

World Population Prospects and Migration: How can migration be taken into account in population projections?

Agnieszka Fihel & Paweł Kaczmarczyk

A few basic issues

- What are the aims of WPP (and how it explains the way migration is incorporated)
- Migration as a demographic phenomenon that is extremely difficult to predict
- State of the art and recent advances (e.g. QuantMig Project → Bijak and Czaika 2020; Barker and Bijak 2021)
 - Various methods of assessing uncertainty → e.g. Bayesian methods, responses to external shocks
 - "Early warning systems" (Napierała et al. 2022)
 - Social media data, digital traces (mostly for short-term assessments) and data triangulation
- ... but still numerous pitfalls (knowable and unknowable unknowns, estimates in the long-run)
- Obvious challenges: fluidity of migration/mobility forms (circular temporary - settlement - return) and unclear link with other population processes (especially fertility)



Aim of this comment

- Our intention is not to comment on the general projection and the underlying assumptions
- Focus → a few cases we know relatively well → discussion of challenges and methodological issues
- Questions about future challenges (and the way forward)



Case 1: Poland

RESEARCH

Figure: Net migration, 1990-2070 (in thous.)



Net number of migrants, Poland

Case 1: Poland

Figure: Demographic indicators, 1990-2070



CENTRE OF

MIGRATION RESEARCH



Source: Own elaboration based on WPP2024

Rates per 1,000 population

30,0

Case 2: Ukraine

Figure: Net migration, 1990-2070 (in thous.)



CENTRE OF MIGRATION RESEARCH

-7000,0

Source: Own elaboration based on WPP2024

Case 2: Ukraine

RESEARCH

Figure: Demographic indicators, 1990-2070

III Unrealistic structure of recent migration \rightarrow 50/50 (gender)

Rates per 1,000 population, Ukraine



Source: Own elaboration based on WPP2024

Critical controversial issues

- Data on migration common practice: data used for forecasting/projection are based on registers or censuses → to what extent this data can capture the complexity and dynamics of migration processes? (do they need to in the context of forecasting?) → example: changes in the structure of migration with regard to time of stay in Poland after 2018.
- Risks → data artefacts → e.g. those resulting from comparing register data (very low in both cases) with national censuses → peak for Poland after 2010 (only as a result of new information from 2011 population census == major outflow 2004-2007; no massive returns)
 - Are those important for forecasting?
 - How to avoid a misuse of the data?
- Migration processes are **not or only weakly modelled**:
 - the Polish case: with the exception of two peaks (after 2010 and after 2022) net migration is assumed to be at a very low (and negative!) level;
 - the case of Ukraine: massive negative net migration in 2022 and then (almost equal) return in 2025 assumed → this is almost exclusively due to (strong) assumptions made (not all of them are obvious, i.e. gender structure of this particular phenomenon is significantly different from structures used to formulate assumptions).



Questions / Postulates

- Are we able to include the migration component in the population projection in a way that makes use of a wide range of knowledge on migration, including migration dynamics, self-propagation, fluidity of forms of behaviour?
 - Is it possible to do this on the assumption of a consistent methodology throughout the world (and time)?
 - What steps should be taken to achieve it?

How can migration be better linked to other population processes?

 One of the best examples: highly selective outflow from Ukraine (approx. 80% women) and possible outcomes in terms of fertility.

