

## ABSTRACT

The availability of timely, comprehensive and disaggregate indicators has become in the last years one of the most important issues for the economic analysis. Among macroeconomic series, GDP is considered as the one carrying highest informative content, nevertheless the official National Accounts release of its value is published with strong delay. In order to fill this gap many researchers have attempted to get an indirect measure of the state of the economy exploiting disaggregated series related to GDP and available at higher frequency. Among official data for Europe the timeliest data are the Business and Consumer Surveys of the European Commission, published at the end of each month and referring to the same month. Within respect to this advantage in term of timeliness it remains however to understand how to use in quantitative terms the information from Surveys, which is primarily qualitative.

To address this issue we present in the first Chapter two new methods for the quantification of the qualitative information provided by firms in the Business Survey. The Spectral Envelope, as well as the Cumulative Logit model with a non linear Kalman filter is applied to get a quantified indicator of the level of production. The main result is that this indicator is high coherent with the cycle of the Industrial production, which is extracted independently.

The issue of GDP nowcasting is carried out extensively in the second Chapter, where the focus is the disaggregation in time of the quarterly value added for the Euro area. By using a mixed frequency model that relies on quarterly and monthly series, the monthly indicator for GDP is obtained casting the traditional Stock and Watson (1991) model in state space form, as in Mariano and Murasawa (2003). The estimation is carried out from the output (sectors of activities) and the expenditure side (demand components) of GDP, which both contribute to the final computation on the basis of their precision. The chain linked nature of the National Account series is also considered. The results of this application show that, in contrast with some recent literature, Survey data do not matter for the estimation of GDP.

More appropriate investigations on the role of Survey data for the estimation of macroeconomic variables is provided in the third Chapter, where the basic model presented in the previous Chapter is extended to allow for more than one common factor and low frequency cycles. After some analysis of real time data and revisions, the main conclusion is that Survey data in a richest model are indeed useful to produce more accurate estimates and forecast, especially 3 steps ahead of the current released of GDP and when hard data are not available yet.

We conclude our analysis on GDP estimation considering a mean-variance coincident index for the US economy. There is general consensus on the fact that most of the macroeconomic series have become less volatile in the last 20 year in US. This issue is addressed by extending the framework developed for Europe in the previous Chapters with a two regimes Garch-type model for the fluctuations of the economy that mimic the dynamic of the so called "great moderation". The main finding is that the volatility of the coincident index seems to respond well to negative shock affecting the US economy such as wars, oil crises and terroristic attacks. In addition, while the level of the economy is mainly driven by the industrial production, the uncertainty in the real outcomes comes from other series, such as income and employment. Finally by permitting time varying volatility, the in and out of sample forecasts for GDP have confidence intervals that shrink and expand with the degree of uncertainty in the economy.