EFFECTS OF EXCHANGE RATE CHANGES IN DEVELOPING COUNTRIES

by

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Abstract

This paper sets out to examine the economic effects of exchange rate changes in developing countries by the use of alternative definitions of the real exchange rate. The evidence presented in the paper shows that devaluation generally improves the balance of trade in developing countries within a year and it is followed, on the whole, by increases in output. The paper further indicates the superiority of a devaluation in the event of an unsustainable balance-of-payments deficit over restrictive macroeconomic measures and import controls. Finally, the need for stability in the value of the real exchange rate is emphasized.
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This paper set out to examine the economic effects of exchange rate changes in developing countries. It will consider, first, the relevance of alternative definitions of the real exchange rate for an empirical investigation of its economic effects. Next, the impact of changes in the real exchange rate on exports and imports will be analyzed. Possible effects on output, the distribution of incomes, employment, and inflation, will also be investigated. Finally, the implications of the findings for policy making in developing countries will be drawn.

The paper will focus on the usefulness of the exchange rate as a tool of economic policy-making in developing countries. In view of the questions raised about the effectiveness of this instrument in the least developed countries, particularly in Sub-Saharan Africa, the case of these countries will also receive attention in the paper.

Alternative Definitions of the Real Exchange Rate

A recent contribution to the subject contrasted the 'traditional' definition of the real exchange rate with its 'modern' definition (Edwards-Ng, 1980, p. 9), when the former refers to inflation-adjusted changes in the nominal exchange rate and the latter to the ratio of price indices for traded and for nontraded goods. In a general formulation, however, both definitions

1/ The discussion will proceed in a short- to medium-term framework. In the long term, intercountry differences in productivity growth may importantly influence the results, thereby limiting the usefulness of real exchange rate calculations over a long period (Balassa, 1964).
are relevant. This will be shown in a simple model, consisting of a (foreign) export demand and a (domestic) export supply equation.

Foreign demand for a country's exports \( (X^F) \) will be affected by changes in its competitive position. This may be indicated by the index of international competitiveness, derived as the index of the nominal exchange rate \( (R) \) adjusted for changes in the prices of traded goods in foreign countries \( (P_T^F) \) and in the domestic economy \( (P_T^D) \). \(^1\) Introducing foreign incomes \( (Y^F) \) as an additional variable affecting exports, we obtain equation (1).

\[
(1) \quad X^F = f(R, P_T^F/P_T^D; Y^F)
\]

The supply of a country's exports \( (X^D) \) will be affected by changes in relative incentives to traded and non-traded goods. This may be indicated by the ratio of domestic price indices for traded goods \( (P_T^D) \) and for nontraded goods \( (P^D) \). \(^2\) Introducing a domestic capacity variable \( (C^D) \), we obtain equation (2).

\[
(2) \quad X^D = g(P_T^D/P_N^D; C^D)
\]

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\(^1\) We do not consider here the choice of weights in deriving the index of international competitiveness. Depending on the purpose at hand, one may weight with the shares of foreign markets in the country's exports (regarding competitiveness with the domestic products of foreign countries) or by foreign import shares from competing suppliers (regarding competition with other suppliers in foreign markets).

\(^2\) Ideally, one would need to consider the price of value added (the effective rate of protection) rather than product prices.
Similar formulations may be derived for the case of imports. In this event, account needs to be taken of the substitution of imports for domestic import substitutes as well as for nontraded goods; in the former case, the index of international competitiveness, \(^1\) in the latter, relative incentives to traded and nontraded goods, will be relevant.

It is apparent, then, that a general formulation includes both the 'traditional' and the 'modern' definitions of the real exchange rate; the former shows changes in international competitiveness while the latter indicates changes in relative incentives to traded and to nontraded goods. This conclusion needs modification only in the case when the so-called 'one price rule' applies -- i.e. the same price obtains for a particular commodity, irrespective of whether it is of domestic or of foreign origin -- and the country in question cannot influence this price.

