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CURRENCY DEVALUATION  
IN  
DEVELOPING COUNTRIES

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## CURRENCY DEVALUATION IN DEVELOPING COUNTRIES

Currency devaluation is one of the most dramatic—even traumatic—measures of economic policy that a government may undertake. It almost always generates cries of outrage and calls for the responsible officials to resign. For these reasons alone, governments are reluctant to devalue their currencies. Yet under the present rules of the international monetary system, laid down in the Articles of Agreement of the International Monetary Fund, devaluation is encouraged whenever a country's international payments position is in "fundamental disequilibrium," whether that disequilibrium is brought about by factors outside the country or by indigenous developments. Because of the associated trauma, which arises because so many economic adjustments to a discrete change in the exchange rate are crowded into a relatively short period, currency devaluation has come to be regarded as a measure of last resort, with countless partial substitutes adopted before devaluation is finally undertaken. Despite this procrastination, over 200 devaluations in fact occurred between the inauguration of the IMF in 1947 and the end of 1970; to be sure, some were small and many took place in the years of postwar readjustment, especially 1949. In addition, there were five upvaluations, or revaluations, of currencies. Two more occurred in May 1971.

By convention, changes in the value of a currency are measured against the American dollar, so a devaluation means a reduction in the dollar price of a unit of foreign currency or, what is the same thing, an increase in the number of units of the foreign currency that can be purchased for a dollar. (The numerical measure of the extent of devaluation will always be higher with the latter measure than with the former; for example, the 1967 devaluation of the British pound from \$2.80 to \$2.40 was 14.3 per cent and 16.7 per cent on the two measures, respectively.) By law, changes in currency parities are against gold, but since the official dollar price of gold has been unchanged since 1934, these changes in practice come to the same thing. Except when many currencies are devalued at the same time—as they were in September 1949 and to a much less extent in November 1967 (when over a dozen countries devalued with the pound) and August 1969 (when fourteen French African countries devalued their currencies along with the French franc)—a currency devaluation against the dollar is also against

the rest of the global payments system, that is, against all other currencies.

Only a baker's dozen of countries did not devalue their currencies at least once during the period 1947-70 (Japan, Switzerland, and the United States among developed countries, and ten less developed countries, mostly in Central America). Largely because they are so numerous, but partly also because they devalue on average somewhat more often than the developed countries do, less developed countries account for most currency devaluations. Yet the standard analysis of currency devaluation, which has advanced substantially during this period and is still being transformed and further refined, fails to take into account many of the features that are typical of developing countries today, and which influence substantially the impact of currency devaluation on their economies and on their payments positions.

This essay attempts to do three things. First, it sketches very briefly the analysis of currency devaluation as it stands at present. Second, it suggests how this analysis has to be modified to take into account the diverse purposes to which the foreign-exchange system is put in many less developed countries, and the extent to which these diverse purposes influence the nature of devaluation and its effects on the economy. Third, it draws on recent experience with about three dozen devaluations to see to what extent the anxieties of government officials, bankers, and traders, and even some economists, about devaluation and its effects are justified, and interprets some of this experience in light of the earlier theoretical discussion.

#### I. A SUMMARY OF THE THEORY OF DEVALUATION

In analyzing devaluation, the exact nature of the initial disequilibrium is important, and much analysis misleads by its focus on economies that are assumed to be in equilibrium at the moment of devaluation. To set the stage precisely, suppose we have a country which for reasons past has money costs that are too high to permit it to balance its international payments at a level of domestic economic activity that is both desired and sustainable, and as a result it must finance a continuing payment deficit out of its reserves, a process that obviously cannot continue indefinitely. Thus by assumption we are not dealing with a case in which domestic demand is pressing against productive capacity to an extent that is regarded as undesirable ("inflationary"), although under the circumstances domestic expenditure does exceed domestic output, a necessity to maintain full employment. Correction of the payments imbalance by reducing aggregate demand (the rate of money spending) would lead to unwanted unemployment because of the rigidity of fac-

tor incomes in money terms, especially wages. Perhaps ultimately the pressure on costs and prices of a depression in activity would restore an equilibrium level of costs and prices that would lead to payments balance at full employment, but the transitional depression might have to be long and painful. The recommended alternative is devaluation of the currency, which at the stroke of a pen lowers the country's costs and prices when measured in *foreign* currency. Analysis of the effects of devaluation on the country's economy and of the mechanism whereby it eliminates the payments deficit has proceeded under three quite different and apparently contrasting approaches: the elasticities approach, the absorption approach, and the monetary approach.

#### *Three Approaches to Analysis*

The *elasticities approach* focuses on the substitution among commodities, both in consumption and in production, induced by the relative price changes wrought by the devaluation. For an open economy such as the one we are considering here, the principal relative-price change is between goods, whether imported or exported, whose price is strongly influenced by conditions in the world market, and those home goods and services that are not readily traded. For a small country, we can assume that the prices in domestic currency of foreign-trade goods—exports, imports, and goods in close competition with imports—will rise by the amount of devaluation (the larger of the two percentages mentioned above is the relevant one here). This rise will divert purchases out of existing income to nontraded goods and services, thereby reducing domestic demand for imports and for export goods, releasing the latter for sale abroad. When the country is large enough to influence world prices, domestic prices may rise by less than the amount of the devaluation, since prices in foreign currency will fall somewhat in response to the reduction in our country's demand for imports or to the increase in its supply of exports. There is some presumption that most countries will have a greater influence on their export prices than on the prices at which they import, so the rise in local prices of exports will be less, and the terms of trade will deteriorate.

The shift in relative prices operates both on consumption and on production. Consumption will be diverted to lower-priced nontraded goods and services, releasing some existing output for export and cutting demand for imports. At the same time, increased profitability in the foreign-trade sector, arising from the fact that prices in domestic currency have risen more than domestic costs, will stimulate new production of export and import-competing goods, and will draw resources into these industries. If excess capacity happens to exist in these industries, the



resources drawn in will be variable ones—labor and materials. Otherwise new investment will be required; in agriculture, land may have to be recropped or herds rebuilt.

The elasticities approach gives rise to the celebrated Marshall-Lerner condition for an improvement in the trade balance following a devaluation: that the elasticity of demand for imports plus the foreign elasticity of demand for the country's exports must exceed unity, which is to say that the change in the quantity of imports and exports demanded together must be sufficiently great to offset the loss in foreign earnings consequent upon lowering the price of exports in foreign currency. This condition assumes initially balanced trade, finished goods, and elastic supply of exports both at home and abroad, but may be modified to allow for initial trade imbalance, for less than perfectly elastic supplies of export, and for intermediate products.

