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Exchange Rate Policy in Philippine Development

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PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

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Introduction

Exchange rate policy in the Philippines can be viewed in a number of ways, depending on what aspect of the public interest is being considered. In the narrowest sense, it relates to the Philippine peso-United States (US) dollar exchange rate, information on which is available daily from newspapers and other media sources. Interest in the peso exchange rate with the US dollar presumably reflects the fact that the US dollar is the world s most important currency (for various reasons), and also that the US has the largest share of Philippine international transactions. About a third of the country's foreign trade, for example, was contributed by the US in the last decade.

There is also public interest in the peso exchange rate with the Japanese yen, Japan being the second most important contributor to Philippine foreign trade and payments. In the last decade Japan accounted for about one-fourth of the country's merchandise trade. The total share of other trade partners was slightly above 40 percent, each of which contributed less than 10 percent. More broadly, under the present system of generalized currency floating, the nominal effective exchange rate (NEER)—representing a weighted average of peso exchange rates with trade-partner currencies—is also of policy interest. NEER changes have financial effects and implications for macroeconomic stability.

At another level exchange rate policy can be viewed in terms of the behavior of the real exchange rate (RER). The latter represents the domestic price of tradable goods relative to nontradables[1] and

[1]Also called "home goods," nontradables are domestic products that are not traded due to prohibitive tariffs, trade controls, or natural protection. By definition, their nominal price is unaffected by foreign price changes.

provides the mechanism through which the further repercussions on output growth, income distribution and other development concerns can be traced. The real exchange rate more appropriately, the real effective exchange rate (REER) is a key macroeconomic relative price influencing the composition of production and absorption between tradable and nontradable goods. Relative production incentives, including the incentive structure for export producers, are affected directly by the REER. The real exchange rate thus plays an important role in the outward-oriented development strategy that the Philippines has ostensibly followed since the early 1970s.

The Philippine peso was already under "managed floating," at least with respect to its exchange rate with the US dollar, when currency floating among developed countries was adopted in 1973. The latter effectively ended the maintenance of exchange rate parities among International Monetary Fund (IMF) member-countries under the Bretton Woods system. Earlier, in late 1969, the need to service short-term credit that had financed the country's large trade deficits of the immediately preceding years precipitated a foreign exchange crisis. In February 1970 the government allowed the peso-US dollar exchange rate to float. By December the exchange rate had settled to P6.40 per dollar, representing an effective devaluation of 61 percent during the year. Previously, in 1962, the Philippine peso was similarly devalued—from P2.00 per dollar (the official exchange rate even before World War II) to P3.90 per dollar.

Exogenous changes in the exchange rates of major currencies would seem an added source of external economic disturbance to developing countries with strong links in trade and payments to developed countries. In the Philippine case, particular interest attaches understandably to the exchange rate between the US dollar and Japanese yen, which in the last decade was subject to sharp changes; from an average of 134.70 per dollar in 1991, it fell continuously to 94.10 in 1995, moved up to 130.90 in 1998, then declined steeply to 103.90 in the following year before rising again to 127.40 in 2001.

On the positive side, the system of generalized currency floating presented an opportunity to undertake more active exchange rate

management in pursuing external balance and other policy objectives. By wide agreement, developing countries' currencies had been generally overvalued, trade controls and tariff walls being used to defend unrealistic exchange rates, which contributed to the distortion of investment incentives and inefficiency in resource allocation. Most devaluations in the 1950s and 1960s had taken place in crisis atmosphere and entailed large, abrupt exchange rate changes which frequently resulted in severe dislocations for the developing economy. Exchange rate flexibility under the new system rendered large, once-and-for-all devaluations unnecessary, since gradual (and hence, less disruptive) exchange rate adjustment could be undertaken that would facilitate the correction of currency overvaluation.

Generalized currency floating came at a time of growing policy emphasis among developing countries in export promotion and diversification, moving away from the heavy import substitution drive of the 1950s and 1960s. In the Philippine case, the enactment of the Export Incentives Act of 1970 signaled a policy shift towards a more outward-looking industrial development strategy. Among other incentives, manufacturing firms registered under the Export Incentives Act qualified for various kinds of tax exemptions, deductions from taxable income, and tax credits. This served to compensate in part for the still substantial bias in the incentive system against export production (Bautista, Power and Associates 1979). The highly protective tariff system constituted the primary source of this bias, but no attempt was made to deal with it directly as part of the industrial export promotion program during the 1970s. Furthermore, there was a marked rise in the number of imported products subject to quantitative restrictions (QRs), its share in the total number of Philippine Standard Industrial Classification (PSIC) seven-digit product categories doubling from 26 percent in 1970 to 52 percent in 1980. Although the real exchange rate depreciated in the early 1970s (Baldwin 1975) even with increased import controls, it continued to be overvalued—indicating an incentive bias against exports and other tradable goods. The average RER overvaluation has been estimated at 24 percent for the period 1970-74 and even higher at 32 percent for 1975-79 (Intal and Power 1990). Based on

the comparison given in Bautista (1990), these rates are much higher than those derived for Thailand (16 and 24 percent, respectively) and Malaysia (less than three percent for both periods) using the same estimation methodology.

The relative uncompetitiveness of domestic industry in the Philippines has been attributed to market price distortions arising from biased trade and exchange rate policies that reduced the efficiency of resource allocation and investment (Baldwin 1975). Also, the sustained overvaluation of the real exchange rate prevented a more rapid export growth and slowed the expansion of the national economy in the 1970s (Bautista, Power and Associates 1979). Not only would economic growth have been more sustainable had the real exchange rate been more favorable to tradable goods production, labor employment and use of locally produced inputs would have been greater. The choice of products and the choice of production technology would have favored increased utilization of the country's abundant unskilled labor force and, because the poor accounted heavily for the unemployed and underemployed, greater participation of the poor in the growth process. Indeed, the results of cross-country regressions indicate that RER depreciations tend to lower poverty in developing economies (Agenor 2002).

