

RESPONSE TO BALANCE OF PAYMENTS CRISES  
IN THE 1970'S: KOREA  
AND THE PHILIPPINES

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Response to Balance of Payments  
Crises in the 1970's: Korea and the Philippines

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Korea and the Philippines today are among the East Asian countries most heavily burdened with external debt. This is a result, of course, of heavy borrowing to finance current account deficits in the 1970's. How to account for these deficits and an analysis of the two countries' responses and their consequences is the subject of this paper.

Taking balance of payments crisis to mean a sharp rise in the current account deficit, financed by running down foreign exchange reserves or external borrowing, two periods of crisis have been identified for both countries, 1974-77 and 1979-82. While the focus is on these periods the analysis is put in the perspective also of the trends of the preceding decade.

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1. Balance of Payments Crises in the 1970's:  
Korea and the Philippines.

Both Korea and the Philippines, along with much of the rest of the world, suffered sharp increases in their current account deficits following the two oil price shocks in 1974 and 1979-80. This can be seen in Tables 1 and 2 where to gain a better perspective the deficits are also put as proportions of "trade" -- the simple average of exports and imports.

Korea's deficit jumped to about 30 per cent of trade in 1974-75, compared to an average of 20 per cent in the previous three years. This, however, understates the extent of the change, since the deficit had dropped sharply from 40 per cent in 1971 to only seven percent in 1973, so that the sharp rise represented an even sharper reversal of a trend.

In the first year (1974), Korea's international reserves, which had been rising sharply, showed a slight decline absolutely and a substantial decline in relation to trade. External indebtedness continued to grow rapidly, but it also declined as a proportion of trade. The reason was a remarkable 50 per cent increase in Korea's trade in one year. Most of this was accounted for by the rise in the trade unit value (average of import and export unit values) which rose 39 per cent, leaving only about eight per cent for real growth. This was followed by a modest six per cent growth in trade the following year, helped by a decline in trade unit value. This helps to explain the movement of the ratios to trade of the deficit, reserves and indebtedness in 1974 and 1975. The upshot is, however, that

despite the relatively large deficits of the two years Korea found itself only slightly worse off with respect to reserves as a proportion of trade and slightly better off with respect to external indebtedness. (See Table 1. This suggests that, while the picture might fit the definition of a balance of payments crisis, it was hardly a major one.

What is really impressive, however, is the rapid recovery of the current account in the next two years, resulting in a very slight surplus in 1977. Reserves improved strongly, both absolutely and in relation to trade; and, while indebtedness continued to grow, it declined as a proportion of trade.

This picture was reversed again in 1978, a year before the second oil shock, though the rise in the deficit was not as sharp as in 1974; and because of the tremendous growth of both exports and imports over four years, it represented only six per cent of trade. Still it was a reversal and international reserves once again failed to grow with trade. Indebtedness, on the other hand, rose slightly less than in proportion to trade. Nevertheless, the increase in indebtedness was 30 per cent for the year as trade grew even faster, dominated by a 38 per cent increase in imports (31 per cent in volume).

Should we, then, consider the second balance of payments crisis as beginning in 1978 rather than in 1979 after the oil shock? Other evidence suggests not. The surge in imports, noted above, was dominated by machinery and transport equipment, which rose 69 per cent, and basic manufactures, which rose 46 per cent. These complemented the sharp rise

in gross fixed investment of 59 per cent in current prices, which accompanied the government's policy thrust to favor heavy and chemical industries. GDP rose at a faster rate than the average for the preceding seven years, while unemployment reached a record low for the decade of 3.2 per cent, compared to an average of 4.2 per cent during 1970-77.

It seems, then, that the current account deficit in 1978 was a result of a domestic investment boom, rather than an external shock.

For this reason, in the subsequent analysis the first balance of payments crisis period will be taken as 1974-77, and the second will cover 1979-82. This leaves 1978 out of both periods as a year of internal shock.

In any case, the current account deficit quadrupled in 1979, more than tripling as a proportion of trade. This time there was no quick recovery, however, as the deficit rose further in 1980 and remained above the 1979 level in 1981. By 1982 the deficit was down to half the peak 1980 level, but more than two and a half times that of 1978. As a proportion of trade, however, it was down to eight per cent, compared to the peak of 21 per cent in 1980.

Indebtedness continued to grow but not much faster than trade, so that the ratio rose only slightly and remained low compared to the early years of the decade. Reserves, surprisingly, continued to grow, though at a rapidly diminishing rate. By 1982 the ratio of reserves to trade was down to 23 per cent, compared to a high of 33 per cent in 1977.

The year 1980 deserves special comment, particularly since some of the later analysis could be misread without some understanding of the special circumstances that characterized that year. I will limit the comment to three points. First, real GNP not only failed to grow, but

actually declined between 1979 and 1980. The principal reason was crop failure, dominated by a 36 per cent drop in rice production. A less important factor was the effect on investment of a brief period of political uncertainty following the assassination of the President. The significance of this is that the decline in GNP and its effect through imports on the trade balance cannot be attributed to a government policy response to the external shock. The volume of imports did decline, but less than might have been expected because of a surge in food imports in response to the crop failure, though the main effect of the latter on food imports was felt the following year.

GNP growth was modest during the two years following 1980, despite a sharp recovery of agricultural output, averaging less than six per cent per annum, compared to more than 10 per cent between 1972 and 1979. This was due in part to the world recession, but also in part to stabilization measures taken in consultation with the International Monetary Fund and supported by Fund stand-by arrangements. Gross investment in real terms was kept well below the peak levels of 1978 and 1979 and the rate of inflation was brought down to about eight per cent in 1982 from its peak in 1980 when crop failure, rise in energy prices, and devaluation had combined to help produce a 26 per cent rise in the GDP deflator. The stabilization measures helped to maintain growing export volume in the face of declining world trade, as well as to limit the growth of imports, which together with some help from the terms of trade, brought a substantial reduction in the current account deficit in 1982.

The role of oil obviously deserves special mention in a discussion of the balance of payments crises in the 1970's. The main impact on the current account balance was, of course, through the sharp rise in the import price. In 1974 this was more than three and one-half times and in 1975, more than four and one-half times, the 1971-73 average. The value of oil imports as a proportion of total commodity imports rose from less than eight per cent in 1971-73 to more than 15 per cent in 1974 and 19 per cent in 1975.

