
Online Nation

Annex 1: Methodology

Contents

Section

1. Research sources (internal and external)	1
2. Adjustments for CPI	8
3. Other third-party sources	9

1. Research sources (internal and external)

Ofcom Technology Tracker

The technology tracker is a face-to-face in-home survey run once a year with c. 3,900 adults. It provides us with continuous understanding of consumer attitudes and behavior in the UK communications markets, helping us to monitor change and assess the degree and success of market competition. The data collected are weighted to the profile of UK adults, so the data are representative of adults aged 16+.

The Technology Tracker provides data on:

- Take-up of devices
- Take-up of telephony and broadband services
- Activities conducted on mobile phones and the internet
- Take-up of pay-TV services
- Use of video-on-demand services
- Take-up and listenership of radio, including digital radio
- Bundling of services

Ofcom Media Tracker

The media tracker survey is run throughout the course of the year to counter potential seasonality issues and is reported on an annual basis on a sample of 2,386 adults including 1,100 face-to-face respondents (54%) and 1,286 online respondents (46%). The research provides Ofcom with a valuable source of information on consumers' attitudes and helps inform Ofcom's work on broadcasting standards.

Ofcom Adult Media Literacy Tracker

The Adults Media Literacy Tracker is a face-to-face survey run once a year between October-November, among c.1,900 adults aged 16 and over. The objective of the survey is to provide detailed evidence on media use and understanding among adults aged 16+. The data are weighted to the national UK profile.

Ofcom Communications Market Report

The Communications Market Report (CMR) is an annual publication providing data and commentary on key market developments in the UK communications sector. The narrative and interactive reports contain data and analysis on broadcast television and radio, fixed and mobile telephony, internet take-up and consumption, and post.

We publish the CMR to support Ofcom's regulatory goal to research markets constantly and to remain at the forefront of technological understanding. The report addresses the requirement to

undertake and make public our consumer research (as set out in Sections 14 and 15 of the same Act).

Ofcom Adults' Media Lives

The Adults' Media Lives study was 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 19 individuals over time and interviews them on camera each year about their media habits and attitudes.

Ofcom Children's Content Review – Life on the small screen: What children are watching and why.

40 children and young people aged between 4 and 16 took part during winter 2018. Respondents were from a range of locations across England, Scotland, Wales, and Northern Ireland. Each child completed a seven-day media diary. Objective data, including 'watch histories' and app usage statistics, was also collected from devices. Finally, researchers spent time in each household conducting interviews. Unless otherwise specified, the data cited for 'children' relates to youngsters aged 5-15.

Ofcom Children and Parents Media Use and Attitudes

The Media Literacy Tracker with children and parents is an annual quantitative tracking survey that provides detailed evidence on media access, use, attitudes and understanding among children and young people aged 5-15, as well as detailed information about media access and use by young children aged 3-4. The survey also includes findings relating to parents' views about their children's media use, and the ways that parents seek – or decide not – to monitor or limit use of different types of media. In 2018, fieldwork ran from April-June; 1,430 face-to-face in-home interviews with parents of 5-15s and children aged 8-15 were conducted, along with 630 interviews with parents of children aged 3-4.

Ofcom News Consumption Survey

The News Consumption Survey utilizes a mixed methodology which includes c.2,200 face-to-face and c.2,400 online interviews among adults aged 16+, as well as around 1,000 online interviews among children aged 12-15. The survey is carried out in two waves; in November-December and March-April. The data is weighted to correct for over-representation in the Nations, with weights applied to age, gender and SEG within Nation to match known population profiles. A final weight step is taken to calibrate between the face-to-face and online adult interviews.

Ofcom Online Harms research (Ofcom-ICO research)

The Online Harms research is a face-to-face survey which was run from 23 February- 31 March 2019, among a representative sample of c.2,000 UK adult internet users aged 16 and over. The research

also included a representative online survey among c. 1,000 UK children aged 12-15 which ran over the same period. Quotas were set and on weighting applied (to the adults survey) on age, gender, region, social grade and urbanity.

Ofcom Search questionnaire research

The search research was a survey conducted online amongst a UK representative sample of 2,131 members of Populus' online panel member aged 16+ to better understand how UK internet users search and discover content and information.

Quotas were set on age, gender, region and social grade. The data was then weighted in order to bring the sample into line with the profile of the population.

Ofcom Telecommunications Data Revenues

Quarterly updates tracking key trends emerging from the data we collect on the UK telecommunications sector including fixed voice services, mobile services and fixed broadband. Figures are compiled from information collected from UK telecoms providers, supplemented with Ofcom estimates for providers that do not submit data.