In this paper we examine the conduct of exchange rate policy in the Philippines since the early 1980s, paying particular attention to the influence of exchange rate adjustments on relative production incentives. The latter serves to provide a link to the further repercussions on resource allocation, output growth, and income distribution which are important considerations for the country's economic development. Rather than the nominal exchange rate (of which the government has some control), it is the real exchange rate, which adjusts for domestic and foreign inflation, that is relevant in the assessment of relative incentives. The present study focuses on the incentive structure between tradable and nontradable goods production, and among different industries within the tradable goods sector. While our primary interest is in the exchange rate regime and its incentive effects, the role of trade policy has to be simultaneously analyzed in view of its influence on the conduct of exchange rate policy as well as its direct effect on the real exchange

rate. Moreover, there are analytical and empirical linkages of the real exchange rate to macroeconomic policy that need to be examined.

Section 2 develops the framework of analysis. We first describe the measurement and "accounting" determinants of the nominal and real exchange rates under the present system of generalized currency floating. This is followed by an analytical discussion of relative incentives between tradables and nontradables, and also among different tradable goods industries, paying attention to the separate effects of exchange rate and trade policies. The "behavioral" determinants of the real exchange rate are then discussed, identifying two policy-induced sources of incentive bias against tradable goods production and the scope for policy improvement with reference to the overvaluation of the real exchange rate. The section ends with an examination of the possible conflict between trade policy and exchange rate adjustment in the Philippine context, underscoring the need for coordination to help achieve policy goals.

The following two sections of the paper describe the policy developments and present the empirical analysis of the study for the decade of the 1980s (Section 3) and the more recent period since the early 1990s (Section 4). Each of these two periods was marked by a "crisis"—the external debt-related foreign exchange crisis of 1983-85 and the Asian financial crisis of 1997-98—which, despite their differing sources of origin, had wide-ranging effects on the national economy, including the conduct of trade and exchange rate policies. The empirical analysis starts with an examination of the annual values of the peso-dollar exchange rate, NEER and REER indices, and a decomposition of observed REER changes into their accounting components during specific subperiods. We then investigate the factors affecting the past behavior of the real exchange rate, distinguishing those that are determined by domestic policies and those associated with external developments outside the control of policymakers. This is followed by an examination of the influences of trade and exchange rate policies on production incentives for different industries within the tradable goods sector.

The concluding section summarizes the main findings of the study and their policy implications.

II

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Analytical Considerations

Nominal and real exchange rates under generalized floating

In contrast to the pre-1973 Bretton Woods system of fixed exchange rates among currencies of IMF-member countries, the value of any country's currency under the present regime of generalized currency floating can change exogenously with exchange rate realignments among trade-partner currencies. The nominal exchange rate is thus more appropriately measured by a nominal effective exchange rate index that represents a weighted average of the nominal exchange rates with trade-partner currencies:

$$(1) \qquad NEER = \Pi R_i^{w_i}$$

where R_i is the nominal exchange rate index (relative to a base year level) in home-country currency per unit of trade partner i's currency, and w_i is the trade share of country i ($\Sigma w_i = 1$).

Analytical discussions in which foreign prices are assumed fixed typically represent the real exchange rate simply as a ratio of the nominal exchange rate to a general price index in the "small country" under study. In empirical work that traces the movement of the real exchange rate over time, foreign prices cannot be assumed constant. With generalized currency floating, changes in the general price level in each trade partner, as well as in the bilateral exchange rates, need to be taken into account.

A broad measure of the real exchange rate can be represented by a real effective exchange rate index calculated, for a home country in a given year, as follows:

$$(2) \qquad REER = \Pi (R_i \cdot P_i)^{w_i} / P$$

where P_i and P denote the general price level in trade partner i and in the home country, respectively. The wholesale price index, which consists mostly of the prices of tradable goods, and the consumer price index, which includes the prices of nontradables, are typically used for P_i and P, respectively. The real exchange rate can then be interpreted as the relative price of tradable goods vis-à-vis nontradables, representing therefore a relative incentive measure between tradable and nontradable goods. A real depreciation of the home currency (i.e., an increase in REER) improves the price competitiveness of tradable goods, encouraging their production relative to nontradables.

Equation (2) can be transformed into the following relationship involving first differences of natural logarithms:

$$(3) \qquad \Delta \ln REER = \Delta \ln NEER - \Delta \ln P + \Sigma w_i \Delta \ln P_i$$

which shows a decomposition of any change in the real effective exchange rate into three components involving changes in the nominal effective exchange rate, domestic inflation, and foreign inflation. While changes in the exchange rates of foreign currencies are exogenous to a small country, it is possible in principle to achieve any target NEER by pegging to a chosen standard—whether a single currency or basket of currencies—and adjusting the peg appropriately (Bautista 1982). The right-hand side of equation (3) indicates that the REER behavior can be attributed not only to the country s exchange rate policy but also to a host of factors influencing the general price level and to exogenous inflation rates in trade-partner countries. The effect of a depreciating home currency on the real exchange rate, for example, can be undercut by a rise in domestic prices—which would be related to the monetary and fiscal policy measures accompanying the nominal exchange rate depreciation.

Relative incentives among tradable goods

We make use of two well-known measures, the effective protection rate (EPR) and the net effective protection rate (NEPR), to represent the incentive structure among tradable goods industries resulting

from import protection without and with adjustment for exchange rate overvaluation, respectively. The EPR and NEPR are rates of protection of value added by domestic factors measured by the proportionate difference between domestic and foreign value added, the latter being evaluated at the actual exchange rate for the EPR and at the "equilibrium" exchange rate (see below) for the NEPR. For any industry *j*, the relationship between EPR_j and $NEPR_j$ is given by (Balassa 1971):

$$(4) \qquad NEPR_j = (1+ EPR_j)/(1+ \rho) - 1$$

where ρ is the degree of exchange rate overvaluation, that is, the proportionate difference between the actual and equilibrium exchange rates. Thus, if $\rho = EPR_j$, then the net effective protection to industry *j* is zero. To compensate tradable goods producers for the price penalty of an overvalued exchange rate, they need to be given an effective protection equal to the degree of exchange rate overvaluation.

As will be shown in the following discussion, import protection itself contributes to exchange rate overvaluation, which need to be taken into account in isolating the effect of trade policy on relative incentives among tradable goods.

Two policy-induced sources of real exchange rate overvaluation

It is in an accounting sense that movements of the real exchange rate can be attributed to movements of the nominal exchange rate, foreign prices (exogenous in the small country case) and the general level of domestic prices. Since domestic prices are affected by nominal exchange rate changes (to an extent determined by the accompanying fiscal and monetary policies), there is no one-to-one correspondence between the nominal and real exchange rates.