There is little evidence in the period of the first crisis of any determination to conserve energy or to limit imports of oil by substituting alternative energy sources (Yager, 1983). While consumption of oil and coal (in tons) were roughly equal in 1972, during 1974-75 consumption of coal was only six per cent greater than oil, despite the sharp change in relative prices; and by 1978 oil consumption exceeded coal consumption by 23 per cent. The rise in total energy use of 8.2 per cent per annum during 1973-79 almost matched the 9.5 per cent rate of GDP growth, in contrast to Japan, for example, where the energy use rate of growth was only about one-third that of GDP (Yager, 1983). Moreover, the use of oil increased at an annual rate of 9.8 per cent over the same period.

Energy prices were allowed to increase in Korea to 56 per cent and 63 per cent over 1973, respectively, for 1974 and 1975; and this led to a slight overall decline in energy intensity (ratio of energy use to GDP) as the decline in intensities in non-industrial sectors more than matched the rise in the industrial sector. Finally, however, dependence on imports of

energy (including coal, but excluding uranium) rose from 55 per cent of total energy supply in 1973 to 70 per cent in 1979 (Yager, 1983).

In the second crisis, the import price of oil was up almost 150 per cent and 200 per cent, respectively, in 1980 and 1981 over the average of 1976-78. The value of oil imports was more than 30 per cent of total commodity imports compared to less than 20 per cent during 1976-78.

The rapid rise in oil import volume finally subsided after 1979, partly due to the 1980 downturn in GNP, but due also to substitution of coal. Coal imports and consumption jumped sharply in 1979 and continued to rise at a substantial rate the following two years. Overall, however, there is no evidence of energy conservation, as energy intensity increased 5.3 per cent and 7.6 per cent, respectively, in 1979 and 1980 (Yager, 1983).

Comparing the two crises, the first was sharp and short-lived. Korea apparently largely ignored its balance of payments and opted for continued export-led growth; and it worked, leaving its external debt position none the worse for the wear. The second crisis was prolonged and was compounded by the internal shock of 1978, the over-commitment to investment in heavy industry and the agricultural disaster of 1980. As a result, the balance of payments could not be ignored and Korea began to take measures to dampen the rate of inflation, reduce the emphasis on heavy industry, liberate market forces, as well as to aim at more modest growth targets (Republic of Korea, 1982).



Turning to the Philippines, the rise in the current account deficit in the first crisis was retarded because of the favorable effect on export earnings of high sugar and copper prices in 1974. Moreover the deficit as a percentage of trade in the peak year, 1976, was smaller than that of Korea in 1974 and 1975. (See Table 2.) Reserves dropped in 1975, but recovered in 1976 when, as a percentage of trade, they were almost as high as at the end of 1973, a year in which the Philippine had a substantial current account surplus. The counterpart to this was, of course, a sharp rise in external indebtedness, both absolutely and as a percentage of trade.

The Philippines, like Korea, chose to ignore the balance of payments and opt for growth. Investment in rural infrastructure to improve agricultural production and promotion of new exports were to improve the balance of payments, while government deficits were to provide the stimulus to aggregate demand to offset lagging demand for traditional exports. Despite some success in both agriculture and non-traditional exports, however, the strategy did not succeed. Following a slight improvement in the current account deficit in 1977, it worsened again in 1978. Reserves in 1977-78 were at a low point in proportion to trade and indebtedness grew rapidly to exceed the ratio to trade that prevailed in 1971-73. Hence, the Philippines faced the onslaught of the second oil shock without having recovered from the balance of payments crisis initiated by the first.

With the oil price increases in 1979-80 and the ensuing slowdown in growth of world trade, the Philippines' current account deficit worsened further, creeping up from 21 per cent of trade in 1978 to

23.5 per cent in 1981. International reserves declined as a percentage of trade from almost 34 per cent to below 28 per cent over the same period, while indebtedness grew only slightly less than trade. The increase in indebtedness may have been greater, however, than Table 2 indicates, since the figures are from the World Bank Debt Tables which fall short of capturing fully private non-guaranteed debt. This is more of a problem in analyzing the debt situation of the Philippines than that of Korea, since a much greater proportion of the latter's debt is public or guaranteed. The figures for the Philippines may serve at best as a rough index of changes, though I suspect that the increase after 1978 is understated.

In any case, the real crunch came in 1982 as exports dropped more than 15 per cent below 1981. Government deficit spending provided enough of an offset to permit a modest growth of 2.8 per cent in GNP, the lowest since the 1960's. Imports in dollars declined four per cent, far short of the decline in exports. But this was the result of an increase in volume more than offset by a decline in import prices. Likewise, the volume of commodity exports rose a modest five per cent, while the export unit value index declined 17 per cent.

The result of this disaster for the Philippines was a current account deficit almost 35 per cent the value of trade, a decline in international reserves to 26 per cent of trade, the lowest since 1971, and a record external indebtedness at 125 per cent of trade. This represents a startling contrast to the situation in Korea in 1982 which, by itself, might have appeared bleak enough.

It would be unfair to ignore the role of the terms of trade on the fortunes of the Philippines. Few countries in the world have suffered as much from the movements of international prices. With 1971-73 = 100, the index for the Philippines in 1982 was 52. The corresponding 1982 index for Korea, for example, was 75. Of course, we have long known that the way to avoid terms of trade disasters is to have a built-in flexibility so that resources can move out of relatively declining price industries. The Philippines' continued excessive dependence on its traditional exports, a result of its own inward-looking industrial and trade policies, is as much to blame for its terms of trade losses as bad luck.

Finally, a brief comment on the role of oil. The import price of oil in 1974-75 was more than four times that of 1971-73, while the value of oil imports was 70 per cent greater as a proportion of total commodity imports. The latter rose to 23 per cent in 1976-78 which was 87 per cent over 1971-73.

Then, in the second shock, import prices rose 50 per cent in 1979 and 150 per cent in 1980-81 over the level of 1976-78. The share of oil imports rose to 30 per cent of total imports by 1981 as compared to 12 per cent in 1971-73, and then subsided to 26 per cent in 1982.

The Philippines appears to have taken much more seriously than Korea the problem of energy cost. Through a variety of programs promoting alternative energy sources, including hydro, geo-thermal, coal and others, the Philippines managed to limit growth of oil consumption

to seven per cent over the entire period 1971-73 to 1981, and oil imports to a four per cent increase. This represents annual increases of three-fourths of one per cent and one-half of one per cent, respectively.

Much of this substitution has occurred very recently. In 1977 oil represented 94.7 per cent of energy sources, with hydro and coal providing 4.3 and 1.0 per cent, respectively. By 1982, oil's share was down to 77.5 per cent, hydro had 7.4 per cent, geo-thermal had 7.0 per cent, coal had 1.2 per cent and non-conventional, the remaining 0.7 per cent.

