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Philippine Institute for Development Studies

The International Economic Environment and the Philippine Economy

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THE INTERNATIONAL ECONOMIC ENVIRONMENT AND THE PHILIPPINE ECONOMY

Ponciano S. Intal, Jr. and Leilanie Q. Basilio*

THE INTERNATIONAL ECONOMIC ENVIRONMENT

This paper focuses on the two most important developments in the international economic environment facing the Philippines now and in the future; namely, (1) openness, integration and globalization including the sharp resurgence of capital movements; and (2) the rise of Asia Pacific and China.

Openness, Integration and Globalization

Openness and integration in historical perspective. The international economy has become increasingly open and integrated during the last two decades of the 20th century. Sachs and Warner (1995, p. 12) estimate that, whereas only about 20 percent of the world's population lived in open economies in 1960, more than 60 percent of the world's GDP and more than 50 percent of the world's population were in open economies by 1993. If the ongoing reforms, liberalization and economic opening in China and Russia continue, it is not too long when about 87 percent of the world's population and 83 percent of the world's output is located in open economies.

The openness and integration of the international economy by the 1990s is worth noting because it is not the norm during this century. Trade protectionism lorded during the 1930s until the 1950s in much the world; hence, the world economy was essentially closed during the period. The process of opening up of the developing world has been slow and in many cases "stop and go" during the 1960s until the 1980s. Hence, the experience of much of the century cannot provide much illumination on the range and degree of both benefits and risks arising from the deepening integration of the world economy. It is this element of uncertainty that provides the continuing challenge for policy makers and analysts especially in the developing world in their effort to manage the integration of domestic economies into the international economy.

The only period in world economic history that is similar to the current emerging international economic environment is the period from the 1870s until 1913 right before the first world war. Technological developments (e.g., shipping, refrigeration, communications), low rate of protection in much of the world (except to some extent in the US and Russia), and currency convertibility under the gold and silver standards during the period gave rise to the first truly international economy in world history. Studies show that some economic convergence occurred during the period as the economic periphery grew faster than the more

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advanced countries at that time; i.e., UK, France and Germany (Sachs and Warner, 1995, p.8). Lewis' estimates of the growth of world trade during 1883-1913 indicate that Japan, the temperate settlements and Asia other than India and China experienced export growth rates higher than the average for the whole world as well as the average for the developed Northwest Europe (Lewis, 1978, Table 7.4, p. 169).

The Philippines also participated increasingly in the international economy during the late 19th century and early 20th century. Like other tropical exporters, the Philippines faced deteriorating terms of trade during the 1880s and early 1890s, so much so that the volume export growth was largely offset by the decline in export prices in gold terms. What encouraged the growth of Philippine exports despite the decline in export prices in gold bullion terms was the depreciation of the peso (i.e., silver Mexican peso) vis-à-vis gold by about 50 percent during the period. The country experienced mainly trade surpluses during period. When the external terms of trade improved for tropical products during 1895-1913, the Philippines registered export growth rates higher than the averages for all developing countries, all tropical countries and developed countries (Intal, 1983). Thus, on the whole, the Philippines increasingly participated in the international economy during the period. This process of growing economic integration accelerated during the American colonial regime. The share of exports to national output of the Philippines rose from about 7.7 percent in 1913 to about a quarter in 1938 (Intal, 1983, p. 69).

Towards greater openness and competition. Major international policy developments during the past decade point to greater international economic openness and competition especially in the Asia Pacific region. The GATT Uruguay Round, the most ambitious round of multilateral trade negotiations during the post World War II, expanded the multilateral trade disciplines to the hitherto excluded sectors of agriculture, textiles and garments, and services as well as to new areas of interest to international trading, specifically TRIPS and TRIMS. The Round also deepened tariff reductions and reduction in nontariff barriers and widened tariff bindings. Thus, overall, the GATT Uruguay Round pushed significantly further the continuing process of trade liberalization in the world. But some analysts consider that the most important achievement of the Round is the strengthening of the institutional structure of international trading, especially the improvement of the dispute settlement system, the establishment of the World Trade Organization which has stronger powers than the GATT Secretariat, and the clearer rules on antidumping and countervailing duties.

Under the WTO, multilateral negotiations have been continuing to address uncompleted negotiations under the Uruguay Round and other initiatives. The most recent trade liberalization agreement in the Information Technology Agreement during the first WTO Ministerial Meeting in Singapore in 1996 wherein countries agreed to an eventual zero tariff on information technology products.

The ASEAN Free Trade Area (AFTA) agreement and the Asia Pacific Economic Cooperation (APEC) Bogor declaration aim toward virtually free trade in the ASEAN and Asia Pacific regions. Under the Common Effective Preferential Tariff (CEPT) scheme, intra ASEAN trade for nonsensitive manufactures and agricultural products would have tariffs of zero to five percent by year 2003. As a result, the average CEPT rate for the whole ASEAN will decline from 7.1 percent in 1996 to 2.7 percent in 2003 (ASEAN Secretariat, n.d.).

Similarly, the APEC Bogor declaration aims toward free trade and investment in the whole APEC region by the year 2020, primarily through the “concerted” unilateral liberalization efforts of the member economies. Because APEC is nondiscriminatory in principle, the Bogor declaration means that the APEC member economies which currently account for more than one half of total world production would be virtually open economies by the year 2020. In tandem with trade and investment liberalization, the APEC member economies are also in the process of coming up with “collective action plans” that tend to address trade and investment facilitation issues like customers procedures, standards and conformance and transparency in government procurement. Drawing from the initial submission of Canada in response to the Manila declaration to strengthen economic cooperation in the region, economic infrastructure and facilitation institutions like ports would aim for commonly agreed upon efficiency targets, with the ultimate objective of reducing the transactions cost of doing business in the region. The experience of the European Community countries also show that deepening economic integration among the member economies necessitates the harmonization of trade, investment and competition related domestic policies. Thus, the Philippines is facing not only a more open and integrated regional economy but also where the standards of trading and facilitation as well as domestic policies are increasingly circumscribed.

In summary, the Philippines is in the midst of a region that is well on the way to greater economic openness and deeper economic integration. The more open export markets offer opportunities for the Philippines. Similarly, the greater openness of the Philippines itself presents challenges to domestic producers. In short, managing the integration of the Philippines more deeply in the international economy, which offers both opportunities and challenges, will be a continuing task for the country’s policy makers now and in the future.

Integration and globalization. Despite its similarity to that of the late 19th century until the First World War, the current international economic regime is qualitatively different from the “first world economy” in many respects. For example, the remarkable improvements in air transport and telecommunications in recent decades has led to the development of global production networks of major multinational corporations. Indeed, the sales of foreign affiliates of multinational corporations already exceeded total world exports of goods and services by 1992 (WB, 1996, pp. 11-12). International trade is increasingly intraindustry trade and inter-company trade. Fast technical change, growing importance of after-sales service and competitive pressure have contributed to the growing globalization of production networks in order to meet the varied demands of various exports and to reduce production costs.

