Adjusting Canada's estimates of returning emigration in the context of COVID-19 by integrating flight and Registration of Canadians Abroad (ROCA) data

Julien Bérard-Chagnon

Statistics Canada

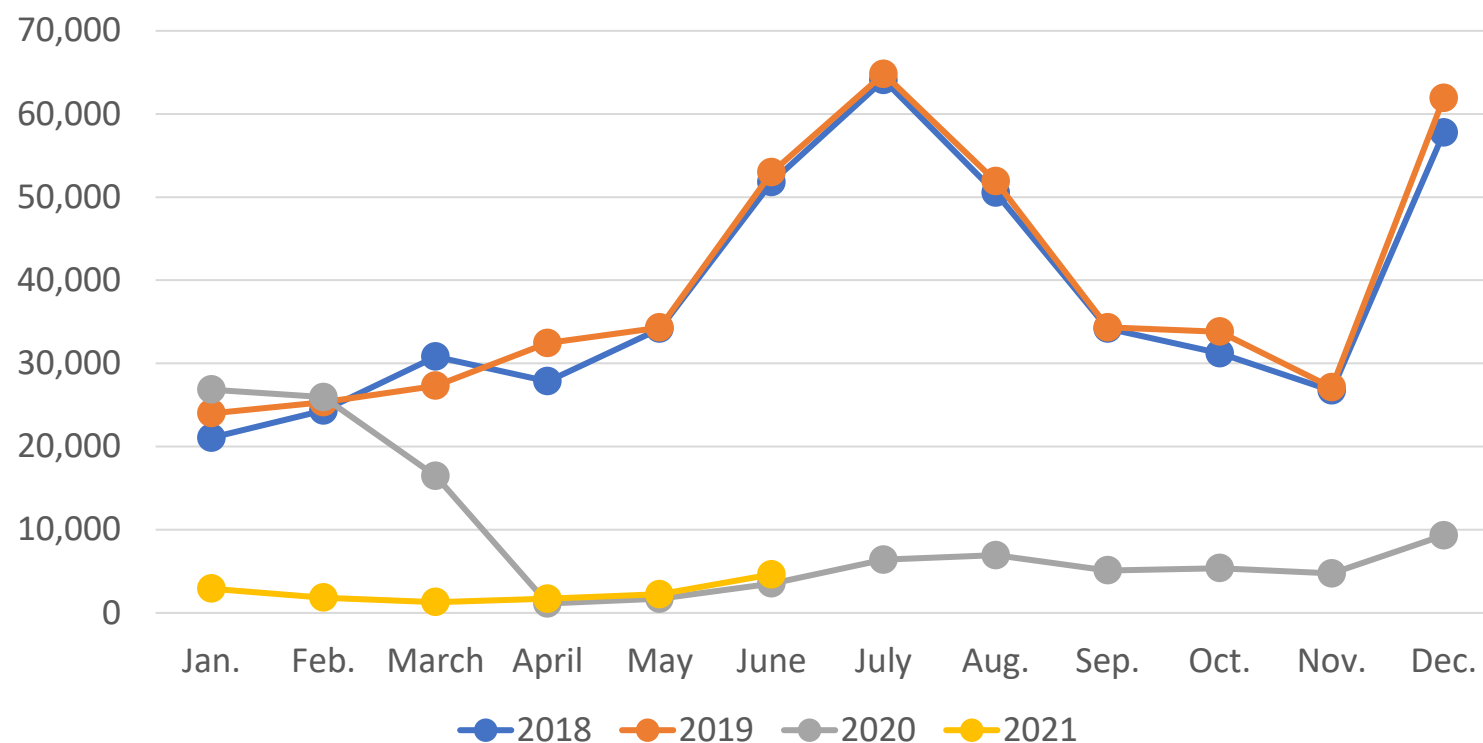Delivering insight through data for a better Canada

The issue: measuring Canadian returning emigration in the context of COVID-19

- StatCan releases quarterly **preliminary** estimates **3 months after the end of the reference period**

- Returning emigrants: **Canadian citizens** or **immigrants** having previously emigrated who subsequently returned to establish a permanent residence in Canada (subset of emigration)

- Usual method: Canada Child Benefit (CCB) data (tax data) + demographic models

- Data lag 2 years
  - Assumption: past trends are continuing

- Assumption less realistic in the context of COVID-19

- StatCan adjusted its models to take into account the current context

The solution: using flight and Registration of Canadians Abroad (ROCA) data to adjust our methodology (1)

- Primary Inspection Kiosks (PIKs): electronic means to collect declaration information in most major Canadian airports
  - Canada Border Services Agency (CBSA)

- Very current microdata available

- Very recent (early 2018, no time series), not all border crossings (only air), intention of residence in Canada and duration abroad unknown

