

Issues of Coverage and Sampling in Web Surveys for the General Population: An Overview

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An initiative by the Economic and Social Research Council, with scientific leadership by the Institute for Social and Economic Research, University of Essex, and survey delivery by the National Centre for Social Research.

### Context I: Motivation

Motivation for considering web:

- Cost reduction compared to other modes; vs.
- Coverage/ participation enhancement.

Different motivations tend to suggest rather different designs:

- Single-mode vs. mixed mode;
- Sequence of mixed mode.

The coverage and sampling issues may differ between these types of design

## Context II: Longitudinal

#### Longitudinal surveys:

- Possible to achieve many of the advantages of including web without including it at recruitment wave;
- Possible to collect information to aid targetting and contacting at subsequent waves (web use, email addresses, etc) – for mixed mode designs;
- Consequently sampling issues may be no different from those for surveys not including web;
- Focus shifts to costs, participation by web, and measurement.

## Context III: Single Mode vs Mixed Mode

#### Mixed mode:

- May offer sampling and coverage solutions that are not possible with single-mode;
- (Though there may be disadvantages in terms of measurement, complexity, etc).

#### Single mode:

Coverage issues require either costly solutions or heroic assumptions.

## Coverage Issues with Single Mode Web

#### A. Restrict survey to web users:

- Obvious cost advantages;
- Non-random under-coverage: requires evaluation and adjustment.

#### Or B. Find a way to include non-web users:

- Requires provision of hardware, software and training;
- Various models, e.g. LISS, KnowledgePanel, GIP, ELIPSS.

# Coverage Issues with Mixed Mode including Web

Alternative solution to including non-web users is to allow them to participate in a different mode:

- May have cost advantages compared to providing equipment

  depends on frequency/pature of data collection, etc.
  - depends on frequency/nature of data collection, etc;
- May have measurement disadvantages.

#### Various designs possible:

- Web + mail, based on mail-only approach;
- Interviewer-administered recruitment, followed by web+mail, web+phone, or other mixes;
- More options are feasible in longitudinal context.

## Sampling Issues with Single Mode Web

No general population frames with email addresses, therefore first approach must be by a different mode.

For frames without names, mail approach requires selfadministered respondent selection:

 This is error-prone if paper-based and may cause dropout if web-based.

Interviewer-administration preferred but costly.

Alternatively, use non-probability recruitment methods (opt-in panels) and model-based inferential paradigm.

# Sampling Issues with Mixed Mode including Web

Frames with partial information can be used (e.g. email addresses for a subset) – but none yet in UK.

Instead, single-mode initial approach needed:

- Mail approach, with web+mail data collection, may offer lowcost solution of reasonable quality in some situations;
- In UK, this design may work with named-person frames such as admin records, but is hampered by the need for respondent selection for general population surveys;
- Interviewer approach and respondent selection may be preferable, but only cost-effective for longitudinal surveys.

### Conclusion

- Limited options for sampling frames and sampling methods in UK constrain the use of web.
- Mail approach may be promising, but only for named-person samples (not an option for general population).
- Otherwise, interviewer approach necessary, which is not costeffective for cross-sectional surveys.
- Prospects for web data collection would change if a population register were to be introduced but seems very unlikely!
- Attraction of non-probability methods likely to remain.



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