Behaviorally, the real exchange rate adjusts to bring about equilibrium in the markets for tradable and nontradable goods. Changes in the real exchange rate are explained in the theoretical literature in terms of at least three factors that affect the supply of and demand for those goods. These are the country's trade policy, current account balance, and external terms of trade. The first two

are policy variables that historically have caused the real exchange rate in most developing countries to be overvalued.

Trade policy is represented by import quotas/tariffs and export taxes/subsidies. The imposition of tariffs, for example, raises the domestic price of importables relative to exportables and nontradables, leading to increased demand for the latter goods. To restore equilibrium in the nontradables market, the price of nontradables must rise relative to the price of exportables and the post-tariff price of importables. Thus, the real exchange rate appreciates and becomes overvalued relative to what it would be without the tariffs. While export subsidies have a similar effect on the real exchange rate, it is the adoption of import-protection policies that in the past sustained real exchange rate overvaluation in the Philippines and most other developing economies.

A deficit in the current account, another widespread tendency among developing countries, implies an excess demand for foreign exchange, and its accommodation through reserve drawdowns or capital inflows serves to defend an overvalued exchange rate. Over a given period of time the real exchange rate will appreciate or depreciate as the current account deficit increases or decreases. The current account balance is traditionally considered a policy variable, determined largely by macroeconomic policies, including foreign borrowing policy, that determine the disparity between national income and expenditure. This view has less relevance to economies that are highly integrated to the world financial system, as shown dramatically by the massive movement of private capital leading to the Asian financial crisis of 1997-98. However, there is a policy option of imposing controls on capital flows that a few developing country governments have actually adopted.

The external terms of trade, over which policymakers have no control, affects the relative price of tradables to nontradables in two ways. One is through the substitution effect. A deterioration of the terms of trade arising from an increase in import prices increases the domestic price of importables, raises the demand for nontradables, and results in an appreciating real exchange rate. The other is through the income effect. Higher import prices serve to reduce the purchasing power of a given real income. The effect on

relative demand for tradable and nontradable goods, as well as on their relative prices, would depend on the income elasticities of demand for these goods. If the substitution effect is stronger than the income effect, the real exchange rate must appreciate to restore equilibrium. Alternatively, if the terms-of-trade deterioration arises from a fall in export prices, both the substitution and income effects will reduce the demand for nontradables, leading to a depreciation of the real exchange rate. While the net effect of terms of trade changes on the real exchange rate cannot be established *a priori*, empirical findings indicate that a worsening of the terms of trade is likely to result in a depreciation of the real exchange rate (Edwards 1988).

In addition to these three long-run influences, the nominal exchange rate is widely observed to affect the short-run behavior of the real exchange rate. The latter being a relative price variable, its long-run level is not likely to be affected by nominal variables. However, in the short run, exchange rate management can facilitate the adjustment of the real exchange rate to changes in the real variables. As indicated earlier, the NEER is a policy decision. Even at a time of external turbulence, setting the nominal exchange rate is the policymakers prerogative, exemplified by the adoption of a fixed exchange rate of the Malaysian ringgit to the US dollar in the wake of the Asian financial crisis.

The real exchange rate appreciates or depreciates over time, depending on the trade policy being adopted, behavior of the current account, movement of the foreign terms of trade, and as a short-run influence, nominal exchange rate adjustment. Other things remaining the same, trade liberalization will depreciate the real exchange rate; however, if the current account balance deteriorates and/or the external terms of trade improves, it is possible for the real exchange rate to appreciate instead. Conversely, a more restrictive trade policy and real exchange rate depreciation can take place at the same time.

In contrast to the appreciation or depreciation of the real exchange rate which occurs over time, its overvaluation or undervaluation is in reference to an equilibrium value of the real exchange rate at a given time, the latter being associated here—as

in most other empirical studies[2]—with a completely open trade regime (with zero implicit tariff and export tax rates) and current account balance. Thus, an overvalued real exchange rate will result from the adoption of a restrictive trade policy and/or from incurring a deficit in the current account. Real exchange rate overvaluation discriminates against tradable goods production, and it can be corrected only by removing the source of the incentive bias. Nominal exchange rate adjustment is typically needed to bring about real depreciation that can reduce a high degree of real exchange rate overvaluation. However, without accompanying measures to address the two sources of policy-induced bias—namely, trade liberalization and macroeconomic policies to reduce the gap between national income and expenditure—a nominal depreciation will not lead to a less overvalued real exchange rate. It may only raise the general price level without affecting relative prices in the economy.

Possible conflict between trade policy and real exchange rate adjustment

What happens if imports are liberalized but the real exchange rate appreciates? This combination is possible since there are factors other than trade policy that influence the behavior of the real exchange rate. The likely effects are as follows. Import demand will increase due to lower cost, affecting negatively the trade balance. The output and employment effects will also be negative, since the domestic prices of tradables—and hence, the profitability of producing both export and import-competing goods—will fall as a result of the exchange rate appreciation. A simultaneous trade liberalization and real exchange rate appreciation is therefore not a desirable policy combination.

Similarly, a depreciating real exchange rate is better accompanied by import liberalization. As indicated earlier, the Philippines began promoting an outward-looking development strategy in the early 1970s with the enactment of the Export Incentives Act and a large nominal devaluation. In real terms the

[2]A prominent example is the World Bank comparative studies on agricultural pricing policy in developing countries (Krueger, Schiff and Valdes 1988).

effective exchange rate depreciation in 1970 and 1971 has been estimated to range from 19 percent for "essential" producer goods to 66 percent for "new" exports Baldwin (1975). However, new import controls were imposed and most of the old import-protection biases remained. This was a case, therefore, of increased import restriction—which reduces the effective protection to export producers—and real exchange rate depreciation. Notably, the minor export boom that occurred during 1970-71 was not sustained. It illustrates the need to coordinate the implementation of trade policy reform with exchange rate adjustments, which are best regarded as representing a policy package.

III

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Policy Developments in the 1980s and Their Incentive Effects

The 1980s was a decade of marked turbulence in the Philippine economy, reflected in the considerable instability in annual output growth and inflation rates. Moreover, Philippine gross domestic product (GDP) growth was drastically slower not only relative to the preceding decade but also in comparison with the contemporaneous performance of other developing countries in East and South Asia (Bautista 1993). A major factor in the country's dismal economic record in the 1980s was the foreign-exchange crisis of 1983-85, during which real GDP declined (in absolute terms) by more than 15 percent. The rapid expansion of external debt that led to the exchange crisis was a consequence of the government response to the external shocks that buffeted the economy beginning with the oil crisis of 1973-74. Foreign borrowing was increased sharply to accommodate the mounting current-account deficits and a highly expansionary macroeconomic policy. In hindsight at least, there was little regard to the productivity in which the borrowed funds were spent (Bautista 1988).

A notable casualty of the debt-service crisis was the program of industrial structural adjustment initiated in 1981 by the Philippine government with World Bank technical and financial support. It aimed at improving the international competitiveness of domestic industry, which was found in a Tariff Commission (1979) study to be more heavily protected than in other Association of Southeast Asian Nations (ASEAN) economies. Trade liberalization measures were a major component, including tariff reduction and relaxation of import controls. Unfortunately, the foreign exchange crisis that began in August 1983 overtook the program, and some of the

intended measures, particularly the phasing out of import restrictions, were superseded by policy actions introduced to deal with short-term contingencies.

Beginning in October 1983, comprehensive controls on foreign exchange and imports were put in place,[3] supplanting the scheduled lifting of import restrictions. The tariff revisions were implemented through 1985, but made redundant by the exchange and import controls. As a revenue measure and also to curtail imports, the government imposed a general import tax of five percent in November 1983, which was increased to eight percent in April 1984, and then to 10 percent two months later. Additional export duties ranging from two to five percent were levied on traditional export products from November 1983 to December 1984 and an "economic stabilization tax" of 30 percent was collected in June-September 1984.

Exchange rate policy also turned proactive. The peso was devalued three times—in June 1983 by 7.8 percent to P11.00 per dollar, then in October to P14.00 per dollar, and in June 1984 to P18.00 per dollar. In October 1984 the exchange rate regime reverted to "managed floating."

One favorable development during 1983-85 was the gradual unification of the sales taxes on imports and import-competing domestic products, which removed a long-standing source of effective protection. Also, the mark-up rate on essential and semi-essential goods was reduced to a uniform 25 percent in 1985. The latter was phased out in 1996 by the Aquino government, which also abolished export taxes (except on logs) and resumed import liberalization. There were 951 import items liberalized in 1986, roughly one-half consisting of highly protected manufactured products (textile, leather, rubber and paper products). This was followed by the liberalization of 170 additional import items in 1987, 209 in 1988, and 94 in 1999. What remained restricted at the end of the decade were to be further reviewed (465 items) or would continue to be restricted for national security and health reasons (114 items).

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[3]It has been noted that the Central Bank priority listing tended "to give more protection to heavily protected import substitutes while penalizing less protected sectors (e.g., exports)" (Lamberte et al. 1985).

These trade liberalization efforts were made under improving macroeconomic conditions after the 1983-85 crisis, reflected in the dramatic reduction in annual inflation rate from 34.5 percent (average) in 1984-85 to 1.3 percent in 1986-87 and improvement in current account balance from ˇ4.1 percent of the gross national product (GNP) in 1983-85 to 0.3 percent in 1986-88.

The evolution of Philippine trade and exchange rate policies in the 1980s as described above demonstrates the significant interrelations among macroeconomic, trade and exchange rate policies. Unstable macroeconomic conditions caused by profligate demand management prevented the implementation of a substantive trade liberalization program in the first half of the decade. It also forced the government to impose trade controls and undertake large changes in the peso exchange rate to help stabilize the economy. With the subsequent improvement in macroeconomic stability, trade policy reform was implemented to a significant extent and the foreign exchange market allowed to determine more freely the exchange rate of the Philippine peso.

Table 1 contains annual values of three exchange rate indices from 1980 to 1990, relating to: (a) the bilateral exchange rate of the peso with the US dollar; (b) the nominal effective exchange rate, represented in equation (1) above; and (c) the real effective exchange rate represented in equation (2). It is seen that the peso-dollar and nominal effective exchange rates increased continuously during the decade, indicating a sustained nominal depreciation of the peso relative to the US dollar and other trade-partner currencies (on average). The time profile of the ratio index of NEER to the peso-dollar exchange rate (Figure 1) shows lower values in the first half of the decade (averaging 94) relative to the second half (averaging 112), implying a depreciated US dollar relative to the other partner currencies—largely, the Japanese yen—in the latter period.

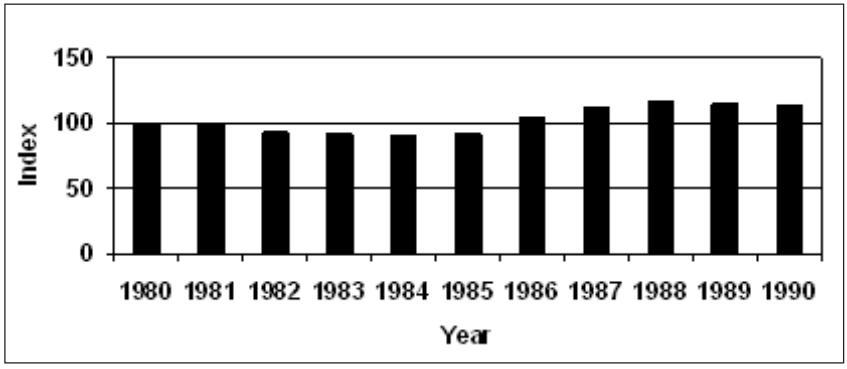
It is evident from Table 1 that the large NEER increases during the crisis years from 1983 to 1985 did not translate into large REER increases, having been severely eroded by rapid domestic inflation (as noted above). Subsequently, the markedly lower inflation rates made possible higher REER values. That the average value of the REER index during 1986-90 was 36 percent higher than during 1980-

Table 1. Annual values of exchange rate indices, 1980-1990

	Peso-US dollar exchange rate	Nominal effective exchange rate	Real effective exchange rate
1980	100	100	100
1981	105	104	100
1982	113	105	96
1983	148	135	116
1984	223	202	122
1985	248	227	113
1986	272	283	141
1987	275	306	150
1988	281	329	153
1989	289	333	143
1990	324	369	146

Source: Author's calculations based on data from PIDS Economic and Social Database.

