ELSEVIER

Journal of Economic Dynamics & Control
24 (2000) 97–125

JOURNAL OF
Economic
Dynamics
& Control

www.elsevier.nl/locate/econbase

Endogenous fluctuations in an open economy with increasing returns to scale

Marta Aloi[a,b,*], Huw D. Dixon[c], Teresa Lloyd-Braga[d]

[a] *Institute of Economics, Studiestraede 6, 1455 Copenhagen, Denmark*
[b] *School of Economics, University of Nottingham, University Park, NG7 2RD, Nottingham, UK*
[c] *Department of Economics, University of York, Y01 5DD York, UK*
[d] *Departamento de Economia, Universidade Católica Portuguesa, Palma de Cima, 1600 Lisbon, Portugal*

Received 28 October 1996; accepted 8 June 1998

Abstract

In this paper we study the effects of opening an economy, with increasing returns in the production of nontraded goods, on the existence of multiple Pareto-ranked stationary equilibria, local indeterminacy and bifurcations. We consider a standard *overlapping generation model* of a small open economy, with a fixed exchange rate, where labour is the only input and money the only asset. We find that when there are increasing returns, the open economy may display persistent equilibrium endogenous fluctuations (deterministic and stochastic) in the balance of trade and main macroeconomic aggregates. © 2000 Elsevier Science B.V. All rights reserved.

JEL classification: D43; E32; F41

Keywords: Endogenous fluctuations; Increasing returns to scale; Small open economy

1. Introduction

This paper develops a simple model of a small open economy showing how persistent fluctuations in the balance of trade and main macroeconomic aggregates can arise into the system without appealing to shocks to the fundamentals.

* Corresponding author.

0165-1889/00/$ - see front matter © 2000 Elsevier Science B.V. All rights reserved.
PII: S0165-1889(98)00063-3

In particular, we study the impact of openness on the uniqueness/multiplicity of steady states, local indeterminacy, deterministic and stochastic endogenous fluctuations in an economy with increasing returns to scale and imperfect competition.

We consider a simple OG open economy model, with money, in which there is a traded and a nontraded sector. The exchange rate is assumed fixed, the price of traded goods being determined by the world market. For simplicity, we assume that the traded good is an endowment which is constant over time. The technology for producing the nontraded good with labour exhibits increasing returns to scale. There is imperfect (Cournotian-monopolistic) competition in the nontraded sector output markets with free entry. In our set up the (endogenous) equilibrium number of firms is constant and so is the mark up. The model is designed to be as simple as possible, and we abstract away from capital accumulation. In this economy, money is the only asset and is predetermined (its value at time t is determined by the state of the economy in the previous period, i.e. by the balance of trade). Technology and preferences are time invariant, as is the price of traded goods (exogenously fixed, due to the small country and fixed exchange rate assumptions).We disregard exogenous shocks in order to focus on the role played by underlying preference and technology parameters in generating endogenous fluctuations.

The present paper develops the existing studies of endogenous fluctuations in the macroeconomic context to the case of an open economy. The earliest studies followed Grandmont (1985) in focussing on the closed economy case. We follow his approach by assuming that there is no capital: however, we differ from him in assuming that there are increasing returns in production, and also that there are two sectors (traded and nontraded) so that the dynamic system is two dimensional. This complements the closed economy models with capital, in which endogenous fluctuations are possible with positive labour supply elasticities (for the case of constant returns, see Reichlin (1986, 1992), Woodford (1986) and Grandmont et al. (1998)) or, for the case of increasing returns, recent works by Lloyd-Braga (1995a,b) and Cazzavillan et al. (1998).

In our study we explore the conditions under which local deterministic and stochastic endogenous fluctuations may emerge into the system by using the methodology of Grandmont et al. (1998). The advantage of this method is that it provides a simple and comprehensive geometrical way to analyse the behaviour of equilibrium trajectories nearby a steady state, without appealing to particular specifications of preferences or technology. We find that there are four fundamental parameters determining the local dynamic properties of the model: the extent of returns to scale; the degree of substitutability between traded and nontraded goods; the propensity to consume nontraded goods; the elasticity of labour supply. Our main results are the following.

First, we characterise sufficient conditions for the existence of a steady-state solution (Proposition 1) and the existence of more than one steady state

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
✓ امکان دانلود نسخه ترجمه شده مقالات
✓ پذیرش سفارش ترجمه تخصصی
✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
✓ دانلود فوری مقاله پس از پرداخت آنلاین
✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات