

Forecasting Births Using Google

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Abstract

Monitoring fertility change is particularly important for policy and planning purposes. New data may help us in this monitoring. We propose a new leading indicator based on Google web-searches. We then test its predictive power using US data. In a deep out-of sample comparison we show that popular time series specifications augmented with web-search-related data improve their forecasting performance at forecast horizons of 6 to 24 months. The superior performance of these augmented models is confirmed by formal tests of equal forecast accuracy. Moreover, our results survive a falsification test and are confirmed also when a forecast horse race is conducted using different out-of-sample tests, and at the state rather than at the federal level. Conditioning on the same information set, the forecast error of our best model for predicting 2009 births is 35% lower than the Census bureau projections. Our findings indicate the potential use of Google web-searches in monitoring fertility change and in informing fertility forecasts.

Keywords: *fertility forecasting, US birth rates, Google econometrics, time series models, Forecast comparison.*
