

## The Essential Conditions for International Economic Stability

### 1. The Dilemma of Prosperity

The third quarter of the 20th century has given us what is probably the greatest growth of real income the world has ever seen in a like period. International trade has boomed. Prosperity has been endemic. Nevertheless there has been one major and growing problem in a great many countries: the dilemma of an unacceptable and apparently accelerating rate of price increase in the face of an uncomfortable level of unemployment. This dilemma revolves around our reliance on fiscal policy and monetary policy as the major instruments for controlling both inflation and unemployment. Restrictive policies can restrain inflation and reduce excessive demands on resources in boom times, expansive policies can stimulate output and ease deflationary pressures in slack times, but as yet we know of no policy combination for dealing simultaneously with rising prices and high unemployment. The consequence is that monetary and fiscal policies can not be decisively used until either the rate of price-rise overshadows the level of unemployment in the public's mind, or *vice versa*, whereupon the use of these instruments aggravates one condition while improving the other, so the community is never fully satisfied on either score.

This dilemma underlies both the poor performance of the Bretton Woods system in recent years and the sharp escalation of the trade war. Different rates of inflation in major countries make it virtually impossible to maintain stable exchange-rate patterns. Policy measures designed to support domestic incomes and employment seem more effective in generating inflation and balance-of-payments deficits, with the result that policymakers are tempted into measures they hope will push the burden onto someone else. As in

the 1930's, competitive depreciation and other techniques are being used in an effort to expert unemployment. Perhaps we should not be surprised at this. From an international point of view the immediate cause of the trouble is that price changes occur at different rates in different countries; in the 1930's it was a case of different rates of *deflation*, in the 1970's it is different rates of *inflation*.

Clearly, there can be no equilibrium in international economic arrangements unless each major nation and the world community as a whole is reasonably well satisfied with its lot. In this phrase we must specifically include such things as the levels and the rates of change of real and money incomes, prices, employment, and output, the terms on which each nation trades with others, and the progress of the developing countries in raising their standards of living. Any nation, large or small, that is not reasonably well satisfied with its position on any of these counts, or with the rate at which conditions are improving, will surely take such action as it can to improve its situation. However, since it is indeed one world we all inhabit together, the actions one nation takes to improve its lot are likely to have direct and indirect effects on other nations, for good or for ill.

### 2. External Repercussions of Domestic Spending

#### *A Numerical Example*

It may be helpful to start by taking a look at the external repercussions of domestic income-supporting measures in an open economy. The general principles have been widely recognized in macro-economic analysis since very early in the Keynesian era,<sup>1</sup> and can be readily illustrated in a simple arithmetic representation of a two-country world.<sup>2</sup> Obviously we can not hope to cover all the circumstances in which a given country might conceivably find itself in the real world, but we can present a number of sequences that should help us to understand the general principles at work.

Let us postulate a trading world composed of two countries, A and B, each of which earns its income from a combination of

<sup>1</sup> An early treatment of the subject is to be found in FRITZ MACHLUP, *International Trade and the National Income Multiplier*, Philadelphia, Blakiston, 1943.

<sup>2</sup> This example is based on a more formal model elaborated in a paper by A. N. McLEOD, entitled "External Repercussions in a Two-Country Model", which has been submitted for publication in a technical economic journal.

domestic production and export sales, and spends its income on a (presumably somewhat different) combination of domestic production and imports. The discussion will be in terms of the spending multiplier, without specifying whether a given increase in the spending stream is due to new capital formation or something else. Also, we will speak primarily of income, consumption, imports, exports, savings, investment, etc., in monetary terms; whether their corresponding real magnitudes vary by the same amount will depend on the behaviour of prices, into which we will not attempt to delve in any systematic way. The exports of each country are identical with the imports of the other, and their respective holdings of foreign-exchange reserves are a component part of their accumulated financial savings out of past income; but a change in reserves may include borrowing by one from the other as well as changes in owned reserves in the form of either gold or claims on the other country.