The electronics and computer industries are good examples of the globalization of production networks where parts are sourced from, produced and assembled in, various parts of the world (many from affiliates). As can be expected from the product cycle theory, the production of products with more mature technologies and facing steeper price competitive pressure is shifted to developing countries (e.g., in electronics and computers, mainly ASEAN and lately China for computer peripheral like floppy disk, low-end printers, etc.). Figure 1 provides an illustration of an international production network.

Another important characteristic of the current international economic regime is the large magnitude of foreign capital flows. This is a matter of degree because international economic integration generally presupposes some capital flows. Indeed, even during the late 19th century an early 20th century, international investments were beginning to be important.

The two most important investor countries, Great Britain and France, invested not only within Europe but also in Canada, South Africa, Latin America, Australia and Asia. The investments were primarily in infrastructure (e.g., railways, electricity, etc.), mines and a few industries including tropical plantation (Lewis, 1978, pp. 177-178).

Nevertheless, the magnitude of capital flows in recent years is a quantum leap from the levels of the early years of the century. Net medium term and long term capital flows to developing countries, which averaged about \$20 billion per year (amounting to 0.7 percent of GDP) during 1982-1989 rose to \$104.8 billion (representing 2.3 of GDP) in 1993 (Khan and Reinhart, 1995, Table 2.1, p. 5). Equally important is the sharp rise in the importance of portfolio flows in recent years. For example, for the APEC developing countries which account for the bulk of capital flows to the developing countries, portfolio investment which averaged about \$0.9 billion per year during 1982-1989, increased dramatically to \$37.1 billion in 1993 thereby nearly equaling the level of foreign direct investment (at \$39.5 billion) during the year (*Idem*, Table 2.2, p.6).

Like in the early 20th century, capital flows were facilitated by minimal government interventions in capital outflows. Unlike the early years, however, current flows occur through a sophisticated and increasingly and internationally integrated financial system. Unlike the early years under the silver and gold standards, the magnitude of international capital flows at present has significant potential impact on the macroeconomic variables in net receiving countries. As the current currency turmoil in Southeast Asia suggests capital flows bring potential macroeconomic risks apart from potential economic growth benefits. The macroeconomic risks arise because capital flows exacerbate inappropriate policy mixes, inadequacies in the domestic financial systems and institutions, and weak monitoring by inadequately staffed regulatory authorities.

The current currency turmoil in Southeast Asia, to some extent, points to the next stage of policy reforms in the region. Specially, the countries would have to improve further their macroeconomic management, address structural inadequacies in the domestic financial systems including the need for greater transparency and more effective monitoring and oversight (e.g., regulators and monitors not coopted by the regulated financial institutions), encourage greater competition in the financial system, and improve the institutional capacities of the regulatory authorities. If the above are adequately addressed, the current currency and economic turmoil in the region may best be viewed as part of the process of the deepening economic integration of the Southeast Asian economies with the world economy, not only in trade and production but also in finance.

It may be noted that while the late 19th century is characterized by large international movements of people (immigrants) and less of capital, the late 20th century can be characterized by large flows of capital and less of people (given stricter immigration rules). Of course, to some extent, the large capital flows and the growing globalization of production networks make international mobility of people in terms of permanent migration less pressing while making international mobility of people in terms of temporary migration more important.

The Rise of Asia and the Pacific

Another differing characteristic of the current international economic environment from the “first world economy” is the rise of Asia and the Pacific now compared to the centrality of Northwest Europe during the late 19th century. East Asia, comprising China (including Hong Kong), Japan, Korea and Taiwan, accounted for 8.8 percent of world total trade in 1970; this share increased to 14.9 percent in 1990 and 18.2 percent by 1995. The share of Southeast Asia (ASEAN) to total world trade increased from 2.2 percent in 1970 to 5.0 percent in 1990 and 7.0 percent in 1995. The share of APEC member economies (excluding Brunei) to total world trade has increased for 33.3 percent in 1970 to 39.6 percent in 1990 and 45.1 percent in 1995. The share of the East Asian and APEC member economies to world output, increased from 47.2 percent in 1980 to 53.6 percent in 1993 (Table 1). It may be noted that the rise in the region’s share to total world trade is higher than in the region’s share to total world output. This reflects the comparatively greater trade orientation as well as the increasing economic integration of the economies in the region.

Underpinning the rise in the share to total world trade and output is the significantly higher rate of growth of output, exports and imports of many of the East Asian economies during the past two decades. Popularly described as “tigerhood” or “dragonhood”, it is the markedly higher rate of growth in the region which has attracted the attention of the world and which has spawned controversies with respect to the factors that contributed to such high rate of growth. Despite the current currency turmoil in the region which has somehow dimmed the public perception of the “East Asian Miracle”, one key determining characteristic of the Asian “tigers” or “dragons” is their high investment rate, funded largely by the high domestic saving rates of the countries. Recent studies (e.g., Mason 1997) indicate that the high saving rates are to a large extent a “demographic bonus”, an aspect that was not highlighted in the World Bank East Asian Miracle book. Specifically, the high saving rates are a result of the happy happenstance of declining fertility rates and dependency ratios and of good economic policy regimes that resulted in good returns to the growing investible funds from the rising domestic saving rate (i.e., high economic growth).

This symbiosis was perhaps more tightly “managed” by the Northeast Asian NIEs (i.e., Korea and Taiwan) by their credit bias towards their tradable sector (exports and import substituting industries) rather than the ASEAN countries (which have allowed an excessive credit support to their nontradable sector, especially the property sector, and thereby weakening their financial institutions and bloating their current account deficits). Nevertheless, precisely because the rise in the saving rates in most countries in the East Asian region stem in large part from the significant demographic change that occurred during the past two decades, it is likely that the domestic saving rates in these countries would not drop precipitously during the current economic difficulties, in contrast to the experience of the Philippines during the 1980s. With their comparatively better economic fundamentals in terms of saving rate, export orientation and fiscal surpluses, the ASEAN economies currently battered by the currency turmoil would likely be able to recover well in the near future from the present economic difficulties.