Figure 1. Ratio of NEER to peso-dollar exchange rate, 1980-1990



85 indicates a much improved price competitiveness of tradable goods relative to nontradables in the second half of the decade. This was despite the relatively larger nominal exchange rate depreciation in the earlier period, which must have been swamped by the large differential between domestic and foreign inflation rates at the time. Thus, the highly expansionary macroeconomic policies that resulted in rapid domestic inflation and macroeconomic instability during

the first half of the 1980s not only derailed the trade liberalization program but also impeded development of the tradable goods sector. Conversely, macroeconomic stabilization in the second half of the decade enabled the government to resume lowering trade barriers and to promote growth of tradable goods production through the REER-related improvement in price incentives.

The changes in REER during the two halves of the 1980s are decomposed into their accounting components in Table 2. It shows the dramatic reductions in NEER depreciation and domestic inflation along with the larger REER depreciation during 1985-90 relative to the earlier subperiod. The comparatively minor role of foreign inflation in shaping the incentive structure between tradable and nontradable goods in the 1980s is also evident from the table.

The behavioral determinants of the REER are investigated quantitatively in Medalla et al. (1995). Based on regression analysis using annual data for 1950-1980, the results show statistically significant effects of trade policy (represented by the average implicit tariff rate), current account balance (as a ratio to GDP), external terms of trade, and as a short-run influence, the NEER. Thus, a 10 percent reduction in the implicit tariff rate will depreciate the REER by 6.2 percent; a one percentage point increase in the ratio of the current account balance to GDP will lead to a 3.8 percent REER rise; and a

Table 2. Decomposition of REER changes in 1980-85 and 1985-90

	1980-85	1985-90
Change in REER	12.1	25.6
Change in NEER	82.2	48.4
Change in P	88.9	37.4
Change in weighted P_i's	18.8	14.6

Source: Author's calculations.

Notes: REER = real effective exchange rate; NEER = nominal effective exchange rate; P = consumer price index; P_i = wholesale price index in trade partner i. (Refer to equation (3) in text.) The entries are 100 times the calculated changes in natural logarithms of the variables, which therefore approximate the percentage changes over the indicated subperiods.

10 percent deterioration of the foreign terms of trade will increase the REER by 6.4 percent. Also, other things remaining the same, 69 percent of a nominal exchange rate change will translate into an REER adjustment within a year.

Analysis of the contributions of domestic policies and the external terms of trade to the observed annual changes in the real exchange rate in the 1980s indicates that exogenous terms-of-trade movements were only a minor influence. Among the policy variables, trade and nominal exchange rate policies contributed most significantly to the REER changes for the four years in which there were unusually large changes in the real exchange rate. In some years the REER effects due to the policy variables are found to be negative, reflecting a "lack of consistency with which the improvement of the incentive structure for tradable goods production was promoted during the period" (Medalla et al. 1985).

Within the tradable goods sector, estimates of effective protection rates for the 1980s presented in Tan (1995) and Medalla (1998) show only slight changes from 1983 to 1985 for importables but a significant downward trend subsequently. This reflected the negative effect of the foreign exchange crisis of 1983-85 on the trade liberalization effort and the resumption of tariff reduction and easing of import restrictions in 1986. While the EPR disparity between import-competing and export-oriented sectors was significantly reduced, the incentive bias against the latter persisted (Table 3). There was also a substantial decline in EPR for manufacturing—from 65 percent in 1983 to 24 percent in 1988, the latter only slightly higher (by two percentage points) than the agricultural EPR in 1988. Bringing down the effective protection for the manufacturing sector as a whole would appear to be a major achievement of trade policy reform in the 1980s; however, import-competing industries continued to be highly favored relative to export-oriented sectors.

As pointed out earlier, the EPR can be adjusted for exchange rate overvaluation—using equation (4) above to calculate the sectoral NEPRs evaluated at the equilibrium exchange rate. We make use of the estimated elasticities of REER with respect to the trade policy and current account variables from the Medalla et al. (1995) study, as well as these variables' actual values in 1983 and 1988, to obtain

Table 3. EPR, NEPR, and NEPRT estimates for 1983 and 1988 (in percent)

	1983			1988		
	EPR	NEPR	NEPRT	EPR	NEPR	NEPRT
All importables	87.4	11.1	41.5	36.2	9.9	31.0
All exportables	-4.0	-43.4	-27.5	-4.7	-23.1	-8.4
Agriculture	24.2	-26.4	-6.2	22.3	-1.3	17.6
Importables	88.4	11.7	42.3	35.9	9.7	30.7
Exportables	-4.4	-43.3	-27.8	-0.9	-20.0	-4.7
Manufacturing	64.7	-2.4	24.4	24.3	0.3	19.5
Importables	88.1	11.5	42.1	38.4	11.7	33.1
Exportables	3.1	-38.9	-22.1	-6.3	-24.4	-9.9

Source: Medalla (1998) for EPRs; author's calculations for NEPRs and NEPRT.

Note: EPR = effective protection rate; NEPR = net effective protection rate (adjusted for exchange rate overvaluation); NEPRT = net effective protection rate due to trade policy.

estimates of the degree of real exchange rate overvaluation for those two years—which are 68.7 and 23.8 percent, respectively. The markedly large overvaluation in 1983 can be attributed to the highly restrictive trade regime (with an implicit tariff rate of 78 percent) and drastically increased current account deficit (8.3 percent of GDP) in the first year of the external debt crisis. The dramatic decline in exchange rate overvaluation was due to the trade liberalization measures implemented during 1983-88 (largely from 1986 to 1988, as described above) that reduced the implicit tariff rate significantly to 38 percent, and the large reduction in current-account deficit to 1.0 percent of GDP in 1988.

The calculated NEPR values are shown in Table 3. The effective "disprotection" (negative protection) for agriculture is seen to have dropped sharply (by 25 percentage points) from 1983 to 1988, almost closing the gap between the agricultural and manufacturing NEPRs. Relatedly, there was not much change in effective protection for manufacturing. Even after removing the disincentive effect of exchange rate overvaluation, the protection to import-competing sectors afforded by trade and other policies in 1988 was still significant (10 percent). At the same time, export-oriented sectors

in agriculture and manufacturing were subject to an effective penalty of 20 and 24 percent of their value added, respectively.

