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Author(s): J. S. Allely

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## SOME ASPECTS OF CURRENCY DEPRECIATION

IN the decade following 1929 all currencies of the world, save the Albanian franc, have undergone either devaluations in terms of gold or exchange restrictions tantamount to devaluations. These changes reflect not only the depreciation of several originally overvalued currencies to equilibrium, but also a nearly complete round of successive depreciations of individual currencies to temporary undervaluation. Each such undervaluation has set in motion forces tending to restore equilibrium, through rising supply and demand schedules in the undervalued-currency country, falling supply and demand schedules in the overvalued-currency countries, counter-depreciation in the latter countries and sometimes adverse tariff action. The proportions in which the effects have been divided among these four channels have differed among countries; consequently with the end of the round of depreciations, the re-establishment of something like equilibrium of exchange rates has come about without having involved equal degrees of devaluation by all countries. Thus the new exchange rates differ from those of 1929 in many ways additional to those necessary to cancel the disequilibrium of that year. That, toward the end of this decade, something like equilibrium of the major exchange rates has been established, is indicated by agreements that sharply limit the possibility of further depreciations to undervaluation and even the possibility of depreciations to counteract overvaluations which may arise in the future from changes in international reciprocal demand, etc. It is now opportune to examine the effects of these depreciations of the past decade upon the prosperity of the countries concerned.

To discover these effects involves discovering the effects of the depreciations on the internal prices of import and export goods in the depreciating countries, on their total physical volumes of import and export goods, on their balances of international trade, on their terms of international trade, and on the totals, balances, terms, and what may be called the "internal prices" of their international capital and interest payments and receipts. It also involves discovering the effects of all these changes (especially the changes in the prices and volumes of trade in international goods, the changes in the cost of servicing foreign-money debts, and the changes in the receipts from foreign-money investments) upon the relationships among the internal prices of domestic and international goods and upon the incomes and expenses of different groups within the countries. The effects of these, in turn, upon the production of domestic goods and services are of major importance. It is, of course, difficult to find a common denominator of "prosperity" among all these

various effects, some of which are positive for some groups and negative for others; however, national income figures, corrected for changes in price levels and for population changes, are probably as satisfactory indication of "prosperity" as may be secured, although the facts concerning income distribution among regions and economic classes must increasingly be taken into account.

Discovery of these effects by statistical investigation has limited possibilities, so many and complex are the other forces which have been operating during the decade. Examining the case studies which have appeared, one finds that most conviction is carried not by the tables which indicate what has happened but by the theoretical explanations of how such happenings have been related to depreciation.<sup>1</sup> The purpose of this paper is not to present in detail or even in summary the record of the economic events of the period of depreciations, but rather to present, as a prerequisite, some of the conclusions of economic theory as to how the depreciations were affecting the course of these events.

For a time attention will be directed separately to the effects of (a) the depreciation of overvalued currencies to exact equilibrium and (b) the succession of depreciations to undervaluation which, when completed, have resulted in a new equilibrium. It may also be noted that the terms "depreciation," "devaluation," and "inflation," which are occasionally confused, are used in the following pages with the exact meanings which are now a matter of standard terminology.<sup>2</sup> By "depreciation," is meant the reduction of the value of a currency in terms of other currencies (a country's average rate of depreciation being commonly determined by weighting its specific rate of depreciation in terms of the currency of each outside country by the percentage of its external transactions effected with each such country). By "devaluation" is meant the reduction of the value of a currency in terms of gold. By "inflation" is meant the reduction of the value of a currency in terms of internal goods and services.

<sup>1</sup>See Douglas Copland, *Australia in the World Crisis* (New York, 1934); J. K. L. Gifford, "Currency Devaluation, with Special Reference to Australia" (*Economic Record Supplement*, March, 1934); J. K. L. Gifford, *The Devaluation of the Pound* (London, 1934); E. T. H. Kjellstrom, *Managed Money: The Experience of Sweden* (New York, 1934); R. A. Lester, "Sweden's Experience with Managed Money" (Supplement to *The Index*, Jan., 1937); S. E. Harris, *Exchange Depreciation* (Cambridge, 1936); A. R. Uppgren, "Devaluation of the Dollar in Relation to Exports and Imports" (*Journal of Political Economy*, vol. XLIV, Feb., 1936); N. A. Silverstein, "American Devaluation: Prices and Export Trade" (*American Economic Review*, vol. XXVII, June, 1937); M. Gilbert, *Currency Depreciation and Monetary Policy* (Philadelphia, 1939); League of Nations, *World Economic Surveys* (especially 1934-5), Bank for International Settlements, *Annual Reports*.

