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A Bayesian approach to modeling and projecting cohort effects. (English) Zbl 1461.91245
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Summary: One of the key motivations in the construction of ever more sophisticated mortality models was the realization of the importance of “cohort effects” in the historical data. However, these are often difficult to estimate robustly, due to the identifiability issues present in age/period/cohort mortality models, and exhibit spurious features for the most recent years of birth, for which we have little data. These can cause problems when we project the model into the future. In this study, we show how to ensure that projected mortality rates from the model are independent of the arbitrary identifiability constraints needed to identify the cohort parameters. We then go on to develop a Bayesian approach for projecting the cohort parameters that allows fully for uncertainty in the recent parameters due to the lack of information for these years of birth, which leads to more reasonable projections of mortality rates in future.

MSC:

91G05 Actuarial mathematics

62P05 Applications of statistics to actuarial sciences and financial mathematics

Cited in **2** Documents

Full Text: [DOI](#)

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