This note outlines the key advantages of adopting an online panel methodology and explores issues relating to the representativeness of such an approach.

1. The advantages of an online panel approach.

Over the last five to ten years there has been massive growth in the use of online panel research. It is fast becoming, in many countries around the world, the most popular research methodology. The key advantages of this approach are relatively clear and generally agreed across the industry. They are:

- **Lower cost** - online research relative to face-to-face, telephone and postal methodologies is generally less expensive for the same size of sample and length of interview.
- **Greater speed** - large samples can be contacted much more quickly and online approaches offer the possibility of very fast turnaround surveys and polling.
- **Greater interactivity and use of visual stimuli** - online surveys allows research that is more visual, flexible and interactive. Respondents can easily be shown web-pages, images and video within an interview.
- **Avoidance of social desirability effects** - the absence of an interviewer means a greater degree of honesty regarding questions that may have a social desirability element. This has been shown in many areas of health care and public policy research – for example, disease rates are much closer to the known rates when using properly designed Internet studies than when done either via the telephone or face to face.
- **Possibilities for complex routing** - is possible even without the presence of an interviewer. In other self-completion surveys routing within a questionnaire needs always to be kept to a minimum, to avoid respondent confusion. Since questionnaire routing in an online survey can be fully automated, any level of complexity can be accommodated without the risk of respondent error.

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1 ESOMAR Global Market Research Report Series
• **Greater convenience and satisfaction for the respondent** - arguably online research also provides a better respondent experience since participating can be fitted in at a time to suit the respondent.

### 2. The possible limitations.

**How do online providers ensure robustness of data?**

A set of guidelines relating to online surveys has been developed by [ESOMAR](https://www.esomar.org). ESOMAR’s [Guidelines for Conducting Market Research Using the Internet](https://www.esomar.org), covers all kinds of online research not just online research through access panels. However, to supplement this, ESOMAR has developed a series of **28 questions** that research buyers might wish to ask of potential online access panel suppliers.

These questions helpfully cover the key aspects of panel composition and data quality control that any client is likely to need to consider. These should be borne in mind when considering using an online approach.

**How representative will the data be?**

This complex question has been broken down into two key sub-questions, as follows:

**How does the online population differ from the whole UK population?**

The latest available data from [Ofcom](https://www.ofcom.org.uk) shows that 80% of the UK population had access to the Internet at home by Q1 2014 and that the ways in which people are connecting to the Internet continues to evolve, with 57% saying that they personally use their mobile phone to access the Internet (up from 49% the previous year.) However, the figure still varies substantially by key demographics.

**Age**

There are large differences between the younger and older age groups: 94% of those aged between 16 and 24 had access to the Internet, while only 32% of those aged 75 and over had access. There are also differences in terms of smartphone usage, with 88% of 16-24 year olds reporting that they have a smartphone, compared with only 25% of those aged 55 and over. Despite these differences, much of the growth in Internet take-up appears to have taken place among older age groups, for example take-up amongst 65-74 year olds rose from 51% in 2010 to 67% in 2014.

**Socio-economic group**

There are also strong differences between levels of home Internet take-up between socio-economic groups. Over nine in ten (93%) ABs report having a
broadband connection; this drops steadily to 88% of C1s, 80% of C2s and 67% of DEs. Data on ownership of smartphones by socio-economic group shows fewer differences with 69% of ABC1s having a smartphone compared with 51% of C2DEs (with the latter having increased from 30% in 2012.

**Disability**
Disabled people appear to have lower levels of Internet access, 48% of disabled people are offline.³

**Ethnic Group**
The latest (2013)⁴ report from Ofcom regarding media take-up amongst ethnic minority groups shows that black and minority ethnic (BME) groups in the UK have higher Internet take-up than the population as a whole. This stems partly from demographic differences - the BME population is, as a whole, younger and some communities are heavily concentrated in London (for example, the Bangladeshi community) and have a higher income profile (for example, Asian Indians.) Internet take-up rates outlined at this time were as follows:

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Internet take-up (2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All UK adults</td>
<td>71%</td>
</tr>
<tr>
<td>White British</td>
<td>70%</td>
</tr>
<tr>
<td>White Other</td>
<td>75%</td>
</tr>
<tr>
<td>Asian Indian</td>
<td>82%</td>
</tr>
<tr>
<td>Asian Pakistani</td>
<td>73%</td>
</tr>
<tr>
<td>Asian Bangladeshi</td>
<td>75%</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>71%</td>
</tr>
<tr>
<td>Black African</td>
<td>76%</td>
</tr>
</tbody>
</table>

However, having said all of this the differences in take-up by different demographics do not need to be a key issue since panellists are recruited according to strict quotas, to ensure that the overall panel offers a good representation of the demographics required.

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³ Data taken from Raceonline2012:

⁴ http://stakeholders.ofcom.org.uk/binaries/research/cmr/ethnic-minority-groups/ethnic-minority-groups.pdf
**How representative of the wider population are online panels?**

This is perhaps the most hotly contested issue of recent years in the market research industry. Numerous papers in industry journals attempt to address this question. A large number of paired comparisons have been undertaken to try to ascertain the relative strengths and weaknesses of online panel samples compared to more traditional methods.

It is important to understand that all surveys are susceptible to errors from many different factors and causes. These are summarised in Figure 1.

**Figure 1 – Survey Error**

![Survey Error Diagram]

When thinking about how representative an online panel sample may be, of the wider population, we are essentially considering aspects of non-observation error.