TouchPoints

TouchPoints is an annual survey commissioned by the Institute of Practitioners in Advertising (IPA). With a sample of approximately 6,000 adults 15+ across Great Britain, it uses a seven-day diary to capture media consumption and other daily activities every half hour. It also uses a self-completion questionnaire which includes attitudinal statements.

BARB

Broadcasters' Audience Research Board (BARB) is a panel of approximately 5,100 homes providing the official broadcast TV measurement for the industry.

RAJAR

The Radio Joint Audience Research (RAJAR) is the official body in charge of measuring radio audiences in the UK and is owned and controlled by the industry. The overall adult 15+ sample is about 100,000 each year, with each respondent participating for only one week.

UKOM (Comscore)

The UK Online Measurement Company (UKOM) was formed in 2009 with a mandate from the advertising industry to establish measurement standards for digital media. UKOM appointed Comscore as its exclusive partner for online media audience measurement in the UK in 2012. We have used three of the Comscore products:

1. For analysis of laptop and desktop computer internet activity only, we use Comscore Media Metrix (MMX) which employs Comscore's Unified Digital Measurement (UDM) methodology, explained below.
2. For analysis of mobile internet and app activity only, on Android and iOS smartphones, iPads and Android tablets, we use Comscore Mobile Metrix, which also employs Comscore's Unified Digital Methodology for Android and iOS smartphones and iPads. Android tablet use is captured on tagged entities.
3. For analysis of internet activity across platforms, we use Comscore MMX Multi-Platform which provides metrics on desktop video.

Comscore's Unified Digital Methodology (UDM) combines panel and census measurement techniques to obtain digital audience measurement statistics. UDM uses Comscore's UK measurement panel to determine audience reach and demographics. Census-level activity is captured from publishers' digital content, such as on websites, videos, and computer and mobile applications. Comscore combines census-level data with those captured from the panel to help provide a more accurate view of audiences and their consumption habits. This approach allows Comscore to capture more accurate consumption activity from publishers, and attribute this to audience demographics in a way that is not affected by cookie deletion, blocking, or rejection.

In September 2017 Comscore updated the source for its UK universe estimates from National Readership Survey to the Audience Measurement for Publishers study run by The Publishers Audience Measurement Company. The Enumeration source is the data that Comscore use to produce universe estimates for Audience Analytics products. The change affects the UK universe estimates in Comscore MMX Multi-Platform, MMX, Video Metrix and Mobile Metrix products. The enumeration study change will result in trend shifts for UK Audience data. Data changes will vary by entity and platform.

Comscore does not measure online activity via a TV set.

App Annie

App Annie provide mobile app analytics data on how apps and markets are performing, platforms and key metrics across the app lifecycle — from downloads to retention.

The publisher and app rankings reported in the App Annie 2019 State of Mobile, where the data is sourced for this report, are based on the download, consumer spend and usage estimates available through App Annie Intelligence.

- App Annie 2019 State of Mobile consumer spend rankings are based on consumer spend that the iOS App Store and Google Play earned from paid downloads and in-app purchases. They do not include consumer spend earned from in-app advertising.
- Top companies in Games are ranked by downloads and consumer spend in the Games category only, while top publishers in Apps are ranked by downloads and consumer spend in categories outside of Games.
- In the iOS App Store, an app can be categorized under a Primary Category as well as an optional Secondary Category. If an app has a Primary Category of Games and a Secondary

Category of Entertainment, it is a candidate to be included only in the Games tables of the App Annie 2019 State of Mobile. If the app's Primary Category is Entertainment and its Secondary Category is Games, it is a candidate to be included only in the Apps tables within this report.

- Download rankings are based on individually downloaded apps and exclude app downloads when included in bundles. Consumer spend rankings are based on consumer spend from individually downloaded paid apps as well as in-app purchase consumer spend from both individually downloaded apps and app bundles.
- Consumer spend is gross spend – the sum of payments made before Apple or Google takes a fee. iOS App Store and Google Play share of consumer spend on apps varies, but is generally 30%.
- For publishers acquired by another company during 2018, downloads and consumer spend are attributed to the new parent company from the start of the calendar month after the acquisition occurred.
- Occasionally, a publisher may decide to shift an existing app from one category to another category. In these cases, the App Annie 2019 State of Mobile ranks that app based on its app store categorization at the time of writing.
- Monthly Active Users (MAU), download and consumer spend rankings in this report are based on unified apps made possible by App Annie's exclusive DNA. In unified apps, similar versions of the same app with different names and on different platforms are unified.
- Top apps and games usage rankings exclude pre-installed apps as well as apps published by platform owners and downloaded to devices running their OS (such as Google Translate on Android phone and GarageBand on iPhone). However, downloads from apps published by platform owners are included in the calculations of company rankings.
- Note that the ranking approach used in the App Annie 2019 State of Mobile differs from that used in the iOS App Store. In the latter, app rankings for a given category will include all apps whose Primary Category or Secondary Category matches that given category. Therefore, an app can appear in the rankings for more than one category within the iOS App Store.
- App Annie Usage Intelligence data for iPhone and Android phone were derived from mobile usage data collected from a large sample of real-world users, combined with additional proprietary data sets.
- An active user is defined as a device having one or more sessions with an app in the time period. A single person may be active on multiple devices in any time period, and, therefore be counted as one user per device in the total active users.
- A session as defined in this report is the period for which a user has a given app open in the foreground with the screen on. Background data usage does not contribute to session length.
- QSR apps were identified from the Food and Drink category on iOS and Google Play.

