Leveraging U.S. Federal Statistics to Inform Census Bureau Migration Estimates during the COVID-19 Pandemic

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Introduction

- The need for timely and accurate data on international migration became more urgent during the COVID-19 pandemic starting in 2020. However, there are many challenges with migration data.

- U.S. administrative records on international mobility exist in a decentralized statistical system:
  - Data exchanges are not timely due to bureaucratic hurdles for creating and enforcing inter-agency agreements.
  - Federal agencies use different definitions and reporting periods.
  - Data are fragmented and not representative of all international migrants.

- The American Community Survey (ACS) is a large household survey released once a year that provides comprehensive data on immigration:
  - Migration data are lagged, which prevents an analysis of current year’s trends.
  - In 2020, COVID-19 disruptions to survey operations led to exceptionally high non-response bias.

- The Census Bureau’s Population Estimates Program (PEP) typically uses ACS data because of similar universe and coverage with the population census, though residence definitions differ.

- However, COVID-19 prevented the use of usual data and methods for 2020 and 2021.
Benchmark Database

• In response to this challenge, PEP developed the Benchmark Database, which compiles published statistics from various agencies to forecast the PEP series for the COVID-19 period (three examples shown here).

• Use of published statistics can be more timely than inter-agency data exchange. One-year data lag is reduced to one month in some cases.

• However, there are limitations:
  • Published statistics are intended to be administrative metrics, not migration measures.
  • Confounds mobility for migration. Requires subject matter expertise to identify files and carefully evaluate for fitness of use.
  • Often difficult to find published files. Only available as national aggregate statistics.
Benchmark Components of Foreign-Born Immigration

- Compiled 10 benchmark components of foreign-born movement to the U.S.
- Not an exhaustive list but covers most categories of the foreign born who reside in the U.S. most of the year.
- Benchmarks and PEP trend similarly. Benchmarks surpass PEP immigration levels partially due to increased asylees.
- Benchmarks reflect the 1 July - 30 June reference period used by PEP. COVID-19 affects the last quarter of the 2020 reference period and all of 2021.
- 2020 PEP is a COVID-19 projection of 2019 ACS data based on early benchmarks. Final benchmarks shown here support PEP assumptions used in 2020.
- 2021 PEP is the standard projection assumption, which is not plausible given that COVID-19 impacted all of 2021.

Data Sources: U.S. Census Bureau, Vintage 2020 Population Estimates-Foreign-Born Immigration Component; U.S. State Department, Bureau of Consular Affairs; Institute of International Education; Refugee Processing Center; U.S. Citizenship and Immigration Services; U.S. Department of Justice
Emphasizes comparison of annual trends instead of absolute numbers. 2010 year used as a baseline.

For 2021, the benchmark is used to develop a plausible range of immigration trajectories.

Low benchmark is restricted to immigrants and refugees only. PEP theoretically should never fall below this series’ totals.

High benchmark combines all components from the previous slide. Heavily influenced by surge in asylees since 2014; however, many asylees might be outside the U.S. or appear in prior visa data.

Middle benchmark combines immigrants, students, labor migrants, refugees, and affirmative asylees.

COVID-19 travel restrictions impact part of the year for 2020 and all of 2021. This results in a narrow range of estimates to inform the PEP 2021 projection (not shown).
Discussion

• The forthcoming PEP series (not shown) applied a ratio of 2021 to 2019 Middle benchmark totals to the 2019 PEP total to project 2021 PEP:
  • Current PEP methodology ties immigration levels to the ACS.
  • 2019 was the last year in which non-adjusted ACS data were used for PEP.

• Net air passenger totals, in conjunction with ACS/PRCS, used for the 2021 PEP estimate of U.S. and Puerto Rico migration (not shown).

• Is this an example of **nowcasting**? Reduces previous one-year data lag down to one month in some cases. Future applications can project months and quarters but not weeks or days.

• Allows us to adjust preliminary PEP trends for more recent changes that impact certain categories of migration for a given month, quarter, or year. ACS does not have immigrant categories.

• This is an example of macrolevel data integration in which aggregate data from multiple sources are combined to produce a practical estimate. Current research on the **Integrated Database for International Migration (IDIM)** examines microlevel integration, using individual-level and internal-use federal administrative data to measure migration by subnational geographic and demographic detail.
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