The *absorption approach* shifts attention from individual sectors to the overall economy. Its basic proposition is that any improvement in the balance on goods and services must, in logic, require some increase in the gap between total output and total domestic expenditure. It starts from the identity  $E + X = Y + M$ , where  $E$  is total domestic expenditure on goods and services and  $X$  is total foreign expenditure on our country's goods and services (exports), the sum of the two representing total "absorption" of the goods and services available to the country, which derive from its own aggregate output,  $Y$ , and imports from the rest of the world,  $M$ . Rearranging the terms yields  $X - M = Y - E$ , which shows that any trade surplus reflects an excess of output over domestic expenditure, and vice versa for a trade deficit. It follows that to reduce a deficit requires a corresponding reduction in the gap between output and expenditure. Excess capacity and unemployment will permit an increase in output; otherwise expenditure must be reduced. Without such a reduction, there can be no improvement in the balance, regardless of the elasticities. This analysis points to the policy prescription that devaluation must be accompanied by deflationary monetary and fiscal policy to "make room" for improvement in the balance, a prescription to which we shall return below.

The *monetary approach* to devaluation focuses on the demand for money balances and the fact that an excess demand for goods, services, and securities, resulting in a payments deficit, reflects an excess supply of money. It draws attention to the analytical parallel between a devaluation and a reduction in the supply of money that affects all holders in equal proportion. Devaluation is equivalent to a decline in the money supply and in the value of other financial assets denominated in local currency, when measured in *foreign* currency. Put another way, the

real value of the money supply will be reduced by devaluation, because the local prices of traded goods and services, and, secondarily, those of nontraded goods and services to which demand is diverted, will rise. The public will accordingly reduce its spending in order to restore the real value of its holdings of money and other financial assets, which reduction in expenditure will produce the required improvement in the balance of payments. For a country in initial deficit, the right devaluation will achieve just the right reduction in the real value of the money supply, and the deficit will cease. To restore lost reserves the country must devalue by more than that amount, in order to achieve a surplus. But once the public has reattained its desired financial holdings, expenditure will rise again and the new surplus will be eliminated. On this view, a devaluation beyond the equilibrium point has only a once-for-all effect. A key implication of this approach is that if the monetary authorities expand domestic credit following devaluation to satisfy the new demand for money, the effects of the devaluation on international payments will be undermined. (The money supply may of course increase in response to the inflow of reserves; indeed, if it does not, the surplus will continue until some other country takes steps to curtail it.)

These three approaches are complementary rather than competitive—they represent different ways of looking at the same phenomenon, and each has its strengths and weaknesses. The first has its roots in Marshallian, partial-equilibrium analysis, and is most suitable when the foreign-trade sector—like Marshall's strawberry market—is small relative to the total economy, or when there are ample unemployed resources—and even in the latter case it offers only a part of the story. The absorption approach is "Keynesian" in its focus on total output and expenditure, not differentiating among sectors and neglecting monetary effects. But it draws attention to the impact of changes in exchange rates on overall income and expenditure, which the elasticities approach fails to do. The third approach is the international counterpart of the recently revived monetary school of thought propagated by the Chicago-London School of Economics, but its intellectual roots go back to David Hume, where stock adjustments in the real value of money balances were all-important.

It is tempting to think of these three approaches in temporal sequence, with the first stage of the elasticity approach representing the short run, the absorption (income-expenditure) approach applying to the medium run, and the monetary approach applying to the long run, on the grounds that asset portfolios take a long time to adjust following a major dislocation. But this would oversimplify the matter. All factors are present to some degree even immediately following devaluation.



In the first instance relative prices normally do change, however, as assumed by the elasticities approach, and this in turn will alter the patterns of consumption and, in the right circumstances, of production, encouraging the necessary increase in net exports.

With initial excess capacity, these alterations will generate additional income, which by leading to additional expenditure will in turn damp down the improvement in the trade balance; without it, the switch in demand toward home goods will tend to bid up their prices. But unless the monetary authorities expand domestic credit the rise in prices will not be sufficient to eliminate the change in relative prices initially brought about by the devaluation, and some improvement in the trade balance will remain.

All this is consistent with the monetary approach. The initial disequilibrium reflects not only an excess supply of money but also a misalignment of relative prices between home and tradable goods, since the fixed-exchange-rate link with the world market diverts the impact of those excess holdings of money into demand for imports rather than higher prices in the foreign-trade sector. The appropriate devaluation simply corrects this disequilibrium set of relative prices and at the same time lowers the real value of money holdings and, hence, expenditures. It therefore has a durable effect. This contrasts with the case where the starting point is one of monetary equilibrium, as is usually assumed in the theoretical analysis despite the fact that devaluation seems superfluous in such circumstances, in that devaluation from equilibrium can have only a transitory effect, giving rise to the wholly misleading impression that devaluation cannot really "work."

Whether the second stage of the elasticities approach—the new investment in the foreign-trade sector—comes into play depends in large part on whether the structure of potential output was seriously affected during the disequilibrium period before devaluation. If the disequilibrium persisted for some time, or if investors were prompt to respond to profitable opportunities and failed to anticipate the eventual need for devaluation, then there would be excess capacity in the home-goods sector and deficient capacity in the foreign-trade sector from the viewpoint of long-run equilibrium, and the second stage would come into play. Otherwise, there would be sufficient capacity in the foreign-trade sector (not fully utilized before devaluation) and no change in the structure of potential output would be necessary.

The impact of growing cost-price disequilibrium on production in the export industries, and its subsequent reversal after devaluation, can be illustrated graphically by Finland's experience. Here a "zero line" marks the boundary north of which it is unprofitable to cut and

transport timber for export. As cost inflation proceeded in the 1950s, this zero line gradually moved southward, to the point in 1957 that it was only about 200 miles from the south coast. Following the 1957 devaluation, the line shifted markedly northward again.

#### *Distributional Effects*

There is a distributional counterpart to these allocational changes which should be explicitly acknowledged, since distributional considerations are so important in less developed countries. A devaluation will raise the "rents" on all factors working in the foreign-trade sector, particularly, in the first instance, entrepreneurial returns in industries engaged in export and in competition with imports. At the same time, the real income of other groups (including the government) will decline because of the rise in prices of these goods. If the higher profits are expected to continue, managers in these industries will expand output and in so doing will bid up the prices of other factors of production used extensively in the foreign-trade sector, leaving a distributional effect in the end that may favor, say, labor, even though it favored certain profits initially. Since we started with a disequilibrium pattern of expenditure and a disequilibrium distribution of income (for a given tax regime), both produced by the misalignment of prices between traded and nontraded goods, the new position brought about by appropriate devaluation will persist unless it is disturbed by other factors.