The World Bank projections of the growth rate of the world economy until the year 2005 show that East Asia will remain to be the economic growth leader in the world (at a per annum rate of 7.9 percent during 1996-2005), followed by the non-OECD developed countries (at 5.5 percent per annum) and the South Asian economies (at 5.4 percent per annum) (World Bank, 1996, Table 1-3, p. 6). The currently available World Bank

projections are as of 1996; hence, they do not take into consideration the current currency turmoil in the area. While it is possible that there may be some reduction in the projected average growth for the region through 2005 as a result of the current economic problems, it is likely that the region remains the growth leader in the world. This is especially so as China continues to grow at a fast pace and as the country becomes more important to the regional and international economies. With the comparatively higher economic growth projected for East Asian countries, it is likely that by the year 2005, the three largest economies in the world are all situated in the Asia Pacific region, i.e., the US, Japan and China. In addition, large countries like Indonesia, India and Russia are also expected to move up in terms of world ranking in level of national output and trade in the future. In the process, the locus of international economy veers inexorably to the Pacific and away from the Atlantic (between Europe and the US).

The Philippines, situated in the geographic heart of East Asia, will be heavily influenced by the developments in the Asia Pacific region. Indeed, the Philippine trade pattern has changed over the past two decades towards greater integration with the rest of the region (Table 2). As Table 2 indicates, the ranking of the top fifteen trading partners of the Philippines has changed significantly during 1975-1995 period. Specifically, the Western European and Middle East country partners slid down in ranking to make way for the sharp rise in importance of the Asian NIEs (Korea, Singapore, Hong Kong) and the other ASEAN economies (Thailand, Malaysia).

The Asia Pacific region now accounts for about three-fourths of total foreign trade of the Philippines. The Philippine trade in the Asia Pacific is largely a three-way flow. That is, the Philippines is a net exporter across the Pacific to the United States and is a net importer from the rest of East Asia. At the same time, the sourcing of imports from East Asia has been shifting towards the Asian NIEs in part as a result of currency shifts in the region (Intal and Aldaba, 1994, p. 337). In short, Philippines international trade is intimately linked with the fortunes of the Asia Pacific region.

“Flying geese” and shifts in comparative advantage. The intimate link between the fortunes of the Philippines and the Asia Pacific is exemplified by the economic restructuring in East Asia since the latter 1980s. Popularly described by Japanese analysts in terms of a “flying geese”, the ongoing economic restructuring in the region reflects shifts in comparative advantage arising from the changing relative factor prices (accelerated by exchange rate changes) and greater vertical and horizontal integration of production systems in part along the lines of endogenous product cycles in the region. Investment flows and technology transfer, primarily to ASEAN and China in the late 1980s and early 1990s, provided the important mechanisms for the acceleration in the shifts in comparative advantage in the region.

The differing factor endowments and levels of development among the countries in the Asia Pacific, in tandem with the comparatively high economic growth, have contributed to the increased economic linkages and shifts in comparative advantage in the region. Resource endowment proxies are shown in Table 3. The Asia Pacific can be grouped into the natural resource-abundant countries (Canada, US, Australia, New Zealand, Chile), the natural resource-poor countries (Japan, Asian NIEs) and at the middle, the ASEAN countries and China. Human capital proxies and, GNP per capita for physical capital, point to the developed countries to be well-endowed while the developing countries ASEAN and China

bring up the rear; the Asian NIEs are in the middle but with South Korea nearing the levels of the developed countries.

The revealed comparative advantage (RCS) estimates by Yamazawa and Okuda (1994) bring out the enduring comparative advantage of the natural resource-abundant countries in resource-based products as well as the shifts in comparative advantage in a number of manufactures consistent with the evolving differences in human capital and technological capability (Table 4). Japan, US and Canada have lost comparative advantage in low-skilled labor intensive manufactures in favor of China, ASEAN-4, and South Asia. In turn, Japan, US, Canada and European Community have moved to machineries, which to be highly skilled-labor and technology intensive.

Consistent with the shifts in comparative advantage, the ASEAN-4 and China experienced major changes in the structure of their exports. Specifically, the share of exports of manufactures has risen dramatically while that of primary products exports declined substantially. Indonesia's comparative advantage in labor intensive manufactures has been primarily in low-skilled labor intensive industries like footwear, garments and textiles while Malaysia's export niche has been in the electronics and electrical machinery sector, which is comparatively more skilled-labor intensive (Table 5).

RP's revealed comparative advantage and the challenge of economic restructuring

Table 5 also shows the shifts in comparative advantage of the Philippines during the period 1975-1990. The table indicates that the country's revealed comparative advantage in agriculture-resource intensive exports declined substantially during the late 1970s and the 1980s. Where the country has gained comparative advantage during the period is in low skilled labor intensive manufactures (primarily garments) and in human resource intensive industries (especially electronics and electrical machinery). The RCA estimates in Table 5 have not been updated to the mid-1990s. Nevertheless, it is likely that the country's rise in revealed comparative advantage in human resource intensive industries consolidated further during the 1990s. In contrast, the country's revealed comparative advantage in low skilled labor intensive manufactures may have likely deteriorated in the light of the problems faced by the Philippine garment industry in the face of stiffer competition from lower-cost exporting countries in the region as well as from Mexico and the Caribbean countries (for the US market).

The changes in the commodity composition of Philippine exports during the late 1970s and the 1980s, as indicated in Table 5, seem to suggest that the Philippines followed the ASEAN pattern consistent with the dynamic changes that 1980s that transpired in the region during the late 1980s and the early 1990s. However, the changes during the 1980s reflect weaknesses on the Philippine economy in sharp contrast to the dynamism of the other ASEAN countries. The comparison with Malaysia may be in order. While both Malaysia and the Philippines registered declines in revealed comparative advantage in primary products, the decline in the Philippines occurred because of the absolute decline in exports earnings from US\$3.1 billion in 1980 to US\$1.6 billion in 1990: decline for RCA occurred despite the increase in the absolute level of primary product exports earnings (from US\$9.9 billion in 1980 to US\$11.7 billion in 1990) because the level of exports from manufactures rose dramatically during the period (from US\$2.7 billion in 1980 to US\$17.4 billion in 1990) (Intal, 1995, pp. 16-17).

Poor world market fundamentals for the country's traditional agricultural exports, worsening natural resource constraints and deteriorating international competitiveness led to the sharp fall in export revenues from agricultural products. More fundamentally, the poor performance of the Philippine trade sector during the period reflect the effects of stagnant labor productivity in the Philippines in contrast to the sharp rise in labor productivity in the other competitor countries in the region (e.g., ASEAN countries, China) and combined with the real appreciation of the peso vis-à-vis the currencies of the competitor countries, esp. China and Indonesia (Tables 6 & 7).

It is clear that the Philippines faces formidable challenges in its efforts to reverse the dismal performance of the Philippine economy during the 1980s into sustained winning performances in both the agricultural and industrial sectors in the future. As the next section of the paper indicates, the country needs to address a large number of concerns before the current economic resurgence is sustained.

