Relations Between Measurements of International Migration Statistics

Beata Nowok

Central European Forum for Migration Research
NIDI fellow, European Doctoral School of Demography
at Max Planck Institute for Demographic Research
OUTLINE

- Measurements and data sources
- Comparison of different measures
- Estimates of net migration
- Final remarks
MEASUREMENTS AND DATA SOURCES

- migration (=event)
  - movement approach - events are recorded when they happen (continuous time)
    - population register
    - passenger sample survey

- migrant (=person)
  - transition approach - attributes are recorded at particular points in time (discrete time)
    - census
(Theoretically) all the migratory moves undertaken by an individual are recorded

different rules for reporting changes of place of residence

and/or
different selection rules applied to the raw data when preparing statistics

different duration of stay criteria
(various events are counted: short-term, long-term, permanent migration)
### Question | What is measured?
---|---
Place of usual residence at a specified date in the past (usually one year prior to the census) | **Migrants**: an individual whose place of residence differs at the beginning and the end of the period (surviving non-return movers)
Previous place of usual residence | **Latest migration** = number of migrants by latest migration: period = variable from an individual to another
Country/place of birth | **Lifetime migrants**: period = the whole individual lifetime

Other questions: duration of residence, year (or period) of immigration into the country
## COMPARISON OF DIFFERENT MEASURES

<table>
<thead>
<tr>
<th></th>
<th>migrants</th>
<th>latest migrants</th>
<th>migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>return moves</td>
<td>—</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>multiple moves</td>
<td>—</td>
<td>—</td>
<td>+</td>
</tr>
<tr>
<td>followed by internal moves</td>
<td>+</td>
<td>—</td>
<td>+</td>
</tr>
<tr>
<td>followed by death</td>
<td>—</td>
<td>—</td>
<td>+</td>
</tr>
<tr>
<td>immigration of newborns</td>
<td>—</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
DIFFERENT DURATION OF STAY CRITERIA

Comparison of gross migration flows (Immi+Emi) between Sweden (SE) and a partner country (CC) reported by SE and CC, 1990-2003.

SE - one year (UN recommendations)

CC=

- DE
- AT
- DK
- NL
- FI
- PL

none

3 months

4 out of 6
8 out of 12

3 months
6 months

1 year

permanent

Immi+Emi according to CC

Immi+Emi according to SE
NET MIGRATION (NM)

- Registration:
  \[ \text{NM}_{I-E} = I_{(t,t+n)} - E_{(t,t+n)} \]

- The balancing equation of population change
  \[ \text{NM}_B = (P_{t+n} - P_t) - (B_{(t,t+n)} - D_{(t,t+n)}) \]

\[ ? \]

\[ \text{NM}_{I-E} = \text{NM}_B \]
NET MIGRATION (NM)

POLAND

<table>
<thead>
<tr>
<th>Year</th>
<th>Net migration [thousands]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>-500</td>
</tr>
<tr>
<td>1990</td>
<td>-400</td>
</tr>
<tr>
<td>1995</td>
<td>-300</td>
</tr>
<tr>
<td>2000</td>
<td>-200</td>
</tr>
<tr>
<td>2005</td>
<td>-100</td>
</tr>
</tbody>
</table>

SLOVAKIA

<table>
<thead>
<tr>
<th>Year</th>
<th>Net migration [thousands]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>-40</td>
</tr>
<tr>
<td>1990</td>
<td>-30</td>
</tr>
<tr>
<td>1995</td>
<td>-20</td>
</tr>
<tr>
<td>2000</td>
<td>-10</td>
</tr>
<tr>
<td>2005</td>
<td>10</td>
</tr>
</tbody>
</table>

Year

- Immigration - Emigration
- Balance equation
Migration is a process continuous in time

Conceptual problems are very often solved pragmatically by defining international migration based on available measures

Different measures cover different aspects of migration phenomenon

Some consequences: inconsistent population forecasts, alternative interpretation of mobility levels and migration pattern, different geographic pattern of migration flows