In the latter eventuality, the index of international competitiveness will never deviate from unity, provided that the same weights are used in calculating foreign and domestic price indices for traded goods. Correspondingly, in equation (2), the index of the domestic prices of traded goods is replaced by the index of the foreign prices of traded goods times the exchange rate with adjustment made for changes in import protection and export subsidies (taxes).

The 'one price rule' has limited practical relevance, however. To begin with, many traded commodities are differentiated products that do not have a uniform price and price differences among them may vary over time,

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1/ Regarding substitution for imports, the country origin of imports will provide the appropriate weighting.
resulting in demand shifts. And, even for narrowly defined products, prices have been shown to differ among suppliers, with price differences undergoing changes over time (Kravis and Lipsey, 1978).

Drawing on the available evidence, it has been suggested that "in reality the law of one price is flagrantly and systematically violated by empirical data" (Isard, 1977, p. 942), and "the hypothesis that arbitrage quickly equates goods prices internationally has probably been rejected more decisively by empirical evidence than any other hypothesis in the history of economics" (Williamson, 1983, p. 201). More specifically,

"The denial of the law of one price in this context— at the most disaggregated product level for which price data can be readily matched—provides a strong presumption that it is impossible to assemble available data into aggregate price indexes which can be expected to obey the law of one price (except perhaps, when product coverage is restricted to primary commodities)." (Isard, 1977, p. 941).

In fact, there is evidence of persistent deviations of the index of international competitiveness from unity in the developed countries (Dornbusch, 1985, p. 17) as well as in the developing countries (Edwards-Ng, 1981, Appendix B). In the 1965-82 period, deviations exceeding 50 percent were found for several developing countries, even though they exported overwhelmingly primary commodities. In Eastern and Southern Africa, the group
included Tanzania and Uganda (Gulhati, Bose, and Atukorala, 1985, Table 4), to which Ghana in Western Africa may be added. 1/

It follows that the 'traditional' definition of the real exchange rate is needed to indicate changes in a country's international competitiveness. In the remainder of the paper, this will be referred to as the real exchange rate while the indicator of relative incentives in the domestic economy will be referred to as the ratio of traded to nontraded goods prices. The discussion will concentrate on the economic effects of changes in the real exchange rate so defined, which has been the subject of much of earlier research.

**Effects on International Trade**

A review of twenty-four devaluations carried out by developing countries in the 1953-66 period led to the conclusion that the trade account tends to improve within one year after the devaluation (Cooper, 1971, p. 28). Subsequently, in an empirical study of forty-five devaluations undertaken by developing countries during the 1960s, it was found that the average rate of growth of exports rose from 5.4 to 13.4 percent in the first

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1/ These deviations cannot be explained by changes in import protection and in export subsidies (taxes) or by the choice of the price indices utilized in the estimates. Thus, while the sources cited use consumer price indices, or a combination of consumer and producer price indices, calculations made by the author show that the results are not materially affected if wholesale prices are used instead. At the same time, wholesale price indices are superior to consumer price indices, which also include the prices of nontraded goods and are affected by price controls applied at the consumer level. These objections also apply to the use of the GDP deflator in the calculations that is preferred by some writers on the grounds that it has "a clear methodological definition" (Dornbusch, 1985, p. 17). The index of labor costs provides another alternative but the wage data and productivity indices necessary for their estimation are available for few developing countries only and the index neglects changes in non-labor costs.
year following the devaluations while import growth rates increased from 6.8 to 7.8 percent, resulting in a shift from -1.4 percent to 5.6 percent in the average difference between export and import growth rates. This difference declined to 2.1 percent over a three year period as the rate of import expansion accelerated in the process of economic growth (Bhagwat and Onitsuka, 1974, Tables 2 to 17).

A subsequent study of twelve developing countries that adopted IMF-supported stabilization programs in the 1970-76 period gave similar results. The average rate of export growth in these countries rose from -1.3 percent in the year preceding the devaluation to 9.2 percent in the first post-depreciation year, even though the rate of expansion of world exports hardly changed. While import growth rates also increased, due largely to the import liberalization program adopted by several of the countries concerned, a shift from -2.4 percent to 5.1 percent occurred in the average difference between export and import growth rates (Donovan, 1981, Tables 4 and 5).