But both the speed with which the initial distributional effect is transformed to the ultimate effect and the chance that the ultimate effect will not be disturbed will vary greatly. It is here that "money illusion" enters the picture, provided that term is interpreted broadly to cover cases where the decline in real income from a rise in prices is perceived (so there is no "illusion" in a literal sense) and accepted, even when a reduction in money wages would not be accepted. There are many reasons for such illusion to be present, not the least of which is the importance of contracts in business transactions. In the long run contracts can be renegotiated, but in the short run there are important costs to breaking and renegotiating them. Even when "contracts" are broken in any case, as when workers leave jobs in the home-goods sector to take up jobs in the foreign-trade sector, they may be willing to move at real wages lower than their pre-devaluation wages in the expectation of greater job security if they do so. Thus, while money illusion is not normally necessary for devaluation to be successful in improving the trade balance, the more widespread it is, and the longer it lasts, the greater will be the gain to reserves in the period following a devaluation of a given amount.

In another respect, however, money illusion is even more important. Some factors of production profited (at the expense of others, and of the national reserves) before the devaluation, when the domestic costs of foreign-trade goods were too high. This state of affairs was not sustainable in the long run, but those factors that did profit may be most reluctant to accept the reduction in real rewards that is in fact necessary, given the regime of taxes and other policies that affect the distribution of income. If through "bargaining power" (strong unions, administered prices) they succeed in raising their money incomes enough to restore their pre-devaluation level of real income, then the initial disequilibrium will also have been restored. The authorities will be forced to devalue again in the hope that it will work (or can be made to work) the second time. Or they may in the end have to reduce domestic demand, thereby creating unemployment and damaging all groups (although not equally) as the only way to resolve the incompatible objectives of payments equilibrium and level of real income (at full employment) acceptable to those who benefit from the disequilibrium. Money illusion will help to resolve the difficulty by permitting the groups in question to accept lower real incomes while still keeping up appearances with high and even somewhat enlarged money incomes.

## II. MODIFICATION IN THE ANALYSIS FOR DEVALUATION IN MOST DEVELOPING COUNTRIES

The foreign-exchange system of a country can be used to pursue many objectives other than clearance of the foreign-exchange market, and, faced with inadequate instruments of policy to achieve the many objectives expected of them, the governments of many less developed countries have called upon it to do so. These functions range from fostering industrialization, improving the terms of trade, and raising revenue to redistributing income among broad classes and even doling out favors to political supporters. A practice used frequently to accomplish all three of the first objectives, and also to redistribute income, is to give primary export products a rate of conversion into local currency lower than the rate that importers must pay to purchase foreign exchange (and that exporters of nontraditional products receive). Import-substituting investment is stimulated by the unfavorable rate on imports, foreign export prices are higher than they otherwise would be in the rare event that the country can influence world prices for its products, and the government gains revenue from the often substantial difference between the buying and selling prices of foreign exchange. Similarly, imported consumer goods are often charged a rate much higher than imported investment goods, in an effort to stimulate invest-

ment in manufacturing (and with the undesirable side-effect of encouraging modes of production that use relatively more capital and relatively more imported ingredients or components). Finally, and not least, the exchange system can be used to redistribute income between broad classes, as for example in Argentina when the exchange rate applied to traditional exports, meat and wheat, was deliberately kept low for a number of years with a view to keeping down the cost of living for urban workers.

All of these functions involve multiple exchange rates of some kind, either explicit or implicit, that is, charging different exchange rates according to the commodity or service, the origin or destination, or the persons involved in the transaction. As such, they inevitably invite arbitrage and require policing—but so of course do taxes, which they often replace in function.

Moreover, politicians have learned that an objective achieved indirectly is frequently socially acceptable when direct action would not be. This is not always because of an imperfect understanding of the indirect means in contrast to the direct means, although that plays an important role. It is much easier for an interest group to mobilize successfully against an export tax than it is to mobilize against an over-valued currency supplemented by high import tariffs and possibly accompanied by some export subsidies, even though the two systems might have precisely the same economic effects. As Fritz Machlup has said (in connection with Special Drawing Rights): "We have often seen how disagreements among scholars were resolved when ambiguous language was replaced by clear formulations not permitting different interpretations. The opposite is true in politics. Disagreements on political matters, national or international, can be resolved only if excessively clear language is avoided, so that each negotiating party can put its own interpretation on the provisions proposed and may claim victory in having its own point of view prevail in the final agreement." Machlup was speaking of language, but the same is true of action; a roundabout way of accomplishing a controversial objective will often succeed where direct action would fail, because it obscures, perhaps even from the policymakers themselves, who is really benefitting and who is being hurt.

The difficulty is that the pursuit of these diverse objectives too often leads to neglect of the function of the exchange rate in allocating the supply of foreign exchange. When balance-of-payments pressures develop (sometimes as a result of inflationary policies, which in the short run are often also a successfully ambiguous way to reconcile conflicting social objectives), officials then engage in a series of patchwork efforts and marginal adjustments to make the problem go away (raising tariffs



here, prohibiting payments there), which may disturb the original objectives as well as coping only inadequately with the payments difficulty. When devaluation finally occurs, in consequence, the occasion is also taken (sometimes under pressures from the IMF or from foreign-aid donors) to sweep away many of the ad hoc measures that have been instituted to avoid the necessity for devaluation.

This fact makes currency devaluation in many developing countries (and some developed ones) a good deal more complex than a simple adjustment of the exchange rate, and the analysis must be modified to take these other adjustments into account. Broadly speaking, one can distinguish four types of devaluation "packages": (1) straight devaluation (involving a discrete change in the principal exchange rate, as opposed to a freely depreciating rate or an administered "slide" in the rate, such as was adopted by Brazil, Chile, and Colombia in the late sixties, whereby the rate was depreciated by a small amount every two to eight weeks); (2) devaluation with a *stabilization* program of contractionary monetary and fiscal policy aimed at reducing the level of aggregate demand, or at least the rate of increase of demand; (3) devaluation accompanied by *liberalization*, whereby imports and other international payments that were previously prohibited or subject to quota are allowed to take place under much less restraint than before the devaluation; and (4) devaluation accompanied by partial or full *unification* of exchange rates, whereby a pre-existing diversity of exchange rates is collapsed into a single, unified rate, or at most two rates, the lower one applying to traditional exports of primary products and in effect amounting to a tax on these exports.

It is obvious that these categories are not mutually exclusive. Devaluation may involve simultaneously a stabilization program, liberalization, and exchange-rate unification, and in fact at least some elements of all are often present in devaluation in developing countries. For example, of 24 devaluations studied in some detail (and which will provide the basis for evidence cited below), ten involved a fairly substantial degree of trade liberalization, ten (partially overlapping) involved a major consolidation of rates, and virtually all were accompanied by at least token measures of stabilization. (It might be mentioned in passing that in most developing countries the distinction between monetary and fiscal policy does not have the same meaning it has in more advanced countries. Since capital markets are little developed and access to foreign capital markets is limited, budget deficits, after allowing for foreign assistance, must be financed by the banking system, which results directly or indirectly in monetary expansion. Thus, the usual focus on eliminating government deficits is merely an indirect way to limit the rate of

monetary expansion, provided, of course, that bank credit to the private sector is also kept under control.)