<sup>2</sup>See Gilbert, *Currency Depreciation and Monetary Policy*.

What would have been the results with merely a depreciation of the overvalued currencies to exact equilibrium? There has been much discussion of the exact meaning of the terms "equilibrium rate of exchange," "overvaluation," and "undervaluation."<sup>3</sup> In this paper, a country's "equilibrium rate of exchange" will be taken to be that which, given levels of domestic prices and costs that it is impossible or undesirable to alter and trade restriction policies that it is not wished to alter, will balance international payments without any significant net inward or outward movement of monetary gold and Central Bank or Government agency holdings of foreign short-term securities. It is required also that this balance of international payments be achieved without unduly depressive monetary policy. It is sometimes possible for an overvalued-currency country to keep its payments in equilibrium by high interest rates that induce extraordinary capital inflows and that check imports somewhat by inducing unemployment, without being adequate to lower internal prices and costs sufficiently for a real equilibrium.

A somewhat longer-run concept of equilibrium than is commonly entertained includes also the requirement that the internal prices of international goods (which are determined in part by the exchange rate), shall be in such relationship to prices of domestic goods that profit rates in export and domestic industries, including industries competitive with imports, shall be equal.<sup>4</sup> This is principally in order that no unsatisfied tendency will exist for further movement of factors between export and domestic lines which, when satisfied, will throw payments out of equilibrium again. Thus it is a requirement less of equilibrium than of stability of equilibrium. This consideration need not, perhaps, be taken into account in the short run, although it is well to conceive of the equilibrium rate as that which will balance payments over at least a few years (while resources are being transferred among export, import, and domestic lines and international payments are correspondingly being affected), rather than merely during a short period.

This requirement, that profit rates in domestic and export lines shall be equal, may have a special short-run significance in the case of a country in which export supply schedules and import demand schedules are so inelastic that, at almost any exchange rate within a reasonable range, international payments, excluding gold and bankers' short-term

<sup>3</sup>These discussions may be most easily followed by reference to J. W. Angell, "Equilibrium in International Payments"; H. S. Ellis, "The Equilibrium Rate of Exchange"; and S. E. Harris, "Measures of Currency Overvaluation and Stabilization"; all in *Explorations in Economics* (New York, 1936); and in sources indicated by references in these articles. A summary discussion is contained in Gilbert, *Currency Depreciation and Monetary Policy*.

<sup>4</sup>See A. C. Pigou, *Essays in Applied Economics* (London, 1923), pp. 156-73.

capital movements, will balance or can be promptly balanced without any important change in domestic-goods prices, while export and import prices will fully reflect the exchange rate. In such case, of course, there are many equilibrium exchange rates; but the true equilibrium rate may be conceived as that which brings about the relationship among domestic, export, and import prices that approximately equates profits. This presumably removes the impediment to full employment within the country which, under a higher exchange rate, has resulted from the sudden decline of income of the producers of export goods and goods competitive with imports, in the face of internal immobilities and price rigidities. Where, however, an exchange rate which restores accustomed price relationships within a country unbalances its international payments, the true equilibrium rate is that which will balance payments, even though full employment cannot be achieved at such exchange rate until the internal readjustment of resources among export, import, and domestic lines, necessary in such case, is completed.