Over a three year period, only three out of eleven countries for which comparable data are available experienced a deterioration in their export performance; in one of these countries the real exchange rate approximately returned to, in another it appreciated compared with, its pre-devaluation level. And while import growth rates increased also, a comparison of the three-year periods preceding, and following, the devaluation shows a shift from -2.1 percent to 2.5 percent in the average difference between export and import growth rates (Ibic).

These estimates have the shortcoming that they fail to separate the impact of a devaluation from that of other elements of a stabilization program. In particular, exports are affected by the application of
restrictive macroeconomic policies while imports are influenced by the liberalization of trade and, over time, by the rate of economic growth. Also, the price and wage policies applied bear on changes in the rate of inflation, and hence in the real exchange rate, following a devaluation, i.e. the extent to which the devaluation is offset by increases in domestic prices.

Correspondingly, interest attaches to the effects of changes in the real exchange rate on exports and imports. The elasticity of exports with respect to the real exchange rate was estimated for several developing countries, using quarterly data for the 1974-76 period. In the case of the five developing countries where the estimates are statistically significant at the 5 percent level, the results range between 1.3 to 3.3, with a median of 2.9 (Bautista, 1981, Table 2).

The same study provided evidence on the adverse effects of the variability of the real exchange rate on the exports of the countries concerned. This result confirmed the findings of other researchers for Argentina and Chile (Krueger, 1978, p. 202) as well as for Brazil (Coes, 1979, p. 2). The evidence provided supports the view that uncertainty regarding the real exchange rate tends to discourage exports (Balassa, 1975).

Several studies analyzed the effects of changes in the real exchange rate on exports and imports in a comparative framework. In an investigation of twenty-four developing countries for the 1973-78 period, it was found that the appreciation of the real exchange rate led to declines in export market shares in world trade, as well as to increases in the share of imports in GDP, unless offset by measures of export promotion or import protection (Balassa, 1982, p. 28). Furthermore, a study of twelve developing countries in the 1978-84 period led to the conclusion that "all countries lost world market
shares at times when their currencies were appreciating in real terms, and managed to increase them when [the] exchange rates had been corrected" (Reisen, 1985, p. 34).

The effects of changes in the real exchange rate on export market shares were also observed in the countries of Sub-Saharan Africa during the 1973-78 period. Countries with the largest appreciation of the real exchange rate experienced the greatest losses in export market shares while countries whose currency depreciated in real terms gained market shares (Balassa, 1984). These conclusions were confirmed in a study of exchange rate policies in Eastern and Southern Africa for the 1965-82 period (Gulhati, Bose, Atukorala, 1985).

Furthermore, time-series estimates for different groups of countries led to the finding that "the exports from non-oil developing countries are strongly influenced by real effective exchange rate changes, which indicate that exchange rate policy in the non-oil developing countries as a group should be successful in promoting export growth" (Bond, 1985, p. 74).

According to the results of this study, the responsiveness of exports to exchange rate changes tends to be greater in low-income countries and in major exporters of manufactured goods than in middle-income countries. 1/

A recent study analyzed the effects of exchange rate changes on exports in a cross-section framework, utilizing time series data for 53 developing countries in the 1966-82 period, with separate estimates made for a subgroup of 16 Sub-Saharan African countries. In this study, changes in the

1/ An exception is provided by exports to the non-oil developing countries, where the ranking is middle-income countries, low-income countries, and major exporters of manufactured goods.
real exchange rate and changes in the relative prices of traded to nontraded goods were separately introduced by combining equations (1) and (2) referred to above. At the same time, in view of the intercorrelation of exports and domestic capacity, the export-output ratio was used as a dependent variable in the estimation (Balassa, 1986).

In the event, the real exchange rate variable, but not the relative price variable for traded and for nontraded goods, proved to be statistically significant. The estimated coefficients, all significant at the 1 percent level, show that in the 53 developing countries a one percent change in the real exchange rate was accompanied by a 0.8 percent change in the export-output ratio for merchandise exports and by a 0.5 percent change in the export-output ratio for goods and services. The corresponding estimates for 16 Sub-Saharan African countries were higher, 1.0 and 0.9, again significant at the 1 percent level.

