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	authors	• Scognamiglio, S.	authors	• Salvatore Scognamiglio	DUPLICATES	162
	title	CALIBRATING THE LEE-CARTER AND THE POISSON LEE-CARTER MODELS VIA NEURAL NETWORKS	title	Calibrating the Lee-Carter and the Poisson Lee-Carter models via Neural Networks		
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	id	id4240777102372037737	id	id-1263884613581019335		
	abstract		abstract	This paper introduces a neural network approach for fitting the Lee-Carter and the Poisson Lee-Carter model on multiple populations. We develop some neural networks that replicate the structure of the individual LC models and allow their joint fitting by analysing the mortality data of all the considered populations simultaneously. The neural network architecture is specifically designed to calibrate each individual model using all available information instead of using a population-specific subset of data as in the traditional estimation schemes. A large set of numerical experiments performed on all the countries of the Human Mortality Database (HMD) shows the effectiveness of our approach. In particular, the resulting parameter estimates appear smooth and less sensitive to the random fluctuations often present in the mortality rates' data, especially for low-population countries. In addition, the forecasting performance results significantly improved as well.		
	versions		versions			