Underestimation of emigration
- an alternative approach

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Statistisk sentralbyrå
Statistics Norway
1. Anyone with the intention of staying abroad for at least six months must notify the Norwegian Tax Administration...

2. Norwegian Tax Administration
   • imputes emigration following strict criteria = proxy for non-notified emigration
   • Short-list of possible emigration (limited sources)

3. Statistics Norway
   • Alternative approach
   • Numerous sources
Underestimation of emigration
- an alternative and explorative approach

- Traces of «activity» in Norway?
  - No trace \(\approx\) emigrated

- Merge numerous administrative registers
- Arrive at an estimate
  - Complement to the work at the Tax Administration
    - More accurate
    - More up to date

- Similar efforts in other Nordic countries

- Results
- Further plans
Data sources of activity

- Resident population
  - Active
  - Non active
- Employers and employees register
- Legal entities register
- The land ownership register
- National education Database
- Address database
- Register of temporary residence in institutions
- Household income register

Population register
Demographic events
Irregular moves
Income an important indicator

Lower annual income limit for living in Norway:

1 person household per month:
    Social assistance rate = 5 850 NOK (585 EUR)
    + housing expenses   = 2 500
    Total                = 8 350

1 person household per year => 100 000 NOK

Possibly emigrated if annual:

\[
\frac{\text{Household income}}{0.5 + (0.5 \times \text{number of hh members})} < 100 000 \text{ NOK}
\]

Why household income?
• Supported financially by someone else in the household
• But all family members treated as one - no deviation from the family
**Assumed emigrated - alternatives**

<table>
<thead>
<tr>
<th>Description</th>
<th>Assumed emigrated</th>
<th>In Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Intermediate</td>
</tr>
<tr>
<td><strong>Group 1</strong> Income &lt; 50 000 NOK/year. Not in any other register sources. No demographic events. Address with irregular move*.</td>
<td>8 030</td>
<td>8 030</td>
</tr>
<tr>
<td><strong>Group 2</strong> Income &lt; 100 000 NOK/year. Not in any other register sources. No demographic events. Address with irregular move*.</td>
<td></td>
<td>10 179</td>
</tr>
<tr>
<td><strong>Group 3</strong> Income &lt; 100 000 NOK/year. Found in other register sources or demographic event. Address with irregular move*.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 4</strong> Found in other register sources or demographic event. No address with irregular move*.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUM</strong></td>
<td>8 030</td>
<td>18 209</td>
</tr>
</tbody>
</table>

*Addresses with more than one family, where the originally residing family moved out without notifying the population register.*
Assumed emigrated - results

- **Statistics Norway:**
  - 44,837 – max. alternative (least strict)
  - 8,030 – min. alternative (most strict)
  - \(0.2-0.9\)% of all residents 1.1. 2015
    - Maks 4% among immigrants
    - Maks 0.4% among rest of population
  - 18% are already registered as suspected emigrated by the Tax Adm.
  - Increases the number of emigrated in official population register by 0.6 percentage points to 7.65%

- **Statistics Sweden:**
  - Interval 30,000 – 60,000 persons
  - \(0.3-0.6\)% among all residents in 2012
Who is assumed to be emigrated?

- Immigrants: 63%
- Born in Norway with two Norwegian-born parents: 23%
- Descendants: 8%
- Other categories: 6%

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- Who is assumed to be emigrated?

![Bar chart showing emigration data by age, gender, municipality, and emigration status]

**Rest (16 400)**

- Age end of year: 0-17: 36
- Age end of year: 18-29: 30
- Age end of year: 30-49: 20
- Age end of year: 50+: 13
- Short-listed emigr. (TA): 11
- Municipality: Oslo: 27
- Municipality: Bergen: 7
- Men: 54
- Women: 46

**Immigrants (28 500)**

- Age end of year: 0-17: 9
- Age end of year: 18-29: 30
- Age end of year: 30-49: 44
- Age end of year: 50+: 16
- Short-listed emigr. (TA): 22
- Municipality: Oslo: 26
- Municipality: Bergen: 5
- Men: 63
- Women: 36
- Who is assumed to be emigrated?

### Immigrants (28 500)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at immigration:</strong></td>
<td></td>
</tr>
<tr>
<td>0-14</td>
<td>13%</td>
</tr>
<tr>
<td>15-17</td>
<td>5%</td>
</tr>
<tr>
<td>18-29</td>
<td>42%</td>
</tr>
<tr>
<td>30-49</td>
<td>32%</td>
</tr>
<tr>
<td>50+</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Years of residence:</strong></td>
<td></td>
</tr>
<tr>
<td>0-2</td>
<td>40%</td>
</tr>
<tr>
<td>3-5</td>
<td>24%</td>
</tr>
<tr>
<td>6-10</td>
<td>15%</td>
</tr>
<tr>
<td>11+</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Norwegian citizenship:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18%</td>
</tr>
<tr>
<td><strong>Grounds for immigration:</strong></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
<td>39%</td>
</tr>
<tr>
<td>Refuge</td>
<td>22%</td>
</tr>
<tr>
<td>Family</td>
<td>19%</td>
</tr>
<tr>
<td>Before 1990</td>
<td>12%</td>
</tr>
<tr>
<td>Education</td>
<td>7%</td>
</tr>
<tr>
<td>Nordic</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Region of birth:</strong></td>
<td></td>
</tr>
<tr>
<td>Eastern Europe EU</td>
<td>36%</td>
</tr>
<tr>
<td>Asia w/ Turkey</td>
<td>22%</td>
</tr>
<tr>
<td>Africa</td>
<td>18%</td>
</tr>
<tr>
<td>Western Europe ex. Nordic region</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Country of birth:</strong></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>17%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>9%</td>
</tr>
<tr>
<td>Somalia</td>
<td>8%</td>
</tr>
<tr>
<td>Eritrea</td>
<td>5%</td>
</tr>
</tbody>
</table>

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Further plans

- Publish report on method and results
- Update annually, improve further
- Make variable available for research purposes
- Link report to annual official population statistics releases
- Use in quality control of registers at Statistics Norway
- Feed-back to Tax Administration