- Potential returning emigrants: **Canadian citizens** who reported **residing abroad**

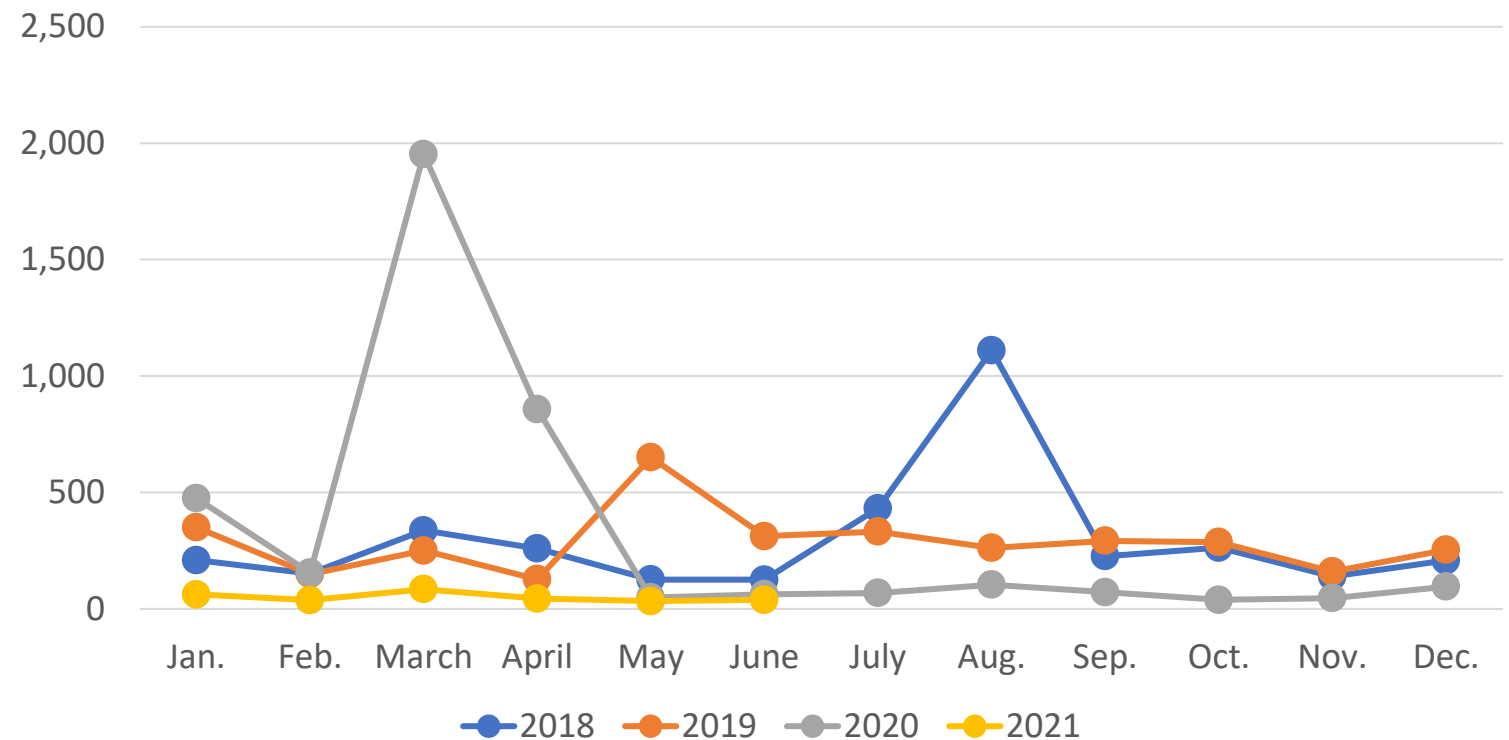PIK potential returning emigrants (Canadian citizens residing abroad

Note: PIKs were gradually introduced at major Canadian airports. In order to obtain a consistent time series, the entries included in the graph are only from airports with these kiosks as of January 2018.

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The solution: using flight and Registration of Canadians Abroad (ROCA) data to adjust our methodology (2)

- Registration of Canadians Abroad (ROCA): free service for citizens through which the government notifies its nationals in case of emergencies
  - Global Affairs Canada (GAC): https://travel.gc.ca/travelling/registration
  - Dates of registration, departure and return, country of destination, etc

- Very timely, info on country of destination, dates of registration, departure and return

- Small numbers, coverage very low and that changed with COVID

- Returning emigration = 1) returning after **365+ days abroad 2) if registered before departure**
  - Assumption : Date of return to the country is a migration
  - Allows us to divide between travelers and migrants
  - Allows us to consider the increase in coverage.