MEETING THE CHALLENGES OF GLOBALIZATION AND SUSTAINING THE PHILIPPINE ECONOMIC RESURGENCE

Gearing up for greater integration in the global arena calls for a holistic improvement of the economy. In order for the Philippines to benefit from deeper economic integration with the rest of the world, the country would need a facilitative macroeconomic policy environment (i.e., higher saving rate, outward orientation and "investment friendly" measures), sustained productivity improvements and stronger institutional and human resource capacity. Sustained productivity growth, in turn, necessitates more efficient resource allocation, more effective infrastructure and bureaucratic support services, and higher rate of technological absorption and adaptation (Intal and Geron, 1996).

Savings Mobilization and Investment Facilitation

Raising the saving rate. Mobilization of domestic savings plays a significant role in the quest for a sustained high economic growth. High domestic savings provide for greater domestic investments and facilitate foreign direct investments through joint ventures and improved macroeconomic expectations.

Between 1970 and 1997, saving rates rose sharply for most of the Southeast Asian countries (Table 8). Positive real interest rate, availability and accessibility of financial institutions, higher returns on investment ventures promoted domestic savings (Eggleston, 1997), higher economic growth rate and a rapid demographic transition (Mason 1997) all contributed to the sharp rise in the domestic saving rates

In contrast, the Philippine gross domestic saving rate, which was comparable to the other Southeast Asian countries in the 1970s, dropped substantially over the 1980s and early 1990s such that it is now the lowest in the region despite some slight increase in recent years (Table 8). As a result, the investment rate in the country is lower and the country would have to rely a lot more on foreign financing (i.e., foreign direct investment, foreign portfolio capital and foreign loans), thereby making the country more vulnerable to changes in foreign investors' sentiments on the country. In effect, the Philippine government would have to be

acutely aware of the impact of government policies and policy changes on foreign investors and lenders who have become an important “public” that the government must take into consideration in its policy deliberations.

The drop in the country’s saving rate during the 1980s and early 1990s arose primarily from the decline in per capita incomes during the economic crises and recessions during 1983-1985 and 1991-1993 (Figure 2). Household and unincorporated business saving, which dominated national saving until the late 1980s, was particularly hard hit by the decline in per capita incomes and has continually become low since then. It has been corporate saving, and to some extent government saving, which has been rising in recent years. Nevertheless, overall, Philippine government saving has been low and variable, in sharp contrast to the higher government saving and better fiscal positions of the other Southeast Asian countries, at least up until 1996. The government saving rate of 3.8% during 1992-1995 is much lower than Indonesia’s (9.7%), Malaysia’s (6.2%), Singapore’s (10.7%) and Thailand’s (7.4%) during 1990-1993 (Intal, 1997c).

In view of the importance of a high saving rate for a sustained high economic growth rate, it is critical that the country creates and sustains the environment that encourages high domestic saving rate. Fundamentally, this means robust economic growth rate, positive real interest rate, more attractive and accessible financial saving instruments and lower fertility rate.

Drawing from the experience of the 1980s and early 1990s, it is important that declines in per capita incomes are avoided in order that the household saving rate does not drop and indeed increases instead. Robust economic growth could translate to higher overall propensity to save as it raises employment and increases the incomes of the age groups with higher saving rates.

Explicit incentives designed to encourage small savers also encourage more efficient mobilization of household saving. For so long, small saving deposit rate has been negative thereby acting as a deterrent to financial saving of households. Policy measures designed to encourage small savers include the elimination on the final tax on interest incomes from small savings and other taxes like the documentary stamp tax on smaller-denominated government securities.

Robust economic growth, competitive environment and efficient pension system, on the other side, may be major factors for raising corporate saving rate. There may be a need to restructure and reform the country’s major social security systems (especially the GSIS) in order to maximize investment returns as well as reduce the administrative cost which is comparatively higher than in other Southeast Asian countries like Singapore. The country may well explore the Chilean experience in pension reform whereby a number of private firms which met selection criteria compete aggressively for the management of pension funds including the government, thereby ensuring the maximization of investment returns.

The government can contribute to higher national saving rate by raising the government saving rate. This means greater emphasis on fiscal discipline. In turn, this means improved tax effort preferably through improved tax administration in order to mitigate tax evasion and minimization of the erosion of the tax base (through very liberal and wide areas of tax exemptions). Fiscal discipline also demands better government

expenditures programming to reduce government wastes (especially in the infrastructure sector) and increases the societal returns from government expenditures and the bureaucracy.

Lastly, the East Asian experience indicates that steady declines in dependency ratio and fertility rates over time in an environment of high economic growth facilitates a rising trend in saving rates (Mason 1997). The average increase in Asia's saving rate due to demographic factors has been estimated to be about 5-percentage points (ADB 1997). Thus, the demographic transition in the country (i.e., lower fertility rate and dependency ratio) has to be accelerated if the country's saving rate should catch up with the rest of the economies in the region.

Aggressive investment promotion. In view of its comparatively low domestic saving rate, the Philippines can only raise the country's investment rate significantly higher than the domestic saving rate by foreign capital inflows. Instead of foreign loans and foreign portfolio inflows, it is best that the capital inflows are direct investments. Foreign direct investment has come to be recognized as a significant source of private resources, employment, foreign exchange and technological improvement. Much of the increase in the global trade share of the region has been associated with a rise in foreign direct investment. However, although its share of FDI inflows has grown, the Philippines has not been a major destination of foreign direct investment in the region. Moreover, only one-third of investment inflows in the Philippines during the early 1990s is accounted for by FDI as compared with about half for other economies in the region. The bulk of the investments to the Philippines remain to be portfolio flows and external borrowing (World Bank, 1997).

While the improvement of the country's economic performance and prospects as well as political stability remain to be the ultimate encouragement for foreign investors, it is worthwhile for the government to invest more resources in a more aggressive investment promotion. In addition, the government bureaucracy would have to be more "investors friendly" in the sense that there is greater coordination among concerned agencies to streamline systems and procedures for reduce the transactions costs of setting up businesses and implement investment programs. The government's fiscal incentive system would have to be restructured to be more focused to fewer industries in support of exports and industrial restructuring in order to reduce the fiscal burden of the fiscal incentives. At the same time however it may be useful to provide greater flexibility in the granting of the incentives consistent with the needs of the targeted industries and interested firms, given the overall notional fiscal budget for fiscal incentives.

Productivity-Wage Rate-Exchange Rate Nexus

Meeting the demands of global integration essentially requires maintaining and widening the country's area of international competitiveness. This brings out the importance of improvement in productivity and the relationship between wages, productivity, and the exchange rate.

