VID Colloquium

Adjusting the Brass Relational Model to the Shift and Compression of Mortality at Old Age: A Conservative Scenario

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Formal relations are used to demonstrate inability of the relational Brass mortality model to keep up with declining mortality at old age. In order to adjust the model, a descriptive study is undertaken of mortality shifts at old age. To this end, ages X(M) at given levels of the mortality rate are studied. When arranged as functions of the life expectancy at birth, those ages show increasing steepness of the trend. This pattern is explained by approaching, as mortality declines, to upper limits of period mortality compression. In order to take this changing pattern into account, we obtain empirical lower-bound limits to X(M). Our models of lower-bound limits may be useful both in examining tendencies in period mortality shift and compression and as a starting point in adjusting the mortality projection models at older age. For the Brass model (standard: 1970; projection period: 2000+), the adjustment brings down the prediction errors by about half at ages above 80 years. Our results may also be useful in the continuing discussion of prospects for further mortality decline.

About the presenter
Dalkhat Ediev joined the Vienna Institute of Demography in 2005 and World Population Program of IIASA in 2013. His research interests include population change and projections, population ageing, formal demography, demographic methods and models. Dr. Ediev graduated from Moscow Institute of Physics and Technology in 1993, where he also obtained his PhD in 1999. In 2002, he was granted the Docent degree in mathematics by the Russian Highest Attestation Commission and in 2008, he was granted the degree of Doktor Nauk in Physical-Mathematical Sciences by the Russian Highest Attestation Commission.

Presentation