Now suppose that A undertakes income-supporting expenditures of \$1,000 at Phase I (1) of Table 1, using the dollar as a numeraire in which to express magnitudes denominated in the local currencies of both countries. If A's marginal propensity to import is 0.2 and its marginal propensity to save is 0.1 then its income multiplier will generate income of \$3,333 and imports of \$667 at Phase I (2), which means that B's export earnings will increase by \$667.<sup>3</sup>

The external repercussions begin in earnest in Phase II. If B's marginal propensity to import is 0.3 and its marginal propensity to save 0.1 then its export multiplier will generate income of \$1,667 in Phase II (1), and new imports of \$500, which means an equivalent increase in export income for A. At Phase II (2) this leads to new income of \$1,667 and new imports of \$333 for A; and so on. By the end of Phase II a further \$3,333 has been added to A's income, and a like amount of new income has been generated in B. Combining Phase I and II as Phase III, we find that A has added \$6,667 to its income and \$1,333 to its imports, B has added \$3,333 to its income and \$1,000 to its imports, and A has lost reserves of \$333

<sup>3</sup> Compressing the expansionary sequence thus implied into a virtually instantaneous multiplier in this way raises certain intellectual difficulties, in that no such sequence can be deemed to go to completion in any finite time period. However, these difficulties are easily overcome by supposing that the authorities deliberately over-do the expansion at first and then partially reverse it later as the resulting income-expansion reaches the desired level.

to B — all as a result of the initial injection of \$1,000 in new spending in A. A new equilibrium of sorts has been attained, in that the marginal increments of mutually-induced expenditures have approached zero in both countries, and under some circumstances both countries may be willing to tolerate the exchange flows. For example, A may be willing to borrow from B to support incomes in a temporarily depressed sector which is expected to recover in due course.

TABLE I  
AN ILLUSTRATION OF INCOME REPERCUSSIONS

Phase or Period	A's Economy					B's Economy				
	Ex-ports (1)	Inco-me (2)	Im-ports (3)	Sa-vings (4)	Re-serves (5)	Ex-ports (6)	Inco-me (7)	Im-ports (8)	Sa-vings (9)	Re-serves (10)
I (1) . . .		1,000								
(2) . . .		3,333	667	333	-667	667				+667
II (1) . . .	500				+500		1,667	500	167	-500
(2) . . .		1,667	333	167	-333	333				+333
(3) . . .	250				+250		833	250	83	-250
(4) = $\Sigma_1^{\infty}$	1,000	3,333	667	333	+333	667	3,333	1,000	333	-333
III = I + II	1,000	6,667	1,333	667	-333	1,333	3,333	1,000	333	+333
IV (1) . . .	250				+250		833	250	83	-250
(2) . . .		833	167	83	-167	167				+167
(3) . . .	188				+188		625	188	63	-188
(4) = $\Sigma_1^{\infty}$	1,000	3,333	667	333	+333	667	3,333	1,000	333	-333
V = III + IV	2,000	10,000	2,000	1,000	0	2,000	6,667	2,000	667	0
VI . . . . .	3,000	15,000	3,000	1,500	0	3,000	10,000	3,000	1,000	0
VII = V + VI	5,000	25,000	5,000	2,500	0	5,000	16,667	10,000	5,000	0

*Notes.* It is assumed that A's marginal propensity to import is 0.2, B's is 0.3 and A's and B's marginal propensities to save are both 0.1. In Phase I the expansion is generated by the domestic income multiplier operating on exogenous domestic spending of \$1,000 in A. In Phase II the expansion at each step is generated by the export multiplier operating on the net expansion of exports in the preceding step. In Phase IV B's expansion at each step is generated by the domestic income multiplier operating on credit-financed spending equal to B's net retained reserves at the end of the previous step (\$333 at II (1), \$250 at II (3), etc.), and A's expansion is generated by the export multiplier operating on A's net gain of exports in the preceding step. Phase VI repeats Phase V for an exogenous domestic expenditure of \$1,000 in B.

