CENSUS • RECENSEMENT

Use of Administrative Data in the Canadian Census

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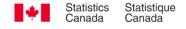






Outline

- 1. Introduction to the Canadian Census of Population
- 2. Statistical Contingency Plan for the 2021 Census
- 3. Increased Usage of Administrative Data for the 2026 Census
- 4. Final Remarks







1. Introduction to the Canadian Census of Population

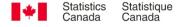
- The Canadian Census of Population aims to enumerate and to collect information on the entire population of Canada every five years
 - Full field enumeration is conducted → Traditional Census
- Short form and long form questionnaires
 - Short form questions on basic socio demographic information and languages (100% of population)
 - Long form (25% sample in the 2016 and 2021 censuses): dwelling characteristics and additional demographic and socio-economic characteristics on individuals
- Collection:
 - Collection modes: mail out, list leave and canvasser
 - Various field operations conducted to ensure appropriate dwelling classification and response level
 - Non Response Follow Up (NRFU)





1. Introduction to the Canadian Census of Population

- Coverage Studies: measured through 3 statistical activities
 - Dwelling Classification Survey (DCS): follow-up operation to estimate and correct for misclassification of dwellings on Census Day
 - Census Coverage Measurement Program: Main sources of information are administrative data
 - Census Undercoverage Survey (CUS) which was formerly known as the Reverse Record Check: estimates the
 population missed by the Census using various administrative data sources and to create an independent
 frame and follow-up with survey information
 - Census Overcoverage Study (COS), estimates the population enumerated more than once mostly a linkage exercise
- Census of population direct use of administrative data
 - Income and some immigration variables
 - Disruption of collection, e.g. wildfires in northern region

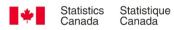






2. Statistical Contingency Plan for the 2021 Census

- In the event that COVID-19 or other disasters prevented the traditional census from a satisfactory enumeration
 - Statistics Canada developed (and eventually implemented) a "statistical contingency plan" based on the use of administrative data for post-collection imputation of 2021 Census non-responding households
 - Note that the contingency plan used data already provided to Statistics Canada, and meets the highest standards of privacy, confidentiality and data security.
 - Statistical models (see paper for details on the models) were used extensively to form households from individual government-provided administrative information (e.g., tax records) and quality indicators were developed to determine household eligibility for inclusion in imputation processes.

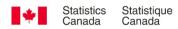






2. Statistical Contingency Plan for the 2021 Census

- 2021 Census had a successful enumeration, with 98% of Canadians responding to the census.
 - Widespread use of the contingency plan was not necessary
 - Administrative data were used to support the imputation of non-responding households for some localized areas of the country that had response rates well below the national rates.
 - 1,045 collection units (out of 49,000 in Canada) showed a response rate below 90%.
 - Dwellings that had good quality administrative data were in-scope.
 - About 12,000 non-responding households representing less than 0.1% of occupied private dwellings in Canada.







2. Statistical Contingency Plan for the 2021 Census

- Impact of the pandemic on census response rates was unknown in the planning stage
 - Simulations were conducted and showed reduced bias in estimates compared to the existing donor imputation methods when nonresponse increased.
 - Further, the most gain was found in geographical areas where the response rate was lower than 90%.
 - Imputation of 2021 Census non-responding households was done after other collection activities had ceased





3. Increased Usage of Administrative Data for the 2026 Census

- The 2026 Canadian Census of Population will still be a traditional census
- Objective for 2026:
 - Leverage 2021 success and continue to provide very high-quality data, maintain cost effectiveness on a perdwelling basis, pay more attention to its environmental (carbon footprint and paper consumption) impact, and earn and maintain citizen trust by providing very high levels of service and reducing burden
 - Look at ways to increase the use of administrative data and identify more efficiencies in 2026 while maintaining the highest quality standard expected from the census.
- Significant census tests will be conducted in 2024
 - Currently under development





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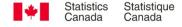
- How ?
 - Operational efficiencies during the NRFU
 - Various models could be used to reduce field efforts away from some in-person activity (classification of dwelling)
 - Optimizing NRFU activities by using signal from good administrative data
 - Post-collection: Imputation of non-responding households
 - Mainly used in mail out areas in 2021; extend to non-mailout in 2026





3. Increased Usage of Administrative Data for the 2026 Census

- Social and stakeholder acceptability
 - Maintaining and increasing the trust of Canadians is essential
 - One risk lies in its social acceptability from the public, the stakeholders and the data users.
 - Understanding of the social acceptability is a prerequisite for any change to census collection methods
 - A comprehensive consultation plan is being developed
- Impact on the current undercoverage estimation quality
 - Impact on the design-independence of the undercoverage program if
 - Same information are used for the purpose of the census, as well as for the measurement of undercoverage
 - Administrative data sources that would be used for the imputation may also be used in the Census Undercoverage Survey (CUS)







4. Final Remarks

- Census Program has a dedicated team (Census Futures) to develop a future model for the census
- Combined census is being considered for post 2026
 - Research is on-going and various combined census models are being studied, as well as evaluation of appropriate coverage studies.
- 2026 Census: to the extent possible, test components of a combined census



THANK YOU / MERCI

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