

'demand creates its own supply', the conclusion must be that further empirical evidence is needed to try to resolve the issue.

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REFERENCES

- HOUTHAKKER, H.S. & MAGEE, S.P. (1969): "Income and Price Elasticities in World Trade", *Review of Economics and Statistics*.
- THIRLWALL, A.P. (1979): "The Balance of Payments Constraint as an Explanation of International Growth Rate Differences", in this *Review*, No. 128, March 1979.

A Reply to Mr. McCombie

Mr. McCombie seems to imply that the 'law' I derive from the empirical evidence relating export growth and output growth is somehow spurious because "the analysis borders on circular reasoning". This is not so, and he does less than justice to the model. He misleads when he says that the law is derived from the two equations: $x_t = \epsilon z_t$ and $m_t = \pi y_t$, and that π is estimated as simply the regression of $\ln M_t$ on $\ln Y_t$. Both the import and export demand functions have relative prices in them, and the Houthakker and Magee import demand equations, from which the π s are estimated, also include a relative price term. If relative prices were to change there is no reason why x_t and m_t should be equal for a moving balance of payments equilibrium through time and therefore no reason why the 'law' should hold. The fact that the growth of many countries seems to have approximated to the simple rule $y \div x/\pi$ is not indicative of circular reasoning; it is indicative that relative prices in international trade measured in a common currency must have remained relatively stable over the long period taken and that capital flows have either been relatively unimportant in allowing growth to deviate from the rule, or that for countries in permanent disequilibrium on current account (like the United States) the rate of growth of real capital imports was approximately equal to the rate of growth of export volume.¹

¹ This is the condition for the simple rule to hold starting from initial balance of payments disequilibrium. For a formal proof, see my paper "Balance of Payments Constrained Growth, Capital Flows and Growth Rate Differences Between Developing Countries", *Oxford Economic Papers*, forthcoming.

Although I did not say so in my original paper, the rule that $y = x/\pi$ is the dynamic analogue of the Harrod trade multiplier, $Y = X/m$, where m is the marginal propensity to import.² The empirical evidence suggests, therefore, that the Harrod trade multiplier works, at least for many advanced countries. In other words, it is income that tends to adjust in the face of imbalance between exports and planned imports, not relative prices.

There are, however, countries which are exceptions to the rule, the most notable being Japan, which grew much slower than its balance of payments equilibrium growth rate as determined by x/π . This result has a bearing on the question of supply constrained versus demand constrained growth. For countries that are demand constrained, we should expect to observe growth rates equal to, or in excess of, their balance of payments equilibrium growth rate, and with a growing amount of unused resources at home. If their balance of payments could be relieved, by raising exports or reducing the propensity to import, they would have the resources to grow faster. By contrast, for countries that are constrained by domestic supply, we should expect to observe growth rates below the rate consistent with balance of payments equilibrium indicating an inability to use foreign resources productively. By this criterion, Japan was clearly not demand constrained in the 1950s and 1960s, just as the oil producers today cannot use all the foreign exchange they have at their disposal. By the same token, the presumption must be that most of the counterpart deficit countries in the 1950s and 1960s were demand constrained and could have grown faster had their balance of payments been stronger. If these countries, such as the United Kingdom, for example, were constrained by supply *before* the balance of payments constraint on demand became important, why did they not experience (like Japan) growing balance of payments surpluses? Thus, while the simple model itself may not be able to discriminate easily between the demand and supply led growth hypotheses, I think the *results* of applying the model, combined with judgement, can; and there is little doubt in my own mind that a balance of payments constraint on demand is a far more plausible explanation of international growth rate differences (as long as any one country or bloc of countries is in surplus) than differences in domestic resource constraints on output. The latter view of the world implies that factor supplies are mainly exogenous to an economic system, which is an assumption very difficult to swallow when we know that capital is a produced means of production; that there are vast reserve armies of labour all over the world, and that most technological progress is endogenous. This is not to deny, of course, that an important determinant of demand is the supply characteristics of goods.

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² On the assumption that trade is always balanced and the terms of trade are constant. See R. HARROD, *International Economics*, Cambridge, 1933, and A.P. THIRLWALL, "Harrod's Trade Multiplier and the Importance of Export Led Growth" (unpublished, available on request).