However, perhaps B is encouraged to permit credit expansion as a result of the unexpected addition to its reserves; and let us suppose that the monetary authorities permit the expansion to continue until all the newly acquired reserves are exhausted. In terms of the usual credit-expansion sequence-analysis we may suppose that at Phase IV (1) B's financial system initially lends the net free reserves it has accumulated in Phase I and II, i.e. \$333, and that this is spent domestically and generates income of \$833. This will add \$250 to B's imports, i.e. to A's exports, which in turn will generate income of \$833 and imports of \$167 for A at IV (2). The result is that B still has excess reserves of \$250 (i.e.  $\$333 - \$250 + \$167$ ), which the financial system now lends out to be spent as before, and which generates additional income for B of \$625 at III (4); and so on. In the end we find an additional \$3,333 of income is generated for A and a like sum for B in this phase. Thus at Phase V we find that A's income has increased by exactly the amount one would expect if it were a closed economy instead of an open economy, and in addition B's income has risen by two-thirds as much.<sup>4</sup>

Parenthetically, we may note that the course of events in Phase IV will be materially modified if B retains a foreign-exchange reserve of some given percentage of the increase in its financial assets that is generated by the expansionary sequence.<sup>5</sup> If the reserve ratio is 100 per cent then there will be no credit-induced expansion at all, and the level of all variables in the table at Phase V will be identical with their levels at Phase III. If the reserve ratio is zero then the expansion will be as shown in Table 1. If the ratio is less than 100 per cent but greater than zero the expansion will be at some intermediate level.

Even the situation in Phase V is not the end of the story. Suppose that B is now encouraged to emulate A and undertakes to stimulate new domestic spending by another \$1,000. Phases VI and VII of

<sup>4</sup> It can be shown that A's income at this stage will increase by the initial injection of new spending multiplied by the reciprocal of its marginal propensity to save, and that B's income will be increased by the amount of A's increase multiplied by the ratio of A's marginal propensity to import to B's marginal propensity to import. Note, however, that this is not a simple income multiplier but a combined income-and-credit multiplier; see for example the "total export multiplier" derived in A. N. McLEOD, "Credit Expansion in an Open Economy", *The Economic Journal*, LXXII, September 1962, paragraph 57 (p. 632) and *passim*.

<sup>5</sup> The foreign-exchange-reserve ratio here relevant is the ratio of a change in foreign-exchange reserves to a change in the total of all financial claims generated in the expansion, not just the ratio to the change in the central bank's monetary obligations nor to the change in the "money supply" however defined.

Table 1 show the eventual results, assuming that A now permits credit expansion in the same way B did at Phase III. Total exogenous spending of \$2,000 by A and B combined will bring an increase of \$41,667 in world income, which implies a multiplier of somewhat more than 20.

### *Policy Implications*

The policy implications of this model are as diverse as the circumstances in which A and B may find themselves at the start of the first sequence, as the changes that may occur in these circumstances in the course of the subsequent events, and as A's and B's possible reactions. However, the various phases into which the sequences have been broken in our model permit us to examine a number of major possibilities.

In a world in which inflation is not a problem and both A and B are in an under-employment position at the start, they both should welcome A's initiative. Up to Phase III A tends to gain rather more than B, unless B's marginal propensity to import is considerably smaller (its income multiplier is considerably greater) than A's, so B will have an incentive to emulate A and initiate some domestic income-supporting measures of its own. Also, unless either A or B achieves full employment earlier, both will benefit from the domestic credit expansion occurring in Phase III (and in the corresponding part of Phase VI).