It should be added that the reported estimates show within-year changes in the export-output ratio in response to changes in the real exchange rate. Yet, available evidence indicates that increases of exports in response to a devaluation tend to increase further after one year. This has long been known for the industrial countries and it has also been confirmed for Brazil and Korea (Yang, 1981). Over time, one would also expect the export-output ratio to change in response to changes in relative prices of traded and nontraded goods as resources are reallocated among industries.

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1/ The estimating equation also included a foreign income variable that was positive and statistically significant at least at the 10 percent level. -- It may be added that the elasticity estimates are subject to a downward bias due to the use of least squares estimation procedures.
Finally, an econometric analysis of fifteen developing countries led Khan to conclude that "price elasticities of imports and exports tend to be much larger than perhaps would have been generally expected ... This implies that in a number of developing countries the Marshall-Lerner condition for successful devaluation would be easily satisfied" (1974, pp. 691-97). Such is in fact the case for all but one of the country studies. The exception is Chile, whose exports were dominated by copper in the 1951-69 period, for which the estimates were made.

Effects on Output

The next question concerns the effects of a devaluation on domestic output. While output must increase, unless domestic expenditure declines, for a devaluation to bring an improvement in the balance-of-payments from a situation of initial equilibrium, a devaluation may lead to a fall in domestic output while improving the balance of payments if the initial situation is one of a balance-of-payments deficit (Hirschman, 1949).

It was further suggested that the redistribution of incomes from wages to profits following a devaluation may lead to the contraction of economic activity because of the lower marginal propensity to consume from profits than from wages (Diaz-Alejandro, 1963). Subsequently, it was claimed that, under reasonable values of the relevant parameters, a devaluation would bring forth a fall in output in semi-industrial countries (Krugman-Taylor, 1978). In the example used by the authors, a 25 percent devaluation would lead to a decline in the trade deficit, expressed in terms of foreign currency, from 8.4 to 7.2 percent of GDP while the trade deficit would rise from 8.4 to 9.0 percent of GNP, expressed in terms of domestic currency, entailing a fall in output.
But these results are based on the questionable assumptions that (a) the government would not use increases in revenue following a devaluation to raise expenditures or to reduce taxes; (b) increments in profits would not be invested; and (c) exports and imports would not respond to a devaluation. And, the authors add that the elasticity of exports with respect to the devaluation would have to be close to two in the short run to restore GDP at initial prices to its pre-devaluation level (Ibid, p. 452).

The likelihood of a contractionary devaluation will be greatly reduced, however, if account is taken of possibilities of substitution in production (for imported inputs) as well as in consumption (for imported final goods). Thus, in the Krugman-Taylor example, output will increase following a devaluation if the weighted sum of the demand elasticities for imported inputs and consumer goods exceeds 0.4 (Hanson, 1983, p. 184). And, an even weaker condition will suffice if the assumption of fixed exports is removed.

A decline in output following a devaluation was obtained in simulation model exercises for five out of eight developing countries (Gylfason and Risager 1984, Table 2) and for ten out of twelve least developed countries as defined by the United Nations 1/ (Gylfason and Radetzki, 1985, Table 4). However, the models make inadequate allowance for increases in exports and decreases in imports following a devaluation. For one thing, the authors assume very low price elasticities for exports, 2/ (1.2 for the least developed countries, equal to the average for the eight developing countries,

1/ Eight of the countries are in Sub-Saharan Africa, three in Asia, and one (Haiti) in the Caribbean.

2/ These elasticities show the combined effects of price responses to (domestic) export supply and (foreign) import demand.
which ranged between 0.4 and 2.5).  

1/ For another thing, they assume a very low elasticity of substitution between labor and imported inputs (0.3).  

Furthermore, the authors explicitly or implicitly assume that a balance-of-payments deficit will continue to be financed by foreign borrowing. Correspondingly, they fail to consider the effects on output of alternative policies that may be used to remedy a balance-of-payments deficit, an issue that will be taken up below.

