Exchange Rate Regimes and the Real Exchange Rate

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Abstract

It is well established now that the (nominal) exchange rate regime has important implications for the behavior of real exchange rates. Two key stylized facts in this regard are that real exchange rate variability is greater under flexible exchange rates than under fixed exchange rates and that real and nominal exchange rate movements are positively related under flexible exchange rates. One class of models that are consistent with these observations are sticky price models. This paper constructs an equilibrium model of real and nominal exchange rate determination that is capable of explaining these observed facts without resorting to differences in other policies across regimes. The paper thus shows that there is an inherent tendency, due solely to the difference in monetary adjustment mechanisms across alternative exchange rate regimes, for real exchange rates to exhibit greater variability under flexible exchange rates and this tendency turns out to be compatible with the observed positive correlation between real and nominal exchange rates. The model relies on the inflation tax mechanism and the impact of temporary, country-specific shocks to generate these results.

I. Introduction

Choices among alternative exchange rate regimes are thought to be important because they influence the behavior of real variables and alter the

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real impact of other policies. For example, the exchange rate regime has been argued to be an important determinant of the efficacy of monetary and fiscal policies (see Mundell [1963]), the stability of real output (see Kimbrough [1984]), the volume of trade (see Persson and Svensson [1989]), and the behavior of relative prices such as the real exchange rate. In recent years this last issue, the implications of the exchange rate regime for the behavior of real exchange rates, has been the subject of extensive discussion.

Work by Stockman [1983] and Mussa [1986] has clearly established that the behavior of real exchange rates is significantly affected by the (nominal) exchange rate regime. In fact, Baxter and Stockman [1989] argue that, except for the behavior of real exchange rates, there is little evidence to suggest that the choice between fixed and flexible exchange rates matters for the behavior of macroeconomic aggregates and international trade flows. These results suggest that it is important for open economy macro models to explain the differences in the behavior of real exchange rates across exchange rate regimes. The attractiveness of broad classes of models will be considerably diminished if they are not able to explain the observed impact of the exchange rate regime on real exchange rates. Two key stylized facts emerging from the three papers cited above are that the variability of real exchange rates is greater under flexible exchange rates than it is under fixed exchange rates and real and nominal exchange rates are positively correlated under flexible exchange rates. Attractive approaches to open economy macroeconomic questions need to be able to be structured and parameterized to be consistent with these two empirical observations.

Mussa [1986] argues that one class of models that is consistent with these observations are those assuming that national price levels adjust sluggishly compared to the speed with which exchange rates adjust under flexible exchange rates. These “sticky price” models explain the difference in the behavior of real exchange rates under fixed and flexible exchange rate systems in the following manner. When exchange rates are fixed real exchange rate variability is low as a consequence of price level stickiness and the pegging of nominal exchange rates. However, when exchange rates are flexible real exchange rate variability increases substantially reflecting the variability of market determined exchange rates combined with the con-