

Saturated solution

Jul 27th 2000

From The Economist print edition

A new paper that could revolutionise macroeconomic theory hinges on an extremely simple point—the costs of trade

RARELY in academic economics does a research paper come along that credibly claims to offer a solution to one of the field's long-standing puzzles. A paper that purports to solve or at least illuminate no fewer than six such puzzles is almost unheard-of. But Maurice Obstfeld of the University of California at Berkeley and Kenneth Rogoff of Harvard, whose reputations demand that they be taken seriously, have produced just such a tract*.

The six phenomena that Messrs Obstfeld and Rogoff deal with have long baffled economic theory. They are: that subdivisions of nations trade far more with each other than they do with neighbouring parts of other countries; that rich-country rates of saving and investment are strongly correlated; that investors' equity portfolios are heavily dominated by their home-country securities; that growth rates across countries are less closely correlated for consumption than they are for income; that prices are slow to adjust to shocks in the real exchange-rate; and that there is no consistent relationship between exchange rates and measures of economic activity.



This week we look at the first four puzzles—those that deal with relationships between “real” quantities (eg, goods and securities). Next week, we will consider the last two problems, as well as some criticisms that Messrs Obstfeld and Rogoff have provoked with their research.

Their central insight is hardly a miraculous silver bullet. Rather, they resurrect a fairly humble idea: that, whether because of tariffs, import barriers or transport fees, *trade costs money*. Paul Samuelson demonstrated the significance of trading costs in trade patterns as long ago as 1954. But more recently they have merited little more than a lowly footnote in most economic papers. For many years, macroeconomists have pared down their models for the sake of clarity, and dropped the complication of trading costs in favour of a distinction between traded and non-traded goods.

This paper rejects that split, and reinstates trading costs, albeit only in goods markets. The authors first tackle the “home-bias” puzzle: that people trade more between domestic regions than across international borders. The ratio of spending on “imports” of goods from other home regions to imports from abroad is greater than one; researchers have recorded values anywhere between 2.5 and 12. Previous authors attributed this to differences in currencies. But this is a weak argument, which the paper says is redundant if trading costs are taken into account. They show that the home bias is exponentially sensitive to trading costs. If trading costs are

close to zero, the new model predicts little home bias; but if they are significant—25% of the value of goods shipped, say—then the predicted home-country bias reaches the observed range.

Next, the authors try to explain the apparent lack of integration in global capital markets. The best evidence of this is that domestic savings and investment rates tend to differ between countries only slightly over long periods. In the 1970s, the two were practically equal in most OECD countries. In more recent years the correlation dropped somewhat but was still considered unnaturally high. The puzzle is why countries' net foreign investment is such a small part of overall investment.

The explanation begins with a basic principle: current-account deficits must, sooner or later, be followed by current-account surpluses. If one allows for trading costs, a good will always be sold at a higher price when it is imported than when it is consumed in its country of origin. When a country switches from importing the good to exporting it, the good's price in the country therefore tends to fall.

Extended to the entire marketplace, this implies an expected deflation as a country moves from current-account deficit to surplus. That means that the real interest rate can be higher domestically than it is at world level—in some circumstances, a lot higher. This link between the interest rate and the current account may restrain foreign investment. Empirical research supports the theoretical result. Statistical tests using data on OECD countries from 1975 to 1998 show a strong negative relationship between a country's real interest rate and its current-account balance.

Domestic inequity

A puzzle closely related to these first two is the home bias in equity holdings. Americans held 90% of their wealth in American-based firms in the mid-1990s; in Japan at the end of the 1980s, the figure was 98%. Again, the key in applying the Obstfeld-Rogoff theory to this phenomenon is the difference in goods prices for importers and exporters. In this case, even though they assume that securities can be traded cost-free, trade in the goods from which they are derived still incurs costs. With assumed trading costs of 25%, their simulation generates portfolios with home biases very like those in the real world.

The last of the "real" puzzles is the low correlation in countries' rates of consumption growth, which is surprising given the strong relationships between growth rates of national incomes. One might, for instance, expect neighbouring countries to "insure" each other against situations in which consumption became relatively more expensive in one rather than the other. But such risk pooling is more common between internal regions of countries than it is between countries. Using the same assumptions as for their equity home-bias calculations, the authors find correlations in consumption growth very similar to those actually observed among the G7 countries.

All four puzzles are, in fact, interlinked. So it is not wholly surprising that a single wrinkle in standard economic theory might unlock so many mysteries. The danger, as we will see next week, is that, besides solving old theoretical problems,

reinstating trading costs creates new ones. Whatever the side-effects, however, this particular road-not-taken is an illuminating one.

*["The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?"](#) Maurice Obstfeld and Kenneth Rogoff, National Bureau of Economic Research working paper, July 2000.