Empirical estimates for individual countries are available for several periods. It was reported that devaluations were frequently followed by a temporary decline in output in the early part of the postwar period (Cooper, 1971, p. 25). In turn, the large excess of export over import growth rates in the first post-devaluation year provides an indication of the rise of

1/ In the case of countries where the small country assumption is made (i.e. the country is price taker in world markets), the export price elasticity equals one plus the price elasticity of domestic supply; hence, an export elasticity of 1 implies no supply response to price changes (Gylfason and Risager, 1984, p. 61). Yet, it is the least developed countries that come nearest to the case of the traditional small country whose devaluation would not affect world market prices.

The export elasticities of 0.6 for Argentina and 0.4 for Brazil, where the calculations show practically no effect of the devaluation on the current account, originate in an earlier study by Houthakker and Magee (1969). These elasticities are subject to a downward-bias due to the use of ordinary least-square estimation and relate to an earlier period when Argentina's exports were dominated by beef and wheat and Brazil's exports were dominated by coffee. Subsequently, a one percent change in the real exchange rate was estimated to lead to a 2.1 percent change in Argentine manufactured exports (Eaton, 1972). According to the results of two studies for a more recent period (Pinto, 1979; and Cardoso and Dornbusch, 1979), a one percent change in the real exchange rate is accompanied by changes of 1.0 to 1.5 percent in Brazil's manufactured exports while an elasticity of 4.1 was obtained by using distributed lags (Yang, 1981).

2/ This elasticity is much lower than the econometric estimates of 0.7-1.0 for the industrial countries (Gylfason and Risager, 1984, p. 60); similar estimates for the developing and the least developed countries are not available.
output following devaluations in developing countries during the 1960s (Bhagwat-Onotsuka, 1974) and increases in output are shown to have occurred after the devaluations undertaken in the framework of stabilization programs during the first half of the 1970s (Donovan, 1981, Table 9).

In the latter period, average GDP growth rates increased from 3.5 percent in the year preceding, to 5.6 percent in the year following, the devaluation in the twelve countries undertaking stabilization programs whereas the average growth rate for non-oil developing countries increased from 4.4 to 5.1 percent growth rates in six countries increased from 1.1 to 7.6 percent while six countries applying restrictive macroeconomic policies experienced a decline from 5.5 to 4.0 percent. In the last-mentioned cases, however, we do not observe the effects of the devaluation per se but rather the combined effects of the devaluation and of restrictive macroeconomic policies. This may explain the findings of subsequent analysis of IMF-supported stabilization program during the 1970s, according to which "in the short run, the change in the growth rates achieved on average was little different from that of all non-oil developing countries, while program countries' growth performance improved slightly in a relative sense during a three-year comparison period (Donovan, 1982, p. 187). Thus, it may be surmised that the adverse effects of restrictive policies on output wear off with the passage of time.

Finally, there appears to have been a negative correlation between the overvaluation of the currency and rates of economic growth in developing countries during the period following the quadrupling of oil prices. On the whole, Far Eastern countries maintained realistic exchange rates and reached
high growth rates 1/ while the overvaluation of the exchange rate was accompanied by low growth rates in a number of Latin American countries (Balassa, 1982a). The extent of the overvaluation of the exchange rate, and its adverse output effects, were particularly pronounced in Sub-Saharan Africa (Balassa, 1984; Gulhati, Bose, and Atukorala, 1985), affecting agriculture as well as in industry.

In agriculture, the causation goes from low (high) prices in terms of domestic currency to low (high) production for export that represents an important part of agricultural output. This conclusion has been confirmed in a cross-section study of 31 Sub-Saharan African countries, which shows that a one percent change in the real exchange rate is associated with a 0.15 percent change in agricultural output; the regression coefficient is statistically significant at the 10 percent level (Cleaver, 1985, p. 30). The estimated coefficient for agricultural exports was 1.4 for 16 Sub-Saharan African countries, statistically significant at the 1 percent level (Balassa, 1986).

Shortages of foreign exchange resulting from the poor performance of exports led to declines in industrial output in Sub-Saharan African countries whose currency was greatly overvalued. This occurred because of the virtual lack of spare parts and components for manufacturing establishments. In turn, countries with realistic exchange rates experienced favorable output trends in the industrial sector.

