Theory and practice of forecasting with large data sets

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Abstract: The course seeks to introduce static factor models or dynamic factors models that can be cast in a static framework. It is primarily theoretical in nature but the main arguments are illustrated with many empirical examples drawn from a rich variety of data sets. A key issue is the efficacy of factor models in forecasting when compared with less data-rich methods, including looking at the consistency of factor estimates of the ‘true’ factor space especially when there is strong evidence of structural instability. Emphasis in the course is also placed on looking at applications of factor models, for example, in monetary policy, and exchange and interest rate pass-through – in other words, in a range of real-world macroeconomic policy applications.

1. Introducing factor models

Detailed introduction to factor models


2. Applications to forecasting in large data sets

Discussion of specific applications in forecasting, with country-specific references


3. **Application to data sets with structural change**

Continuing theme of 2. above but with more specific focus on where the time dimension is modest and where there is structural change


4. **Factor models in macroeconomic analysis**