In fact, trade restrictions are partly responsible for the exchange rate overvaluation, as discussed above. The NEPR values understate therefore the total effect of trade policy. Taking out the contribution of import restrictions to the exchange rate overvaluation—effectively correcting the EPR only for the overvaluation due to the current account deficit—results in higher levels of net effective protection, labeled NEPRT in Table 3. Import-competing sectors had NEPRT values exceeding 40 percent in 1983, while export industries were being penalized by trade policy by at least 20 percent of their value added. In 1988, when the current account deficit was quite low, import restrictions were the dominant contributor to the real exchange rate overvaluation and accounted for a very large share of effective protection across the board. Importables still benefited from a high average NEPRT of 31 percent, which already reflected the 10-percentage point decline from 1983. The final point to note is that, even after adjusting for the overvalued exchange rate and isolating the effect of trade policy, the above finding from EPR comparison about the near closing of the protection gap between manufacturing and agriculture in the second half of the 1980s still holds.

IV

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Developments Since the Early 1990s

Losing steam in 1989 and 1990 when threats to political stability and a series of natural disasters plagued the Philippine economy, trade liberalization efforts substantially picked up in 1991 with the issuance of Executive Order (EO) 470. It represented the second phase of the country's tariff reform program, and continued the movement toward tariff uniformity by reducing the number of import items with high tariff rates and increasing the number with low tariff rates over a period of five years. By 1995, as a result of EO 470, about 95 percent of the 5,561 tariff lines would be in the three and 30 percent range.

Import liberalization also continued in the early 1990s, accelerated in 1992 as QRs on 173 commodities were lifted (compared to 17 in 1990-91). Under EO 8, issued in July 1992 by the Ramos administration, 113 previously restricted import items were "tariffied." The adjusted tariff rates were generally higher than those under EO 470 but the scheduled reductions would lead to roughly the same rates in 1995.

In the second half of the decade, particularly in 1997 and 1998, a series of EOs further lowered tariffs on capital equipment, spare parts for machinery, other producer goods, and selected agricultural and industrial products. By yearend 2000 more than 80 percent of the total commodity lines were in the three to 10 percent tariff range. Most quantitative restrictions had also been lifted, with tarriffication for some agricultural products under EO 313; imports of rice (exempted from tarrification until 2004) and some motor vehicle products are the important exceptions. A declared objective of the trade liberalization program is to adopt a uniform tariff rate of five percent (except for "sensitive" farm products) by 2004.

There have been some rough spots along the liberalization route. Voices of dissent have been heard, clamoring for a slowdown or even reversal of scheduled tariff changes and import liberalization. In early 1999, EO 63 was issued that adjusted upward the scheduled tariff changes for such products as textile and apparel, iron and steel, pulp and paper, and petrochemicals. Other industries had proposed various ways of increasing protection for their products. The well-publicized demand of the petrochemical industry was for the average tariff of 15 percent on competing imports in 2000 to remain unchanged through 2010. Another example is the request for a postponement of the deadline for removing the domestic content requirement for automobiles.

The "backlash of protectionism" (Bautista and Tecson 2002) and the earlier EO cuts in tariff rates on various producer goods came at a time of financial difficulty for many firms and industries. This difficulty was occasioned by the drastic increases in nominal exchange rates of the Philippine peso in 1997 and 1998 as well as by the rising interest rates and reduced access to bank credit—all related to the Asian financial crisis of 1997-98. Precipitated by the massive outflow of short-term capital, the turbulence in the external sector of the crisis-afflicted countries had adversely affected overall economic performance. In the Philippines, real GDP growth turned negative (-0.6 percent) in 1998 and in the next three years averaged only 3.5 percent annually (compared to 5.3 percent in the previous three years).

As can be seen from Table 4, the Philippine peso depreciated in nominal terms relative to the US dollar, and even more so—especially in the first half of the decade—relative to the currencies of other trade partners as a group. Although the exchange rate regime was not quite an "implicit dollar standard" (Asian Development Bank 2000),[4] the peso-dollar exchange rate showed some inflexibility at a time when the US dollar was weakening rapidly relative to other

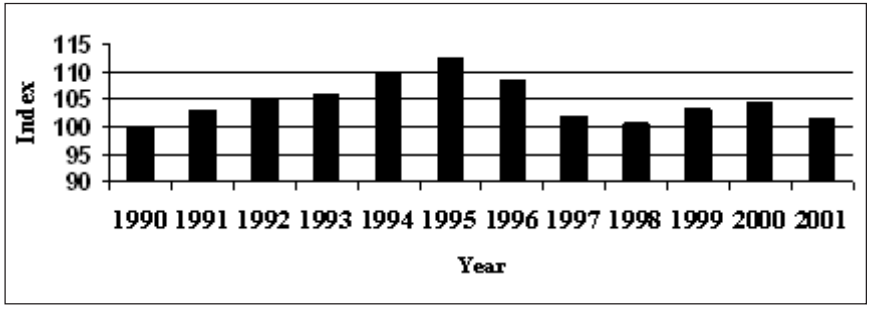
[4]Unlike in Malaysia and Thailand, for example, where the domestic currencies' exchange rates with the US dollar even appreciated from 1990 to 1996. It is now widely believed that the adoption of the implicit dollar standard in many Asian countries contributed to the Asian financial crisis.

Table 4: Annual values of exchange rate indices, 1990-2001

	Peso-US dollar exchange rate	Nominal effective exchange rate	Real effective exchange rate
1990	100	100	100
1991	113	117	99
1992	105	110	91
1993	112	118	93
1994	109	120	87
1995	106	119	82
1996	108	117	75
1997	121	129	79
1998	168	169	99
1999	161	166	94
2000	182	190	103
2001	210	213	111

Source: Author's calculations based on data from PIDS Economic and Social Database.

Figure 2. Ratio of NEER to peso-dollar exchange rate, 1990-2001



major currencies, including the Japanese yen.[5] The ratio of NEER to the peso-dollar exchange rate increased continuously during 1990-95 (Figure 2), indicating a strengthening of trade-partner currencies (as a group) relative to the US dollar.

Despite the NEER depreciation, there was a sustained decline in the REER index until the onset of the Asian crisis. The real

[5]The Japanese yen appreciated relative to the US dollar by 43.2 percent from 1990 to 1995.

exchange rate appreciated by 25 percent from 1990 to 1996, significantly lowering the price incentive for producing tradable goods. As discussed above, the government substantially reduced tariffs and lifted import restrictions in the first half of the decade. Thus, trade liberalization and real exchange rate appreciation took place at the same time, inevitably operating at cross purposes. As discussed earlier, the two do not constitute a desirable combination.

In the second half of the 1990s the most notable movement of the exchange rate indices occurred during the Asian crisis when the NEER and REER climbed up in 1998 by 31 and 25 percent, respectively, the REER index almost reaching the 1990 level. A comparatively modest decline in both indices took place in the next year, followed by more significant increases in 2000 and 2001. It is noteworthy that the REER finally exceeded the 1990 level in 2000, and that its most recent evolution represents a major boost in price competitiveness for the tradable goods sector, enhancing the capacity of domestic producers to exploit their comparative advantage.

The contrasting REER changes and their accounting components during the two subperiods until and after 1996 are shown in Table 5. As in the preceding decade, foreign inflation was not a major factor in the observed behavior of the real exchange rate. In the pre-crisis period the REER appreciation—which as noted above was inconsistent with the ongoing trade liberalization effort—was associated with rapid domestic inflation and a somewhat inflexible nominal exchange rate (reflecting an implicit preoccupation of policymakers with the peso-dollar exchange rate). What happened in the later period was a complete reversal: despite the drastic increase in NEER (a forced response to regional developments), domestic inflation was relatively mild and the REER increased significantly, more than making up for the real appreciation of the pre-crisis period. In the wake of the Asian financial crisis, there was an apparent policy improvement towards promoting the tradable goods sector.

Turning now to the behavioral determinants of the real exchange rate in the 1990s, Table 6 contains the observed values in 1991, 1995 and 1999 of some policy and external factors that influence the REER. As discussed above, trade liberalization continued in the

Table 5. Decomposition of REER changes in 1990-1996 and 1996-2001

	1990-1996	1996-2001
Change in REER	-27.9	38.3
Change in NEER	15.8	59.8
Change in P	56.4	31.7
Change in weighted P_i's	12.7	10.7

Source: Author's calculations.

Notes: REER = real effective exchange rate; NEER = nominal effective exchange rate; P = consumer price index; P_i = wholesale price index in trade partner i. (Refer to equation (3) in text.) The entries are 100 times the calculated changes in natural logarithms of the variables, which therefore approximate the percentage changes over the indicated subperiods.

Table 6: Policy and external influences on the real exchange rate, 1991, 1995 and 1999

	1991	1995	1999
Trade policy			
Average implicit tariff rate (percent)	25.7	20.9	17.3
Average effective protection rate (percent)	27.6	21.9	18.6
Nominal effective exchange rate (1990=100)	117.0	119.0	190.0
Current account balance (percent of GDP)	-1.91	-4.45	9.16
External terms of trade index (1995=100)	116.0	100.0	127.0

Source: PIDS Economic and Social Database; Asian Development Bank (2001).

1990s, which is corroborated by the downward trend in the two aggregate measures of import restrictions given by the sector-weighted average implicit tariff and effective protection rates. The larger rate cuts between 1991 and 1995 are consistent with the relative effectiveness of EO 470. There was policy inconsistency, however, in the simultaneous REER appreciation and trade liberalization in the first half of the decade, as noted earlier. Indeed, the effect of the latter would have been to depreciate the real exchange rate (see above), which apparently was swamped by the countervailing influence of the current account deficit that more than doubled (as a

percentage of GDP) from 1991 to 1995. Note also that the external terms of trade deteriorated, which likely would have had a depreciating effect on the real exchange rate.

In the second half of the decade trade liberalization contributed to the observed depreciation of the real exchange rate. Also, nominal exchange rate policy was supportive of REER depreciation, considering the drastic increase in the NEER from 1995 to 1999. However, the most important depreciating effect on the real exchange rate came from the marked improvement in the current account balance (Table 6). It exceeded significantly the REER appreciation induced by the 27 percent improvement in the external terms of trade, going by the estimated elasticities from the Medalla et al. (1995) study.[6]

Finally, let us consider the changes in relative production incentives among tradable goods since the early 1990s. Continuing the trend observed in the 1980s, the sectoral EPR estimates presented in Table 7 show a significantly lower value for "all importables" sector in 2000 than in 1992, and with only a slight change for "all exportables," the EPR gap between importables and exportables was further reduced. The narrowing of this gap was more pronounced in manufacturing than in agriculture. It is also notable that the agricultural EPR declined only slightly from 1992 to 2000, but the substantial reduction in manufacturing EPR led to a reversal of the traditional EPR bias against agriculture. Thus, in 2000, effective protection in agriculture was nearly five percentage points higher than in manufacturing.

Adjusting the EPRs for exchange rate overvaluation, one obtains the NEPRs. Using (again, with qualification) the elasticity coefficients in the estimated REER equation in Medalla et al. (1995), together with the 1992 and 2000 values of the trade policy and current account variables, we calculate the exchange rate overvaluation at 23.2 percent in 1992 and 4.9 percent in 2000. The latter's unusually low value can be attributed to the current account surplus in 2000 that undervalued the real exchange rate, which, however, was more

[6]Because the estimated REER equation in the study is based on 1950-1980 data, it may not be appropriate to use the elasticity coefficients for the 1990s.

Table 7: EPR, NEPR and NEPRT estimates for 1992 and 2000 (in percent)

	1992			2000		
	EPR	NEPR	NEPRT	EPR	NEPR	NEPRT
All importables	41.0	14.4	32.6	23.4	17.6	29.8
All exportables	-4.5	-22.5	-10.2	-1.6	-6.2	3.5
Agriculture	22.4	-0.6	15.1	20.4	14.8	26.6
Importables	36.1	10.5	28.0	32.7	26.5	39.5
Exportables	-0.7	-19.4	-6.6	-0.4	-5.1	4.7
Manufacturing	28.9	4.6	21.3	15.7	9.7	21.7
Importables	44.9	17.6	36.3	23.9	18.1	30.3
Exportables	-5.7	-23.5	-11.3	-2.1	-6.7	2.9

Source: Medalla (1998) for EPRs; author's calculations for NEPRs and NEPRTs.

Note: EPR = effective protection rate; NEPR = net effective protection rate (adjusted for exchange rate overvaluation); NEPRT = net effective protection rate due to trade policy.

than offset by the overvaluation due to the remaining trade restrictions.

