Respondent Centric Survey Design and Data Collection – Transformed Labour Force Survey

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Talk outline

Part 1 – Survey Design

- What is the purpose of the Transformed Labour Force Survey?
- Survey Design – sample, collection modes
- Return rates

Part 2 – Implementation of an Adaptive Survey Design

- Why use an Adaptive Survey Design?
- How was it developed?
- How was it implemented?
- Initial findings

Part 1 – Survey Design

Colin Beavan-Seymour

What is the Transformed Labour Force Survey?

- A new survey which will collect data on key labour market measures
- Developed with a respondent centric approach
- Qualitative and quantitative research
- Online first

- A rationalisation and redevelopment / rethink of how to measure core labour market concepts
- Extensive qualitative research with members of the public, interviewers, data users

The journey so far…

Tests 1 & 2
Online response rates
Engagement strategies

Test 3
Mixed mode (online & F2F)
Statistical outcomes

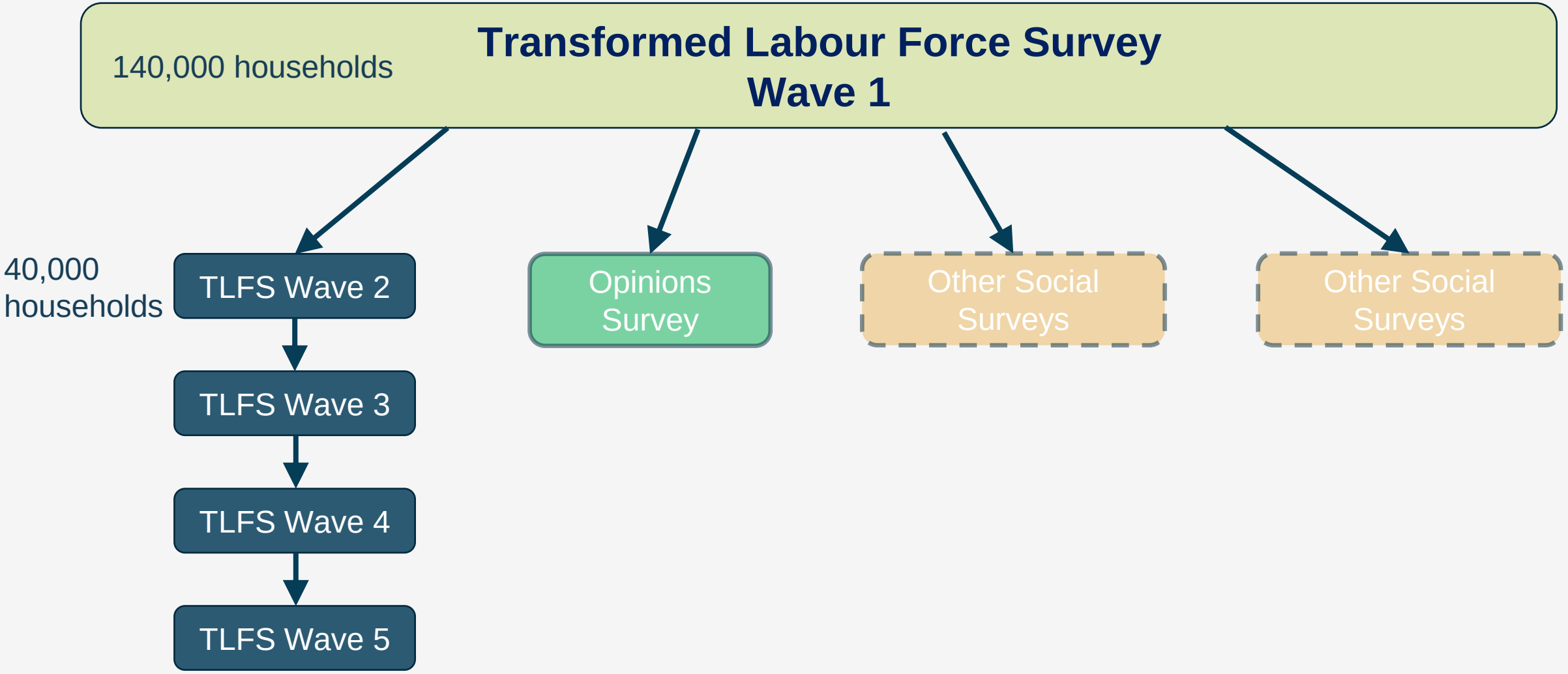
Test 4
Online attrition test – response rates across 3 waves

TLFS Beta
Online only in response to pandemic

Addition of Telephone
Online & telephone collection

Knock-to-nudge
Using an Adaptive Survey Design

Sample Design



What data did this give us?

- A return rate (complete returns & partials) of around **37.5%** - a great start!
- However, we were still seeing similar biases in the responding sample that other voluntary surveys in the UK were experiencing, despite the online mode and user-centric design:

- A large proportion of respondents were **over 55**, many over 65 – fewer respondents of working age, more economically inactive
- A majority of respondents **owned their homes**, many without a mortgage or loan
- Respondents with a **white ethnic background** comprised the vast majority of the data, under-representation from other ethnic backgrounds
- The vast majority of data was from the **online mode** – only a small percentage was from telephone collections

- The 2018 test indicated that interviewers visiting households can increase response from under-represented areas
- But… with a large scale survey of over 500,000 a year… *how can we increase the quality of the data collection but keep the cost of the operation down?*

Part 2 – Adaptive Survey Design

Maria Tortoriello

What is an Adaptive Survey Design (ASD)?

In November 2022 we implemented an ASD for the TLFS.