Not only has there been substantial substitution for oil, but the energy intensity of the economy has diminished. The ratio of energy use to GNP has declined almost 15 per cent between 1973 and 1981 (Makasiar, 1983). This is one glimmer of brightness in the Philippine picture.

## 2. Shock-Accommodation Analysis.

Further understanding of the nature and consequences of the balance of payments crises of 1974-77 and 1979-82 can be derived from a shock-accommodation model, similar to that of Balassa (1980). The model is presented formally in Appendix A to this paper; hence, a brief, informal presentation may suffice here.

The model is designed to measure the effects of external shocks and adjustments to the shocks and to decompose the former into terms of trade effect and export volume effect and the latter into export share effect, import saving through slower growth, and import substitution (World Bank, 1981). The terms of trade effect measures the effect on the commodity trade balance of the difference in import and export prices

in any year from those in the base period (1971-73). The export volume effect measures the difference between an assumed trend value of exports, and a hypothetical value of exports, both measured in base year prices. The trend value is based on a trend rate of growth from the base period of world exports, derived from the actual trend growth between 1961-63 and 1971-73, and the country share of world exports in the base period. The hypothetical value of exports is derived from the same base period export share and the actual growth of world exports from the base period. Thus, if actual world exports fall below the trend value (presumably because of the recession following the oil price shock), there will be a positive export volume effect.

The export share adjustment measures the difference between actual exports and hypothetical exports. Given the effect of the recession on world exports, if a country's export performance exceeds that which would have come from a constant share, the export share adjustment will be positive. The slower growth adjustment attempts to measure the effect on imports of slower growth of GNP following the shock. It is represented by the difference between a trend value of imports, based on a trend value for GNP together with an assumed income elasticity of demand for imports, and a hypothetical value, based on the actual growth of GNP (from the base period) and the same elasticity. The trend growth of GNP again was based on the period, 1961-63 to 1971-73, while the elasticity was derived from regression analysis of import demand functions (see Appendix B).

Finally import substitution measures the difference between actual imports and hypothetical imports. It attempts to answer the question: to what extent were imports below the trend level by an amount beyond that which could be accounted for by slower growth?

The gap between total shocks and total adjustments represents the additional external financing required above the trend value of such financing, as given by the trend values of exports and imports. It is an "accommodation" to the shocks, as are all of the above adjustments; but, unlike the World Bank model (World Bank, 1981), I have chosen to separate it from the other elements of accommodation. This is not a substantive issue, of course, but merely a matter of taste.

The actual values of the parameters used in the calculations were:

	<u>Korea</u>	<u>Philippines</u>
	(per cent)	
Per Annum Growth Rate of world exports	8.9	8.9
Per Annum GNP Growth Rate	9.6	5.3
Export Share	.427	.303
Import Elasticity	1.9	1.2

All trade values are in prices of the base period, 1971-73. Analysis is done for the whole period, 1974-82, and for the two sub-periods, 1974-77 and 1979-82. For the latter, the base period is 1976-78. Since we have no price indexes for "invisible" trade, exports and imports are commodities

only. In effect, it is assumed that price effects from invisible imports and exports cancel and that these components of trade are always at their trend values.

Two words of caution are in order before proceeding to the results of the analysis. First, this model is tailored to the experience of the 1970's and the assumption that balance of payments crises emanate from external shocks. It is obvious, however, that shocks can be of internal origin, as well. I have already noted above that 1978 and 1980 could be considered years of internal shock for Korea because of the investment boom in the former year and the crop failure in the latter. The effects of these internal shocks, however, are revealed in the model in the form of adjustments. Second, the adjustments are sometimes interpreted as policy responses to the shocks. They may be in some cases. They may also be in response to stimuli other than government policy. And, even if they are influenced by government policies, those policies may not be directed at the balance of payments — i.e., they may be in response to something other than the shocks. These limitations are in addition to those from the assumptions of given constant shares, given constant elasticities, and given growth trends. The results, then, must be interpreted with great care. Nevertheless, even with these limitations, the analysis sheds considerable light on the balance of payments crisis experience of Korea and the Philippines over the past decade. In particular I think that it highlights the contrast between the adjustments of the two countries.

Tables 3 and 4 reveal the results of the calculations of shocks and accommodations for Korea and the Philippines, respectively. Results are given for each year and summed for the whole period and the two sub-periods. Tables 5 and 6 help to put these results in perspective by indicating the relative importance of each shock and adjustment to their respective totals, as well as to trade and GNP.

Total shocks in relation to GNP were slightly more important to Korea than to the Philippines, while in relation to trade they were much more important to the latter country (Table 5). The reversal, of course, reflects the fact that trade as a proportion to GNP is much larger for Korea, averaging 42 per cent over the whole period compared to 22 per cent for the Philippines. But the picture is nonetheless surprising. One might expect external shocks emanating from changes in the prices and volume of world trade to be more uniform between countries in relation to trade than to GNP when trade-GNP ratios differ sharply. This is the same thing as saying we would expect the more trading country to be more vulnerable to such shocks than the less trading country when we measure damage in relation to GNP. It turns out not to be true in this case, however. The ratios are much more nearly uniform for GNP than for trade, indicating roughly equal vulnerability despite the fact that Korea's trade-GNP ratio is almost double that of the Philippines.

The fact that total shocks represent a much higher proportion of trade for the Philippines is largely explained by the differences in the behavior of the two countries' terms of trade, a difference already



noted above. The decline in Philippines' terms of trade over the period 1971-73 to 1982 of 48 per cent was almost double that of Korea. This undoubtedly reflects the Philippines' greater dependence on primary exports.

In any case, the terms of trade effect predominated over export volume for both countries over the whole period, as well as in each sub-period. Moreover, for both countries total shocks were somewhat greater in relation to trade in the first period than in the second, though the difference is not great. The period ends in 1982, however, so that the additional shock of 1983 is not counted. No doubt if we added one year to each period the picture would be reversed.

The pattern of export volume shocks is, of course, exactly similar for the two countries, being derived from the same world export values and constant export shares. Comparing the two periods, the effect is much greater in the second, reflecting the greater depth and length of the world recession.

The patterns of accommodations, in contrast to the shocks, show very little similarity. While the shocks were largely accommodated by additional financing in the Philippines, Korea more than accommodated in other ways to reduce external financing far below the assumed trend. Over the whole period Korea's trade and growth adjustments were more than double the estimated effects of the shocks. For the Philippines these adjustments represented less than one-fourth of its shocks, leaving more than 75 per cent to be met by additional financing beyond the assumed trend.

