

Macroeconomic Nowcasting Using Google Probabilities

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Abstract

Many recent papers have investigated whether data from internet search engines such as Google can help improve nowcasts or short-term forecasts of macroeconomic variables. These papers construct variables based on Google searches and use them as explanatory variables in regression models. We add to this literature by nowcasting using dynamic model selection (DMS) methods which allow for model switching between time-varying parameter regression models. This is potentially useful in an environment of coefficient instability and over-parameterization such as can arise when forecasting with Google variables. We extend the DMS methodology by allowing for the model switching to be controlled by the Google variables through what we call Google model probabilities. That is, instead of using Google variables as regressors, we allow them to determine which nowcasting model should be used at each point in time. In an empirical exercise involving nine major monthly US macroeconomic variables, we find DMS methods to provide large improvements in nowcasting. Our use of Google model probabilities within DMS often performs better than conventional DMS.

Keywords: *internet search data; nowcasting; dynamic model averaging, state space model.*

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