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A structuralist model of the small open economy in the short, medium and long run

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Abstract

Open-economy macroeconomics contains a monetary model in the Keynesian tradition that is deemed serviceable for analyzing the short run and a nonmonetary neoclassical model thought capable of handling the long run. But do the Keynesian and neoclassical models meet the challenges thrown out by the main events of the past few decades? We first indicate that the effects of these shocks on the open economy are not well captured by either the standard Keynesian model or the standard neoclassical theory. Next we provide a careful development of a nonmonetary model of the equilibrium path of the real exchange rate, share price level, as well as natural output, employment and interest that contains "trading frictions" of the customer-market type. We then examine its implications for these shocks not only over the medium run but over the short run and the long run as well.

JEL classification: E24; F3; F4

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1. Introduction

In open-economy macroeconomics there is a monetary model in the Keynesian tradition that is deemed serviceable for analyzing the short run (Mundell, 1962, 1963; Dor-

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nbusch, 1976, 1980) and there is a nonmonetary neoclassical theory thought capable of handling the long run (Blanchard and Fischer, 1989; Faria and León-Ledesma, 2000).[1] For years the weak point in this arsenal was agreed to be the medium run (Malinvaud, 1994, 1996). This run, which follows the short-run adjustment of production, hiring and training, advertising and other investment rates, is a period of adjustment for the various business assets, such as customers and trained employees as well as plant, during which nationals' private wealth holdings and social entitlements are regarded as constant—a period we will think of as emerging in the second year following a shock and running for half a decade or so. By now, several dynamic nonmonetary models of a ''structuralist'' possessing such a medium run have emerged (Phelps, 1988a,b; Hoon and Phelps, 1992; Phelps, 1994; Obstfeld and Rogoff, 2000). At present, though, the structuralist models tend to be seen as niche products offering no competition to the established short-run and long-run models.

But do the Keynesian and neoclassical models meet the challenges thrown out by the main events of the past few decades? We suggest that the effects of these shocks on the open economy are not well portrayed by either the standard Keynesian model or by standard neoclassical theory. (We relegate to the appendix in the working paper, Hoon and Phelps (2005), the key equations underlying the Dornbusch–Mundell–Fleming model and the standard competitive neoclassical model that form the basis of our following discussion.) Consider the 1980s shock to Europe: an external jump in real interest rates. The Dornbusch–Mundell–Fleming model and its descendants, applied to fluctuating-exchange-rate economies such as the US, EU and Japan, predict that a rise in the overseas interest rate interacts with the home country's supply of liquidity, or LM curve, to cause a release of liquidity fuelling an increase of output and employment; in the usual extension, employment would gradually be forced back to its fixed natural level. Neoclassical theory would depict interaction of the interest rate increase with the supply of labor, in particular, it would show that a higher external real interest rate leads to an increase in the current marginal utility of wealth and thus a drop in the demand for leisure and hence an increase in the work week and possibly an increase in labor force participation. In fact, European employment went into a huge decline in the 1980s and by 2000, nearly 20 years later, unemployment rates had hardly recovered at all except in those countries that caught the internet boom of the late 1990s or implemented economic reforms.[2]

Consider next the sort of shock experienced in the US and parts of northern Europe in the second half of the 1990s: the emerging prospect of new industries in the future creating increased needs for capital—as a macroeconomic approximation, an anticipated future

[1] Rodriguez (1979), in addition to studying the short-run effects, also studies the long-run effects of monetary and fiscal policies in an open-economy Keynesian model under flexible exchange rates where the stock of foreign assets has fully adjusted to the stream of induced short-run international capital flows. This approach, however, suffers from the weakness that it assumes nominal wage or price-level stickiness even in the long run.

[2] In defense of the open-economy Keynesian model, one might argue that in response to the higher external real interest rate in the first half of the 1980s, Europe contracted money supply in order to fend off inflationary pressures, and thus produced a rise in unemployment. However, for such an endogenous response in monetary policy to actually cause a recession, Europe would have had to experience real exchange rate appreciation according to the Dornbusch–Mundell–Fleming model. (This is readily proved with the Dornbusch–Mundell–Fleming model set up in the appendix in Hoon and Phelps (2005).) Data, in fact, show that Europe faced real exchange rate depreciation in the first half of the 1980s (see Fitoussi and Phelps, 1988, Table 2.1, and Rogoff, 2002, various figures).