The Philippines did better in the second period, adjusting 30 per cent as compared to only five per cent in the first, while Korea's performance was roughly similar between the two periods.

Over the whole period, increased export share was, not surprisingly, the major adjustment for Korea, accounting for 59 per cent of the total. Import substitution followed with 27 per cent. Slower growth was important only in the second period. For the Philippines, export share was also the most important element in its more modest adjustment package, again followed by import substitution. Slower growth was, indeed, faster growth; hence its contribution was negative.

Turning now to a comparison of the accommodations in the two periods, recall that the base for the second period is 1976-78, so that the values for the second period represent additional shock and accommodation over that base rather than accumulated values over 1971-73 as in the figures for individual years.

We noted already that the Philippines adjusted better in the second period than in the first. The improvement came mainly from greater export share, aided by a much smaller deduction from faster growth.

For Korea, the big change was a dramatic slow-down in growth. Indeed, this accounted for more than half of the total adjustments in the second period, whereas its effect was slightly negative in the first. We must be cautious in interpreting this, however, because it includes the effect of the five per cent decline in GDP in 1980 which was due mainly to crop failure rather than to restrictive demand management.

policies. It is true that growth was well below trend value in the recovery after 1980, at about six per cent compared to the assumed trend of 9.6 per cent. Nevertheless, without the crop failure, Korea's performance ratio -- adjustments to shocks -- would have been considerably lower in the second period than in the first.

For both countries, the importance of export share adjustment to exports was greater than that of import substitution to imports, though the Philippines improvement occurred only in the second period (Table 6). The significance of the Philippines' export market share performance is better indicated, however, by the value for export share in the final year (Table 2) divided by the total increase in exports over the period. This gives the proportion of export gain that is due to greater market share, and is shown in the second column of Table 6. For the whole period the proportion was 72 per cent and for 1979-82, a remarkable 95 per cent. This shows in the second period the continued growth of Philippine exports in the face of declining world trade (both measured in 1972 prices).

Korea's performance in this respect was even more outstanding. The proportions of export gain accounted for by increased share were 92 and 98 per cent, respectively, for the decade and for the last four years. One cannot easily argue, in the case of Korea, however, that this drive for increased export share was a response to the shocks of the 1970's. Rather, it had been going on for some time previously. If, for example, I had calculated hypothetical exports on the assumption not of a constant base period share, but had instead projected the past rate of increase of

Korea's share (over the period, 1961-63 to 1971-73), Korea would have had a substantial negative export share adjustment. Moreover, Korea's hypothetical exports in 1982 would have represented roughly half of world exports. In fact, of course, the rate of increase in Korea's share retarded over the decade ending in 1982. Nevertheless, it was almost three times the base period (1971-73) share; and this largely accounts for the outstanding adjustment performance in the shock-accommodation model.

The overall results largely corroborate Korea's far superior balance of payments adjustment that was evident in the analysis of the first section. They show also the predominance of the terms of trade effect and the much greater severity of the shock for the Philippines.

The results for Korea might seem to suggest huge balance of payments surpluses by the end of the decade, which are not in evidence. The principal reason is, as noted above, the constant share assumption in the calculation of hypothetical and trend exports. A second reason is the decline in the income elasticity of import demand from 1.9, the assumed trend level, to less than 1.6. What the results show is that by increasing its export share rapidly and reducing its import elasticity, Korea avoided what would have been, other things equal, a disaster.

For the Philippines, the better performance in the second period might seem to conflict with the balance of payments crisis indicators, which indicated a much more serious situation in 1979-82. The former results, however, show the change from 1976-78, while the latter show

the accumulation since 1971-73. This highlights the importance of the fact that the Philippines had failed to recover from the first shock before encountering the second in explaining its present predicament.

For both countries, however, the analysis so far shows little evidence of a determined effort to respond to the balance of payments shocks as such. Rather, it appears that each was intent on growth and that it was willing to borrow abroad when necessary to maintain growth. For Korea this was made viable by an outstanding export performance. This interpretation makes more sense, I think, than treating the export performance as a response to the shocks. For the Philippines it did not succeed. Despite some success in efforts to promote new exports, the Philippines' share in world exports increased by only 12.5 per cent over the decade -- not enough to permit an all-out growth strategy.

To shed more light on the validity of the hypothesis that both countries were pursuing growth strategies, largely ignoring balance of payments considerations, it might be instructive to look briefly in the next section at their investment and saving performances during the decade.

### 3. Saving-Investment Analysis.

The ratios of gross investment and gross saving to GNP are shown in Tables 7 and 8, respectively for Korea and the Philippines, for the years 1971-82. The ratios are similar and relatively high compared to developing countries in general and also to the ratios for the same countries in the 1960's.

The difference between the two ratios is, of course, foreign saving, which includes net transfers, as well as net external borrowing. The latter strongly dominates foreign saving for both countries, however, so that this component of saving can serve as an alternative measure of the resource gap, thereby serving as an indicator also of balance of payments pressure.

What is striking in both cases is the rise during the 1970's of the investment ratios to levels above 30 per cent at the end of the decade, compared to 24 per cent and 21 per cent, respectively, for Korea and the Philippines in the base period. While the ratio dropped off for Korea in 1981 and 1982, a record high of 35 per cent in 1979 gives an average for 1979-82 of just above 30 per cent. The Philippines maintained a steady ratio over the four years of the second sub-period at the same level. Moreover, the ratio was already at 28 per cent for Korea and 29 per cent for the Philippines in the first sub-period. The whole period of the two shocks has all the earmarks of an investment boom for both countries.

Moreover, the investment ratios were highest during the peak years of the ratio of current account deficit to trade -- 1974-75 and 1979-80 for Korea, and 1975-76 and 1979-82 for the Philippines. The coincidence is perfect. If one did not know about those oil shocks and simply looked at investment and the balance of payments indicators, one might easily conclude that the years of balance of payments difficulties were simply years when the investment boom got out of hand. But, of course

we must bring in saving to complete the picture of this side of the story.

Both countries also raised their saving ratios over base period levels, in the case of Korea by enough to maintain for the period 1974-82 the same percentage gap below the investment ratio as prevailed in 1971-73. The Philippines had no gap in the base period, but the rise in saving failed to match that of investment, creating an average gap of just under six per cent during 1974-82. This was slightly less than Korea's gap. In both countries, but especially in Korea, the rise in government saving represented a significant contribution (Tables 7 and 8).

