

# **1 Preface**

This volume contains the full computer tabulations for the 2017 Half 2 (H2) Technology Tracker study, which has been run by Saville Rossiter-Base on behalf of Ofcom. The objective of the survey is to track the attitudes and behaviour of the general public with respect to the residential telecommunications market as well as broadcasting more generally.

Quadrangle Operations interviewed a quota sample of 2,861 adults, aged 16+, in the UK. Interviews were carried out across 231 different sampling points in the UK, face-to-face, in-home. All interviews were conducted between 1<sup>st</sup> July and 31<sup>st</sup> August 2017.

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, and weighting procedures are outlined in the following pages. A note on statistical reliability is also included. 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 SEG) 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 and rural/urban:

- firstly, all the SUs were sorted by region,
- the SUs were then sorted 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 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. Quotas were set using 2011 Census data for Great Britain and Northern Ireland.

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

## Fieldwork

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 H2 2016, all interviews were conducted in the home, using pen and paper. A trial of the CAPI (Computer Assisted Personal Interviewing) method of interviewing was conducted for the H2 2016 fieldwork.

For the fieldwork conducted from H1 2017 onwards, it was decided to conduct all of the 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.

## Reporting

The sample is drawn on the basis of households within SUs, while quotas are set on the basis of 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, plus satisfaction of landline, mobile and internet provider services.

Other questions asked may vary wave on wave.

# Weighting

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

<b>Figures are based on UK adults</b>	<b>% Weighted</b>	<b>% Unweighted</b>
	Profile	Interviews achieved
Gender – Male 16+	49%	48%
Gender – Female 16+	51%	52%
Age – 16-34	31%	30%
Age – 35-54	34%	36%
Age – 55+	35%	33%
SEG – AB	27%	23%
SEG – C1	27%	30%
SEG – C2	22%	22%
SEG – DE	25%	25%
Working Status – working	58%	53%
Working Status – not working	42%	47%
Region – London	12%	9%
Region – South East	14%	10%
Region – East of England	9%	10%
Region – South West	8%	9%
Region – East Midlands	7%	9%
Region – West Midlands	9%	9%
Region – Yorkshire & Humber	8%	9%
Region – North East	4%	3%
Region – North West	11%	6%
Region – Scotland	9%	9%
Region – Wales	5%	9%
Region – Northern Ireland	3%	9%
Cable	48%	45%
Non cable	52%	55%

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. 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 July/ August 2017 fieldwork.

## 2 Appendix B – Quotas

The following quotas were set at the outset of the project:

<b>Adults 16+</b>	<b>Quotas set</b>	<b>Interviews achieved Jul-Aug 2017: Weighted</b>	<b>Interviews achieved Jul-Aug 2017: Unweighted</b>
Gender – Male	49%	49%	48%
Gender – Female	51%	51%	52%
Age – 16-24	15%	14%	15%
Age – 25-44	33%	34%	34%
Age – 45-64	32%	31%	32%
Age – 65+	20%	20%	19%
SEG – AB	22%	27%	23%
SEG – C1	31%	27%	30%
SEG – C2	21%	22%	22%
SEG – DE	26%	25%	25%

### 3 Appendix C - 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 size<sup>1</sup> (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	2,861	2,350
URBANITY: RURAL	2,382	1,976
URBANITY: URBAN	479	395
GENDER: MALE	1,375	1,126
GENDER: FEMALE	1,486	1,225
AGE: 16-24	377	311
AGE: 25-34	403	337
AGE: 35-54	947	793
AGE: 55-64	410	343
AGE: 65+	723	537
SEG: AB	648	558
SEG: C1	858	715
SEG: C2	619	501
SEG: DE	728	588
HOUSEHOLD INCOME: UNDER £10.4K	189	156
HOUSEHOLD INCOME: £10.4K-£15.5K	198	174
HOUSEHOLD INCOME: £15.6K-£25.9K	275	229
HOUSEHOLD INCOME: £26K+ <sup>2</sup>	700	609
WORKING: YES	1,485	1,234
WORKING: NO	1,373	1,153
MOBILE PHONE USER	2,674	2,206
INTERNET ACCESS AT HOME	1,477	2,077

<sup>1</sup> Effective Sample Size shown as Effective Weighted Sample in the data tables produced

<sup>2</sup> Household income categories were amended from the H1 2017 wave of interviewing in line with those used by The Office for National Statistics (ONS)

The table below illustrates the required ranges for different sample sizes and percentage results at the “95% confidence interval”:

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**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%
	±	±	±	±	±
2,350 (Total)	1.2%	1.7%	1.9%	2.0%	2.1%
1,126 (GENDER: MALE)	1.8%	2.4%	2.7%	2.9%	3.0%
715 (SEG - C1)	2.2%	3.0%	3.4%	3.7%	3.7%
395 (URBANITY: RURAL)	2.8%	3.7%	4.3%	4.6%	4.7%

For example, if 30% or 70% of a sample of 2,350 gives a particular answer, the chances are 95 in 100 that the “true” value will fall within the range of  $\pm 1.9$  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 have to 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:

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**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%
	±	±	±	±	±
1,126 vs. 1,225 (Male vs. Female)	2.4%	3.2%	3.7%	4.0%	4.0%
558 vs. 715 (SEG AB vs. C1)	3.3%	4.4%	5.1%	5.4%	5.5%