1. **Introduction: Economic forecasting - the pitfalls.**

Economics needs to forecast a non-stationary and evolving world, using a forecasting model that differs from the economic mechanism. The resulting framework, its basic concepts and main implications are sketched. Many famous theorems of economic forecasting no longer hold—rather their converses often do. Consequently, six aspects of unpredictability are distinguished, compounding four additional mistakes in estimated forecasting models. A key result links predictability and forecastability, and can elucidate when disaggregation of information is beneficial.

**Suggested reading:**


2. **Theory of forecasting in a non-stationary world where the model and mechanism differ**

The role of causal information in economic forecasting is considered, as non-causal devices may outperform when model and mechanism differ. The main model class is a vector autoregression in integrated-cointegrated variables, so measures of forecast accuracy require invariance to isomorphic representations of the model. A generalized taxonomy of forecast errors is developed, allowing for structural change in the forecast period, the model to be mis-specified for the DGP over the sample period, and selected from sample evidence, the parameters of the model to be estimated (possibly inconsistently) from the data, which might be measured with error, the forecasts to commence from incorrect initial conditions, and innovation errors to cumulate over the forecast horizon. The taxonomy reveals the importance of shifts in deterministic factors (location shifts), and helps explain the findings of forecasting competitions. Other potential sources of forecast failure seem less relevant. Location shifts induce non-stationarity but sometimes can be removed by co-breaking (the cancellation of breaks across linear combinations of variables).

**Suggested reading:**
3. Possible solutions: robust forecasting

Corrections to reduce forecast-error biases (intercept and forecast-error corrections), and model transformations (differencing) are shown to help robustify forecasts in the face of location shifts. Forecast pooling and using diffusion indices are discussed. Estimation effects in forecasting models are noted, as is the impact of model selection on forecasting. As forecast failure is primarily due to unanticipated large location shifts, it need not invalidate a model, may lead economic agents to use robust (rather than ‘rational’) forecasts, and entails different models for forecasting and policy.

Suggested reading:


4. Nowcasting

Given a need for nowcasting, we consider how nowcasts can best be achieved, the use and timing of information, including disaggregation over variables and common features, and the role of automatic model selection for nowcasting missing disaggregates. We focus on the impact of location shifts on nowcast failure and nowcasting during breaks, using impulse saturation, its relation to intercept correction, and to robust methods to avoid systematic nowcast failure.
nowcasting strategy is proposed, building models of all N disaggregate series by automatic methods, forecasting every variable each period, then testing for shifts in available measures, switching to robust forecasts of missing series when breaks are detected.

Suggested reading:


