Journal of International Economics 68 (2006) 368–383
www.elsevier.com/locate/econbase

Interpreting real exchange rate movements in transition countries

Mark De Broeck [a,*], Torsten Sløk [b]

[a] Fiscal Affairs Department, International Monetary Fund, 700 19th Street, NW, Washington, DC 20431, USA
[b] Deutsche Bank Foreign Exchange Research, 60 Wall Street, New York, NY 10005, USA

Received 19 November 2001; received in revised form 1 September 2004; accepted 20 May 2005

Abstract

Real exchange rate movements in the transition economies during the initial transition period were unusually large by the standards of other economies and periods. Using cross-sectional evidence, this paper documents how real exchange rates were generally misaligned at the onset of the transition and how most of this misalignment was eliminated over a relatively short period. Turning to the time series dimension, the paper shows that estimates from a consensus-type single-equation model of the real exchange rate are well-behaved and provide a good fit for exchange rate movements in the early transition period. The results highlight the role of productivity-driven real exchange rate movements that can be interpreted as reflecting both the impact of the structural transformation process on productivity in the tradables sector per se and the effects of changes in tradables versus non-tradables productivity. Furthermore, the results show that the relationship between productivity and real exchange rates holds both when productivity is increasing and when it is falling.

Keywords: Real exchange rates; Transition economies; Balassa–Samuelson effects

JEL classification: F30; G14; G15; P34

1. Introduction and related research

Real exchange rate movements in the transition countries during the initial transition period 1991–98 were unusually large by the standards of other economies and periods. A number of

* Corresponding author.
E-mail addresses: mdebroeck@imf.org (M. De Broeck), torsten.slok@db.com (T. Sløk).

0022-1996/$ - see front matter
doi:10.1016/j.jinteco.2005.05.012

transition countries experienced strong real exchange rate appreciations, while others faced steep depreciations. This initial transition period 1991–98 deserves special attention in two respects. First, it is the period during which exchange rates in the transition economies became market-determined, in many cases in tandem with the introduction of new currencies. Second, this period was characterized by both a deep structural transformation and a volatile macroeconomic environment. This paper (i) documents how real exchange rates were generally misaligned at the onset of the transition and how most of the misalignment was eliminated over a relatively short period; and (ii) demonstrates that estimates from a consensus-type single-equation model of the real exchange rate are well-behaved and provide a good fit for exchange rate movements in the early transition period. Key contributions of the paper are that it relates exchange rate movements to the sharp fluctuations in productivity in the transition countries and that the analysis covers all the transition economies other than those in East Asia.

Reflecting the collapse of central planning-based production mechanisms and trade patterns, productivity and real exchange rate movements in the transition economies have been unusually pronounced by the standards of non-transition industrial and developing countries. During 1991–98 productivity in the tradables sector rebounded in the central and eastern European countries and the Baltics, but continued to decline in Russia and other countries of the former Soviet Union. At the same time, real exchange rates appreciated consistently in the first group of countries, but not in the other transition economies. These productivity and exchange rate patterns suggest that productivity effects may be operating in both the positive and negative direction.

Real exchange rate movements can be explained by different theories, which tend to focus on either demand or supply factors (Obstfeld and Rogoff, 1996), with the main supply-side based explanation the Balassa–Samuelson "productivity hypothesis" (Balassa, 1964; Samuelson, 1964). An incipient literature has adapted productivity-based models of the real exchange rate to the context of the transition economies. Krajnyák and Zettelmeyer (1998) add two assumptions to a standard tradables/non-tradables model: (i) the tradables sector is relatively capital intensive and (ii) capital adjustment is costly. In their model, capital obsolescence associated with external opening and price liberalization drives the real exchange rate below its steady state level at the beginning of the transition. During the transition, capital accumulation in the tradables sector results in an appreciation of the real exchange rate back toward the steady state. Coricelli and Boŝtjan (2001) introduce a variable representing the extent of structural misalignment inherited from the central plan in the two-sector model and show that structural reform and reallocation of labor from industry to services are important determinants of real exchange rate behavior during the transition. Égert and Lommatzsch (2004) and Welfens (2004) present models where the catching-up of transition economies with advanced market economies in terms of either the quality of tradable goods or the rate of product innovation contributes to a real appreciation of the currencies of the former versus the latter. A common feature of these models is that they show how in the transition economies real exchange rate movements can be related to productivity developments through channels other than those implied by the Balassa–Samuelson model.

There is a broad body of empirical literature analyzing real exchange rate movements in transition countries. A comprehensive and detailed survey is offered in Égert (2003). Directly relevant to this study are a number of papers that, while using a different methodology and sample, also focus on the initial undervaluation of the real exchange rate in the transition