

Small regional disparities in mortality with large regional disparities in economic conditions: the case of Germany

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Background: Germany experiences considerable disparities in structural unemployment and living conditions between its federal states. As such, we expected to detect comparatively high state-level inequalities in mortality, as has been found in other high income countries with high economic inequalities such as the US. Until now, the patterning of long term state-level trends in mortality for Germany was either not available or of a poor quality because of a lack of data harmonization and substantial numerator/denominator biases.

Methods: We analyse state-level mortality in Germany utilizing data from a newly reconstructed and harmonized regional database based on the methodology of the Human Mortality Database. We compare time trends (1990-2015) in the German state-level standard deviation in life expectancy to that of other wealthy countries, and examine the relationship between regional mortality inequalities and regional economic inequalities. To better understand the development of German state-level inequalities in life expectancy, we investigate age patterns of mortality convergence, using contour decompositions.

Results: Despite high state-level inequalities in economic conditions, regional inequalities in life expectancy in Germany are comparatively low internationally. These relatively low inequalities emerged 5-10 years after reunification, particularly among women. Age patterns of mortality are converging between the longest and shortest living German state populations and across the former East-West political border.

Conclusions: Converging spatial mortality inequalities in Germany demonstrate that long-standing economic differences do not necessarily translate into large regional disparities in mortality.

Key words: mortality inequality; regional variation; dispersion; economic conditions