1/ According to an IMF official, "following the 1973-74 oil price increases, a number of countries in Asia adopted firm measures to restrain domestic demand, and sought to switch output to exports through allowing their effective exchange rate to depreciate. As a result, Korea, the Republic of China, Thailand and Singapore all maintained satisfactory growth rates in the period 1974-76" (Crockett, 1981, p. 470).
Chile provides a laboratory experiment on the economic effects of changes in exchange rates. Following the adverse impact of the appreciation of the real exchange under President Allende, exports and output rose rapidly in the wake of the devaluation of the currency until a reversal occurred in June 1979 when the exchange rate was fixed in dollar terms, notwithstanding continued large differences of inflation rates in Chile and abroad. With the exchange rate remaining unchanged while wages doubled between June 1979 and October 1981, the competitive position of Chilean agriculture as well as industry was compromised, leading to declines in the output of exporting and import-competing industries (Balassa, 1985).

Another example is Turkey that experienced a severe foreign exchange shortage following the 22 percent appreciation of its real exchange rate in 1979. The subsequent re-establishment of the real exchange rate to its earlier level led to the rapid expansion of exports that contributed to economic growth (Balassa, 1983). Thus, in an inhospitable world environment, the volume of Turkey's exports doubled between 1980 and 1983 and its gross domestic product increased by 14 percent. By contrast, in the absence of a devaluation, output would have declined due to the aggravation of foreign exchange shortages.

It may be suggested, then, that the appropriate comparison is between the actual situation following a devaluation and the hypothetical situation that would have resulted if the devaluation had not occurred. Also, as discussed further below, considération needs to be given to the effects on output of the macroeconomic policies applied.

Note should further be taken of the results of a cross-section study of 12 developing countries by Edwards (1986). In Marine adjusted for the
effects of fiscal and monetary variables, Edwards has obtained a negative correlation between changes in exchange rates and in output in the year of the devaluation that was fully offset by a positive correlation in the following year. But, the results for the year of the devaluation may be interpreted to indicate that devaluations are undertaken in the year where output is below the trend.

**Income Distribution**

It has long been recognized that a devaluation will adversely affect the distribution of incomes through increases in profits relative to wages in the traded goods sector (Diaz-Alejandro, 1963). In examining the case of Argentina, it was noted however that increases in employment will provide partial compensation for declines in real wages (Diaz-Alejandro, 1965, p. 191). More recent research has shown that, in a group of 12 developing countries, increases in employment associated with a decline in real wages would offset the adverse effects of a devaluation on labor incomes over time, to which the employment created through favorable output effects should be added.  

In analyzing changes in the income distribution following a devaluation, further account needs to be taken of intersectoral shifts. In particular, farmer incomes are increased by a devaluation that raises the domestic currency equivalent of agricultural prices. And although in the case

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1/ In cases where the regression coefficient was statistically significant at least at the 10 percent level, short-term employment gains associated with a 10 percent decline in real wages ranged from 0.7 percent to 12.4 percent, with a median of 4.5 percent. In turn, the long term effects varied between 2.7 and 27.0 percent, with a median of 11.3 percent. However, in two countries a positive relationship is shown between real wages and employment (Larrain, 1985, Table 3).
of Argentina, referred to earlier, the gains accrue to large farmers, in most
developing countries the farmers represent the poorest segment of the
population.

Taking account of changes in farmer incomes, then, the devaluation
may improve the income distribution even in the short run. This is likely to
be the case, in particular, in Sub-Saharan Africa, where the burden of the
overvaluation of the currency was largely borne by farmers through lower
prices and incomes.

**Effects on Inflation**

Ceteris paribus, a devaluation will contribute to inflation through
increases in the prices of traded goods. However, the ceteris paribus
assumption will not be fulfilled if the devaluation is accompanied by the
abolition of import restrictions. As Sohmen (1958) noted nearly thirty years
ago, prices will decline rather than increase in this eventuality if economic
welfare is improved following the replacement of import restrictions by a
devaluation.