Looking again at the peak years of the current account deficit for Korea (1974-75 and 1979-80), we find saving relatively low in the first pair of years, which together with the sharp rise in the investment ratio, yields peak values for the foreign saving ratio. In 1979 the saving ratio was very high along with the record investment ratio, but the former dropped sharply in 1980 and remained below average for the next two years. It is possible that in 1974-75 and again in 1980 saving was dampened by the consequences of the external shocks -- e.g., slower growth of GNP and higher rates of inflation; but there remain the relatively high investment ratios as clear indicator of internal shock.

For the Philippines the picture is clearer. There is no evidence of a decline in the saving ratio during the peak current deficit years until we reach 1982. Indeed, in the other five years (1975-76 and 1979-81) saving was at or above the average for 1974-82. Again, the high investment ratios remain as evidence of internal shock.

One would need a very rich model to measure the relative effects of the external and internal shocks on the resource gap. All I can say here is that it seems evident that there were internal investment shocks in both countries coinciding with the external shocks. This is best explained, I think, by the sharp rise in government investment in both countries in those years, presumably as a countercyclical measure.

In any case, it is clear that both countries were opting for growth and were unwilling to let balance of payments concerns stand in the way (at least until the end of the period for Korea). Korea was, of course, more successful in this strategy, not only in expanding its export share, but in generating growth out of saving, as well. Philippine growth was retarded by an incremental capital-output ratio (ICOR) that remained high, relative not only to Korea, but to most developing countries, owing in part at least to distortions from government price intervention policies. Korea, in contrast, enjoyed a low ICOR until the switch to investment in heavy industry in the late 1970's.



#### 4. Strategies and Policies.

What the quantitative analysis shows is that both countries put growth above balance of payments considerations and were willing to increase external debt in the face of severe external shocks to implement this strategy. As noted above, Korea was able to get away with it, until prematurely it went overboard on investments in heavy industry, largely because of its export share performance with some help from import substitution. (The slower growth element should be discounted because it reflects the crop failure in 1980 and the years 1981-82 when Korea was no longer getting away with it.) While the Philippines had modest success in both export share and import substitution (its import elasticity dropped to below 0.9 compared to the assumed value of 1.2), these adjustments fell far short of what was needed to sustain its faster growth strategy in the world economic environment of the 1970's. That much is clear. The big question, of course, is why Korean performance was adequate to the strategy choice and the Philippines' performance was not. It is not the purpose of this paper to give an answer to this question. However, a brief comparison of industrial and trade strategies and policies, based on studies (e.g., Westphal and Kim and Bautista, Power and Associates) that have been directed to this question, may help to guide us in the direction of an answer.

The Philippines has suffered for three decades under highly protective and distorted industrial and trade policies that produced

strong biases against exports and agricultural production in favor of the manufacture of consumer and some intermediate goods for the domestic market. The result of this has been to retard the growth of both manufacturing and agriculture, to hamper efforts to promote non-traditional exports, and to maintain an excessive dependence on traditional primary exports. Recurrent cycles of balance of payments crises, devaluation and inflation resulted from the inability of the primary sector (burdened by overvaluation of the peso and the cost of government price intervention policies) to carry this load (International Labour Office, 1974). Attempts, beginning at the end of the 1960's, to counter the bias against non-traditional exports by means of fiscal incentives have been inadequate in the face of the substantial undervaluation of foreign exchange that is defended by the tariff system. It was not until the early 1980's that recognition of the inadequacy of this patch-on, patch-up approach to countering the biases of the protection system led to the adoption of a program of trade liberalization and fiscal incentives reform, in consultation with the World Bank and supported by structural adjustment loans. Implementation of this program has been hampered, however, by the continuing world recession and its effects on the prices and volume of Philippine exports.

Korea also initially adopted an inward-looking strategy, but in the early 1960's switched to export promotion. Largely through cheap credit for export industries and exchange rate policy, aided by tariff liberalization in 1967 and 1973, Korea was able to create a more balanced set of incentives for exports and import substitution.

In the mid-1970's, because of increasing protectionism in industrialized country markets and growing competition in labor-intensive manufactures, Korean strategy switched to import substitution in heavy and chemical industries. Over the 1970's, various fiscal incentives for exports were reduced and finally eliminated, while being increased for the new capital-intensive industries. By the end of the decade all that remained for exports was the preferential interest rate.

Finally, in the early 1980's strategy was again reversed and Korea adopted of program aimed at more modest growth and a concomitant reduction of inflation, less emphasis on heavy industry, trade and market liberalization, and more attention to the rural and other neglected sectors. The program is supported by stand-by arrangements with the Fund (Korea's first use of Fund resources since 1968) and by a World Bank structural adjustment loan. The program has already had some success in helping to bring down inflation and the current account deficit, while sustaining growth of GNP at six per cent in the face of declining exports (International Monetary Fund).

From this overview of long-range strategies and policies, I turn now to policies that were related more immediately to the balance of payments crises. First and foremost, the policy response to the external shocks in both countries was to borrow externally, while vigorously pushing ahead with growth, as already noted.

The other important element of immediate policies was the management of the price of foreign exchange. Table 9 shows nominal and real exchange

rates for the won and the peso for the years, 1971-82. Real rates ideally should be nominal rates adjusted for changes in the relative prices of internationally traded goods and non-traded goods. And, since non-traded goods can be decomposed into traded and primary factors, we really would like to have an index of primary factor prices. (This assumes that changes in the degree of protection are not important, which was true for the Philippines, but perhaps not for Korea.) For the prices of traded goods I have used trade unit values -- the simple average of import and export unit values. For non-traded goods (or primary factors) I have used the GDP deflator, it being the index that most fully includes non-traded goods and services.

The Philippines began the decade with a devaluation and the adoption of a managed floating rate policy. The nominal rate rose gradually to 1976 and then leveled off to the end of the decade. The real rate rose in 1974 as a reflection of high oil prices on the import side and high sugar and copper prices on the output side. It then fell during the balance of payments crisis years (1975-76), reflecting domestic inflation. After 1976 it remained roughly constant at about the base period level. There is virtually no evidence here of an exchange rate policy response to the balance of payments crises. Not until 1982 did the peso depreciate significantly and this was not enough to raise the real rate.

In contrast, there is some evidence of exchange rate response in the Korean case. Significant depreciation took place in 1975 and 1980-81, in each case following by one year the onset of the crisis. These were

not enough, however, to keep the real rate from falling, owing to rapid rates of domestic inflation. And the constant nominal rate over 1975-79 allowed the real rate to fall significantly below the base period level.

