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Abstract

In this paper, we empirically investigate the link between exchange rate accommodation and inflation persistence in Europe. We introduce the lagged level of the real exchange rate as an appropriate indicator of exchange rate accommodation. We correspondingly estimate a non-linear autoregressive inflation equation for ten European countries (excluding Germany) for the period 1974:1–1998:2. In the estimation procedure we allow for the presence of an unknown number of shifts in the mean of inflation. Overall, our results provide modest support for the existence of the theoretically hypothesized link between exchange rate accommodation and inflation persistence.

Absent trend-like real exchange rate changes, inflation rates in countries participating in a joint fixed exchange rate system cannot permanently differ from one another according to relative purchasing power parity. The European experience over the past twenty years on this issue is a prime example. To achieve the goal of low and stable inflation, central banks in almost all West-European countries have used exchange rate targeting relative to a low-inflation country (Germany) at some point in the eighties and nineties. As a result, inflation in almost all member countries of the ERM had converged to a low and stable level prior to the start of EMU in 1999. Some countries on floating exchange rates experienced a similar decline in inflation, as discussed by De Grauwe (1990). Monetary targeting or inflation targeting are appropriate alternative monetary policy strategies to reduce inflation.

An important related but somewhat neglected issue is the speed of inflation convergence, or equivalently, the degree of inflation persistence. Clearly, high
inflation persistence raises the disinflation costs for high-inflation countries and endangers the sustainability of a low-inflation monetary policy. Taylor (1980), Dornbusch (1982), Alogoskoufis and Smith (1991)—henceforth AS (1991)—, Alogoskoufis (1992), and Obstfeld (1995) develop variants of a similar theoretical model to show that inflation persistence is a function of the degree of monetary policy accommodation. \(^1\) AS (1991) and Alogoskoufis (1992) use a symmetrical two-country model and distinguish between average (world) inflation persistence and relative inflation persistence. Average persistence is determined by money supply accommodation, while relative persistence is a function of exchange rate accommodation. Dornbusch (1982) studies the link between exchange rate accommodation and domestic inflation persistence using a small open economy model.

In this paper, we concentrate on the relation between exchange rate accommodation and the degree of inflation persistence. Apart from its theoretical relevance, the issue is of considerable practical interest to countries that have to decide on the appropriate exchange rate system. In particular, a small open economy with relatively high inflation will not only or even primarily be interested in the fact that in due time a fixed exchange rate against a low-inflation currency will lead to inflation convergence. It may be more interested in questions like how long such convergence process will take and to what extent the length of the convergence period can be shortened by following a less accommodating policy. Of course, the issue—in terms of the choice of the degree of exchange rate accommodation—has lost most of its urgency for the previous EMS participants who now are part of EMU. \(^2\) However, a new wave of EU entrants will face a similar question. Countries like Poland, Hungary, the Czech Republic etc. are likely to enter the EU with a rate of inflation still considerably exceeding inflation in the EMU area. These countries subsequently will be expected to join the new exchange rate mechanism ERM II in which the euro is the anchor country. The new entrants will be granted access to EMU only after they have obtained sufficient inflation convergence with the euro area.

Empirical evidence on changes in the degree of (relative) inflation persistence is scarce and mixed. Examples are AS (1991), Alogoskoufis (1992), Burdekin and Siklos (1999), Obstfeld (1995), Anderton (1997), and Bleaney (1999). Anderton (1997) is the only one focusing on the ERM experience in the seventies and eighties. Support for the null hypothesis that less exchange rate accommodation—that is, a more rigidly fixed exchange rate—implies lower inflation persistence weakens when the potential presence of level shifts in the mean of the inflation process is incorporated into the analysis, see for instance the evidence by Bleaney (1999), Anderton (1997), and Burdekin and Siklos (1999).

All studies share a common unsatisfactory feature in our view. In investigating changes in inflation persistence across time, they all hypothesize a one-to-one relation with changes in the prevailing formal exchange rate regime. In reality, exchange rate regimes appear far more complex than that, especially in recent times. A country like Italy, for example, continuously participated in the ERM