There is another requirement of the longer-run concept of exchange rate equilibrium—that profit rates must be equal in all countries. This is principally in order that the capital movements, when payments are balanced, shall be normally motivated by the tendency for capital to seek a common level of earnings and not motivated by temporary fears, especially by the fears aroused by an alteration of the exchange rate itself. We may perhaps in the short run regard an exchange rate as the equilibrium one if, under it, international payments (other than those representing movements of monetary gold and of Central Bank or Government agency holdings of foreign short-term assets) are balanced, even if such balance is achieved by virtue of a net inflow or despite a net outflow of capital, resulting temporarily from the recent change in such rate. However, it seems on the whole preferable to regard this as undervaluation and the real equilibrium rate as that under which payments would be balanced and will again be balanced given a normal capital movement, even though temporarily a flight movement is necessitating considerable net export or import of monetary gold and Central Bank or Government agency short-term foreign capital assets.

In considering the effects of a depreciation of overvalued currencies to equilibrium, we do not envisage a situation in which exchange rates fluctuate with every random influence in the market or even with every change in fundamental influences. "Currencies have always been over- or undervalued,"<sup>5</sup> owing to monetary changes, alterations in the obstacles against which foreign trade moves, changes in demand and supply conditions of internationally traded goods and services, and capital

<sup>5</sup>Harris, "Measures of Currency Overvaluation," p. 35.

movements.<sup>6</sup> The so-called automatic correctives available under the gold standard have in the past been relied upon to eliminate these over- and undervaluations and it is not proposed to discuss a situation in which all this adjustment is effected by exchange rate fluctuations. Rather we think in terms of exchange rate adjustment as correcting only substantial over- and undervaluation due to the resistances in the overvalued-currency countries to the necessary declines of their internal prices and the inability of the undervalued-currency countries to raise or even maintain their internal prices, despite inflows of gold and short-term securities.

The problem is to discover the differences between the effects of a depreciation from overvaluation to equilibrium, on the one hand, and the effects of the inevitable alternative deflation, on the other. Since adjustment of the international balance of payments is inevitable, obviously only the differences of depreciation's effects from those of deflation may be charged to the policy of depreciation.

If depreciation caused no extraordinary international capital movement and if its effect on the volume of trade in, and foreign prices of, each import and export good and service was the same as the effect of the alternative deflation, these differences could be easily analysed. In the depreciating countries, internal prices of export and import goods would be higher than they would be under an equivalent deflation, by something like the degree of their depreciation, with prices and volume of production of domestic goods and services almost certainly higher also, owing to the avoidance of the painful deflation otherwise necessary. In all countries, the physical volumes, balances, and terms of international trade would be the same as under the deflationary adjustment. In the matter of the net value, in terms of foreign money, of the depreciating country's debts and investments abroad, however, the situation would be the same as under a policy of deflation, only if the amount owed abroad, contracted in terms of its own money, and the amount of its investments abroad, contracted in terms of its own money, were equal. If the former were greater, the depreciating country would secure such benefits as come from a partial debt repudiation; if the latter were greater, it would suffer some loss of the foreign-money value of its net investments abroad. Similarly, only if these two amounts were equal, would the totals, balances, and terms of current international financial payments be the same under depreciation as deflation. Any change in the balances of current international financial payments, of course, involves the necessity of a compensating change in the balance of trade that would not be necessary under deflation. In any case, whether or

<sup>6</sup>Ellis, "The Equilibrium Rate of Exchange," p. 28.

not the balance of international financial payments of a country as a whole is affected, depreciation involves increased costs for those in a country who owe debts in terms of foreign money and increased receipts for those owning investments in terms of foreign money; this, as well as the directly induced rise in international-goods prices, may alter relative prices and certainly does change the distribution of income and costs among various groups within the country from what they would be under deflation.

It cannot be assumed, however, that the effect of depreciation on the volume of trade in, and foreign prices of, import and export goods and services would be the same as that of the alternative deflation. Deflation tends to lower the supply schedules of all export goods in terms of foreign money, but some more than others, owing to the differing importance in differing goods of these elements of cost that are lowered by deflation. Depreciation will lower, in foreign money, the supply schedules of some goods and services, but not of others; and the degrees by which specific ones are lowered may well be different from those by which they would be lowered by deflation. It is possible, also, that foreign demand schedules for certain exports may decline owing to the expectations aroused by depreciation, when they would not so respond to the less spectacular policy of deflation. Similarly, hostile tariff action or counter-depreciation is somewhat more probable against a country's low prices when these result from a depreciation than when they come from deflation, even though they may be necessary in any case to balance international payments. Also, since depreciation lowers the power of various groups to purchase imports differently than does an equivalent deflation, it lowers demand schedules for some import goods and services more and others less. Again, if depreciation introduces uncertainty concerning the future value of the currency, it may increase the costs of importing and exporting and thus tend to reduce the volume both of imports and exports. On the other hand, the increased internal production of a depreciating country, as a result of its higher internal prices, could easily increase international trade, since the prosperity of the parties to a trade is as significant for its growth as is comparative advantage.