What conclusions can we draw from this brief look at strategies and policies? First, the immediate policy response to the balance of payments crises were similar in the two cases, except for Korea's modest exchange rate adjustments. The name of the game was borrow abroad.

Why, then, was Korea's performance so much better? The great difference lies in the long-run strategies and policies, not in the immediate responses. Korea's outward-looking constellation of trade and industrial policies are apparently what gave it a great advantage over the Philippines, whose market price distortions from its own trade and industrial policies not only hampered the growth of non-traditional exports, but also undermined the efficiency of translating a high level of investment into growth.

## 5. Prospects.

The outlook for developing countries in general is not very bright. Growth in the industrialized countries is expected to be slower in future than in the past two decades, particularly in Europe and Japan. Moreover, there is as yet no indication that they will open their economies more fully to imports from developing countries. Two strategies are called for in the face of this prospect. One is to promote diversification of the rural sector through medium and small scale industrial enterprises. The other is to promote more trade among developing countries (the least developed segment of world trade). There is no reason why the growth of countries like Korea and the Philippines should be rigidly tied to growth in the industrialized countries.

Both countries, I think, are fully aware of the need to move in these directions. More important, both are aware of past mistakes and have undertaken commitments to correct them. I have commented already on the new directions indicated in Korea's Fifth Five Year Plan and the Philippines' trade liberalization and other reforms under its structural adjustment program.

How much success can we expect from these efforts? For Korea, the prospects are reasonably good that they will be able to achieve something near at least the growth, stabilization and diversification targets of their Plan. Much depends, of course, on the world economic environment.

For the Philippines, the picture is not so bright. The political events beginning in August, 1983 revealed how fragile the Philippine

balance of payments and debt situation was. The apparent lag in the ability of the government even to recognize, let alone to deal with, the political crisis, has induced a massive capital flight that has severely damaged the Philippine economy. If, however, the political crisis can be resolved soon, the economy will recover, though it will take time and, again, a favorable world environment. The underlying economic situation is not weak and was improving rapidly in the first half of 1983. A possible danger is, however, that the resolution of the political crisis might mean less commitment to the economic policy reforms to which the present regime has committed itself.

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Appendix A. The Shock-Accommodation Model<sup>1/</sup>

The resource gap (R) in the base period is equal to commodity imports less commodity exports (X) less net earnings from services and private transfers (S).

$$(1) \quad R_0 = M_0 - X_0 - S_0$$

The resource gap in any subsequent period (n) equals imports in base period prices raised or lowered by the change in import prices less exports in base period prices raised or lowered by the change in export prices less the S balance in current prices.

$$(2) \quad R_n = M_n (1 + P_{on}^m) - X_n (1 + P_{on}^x) - S_n$$

We can then divide the change in R between the two periods into a terms of trade effect and a volume effect.

$$(3) \quad R_n - R_0 = (M_n P_{on}^m - X_n P_{on}^x) + (M_n - M_0) - (X_n - X_0) - (S_n - S_0)$$

We then define  $R_n - R_n^t$  as the additional external financing required in period n, where  $R_n^t$  is the trend resource gap.

$$(4) \quad R_n - R_n^t \equiv (R_n - R_0) - (R_n^t - R_0) \\ = (M_n P_{on}^m - X_n P_{on}^x) + (M_n - M_0) + (X_n - X_0) + (S_n - S_0) -$$

But,  $(R_n^t - R_0) \equiv (M_n^t - M_0) - (X_n^t - X_0) - (S_1 - S_0)$  where the t superscripts indicate the same S is always at its trend value.)

Hence

$$(4a) \quad R_n - R_n^t = (M_n P_{on}^m - X_n P_{on}^x) + (M_n - M_n^t) - (X_n - X_n^t)$$

---

<sup>1/</sup>The :

$$\text{But, } M_n^t - M_n^h = -(M_n^t - M_n^h) - (M_n^h - M_n^t)$$

$$\text{and } -(X_n^t - X_n^h) = (X_n^t - X_n^h) - (X_n^h - X_n^t)$$

where the h superscripts indicate hypothetical values.

Hence, finally

$$(5) \quad R_n^t - R_n^h = \left[ (M_n^t P_{on}^m - X_n^t P_{on}^x) + (X_n^t - X_n^h) \right] - \left[ (X_n^h - X_n^t) + (M_n^t - M_n^h) + (M_n^h - M_n^t) \right]$$

The trend value of exports depends on a trend value for world exports and the base period share of world exports for a given country. The hypothetical value of exports depends on the actual growth of world exports from the base period and the same given share. The trend value of imports depends on a trend value for growth of GNP and an income elasticity of demand for imports derived from regression analysis, the results of which are shown in Appendix B. The hypothetical value of imports depends on the same elasticity and the actual growth of GNP from the base period.

Then from equation (5) we have the additional external financing depending on the shocks in the first set of brackets on the right side less the adjustment terms of trade (left to right) a

rates for GNP and world exports are the annual a  
the period, "1964" - "1972", v quotation s  
indicate three year averages around the years. The growth rate for world  
exports was calculated to be 0.9 per cent per annum, for Korean GNP,  
9.6 per cent, and for Philippine GNP, 5.3 per cent.

Appendix B. Income Elasticity of Demand for Imports

The regression equations were of the log-linear form.

$$\ln M = a_0 + a_1 \ln Y + a_2 \ln \frac{\text{MUV}}{\text{YD}} R$$

where M is an index of the value of imports deflated by MUV

MUV is an index of import unit value

Y is an index of GNP deflated by YD

YD is the GNP deflator

R is an index of the foreign exchange rate.

(All indexes are based on 1971-73 average = 100.)

Regressions were run for the years, 1963-73, in order to obtain an income elasticity of demand for imports to use in the calculation of "hypothetical" and "trend" imports. Regressions were run also for 1963-82 and 1974-82 for purposes of comparison.

In presenting the results,  $\frac{\text{MUV}}{\text{YD}} R$  is represented by P. T values are in parentheses.

1963-73

Korea:	$\ln M = .071 + 1.904 \ln Y - 1.070 \ln P$	F = 202
	(11.78) (-4.23)	$\bar{R}^2 = .976$
		DW = 1.37
Philippines:	$\ln M = .005 + 1.211 \ln Y - .789 \ln P$	F = 23
	(6.70) (-4.16)	$\bar{R}^2 = .817$
		DW = 2.41

All of the coefficients are significant at the one per cent level.

