Adjusting Canada’s estimates of emigration in the context of COVID-19 using U.S. visa data

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

- Citizens + immigrants who have left Canada to establish a permanent residence in another country
- Very challenging to measure accurately
- Compute monthly data published 3 months after the end of reference period
- Usual method: Canada Child Benefit (CCB) data (tax data) + yearly U.S. Department of Homeland Security (DHS) data + demographic models
- Data lag 2 years
  - Assumption: past trends are continuing
- Assumption less realistic in the context of COVID-19
The solution: using U.S. visa data to adjust our methodology

- Most Canadian emigrants move to the U.S.
- Monthly immigrant visas issued by American consulates in Canada
  - Very timely
  - Show a change in trends in 2020
  - Already use some DHS data
- Publicly available from the U.S. Department of Homeland Security (DHS)
- Discussions and aggregated data exchanges with the U.S. Census Bureau

Source: U.S. Department of State, Bureau of Consular Affairs.
Integrating US visa data in our usual method

1. Monthly ratio between usual method and VISA data for 2017-2019:
   \[ RAT(m,y) = \frac{EMI_USUAL(m,y)}{VISA(m,y)} \]

2. Take the average of the monthly ratios:
   \[ RAT_AVERAGE(m) \]

3. Apply monthly ratios to 2020 VISA data beginning in March.
   \[ EMI_ADJ(m,2020) = RAT_AVERAGE(m) \times VISA(m,2020) \]
The results: adjusted data show a decrease consistent with COVID that is not seen using the usual 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 for each release of 2020 (2 so far)

[Links to technical documents]
- https://www150.statcan.gc.ca/n1/pub/91f0015m/91f0015m2020001-eng.htm
- https://www150.statcan.gc.ca/n1/pub/91f0015m/91f0015m2020002-eng.htm
Some lessons learned

• Interpretability: simpler models are easier to understand given the uncertainty of the estimates
• Timeliness: increasingly relevant to users (internal and external)
• National partnership: good relationships with partners were useful to get data and answers in a timely fashion
• International partnership: discussions with the U.S. Census Bureau were very useful and notably led to aggregate data exchanges (mirror statistics)
• Transparency: technical documents that 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! 😊

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