None	10%
Up to 2 hours	5%
3 to 5 hours	11%
6-8 hours	9%
9-11 hours	10%
12-15 hours	6%
16-22 hours	10%
Over 22 hours	38%

However, a study conducted by Ofcom using the Ipsos MORI CATI omnibus in early 2021 suggested that usage at that time may have increased even more sharply, with data from that study comparing as follows²:

	Proposed weights	CATIBus
None	10%	6%
0-5 hours/ week	16%	11%
6-8 hours	9%	6%
9-11 hours	10%	5%
12-22 hours	16%	19%
Over 22 hours	38%	51%

We could not immediately conclude that the 2021 CATIBus study accurately reflects the population, for example a telephone survey will exclude those with no telephone access, who have very limited opportunity to use the internet. A fuller analysis of the data has been carried out for Ofcom, as a result of which we revised these usage targets to the following:

	Revised targets
Never use	7%
0 to 5 hours	13%
6 to 8 hours	9%
9 to 11 hours	9%
12 to 22 hours	20%
Over 22 hours	41%

² The figures quoted may differ occasionally from those shown in the published CATIBus tables, as we have used our own weights which show minimal differences across the data but return a higher ESS – we do not interlock gender with the other quota variables

The following table shows the initial unweighted sample and the final weighted sample profile.

Figures based on UK adults	% Weighted Profile	% Unweighted Interviews achieved
Gender – Male 16+	47%	47%
Gender – Female 16+	51%	51%
Age – 16-34	29%	28%
Age – 35-54	31%	33%
Age – 55+	37%	37%
SEG – AB	27%	26%
SEG – C1	26%	32%
SEG – C2	17%	12%
SEG – DE	24%	24%
Working Status – working	58%	55%
Working Status – not working	38%	41%
Region – London	12%	7%
Region – South East	14%	9%
Region – East of England	7%	7%
Region – South West	8%	7%
Region – East Midlands	7%	7%
Region – West Midlands	9%	7%
Region – Yorkshire & Humber	8%	8%
Region – North East	4%	6%
Region – North West	12%	7%
Region – Scotland	9%	11%
Region – Wales	5%	12%
Region – Northern Ireland	3%	13%
Cable	49%	40%
Non-cable	51%	60%
Urban areas	86%	76%
Rural areas	14%	24%

The percentages described above as ‘% Weighted’ are the targets used to weight the data. The figures for age, gender and location are taken from the 2011 Census, with age quotas updated to align with the ONS 2017 mid-year population estimates. Cable/ non-cable figures come from published data on the proportion of UK households in cabled areas, and SEG profiles come from NRS published data. The ‘% Unweighted’ column shows the actual percentage of interviews achieved in the January to March 2021 fieldwork.

An additional level of weighting is applied to minority ethnic groups, those with any impacting/ limiting conditions and those aged 65+ to ensure that the separate tables issued to report on these groups match their known profile by key demographics

Reporting

The data is weighted to the profile of UK adults and so the data is representative of adults aged 16+. Therefore, when reporting it is necessary to state that the data represents the percentage of adults rather than the percentage of households. Within each wave of research, we ask a set of core questions relating to these topic areas: take-up and use of landline, mobile phone, internet, television, radio, devices, and bundles. Other questions asked may vary wave on wave.

Appendix A – Guide to Statistical Reliability

The variation between the sample results and the ‘true’ values (the findings that would have been obtained if everyone had been interviewed) can be predicted from the sample sizes on which the results are based, and on the number of times that a particular answer is given. The confidence with which we can make this prediction is usually chosen to be 95%, that is, the chances are 95 in 100 that the ‘true’ values will fall within a specified range. However, as the sample is weighted, we need to use the effective sample size³ (ESS) rather than actual sample size to judge the accuracy of results. The following table compares ESS and actual samples for some of the main analysis groups.

	Actual	ESS
Total	5,233	3,539
Urbanity: Rural	1,231	549
Urbanity: Urban	4,002	2,998
Gender: Male	2,472	1,665
Gender: Female	2,668	1,824
Age: 16-24	545	368
Age: 25-34	939	675
Age: 35-44	879	614
Age: 45-54	820	559
Age: 55-64	885	576
Age: 65+	1,066	695
SEG: AB	1379	983
SEG: C1	1,694	1230
SEG: C2	634	442
SEG: DE	1,268	886
Household income: under £10.4k	369	241
Household income: £10.4k-£15.5k	417	277
Household income: £15.6k-£25.9k	678	455
Household income: £26k+	2198	1528

³ Effective Sample Size shown as Effective Weighted Sample in the data tables produced

Working: Yes	2,898	2,012
Working: No	2,162	1,442
Mobile phone user	5,075	3,466
Internet access at home	4,992	3,449

The table below illustrates the required ranges for different sample sizes and percentage results at the '95% confidence interval'.

Approximate sampling tolerances applicable to percentages at or near these levels

Effective sample size	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
	±	±	±	±	±
3539 (Total)	1.0%	1.3%	1.5%	1.6%	1.7%
1665 (Gender: Male)	1.5%	2.0%	2.2%	2.4%	2.5%
1230 (SEG: C1)	1.7%	2.3%	2.6%	2.8%	2.9%
549 (Urbanity: Rural)	2.6%	3.4%	3.9%	4.2%	4.3%

For example, if 30% or 70% of a sample of 3,539 give a particular answer, the chances are 95 in 100 that the 'true' value will fall within the range of + 1.5 percentage points from the sample results.

When results are compared between separate groups within a sample, different results may be obtained. The difference may be 'real', or it may occur by chance (because not everyone has been interviewed). To test if the difference is a real one – i.e. if it is 'statistically significant' – we again must know the size of the samples, the percentages giving a certain answer and the degree of confidence chosen. If we assume '95% confidence interval', the difference between two sample results must be greater than the values given in the table below to be significant.

Differences required for significant at or near these percentages

Sample sizes being compared	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
	±	±	±	±	±
1665 vs. 1824 (Male vs. Female)	2.0%	2.7%	3.0%	3.3%	3.30%
983 vs. 1230 (SEG AB vs. C1)	2.5%	3.4%	3.8%	4.1%	4.2%