These various simultaneous adjustments must be taken into account in analyzing the economic effects of devaluation. In particular, it is necessary to distinguish between devaluation from a position of open payments deficit, such as we considered in the preceding section, and devaluation from a position in which a latent deficit is suppressed by import controls and related measures, which are removed upon devaluation. An additional complication is that less developed countries are more likely at the time of devaluation to be generating new money demand at a rate greater than can be accommodated by total domestic output plus foreign assistance and other long-term capital inflows from abroad; in short, they are pursuing inflationary policies, as opposed merely to having costs that have gotten out of line in the course of *past* inflation.

In fact, most devaluing countries have some combination of an open payments deficit and a suppressed one. But for clarity of exposition, and to bring out the contrast with the analysis above most clearly, we will consider devaluation from a position in which the payments deficit is fully suppressed by other measures, and where the devaluation is accompanied by liberalization and/or unification of the exchange system involving the removal of special taxes, subsidies, and prohibitions that have been installed earlier. In addition, we will suppose that the country is not pursuing inflationary policies at the time of devaluation.

#### *Elasticity Pessimism*

The first point to note is that the elasticity of demand for imports is likely to be low when imports are concentrated on raw materials, semi-fabricated products, and capital goods, a structure prevalent in less developed countries. With import substitution in an advanced stage, all the easy substitutions having already been made in the pursuit of industrialization; imports depend largely on output rather than income and are not very sensitive to relative price changes. There is more room for substituting home production for imports of foodstuffs, although it will usually take a season or longer to bring this about. Moreover, import liberalization and exchange-rate unification will actually result in a *reduction* of the prices of those imports most tightly restrained before the devaluation, so consumption of them will be encouraged.

There is greater diversity of experience with regard to exports. Some countries—producers of oil, copper, and cocoa, for instance—have virtually no domestic consumption of the export goods. In others, exports include the major wage good—beef in Argentina and fish in Iceland, for instance. In the former countries, increasing exports require enlarged output



and development of new export products, and neither of these courses may be easy in the short run, although tree crops can sometimes be more intensively harvested. In the latter countries, there is more room for immediate increases in exports permitted by reductions in domestic consumption of the export products, but this gain is brought about only by courting a wage-price spiral, on which more will be said below. In developed countries, by contrast, there are many domestically consumed goods that are actual or potential exports, and hence there is more room for short-term increases in export supply by diverting output from the home to the foreign market.

When it comes to incentives to enlarge output and expand capacity, the principal reallocation here is between import-competing goods and exports, rather than between home goods and all foreign-trade goods, as in the case of open economies. This is because by assumption imports have already been stringently limited by high tariffs, disadvantageous exchange rates, and quantitative restrictions, all of which create a strong price incentive for domestic production. Some exports may also have been subsidized and, where this is so, devaluation accompanied by removal of the subsidy may leave no new incentive to increase production for export. But, generally speaking, exports are heavily penalized under the regimes we are considering, and devaluation has the effect of reducing the premium for producing import-competing goods for the home market and increasing the premium for production for export, with the principal shift in incentives coming between these two sectors rather than with respect to the home-goods sector (although of course there will also be some incentive to shift resources into that sector from the import-competing sector and out of it to the export sector).

New investment in the capacity to export will require that investors expect the improvement in their position to last, that the devaluation and associated policies will establish a new regime that will not simply slide back into the old configuration of policies. Establishing these expectations is one of the most difficult tasks of those carrying out the reform. The same problem exists in principle in devaluation from open deficit too, but developing countries that have not relied on restriction of imports for payments reasons stand a better chance of success, because investors will expect any emerging disequilibrium to be corrected rather than suppressed by controls.

Furthermore, the required investment may differ in character from that in developed countries. Where manufactures can be competitively exported under the new regime, conversion from domestic manufacturing may be relatively easy; but opening up export markets for manufactured goods for the first time is a drawn-out process, requiring

the establishment of new marketing channels. The shift from domestic to export crops in agriculture—or the opening of new lands—is generally easier; but for livestock and for tree crops the required gestation period may be several years.

For all of these reasons, some pessimism with regard to price elasticities would be quite justified for many developing countries, at least in the short run, but as we will see below it does not usually go far enough to prevent devaluation from improving the trade balance.

#### *Effects on Aggregate Demand*

The absorption approach suggests that a devaluation that merely substitutes for other measures, leading to no net improvement in the balance on goods and services, requires no cut in aggregate expenditure or increase in total output. But it is still worth asking what pressure devaluation in these circumstances might put on aggregate expenditure and output, since this will give some guide to the possible need for compensatory macroeconomic policy. To provide a framework for discussion, rewrite the basic equation noted above as  $Y = E + D$ , where  $D = X - M$ , the balance on goods and services measured in domestic currency. In order to discover the impact effect on output,  $Y$ , we must ask what will be the effects of devaluation on its two components, the level of domestic expenditure and the external balance measured in domestic currency. The impact on output will in turn affect incomes, expenditure, imports, and output again in a multiplier process. But the impact effect will tell us the impetus to this multiplier process, and in particular whether it is expansionary or deflationary.

To take the external balance first, for the reasons given above this might actually worsen in the period immediately following devaluation, when measured in foreign currency, and this by itself would have a deflationary impact upon the economy. The worsening would occur if import liberalization takes effect immediately, giving rise to an increase in imports, while the stimulus to exports occurs only with a lag. In time, of course, the stimulus to exports will also stimulate the domestic economy; but the immediate impact would be a deflationary one. Furthermore, any discrepancy between the local-currency value of a dollar's worth of imports and a dollar's worth of exports, for example due to tariffs, means that even a parallel expansion of imports and exports will be deflationary, provided the government does not spend the additional revenue at once.

Thirdly, devaluation is deflationary to the extent that remaining quotas are replaced in their import-restricting effects by the depreciated exchange rate. Scarcity rents that went to privileged importers before the

devaluation would now accrue to the central bank as it sells foreign exchange. In effect, price rationing will have replaced quantitative rationing, with no ultimate effect on the *final* market price, but with a higher domestic-currency price to the importer or firm enjoying the license. (If the licenses are auctioned, of course, these scarcity rents accrue to the government even before devaluation; but auctioning of licenses is in fact rare.)

Finally, the inelasticity of demand for imports suggests that a sharp rise in their local-currency price will lead to an increase in *expenditure* upon them, even if the quantity and foreign-exchange value of imports fall. In this respect devaluation is like an efficient revenue-oriented excise tax, increasing the price far more than it reduces the quantity purchased. Since imports will substantially exceed exports, thanks to inflows of foreign grants and capital, exports will have to expand a great deal before the increased local-currency income from their sale exceeds the increased local-currency expenditure on imports.

