Quota sampling – a guide

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Our motivation

- Quota sampling increasingly used by government analysts

- Academic papers abound …

… but analysts need a quick 'how to' guide, not a theoretical treatise

- Extensive consultation has conclusively shown that … agreeing a simple guide is not simple, as the issues are complex and controversial
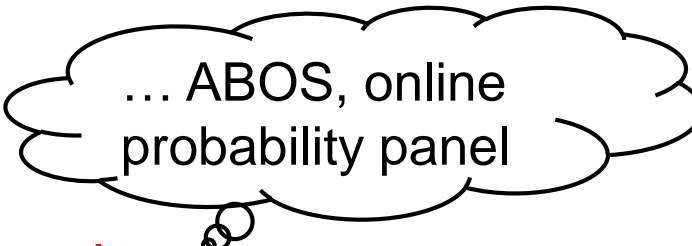
Our result

- We have produced a short guide to:
    - sampling methods
    - issues with sampling
    - reporting on quota samples
    - deciding between sampling methods

- This guide (available on request) represents our views alone – we welcome any feedback

- The following slides are only a quick peek!

Probability sampling – what is it?

- All respondents have a known probability of being selected (not necessarily non-zero)

- Types:
  - SRS, systematic, pps, clustered, multi-stage

- Issues:
  - sampling frame, non-response, time, cost

Probability sampling – what is it?

- All respondents have a known probability of being selected (not necessarily non-zero)

- Types:
  - SRS, systematic, pps, clustered, multi-stage

- Issues:
  - sampling frame, non-response, time, cost

… ABOS, online probability panel

Quota sampling – what is it?

- A non-probability sampling method, where respondents have an unknown probability of being selected. The survey is designed to interview quotas of different types of respondent.

- Issues:
  - bias, limitations in reporting and testing results

Best practice for quota sampling

- When it should be used
    - when there are compelling reasons not to use probability sampling
    - when a 'broad brush' answer or preliminary information prior to probability sampling is needed

- How it should be used
    - with carefully designed quotas using existing data
    - with properly trained interviewers
    - with post-hoc weighting to known population totals
    - with appropriate reporting of results …

How to decide?

- No 'golden rule' … but 4 golden questions to help guide you:
  1. How are the results going to be used?
     - Use a quota sample if … aim is a broad brush picture
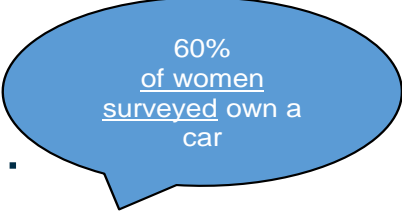   - Use a probability sample if … aim is precise estimates

How to decide?

- No 'golden rule' … but 4 golden questions to help guide you:
  1. How are the results going to be used?
  2. Are conclusions needed about the wider population?
     - Use a quota sample if … no, or only indicative needed
     - Use a probability sample if … yes, ie firm conclusions

How to decide?

- No 'golden rule' … but 4 golden questions to help guide you:

  1. How are the results going to be used?

  2. Are conclusions needed about the wider population?

  3. Are there technical reasons preventing probability sampling?

     - Use a quota sample if … there is no* sample frame or non-response bias was expected

     - Use a probability sample if … the opposite!

How to decide?

- No 'golden rule' … but 4 golden questions to help guide you:

    1. How are the results going to be used?

    2. Are conclusions needed about the wider population?

    3. Are there technical reasons preventing probability sampling?

    4. How much scope is there for collecting a good quality quota sample?

        o Use a quota sample if … good population knowledge exists or research is focussed on a narrow policy area

        o Use a probability sample if … limited population knowledge exists or research covers a broad area

Reporting do's and don'ts

- What can be said about the population as a whole?
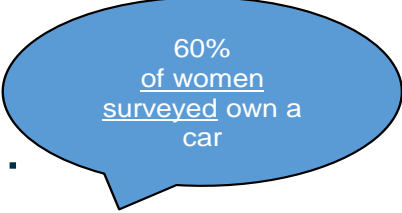 - Do say …

  60%
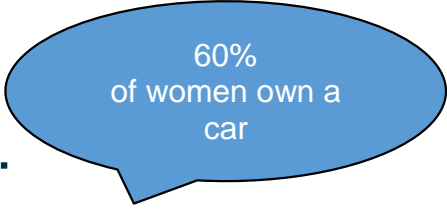 of women
  surveyed own a
  car

Reporting do's and don'ts

- What can be said about the population as a whole?
  - Do say … 60% of women surveyed own a car   Don't say… 60% of women own a car
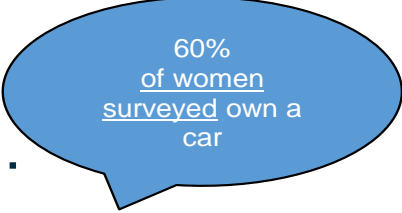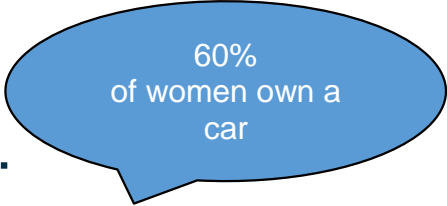
Reporting do's and don'ts

- What can be said about the population as a whole?
  - Do say … **60% of women surveyed own a car**   Don't say… **60% of women own a car**

- Are the results statistically significant?
  - Do say … **Of those surveyed, men (65%) were more likely to own a car than women (60%)**

Reporting do's and don'ts

- What can be said about the population as a whole?
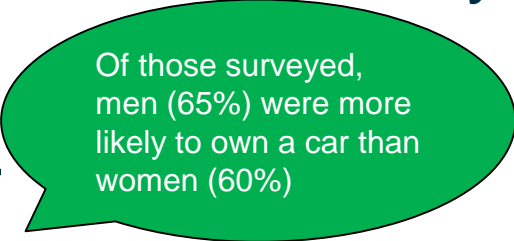
  - Do say … 60% <u>of women surveyed</u> own a car   Don't say… 60% of women own a car

- Are the results statistically significant?

  - Do say … Of those surveyed, men (65%) were more likely to own a car than women (60%)   Don't say … Men (65%) are significantly more likely to own a car than women (60%)

Reporting do's and don'ts

- ## What can be said about the population as a whole?
  - Do say … *60% of women surveyed own a car*   Don't say… *60% of women own a car*

- ## Are the results statistically significant?

  - Do say … *Of those surveyed, men (65%) were more likely to own a car than women (60%)*   Don't say … *Men (65%) are significantly more likely to own a car than women (60%)*

- ## Can confidence intervals be used?
  - Do say … *Due to using a quota sample , confidence intervals are unknown*

Reporting do's and don'ts

- What can be said about the population as a whole?
  - Do say … *60% of women surveyed own a car*   Don't say… *60% of women own a car*

- Are the results statistically significant?
  - Do say … *Of those surveyed, men (65%) were more likely to own a car than women (60%)*   Don't say … *Men (65%) are significantly more likely to own a car than women (60%)*

- Can confidence intervals be used?
  - Do say … *Due to using a quota sample , confidence intervals are unknown*   Don't say … *Results show a 95% confidence interval for women owning a car is (57%, 63%)*

Closing remark – does it make sense?

- Have you explored all options around a probability sample?

- Do your users understand the limitations of a quota sample?

- How can you ensure your quota sampling approach is as good as possible?

- Who will benefit most from your decision? You?