Supply and demand shocks in accession countries to the Economic and Monetary Union

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The success of the enlarged Economic and Monetary Union (EMU) depends on the relative incidence of demand and supply shocks in both the participating and the accession countries. This paper addresses the issue using bivariate vector autoregression models for current and would-be EMU member countries. While the degree of symmetry in business cycle shocks among EMU accession countries is significant, idiosyncratic shocks between current and would-be member states dominate. Our results suggest a costly process of adjustment following EMU enlargement. *Journal of Comparative Economics* **32** (2) (2004) 202–211. Central European University, 1051 Budapest, Hungary; Comenius University, 82005 Bratislava, Slovakia.
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1. Introduction

The potential benefits of monetary integration are manifold. Monetary unions are expected to have welfare improving allocative effects by boosting international trade and economic growth inside the currency area because of the increased stability of the exchange rate brought about by the increased credibility of the exchange rate regime (Rose, 2000).

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A currency union also enables the single monetary authority to pursue more effective monetary control because money demand is likely to be more stable in a wider geographic area under open capital markets and full financial liberalization (Bofinger, 1994). While these and other potential benefits may dominate, the costs of a currency union for new members in the form of reduced scope for demand management and diminished capacity to absorb real shocks may also be significant.

The literature on optimal currency areas emphasizes that policy independence is crucial if countries face recurrent idiosyncratic disturbances. For example, if member-countries of the Economic and Monetary Union (EMU) show sizeable asymmetry in the timing of business cycle phases and their exposure to exogenous shocks, these countries may be better off retaining their ability to conduct monetary and exchange rate policies. Consequently, the important empirical issue is whether Europe is a region in which country-specific shocks prevail or whether shocks affect most of these countries in a similar way. Although, this issue has been addressed for Western European economies, systematic research on the degree of business cycle synchronization among incumbent and accession EMU countries is sparse.[1]

Direct empirical assessment of the costs and benefits of joining a monetary union is difficult; hence we adopt an indirect approach to evaluate the potential adjustment difficulties after EMU enlargement. Our specific objective is to examine the relative incidence of different types of shocks in incumbent versus would-be EMU members. Therefore, we identify both demand and supply shocks over the business cycle in dynamic, quarterly frequency models of inflation and output growth. Then we analyze the degree of asymmetry of these shocks using data from the first quarter of 1993 to the third quarter of 2000.

The paper is organized as follows. Section 2 discusses briefly the theoretical and empirical background of the data analysis. Section 3 describes the data and introduces the empirical approach concerning the correlation of the shocks. Section 4 presents the results, Section 5 concludes with policy implication.

2. Background

The argument in favor of flexible exchange rates depends on the closeness to which countries correspond to regions. Regarding optimum currency areas (OCA), Mundell (1961) emphasizes the importance of retaining exchange rate flexibility in countries that face asymmetric demand shocks, especially if nominal rigidity, non-existent fiscal transfers or limited labor mobility hinder the necessary adjustment to shocks in these countries.[2]

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[1] Bayoumi and Eichengreen (1993), Dibooglu and Horvath (1997), and Funke (1997) analyze present EMU incumbent countries. Horvath and Grabowski (1997) and Grabowski and Horvath (1999) analyze regions outside Europe. The paucity of related research on EMU accession countries in Eastern Europe is explained partly by the lack of sufficiently long time series data. Benczur and Ratfai (2004), Boone and Maurel (1998), Fidrmuc and Korhonen (2001) and Frenkel et al. (1999) are exceptions.

[2] If the prevailing exchange-rate regime can maintain external balance without causing unemployment or demand-induced wage inflation the regime is considered to be optimal (Mundell, 1961). Mongelli (2002) and Horvath (2003) provide detailed reviews of classic and modern contributions to the OCA literature.