



ELSEVIER

Journal of International Economics 56 (2002) 299–327

Journal of
INTERNATIONAL
ECONOMICS

www.elsevier.com/locate/econbase

Explaining business cycles in small open economies 'How much do world prices matter?'

M. Ayhan Kose*

*Graduate School of International Economics and Finance, MS-021, Brandeis University, Waltham,
MA 02454, USA*

Received 27 May 1998; received in revised form 20 October 2000; accepted 7 April 2001

Abstract

This paper analyzes the role of world price shocks – fluctuations in the prices of capital, intermediate, and primary goods, and in the world real interest rate – in the generation and propagation of business cycles in small open developing countries. I construct a stochastic dynamic multi-sector small open economy model. The model is a variant of the specific-factors model and reflects the major structural characteristics of developing economies. I utilize variance decomposition methods to quantitatively evaluate the impact of world price shocks. The results indicate that world price shocks account for a significant fraction of business cycle variability in developing countries. © 2002 Elsevier Science B.V. All rights reserved.

Keywords: Business cycles; Relative prices

JEL classification: F41; E31; E32; D58

1. Introduction

Small open developing countries differ from developed economies along several dimensions. They rely heavily on a narrow range of primary commodities for their export earnings. These earnings are highly unstable due to recurrent and sharp fluctuations in the relative prices of primary commodities. Moreover, a significant

*Tel.: +1-781-736-2266; fax: +1-781-736-2269.

E-mail address: akose@brandeis.edu (M.A. Kose).

fraction of their export revenues is used to pay back their large foreign debt. Developing countries also depend heavily on imported capital goods and intermediate inputs for domestic production. In light of these structural features, it is not difficult to see that fluctuations in world prices – fluctuations in the prices of primary, capital, and intermediate goods, and in the world real interest rate – could have an important impact on business cycle fluctuations in small open developing countries.¹

The objective of this paper is to examine the role of world prices in inducing business cycle fluctuations in these countries using a stochastic dynamic business cycle model. The model embodies the main structural characteristics of small open developing economies. In particular, the model provides an environment in which the dynamic interactions between world price shocks and business cycle fluctuations in traded and non-traded goods sectors, and several factors of production including imported capital goods, imported intermediate inputs, non-tradable and inelastically supplied capital (land), and labor can be studied. I also examine impulse responses to investigate the propagation of economic fluctuations generated by world price shocks and domestic productivity shocks.

This paper is closely related to some of the recent literature that studies the importance of these price fluctuations.² Mendoza (1995) was the first paper to analyze the quantitative importance of terms of trade shocks in driving business cycles using a dynamic stochastic small open economy model. In Mendoza's model domestically produced capital goods in the non-tradable goods sector are inelastically supplied, and capital is perfectly substitutable between exportable and importable goods producing sectors. Also, terms of trade shocks do not have a direct impact on the dynamics of the non-traded sector in his model, because the only endogenous factor in that sector is domestic labor. His paper focuses only on aggregate output fluctuations and he finds that terms of trade disturbances explain 56% of output variation.

This paper extends Mendoza's work by developing a richer production structure that captures several empirically relevant features of developing economies. In particular, I consider a variant of the specific factors model with two sectors: production of exportable primary goods features diminishing returns as these goods are produced with imported capital, domestic labor, and inelastically supplied land. The non-traded final goods sector employs capital, imported intermediate inputs, and domestic labor. This production structure, while capturing the important role played by land in the production process, limits the substitution effects across different types of factors, and reduces the volatility of primary sector

¹See Agenor and Montiel (1996) for a brief analysis of the relationship between world price fluctuations and economic activity in developing countries.

²Baxter (1995) provides an extensive survey of the research program, which investigates a variety of issues associated with the generation and transmission of business cycles in open economies using stochastic dynamic general equilibrium models. Kim (1994); Senhadji (1998); Mendoza (1991, 1995).

متن کامل مقاله

دریافت فوری ←

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