



The real exchange rate and the output response in four EU accession countries

Terence C. Mills, Eric J. Pentecost*

Department of Economics, Loughborough University, Loughborough, Leics, LE11 3TU, UK

Received 6 March 2001; received in revised form 9 July 2001; accepted 30 July 2001

Abstract

This paper estimates the response of output to changes in the real exchange rate in four central and eastern European Emerging Market economies using a new time series technique to generate robust short- and long-run estimates in small samples, where the integration properties of the variables are unknown. The reduced form estimation results show that devaluation is neutral in its effect on the long-run level of GDP in the Czech Republic and Hungary, but that a real appreciation leads to a persistent fall in output in Poland and a sustained rise in output in Slovakia. © 2001 Elsevier Science B.V. All rights reserved.

JEL classifications: P2; C5

Keywords: Devaluation; Output responses; Conditional error correction models; Transitional economies

1. Introduction

The relationship between the real exchange rate and the level of output is an important and controversial issue for transitional economies. There are two principal issues: firstly, the level and determinants of the real exchange rate; and secondly, the effects of changes in the real exchange rate on the level of output of the economy. Halpern and Wyplosz (1997) investigated the determinants of the real exchange rate for transition economies. They found that, following liberalisa-

* Corresponding author. Tel.: +44-1509-222734; fax: +44-1509-223910.

E-mail address: e.j.pentecost@lboro.ac.uk (E.J. Pentecost).

tion, the real exchange rate usually first depreciates sharply and then appreciates, with the most important determinant of real exchange rate appreciation being increases in labour productivity. The second issue, concerning the output effect of real exchange rate movements, has recently been addressed in the context of transition economies by Karadeloglou et al. (2001). They find a positive association between real exchange rate depreciation and output growth in Bulgaria, the Czech Republic and Slovenia, but a negative association in Poland. Mitchell and Pentecost (2001) also find a negative relationship between real depreciation and output growth in a panel data study of the same four emerging market economies.

These studies, however, suffer from a number of statistical problems that may seriously jeopardise the robustness of these statistical findings. Mitchell and Pentecost, by using a panel data set, effectively constrain the real exchange rate coefficients to be the same across all members of the panel, with the country differences being captured by fixed effect dummies. On the other hand, Karadeloglou et al. adopt a standard single equation approach with between 5 and 7 years of data on each country, but without testing the individual time series for non-stationarities which, if present, may lead to incorrect parameter estimates and inference. In contrast to this literature and to that on developing countries (see, for example Branson, 1986; Edwards, 1986), this paper employs a new modelling technique, developed by Pesaran et al. (2000). This allows both short- and long-run relationships to be consistently estimated without knowing precisely the integration properties of the time series appearing in the model. This is an important consideration in studies of transition economies, where unavoidably short samples make unit root and cointegration testing hazardous and potentially misleading. Unfortunately, the critical values provided by Pesaran et al. are asymptotic. We thus extend the technique by providing Monte Carlo simulated critical values for the small samples that we have available. The resulting models provide interpretable and robust estimates of the effects of, *inter alia*, real exchange rate changes on GDP.

The rest of the paper is as follows. Section 2 sets out a brief theoretical model, based on a modified traditional IS-LM model augmented by an aggregate supply curve, from which a reduced form equation for output is derived. Section 3 considers the data sets of four transition economies, the Czech Republic, Hungary, Poland and Slovakia over the period 1992–1998. Section 4 explains the econometric methodology used and Section 5 reports the small sample critical values derived from the Monte Carlo simulations and discusses the results that are obtained from the estimation of the model. Section 6 summarises the main findings, discusses the limitations of the analysis and offers some suggestions for future work.

2. The theoretical framework

The traditional literature suggests that a real exchange rate depreciation will lead to a rise in the demand for domestic output as the gain in competitiveness improves the trade balance, assuming that the sum of the import and export

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