Individuals registered in ROCA (registration before departure) who returned after a trip abroad of 365+ days
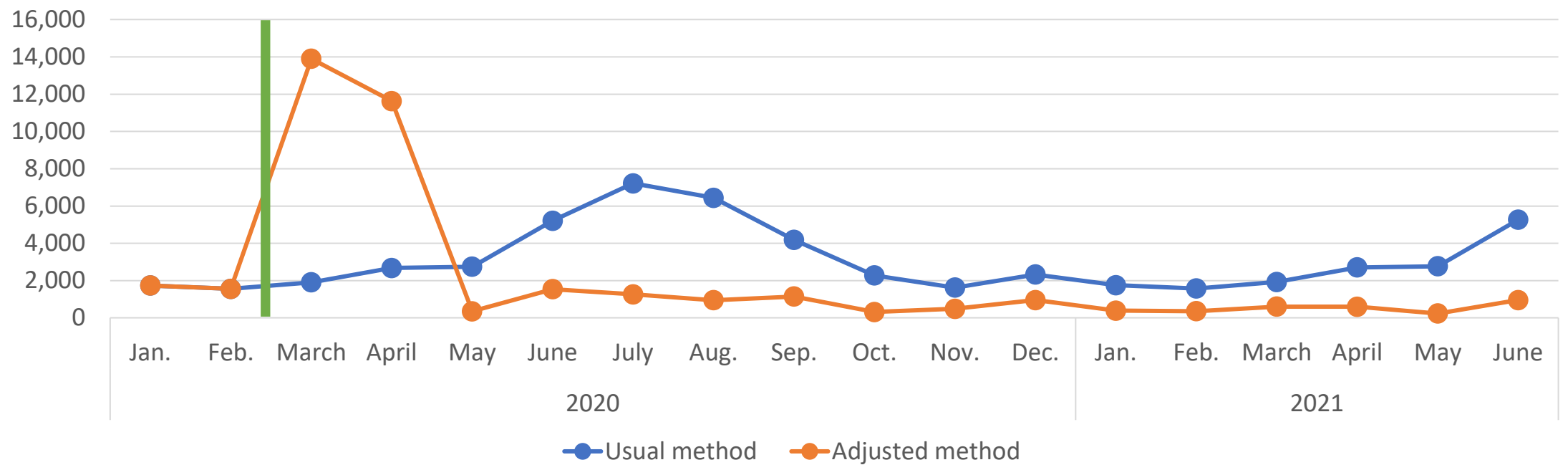

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The solution: using flight and Registration of Canadians Abroad (ROCA) data to adjust our methodology (3)

- Integrating 3 sources

- Usual method
  - Baseline
  - Proven method that is documented and accepted by users

- Flight data (PIKs)
  - Very timely
  - Decent coverage
  - Conceptually limited
    - Canadian citizens residing abroad landing in Canada (migrants or visitors???)

- Registration of Canadians Abroad (ROCA)
  - Very timely
  - Low coverage
  - Conceptually appropriate
    - Returning after 365+ days abroad

The results: adjusted data show a marked increased in spring 2020 followed by a strong decrease consistent with COVID

Estimates of the number of returning emigrants, usual method and adjusted method

The results: publication of special technical documents

- Highlight our decision to adjust or not our models for each component of demographic growth (births, deaths, immigration, etc).

- Published two versions in 2020

Demographic Documents
Technical Supplement: Production of Demographic Estimates for the First Quarter of 2020 in the Context of COVID-19
Release date: June 18, 2020   ℹ More information   ⬇ PDF version

- https://www150.statcan.gc.ca/n1/pub/91f0015m/91f0015m2020001-eng.htm

Demographic Documents
Technical Supplement: Production of Demographic Estimates for the Second Quarter of 2020 in the Context of COVID-19
Release date: September 29, 2020   COVID-19: A data perspective   ℹ More information

- https://www150.statcan.gc.ca/n1/pub/91f0015m/91f0015m2020002-eng.htm

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Some lessons learned

- Data integration: maximizing the strengths of each source. Internal consistency could be an issue. Need to understand both the data and the subject-matter. Press review.

- Interpretability: simpler models are easier to understand given the uncertainty of the estimates

- Timeliness: increasingly relevant to users (internal and external)

- National partnerships: good relationships with partners were useful to get data and answers in a timely fashion

- Transparency: technical documents and presentations were very well received by users

- Methods: created a momentum to acquire new data and develop new models. Need to keep this momentum going

Thank you for your virtual attention! Merci beaucoup pour votre attention virtuelle! ☺

- Julien Bérard-Chagnon
- Senior Demographer
- Centre for Demography
- Statistics Canada
- Julien.berard-chagnon@statcan.gc.ca

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