

“Subnational Fertility Projections in Brazil and Argentina: a Bayesian Probabilistic Approach Application”

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The main objective of this paper is to project fertility rates for sub-national levels in Brazil and Argentina using the Bayesian probabilistic approach adopted by the United Nations. Results are then compared with the most recent fertility information and with the deterministic projections conducted by the official statistical agencies of each country. Results for Brazil show that out-of sample projections systematically overestimate the TFR in 2010, since there was an acceleration of the fertility decline in the 2000s. Social advances observed in this decade might have influenced such rapid fertility decline. For projections with starting point in 2010, official estimations still present lower figures than those projected by the Bayesian model, in addition to a different convergence pattern in 2030. For Argentina, the methods performs less satisfactorily, mainly because fertility changes in this country has show special features that are not captured by the double-logistic curves used in the model. The Bayesian approach offers a promising alternative to sub-national level projections in both countries, providing point estimations and uncertainty of measures.