Does single monetary policy have asymmetric real effects in EMU?

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Abstract

This article compares reactions of economies in Economic Monetary Union (EMU) to a single monetary policy. For that, we estimate a reaction function supposed to represent the behaviour of European Central Bank over the period 1980–1998. Then residuals are introduced into the production equation of each country. We break up monetary shocks in two axes: first, anticipated against unanticipated shocks and then positive against negative shocks. These distinctions permit a best evaluation of the degree of homogeneity of the effects of monetary policy. France, Germany, Spain and Austria seem more sensitive to unanticipated interest rates increases contrary to Belgium and Italy. These results illustrate all the problem of single monetary policy.
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1. Introduction

January 1, 1999 is now a key date in modern history. Indeed, it points the transition to the third phase of the Maastricht's Treaty signed in 1992: founding of

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the Economic and Monetary Union and creation of a single currency, the Euro, within this zone. The change from national monetary policies directed by various independent central banks to a single monetary policy led by only one entity, the European Central Bank (ECB), raises some questions. Monetary authorities fear the existence of asymmetries in the reactions of various economies to a major monetary adjustment assumed to be symmetric since decided by the ECB. That would create tensions, would lead to expensive real adjustments given the impossibility of exchange rate adjustments. Indeed, the success in leading a single monetary policy depends not only on nominal convergence, which is considered successful globally, but also on the convergence of national economies sensitivity degrees to measurements of monetary regulation. Without such a convergence, a common monetary impulse could have different effects on national countries and could become an asymmetric shock. These questions are significant because they raise the problem of monetary policy control by the ECB. A common interest rate change will produce an uneven distribution of output across the monetary union.

The aim of this work is, precisely, to measure the reactions of European economies to a single monetary shock and to determine whether common shocks of monetary policy induce asymmetric reactions on real activity in each country. To undertake this analysis, we choose a similar model to that used by Cover (1992): we first estimate the reaction function of the ECB and then, in a second stage, the production equation for each European economy. The advantages compared to the vector autoregression (VAR) systems are mainly on two levels. First of all, Cover's method enables to take into account the unanticipated part of monetary policy. Then, analyses on VAR systems are all based on an assumption of linearity and symmetry of the effects of currency on the activity whereas macroeconomic theory generally shows that these effects can be asymmetric (downward price inflexibility). We apply this analysis to the Union including eight countries (Economic Monetary Union (EMU) without Greece, Portugal, Luxemburg and Ireland) over the period 1980–1998. We take into account two kinds of asymmetries to know whether countries react in the same way to shocks. First of all, we investigate whether or not output asymmetrically responds either to anticipated component or unanticipated monetary shocks or to both. Lastly, we examine their reactions to positive and negative shocks. Taken all together, our results suggest symmetry in the reactions of European economies with regard to the first distinction: only unanticipated single monetary policy can be considered to have real effects on the production of European countries. Nevertheless, a relative asymmetry exists concerning the distinction between effects of an expansionist or restrictive monetary policy, as some countries react more to unanticipated interest rate increases and others to falls.

In the following section, the monetary policy led by the ECB is examined and represented in a model. We then attempt to quantify the real effects of this single monetary policy on European economies and to clarify the implications for ECB policy.