- What is an ASD?
  - ➢ Dividing a sample into smaller groups that have similar characteristics (segmentation)
  - ➢ Applying alternative survey design features for different groups:
    - modes, materials, incentives
  - ➢ Objective is to improve targeted survey outcomes
    - reduce bias, reduce costs

Why use an Adaptive Survey Design?

- TLFS data collection strategy same for all sampled addresses = no adaptive survey design
- Experiencing differential non-response bias which affects estimates
- Statistical processing enables weighting of sample to account for some bias, but confidence in estimates would only improve with higher quality input data.

- Next step for TLFS was to introduce additional modes - Face to Face follow up
- One size does not fit all!
- ASD allows you to target the right respondents in the right way, rather than targeting all respondents in the same way = more efficient use of field resources

How was the Adaptive Survey Design developed?

- Closely followed work of Statistics Netherlands (Schouten, B *et al.)*
- A key objective of ASD is to divide the sample into strata in order to define targeted protocols for each of the strata
- A logistic regression model was applied to historical TLFS data to identify auxiliary variables strongly associated with response to formulate the ASD strata.
- Variables considered were **Index of Multiple Deprivation (IMD), Urban/Rural Classification, Country of Birth, Age & Ethnicity** (limited by available data).
- Derived and examined **CV, R-Indicators and Partial R-Indicators** to identify the variables and categories of variables driving variation in response propensities
- Strongest predictors of response:

  - **Age (<45)**
  - **Urban/Rural Classification (Urban)**
  - **Index of Multiple Deprivation (IMD deciles 1-4)**

Constructed 8 strata based on these variables

ASD: Iteration 1

- Potential to include numerous interventions in the ASD (e.g. mode, incentive, materials..)
- Keeping it simple with 1 intervention = ‘Knock to Nudge’ (KtN) follow up
- ASD will target KtN data collection at under-represented strata based on response propensities in order to reduce the variation in response propensities for a selected set of auxiliary variables.

- STRATA 1 = Urban, less deprived areas, 45+
- **STRATA 2 = urban. more deprived areas, 16-44**
- **STRATA 3 = urban, less deprived areas, 16-44**
- **STRATA 4 = urban, more deprived areas, 45+**
- **STRATA 5 = non-urban, more deprived areas, 16-44**
- STRATA 6 = non-urban, more deprived areas, 45+
- STRATA 7 = non-urban, less deprived areas, 16-44
- STRATA 8 = non-urban, less deprived areas, 45+

high priority strata

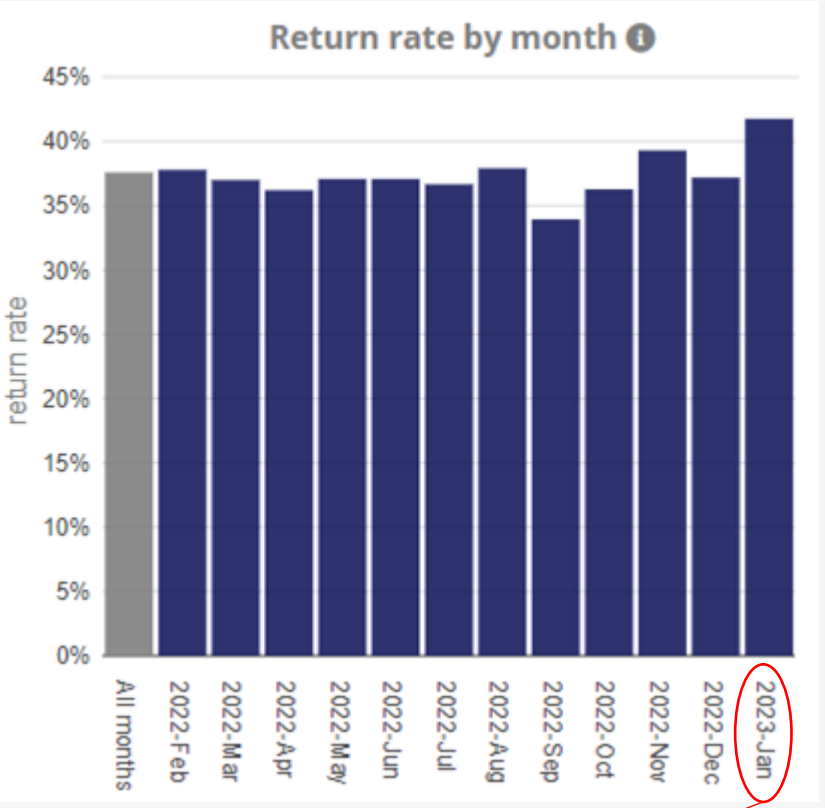
- This will ensure that data collection resources are used in the most efficient way whilst increasing response from historically underrepresented population groups.

ASD Optimisation approach

- We are following a structured ‘trial and error’ approach to optimising our ASD.
- The optimum solution is unknown and experimental testing is needed
- Start with a simple design that can be accommodated using existing systems
- Document, evaluate, learn, extend…
- Grow – add features to the ASD as technical and admin systems improve over time

Early results

- ASD Evaluation project - ongoing
  - **Operational evaluation** – evaluating optimal set up of KtN
    - Optimal number of visits = 2/3
    - Best days to make contact: Monday, Tuesday, Sunday
    - Best time of day to make contact between 3pm-8pm
    - KtN not working as well in London and North West regions
  - **Data quality evaluation**
    - Improving variability in response across strata
    - Small improvements in representivity of data
      - Statistically significant increase in response from 'hard to reach' groups



Thank you for listening!

Any questions?

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