## **Provisional Abstract**

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## **Correspondence**:

Reiner H. Dinkel

Prof. of Demography

University of Rostock,

Ulmenstr. 69

18057 Rostock, Germany

E-Mail: reiner.dinkel@uni-rostock.de

Phone: 0049 381 498 4326

Fax: 0049 381 498 4324

## The Cohort Measurement of Migration:

The striking differences in population size due to the effects of cumulative migration during the past decades for East and West German cohorts

In this paper data requirements and methods are reviewed for a cohort measurement of immigration and emigration. The existing data in Germany do allow for a specific method to identify the effects of cumulative net migration on the size of birth cohorts, if cohort life tables are available. From the number of life births and the probabilities to survive up to age x from the life table of the cohort under consideration a potential number of cohort survivors can be calculated. This number would result, if either no migration at all or a strict equivalence of immigration and emigration would prevail between birth and age x. The observed (true) numbers of the end year population at

age x (identical to the members of the living population of cohort y and available in Germany for all ages) must be the sum of the potential survivors and the survivors of cumulative net migration of the cohort under consideration.

Using this concept of measurement important differences become visible. Post-war cohorts in the "old West German states" of the FRG experienced an increase in the population size (compared to the potential size) of up to 20 percent exclusively due to a long lasting stream of net immigration from a variety of sending countries. Heavy losses are identifies for the "newly-formed German states" on the other side. The effects of cumulative net emigration are most extreme in the state of Mecklenburg Western Pomerania, one of the new countries with the smallest number of available industrial jobs. The female cohort 1977 (although only at age 27 in 2004) in Mecklenburg Western Pomerania for example already lost close to one half of its members (compared to the number without any migration effects) due to border crossing net emigration primarily towards the "old West German states".

Consequences of these developments for population projections and other important aspects are discussed.