NORTH-HOLLAND

Journal of Economics and Business 53 (2001) 45–68

Journal of Economics & Business

Rules and discretion with common central bank and separate fiscal authorities

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Abstract

This paper evaluates the implications of international policy coordination under the setting of a common monetary authority and separate fiscal authorities. The paper considers a two-country framework with noncoordinated monetary and fiscal policies. The deviations of output, public expenditure, and inflation from target levels are obtained under symmetric and asymmetric regimes of rules and discretion. The expressions for output, inflation, and government expenditure deviation from target are also obtained under coordinating fiscal authorities and compared with similar expressions under insular fiscal policy making.

JEL classifications: E. Macroeconomics and Monetary Economics; E5. Monetary Policy, Central Banking, and the Supply of Money and Credit

Keywords: Rules; Discretion; Common monetary policy

1. Introduction

The aim of this paper is to evaluate fiscal and monetary policy implications of a monetary union composed of two countries, with separate fiscal authorities. The Maastricht Accord has no provision for a single fiscal policy to complement the single monetary policy. Fiscal policy will remain in the hands of the national governments. Their individual and uncoordinated actions could make a large difference not only to the fiscal stance of the union as a whole, but also the macroeconomic performances e.g. the inflation performance. The analysis in this paper considers the effects on inflation, output and government expenditure when

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PII: S0148-6195(00)00036-9

the common monetary authority chooses a composite inflation rate for the two countries, the fiscal authorities choose the tax rates for their respective countries, and monetary policy is jointly and centrally managed. In the benchmark model, the monetary policy for the two countries is placed under a single monetary authority. This authority aims to achieve both countries' goals and is responsible for defining the monetary policy for the union.

A two-country framework with a common monetary authority but separate fiscal authorities is considered. In the model, the fiscal authorities choose the taxes for each country. The monetary authority chooses a composite inflation rate, which is a weighted average of the endogenously determined inflation rates in the two countries. The implicit inflation rates are defined as the change in price levels in each country, with the previous year's price level normalized to zero. It is assumed that the monetary and fiscal authorities do not cooperate in their choice of inflation and tax rates. The monetary authority chooses the inflation rate that minimizes its loss. Similarly, each fiscal authority chooses the level of taxes that minimizes its own loss. Each nation's loss is represented as a weighted sum of squared deviations of inflation, output and public expenditure from their target levels. The expressions for the composite inflation, public expenditure and output are obtained.

The following cases are considered below:

(i) Discretion, in which monetary and fiscal authorities do not commit to the private sectors and thus act on their own discretion.
(ii) Commitment, in which the monetary and fiscal authorities make binding commitments to the private sector.
(iii) Monetary authority is discretionary, while the fiscal authorities act in a committed manner.
(iv) Monetary authority commits, while the fiscal authorities act in a discretionary manner.
(v) The monetary authority and a fiscal authority are committed, while the other fiscal authority is discretionary.

The model under consideration in this paper is a blend of Bryson, Jensen, and VanHoose (1993) and Duca and VanHoose (1990). In this paper, a common monetary authority sets a composite inflation rate. In contrast, Bryson et al. consider separate monetary authorities in each country which set inflation rates in their respective countries. My model assumes that a common monetary authority has been established. Thus, the fiscal authorities consider a common inflation rate in their respective budget constraints. As a result, the government budget constraints are a modified version of the budget constraint represented by Alesina and Tabellini (1987). In the Alesina and Tabellini case, the government budget is financed by direct taxes and the entire amount of money seigniorage in each country. In my model, each country's budget is financed from direct taxes and from the fraction of the common money seigniorage available to each country.

Article 103 of the Maastricht Treaty instructs members to "coordinate (their economic policies) within the Council (of ministers)." This aspect of the Treaty is represented by the fiscal coordination scenario in the paper, whereby the fiscal authorities coordinate their choice of tax rates to minimize the joint social loss function for both countries. The European Council will monitor developments in member countries and make recommendations to