For all these mutually reinforcing reasons, the initial impact of devaluation on the domestic economy of a developing country is likely to be deflationary in that it will reduce purchasing power available for expenditure on domestic output. This may be so, paradoxically, even when the trade balance improves in terms of foreign currency. Thus in 14 of 24 devaluations examined, the balance measured in domestic currency worsened following devaluation—without including increased tariff revenues on imports—and in seven of these this worsening occurred despite an improvement in the balance when measured in foreign currency.

The external sector, however, is only one component of demand. It is necessary also to ask how devaluation may affect the level of total domestic expenditure, *E*. Refined analysis is required to discuss the possible effects satisfactorily, but here it will be sufficient to identify six effects that are likely to be important in developing countries.

(1) There is first the *speculative effect*, which is also important in devaluations from open deficits. If devaluation has been anticipated and is expected to lead to a general increase in prices there will be anticipatory buying before the devaluation and the post-devaluation period will therefore commence with larger-than-usual holdings of goods. Total expenditure by the public may therefore drop in the period immediately following devaluation, until these inventories are worked off. (This effect would also lead to a rise in imports before and a drop after the devaluation, insofar as this is permitted by the system of licensing or other controls.) While the speculative effect will normally lead to a drop in expenditure, however, it may lead to an increase if the price

increases following devaluation are expected to lead to general inflation, or if another devaluation is in prospect, as it did immediately following Britain's devaluation in 1967.

(2) Devaluation will generally lead to a redistribution of income, and this *distributive effect*, while present for any devaluation, is likely to be especially important in developing countries with heavy reliance on primary products for export. Unless checked by special export taxes, a devaluation will lead to a sharp increase in rewards to those in the export industry, who are often landowners. Whether large or small, landowners are likely to have different saving and consumption patterns from urban dwellers, generally saving more out of marginal changes in income, at least in the short run. Thus, a redistribution of real income from workers to businessmen and from urban to rural dwellers is likely, in the first instance, to lead to a drop in total expenditure out of a given aggregate income, and this drop will be deflationary. But of course the redistributive effect could also go the other way, if as a result of devaluation the real income of those with a low marginal propensity to save is increased at the expense of others. The redistributive effect will also affect the level of imports out of a given total income, since consumption pattern of those who gain may differ from that of losers. But this effect is likely to be less marked than the total expenditure effect, partly because much of the import bill of developing countries represents inputs into domestically produced goods and services, so they are somewhat more widely diffused throughout the economy than would be the case for direct imports of manufactured consumer goods. Diaz-Alejandro has documented well the dominating importance of the redistributive effect following the Argentine devaluation of 1959, where the shift of income to the landowners led to a sharp drop in domestic spending and therefore to a secondary drop in imports.

(3) A devaluation will lead to a rise in the domestic costs of servicing *external debt* denominated in foreign currency. Where the liabilities are those of businessmen who do not benefit much from the devaluation, it may lead to bankruptcy and an attendant decline in business activity, even when businesses are otherwise sound. This factor allegedly figured in the decline in investment following the Argentine devaluation of 1962. Even where the debt is held officially, the problem of raising the local-currency counterpart of external servicing charges often poses a serious problem, and sometimes represents a serious inhibition to devaluation.

Indeed (to digress for a moment), these "accounting" relationships, usually ignored by economists, often preoccupy officials and bankers.



Local development banks that have borrowed abroad (for instance, from the World Bank or IDA) in foreign currencies and re-lent to local business in domestic currency have accepted an exchange risk that has occasionally provided the major barrier to devaluation: to allow its development bank to fail might psychologically undermine the government's development plans. But if the bank is to be saved, who is to absorb the devaluation loss, and how? (The obvious retrospective answer is that local borrowers should be charged interest rates sufficiently above what the development bank pays on its foreign debt to cover the exchange risk—with the added advantage that such rates will more closely approximate the true cost of capital in the developing country. But development banks have often failed to do this. Or, if they have done it, they have failed to set aside a sufficiently large reserve out of the difference in rates.) A similar problem arises for net *creditors* when the value of their foreign claims is reduced in terms of local currency by devaluation abroad or revaluation of the home currency. Thus, Hong Kong inadvisedly devalued its currency following the 1967 devaluation of sterling, apparently because the commercial banks in Hong Kong held large sterling assets against their local-currency deposits, and the banking system would have been threatened if the relationship between sterling and Hong Kong dollars had not been preserved. But the government thought better of this decision and revalued again four days later, in the meantime having worked out a way to indemnify the banks out of official reserves. By the same token, the German Bundesbank showed substantial paper losses (in marks) on its assets held in gold and dollars following the revaluations of 1961 and 1969. The 1961 revaluation was delayed until the German government would agree to indemnify the bank for its "losses" (which were entirely paper losses, arising from double-entry bookkeeping conventions) out of the budget over a period of seven years. Where private parties have incurred foreign debt, of course, the loss is real to the firm or bank, and that may have undesirable consequences for the economy as a whole. But a thorough discussion of this important issue is beyond the scope of the present essay.

(4) When the balance of goods and services has turned adverse in terms of domestic currency—as we have seen above may frequently be expected—then in the absence of countervailing monetary action a domestic *credit squeeze* may result, since importers and others will be paying more into the central bank for foreign exchange than exporters are receiving. This in turn may lead to a reduction in domestic expenditure.

(5) On the other hand, the improved earning opportunities in the export industries may (if they are expected to last) induce both *domestic*

*and foreign investment* in the country. Foreign investors bring their funds with them, as it were, and increase local credit by converting foreign exchange into domestic currency at the central bank. Domestic investors must either activate idle balances or find banks willing and able to lend, in the second instance leading to domestic credit expansion. Of course, the incentives to invest in import-competing industries will be reduced by the devaluation (in sharp contrast to the case of devaluation from a position of open deficit, where they will be stimulated by devaluation); but the stimulus to investment may on balance be positive, partly because there are limits to the rate at which disinvestment can take place. For reasons given earlier, however, the extent of new investment will depend on expectations about the durability of the new regime, and investors may wait awhile to see how things are going.

(6) In the monetary approach to devaluation from an open deficit, attention was drawn to the reduction in the real value of money holdings and reliance was placed on a desire to reconstitute these holdings to reduce expenditure. In the case of devaluation from a suppressed deficit, however, this *money-demand* effect is more complicated, and may not be present at all. If devaluation simply displaces other instruments of policy, with no effect on domestic prices, the real value of money balances will not be altered. If, as is more typically the case, devaluation displaces some other limits on imports but raises the local prices of exports, the effect on the real value of money holdings will depend upon the importance of export products in local expenditure. When export products are extensively purchased by residents, the monetary effect will tend to reduce domestic spending. Import liberalization, on the other hand, cuts the other way insofar as import prices actually fall. Moreover, in the long run another factor comes into play: to the extent that devaluation displaces measures that led to a less efficient use of resources, the devaluation package will lead (after the necessary reallocation of resources has taken place) to an increase in real income, and this in turn will require a supporting increase in money holdings. Unless it is supplied by the monetary authorities, this demand will depress expenditure relative to potential income.