Under some circumstances, depreciation would probably cause an extraordinary export of capital which would not only check the volume of investment in the country, but would also necessitate a more extreme rectification of the balance of trade in goods and services than would be necessary with a policy of deflation, tending to depress prices abroad. The increase of production involved in this increase of exports and decrease of imports is not to be regarded, as it sometimes is, as a net increase of production in the country.

The precise probabilities in connection with each of these possibilities in the case of any given country depend upon a number of underlying circumstances (such as the supply and demand conditions for specific international goods, the state of public opinion in the depreciating and other countries, the international and internal debt situation, etc.), the significance of which will be considered in greater detail below. On the whole, however, it is commonly possible for internal prices to be maintained and international payments balanced, with a depreciation of considerably greater degree than the alternative deflation.

Let us now examine the effects of the succession of national currency depreciations to undervaluation. The purpose of such a step by any one country is the difficult one of raising some or all internal prices, rather than merely balancing international payments while retaining existing price levels. Each country, of course, aims at the leverage toward higher prices of its international goods afforded by undervaluation but it would appear at first glance that, when all have depreciated, the undervaluation of each would be cancelled out, save for some differences in degrees of devaluation, and the results would be merely those of an approximately uniform simultaneous devaluation by all against gold. It is generally conceded that the eventual effect of this (i.e., after perhaps one full swing of the business cycle) would be a corresponding increase of the prices of all goods in all countries above what they would otherwise be, owing to the increased monetary value of gold reserves, but that such tendency would be very slight in the short run. However, whereas a simultaneous devaluation of all currencies would leave prices in all countries approximately unchanged, a succession of depreciations to undervaluation, which more or less result in a general devaluation, could conceivably either lower or raise prices.

The circumstance which makes it possible that it might raise prices generally is that the stimulus afforded to a rise of its prices and production of international goods, by each country's period of undervaluation, may increase its prices and production of domestic goods, in turn raising its supply schedules for export goods and demand schedules for import goods, thus tending to eliminate most of such a country's undervaluation before too great pressure is put upon foreign prices. (Of course, there are in many countries some export commodities with sufficient inelasticity of supply that there is not even a preliminary pressure put on world prices.) The same stimulus may carry over to enable it to maintain its prices for awhile when other countries undervalue, during the period before their internal price rise removes the pressure of their undervaluation. Obviously, these internal repercussions, especially the increase of production of domestic goods, are desirable for themselves, as



well as for their help in keeping pressure off world prices and allowing the gain in domestic prices of international goods to be retained. The circumstance which makes it possible that a succession of depreciations to undervaluation will lower internal prices in all countries is the possibility that none of these results may come about in a majority of the large countries.

We see this most clearly if we imagine a complete round of successive depreciations starting from a condition of perfect exchange rate equilibrium. The first undervaluation by a country tends partly to raise its internal prices of international goods and partly to increase its offerings of exports and reduce demand for imports, lowering prices in other countries. How the effect is initially divided between these two tendencies and how rapidly the former will come to preponderate over the latter depends upon a host of underlying circumstances, such as the elasticity and inelasticity of supply and demand for its exports and imports; its relative economic importance in the world; the intensity of its internally generated depressing forces (as distinct from the depressing forces transmitted to it by declining prices in the outside world); the propensity of its people to expect a rise of prices to result from the fact of depreciation and by their expectations to induce such rise; the efficacy of other internal price-raising measures; the extent to which exchange rate uncertainty checks the volume of international trade; the inter-relationship between internal prices of international goods and of domestic goods; the internal distribution of the burdens and bounties occasioned by depreciation's effect on the cost of servicing foreign debts and on receipts from foreign investment; etc. The division depends also upon the extent to which depreciation causes an export of capital, or increases the net requirements for foreign exchange for current financial payments and thus necessitates a check on the internal price rise in order to induce a positive shift in the balance of trade.