From the late 1970s to the early 1990s, the Philippines was the laggard in labor productivity growth, especially in manufacturing, among the Southeast Asian countries and China. Indeed, during the period, it was China and Indonesia, which were the leaders among the group in the growth of labor productivity. In addition, both countries experienced the largest real depreciation compared to the other Southeast Asian countries. (Intal 1997c). As a

result, the international competitiveness of the two countries improved and has been rewarded by the significant rise in exports, especially for China. For the Philippines, the loss in international competitiveness during the 1980s and early 1990s is also reflected in a relatively poor export performance during the period. Labor productivity has improved in selected industries in the manufacturing sector in recent years (World Bank 1997, Cororaton 1998), which may have contributed to the recent improvement in the country's export performance, although largely limited to a few commodities primarily in electronics and electrical machinery.

Table 9 presents a comparison of the value added per worker (as a measure of labor productivity), wage and salary per worker and the ratio of wages to labor productivity relative to the United States (i.e., US = 100) for the whole manufacturing sector in a number of countries during the 1980s and early 1990s. The estimates are based on value added and wages in US dollars at current prices; thus, the estimates are comparable only on the assumption that the exchange rates are not seriously distorted. Because the exchange rates in the selected countries were not seriously distorted during the period, the comparisons in Table 9, although based on current prices, remain robust.

The table shows that Japan and the Asian NIEs (here, Korea, Hong Kong and Singapore) experienced secular rise in unit labor costs (i.e., ratio of wages to labor productivity) relative to the United States despite rising labor productivity. This reflects the increasingly tight labor markets in the countries during a period of high economic growth rates.

The experience of the ASEAN-4 countries was varied. Malaysia followed to some extent the experience of the Asian NIEs, except that labor productivity did not increase relative to the US but wages and salaries did. This reflects the tightness of the Malaysian labor market in the face of one of the fastest growth rates in the world during the late 1980s and early 1990s. In sharp contrast to the Malaysian experience, Indonesia's unit labor costs declined relative to the US. The decline arose from rising labor productivity with no secular rise in wage rates relative to the United States.

The Philippines offers the middle ground between Malaysia and Indonesia. Specifically, the country's unit labor cost fluctuated relative to the United States during the period and without any clear secular trend. The unit labor cost relative to the U.S. was highest in 1989, resulting from sharp rise in wage rates (the year the minimum wage rate rose significantly) at the same time that labor productivity fell. Since 1989, unit labor costs have declined relative to the U.S. as labor productivity improved more than the rise in wage and salary per worker.

The overall picture at the whole manufacturing sector masks, however, significant differences in cost and productivity performances at the subsector, industry levels (Table 10). For the Philippines, Table 10 shows that based on the 1982 and 1993 estimates, the country's unit labor costs relative to the U.S. **increased** in food products, textiles, leather products, wood products, industrial chemicals, other chemicals, rubber products, fabricated metals and electrical machinery although, with the exception of leather products, unit labor costs in these industries remain lower than in the United States. Philippine industries with lower unit labor costs during the early 1990s compared to the early 1980s include footwear, paper products, printing and publishing, plastic products, transport equipment and other remaining manufactures.

In sharp contrast to the Philippine experience of mixed performance, virtually all of Indonesia's manufacturing industries registered significant declines in unit labor costs relative to the United States during the 1980s and early 1990s.

As a result, Indonesia improved its international competitiveness vis-à-vis the Philippines during the 1980s and early 1990s. Behind this was the much larger depreciation of the Indonesian rupiah compared to the Philippine peso. Indeed, the rupiah depreciated vis-à-vis the peso by 46 percent during 1984-1994. This depreciation almost equals the decrease in unit labor cost in Indonesian manufacturing as against the Philippines during the same period.

ASEAN currencies have significantly appreciated in real effective terms since 1990, halted only by the 1997 currency devaluations, with the Philippine peso appreciating the most (Figure 3 and Table 7). Currency appreciation and/or increases in wage costs, on the other hand, could be countervailed by productivity improvements to maintain competitive niches. For instance, the Korean won has substantially appreciated during 1982-1993 and wages have significantly increased vis-a-vis Philippine wages. Nevertheless, Korea has maintained its competitive advantage over the Philippines in many areas because of a much higher increase in the labor productivity of its manufacturing industries.

In 1997, most of the East Asian countries have witnessed considerable speculative attacks on their currencies following the major depreciation of the Thai baht in the middle of the year. The peso immediately depreciated nominally, rising from the virtually-pegged P26/US\$1 to P30 in August, before hitting a 42% depreciation at the close of the year. But unlike the past devaluations, the current depreciation has not been significantly inflationary. This can be attributed in part to the relatively tight monetary and fiscal policy adopted by the government, high protection rate in food crops, more realistic wage adjustment during the period, and by the reduction in world oil prices (Intal and Medalla, 1998). Despite the current macroeconomic problems brought about by the high interest rates and slowdown in the economy, the currency realignment, which is in fact a market-based adjustment, is seen to help improve the economic prospects of the country in the long run because it increases the competitiveness of the export industry and corrects the long-standing price distortions in the country's economic structure.

Agricultural Development

A robust agricultural sector facilitates industrial growth. For most of the East Asian countries, high economic growth coincided with increases in per capita food and agricultural output (Table 11) as well as a rising agricultural trade surplus.

In contrast, per capita output in food and agriculture in the Philippines in early 1990s was lower than in the early 1980s. Equally important, the country has turned from being an agricultural trade surplus country in the 1970s until the 1980s into an agricultural trade deficit economy by the early 1990s.

Although the Philippine agricultural production grew faster in early 1990s, this was largely caused by the sharp rise in agricultural protection. Given the high agricultural tariffs in the country, and in the light of the ASEAN Free Trade Agreement, domestic agriculture-

based industries face a formidable task of competing when manufactures tariffs within the region are reduced to a range of zero to five percent by the year 2004.

High agricultural protection implies higher food prices in the Philippines vis-a-vis food exporting countries like Thailand. With comparatively higher food prices come workers' clamor for high wages, which with currency appreciation up until August 1997 and marginal productivity increases, leads to eroded competitiveness.

Such poor performance of the Philippine agriculture thus calls for improvements in agricultural strategies, policies and institutions. There is an urgent need for sustained real improvement in agricultural productivity through greater investment in and improved institutional framework of, the country's agricultural research and extension system, improvement in infrastructure support system, restructuring in the agricultural bureaucracy and redesigning market intervention policies.

Better Infrastructure Support

Sustained profitability and the ability to compete in global markets rest crucially on the costs and availability of inputs in the production operations. Given the comparatively high and rising labor costs in manufacturing in the country, firms would have to rely more on improving productivity and greater efficiency in the interplay of production inputs. This includes greater reliance on adequate infrastructure support both in processing (e.g., reliability of power and water supply) and transporting of goods and services to the production sites (e.g., dependability of roads and telecommunications).

Sustaining economic performance in the East Asian region makes addressing infrastructure bottlenecks an important consideration. Analysis in the World Development Report 1994 confirmed that there is a strong relation between the availability of infrastructure and per capita GDP. Increasing GDP per capita by 1% requires raising the infrastructure stock by 1%.