The upshot of these various considerations is that devaluation in developing countries is likely to be deflationary in the first instance, and thus may "make room" for any improvement in the balance on goods and services, without active reinforcement from monetary and fiscal policy. Indeed, for reasons given below, it may sometimes be desirable to accompany devaluation with modestly *expansionary* policies. Frequently, however, the devaluation will take place against a background of excessively expansionary policies. In this case the devaluation-induced



deflation will be helpful in bringing the economy under control, but these effects must be taken into account if the government is to avoid overshooting the target with deliberately contractionary measures.

In short, unless the devaluation is very successful in stimulating exports or in stimulating investment, the absorption approach to devaluation is of less relevance to devaluation in developing countries except in manifestly inflationary situations—the real problem will often be getting adequate capacity in the export sector, not in releasing resources overall.

Before turning to the actual experience of devaluations in developing countries, it should be noted that a devaluation will have powerful short-run distributive effects (alluded to above in the discussion of the impact of devaluation on expenditure). When tariffs are reduced (unless they are offset by a reduction in subsidies), the government loses revenue; when quotas are eliminated, quota-holders lose the quasi-rents they enjoyed by getting a scarce resource (the right to import) at a price below its social value. When prices rise, all those on fixed money incomes suffer. Petty officials responsible for licensing or tariff collection may also lose the “fees” they can collect by virtue of their position of control. The gainers are those in the actual and potential export industries and, where a quota system is replaced by a dual exchange-rate system (the lower rate usually applying to traditional exports), the government. These prospective gains and losses influence sectional attitudes toward devaluation and their willingness to help make it succeed.

### III. SOME EVIDENCE ON THE IMPACT OF DEVALUATION

Having set out how the conventional analysis of devaluation may have to be adapted to devaluations in developing countries, we turn now to the actual experience of these countries with devaluation. As noted in the introduction, currency devaluations have occurred with some frequency in the last 25 years, averaging nearly ten a year, despite widespread reluctance to engage in them. Many of these were small, or were by countries with inadequate statistics, or were by developed countries, or were part of a larger movement of exchange rates of one block of countries as against another—the last kind of devaluation raising rather different issues for analysis than have been considered above. The evidence drawn on here derives from a study of 24 devaluations occurring over the period 1953-66 and including most of the major devaluations by developing countries in the early 1960s (a more complete description and analysis of these cases is found in Chapter 13 of G. Ranis, ed., *Government and Economic Development*, Yale University Press, 1971),

supplemented by some experience drawn from about a dozen devaluations in the late 1960s.

There are many questions that one can ask about the consequences of devaluation and its associated package of policies, which may have profound effects upon the allocation of resources, growth, and the distribution of income in developing economies. We are not concerned with these ultimate effects—although empirical work on them is all too rare—but, rather, with the immediate, impact effects of devaluation. These start the transition to the longer-term effects, if they are given a chance to work themselves out. The reason for focussing on impact effects is that they often determine whether the longer-term effects will be given a chance to work themselves out. Officials have notoriously short planning horizons, and their anxieties about the impact effects of devaluation often lead to a postponement of devaluation and the substitution in its place of numerous ad hoc measures, imposing substantial costs by impeding the efficient operation of the economy.

The reluctance of officials arises in large measure from the considerations adduced in the introduction: devaluation will disturb an implicit social contract among different segments of society—or at least will jar some groups out of their acquiescence in the existing state of affairs, with its numerous implicit compromises—and officials are understandably anxious about rocking an overloaded and delicately balanced boat. But sooner or later the decision may be forced upon them, when for external or internal reasons the external disequilibrium deepens and a suppressed deficit becomes an open deficit which can be corrected only by disturbing the social equilibrium anyway.

More specific anxieties are also expressed about the consequences of devaluation, however, and they can be grouped under four headings: (1) Devaluation, it is feared, will not achieve the desired improvement in the balance of payments, because neither imports nor exports are sufficiently sensitive to relative price changes within the acceptable range of such changes—in a phrase, elasticity pessimism. (2) Devaluation will worsen the terms of trade of the country and thus will impose real costs on it. (3) By raising domestic prices, devaluation will set in motion a wage-price spiral that will rapidly undercut the improved competitiveness that the devaluation is designed to achieve. (4) Whatever its economic effects, it is thought that devaluation will be politically disastrous for those officials responsible for it.

Let us see to what extent these fears are justified by experience, adopting the short-run (one year, say) perspective of the official.

### *Impact on Trade and Payments*

In nearly three-fourths of the three dozen devaluations examined the balance on goods and services, measured in foreign currency (as is appropriate for balance-of-payments analysis, although a number of countries record their payments positions in domestic currency), improved in the year following devaluation. In 90 per cent of the cases either this or the overall monetary balance (often both) improved in the year following devaluation. Of the four countries that showed a worsening on both counts, two involved important import liberalization resulting in a rise in imports, and one (Israel) was engaged in sporadic warfare and was running down reserves to build up its defense position.

Of course, these actual improvements could have taken place for reasons quite independent of the devaluation, for example an increase in world demand for the country's products or a drop in domestic expenditure due to a crop failure. Adjustment of the trade data to allow for movements in world demand and for changes in the level of domestic activity reveals a slight increase in the number of countries improving their trade balance following devaluation.

These improvements occurred despite good reasons for being an elasticity pessimist about developing countries, for the reasons given above. No doubt some part of the improvement both in trade and in overall payments can be explained by the speculative considerations already mentioned—a reversal of flows after the devaluation occurred. But not all of it can be explained in this way, for the second year following devaluation usually showed a preservation of, and sometimes a substantial increase in, the gains. The fact that supply elasticities are low in the short run helps in theory to assure that there is little or no loss in export receipts such as would arise if supply could be increased rapidly at unchanged *domestic* prices. A steadiness in export earnings, combined with some reduction in imports, will assure some improvement in the trade balance, but only a modest one. In only five of the cases examined did the improvement in the trade balance exceed the initial trade deficit, thereby swinging the country into trade surplus—a fact that should not be surprising for countries that normally import capital from the rest of the world.

Interestingly enough, most of the countries that liberalized imports experienced a *reduction* in the volume of imports in the year following devaluation—partly because of a decline in activity and a switching away from imports to domestic sources of supply, but even more because import liberalization was often delayed from three to nine months following the devaluation, apparently reflecting a wait-and-see attitude

on the part of the authorities toward the devaluation. In delaying, however, they increased the risk of a wage-price spiral.

### *Impact on the Terms of Trade*

Many countries do not have even reasonably comprehensive data on the prices they pay for imports and receive for their exports, hence on their terms of trade. Among those that do, somewhat under one-half showed a deterioration in the terms of trade following devaluation. But some of these deteriorations were independent of the devaluation, and in any case all were small relative to the size of the devaluation—one or two per cent, compared with nominal devaluations ranging from ten to nearly 70 per cent.