In any case, while relative internal and external prices are thus moving to equilibrium with the new exchange rates, another country also depreciates (or perhaps adopts adverse tariff policies), tending to throw the initial depreciating country, as well as other countries, into a new position of overvaluation. How its prices and production respond to this depends upon many of the circumstances listed above, with the added factor that new resistances to decline of prices and production may have been born in the interval if there has been a sharp rise of internal prices. The second country in turn may enjoy a prompt internal price rise, removing the pressure of its undervaluation on the outside world; it will also probably be thrown into a position of overvaluation

by a third country's depreciation. Ultimately a new equilibrium is established.

How prices in the different countries, as they emerge from this succession of depreciations to undervaluation, compare with what they would have been had no alteration of rates taken place, depends fundamentally on (a) the initial degree to which, and the speed with which, prices and production in the various countries have tended to rise during their periods of undervaluation and the firmness of the buoyancy thus imparted to them, and (b) the differences in the degrees of depreciation of the different countries. If the rapid rise of internal prices and the taking on of price buoyancy in the period of undervaluation are general among the different countries, prices in all countries will almost certainly be higher than they otherwise have been, by nearly as much in each case as the degree of its depreciation. If, however, conditions are such in many countries that their depreciations result preponderantly in pressure on foreign price levels, while their prices sink readily under the impact of other countries' depreciations, prices in all countries will almost certainly be lower than if the round of depreciations had never started. Even a single important country in which these conditions exist may by its depreciation fail to raise its own price levels hardly at all and depress prices in other countries back almost to their levels before the round of depreciations started, especially if the degree of its depreciation is as great as, or greater than, the degree of the other countries. In any specific country in which depreciation results preponderantly in a rise of internal prices, it is obvious that the steeper the depreciation the higher will be the internal prices. This is not to suggest that prices will be higher than if the round of competitive depreciations to undervaluation had not started, but merely higher than if such country had not itself depreciated.

As far as the calculations of one country are concerned, the effect on world prices of a succession of competitive depreciations to undervaluation is of little importance. It needs to consider, in evaluating depreciation, only the effects on its own prices and production of its own depreciation, save where the depreciation of other countries can be legitimately regarded as a response to its action. In general, if a country is of small enough importance in the world and if its depreciation results preponderantly in an internal price rise, it may achieve a considerable depreciation, if it wants to, without evoking any more severe depreciation by other countries than they would make in any case.

The actual depreciations of this last decade have combined those to correct overvaluation and those to achieve undervaluation, and there has been much variety in the results. Some of these differences in

results may be related to differences among countries in the techniques of depreciations. Some have been to a definite value in the currency of a larger country: some have involved merely abandonment of any objective standard, sometimes with, sometimes without manipulation of the foreign exchange market by Central Banks or Treasury agencies; some have been depreciations to a definite value in terms of gold, which, in the case of small countries, have commonly given depreciation in terms of the moneys of other countries for a good period of time, but, in the case of larger and more important countries, like the United States, have had the principal effect of merely raising the price of gold considerably in terms of the currencies of all countries. Some depreciations have been applicable at a uniform rate to all types of purchases and sales of exchange, with and without restrictions on certain types of international transactions: others have been applicable at different rates to different types of purchases and sales of exchange, also with and without restrictions on the permitted volumes of specific types of transaction. The chief determinant of the outcomes of different nations' depreciations, however, has been the host of underlying circumstances already referred to. We turn now to a consideration of the more important of these.