Infrastructure investment in the region has dramatically increased during 1970-1980. In the 1980s, investment in infrastructure averaged about 4.6% of GDP compared to 3.6% during the 1970s. Since 1990, there have been further major increases. It should be noted, however, that the Philippines has been investing far lower than any of the countries in the region, devoting only 2.5% of its GDP compared to the region's average of 4.7% (Table 12) (World Bank, 1995).

The 1995 World Competitiveness Indicators of the World Bank shows that the Philippines ranks close to the tail end of the list of countries with respect to the level and quality of infrastructure; it also ranks lower than the other competitor countries in the region (Table 13). In 1995, only about 17% of the country's total roads is paved (concrete and asphalt), the lowest in the region with an average of 67%. The country's normalized road index is 47 as compared to Thailand's 140 and Korea's 118. (the road index represents the total length of road in a country compared with the expected length of roads where the expectation is conditioned on population, population density, per capita income, urbanization and region specific dummy variables drawing from data from all countries in the world.) The index value of 47 means the Philippine road system is only about 47 percent of the average ratio for all countries. Historically, waiting time for a phone line in the country took almost

six years in distinct contrast to the average of four months for Malaysia, Indonesia and China and virtually no waiting time for Singapore and Korea. It is likely that the long waiting time in the Philippines has drastically dropped as a result of deregulation in the telecommunications industry. Nevertheless, it is likely that the four-month waiting time in Malaysia remains a challenge. Given the increasing importance of good telecommunications facilities in the face of globalization and the rise of information-based industries, the shorter the waiting time for a line, especially in the provinces the better.

Despite the substantial improvements in infrastructure, unmet demand remains quite high in East Asia, and more so, in the Philippines. During the next decade, the World Bank estimates the infrastructure investment requirement of the region's developing countries to be between \$1.2-1.5 trillion or about 7% of GDP. The World Bank estimates that the Philippines particularly will need to invest 6.8% of GDP in 1995-2004, more than four percentage points higher than its 1992 investment level.

With the great infrastructure challenges way beyond the financing capability of the government, there is the continuing challenge to maximize public-private partnerships. Despite some successful investment projects e.g., those in Malaysia (BOT arrangements for major toll highways), Indonesia (toll roads) and parts of the Philippines (power distribution), significant challenges remain. Facilitating private investment requires improvement of the policy environment for private participation including greater transparency and regulatory reforms to encourage more appropriate pricing of infrastructure services. With greater private involvement in infrastructure primarily in areas where market demand allows for private participation, the government can redirect to some extent public infrastructure expenditures towards lagging regions and areas where private investment would not likely be interested. In so doing, the government addresses equity in spatial development as well.

Skills, Technology and SME Facilitation

Raising productivity does not only require improved allocation of resources and improved organization of firms but also enhanced human capital resources and technological development.

Enhancing skills. As discussed earlier, rising labor costs and appreciating currency should be compensated with substantial growth in labor productivity in order to maintain and improve the country's international competitiveness. This would include the overall advancement of the country's human resource pool. Although such would not translate into immediate economic improvement, it should help ensure the sustainability of growth in the future.

Between 1970 and 1994, East Asian enrollment ratios for almost all levels have dramatically increased (Table 14). Adult literacy rates have also markedly improved. In both indicators, the Philippine figures are comparable to those of other countries. However, in terms of primary level completion, the country registers the highest dropout rate. In 1990, only 70 percent of enrollees in the primary finished as against 100 percent for Singapore, 96 percent for Malaysia, 87 percent for Thailand, and 77 percent for Indonesia. In 1988, only 93% of those who complete the primary grades proceeded to the secondary level.

At the tertiary level, the enrollment data disguise the problem of quality and relevance. There exists a 40 percent dropout rate at universities and colleges. The shorter school cycle means that higher education institutions have to compensate by spending more time on bringing entrants up to basic levels. Thus, the curriculum is hardly geared to modern technological needs and has little inputs from industry, unlike the developed countries where there is more direct and continuous interaction between providers and users of higher education (World Bank, 1997).

While the private sector has taken greater part in the provision of education, the government remains to be the most important provider of such service particularly at the early levels. During 1970-1994, most of the Asian countries have devoted greater share of public expenditures on education as percentage of their GNP (Table 15). However, in the Philippines, public investment in education as share to GNP in 1994 at 2.4% was two-percentage point lower than in 1970. As percent of total government expenditure, it has drastically dropped from 24.4% in 1970 to 10.5% in 1994. The substantial drop in government expenditures in education had a particularly adverse effect on the quality of primary and secondary education as the tight budget had to be geared primarily to meet the needs of the growing number of students arising from the continued high growth of population.

The Philippines needs to invest more in developing technical skills for improved labor competitiveness. While the general skills are comparable with those of other countries, the skill base has to be reoriented and improved in quality if it is to support a significant upgrading of the technological base of the country.

Developing technology. Technology is crucial for global market competition. In an increasingly integrated market, innovation and product development may significantly affect the value and trade position of a country.

The technological system in the Philippines is at the early stage as against those of other Asian countries. This is manifested by the low levels of R&D expenditures, poor quality of R&D effort and management, and a science and technology sector that is ineffectively integrated with productive activity (World Bank, 1997).

Gross expenditure on R&D in 1991 for the Philippines accounts for only 0.2% of GDP (Table 16), far inadequate to make the country an NIE which spends an average of almost 2% of their GDP. Although R&D and technology do not always have to be locally produced, improving R&D capability is needed for the effective use of foreign technologies. Strong local R&D base is required for accelerated and appropriate technological acquisition and adaptation to international developments.

Developing technology is not an exclusive domain of the government. Indeed, the private sector is central to technology development. Hence, private participation should be encouraged in the country so that technological research would have a direct and effective linkage to industry.

The whole structure of the public science and technology system in the Philippines has to be reformed to make it more autonomous, customer-driven and proactive (World Bank 1997). Proper institutional and organizational arrangement has to be developed in encouraging firm-level technological capability (Patalinghug, 1998) consistent with the

general goal of industrial restructuring through, for example, the determination of high priority industries for technological support and the implementation of environmental standards. Since adoption is the most accessible and cheapest way of acquiring technology, the government can encourage greater technology transfer from multinational companies to local enterprises through programs like Singapore's Local Upgrading Program. In addition, it is important that there is bigger budget allocation for public R&D at the same time that the institutional structure of public and private R & D system is improved. Finally, the government may also need to institute R & D enhancements such as development of industry-linked Polytechnics and HRD programs, and provision of better incentives for technical and research personnel.

