Journal of International Economics 57 (2002) 177–196
Journal of INTERNATIONAL ECONOMICS
www.elsevier.com/locate/econbase

A simple approach to international monetary policy coordination

Pierpaolo Benigno*

Department of Economics, New York University, New York, USA and CEPR, London, UK

Received 12 May 1999; received in revised form 15 January 2001; accepted 7 April 2001

Abstract

This paper analyzes the strategic interaction between the monetary policymakers of two countries, in an intertemporal general equilibrium model with nominal rigidities and imperfect competition. It offers an *excursus* on non-cooperative towards cooperative solutions. In a non-cooperative equilibrium the monopolistic allocation prevails in both countries, because of the incentive to use strategically the terms of trade. In a cooperative solution where both policymakers internalize the externalities given by the terms of trade, the competitive allocation is reached. However, cooperation can be counterproductive. We then characterize a problem of delegation in which the set of choice is restricted to the Pareto efficient allocations and in which the participation constraints implied by the non-cooperative equilibrium are taken into account.

Keywords: Open-economy macro; Monetary coordination

JEL classification: E42; F41; F42

> Our analysis of monetary policy [. . .] relies on social welfare functions defined directly over macroeconomic outcomes and policy instruments. This lack of explicit microeconomic underpinnings reflects the state of the art in

*Tel.: +1-212-998-8958; fax: +1-212-995-4186.

E-mail addresses: pierpaolo.benigno@nyu.edu (P. Benigno), http://homepages.nyu.edu/~pb50 (P. Benigno).

0022-1996/02/$ – see front matter
PII: S0022-1996(01)00132-5

much of the literature, which relies on linear versions of the Mundell–Fleming model.[1]

1. Introduction

The state of the art has changed: Corsetti and Pesenti (2001) have shown how to reconcile rigor in microfoundations and 'tractability' through a two-country general equilibrium model with nominal rigidities and monopolistic competition. In their paper, once a closed-form solution is obtained, it is possible to analyze the effect of unanticipated monetary policy shocks, even of large size, and to compute well-defined welfare functions. We utilize their simple framework in order to address the issue of international monetary policy coordination. We study the normative implication of different forms of strategic interaction, thus revisiting the basic findings of the ad hoc literature on international monetary policy coordination, with no 'lack of explicit microeconomic underpinnings'.[2]

Given that wages are predetermined, monetary policy has an influence on real activity and welfare. In this model, there are two distortions: one is 'structural' and is given by the monopolistic-competition factor market, the other is 'strategic' and is given by the terms of trade. In a closed-economy model, monetary policy would get rid of all the distortions induced by monopolistic competition. Real wages would be equated to the marginal cost of labour in terms of utility — the competitive allocation. In an open-economy model, when the policymakers act in a non-cooperative way, the 'strategic' distortion given by the terms of trade is in conflict with the objective of eliminating the monopolistic distortion. Were both policymakers to push their economies at the competitive level, each policymaker would have an incentive to contract its money supply. In fact the reduction in utility that comes from the decrease in consumption is more than offset by the reduction in the disutility of producing goods, since the 'burden' of production is shifted to the other country through an improvement of the terms of trade. The strategic use of the terms of trade is at the root of the 'contractionary bias'. This contraction is larger, the higher are the degrees of openness of the economy and the higher is the degree of substitutability in utility between the home and foreign goods. Instead, in the traditional literature (e.g. Canzoneri and Henderson, 1991), the 'contractionary bias' emerges because the improvement of terms of trade can lower inflation.

[1] Persson and Tabellini (1995, p. 2003).

[2] The traditional approach to international policy coordination is built in Hamada (1985) and in the first chapters of Canzoneri and Henderson (1991). The main conclusion of their analyses is that if policymakers cooperate, they could all be better off. On the other hand, Rogoff (1985) points out how monetary policy cooperation can be counterproductive when policymakers lack credibility. Persson and Tabellini (1995) emphasize the role of institutions in enforcing the cooperative solution.