Comparing Seasonal Forecasts of Industrial Production

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ABSTRACT
Forecast combination methodologies exploit complementary relations between different types of econometric models. The development and growing use of such combinations results from the fact that this approach often delivers more accurate forecasts than the individual models on which these forecasts are based. This paper examines forecasts of seasonally unadjusted monthly industrial production data for OECD countries, comparing individual model forecasts and forecast combination methods in order to examine whether the latter are able to take advantage of the properties of different seasonal specifications. In addition to linear models (with deterministic seasonality and with nonstationary stochastic seasonality), more complex models are also examined, specifically models that capture deterministic nonlinearity (periodic autoregressions) or stochastic nonlinearity (self-exciting threshold autoregressive nonlinear models). Across various forecast accuracy measures, forecast combinations consistently provide the best performance, implying that utilizing the different characteristics captured by these models can contribute to improved forecast accuracy.