SME Facilitation. The importance of small-and-medium-enterprises (SMEs) is recognized in their capacity to provide a strong base for an export-oriented industrialization and international competitiveness. Such has been demonstrated by the Hongkong and Taiwan experiences where a dynamic SME sector has been a crucial factor in their export success. SMEs have exhibited flexibility of supply to respond to a rapidly changing demand of global consumers. They also encourage labor-intensiveness in manufactures through subcontracting mode and become a testing place for new industries (Intal, 1997b).

The study of Medalla and others (1995) showed that the number of SMEs in the Philippines has increased during the period 1983-1988, attributed primarily to trade liberalization and the recovery of the general economy. More open trade facilitated growth of the SMEs in the way that it allowed for an easier access to more cost competitive inputs. Furthermore, freer exchange encouraged greater exports of manufactures and motivated the use of subcontracting.

Recognizing the role played by SMEs in the economic performance of the country, institutional support must be intensified. Such could be done through an "industrial extension" system, which the Northeast Asian countries followed greatly. The program ranges from technical assistance, investment and equipment-lending schemes, provision of common service facilities, expansion of SME promotion activities and restructuring of regulatory framework. Greater private participation and joint public-private ventures would need to be pursued in order to improve the effectiveness of the provision of support services. In this light, linkages between SMEs and large enterprises (LEs) may also be encouraged, as in the case of Singapore wherein the government reimburses a large percentage of the cost borne by the LEs participating in technology transfer programs.

Greening the Domestic Economy

Growing concern over the integration of environment into the world trading system calls for reshaping of the countries' domestic policies. Faced with environment-related multilateral trade provisions and rising "green" consumer expectations, the government would need to encourage domestic industries to be efficient in the context of a more open economy and greater global competition and integration and at the same time that their operations are more environment friendly. This means that the country's policy regime needs to encourage the incorporation of social or externality costs of pollution or environmental damage in domestic market prices.

There have been apprehensions on the possible adverse effect of the internalization of the environmental costs on the international competitiveness of Philippine industries. Initial analyses drawing from the estimates of pollution abatement costs from the Environment and Natural Resource Accounting Project for the Philippines indicate however, that with the exception of industries with particularly high ratio of abatement costs to the value of output (e.g., logging, metallic mining and agricultural products), industries on the average could internalize to a large extent environment costs and still remain competitive. However, in so doing, the overall incentive structure becomes more skewed against the export industries (Intal, 1997a): thus, it is best that the internalization of environment costs is complemented with further rationalization of the tariff and nontariff trade regime.

The pattern of Philippine trade shows dramatic changes in the pollution intensity of both exports and imports (Table 17). Export and import shares of nonpollutive and nonhazardous products sharply increased, while the share of highly pollutive exports decreased. In addition, the share of pollutive imports is relatively high. This means that, the Philippines is importing products which, had they been produced locally would have aggravated the pollution situation in the country. This is salutary. Nevertheless, as the economy undergoes structural transformation towards more capital and materials intensive intermediate products as the economy grows and industrializes, it is likely that the structure of exports and imports would change in the future with a growing domestic production of potentially more pollutive industries. Thus, as the economy grows, it is important to improve the domestic pricing system and the country's institutional capability to cope with the likely increased pressure of industrial pollution in the future. This would mean, for example, more widespread adoption and implementation of the polluter-pays principle. Revenues from taxes following the polluter pays principle can in turn be invested in environment-regenerative programs and facilities, such as facilities for hazardous wastes from SMEs.

As the country improves its environmental management, it is nonetheless important for the government and the private sector to be constantly aware of the developments in foreign environmental procedures and standards in order for the export industry to respond effectively. At the same time, the government would need to exert efforts to ensure that multilateral or bilateral or regional agreements do not become vehicles for possible discriminatory use of environmentally related trade restrictions for protectionist measures in the export markets.

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Figure 1. The Changing International Division of Labor by Japanese Electric Machinery and Electronic Equipment Industry in Asia and Its Impact on Japanese Economy

