

English Title: Macroeconomic predictions based on diffusion indexes.

Christian Dahl

Purdue University, E-mail: dahlc@mgmt.purdue.edu

Henrik Hansen

Økonomisk Institut, Københavns Universitet, E-mail: henrik.hansen@econ.ku.dk

John Smidt

Det Økonomiske Råds Sekretariat, E-mail: jsm@dors.dk

SUMMARY: *This paper presents simulated out-of-sample forecasts based on diffusion indexes for monthly Danish macroeconomic data. The diffusion indexes are derived from 246 series (172 monthly and 74 quarterly series). The primary focus is on forecasts of unemployment, industrial turnover, and inflation at horizons of 6, and 12 months over the period 1995-2003. It is shown that it is possible to obtain mean squared forecast errors (MSFE) of diffusion index forecasts that are smaller than the MSFE of a standard autoregressive model. However, the gain in forecasting accuracy is not robust as the results are very sensitive to the specification of the forecasting equation. As it is difficult to establish general rules with respect to the parameterization of the forecasting equation this poses a serious problem in real time forecasts. Thus, the basic results based on Danish data are not as good as has been seen in the literature. The disappointing results are probably related to very volatile estimates of the diffusion indexes. Based on this observation, a possible improvement is suggested, namely calculation of the diffusions indexes on the basis of filtered data. Results based on this idea seem much more promising than the basic setting. Using filtered data the diffusion index model leads to a reduction of MSFE of around 10 to 15 per cent relative to a standard autoregressive model.*