In combination, therefore, these different initiatives offer a flexible way in which a general equilibrium acceptable to both A and B could be reached. By a judicious blend of variations in the amount of income-supporting expenditures initiated in A and B, and variations in the amount of additional credit-induced expansion permitted in each country separately, it should be possible to achieve approximately full employment in both economies. If this position involves a permanent and unwanted drain of reserves from one to the other then it should be relatively easy for them to agree on measures to restore balance. The essential point will be to shift some resources from production for export to production for domestic consumption in the surplus country, and the other way around in the deficit country, without causing more than a temporary departure from full employment in either country. Technically it would be

possible to use tariffs, exchange controls, import quotas, or perhaps still other techniques to effect the balance-of-payments adjustment and assist in the transfer of resources, but an agreed exchange-rate change would seem to be the least painful procedure and the one most compatible with the money-and-market mechanism.<sup>6</sup>

If B is experiencing inflationary pressures, however, it will not welcome the spill-over of demand from A at Phase I. As long as full employment is not threatened thereby, B will almost certainly suppress Phase IV and may endeavour to offset Phase II by restrictive domestic policies. Conceivably B may be able in this way to maintain domestic price stability without a material increase in unemployment.

In a world of unacceptably high inflation and unacceptably high unemployment, which is unfortunately the position of most countries today, the problem becomes more difficult. Both A and B may be supporting their domestic spending streams in an effort to achieve a tolerable position between the two horns of the dilemma. Each may feel that its own domestic expansion is fully justified in order to maintain domestic incomes at the level it considers appropriate under the circumstances, but the combined effects will be far more stimulating than either may realize. Each will presumably be thinking in terms of its open-economy income multiplier (assuming that reasonably accurate estimates of their respective marginal propensities to import and to save are available), i.e. 3.3 in A's case and 2.5 in B's, but in fact A's spending will generate a much higher multiplier even if Phase IV is suppressed (double the expected value, in our numerical example) and will also generate new income for B of some additional amount, as at Phase III. Similarly, B's spending will generate a much higher multiplier than expected (in our example it too will be double the expected value), and will also generate new income for A by some additional amount, as can be demonstrated through a process exactly parallel to Phases I and II of Table 1 with B instead of A taking the initiative.

Each country will be able to demonstrate that a substantial portion of its inflationary pressures is imported. Neither will be satisfied with the level of its employment or the rate of its inflation,

<sup>6</sup> If the rate of price increase in one country were persistently greater than in the other then of course some form of continuous or periodic adjustment of exchange rates would be necessary.

hence there is little hope that they can agree on measures to end whatever exchange drain may be occurring; what would suit the surplus country will appear to the deficit country to be an invitation to permit even more unemployment, and what would suit the deficit country will appear to the surplus country to be an invitation to permit still more inflation. Failing a break-through that will permit more effective differential control over the price and the quantity components of the spending stream, it is difficult to visualize any solution that will be even close to a stable equilibrium for either country.

### 3. External Repercussions of an "Improvement" in a Country's Balance of Payments

#### *A Numerical Example*

Instead of undertaking a domestic income-supporting expansionary programme, suppose A takes action to effect an "improvement" of \$1,000 in its balance of payments, either by expanding its exports or by diverting domestic spending from imports to domestic goods. Presumably the purpose will be either to stimulate the domestic economy or to end an exchange drain that threatens the viability of an existing support programme. We need not postulate what technique A uses — import tariffs or quotas, export subsidies, exchange-rate depreciation or devaluation, or what — but we may specify that the monetary values in the table are in terms of a common numeraire after allowing for any change in exchange rates that may have been involved. Essentially the same principles apply as in the income supporting sequence, but the results are complicated by the negative impact on B's income.

Table 2 illustrates what will happen. In Phase I A achieves a net gain of income amounting to \$3,333 and a net gain of reserves amounting to \$333, which means that B suffers a net loss of \$333 in both export earnings and exchange reserves. At Phase II (1) B's export multiplier produces a loss of income of \$833, and consequently a reduction of \$250 in imports. This sets off a contractionary sequence which ends with a loss of income of \$1,667 for each of A and B at Phase II (5). Combining Phases I and II as before, we find that at Phase III A has lost half its initial gain of income and reserves