The negligible deterioration observed in the terms of trade may of course have been due to preventive measures taken by the devaluing countries. Most of them imposed special taxes (or a disadvantageous exchange rate, lower than the new principal rate) on certain exports of primary products. But usually these taxes were imposed for distributive or revenue reasons, not to prevent a deterioration in the terms of trade through a fall in foreign-currency prices of exports. A standard pattern, for example, is to impose a tax roughly equivalent to the amount of devaluation on exports out of the current harvest, on the ground that the quantity of such exports can be increased only marginally (unless domestic consumption is substantial) and there is no reason to pass windfall gains on to the farmers. The new exchange rate is applied to subsequent harvests. In other instances the tax has been imposed to prevent an immediate rise in the domestic price of an export product important in local consumption, such as olive oil in Greece. In both cases it is a rise in domestic prices, not a fall in foreign ones, that the authorities are guarding against. Where only one or two foreign marketing organizations dominate a country's export sales, however, these buyers may retain their pre-devaluation buying price for domestic produce, which of course implies a decline in the price in terms of foreign currency. Thus, existing institutional arrangements may permit foreign buyers, in the short run, to improve their terms of trade at the expense of the devaluing country, and a tax will help to prevent this. In the long run, competition from potential foreign buyers will also prevent it, but by that time domestic supplies may also have increased. Finally, there are some commodities—such as hazel nuts in Turkey, jute in Pakistan, cocoa in Ghana—where one country does have a dominant position in the world market, and in these cases too the imposition of an export tax or its equivalent will prevent a deterioration in the terms of trade.

But preoccupation with the terms-of-trade effects of devaluation in



fact reflects a misunderstanding of the purposes of devaluation, or at best confuses devaluation theory with optimal-tariff theory. A country that dominates world markets in one or more of its export products can increase its welfare by imposing a tax on those exports up to the point at which the additional gains from further increases in the foreign-currency price (arising from the willingness of foreign buyers to pay part of the tax) just compensate for the additional welfare losses arising from the tax-induced reduction in trade. If the devaluing country has already imposed such optimizing export tariffs—import tariffs alone will not do here, because in equilibrium they also discourage manufactured exports, on which the optimal export tax is surely zero for developing countries—then devaluation will not require their alteration unless the causes of the payments imbalance also happen to have altered the optimum export tax. A pre-devaluation rise in domestic costs and prices, leading indeed to the need for devaluation, will have improved the country's terms of trade *beyond* the optimal point. The objective should be to maximize net returns on exporting, not merely to prevent a deterioration in the terms of trade, and in these circumstances some lowering of export prices in terms of foreign currency will be desirable to stimulate foreign purchases.

As a slight digression, it might be mentioned that at least one country, Jamaica, devalued because of a deterioration in its terms of trade caused by devaluation of *another* currency, the pound sterling. Britain buys Jamaica's sugar and bananas at prices fixed in sterling well above world-market prices. At the same time, Jamaica's imports are much more diversified as to source. When sterling was devalued in November 1967, the real value of Jamaica's export earnings therefore dropped and, more than that, the receipts of Jamaica's major export plantations would have dropped in terms of Jamaican dollars, while their expenditures (including wage bill) would not have dropped by nearly as much. To prevent bankruptcy and large-scale unemployment in these important agricultural industries, Jamaica therefore devalued its currency to maintain its parity with the pound. Similar considerations (as well as balance-sheet ones) may have led the French African countries to devalue their currencies with the French franc in 1969.

#### *Impact on Wages and Prices*

Assessing the impact of devaluation on domestic prices and wages is exceptionally difficult, and only partly because price and wage data are sparse and of dubious quality for most developing countries. It is difficult also because exogenous events, expectational patterns based on the same history that led to the devaluation, and policies associated with

but sometimes also at variance with the devaluation all may have important influences on both wages and prices.

It is useful first of all to distinguish between demand-induced and cost-induced increases in prices and wages. By conventional analysis, both should be present following a successful devaluation, for the improved trade balance will increase the claims on domestic output, and the devaluation will lead directly to an increase in the local prices of imports and other foreign-trade goods. We have seen, however, that devaluation may lead to a decline rather than an increase in demand for domestic output, and this alone would tend to depress prices. The extent to which devaluing countries have taken the advice normally tendered to pursue deflationary monetary and fiscal policies will reinforce these devaluation-induced pressures. There is of course no contradiction between deflationary pressures and observed price increases; the devaluation here is very much like an excise tax, which reduces demand by withdrawing purchasing power from circulation, but also raises local prices. Where the devaluation merely substitutes for other measures to restrict imports, such as quotas or special tariffs, there need, of course, be no rise in these prices following devaluation, for under competitive conditions the local market prices will have already risen to reflect scarcity values.

In fact, some depression in economic activity is frequently found following devaluation in developing countries, sometimes lasting only a few months, not infrequently lasting more than a year. While it is impossible to disentangle the deflationary effects of devaluation from those of autonomous policy measures designed to facilitate success of the devaluation, there is much circumstantial evidence to suggest that the extent of depression is a surprise to the authorities in the devaluing countries, that they have not adequately taken into account the depressing effects of the devaluation itself, or that they have exaggerated its expansionary impetus. In too many cases, of course, the need to devalue arises from pre-devaluation inflation that has not been brought fully under control even after devaluation, and these cases reinforce the views of those who insist on strongly deflationary measures to accompany devaluation; in those cases further deflation is necessary to make the devaluation work. But in other cases further deflation is not necessary, and on the contrary may aggravate the difficulties of the authorities in keeping the situation under control just as exports are expanding most rapidly. We return to this possibility below.

Despite the theoretical argument that under some circumstances domestic prices need not rise following devaluation, in fact they in-



variably do. This is partly because there is normally some effective devaluation for imports and export products, even when export subsidies are removed and imports are liberalized, and partly because the instinctive reaction of importers is to pass along to their customers any increase in costs that they have incurred. If they are already charging what the market will bear, however, these higher prices are not sustainable in a given monetary environment, and in the course of time competition among importers will result in a subsequent drop in prices—not to below the pre-devaluation level, but toward it, to an extent governed by the degree to which devaluation substitutes for import quotas as a restraint on imports. Such a pattern can be observed for about half of the few countries for which adequate monthly data on local prices of imports are available: prices rise sharply following devaluation, reach a peak three or four months later, and then gradually drop back, sometimes substantially. In an inflationary monetary environment, of course, one does not observe a post-devaluation decline in prices, but the rate of increase is reduced temporarily.