*The presence or absence and the strength of internal depression-generating forces of the type familiar in analyses of depression in self-contained economies.* A country in which the decline of prices is due to the direct and monetary pressure of declining prices in the outside world, or of unfavourable alteration of world demand for its products, or to the monetary pressure of extraordinary capital withdrawals, would seem more likely to have a price recovery when depreciation has reversed these forces than would a country in which depression is due to some fundamental breakdown of its internal economy. This is not necessarily so, however, if the externally-induced decline of internal prices has bred internal weaknesses, which will continue even after the external depressing forces that started them are gone. Decision as to which of these conditions is behind a particular nation's price decline must depend substantially upon general knowledge of that country's whole economic condition, but various standard indications can be a partial guide. Continuing severe loss of gold reserves and short-term securities is, of course, fairly good evidence that a country is being forced into a price decline by external pressure, and that it has internal price levels very resistant to decline (as well as indicating that some failure of internal prices to rise by the full degrees of depreciation is desirable). It does not, however, necessarily indicate that internal weakness has not developed to some extent. If a country has been balancing its international

payments and also suffering an internal price decline similar to that in other countries, such decline may be due to internal weakness in such a country, with the other countries making a quick downward adjustment of their prices to balance payments, or it may be due to an opposite sequence of cause and effect. If a country's prices are declining despite an inflow of gold and short-term credits, it is very good evidence that it has internal weakness: if, with its currency undervalued already, it has been unable to manage a rise of internal prices to remove pressure on the rest of the world, it is unlikely that, with further undervaluation, it will fail to impose still more pressure. Perhaps another indication is afforded by the probability that a country in which production of goods entering into international trade is a large part of its total business is likely, if depressed at all, to be depressed by external forces.

*The relative importance of the country in the world economy.* Even if a country's depreciation to equilibrium or its further depreciation to undervaluation, unaccompanied for awhile by a sharp internal price rise, puts pressure upon the rest of the world, it is not likely to cause a serious drop in prices in the outside world through monetary drain, if the country is relatively unimportant. Even small countries may, of course, be quite important in the world markets for specific commodities and thus tend to break down the prices of such commodities directly; but if they are unimportant in all markets, they put little direct pressure on prices.

*The probable public expectations aroused by an act of depreciation concerning future changes in the value of the currency, both in terms of goods and in terms of outside moneys.* If the people expect no further currency depreciation (or possibly even some future appreciation, due to devaluation by other countries), capital will on balance tend to stay in the country or even flow in. If they also expect depreciation to raise internal prices, they are likely to buy goods and equities, thus helping the anticipated rise to come about with commonly desirable results all around, save where such rise becomes uncontrollable and exceeds the limits within which international payments can be balanced. If they are sceptical of the price-raising effects of depreciation and expect the whole affair to peter out, they are likely to hold back and help bring about merely a fall in prices in the outside world. If the people's experience with previous currency manipulation is such as to cause them to fear that one act of depreciation will lead to a sharp rise of internal prices, a general flight from the currency, and probably further depreciation, there is likely to be a panic-stricken rush of both domestic and foreign holders of money into purchase of goods and equities, into foreign currencies, and, where this is possible, into purchase of gold. Any of these tendencies, if sufficiently powerful, and if unable to be restrained

by controls on internal inflation and on capital export, or offset by pegging of the exchanges (which may require large foreign-exchange reserves), will bring about that which the people fear, a headlong depreciation and disorder more harmful than any conceivable good it might bring. Even when the exchange rate can be maintained, by using large reserves and by checks on internal price rises, the tendency toward a flight of capital would still be nullifying the principal purpose of the depreciation. An extraordinary flight of capital, further, by checking investment in a country, is a harmful development in its own right, although in time of depression this effect may not be noticeable in view of the unlikelihood of investment anyway. However, arbitrary control of all international capital movements is a step to be entered into with extreme reluctance, for obvious reasons.

In general, so dangerous are some of the possibilities considered in this section that most authorities agree that depreciation is not even remotely practicable unless the people can be assured that the Government's control over internal prices and its reserves of foreign exchange are sufficient to prevent further involuntary depreciation. In fact, there are very severe limitations on the probable success of a country's depreciation when any probability, other than a very remote one, of further voluntary depreciation exists. It is possible that public fears for the currency increase disproportionately with the degree of depreciation. This may limit the possibility of depreciation even under otherwise favourable circumstances to an amount insufficient to restore prices to the most desired level.