TABLE 2

## AN ILLUSTRATION OF BALANCE-OF-PAYMENTS REPERCUSSIONS

Phase or Period	A's Economy				B's Economy			
	Exports (1)	Income (2)	Imports (3)	Re-serves (4)	Exports (5)	Income (6)	Imports (7)	Re-serves (8)
I . . . . .	1,000	3,333	667	+ 333	- 333			- 333
II (1) . . . . .	- 250			- 250		- 833	- 250	+ 250
(2) . . . . .		- 833	- 167	+ 167	- 167			- 167
(3) . . . . .	- 125			- 125		- 417	- 125	+ 125
(4) . . . . .		- 417	- 83	+ 83	- 83			- 83
(5) = $\Sigma_1^{\infty}$ . . . . .	- 500	- 1,667	- 333	- 167	- 333	- 1,667	- 500	+ 167
III = I + II . . . . .	500	1,667	333	+ 167	- 667	- 1,667	- 500	- 167
IV . . . . .	- 500	- 1,667	- 333	- 167	- 333	- 1,667	- 500	+ 167
V = III + IV . . . . .	0	0	0	0	- 1,000	- 3,333	- 1,000	0
VI . . . . .	- 1,000	- 5,000	- 1,000	0	0	0	0	0
VII = V + VI . . . . .	- 1,000	- 5,000	- 1,000	0	- 1,000	- 3,333	- 1,000	0

Notes. Marginal propensities are as in Table 1. In Phase I A's expansion is generated by the diversion of \$1,000 in spending from B (an increase in A's exports or a decrease in imports). In Phase II the contraction at each step is generated by the export multiplier operating on the net loss of exports in the preceding step. In Phase IV a step-by-step contraction is generated as the reverse of the expansion illustrated in the same phase of Table 1. Phase VI repeats Phase V for a retaliatory trade diversion of \$1,000 by B.

and B has lost as much income and as much reserves as A has gained.<sup>7</sup>

Now (Phase IV) suppose B is constrained to deflate its economy in order to recover its lost foreign-exchange reserves. By a process that is just exactly the reverse of that set out in the corresponding phase of Table 1, B must deflate its income by \$1,667. This will reduce its imports (and hence A's exports) by \$500, which will cause a deflation of \$1,667 in A's income and a reduction of \$333 in A's

<sup>7</sup> It is a matter of hypothesis that B's loss of reserves is equal to A's gain. It can also be shown that, on the basis of our assumptions, A must lose exactly half as much in Phase II as it gained in Phase I, regardless of what values we assign to A's or B's marginal propensities to import or to save. However, it is merely a coincidence that B's loss of income at Phase II is the same as A's; with different values for the various marginal propensities it might be greater or less.

imports. On balance, therefore, B loses exports of only \$333 but loses imports of \$500 in this phase, for a net gain of reserves of \$167.

The overall result of Phase V, therefore, is that the initial "improvement" in A's balance of payments is reduced to zero, and the net effect of its action is to reduce B's exports (and imports) by the amount of the initial "improvement" A achieved in Phase I (1). This of course entails a loss of \$3,333 of income to B, which is the product of A's initial trade diversion and the reciprocal of B's marginal propensity to import.

As in the income-expansion case, the outcome in Phase IV will be materially modified if B alters its foreign-exchange reserves in a fixed ratio to increases and decreases in its accumulated financial assets. Just as in Table 1 an increase in the reserve ratio brought a reduction in Phase IV of the expansion, so in this case it brings a reduction in the contraction: some of the foreign exchange that must be given up is released from previously required reserves as B's stock of financial assets is reduced. If the reserve ratio is zero the results are as in Phase V of the table; if 100 per cent, they are unchanged from Phase III; if between zero and 100 per cent, there will be an intermediate additional contraction.

Now suppose that, instead of passively accepting the adverse effects of A's attempt to "improve" its balance-of-payments position, B decides to retaliate in kind. On the same assumptions as before, including the assumption that A is impelled to deflate in the same way as B did in Phase IV, in the end B will achieve neither an increase in income nor an improvement in its balance of payments but A will lose exports of \$1,000 and its income will thereby be deflated by \$5,000. At the end of this compound sequence of events (Phase VII) neither country achieves an "improvement" in its balance-of-payments position but each suffers a loss of income amounting to the product of the other's diversion of trade and the reciprocal of its own marginal propensity to import.

