Using cost modelling in the 2021 England and Wales Census to inform design decisions

Cal Ghee, Office for National Statistics

Meeting of the Group of Experts on Population and Housing Censuses
28 - 30 September 2016
Overview

- Importance/purpose of cost modelling
- 2021 Census overview
- Areas of cost modelling
  - Field staff allocation
  - Self-response
  - Paper capture
  - Coding
- Next steps
Importance/purpose of cost modelling

- Better information for scrutiny of business case
- Informing the design
- Understand impacts if assumptions made are not met in operation
- Informing decisions to out-source services
- Feeding into cross-cutting transformation services
2021 Census – main areas of change

- Online questionnaire
- Digital inclusion
- Follow-up
- Operational management
- Data processing
- Census outputs
Relative number of field staff needed for a given desired response rate, 2011

Costs in 2011:
£75m (15%) field pay
£31m (6%) recruitment, training

Factors include:
- Day 10 response rate
- Target response rate
- Success at contact
- Visits per day
- Expected return rates over time

Quality objective: 94% response rate
Expected versus live return profile – understand impact of interventions
Three examples going forward for 2021

- Cost per household with and without field follow-up, online and paper
- Tipping point for data entry method
- Coding savings
The need to provide some paper first

Minimum saving per household from not having to make a field visit

If someone can’t / won’t respond online (or needs help)

1. Online response, no follow-up
2. Paper response, no follow-up
3. Online response, after field follow up
4. Paper response, after field follow up
Paper capture – tipping point where scanning becomes more cost effective

Keying alone cheaper

Scanning cheaper at 5%
Coding

- Online questionnaire – opportunity to improve quality and reduce cost
  - self-coding by respondent
  - clarification questions only where necessary

- But with some development could reduce costs even further?
  - only online coding?
  - only a validation sample of paper responses?
Individual Questions

What is (was) your full and specific job title? Please enter below:

Bar

- Baby-sitter
- Bailiff
- Baker
- Bank teller
- Barber
- Barista
- Barrister
- Bicycle repairer
- Biochemist
- Blogger
- Boat captain
- Boat designer
- Builder
- Bus driver

Briefly describe what you do (did) in your main job. Please enter below:
Self-coding occupation – tipping point?

Depends on the investment needed into self-coding facility

Amount of saving

* assuming 100% of paper responses manually coded plus 1% of online self-response not on coding frame
What happens next

Continue to monitor and review assumptions

Update assumptions as testing confirms design

Volumetrics
Thank you.

Comments, questions?