Summary for non-specialists
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Measuring Euro Area Monetary Policy Transmission in a Structural Dynamic Factor Model

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In this paper we estimate a Structural Dynamic Factor model on a large panel of euro area quarterly series in order to evaluate the effects of the European Central Bank common monetary policy both at the aggregate and at the national level. Although the objectives of the ECB are defined in terms of euro area aggregates, analyzing how each single country reacts to centralized monetary policy decisions is a topic with relevant policy implications. We are interested in particular in identifying these effects on the euro area as a whole and on its Member States and to measure any possible asymmetric effect, with a particular emphasis on the period subsequent to the introduction of the single currency.

The analysis is carried out on a panel of 237 quarterly series from 1983:Q1 to 2008:Q4 comprising both euro area aggregates, main macroeconomic variables for single Member States, and key indicators for the United Kingdom, the United States, and Japan. We find that the euro area business cycle can be well characterized by four structural sources of fluctuations, and we identify one of them as a monetary policy shock by means of a standard recursive identification scheme.

We have five main findings. First, monetary policy shocks influence euro area real activity, while they have a negligible effect on prices, thus suggesting that price stabilization is mainly driven by the systematic reaction to economic shocks. Second, we estimate a flat response of prices to a monetary policy shock, a result that we can explain by showing that, while the reaction of most euro area countries is either negative or not significant, there is a strong positive reaction of Italian, Portuguese, and Greek prices. Third, with the exception of Greece, which is totally asynchronized with respect to the common business cycle, there are no asymmetries within European countries in terms of output reaction. However, fourth, we find relevant asymmetries in terms of consumption and investment for both Spain and Italy. This heterogeneity stems from an asymmetric reaction of long term yields for which we observe a wider reaction in Italy and Spain. We reconcile these two results by showing that after a monetary policy shock, the Italian and Spanish real exchange rates first rise on impact, but then depreciate, hence dampening the decline of output. Fifth, we provide evidence of strong asymmetries with respect to unemployment for Italy (asynchronized response) and for Spain (magnified response).

When investigating the effects of the euro introduction on monetary transmission, i.e. after 1999, we have three additional results. First, the price reaction is stronger than the one observed before 1999. Second, the Greek economy partially synchronizes with the euro area business cycle. Third, notwithstanding convergence in the responses of both long-term yields, and exchange rates, we do not have clear evidence pointing towards homogeneity of consumption and investment reaction.