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Age groups and the measure of population aging

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Abstract

Background: Measures of population aging are important because they shape our perception of demographic trends. Indicators of aging based on fixed ages contributed to a dramatic portrayal of demographic evolutions, some of which were associated with the myth of decline.

Objective: We propose a new measure of population aging, based on the relative age of each individual in the population. Our approach builds on previous work by Aghevli and Mehran (1981) and relies on optimal grouping techniques that are used to determine the various age groups within a population. The cutoff ages for these groups, such as the age from which an individual is considered to be an older person, are then endogenous variables that depend on the entire population age distribution at any given moment.

Methods: We show how to apply optimal grouping techniques to age distributions and how to calculate various indicators of aging, which are invariant with respect to proportional rescaling of distributions. We compute these indicators for the US, and a sample of 13 other industrialized countries.

Results: We find that, contrary to common arguments for an aging population, the share of elderly individuals within the total population has not increased much, and has remained stable in these countries. These results complement and reinforce the earlier findings of Sanderson and Scherbov (2005, 2007) who also reassessed the aging phenomenon.

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