82

Korea:	$\ln M = -.103 + 1.571 \ln Y - 1.579 \ln P$	$F = 150$
	(11.32) (-.94)	$\bar{R}^2 = .974$
		DW = 1.33
Philippines:	$\ln M = .117 + .883 \ln Y - .312 \ln P$	$F = 40$
	(8.610) (-.932)	$\bar{R}^2 = .908$

both income elasticities are significant at the one per cent  
neither relative price elasticity is significant.

1963-82

Korea:	$\ln M = -.066 + 1.646 \ln Y - .884 \ln P$	$F = 377$
	(21.87) (-4.06)	$\bar{R}^2 = .975$
		DW = .72
Philippines:	$\ln M = .062 + 1.091 \ln Y - .441 \ln P$	$F = 148$
	(10.18) (-3.37)	$\bar{R}^2 = .939$
		DW = 1.68

All of the coefficients are significant at the one per cent level.

Table 1. Balance of Payments Crisis Indicators:  
Korea, 1971-82  
(Millions of U.S. dollars and Per Cent)

Year	Current Account Balance	Per cent of Trade <sup>1/</sup>	International Reserves <sup>2/</sup>	Per Cent of Trade	External Indebtedness	Per cent of Trade	Debt to Ratio
1971	-847	39.8	571	26.9	2,505	117.9	19.1
1972	-370	14.8	740	29.6	3,088	123.7	25.1
1973	-308	7.1	1,095	25.0	3,927	89.9	15.7
1974	-2,023	31.2	1,056	16.3	4,849	74.9	13.1
1975	-1,887	27.2	1,550	22.3	5,957	85.8	11.7
1976	-312	3.1	2,961	30.2	7,253	74.1	9.1
1977	12	-	4,307	32.7	9,026	68.5	9.1
1978	-1,085	6.1	4,937	27.6	11,747	65.5	10.7
1979	-4,151	19.1	5,708	26.2	14,304	65.5	13.1
1980	-5,321	20.9	6,572	25.8	16,705	65.6	12.7
1981	-4,645	15.5	6,890	23.1	20,652	69.2	15.0
1982	-2,650	8.2	6,985	23.7	20,752 <sup>4/</sup>	69.4	13.1
Avg. 1971-73	-508	20.6	802	27.2	3,173	110.5	17.5
Avg. 1974-77	-1,052	15.4	2,468	25.4	6,771	75.8	10.1
Avg. 1979-82	-4,192	15.9	6,539	24.6	18,103	67.4	13.6
Avg. 1974-82	-2,451	14.6	4,552	25.3	12,360	70.9	11.7

<sup>1/</sup> Trade is average of exports and imports.

<sup>2/</sup> End of year.

<sup>3/</sup> Public debt plus guaranteed private debt divided by exports.

<sup>4/</sup> Estimate based on change in public debt

Source: Asian Development Bank, Key Indicators, April and October, 1983.

2 . Balance of Payments Crisis Indicators:  
Philippines, 1971-82  
(Millions of U.S. dollars and Per Cent)

Year	Current Account Balance	Per cent of Trade <sup>1/</sup>	International Reserves <sup>2/</sup>	Per cent of Trade	External Indebtedness	Per cent of Trade	Debt Service Ratio <sup>3/</sup>
1971	-3	0.2	376	25.6	1,685	114.7	6.8
1972	9	-	551	35.7	1,868	120.9	10.0
1973	536	-	1,038	43.6	1,918	80.5	8.7
1974	-176	4.7	1,504	39.8	2,311	61.1	5.2
1975	-892	23.4	1,360	35.7	2,788	73.3	7.1
1976	-1,050	25.6	1,642	40.0	3,934	95.8	7.1
1977	-752	15.9	1,524	32.1	5,103	107.5	7.6
1978	-1,173	21.0	1,881	33.7	6,297	112.8	13.2
1979	-1,576	22.0	2,416	33.8	7,204	100.9	13.1
1980	-2,051	22.6	3,140	34.5	8,415	92.5	7.4
1981	-2,293	23.5	2,707	27.7	10,148	108.8	10.4
1982	-3,357	34.6	2,543	26.3	12,138 <sup>4/</sup>	125.3	13.2
Avg. 1971-73	181	-	655	35.0	1,824	105.4	8.0
Avg. 1974-77	-717	17.4	1,507	36.9	3,534	81.9	6.7
Avg. 1979-82	-2,319	25.7	2,701	30.6	9,476	105.6	11.0
Avg. 1974-82	-1,480	21.5	2,079	33.7	6,482	95.9	9.2

<sup>1/</sup> Trade is average of exports and imports.

<sup>2/</sup> End of year.

<sup>3/</sup> Public debts plus guaranteed private debt divided by exports.

<sup>4/</sup> Estimate based on change in public debt.

Source: Asian Development Bank, Key Indicators, April and October, 1983.

Table B . Effects on Balance of Payments of  
External Shocks and Accommodations: Korea, 1974-82  
(millions of U.S. dollars)

Year	Terms of Trade	Export Volume	Total Shocks	Export Share	Slower Growth	Import Substitution	Total Adjustment	Addition
1974	1,754	38	1,792	809	-16	555	1,348	
1975	2,130	333	2,463	1,600	161	1,024	2,785	-32
1976	1,962	322	2,284	2,700	-351	1,533	3,918	-1,634
1977	1,161	450	1,611	3,546	-411	1,739	4,874	-3,263
1978	1,780	579	2,359	4,272	-754	1,609	5,127	-2,768
1979	3,909	676	4,585	4,029	-355	1,866	5,540	-955
1980	5,228	1,036	6,274	4,792	2,247	2,134	9,173	-2,899
1981	5,888	1,399	7,287	6,219	3,257	2,385	11,861	-4,574
1982	4,081	1,921	6,002	6,985	4,600	3,382	14,967	-8,965
1974-82	27,903	6,754	34,657	34,952	8,414	16,227	59,593	-24,936
1974-77	7,007	1,143	8,150	8,655	-581	4,851	12,925	-4,775
1979-82	12,580	3,232	15,812	8,001	11,721	3,259	22,981	-7,169
1976-78 (base)								



Table 4. Effects on Balance of Payments of  
External Shocks and Accommodations: Philippines, 1974-82  
(millions of U.S. dollars)

