

Ofcom's Technology Tracker 2019 Technical Report

Preface

This volume contains the full computer tabulations for the 2019 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.

Quadrangle Operations interviewed a quota sample of 3,909 adults, aged 16+, in the UK. Interviews were carried out across 315 different sampling points in the UK, face-to-face, in-home. All interviews were conducted between 3rd January and 28th February 2019.

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.

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

To ensure consistency with trend data, the sample approach to sampling has been used as in previous waves, using Output Areas (OAs) as the basic building block for sampling, then using quota control by three key variables (age, gender and socio-economic grade) to control the sample interviewed within each sampling point.

First stage

The OAs in the UK were grouped into sampling units (SUs), which were then stratified by region, then within region by rural/urban.

This approach controls the urban/ rural fallout of the sample, so no further quota is imposed. The sample extracted was checked for close correspondence to the UK population on two key variables:

- Deprivation Index for the United Kingdom.
- Cable/ non-cabled area

Since region has been used as the first sorting variable, regional distribution of SUs will be more or less in proportion to the number of residential addresses in each region.

Second stage

The size of a SU is measured by the number of addresses it contains. The SUs were selected with a probability proportionate to size. This ensures that all households within an SU have an equal chance

¹ See Appendix B – Guide to Statistical Reliability

of being selected, regardless of the size of the SU in which a household is situated. The number of interviews per SU was 12.

Quotas

The following quotas were set (within each SU) to represent the population within that SU, which means the overall quotas across the UK will closely match the UK population.

- Age (16-24, 25-44, 45+)
- Socio-economic grade (SEG)
- Gender

Quotas were set using 2011 Census data for Great Britain and Northern Ireland, with age quotas set using the ONS 2017 mid-year population estimates (released June 2018). Compared to the Census 2011, the 2017 mid-year population estimates indicate a small (less than 2%) downward shift in the incidence of adults aged under 45 and a small (less than 2%) upward shift in the incidence of adults aged 65 and over.

In addition, a boost sample of 150 adults aged 75 and over was achieved to support analysis of this age group.²

Fieldwork/Methodology

Interviewers were provided with specific addresses. The average SU contains around 130 households in England and Wales and 160 households in Scotland and Northern Ireland, thus affording tight control over the addresses the interviewers called at.

At each of the waves conducted prior to Half 2³ 2016, all interviews were conducted in the home, using pen and paper. For the Half 2 2016 fieldwork, a trial of the CAPI (Computer Assisted Personal Interviewing) method of interviewing was conducted. One quarter of the interviews in each SU were conducted using CAPI and the remaining three quarters of the interviews were conducted using pen and paper.

For the fieldwork conducted from Half 1 2017 onwards, it was decided to conduct all interviewing using the CAPI method; using tablet computers rather than paper questionnaires to conduct the interviews in the home. This change in method should be taken into consideration when making comparisons to previous waves, as it is possible that the method change could impact the results.

For the fieldwork conducted from 2018 onwards, it was decided to conduct one wave of research per year; in January and February, to match the Half 1 fieldwork from previous years.

Weighting

The data are weighted to the national UK profile using target rim weights for age, gender, SEG, working status, region and cable/ non-cable. The following table shows the initial unweighted sample and the final weighted sample profile.

² See Appendix A - Quotas

³ In previous years fieldwork was conducted in Half 1 (January-February) and Half 2 (July-August)

The overall sample includes a boost sample of 150 adults aged 75 and over; achieved to support analysis of this age group. These boost interviews are included in the figures below.

Figures based on UK adults	% Weighted	% Unweighted
	Profile	Interviews achieved
Gender – Male 16+	49%	48%
Gender – Female 16+	51%	52%
Age – 16-34	29%	27%
Age – 35-54	34%	29%
Age – 55+	37%	44%
SEG – AB	27%	21%
SEG – C1	27%	30%
SEG – C2	22%	20%
SEG – DE	25%	28%
Working Status – working	58%	51%
Working Status – not working	42%	49%
Region – London	13%	7%
Region – South East	13%	7%
Region – East of England	9%	7%
Region – South West	8%	6%
Region – East Midlands	7%	7%
Region – West Midlands	9%	8%
Region – Yorkshire & Humber	8%	7%
Region – North East	4%	7%
Region – North West	11%	7%
Region – Scotland	9%	13%
Region – Wales	5%	14%
Region – Northern Ireland	3%	13%
Cable	50%	41%
Non-cable	50%	59%

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/ February 2019 fieldwork.

Reporting

The sample is drawn based on households within SUs, while quotas are set based on adult population profiles. The data is then 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 – Quotas

The following quotas (excluding the boost sample of 150 adults aged 75 and over) were set at the outset of the project:

Adults 16+	Quotas set	Interviews achieved Jan-Feb 2019: Weighted	Interviews achieved Jan-Feb 2019: Unweighted
Gender – Male	49%	49%	48%
Gender – Female	51%	51%	52%
Age – 16-24	14%	14%	13%
Age – 25-44	32%	34%	31%
Age – 45-64	32%	31%	31%
Age – 65+ ⁴	22%	22%	25%
SEG – AB	22%	27%	22%
SEG – C1	31%	27%	30%
SEG – C2	21%	22%	20%
SEG – DE	26%	25%	28%

Appendix B – 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 size⁵ (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	3,909	2,683
Urbanity: Rural	1,059	463
Urbanity: Urban	2,850	2,246
Gender: Male	1,871	1,269
Gender: Female	2,038	1,416
Age: 16-24	489	345
Age: 25-34	565	401
Age: 35-44	611	431
Age: 45-54	532	358
Age: 55-64	621	451
Age: 65+	1,090	682
SEG: AB	833	599

⁴ Figures in this table exclude the boost interviews conducted with adults aged 75+

⁵ Effective Sample Size shown as Effective Weighted Sample in the data tables produced

SEG: C1	1,168	827
SEG: C2	791	537
SEG: DE	1,107	768
Household income: under £10.4k	304	219
Household income: £10.4k-£15.5k	338	240
Household income: £15.6k-£25.9k	404	290
Household income: £26k+ ⁶	782	602
Working: Yes	1,983	1,391
Working: No	1,920	1,346
Mobile phone user	3,598	2,482
Internet access at home	3,254	2,253

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% ±
2,683 (Total)	1.2%	1.5%	1.8%	1.9%	1.9%
1,269 (Gender: MALE)	1.7%	2.2%	2.6%	2.8%	2.8%
827 (SEG: C1)	2.1%	2.8%	3.2%	3.4%	3.5%
463 (Urbanity: Rural)	2.8%	3.7%	4.3%	4.6%	4.7%

For example, if 30% or 70% of a sample of 2,683 give a particular answer, the chances are 95 in 100 that the 'true' value will fall within the range of + 1.8 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% ±
1,269 vs. 1,416 (Male vs. Female)	2.3%	3.0%	3.5%	3.7%	3.8%
599 vs. 827 (SEG AB vs. C1)	3.2%	4.2%	4.8%	5.2%	5.3%

⁶ Household income categories were amended in 2018 in line with those used by The Office for National Statistics (ONS)