*The supply and demand conditions for a country's major export and import goods.* Inelasticity of export goods supply schedules; or a powerful tendency for them to shift upward immediately upon depreciation because of the expectations of higher prices; or, failing these, a tendency for them to shift upward readily as a result of the higher cost of imported goods and the repercussions from the increase of national income from the temporary increase of export sales: the first two of these tend to preclude, or the latter one to remove promptly, the pressure of increased offerings of exports at lower prices on world markets. Existence of these conditions depends upon many technical factors, but there are also a few general clues to their presence. The first two are more likely to be present if prices and incomes in the export industries are very low compared with those in other industries in the country; or, even when domestic and export incomes and prices have all declined, if production of goods entering into international trade is a large part of the total production of the country (since prosperity in these lines is unlikely to induce a relatively large inflow of the factors of production from other

industries); or if there is considerable use of imported materials in export goods. Where there is elasticity of supply in the export industries, as is commonly the case when their prices are determined by the prices of the domestic goods industries, and the height of supply schedules has been maintained, commonly resulting in an adverse balance of payments, it is, of course, inevitable in any case and desirable that offerings in world markets should increase. Where this elasticity of supply exists and, owing to deflation, prices of both domestic and international goods have been lowered to balance international payments, the immediate result of depreciation is likely to be an increase of offerings of export goods at lower world prices, the prompt removal of which depends upon the buoyancy of the domestic price structure and its sensitivity to the internal ease of money. A country in which the international-goods industries are relatively large in the economy, will probably be more prompt and effective in transmitting recovery in the international group to the whole economy, this rebounding to raise the export supply schedules.

The nature of the production and marketing organization of export goods affects this likelihood of their being offered too freely on world markets as a result of depreciation. An industry of many small producers, operating under conditions of perfect competition, with an impersonal marketing organization, and commonly with an independent speculative interest in the market, is less likely to increase offerings at lower world prices than an industry of monopolistic competition with a few producers, selling by personal solicitation and the use of goodwill. For one thing, its world prices are already presumably at the lowest necessary level; for another, its producers are presumably producing at or near their short-run capacity; for another, it has little interest in inducing "goodwill." On the other hand, a perfect monopoly, or a unified selling agency for independent producers, capable of evaluating the probable results of depreciation and perhaps definitely co-operating with the authorities to avoid losing the price-raising benefits of depreciation by too eager selling, might find it more possible and profitable to restrict offerings than either of the others.<sup>7</sup> The question whether export goods are commonly quoted in terms of the currency of the depreciating country or some other is probably of little real importance.

Inelasticity of demand for imports, or, failing this, a tendency for import demand schedules to shift upward rapidly through rapid repercussions from the prosperity of the export industries, also tends to preclude or soon remove the pressure of restriction of imports upon world prices. Further, if the world demand for a country's exports is

<sup>7</sup>Compare the discussion in Gilbert, *Currency Depreciation and Monetary Policy*, pp. 21-4, of rigid and flexible prices.

quite elastic, as when its share in the total world markets for its products is relatively small, and if world supply schedules for its imports are also quite elastic, as when it takes only a small part of the world marketings, such pressure as its depreciation puts on world markets has a relatively slight effect in directly lowering world prices, even though some indirect pressure may be put on them through the drain on world monetary reserves. On the other hand, when the foreign demand for a country's exports and its demand for foreign products are highly inelastic, depreciation (or deflation for that matter) may fail to remedy low internal prices and cause a further net drain of foreign exchange reserves and a profitless sacrifice of the barter terms of trade. Of course, it is almost impossible to conceive of such a situation applying to all of a country's exports and imports, but where it applies to any significant part of them, depreciation may be feasible only if accompanied by carefully controlled marketing or if applied at differing rates to the exchange transactions arising from dealings in differing commodities. Such dangerous inelasticity of foreign demand is sometimes found when the foreign customers for a product are united in a well-organized buyers' monopoly.

*The degree of Government control over private economic activities, especially in export marketing and international capital movements.* Enough has been said to indicate that it may be essential, in order to get benefit from depreciation, to impose control over marketing, etc. Generally, countries with central Governments possessed of strong economic powers and buttressed by capable administrative agencies, are in a much better position to handle the problems of depreciation.