A higher level of effective protection for agriculture relative to manufacturing in 2000 is also shown by the comparative NEPR estimates for the two sectors. Somewhat surprising is that the NEPRs for manufacturing importables and all importables in 2000 were higher than in 1992, considering the substantial import liberalization that took place in the 1990s. However, in isolating the effect of trade policy on effective protection at the equilibrium exchange rate, the NEPRT estimates show lower values for the two sectors in 2000 than in 1992 (Table 7). The comparative NEPRT values also indicate higher effective protection due to trade policy for agriculture than for manufacturing in 2000, especially between importables in the two sectors. This is attributable to the tarrification of QRs in some major farm products that exceeded the equivalent tariffs at the time or the book tariff rates under EO 470 (David 1994). Notably, it is the increasing protection in agriculture, not declining manufacturing protection, that was behind the reversal of the protection gap between the two sectors in the 1990s.

V

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Conclusion

The real exchange rate is arguably the most important relative price variable in an open economic system. Many developing economies, including the Philippines, have floundered as a consequence of the real exchange rate being heavily overvalued. On the other hand, the economic performance of countries like Singapore and Malaysia have benefited from maintaining "realistic and competitive" real exchange rates.

The real exchange rate links the nominal exchange rate (which the government can control) to the real sphere of the national economy—most directly, to relative incentives among production sectors—through which the further effects of exchange rate policy on resource allocation, output growth, income distribution, and other development concerns can be analyzed. An appreciation of the real exchange rate, from whatever source, reduces the price competitiveness of tradable goods and makes it more difficult for domestic producers to exploit their comparative advantage. If the real exchange rate is already overvalued to begin with, a sustained appreciation can only lead to increased inefficiency in resource allocation and investment, reduced growth of domestic output and labor employment, and because the unemployed and under-employed are mostly from the low-income population, a worsening of income inequality and poverty.

The role of exchange rate policy in Philippine economic development cannot be properly examined without consideration of its interactions with trade and macroeconomic policies, in view of the latter policies' analytical and empirical linkages to the real exchange rate. As discussed above, the Philippine experience in the 1980s and 1990s amply demonstrates the significant influences of

trade and macroeconomic policies not only on the conduct of exchange rate policy but also on the evolution of the real exchange rate and extent of its overvaluation.

An important distinction is made between real exchange rate appreciation or depreciation that represents a movement over time, and its overvaluation or undervaluation which is in reference to an equilibrium value of the real exchange rate at a given time. The latter is defined by an unrestricted trade regime and current account balance. Real exchange rate overvaluation results from a restrictive trade policy and macroeconomic policies that lead to a deficit in the current account. It is a policy-induced incentive bias against tradable goods production, and can be redressed only by removing the trade restrictions and the current account deficit. Adjusting the nominal exchange rate can bring about real exchange rate depreciation that may reduce a high degree of real exchange rate overvaluation. However, without accompanying trade liberalization and macroeconomic policies that reduce the current account deficit, depreciating the nominal exchange rate will not lead in the long run to a less overvalued real exchange rate.

In the 1980s the large nominal (effective) exchange rate depreciation during the 1983-85 crisis did not translate into a significant depreciation of the real (effective) exchange rate, owing in part to the suspension of import liberalization measures at a time of macroeconomic instability. Subsequently, despite the relatively smaller NEER increases in the second half of the decade, a larger REER depreciation was achieved with the resumption of trade liberalization and reduction of the current account deficit. This was accompanied by a substantial decline in real exchange rate overvaluation.

Considering that there are other influences on the real exchange rate, trade liberalization can take place simultaneously with a real exchange rate appreciation. In the 1990s, despite the NEER depreciation and significant trade liberalization, the REER depreciated almost continuously until the onset of the Asian financial crisis. As discussed above, the effects on the trade balance, domestic output, and employment arising from trade liberalization combined with real exchange rate appreciation are negative. This pre-Asian

crisis experience of policy inconsistency points to the need for proper coordination among exchange rate, trade, and macroeconomic policies in order to achieve desired objectives.

From 1996 to 2001 the REER index increased, more than compensating for the real appreciation in the earlier period. It was facilitated by a drastic NEER rise (responding to regional developments) and a relatively mild domestic inflation. Concurrently, the current account balance improved and trade liberalization continued, reducing dramatically the overvaluation of the real exchange rate. Thus, in the wake of the Asian financial crisis, it would seem that there was an overall policy improvement towards the encouragement of tradable goods production.

Within the tradable goods sector, the vigorous efforts in tariff reduction and import liberalization in the second half of the 1980s are reflected in the substantial decline in effective protection rates for importables and narrowing of the EPR gap between importables and exportables. Even more dramatic is the observed reduction in the disparity between manufacturing and agricultural EPRs, which was cut down to two percentage points by 1988. Adjusting for exchange rate overvaluation and isolating the effect of trade policy lead to the same finding about the near closing of the historically wide protection gap between manufacturing and agriculture.

In the more recent period since the early 1990s, a further reduction of EPR for importables, especially manufacturing importables, took place. This reflected the continuing import liberalization, particularly during 1991-1995. The EPR gap between importables and exportables was also reduced significantly, despite which importables still benefited from an EPR of more than 20 percent in 2000. On the other hand, the traditional EPR disparity between manufacturing and agriculture was reversed in the 1990s, the agricultural EPR being higher by five percentage points by 2000. Isolating the effect of trade policy on effective protection at the equilibrium exchange rate, our estimates show that rising agricultural protection, more than declining manufacturing protection, was the chief reason for the reversal of the protection gap between the two sectors. Indeed, there has been increasing protection for major import-competing agricultural products in

recent years. Since agricultural exportables are still subject to low or negative effective protection, increasing incentives for exportable commodities would seem to provide some scope for policy improvement towards promoting uniformity in the protection system.

The good news about the real exchange rate is that in its most recent evolution (since 1997), the REER index has been increasing and that real exchange rate overvaluation has been reduced to a reasonable degree. The bad news is that the REER index in 2001 was only 11 percent higher than its 1990 value. A lot of ground was lost in the 1990-96 period of falling REER. It is ironic that the forced response to the Asian financial crisis served to reverse the tide and began to improve the price competitiveness of tradable goods production in the Philippines. This recent boost to the tradable goods sector needs to be sustained if the Philippines is to continue to pursue economic openness and exploit future opportunities from increasing globalization.

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