More recently, in reporting on the results of a comparative study of
eleven developing countries in the postwar period, Krueger concluded that "(1)
the popular interpretation of the extent of inflationary pressure resulting
from devaluation is greatly exaggerated; (2) while the effect of devaluation
itself may be to raise some prices, there are significant offsets; and (3) the
magnitude of the inflationary impact is not likely to be so great that it
cannot be offset by appropriate policies, including monetary and fiscal
restraint and liberalization of the flow of imports" (1978, p 155).

Additional evidence is available for the twelve developing countries
that undertook stabilization programs in the 1970s. While inflation rates
rose in these countries, the increase was less than in the non-oil developing countries in general (1.8 vs. 3.2 percentage points). The differences are even larger over a three-year period, with increases of 2.3 percentage points in the first case and 6.9 percentage points in the second. According to the author, the results appear to indicate that devaluation has an once-for-all impact on prices (Donovan, 1982).

All in all, the inflationary effects of a devaluation will depend on several factors. Apart from the liberalization of import restrictions, these include the macroeconomic policies applied and the process of wage and price determination. In particular, attempts made to recoup losses in real wages will add to inflationary pressures, thereby limiting the effectiveness of the devaluation.

Policy Conclusions

The evidence presented in this paper contradicts the elasticity pessimism often expressed in popular discussions and underlying the results of simulation models. Thus, devaluations have been shown to generally improve the balance of trade in developing countries within a year. This conclusion is confirmed by econometric studies on the relationship between changes in the real exchange rate and exports. At the same time, these results pertain to the short-term while the full impact of changes in real exchange rates will be felt over several years.

It further appears that the pessimistic conclusions reached regarding the effects of a devaluation on domestic output rest on questionable assumptions. In fact, recent experience indicates that, on the whole, devaluations have been followed by increases in output.
Output declined, however, in cases when the devaluation was accompanied by strong restrictive measures. This point leads to the conclusion that the initial situation preceding the devaluation, as well as the policy mix subsequently applied, importantly affect the outcome as far as domestic output is concerned. In cases when the devaluation was preceded by a long period of overvaluation leading to foreign exchange scarcity, a situation often found in Sub-Saharan Africa, the easing of the foreign exchange stringency following the devaluation will permit output to grow.

In turn, in cases when devaluation has been brought about by excessively expansionary policies, with increases in domestic output far exceeded by the rise of domestic expenditures, a cutback of these expenditures will be necessary to make the devaluation effective. Changes in output will, then, depend on the relative strength of expenditure-reducing policies, and the expenditure-switching policies a devaluation represents.

An extreme case is when sole reliance is based on deflationary policies to correct a balance-of-payments disequilibrium. This alternative will necessarily lead to reductions in output, since it will not bring forth changes in relative prices that would promote exports and import substitution in the event that a devaluation is undertaken.

Nor are import restrictions a desirable alternative to a devaluation. In contributing to the maintenance of overvalued exchange rates, import controls discourage exports, thereby reducing potential foreign exchange earnings. Exports, and domestic production in general, are also discouraged by shortages in spare parts and components import controls tend to entail. And, if controls are limited to luxuries and semi-luxuries, the domestic production of these commodities will be promoted, leading to
inefficiencies in resource allocation. Further inefficiencies result, and employment is adversely affected, as the underpricing of foreign exchange provides incentives to capital-intensive activities utilizing imported machinery.

Rent seeking, aimed at obtaining the profit resulting from the scarcity value of import licenses, too, has adverse effects. It encourages the generation of overcapacity in production, as well as trading, facilities (Krueger, 1974); it leads to the diversion of efforts from production to activities aimed at obtaining import licenses; it favors large firms that are generally better able to cope with the bureaucracy than small firms; and it breeds corruption as a way of dividing up the gains.

These conclusions favor a devaluation, accompanied by appropriate macroeconomic measures, to cope with an unsustainable balance-of-payments deficit. At the same time, once a devaluation is undertaken one should avoid that the exchange rate becomes overvalued again. In particular, there is need for stability in the value of the real exchange rate, lest exports be discouraged.
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