Crownpeak

Crownpeak is a software company specialising in data and content management solutions. Its [Trackermap](#) maps the tags hosted by a site, allowing businesses to audit the vendors who have access to data through their site. It scans URLs¹ to identify the tags present in a website's HTML code, simulating a user accessing a page for the first time on a desktop computer.

For this report, Crownpeak scanned a list of URLs provided by Ofcom, broadly in line with the top ten search, social media, news, e-commerce and entertainment sites and services listed in our 'The online consumer' chapter. Some sites were amended to better reflect a variety of sites within each category or recent developments such as site closures (e.g. in entertainment or social media).

All URLs were scanned on 6 and 7 May 2019. Crownpeak provided a breakdown for each site of total unique tags, the number of 'piggybacked' tags,² and the numbers of tags by the categories ad, analytics, privacy, publisher, tracker, widget and unclassified. A list of the tags, and their owners where identified, which appeared on each site was also provided. Some sites returned no results/tags (which may be due to it blocking the scanner or not calling tags until a user has logged in), while some sites redirected to cookie consent notices rather than loading the URL directly. The numerical results within each genre were averaged, while the list of tag owners was compiled in a word cloud.

Crownpeak website: <https://www.crownpeak.com/>

Oliver and Ohlbaum (O&O)

Strategy consultancy Oliver and Ohlbaum (O&O) was engaged to provide revenue data and market insights for eight key UK online sectors including search, social media, (free) video, news, shopping, entertainment, gaming, and online directories. O&O also provided estimates on revenues derived in each sector by device type and business model, as well as data at a global level for each sector.

The eight sectors were sized by segment (revenue from advertising, subscription, transactional, public funding or other sources) at a global and UK-level using a variety of approaches:

- A top-down approach, whereby existing data from key industry data sources such as PwC and Zenith was generally used to estimate segment sizes
- Where this data was unavailable, a bottom-up approach, focusing on the revenues of the largest market participants, was used to develop estimates

In each case, the combined total of each of the applicable revenue segments gave the total market size.

Estimations of revenues by device were based upon a quantification of the level of transaction activity likely to take place on a particular device type, rather than being based on the volume of a service's consumption via a particular device type.

In some cases, O&O used data from existing sources to break down revenue categories by device. In others, O&O used a range of estimation techniques depending on the sector and revenue category in question.

For the sizing of UK-derived company revenues for the top-40 UK online properties, as well as the breakdown of these figures by business model, O&O developed estimates through parent company filings and geographic reporting (where available). This included, where appropriate, filings to the UK's Companies House, and documentation provided to the United States Securities and Exchange Commission.

Where this information was unavailable, a proxy company of the same size and the same sector, was used to guide estimation of UK-derived revenues.

2. Adjustments for CPI

Throughout the report we have adjusted figures for inflation, in line with standard Ofcom practice to represent all monetary figures in real terms. We use figures available from the Office for National Statistics. The table below sets out CPI rates used in this report:

Year	Annual CPI adjustment
2013	1.08
2014	1.06
2015	1.06
2016	1.05
2017	1.02
2018	1.00

3. Other third-party sources

The Online Nation provides an in-depth study of how people use the internet, both in the UK and the UK in a global context, as well as how people are served by internet content and services. To do this, Ofcom references publicly-available information and third-party data sources throughout the report. Third-party data providers cited in Online Nation include:

Advertising Association/WARC

AGCOM

Akamai Technologies

Ampere Analysis

Analysys Mason

Cisco Visual Networking Index

Crunchbase

Digital Trends

eMarketer

Forbes

GP at Hand

Graphtreon - <https://graphtreon.com/> - collection, analysis and publication of data and charts on Patreon campaigns

IAB UK - IAB /PwC 2018 Digital Adspend Study

IAB US

Information Commissioners Office (ICO)

Internetlivestats.com

JEMSU

McKinsey insights

New York Times

Office for National Statistics

Plum Consulting report for DCMS

Press releases, blogs, earnings reports and other publicly available corporate information

Scrapehero

Tech Crunch

uSwitch

Wordstream