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FERTILITY AND MORTALITY PROJECTIONS IN KENYA

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Abstract

This paper shows projection of fertility and mortality rates for Kenya through modelling approach that departs from the current practice of using probabilistic and deterministic approaches for fertility projections and Lee-Carter model for mortality projections. It has been found that deterministic approach is often biased with expert knowledge, while Lee - Carter model makes inaccurate forecasts of mortality rates. Data of age specific fertility rates (ASFRs) and age specific mortality rates (ASMRs) are used in the modelling and are obtained from census reports and national fertility surveys for Kenya. The past ASFRs and ASMRs are fitted to both linear and non-linear models under regression analysis and projected in five-year intervals. Exponential model is found to best fit both ASFRs and ASMRs and provides an alternative approach to the projection of fertility and mortality besides the deterministic, probabilistic and Lee - Carter models. Equally, the projection of ASFRs and ASMRs helps in reflecting the contribution of each specific age rate to the overall fertility and mortality levels.

Keywords: Kenya, fertility, mortality, projections, modelling.

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