*The extent and probable success of other centrally undertaken internal recovery measures.* It may be that the stimulus to internal recovery (and therefore to removal of pressure from world prices) resulting from depreciation is not quite enough to bring success; whereas, with other recovery measures which by themselves might not be particularly successful, a joint programme may achieve the aims of both policies. Discovery of these probabilities depends upon knowledge of the countries concerned and especially of the sensitivity of the economic structure to monetary policy.

*The state of disequilibrium of internal price relationships in the depreciating country.* It is not permissible to assume that an increase of the internal prices of a country's import and export goods would automatically bring recovery to that country, since this is in essence largely merely a transfer of income within the country. The degree to which rigidities in the prices of non-international goods and in taxation, railroad rates, interest, and other costs of all industries have checked production in the preceding period of price decline in international goods, is important

in attempting to discover the effects of restoration of income to the international-goods industries upon production. It must also be pointed out that the question of the underlying economic justification of the continuance in existence of a country's particular export industries cannot be ignored. Depreciation cannot effectively assist in maintaining those export industries of a country which, in view of its favourable balance of payments and its determination to avoid any changes in other items of its international balance sheet, are doomed to inevitable extinction. Where a country's depreciation has this effect, it is obviously merely postponing and possibly accentuating the severity of the eventual adjustment.

*The international financial position of the country, particularly with respect to what currencies its inward and outward obligations are held.* Depending upon this, we have seen that a severe deterioration or considerable improvement in the net foreign money value of a country's foreign debts and investments may come about through depreciation. Further the balance of international debit or credit on current financial account may be affected. Of course, this must be determined in the light of the actual collectibility of debt; an adjustment which makes the nominal receipts from investments smaller may make the real receipts greater, through enabling the payer to continue operating his business. Again, even if a country as a whole breaks even on its total international debts position, depreciation involves internal transfers on this account, sometimes as great and as significant for the increase of production as the internal transfers involved in the alteration of relative commodity prices. Of particular importance is the possibility that a Government with a heavy debt in terms of foreign money, may suffer such an increase of its burden as to cause results more unfavourable than the favourable results of the increase of income to some of its citizens. There is another possibility that the act of depreciation may so prejudicially affect the interests of a country's foreign bondholders, as to harm its credit in the future.

*The possibility of reducing the total volume of international trade by introducing the additional risk of exchange rate fluctuations or the additional cost of ensuring against them.* The extent of this cost depends in part upon the existence of a wide market for future exchange. Against this cost must be placed the possibility that, if depreciation makes for better business in the depreciating country, it must increase international trade since the prosperity of the participants, as well as comparative advantage, is vitally important for this, as all, trade.

*The probability of evoking retaliatory action.* Relative economic insignificance in the world is a favourable condition for avoiding retalia-



tion, although it tends to make retaliation more severe when it comes. An attempt to indicate clearly to the world that the objective of a country's depreciation is primarily internal price improvement, with only such favourable alteration of international payments as is in any case inevitable, might be successful. If these protestations are supported by vigorous internal recovery measures and also by some degree of marketing control, where necessary, to prevent a demoralizing flood of export offers, success is somewhat more probable. In any case, as we have seen, if time enough is allowed for internal recovery to take place, and if adverse tariff action can be avoided, counter-depreciation may not have very harmful effects, especially if practised by other countries with a probability of a sharp internal rise of prices resulting.

The foregoing is an attempt to indicate the principal factors to be taken into account in assessing the probable outcome of a nation's depreciation. Obviously, application of this theoretical background to the problem of any country involves intensive study of almost every detail of its economic life. Even with this, valuation of the significance of the different elements involved calls for much purely subjective determination. If a tentative and only partly-informed attempt is made to evaluate these considerations in the case of particular countries, there are some, like the United States, for which depreciation as a price-raising move seems much less likely to succeed than others, as Australia and Argentina, while for most countries, including Canada and the United Kingdom, the principal determinants are so conflicting that any wide margin either of advantage or disadvantage is unlikely.

J. S. ALLELY

The University of Saskatchewan.