



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

François Laflamme

UNECE 2021



Delivering insight through data for a better Canada



Statistics
Canada

Statistique
Canada

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

EQ respondents	
System time (hours) before CATI interview (all codes except 400 for CATI respondents) (X)	System time for CATI interviews (code 400) (Y)
System time for nonrespondents and voids (Z)	

□ $Y = \text{Interview System Time (hours)}$

- $(\text{Expected Average CATI interview time} * \text{Expected Number of CATI respondents}) / 60$

□ $X + Z = \text{Non-interview time by CATI cases (hours)}$

- For Rapid Stats: $(\text{Total number of expected CATI cases} * 8 \text{ minutes}) / 60$ – Avg. 5 calls
- For other surveys: $(\text{Total number of expected CATI cases} * 14.4 \text{ minutes}) / 60$ – Avg. 9 calls
- On average 1.6 minutes by unsuccessful calls

□ $\text{Data Collection Hours}$

- $(X+Y+Z) / 60$ % (ratio system time / collection hours)

Observations

100

- ❑ 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
 - $(\text{Total CATI system time} - \text{Interview system time}) / \text{total number of CATI cases}$
 - 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***



100

For more information, please contact
Pour plus d'information, veuillez contacter

François Laflamme
Francois.laflamme@canada.ca



Statistics
Canada

Statistique
Canada

Canada