Errors of non-observation are errors caused by the fact that the sample does not include all of the groups who are present in the population we are trying to represent. The first type of non-observation error is coverage error. In terms of Internet panels this relates first to the proportion of the population who do not have online access. We have already seen that some groups within the population have lower levels of Internet penetration than others. In addition we must consider that...
some groups within the population will not be represented online at all, for example, frail elderly people in care homes, homeless people etc. Furthermore of course, not everyone who is on the Internet is invited to or agrees to become part of an online panel, in fact only a small minority will do this.

Non-response error is the error that arises from the fact that even those that are included in the sample will not all respond. As with all surveys (whether online or via traditional methods) it is difficult to rule out non-response bias with regards to a survey, since we cannot be sure that those who respond are not in some unknown way different, to those who choose not to.

There are therefore, in summary, three main issues relating to error from non-observation - first, of course, they can reach only those who are online; second, they can reach only those who agree to become part of the panel; and, third, not all those who are invited respond.\(^5\)

However, it could be argued that online panel surveys are not so very different from traditional methods, given that large sections of the public essentially rule themselves out of all surveys, and these people may also have a different profile from those who do take part. Online panel surveys can match demographic profiles in exactly the same way that all traditional quota-sample surveys do. Data can then be weighted (within reason) to compensate for any small differences in profile.

This is satisfactory and tends to work well at the overall population level. However, there may remain questions within sub-groups. Whilst an online panel can adequately include the right number of people aged 65+, for example, analysis of sub-group data for this group alone may need to be treated with some caution as those who are online are proportionately less and may differ to a larger extent from the norm for their group.

In addition, it is widely accepted that there are certain survey questions that it will never be appropriate to ask online when you are trying to represent the population as a whole – the main one of these is technology use. Not surprisingly, people on online panels make much greater use of all sorts of technology than is seen in the wider population.

Much has been made in the UK of polling company YouGov’s record of accuracy in predicting voting behaviour using an online panel. In particular they stood out against other polling company results in successfully predicting a win for Boris Johnson in the 2008 London mayoral elections. YouGov’s success in conducting

polling of this nature has given strong credence to the suggestion that online panels can be just as representative of the general population’s views as other, more traditional, methods.

We should be cautious in accepting this at face value. YouGov have refined and developed their weighting approach for predicting voting intention over a number of years. They weight their data not only on demographic profiles but also by attitudinal and related factors, including newspaper readership and previous voting patterns. They have been able to adjust their approach over a period of many years, and calibrate and test the accuracy of their results against actual voting patterns. Where no such calibration is possible, because a new or different area or issue is being researched, there remains a risk that measures from an online panel will be less reliable than other methods.

These issues are summarised well on the Ipsos-Mori website: "In short, the usefulness of an online survey will depend entirely on who and what is being measured, the use to which results are being put and what is being claimed for their accuracy and representativeness."  

Reg Baker of Market Strategies International went further in his paper to the Online Research: Now & Next 2011 Conference by saying, simply: “Survey results using non-probability online panels should not be characterized as ‘representative.’” He went on to say: “It is essential that we are completely transparent with clients about the weaknesses in online panels and validate our results against other more established sources of information.”

But does this mean that online samples have no value? This would surely be counter intuitive, many researchers have been routinely using online data to represent the views and behaviours of wider populations for many years and we have no evidence that the resulting marketing, communications and policy decisions have been misdirected as a result. Most researchers inherently now trust such data as much as they would data from more traditional sample sources.

A particularly useful and relevant paper in considering this question is a paper to the 2011 Annual Market Research Society conference: “Survey methods in an age of austerity: Driving value in survey design”, delivered by Joel Williams of BMRB, which described recent efforts to calibrate online access panel samples to gold standard samples like the British Crime Survey (BCS).

6 Taken from: http://www.ipsos-mori.com/researchpublications/publications/235/Survey-Methods-At-Ipsos-MORI.aspx?view=print#notes

7 Online Panels: Where do we go from here? Reg Baker, Market Strategies International
His paper draws the following important conclusions (the below is a short summary version of the paper’s conclusions):

- Calibrating online panel data is not a simple case of adjusting for non-coverage of home Internet access. Those people on online panels are not representative even of those with Internet access.
- Demographic weighting does not eradicate differences between the online panel and probability sample estimates. However - with the exception of technology usage - most of the online panel estimates are in the same ballpark and will suffice when a high level of accuracy is not required.
- The correlations (or relationships between different variables within a survey) are similar, whether drawn from the online panel or the probability sample. Online panels appear to be a fairly safe way of generating statistics such as correlation and regression coefficients, rank orders and so on. Potentially estimates of change (e.g. over time) will also be sound, explaining some of the success online panels have had in predicting election results. The real problem is with generating absolute figures.
- Some of the observed differences may be partly the effect of using a different method and not just the result of a biased online panel sample. In some cases, the self-completion mode would be expected to produce the more honest answer.

3. **Our conclusions.**

- Findings from online panel surveys cannot be taken as being directly and, in simple terms, representative of the wider population. Sample error from such surveys is not measurable.
- However, the methodology is widely proven, extensively utilised and increasingly trusted in both political polling and in broader market research and engagement activities.
- Where the exact accuracy of absolute figures is not a vital requirement for a research project, the results from a well-managed online panel will provide valuable data that is helpful to decision-making.

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