A panel cointegration approach to the estimation of the peseta real exchange rate

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Abstract

In this paper we estimate different specifications of a model for the determination of the bilateral real exchange rate of the peseta relative to nine European Union members. The model is based on Meese and Rogoff (The Journal of Finance 43 (1988) 933) monetary approach as extended by MacDonald (Journal of International Financial Markets, Institutions and Money 8 (1998) 117). The applied econometric techniques are the recent panel cointegration tests developed by Kao (Journal of Econometrics 90 (1999) 1), McCoskey and Kao (A Monte Carlo comparison of tests for cointegration in panel data. Journal of Propagations in Probability and Statistics 1 (2001) 165) and Pedroni (Oxford Bulletin of Economics and Statistics 61 (1999) 653) for homogeneous and heterogeneous panels. The results are favorable to a model containing relative productivities in tradables and non-tradables and the real interest rate differentials as explanatory variables.
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1. Introduction

The aim of this paper is to study the main determinants of the Spanish peseta real exchange rate during the float and the first years of European Monetary System (EMS) membership. The study of the real exchange rate is particularly relevant

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under the European Monetary Union (EMU), once the member countries have fixed their bilateral nominal exchange rates.

The peseta and the Spanish economy offer an interesting case study to analyze the effects of a process of opening to international competition in a context of regional integration. The Spanish experience can be relevant for the assessment of the most adequate path to liberalization in emerging economies in the light of the European Union enlargement process.

Following the 1986 entry into the European Community, Spain dismantled the majority of the restrictions on trade and on international capital flows. The entry of foreign capital tended to appreciate the currency. Both domestic and foreign investment increased to accommodate the domestic market to the new competitive conditions. A natural outcome of this opening process would be the increase in productivity, mainly in the manufacturing sector, more exposed to international competition. According to the Balassa–Samuelson effect, this would cause an appreciation of the domestic currency.

During this same period, democracy in Spain introduced drastic changes in fiscal policy, not only in the form of new income taxes and the VAT imported from the European Community, but also with new orientations of government expenditure, that adopted an active and expansionary approach.

Finally, from 1986 (and specially since the 1989 entry in the EMS) the Spanish monetary authorities followed the so-called "competitive disinflation" strategy. In this framework, by keeping locked the nominal exchange rate, either the domestic prices are kept at the same (or lower) level as the competitors or a rise in the terms of trade causes a progressive loss of external markets. This would provoke a more costly adjustment in terms of recession and, consequently, unemployment, but would finally improve the competitive position of the economy.

Bearing this strategy in mind, the Spanish authorities adopted, specially during the period 1989–1992, a "hard peseta" policy in order to maintain the nominal exchange rate target. These measures also provoked a considerable appreciation of the real exchange rate of the peseta challenging, at the same time, the whole strategy.

This paper investigates the factors, from the demand and the supply-side of the economy that may have been influential in the process of appreciation that suffered the peseta during the eighties and the beginning of the nineties. Although there has been an increase in traded-goods productivity in Spain during the period analyzed, [1] the Balassa–Samuelson effect alone may not explain all the peseta appreciation, so that the demand conditions should play an important role in the Spanish economy. Hence, the study of these factors is of crucial importance for the future developments in the EMU, where another episode of real appreciation can be very dangerous for the competitive position of Spain, due to the absence of the nominal exchange rate as a policy instrument.

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[1] According to De Grauwe (1994), the average annual productivity growth of manufacturing in Spain during the eighties was 3.5%, compared to 2.5% in France, 3.0% in Germany and 4.2% in Italy.