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The implications of diversity in consumption behaviour for the choice of monetary policy rules in Europe☆

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Abstract

Differences in economic structures across countries have potentially important implications for the conduct of monetary policy in the Euro Area. One facet of this lies in consumer expenditure behaviour. Our objective is to analyse the policy implications of assuming maximal and minimal differences between European economies using the National Institute's Global Econometric Model. We assess the performance of three possible ECB monetary policy rules under these different scenarios, using measures of the volatility of prices and output. We take as our benchmark a fully heterogeneous Europe, where individual country consumption functions are estimated separately. We estimate a homogeneous model for core European countries, incorporating countries into the core where it is statistically justified to pool them. We also estimate a fully homogeneous Europe where all Euro Zone countries are pooled. We find that the two 'pillar strategy' adopted by the ECB dominates other monetary policy frameworks.

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☆ This work was undertaken whilst Dury was a member of staff at NIESR, and it does not reflect the views of the Bank.

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1. Introduction

Given the recent introduction of a single Euro Area monetary policy, it is important to ask whether the differences between European countries are so substantive that they influence the European Central Bank's implementation of the 'one size fits all' interest rate policy. A pessimistic view is given in Cecchetti (1999). One central difference amongst European countries lies in consumer behaviour, with some more sensitive to particular shocks than others. Differences may, for instance, manifest themselves due to asymmetries in the availability of credit facilities, with the various European countries at contrasting stages of development in their financial systems. The extent of credit restrictions, and their impact on consumer expenditure, is analysed in Bacchetta and Gerlach (1997), Campbell and Mankiw (1991a,b), MacLennan et al. (1998).

It is of course the case that differences between European countries may depend upon the policy environment. Dornbusch et al. (1998) argue that asymmetries in the monetary transmission mechanism are mainly due to heterogeneous financial systems and these will diminish over time. Frankel and Rose (1998) suggest that business cycles are more correlated for countries that trade more, and Rose (2000) finds that members of a monetary union trade more with each other than similar countries who are not part of a monetary union. Hence entry into a monetary union may reduce differences in business cycles. However, Krugman (1991) and Hughes Hallett and Piscitelli (1999) suggest that the effect of European economic integration on institutions may not be great. Whether or not more convergence takes place it is clear that the structure of monetary policy responses is important. Clarida et al. (2000), using a stylised model of the macroeconomy, suggest that both output volatility and inflation variability is affected by the strength with which central banks respond to inflation and the output gap. There is evidence to support this proposition, and for instance Bernanke et al. (1997) demonstrate that the reaction of the US Fed to the oil price shock of the early 1970s was central to economic outcomes.

In this paper we consider whether differences between European economies can be found in the data and whether they are important for the choice of a monetary policy rule. We test for statistically significant differences between the Euro Area countries and also the UK. We estimate a pooled model using seemingly unrelated regression estimation (SURE) with fixed effects and impose homogeneous coefficients across countries where it is statistically justifiable to do so. We find that this is only possible for a small group of core countries. We also estimate a completely homogeneous model which imposes cross country restrictions. We do not find that it is statistically valid to impose the constraint that all countries are members of a European core, but this is useful in our analysis. This model represents a fully integrated European economy, which, conceivably, will result from implementing a single currency and monetary policy. We compare these models to a completely heterogeneous model which is based on the existing equations from the National Institute's Global Econometric Model (NiGEM).