Higher prices will raise costs directly (especially since many imports are intermediate products and capital goods) and they will also stimulate demands for higher money incomes by local factors of production, especially wage and salary employees. But the cycle of wage and price increases should be self-limiting, unless *all* parties (including the government) attempt to maintain their real incomes in the face of rising import prices, or unless the devaluation stimulates price increases that are quite unrelated to increases in costs. In addition, for either case the monetary authorities must support the increase in money incomes with domestic credit expansion if domestic prices and incomes are to rise by the full amount of the devaluation without generating unemployment.

As we saw in the first section, an open deficit will reflect both a level of expenditure and a distribution of income that is not sustainable at the existing level of output and with the existing structure of taxation and expenditures insofar as they affect distribution. Devaluation requires that some real incomes go down and that total expenditures go down, even though aggregate income need not drop. If, however, those who benefitted from the initial disequilibrium insist on retaining the same level of real income, and if they have the market power through administered prices or through wage bargaining to stake out that claim in monetary terms, then the devaluation cannot succeed without general deflation leading to unemployment—unless, of course, there is some unutilized capacity and the tax system can be so altered as to assure that enough of the increased output will go to the powerful factors in

the post-devaluation period. Even this will not work if these factors insist on maintaining their pre-devaluation *share* of income.

Second, the devaluation may stimulate price increases that were overdue in any case, but for reasons of law, custom, fear of public opprobrium, or simply inertia were not made earlier—the liquidation of unliquidated monopoly gains, to use Galbraith's term. This problem arises especially with public utilities subjected to an inflationary environment in the past. Being highly visible to the public, electric companies and bus companies do not readily raise their rates, and they are frequently under substantial government pressure not to do so. A currency devaluation, being little understood by the public, presents a natural occasion to raise such prices and lay responsibility on the devaluation. Several devaluations have led to rioting in the streets—as well as to larger wage claims—when an economically unrelated but psychologically related increase in urban bus fares occurred shortly afterward.

In either case the monetary authorities are confronted with a dilemma; it is here that management of a devaluation is trickiest. Economists have been too little interested in these matters of management, even though they affect the final result (that is, the path is important for determining the equilibrium, or indeed whether equilibrium is achieved). For, if the authorities do not allow some monetary expansion, unemployment and underutilization will result; and if they do allow it, the effects of the devaluation will be weakened and perhaps undermined. That various groups attempt to maintain their pre-devaluation incomes poses a more acute problem in the case of devaluation from open deficit than devaluation from suppressed deficit, since in the latter case much of the adjustment toward equilibrium income distribution will already have been made, except insofar as some firms and individuals are profiting from quantitative restrictions. Since developing countries generally do rely on quantitative restrictions before devaluation, and since they also generally have some open deficit in spite of their ad hoc adjustments, the problem remains a practical one.

In the event, price-wage spiraling does not generally get out of control, at least within the year or so following devaluation. Twelve months after devaluation, wholesale prices of imported goods will generally have risen, but by less than the devaluation (after having fallen from a peak reached three or four months after devaluation, as noted earlier), general wholesale prices will have risen less than this, consumer prices will have risen by about the same as wholesale prices, and, except where devaluations are small, manufacturing wages will have

risen by less than consumer prices, showing a decline in real wages following the devaluation. Thus nonwage incomes of employed factors—mostly profits and rents—show an increase in real terms a year later, and it is this increase that provides the incentive for the necessary reallocation of resources, which reallocation may ultimately restore and even raise real wages, depending on the relative factor intensities in the export industries as opposed to the protected industries.

Thus, to sum up briefly the experience following devaluations in less developed countries, it seems that official anxieties concerning the economic effects are exaggerated. The firmest generalization that can be made is that country experiences are highly diverse, which of course may be unsettling to cautious officials. But, for a hypothetical “representative” country, devaluation seems to improve both the trade balance and the payments position within the first year; it does not seem to lead to deterioration in the terms of trade of any consequence; it does lead to price increases, but not by amounts great enough to undermine the devaluation; price increases of imports are substantially less than the devaluation, suggesting that importer margins have been reduced; real wages fall; and there is a slump in economic activity following the devaluation.

#### *The Political Impact*

The fourth apprehension concerns the political fate of those responsible for the decision to devalue, and here experience is not nearly so encouraging. A naive test is whether the government fell within a year of the devaluation. In nearly 30 per cent of the cases examined it did. Some of these changes in government were clearly unrelated to the devaluation—Costa Rica and Colombia each happened to have elections within the year, for example, and both countries have quite regularly voted out the incumbent government in recent history, devaluation or not. But in other cases the devaluation and associated policies for managing the economy were the main issue on which the government fell. And there were near misses in both Israel (1962) and India (1966), where the ruling government came under severe criticism for its decision to devalue, but survived the crisis for more than a year.

A check was provided by examining a random control group of similar countries that did not devalue; governments changed within the year in only 14 per cent of the control sample. Thus it appears that devaluation—or the policies that led to the need for devaluation or the policies that followed it—roughly doubles the chance that a ruling group will be removed from power. But the test will have to be refined considerably before it can be regarded as anything more than suggestive, in par-

ticular by selecting a control group from countries that seem to be in some balance-of-payments difficulty, either of an open or a suppressed type, rather than just from all developing countries.

Ministers of finance fared much worse. Nearly 60 per cent of them lost their jobs in the year following devaluation—half of them of course when their governments fell—compared with a turnover in a control group of only 18 per cent. So the chances of ouster for the official immediately responsible seems to increase by a factor of three as a result of devaluation. Again the test should be refined. And, in any case, losing one's job as finance minister does not necessarily end a political career; James Callaghan of Britain felt obliged to resign after devaluing sterling, but was immediately promoted to Home Secretary.

#### IV. CONCLUSIONS

Managing a devaluation through the transition phase to final success requires both judgment and delicacy in handling. Consider first the problem of aggregate demand. As we noted, this frequently falls following a devaluation, and unless the economy was badly overheated beforehand it may lead to a drop in profits and employment. If the slump is sufficiently severe and prolonged, it will evoke calls for expansionary action by the government, for few governments these days can escape responsibility for developments in their economies. If the government then yields to these pressures, the expansionary policies may come when devaluation-induced export expansion is also taking hold with a lag, and thereby increase demand pressures on the economy at just the wrong time. The better course of action, on these grounds, would be to mitigate the slump—that is, to take some modest *expansionary* action with or immediately following the devaluation, contrary to the usual advice—and then to draw back with monetary and fiscal policy when new export demand is becoming important. Properly timed, this would reduce the social and economic costs of the slump and would prevent belated expansionary action, in response to political pressure, from undermining the effects of the devaluations on the trade balance.

On the other hand, we have also seen that there is often a sharp increase in prices in the period immediately following devaluation, as importers attempt to pass on to their customers all or most of the increased cost of foreign goods. To the extent that these price increases, some of which are not otherwise sustainable, get built into wages and other local costs, they will undermine the devaluation. Timing here becomes crucial. The authorities should do what they can to reduce the temporary increase in prices (lest it become permanent), to make sure



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