



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

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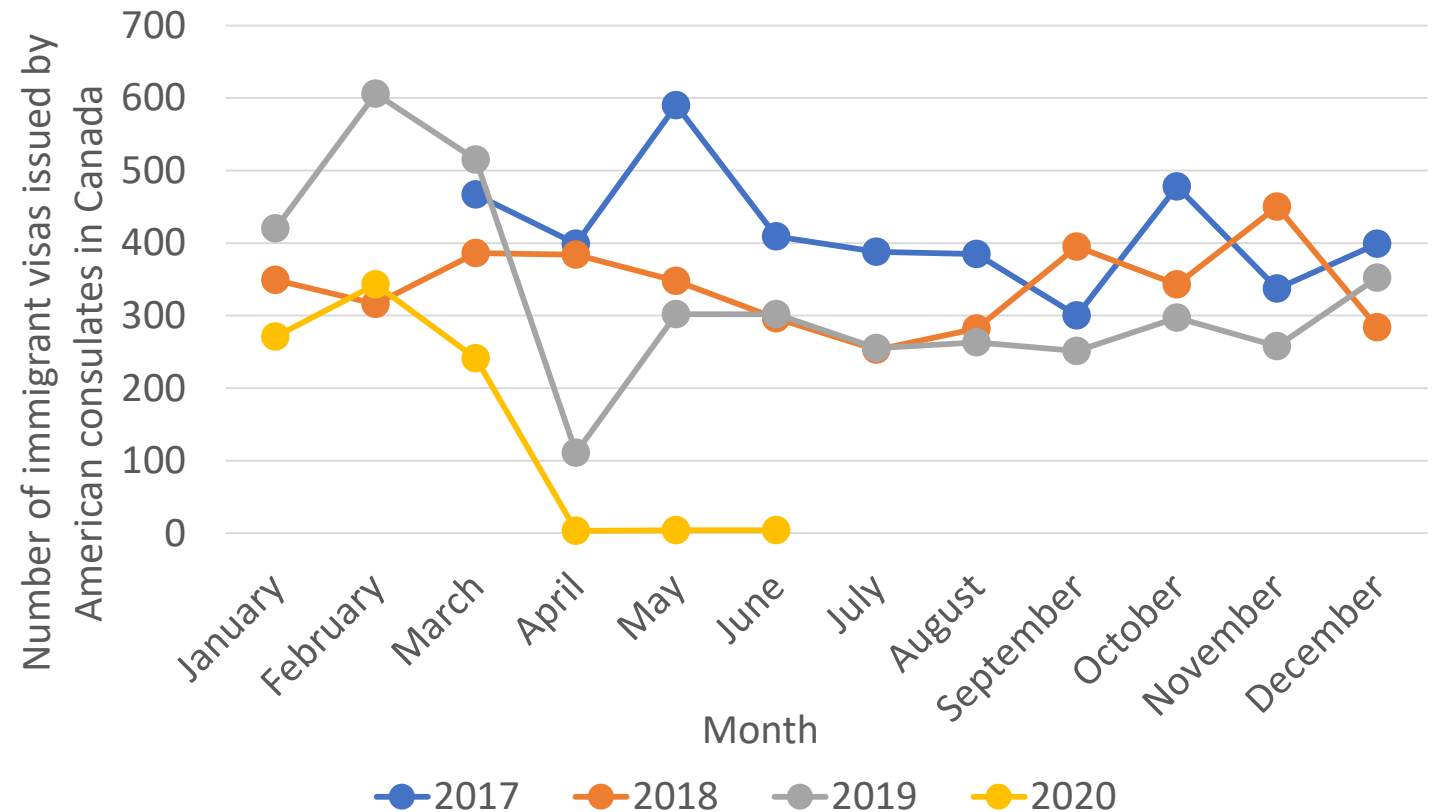
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The issue: measuring Canadian emigration in the context of COVID-19

- 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:

$$RAT(m,y) = EMI_USUAL(m,y) / VISA(m,y)$$

2. Take the average of the monthly ratios:

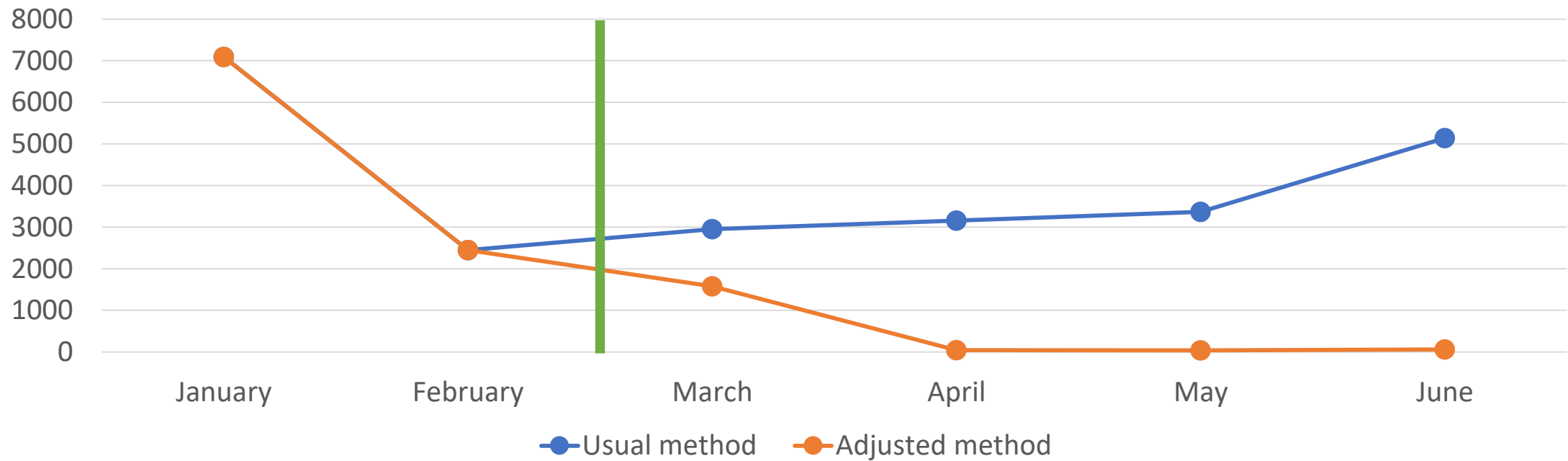
$$RAT_AVERAGE(m)$$

3. Apply monthly ratios to 2020 VISA data beginning in March.

$$EMI_ADJ(m,2020) = RAT_AVERAGE(m) * VISA(m,2020)$$

The results: adjusted data show a decrease consistent with COVID that is not seen using the usual method

Preliminary estimates of the number of emigrants



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)

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

[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 [More information](#)

- <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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