#### Policy Considerations

Trade-diversion tactics have long been known as beggar-my-neighbour<sup>8</sup> policies, whose principal intent is to export unemployment. They invite retaliation, benefit no one, and harm everyone.

<sup>8</sup> Presumably reflecting today's greater permissiveness towards words that used not to be used in print, someone has rechristened this phenomenon the "bugger-my-neighbour" policy.

In a deflationary context A does gain somewhat in Phase III, and B will be well advised not to permit a credit deflation (as in Phase IV) if it can possibly sustain the persistent exchange loss than A's action has saddled it with: the result will be only to reduce its own domestic income still further, for which the elimination of A's ill-gotten gains will be poor compensation. Indeed B might very well follow the enlightened policy of expanding its domestic spending stream, as we supposed A did in Phase I of Table 1. That will aid A also, thus returning good for evil, but B's reward is a further drain on its foreign-exchange reserves. At best, if A responds as we supposed B did in Phase IV of Table 1, this new drain on B's reserves will disappear; but B will still be left with the original drain inflicted by A, and under the circumstances A seems unlikely to agree to any rational way of ending it. Sooner or later, therefore, B is likely to decide to emulate A and endeavour to export some of its unemployment.

However, a combination of expansion at home with trade-diversion against B might be a rational policy for A under certain conditions (or a corresponding combination for B). Suppose both A and B are experiencing underemployment conditions, but B refuses to participate in a joint programme of expansion and does not permit any credit expansion at Phase IV. A would then find itself with a persistent exchange drain at the rate of \$333 per period, which it might not be able to sustain indefinitely, and would be adding to B's income at the rate of \$3,333 per period (Phase III of Table 1). Now let A undertake a trade diversion, as in Table 2, sufficient to end its exchange drain. In terms of our numerical example it would require a diversion of \$2,000 to improve A's position by \$333, assuming that B did not impose a credit deflation on itself (which seems a reasonable assumption, since B has failed to permit a credit expansion on the basis of its original gain in reserves). This would give A a net income of \$10,000, yet leave B no worse off than before — B would get new exports of \$2,000 from A's increased income and imports, just replacing the exports lost through A's trade-diversion initiative.

If B is experiencing inflationary pressures at home it may welcome A's initiative, as long as it brings no material increase in its own unemployment level. However, it is quite probable that the effect will be felt more as a reduction of output and employment than as an easing of price pressures, and B can not permit this to go

very far — presumably it already has as much unemployment as it can tolerate under the circumstances. It would therefore appear that B will be quite as ready to retaliate against A's efforts to divert trade in an inflationary context as in a deflationary context.

#### 4. Price Implications

We have no basis for drawing systematic conclusions about the behaviour of prices (and of real incomes) in the income-supporting sequence, because the major policy variables on which the authorities must rely to regulate the spending stream operate exclusively on the total amount of money spent in the given period. As yet no reliable technique has been devised that will operate differentially on the price component and the "real" or quantitative component of the spending stream. The best the authorities can do is to strike whatever compromise they can between too small an expansion of the spending stream, which will unduly restrict real output and employment, and too great an expansion, which will unduly stimulate price increases, and then wring their hands helplessly when the outturn of events shows a higher rate of unemployment and higher rate of inflation than they would like. That being so, there seems no way in which we can do any better than that in our model.

In the case of a balance-of-payments initiative, however, we can draw at least one general conclusion. When A takes action to "improve" its balance of payments, especially in an already-inflationary situation, it thereby generates some upward pressure on domestic prices in one or more of three distinct ways. First, domestic purchasers must now either pay more for imported goods and components or accept more expensive or less satisfactory domestic substitutes.<sup>9</sup> If the currency has been devalued then the domestic price of home-consumed export goods may also rise, because they will now be cheaper for external purchasers and may therefore enjoy an increased demand. Second, producers of import-competing goods will now feel some relief from external competition and may

<sup>9</sup> If the "improvement" in A's balance of payments is achieved by a tariff or a devaluation then purchasers in A must pay more in local currency for a given import, by some fraction of the tariff or of the increase in the price of B's currency. If quotas are used then either the exporter in B or the importer in A can exact a scarcity price from final purchasers. If an export subsidy is used then domestic resources are diverted from presumably more productive employment into the export trades.

be able to raise their selling prices somewhat. Third, competition among the factors of production for a share in the increased domestic money income may bring cost and price increases in other parts of A's economy as well. Presumably A will consider these probable price effects and will not attempt to improve its balance-of-payments position unless it believes the increase in real income and employment will more than offset the adverse price effects.

