Home   Reviewers   Associate Editors   Editor   Publisher   Contact

Journal Contents

SEARCH

Current Volume

Volumes

Articles

Special Collections

General Information

About the Journal

Information for Authors

Copyright Information

Register for e-mail alerts

Submit a Paper

Algorithm for decomposition of differences between aggregate demographic measures and its application to life expectancies, healthy life expectancies, parity-progression ratios and total fertility rates

Evgueni Andreev
Vladimir Shkolnikov
Alexander Z. Begun

Click the icon to view and/or download the PDF file. Once you are in the PDF file, use your browser back button to return to this page.

Abstract
A general algorithm for the decomposition of differences between two values of an aggregate demographic measure in respect to age and other dimensions is proposed. It assumes that the aggregate measure is computed from similar matrices of discrete demographic data for two populations under comparison. The algorithm estimates the effects of replacement for each elementary cell of one matrix by respective cell of another matrix. Application of the algorithm easily leads to the known formula for the age-decomposition of differences between two life expectancies. It also allows to develop new formulae for differences between healthy life expectancies. In the latter case, each age-component is split further into effects of mortality and effects of health. The application of the algorithm enables a numerical decomposition of the differences between total fertility rates and between parity progression ratios by age of the mother and parity. Empirical examples are based on mortality data from the USA, the UK, West Germany, and Poland and on fertility data from Russia.

Author's affiliation
Evgueni Andreev
Centre of Demography and Human Ecology, Moscow, Russian Federation
Vladimir Shkolnikov
Max Planck Institute for Demographic Research, Germany
Alexander Z. Begun
Universität der Bundeswehr Hamburg, Germany

Keywords
healthy life expectancy, life expectancy, parity progression

Word count (Main text)

Services
- Bookmark this page
- Send this article to a friend

Download to Citation Manager
- Refman format (RIS)
- ProCite format (RIS)
- EndNote format
- BibTeX format

Citations and Similar Articles
PubMed
- Articles by Evgueni Andreev
- Articles by Vladimir Shkolnikov
- Articles by Alexander Z. Begun

Google Scholar
- Articles by Evgueni Andreev
- Articles by Vladimir Shkolnikov
- Articles by Alexander Z. Begun
- Article and its Citations

Other articles by the same author/authors (in *Demographic Research*)

Most recent similar articles in *Demographic Research*

[*Back to previous page*]