Year	Terms of Trade	Export Volume	Total Shocks	Export Share	Slower Growth	Import Substitution	Total Adjustments	Additional Financing
1974	292	27	319	-245	-58	-11	-304	
1975	1,008	237	1,245	-101	-73	47	-127	1,3
1976	1,261	217	1,478	118	-110	113	121	1,357
1977	1,389	319	1,688	405	-115	266	556	1,132
1978	1,556	411	1,967	249	-164	99	184	1,783
1979	1,818	480	2,298	310	-224	109	195	2,103
1980	2,791	735	3,526	816	-250	238	804	2,722
1981	3,275	992	4,267	858	-18	369	1,209	3,058
1982	3,721	1,362	5,083	1,121	-118	450	1,453	3,630
1974-82	17,091	4,780	21,871	3,531	-1,130	1,690	4,091	17,780
1974-77	3,930	800	4,730	177	-356	425	246	4,484
1979-82	6,025	2,305	8,330	2,077	-90	530	2,517	5,813

(1976-78 Base)

Sources: Asian Development Bank, New Indicators, April and October, 1983.  
International Monetary Fund, International Financial Statistics Yearbook, 1983.

Period	<u>Total Shocks</u> GNP	<u>Total Shocks</u> Trade <sup>1/</sup>	<u>Terms of Trade</u> Total Shocks	<u>Export Volume</u> Total Shocks
<u>1974-82</u>				
Korea	.113	.269	.805	.195
Philippines	.110	.501	.781	.219
<u>1974-77</u>				
Korea	.091	.267	.860	.140
Philippines	.076	.362	.831	.169
<u>1979-82</u>				
Korea	.090	.188	.796	.204
Philippines	.079	.317	.723	.277

	<u>Total Adjustments</u> Total Shocks	<u>Export Share</u> Total Adjustments	<u>Slower Growth</u> Total Adjustments	<u>Import Substitution</u> Total Adjustments
<u>1974-82</u>				
Korea	2.136	.587	.141	.272
Philippines	.239	.863	-.276	.413
<u>1974-77</u>				
Korea	1.586	.670	-.045	.378
Philippines	.052	.720	-1.447	1.728
<u>1979-82</u>				
Korea	1.453	.348	.570	.142
Philippines	.302	.825	-.036	.211

<sup>1/</sup> Trade is the average of exports and imports.

Source: Tables 3 and 4.

Table 6 . Relative Importance of Trade  
Adjustments: Korea and Philippines, 1974-82

Period	<u>Export Share</u> Total Exports	<u>Final Export Share</u> <sup>1/</sup> Change in Exports	<u>Slower Growth</u> Total Imports	<u>Import Substitution</u> Total Imports
<u>1974-82</u>				
Korea	.302	.920	.059	.114
Philippines	.101	.718	-.022	.032
<u>1974-77</u>				
Korea	.317	.867	-.017	.144
Philippines	.005	.222	-.023	.028
<u>1979-82</u>				
Korea	.106	.983	.126	.035
Philippines	.099	.953	-.003	.017

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<sup>1/</sup> Final export share is *the value for the export* in the final year, which when divided by the change in exports shows the proportion of the latter that is accounted for by increased export share. *effects (Tables 3 and 4)*

Source: Tables *3 and 4*

Table 7 . Saving and Investment Ratios:  
Korea, 1971-82  
(Per cent of GNP)

Year	Gross Investment	Gross Domestic Saving	Foreign Saving	Government Saving
1971	25.4	14.6	10.8	2.3
1972	21.5	16.4	5.1	-1.8
1973	26.1	22.2	3.9	1.0
1974	31.6	19.0	12.6	0.3
1975	29.4	19.0	10.4	-0.2
1976	25.5	23.1	2.4	1.6
1977	26.9	26.3	0.6	3.2
1978	30.6	27.4	3.2	2.9
1979	35.0	27.5	7.5	5.1
1980	31.1	21.1	10.0	2.6
1981	28.2	20.3	7.9	2.9
1982	26.2	21.4	4.8	0.1
Avg. 1971-73	24.3	17.7	6.6	0.5
Avg. 1974-77	28.3	21.8	6.5	1.2
Avg. 1979-82	30.1	22.5	7.5	2.7
Avg. 1974-82	29.4	22.7	6.6	2.1

Source: Asian Development Bank, Key Indicators, April and October, 1983.

Table 8 . Saving and Investment Ratios:  
Philippines, 1971-82  
(Per Cent of GNP)

	Gross Investment	Gross Domestic Saving	Foreign Saving	Government Saving
1971	21.3	20.0	1.3	2.6
1972	20.6	18.9	1.7	1.6
1973	19.9	23.2	-3.3	5.7
1974	26.7	24.0	2.7	4.9
1975	31.1	24.1	7.0	4.0
1976	31.2	23.8	7.4	2.0
1977	28.6	24.2	4.4	3.2
1978	27.9	22.3	5.6	3.8
1979	31.0	25.8	5.2	5.2
1980	30.6	24.7	5.9	5.0
1981	29.8	23.9	5.9	4.1
1982	29.5	21.5	8.0	3.6
Avg. 1971-73	20.6	20.7	-0.1	3.3
Avg. 1974-77	29.4	24.0	5.4	3.5
Avg. 1979-82	30.2	24.0	6.2	4.5
Avg. 1974-82	29.6	23.8	5.8	4.0

Source: Asian Development Bank, Key Indicators, April and October, 1983.

Table 9. Nominal and Real<sup>1/</sup> Exchange Rates:  
Korea and Philippines, 1971-82  
(Won and peso per U.S. dollar)

Year	<u>Korea</u>			<u>Philippines</u>		
	Nominal Rate	<u>Trade Unit Value</u> <sup>2/</sup> GDP Deflator	Real Rate	Nominal Rate	<u>Trade Unit Value</u> GDP Deflator	Real Rate
1971-73	380	1.00	380	6.62	1.00	6.62
1974	400	1.12	448	6.79	1.36	9.26
1975	484	.88	425	7.25	1.12	8.13
1976	484	.78	378	7.44	.96	7.16
1977	484	.71	345	7.40	.90	6.65
1978	484	.64	308	7.37	.91	6.70
1979	484	.66	317	7.38	.95	7.04
1980	607	.60	362	7.51	.94	7.04
1981	681	.53	362	7.90	.84	6.68
1982	746	.46	345	9.17	.71	6.53

<sup>1/</sup> Real exchange rates are nominal exchange rates multiplied by trade unit value and divided by GDP deflator.

<sup>2/</sup> Trade unit value is simple average of export and import unit values.

Source: Asian Development Bank, Key Indicators, April and October, 1983.



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