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Catching-up and inflation differentials in a heterogeneous monetary union: Some implications for the euro area and new EU Member States

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Abstract

We propose an alternative explanation for the nature, sources and consequences of inflation rate differentials in a monetary union, such as the euro area. We build on the new neoclassical synthesis (NNS) framework, recently advanced by Goodfriend [Goodfriend, M. 2002. Monetary Policy in the New Neoclassical Synthesis: A Primer. Federal Reserve Bank of Richmond, Richmond, VA] and Goodfriend and King [Goodfriend, M., King, R., 2001. Case for price stability. NBER Working Paper 8423, Cambridge, MA]. Based on the NNS setup, we discuss the inflationary consequences of the catching-up process in a heterogeneous monetary union. In particular, we explore the interaction between catching-up and inflation differentials and offer an interpretation of the nature of this interaction. We demonstrate that divergent inflation rates between Member States do not necessarily have to be an equilibrium phenomenon, even if the original shock comes from the supply-side of the economy. Second, we show how such divergence of individual country's inflation rates may arise when countries differ in size and in trend productivity growth.

JEL classification: F3

Keywords: Inflation differentials; New neoclassical synthesis; Monetary union; EMU; Balassa–Samuelson model

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1. Introduction

Inflation differentials between the European Union (EU) Member States participating in the euro area have widened since the introduction of the single currency, the high point of the convergence process. For example, the spread between the highest and lowest inflation rate, which had been about 0.6 percentage points in January 1998, increased to around 3.4 percentage points in 2000 and reached almost 4.0 percentage points in February 2003. It stabilized thereafter and in July 2005 it stood at 3.1 percentage points. While it is true that the convergence of inflation rates in the late 1990s resulted from a deliberate policy action of Member States aimed at meeting the Maastricht inflation criterion in the run-up to the creation of the euro, nonetheless the inflation differentials observed thereafter are more regionally persistent than in the US economy and higher than had been predicted by some leading commentators (see, for example, De Grauwe, 1992, and Canzoneri et al., 1996). The inclusion of the EU accession countries from Central and Eastern Europe (henceforth new EU Member States, NMS) into the EU has produced an even more heterogeneous grouping of countries and will presumably result in such inflation differentials and their persistence rising even further. Therefore a pertinent policy question that both the current and future euro area members face is: what is the nature and what are the sources and consequences of the observed divergence in inflation rates within the euro area? In particular, does this divergence represent an equilibrium adjustment of relative prices, which should not be a source of concern, or is it, rather, a sign of rising disequilibrium?

A common explanation of the observed divergence in inflation rates within the EU draws on the Balassa–Samuelson (BS) model (see Balassa, 1964; Samuelson, 1964; for a formalization of the model see, for example, De Gregorio et al., 1994, or Froot and Rogoff, 1995). In this framework inflation differentials emanate from the supply-side during the catching-up process: with a constant nominal exchange rate, a positive shock to total factor productivity in the traded sector raises the average wage in the economy, and thus both the relative price of non-traded to traded goods and the inflation rate rise. In this setup, inflationary pressures are not viewed as a source of concern as they are an equilibrium, productivity-driven, phenomenon that is unlikely to have a deleterious effect on competitiveness and growth.

The above hypothesis, although widely accepted in the profession (for criticisms see, for example, Bergin et al., 2004; Podkaminer, 2003), does not seem to be supported by the recent experience in the EU. For example, and as we have noted, the inflation rate spread in the euro area has increased since its inception, although trend productivity growth rates in Member States have not experienced any major change during that time and, of course, exchange rates have been irrevocably fixed. With the trend productivity growth and exchange rates constant across Member States, the Balassa–Samuelson hypothesis predicts that the inflation spread should have stayed constant, if this hypothesis were in fact the main driving force behind inflation developments in the euro area. The fact that the spread has been non-constant suggests that there must be other factors at work.

In this paper we propose an alternative explanation for the nature, sources and consequences of inflation rate differentials in a heterogeneous monetary union such as the euro area. Our alternative explanation is based on the new neoclassical synthesis (NNS) framework, as proposed by Goodfriend (2002) and Goodfriend and King (2001). The effect we focus on here is essentially