The effects on prices in B are more doubtful. There will be some deflationary pressure on B's economy, though it must be supposed B will not tolerate any material deflation without taking offsetting action, and in any case it is likely to show up at least partly as a reduction in output rather than prices. But there is also some presumption that A's initiative, by interfering with the international division of labour, may tend to raise costs and prices in B as well as in A. However, if B retaliates in kind then it will add in its turn to the inflationary spiral.

## 5. Conclusions

Subject to the limitations of our model, we can draw a few general conclusions that may very well explain both the strength and the persistence of inflationary pressures throughout the world today and the difficulties major nation face in reconciling their views on international monetary and trade arrangements.

First, the effect of external repercussions is to raise the domestic income multiplier in an open economy to something approaching what would be expected in a closed economy.

Second, these repercussions also have a secondary multiplier effect on the income of "the rest of the world", of about the same order of magnitude as the enhanced multiplier in the first country.

Third, in conditions of simple inflation or deflation the system tends towards a stable equilibrium, or at least towards a situation in which a mutual accommodation should not be too difficult; but when both inflationary pressures and unemployment are uncomfortably high it tends towards an unstable equilibrium in which neither surplus nor deficit countries can easily agree to an accommodation.

Fourth, a country that takes an initiative designed to improve its balance-of-payments position may make some net gain both in increased income and in a net inflow (or a reduced outflow) of

reserves, provided its trading partners do not retaliate in kind on the same scale; and this advantage will be the greater if the other countries avoid a secondary deflation or (even better) undertake domestic income-supporting measures. However, such a situation tends to be unstable because it probably involves a persistent exchange drain for "the rest of the world"; the deficit countries will be tempted to resort to trade diversions of their own in order to end the drain and gain a competitive advantage. Thus this analysis fully supports the conclusions drawn long ago from the experience of the 1930's: a beggar-my-neighbour policy is virtually certain to bring retaliation and hence in the end it benefits no one and harms everyone.

Fifth, in a deflationary situation a combination of income-expansion at home and trade-diversion policies against countries with passive policies may succeed in improving conditions in the domestic economy without worsening conditions in the passive countries. Without the trade-diverting component in its policies the initiating country might not be able to sustain the exchange drain and might have to end its income-supporting measures, so the passive countries would lose the benefit of the initiating country's expansion in any case.

Sixth, it would seem that Hume's self-balancing specie-flow mechanism can be re-interpreted and is still fully operative in terms of holdings of foreign-currency reserves as well as specie, and in terms of modern income-and-price analysis rather than merely the older relative-price analysis. The basic principles still work under modern managed-money techniques in just about the same way as under a bullion standard. A country's balance-of-payments position is still essentially a passive reflection of the operation of general economic forces.

One final suggestion. In the field of domestic public finance there is wide support for "full-employment budgeting" — that is, designing a budget that will be in balance when the economy is at full employment. While by no means a cure-all, "full-employment budgeting" is a useful policy guide. Can we not use a similar technique in the sphere of international economic relations?

Why not set up a full-employment model of world trade, and use it as a guide in solving balance-of-payments problems? Such a model would simulate the trade patterns that would be expected to

obtain in a world in which the major conditions of international economic stability were satisfied — exports, imports, capital flows, exchange rates, interest rates, and the rest. Of course the model could never be expected to be infallible, and would have to be continuously revised in the light of experience. But it would permit individual countries to plan their domestic policies with some assurance that they would be consistent with world needs as well as domestic needs.

*Toronto*

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