Measuring Stocks and Flows in Different Data Collection Systems

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Data collection systems

Depending on main data sources used for measuring stocks and flows, data collection systems might be classified:

- **Field-based data collection**
  - Population Censuses
  - Population Surveys

- **Fully administrative registers/records**
  - Population register and other registers/records

- **Combination** of field-based and registers/records
Population censuses provide rough estimates of FLOWS:
- Foreign-born
- Foreign-citizen
- Foreign-born foreign-citizen
- Return migrants

Emigration?
Population censuses do not produce reliable data for FLOWS.

Detailed information for STOCKS:
- Foreign-born population
- Foreign-citizen population
- Foreign-born foreign-citizen population
- Return migrants

Population censuses + Surveys

Resident population
STOCKS

CITIZENS
- Foreign-born
- Native-born

FOREIGN CITIZENS
- Foreign-born
- Native-born

SURVEYS
- Estimates of STOCKS and FLOWS for the intercensal period

Immigration

Previous country of residence and year/month of arrival
<table>
<thead>
<tr>
<th>Main quality concerns</th>
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<tbody>
<tr>
<td>✓ Alignment between the resident population and flows</td>
<td>10 years census interval</td>
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<td>✓ Flexibility in adoption of international recommendations</td>
<td>Potential under-coverage of refugees and undocumented migrants</td>
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<td>✓ Coherence in the definitions of resident population and international migration across censuses and surveys</td>
<td>Increasing non-response/refusal</td>
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<td>Complexity of questions on international migration</td>
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<td>Lack of data collection/ dissemination By country of birth/citizenship</td>
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FULLY ADMINISTRATIVE REGISTERS/RECORDS

POPULATION REGISTER

STOCKS

Births
Immigration

FLOWS

Residents population

Deaths
Emigration

FLOWS

Regular updates
Marriage
Divorce
Changes in place of residence/country of residence
Acquisition/loss of citizenship

✓ Detailed information for STOCKS and FLOWS
  • Foreign-born population
  • Foreign-citizen population
  • Foreign-born foreign-citizen population
  • Return migrants

✓ Annual/quarterly dissemination of stocks and flows

✓ Alignment between stocks and flows

Definition of the population registered ≠ the definition of the resident population
Main quality concerns

Citizens

- Overcount ➔ Stocks of citizens living in the country
- Undercount ➔ Flows of emigrants

Foreign citizens

- Undercount ➔ Stocks of foreign citizens living in the country
  - Undocumented migrants
- Undercount ➔ Flows of foreign citizens
  - Entering the country as visitors or without any documents

"Signs of Life" method to validate citizens living in the country by integrating population register with other register data

Estimation of undocumented migrants – surveys, estimates of the share of undocumented (mobile phone data, resident/work permits)

Analysis of border records by integrating arrivals and departures and analysis of mobile phone data for foreign citizens
COMBINATION OF POPULATION CENSUSES AND ADMINISTRATIVE REGISTERS/RECORDS

Estimates of the stocks of four population groups

Population censuses

Resident Population STOCKS

CITIZENS
- Foreign-born
- Native-born

FOREIGN CITIZENS
- Foreign-born
- Native-born

Passport/visa records
Residence/work permits
Border records
Refugees and asylum seekers

Immigration/Emigration estimates by years

FLOWS

Acquisition/loss of citizenship

Birth records by citizens/foreign citizens and by native-born/foreign-born
Deaths records by citizens/foreign citizens and by native-born/foreign-born
Main quality concerns

- **Misalignment of the resident population (stocks of international migrants) with international migration flows**
  - Different data sources are used for stocks and flows
    - A set of rules might be developed to align migration flows as closely as possible to the definition of residence population

- **Complications in estimating the flows** when various data sources are used
  - Migration information system (for foreign citizens only) would provide more reliable and frequent data

- **Double records** when macro integration is used
  - Linking individual records using unique identifier for foreign citizens will improve the data quality
Conclusions

- Collecting data for international migration is a complicated process
  - Different forms of migration
  - Variety of data sources available that provide partial information or information for specific migrant groups
  - All sources have its own pros and cons

- Use of administrative data sources will improve the quality, availability and timeliness of migration statistics
  - Assessment of the quality and content of administrative registers/records
  - Improving the technical capacity for data linkage

- Estimation methods for migrant groups that are difficult to measure
  - Undocumented migrants
  - Citizens living abroad
  - ....