Statistics Canada’s Experiences in Planning, Costing, Managing and Assessing Data Collection of Multi-mode Social Surveys

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Delivering insight through data for a better Canada
Impacting factors (*planning assumptions*)

- Sample size
- Frame
  - EQ and CATI completion rates – and expected response rate
  - Efficiency / Productivity / Hit rate
- Average time by interview
- Average time before the interview for respondents
- Average time for non-response and voids

- Survey design and allocation
- Collection strategy
  - Including reminder strategies and length of collection period
- Topics

*Most planning assumptions interact on each others to impact positively or negatively on response rate for a fix budget*
Budget simplified

<table>
<thead>
<tr>
<th>EQ respondents</th>
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<tbody>
<tr>
<td>System time (hours) before CATI interview (all codes except 400 for CATI respondents) (X)</td>
</tr>
<tr>
<td>System time for nonrespondents and voids (Z)</td>
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</tbody>
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- **Y = Interview System Time (hours)**
  - \((\text{Expected Average CATI interview time} \times \text{Expected Number of CATI respondents}) / 60\)

- **X + Z = Non-interview time by CATI cases (hours)**
  - For Rapid Stats: \((\text{Total number of expected CATI cases} \times 8 \text{ minutes}) / 60 – \text{Avg. 5 calls}\)
  - For other surveys: \((\text{Total number of expected CATI cases} \times 14.4 \text{ minutes}) / 60 – \text{Avg. 9 calls}\)
  - On average 1.6 minutes by unsuccessful calls

- **Data Collection Hours**
  - \((X + Y + Z) / 60 \% \text{ (ratio system time / collection hours)}\)
Observations

- Four categories of surveys: Rapid Stats, RTF(telephone frame), DUF(dwelling frame), and other including surveys (e.g., area frame as LFS) – including survey with tracing
  - Each type has a different budgeting pattern

- The observed average time for interview is often very different than the one planned
  - Under estimated / Over-estimated
  - In general, close for other Rapid Stats

- The observed number of CATI interviews is always lower than expected

- With few exceptions, EQ completion rates and the number of EQ respondents is always higher than expected
  - That did help in many instances to reach target response rate within the budget
What we know so far

- **Response rate**
  - Rapid Stats 48%-52%, Target respondent, 47%-53%, more variation among RTF (45%-55%) – Topic?

- **EQ completion**
  - 26%-32%

- **CATI completion**
  - 18%-22%, higher for some surveys

- **Productivity**
  - 25%-35%- depends of survey length (duration)

- **Observed average non-interview time by CATI cases**
  - (Total CATI system time - Interview system time) / total number of CATI cases
  - Vary from 4-6 minutes for rapid stats
  - Vary from 14-16 minutes for other surveys
  - The expected number of calls can also be estimated

- **Ratio system time / collection hours**
  - For legacy surveys (and current budget template) - ratio is 75%
  - For CMP, this ratio is often in the 56%-62% range
Impact of some planning assumptions on response rate for a fixed budget

- **Hit rate**
  - Higher hit rate will decrease the response rate (for a fix number of CATI completes)
  - Hit rate is linked to the frame and its quality,
  - Often not able to identify out-of-scope in the field (e.g. no contact cases)

- **EQ completion**
  - Lower EQ completion put more pressure on CATI (less effort on average on each cases/more CATI cases)
  - Higher EQ completion put less pressure on CATI (often de case)

- **CATI completion**
  - Lower CATI completion will decrease response rate if it is not compensate by EQ completion
Impact of some planning assumptions on response rate for a fixed budget

- Average interview time
  - Longer interview will decrease the amount of effort (and then response rate) that can be used to get cooperation before interview or to confirm a non-response or out-of-scope

- Observed average non-interview time by CATI cases
  - On average 1.6 minutes by unsuccessful calls e.g., 6 minutes is ending up with 3.5 calls by CATI cases, which makes sense for 8 collection days (rapid stats)

- Productivity
  - Lower productivity will impact negatively response rate

Most planning assumptions interact on each others to impact positively or negatively on response rate for a fix budget
For more information, please contact
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