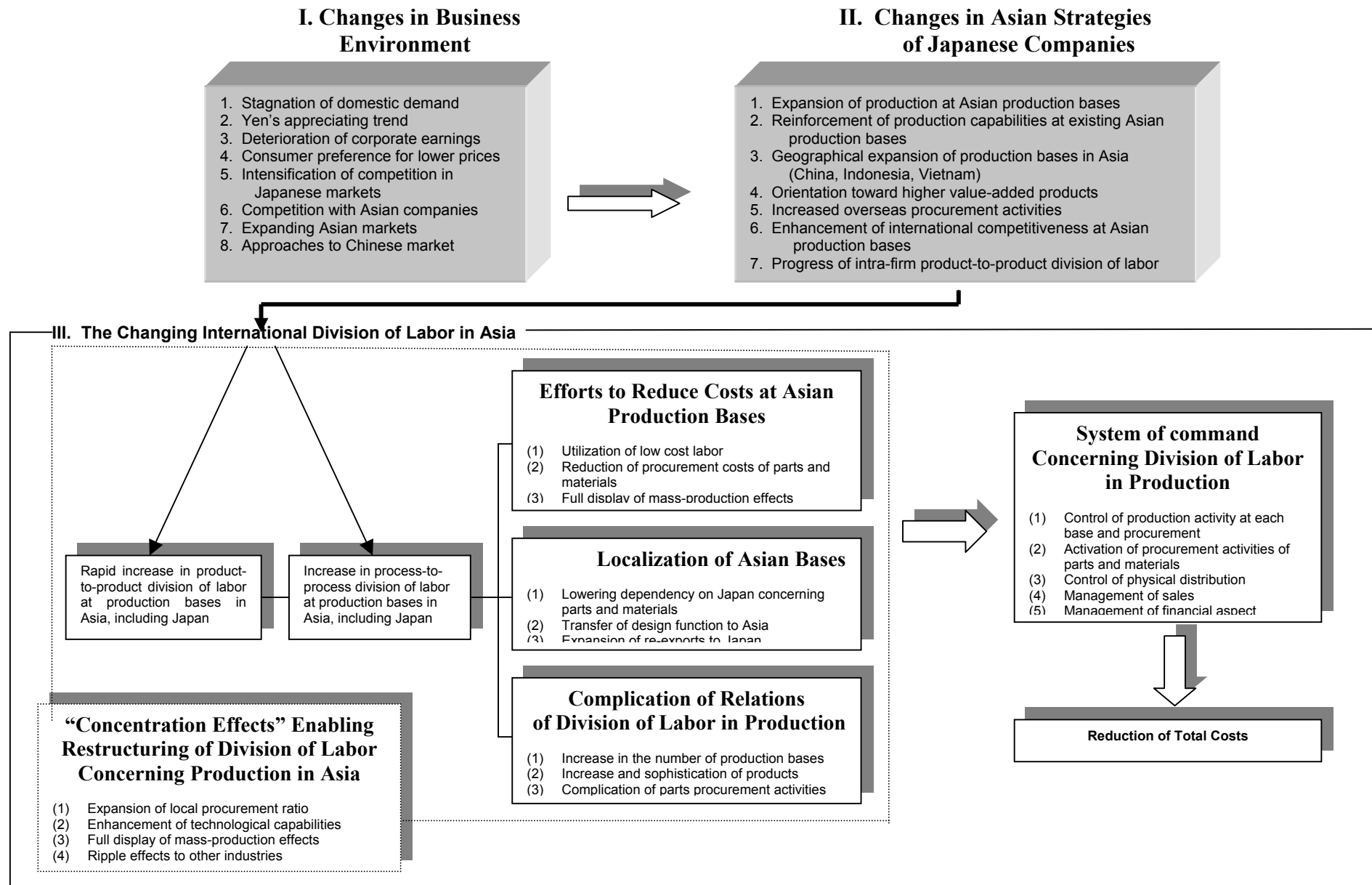


Table 1
SHARE TO WORLD TOTAL TRADE
(In percent)

	1966	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997I-III p/
WORLD	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Brunei	0.03	0.03	0.08	0.13	0.09	0.05	0.05	...	...	...	...	...	...
Indonesia	0.30	0.34	0.69	0.84	0.76	0.70	0.78	0.84	0.87	0.84	0.84	0.87	0.88
Malaysia	0.60	0.51	0.41	0.61	1.23	1.45	1.64	1.10	1.24	1.39	1.49	1.47	1.49
Philippines	0.45	0.37	0.35	0.36	0.27	0.31	0.31	0.34	0.40	0.42	0.45	0.51	0.58
Singapore	0.61	0.66	0.79	1.11	1.30	1.67	1.77	1.85	2.12	2.34	2.38	2.41	2.40
Thailand	0.40	0.33	0.32	0.40	0.43	0.83	0.93	1.00	1.10	1.17	1.25	1.22	1.15
SOUTHEAST ASIA*	2.26	2.30	2.79	3.60	3.49	4.36	4.80	5.14	5.73	6.16	6.41	6.49	6.50
Korea	0.24	0.46	0.71	1.02	1.13	1.38	1.54	2.17	2.21	2.32	2.55	2.63	2.59
China	1.30	0.75	0.91	0.97	1.84	1.69	1.92	2.26	2.59	2.77	2.72	2.73	2.81
Hongkong	0.78	0.89	0.75	1.08	1.58	2.41	2.82	3.32	3.65	3.67	3.59	3.57	3.60
Japan	4.86	6.24	6.65	6.93	8.13	7.66	7.81	7.83	8.05	7.88	7.63	7.15	7.05
Taiwan	0.29	0.48	0.72	1.01	1.34	1.79	1.97	2.10	2.16	2.09	2.11	2.04	2.14
EAST ASIA	9.67	11.18	12.43	14.25	17.61	19.85	21.40	22.65	24.24	24.72	24.91	24.50	24.51
Australia	1.71	1.61	1.32	1.13	1.28	1.20	1.18	1.18	1.18	1.18	1.12	1.19	1.19
Canada	5.06	5.08	4.10	3.32	4.53	3.68	3.57	3.60	3.79	3.75	3.53	3.54	3.82
Chile	0.43	0.38	0.18	0.27	0.18	0.24	0.24	0.28	0.27	0.27	0.31	0.31	0.33
Mexico	0.71	0.63	0.55	0.89	0.95	0.84	0.93	1.05	1.07	1.12	0.93	1.13	1.29 e/
New Zealand	0.55	0.40	0.31	0.28	0.31	0.28	0.25	0.26	0.27	0.28	0.27	0.27	0.27
Peru	0.40	0.27	0.22	0.16	0.13	0.10	0.11	0.11	0.11	0.13	0.15	0.14	0.16
USA	14.41	13.90	12.56	12.31	15.10	13.34	13.17	13.70	14.23	14.08	13.28	13.61	14.50
PACIFIC & LA	23.27	22.27	19.25	18.37	22.49	19.66	19.45	20.18	20.92	20.83	19.60	20.21	21.55
ASIA-PACIFIC*	35.20	35.75	34.47	36.22	43.58	43.87	45.65	47.98	50.88	51.70	50.92	51.20	52.56

* except Brunei

p/ preliminary

e/ estimate

Basic data source: IMF International Financial Statistics, various issues

TABLE 2
MAJOR TRADING PARTNERS OF THE PHILIPPINES
SHARE TO TOTAL TRADE
(In percent)

Rank	1975		1980		1985		1990		1995	
1	Japan	31.39	USA	25.21	USA	30.14	USA	26.61	USA	25.43
2	USA	25.01	Japan	22.66	Japan	16.47	Japan	18.94	Japan	19.79
3	Saudi Arabia	6.56	Saudi Arabia	6.05	Malaysia	5.47	Netherlands	17.67	Singapore	5.66
4	Netherlands	3.79	Germany	4.26	Germany	4.56	Germany	4.48	Hongkong	4.83
5	Germany	3.47	Netherlands	3.44	Hongkong	3.90	Hongkong	4.27	Korea	4.10
6	United Kingdom	3.28	Kuwait	3.06	Singapore	3.88	Singapore	3.52	Saudi Arabia	3.72
7	Australia	2.92	Hongkong	2.80	China	3.65	Korea	3.44	Germany	3.54
8	Kuwait	2.53	Korea	2.47	United Kingdom	3.31	Saudi Arabia	3.02	United Kingdom	3.07
9	France	1.54	Australia	2.43	Saudi Arabia	3.15	United Kingdom	2.91	Thailand	2.68
10	Canada	1.53	United Kingdom	2.39	Korea	2.85	Australia	2.38	Netherlands	2.51
11	Indonesia	1.42	Indonesia	2.09	Australia	2.65	Malaysia	1.96	Australia	2.12
12	Iran	1.28	China	1.89	Kuwait	2.32	Canada	1.49	Malaysia	2.05
13	China	1.18	Malaysia	1.83	Indonesia	2.11	Thailand	1.44	China	1.91
14	Hongkong	1.03	Iraq	1.80	Netherlands	1.69	France	1.43	Indonesia	1.64
15	Malaysia	1.00	Singapore	1.74	France	1.61	Indonesia	1.24	France	1.15

Basic data source: UNCTAD International Trade Statistics, various years.

Table 3
Resource Endowment Proxies

	Population density^{/a} (Persons/sq.m)	Ag. Pop^{/a}/ Ag.Land (Persons/ha)	GNP per capita (US\$)	Mean Years of Schooling (25+ years old)	Secondary Enrollment (%) Female^{/b}	Tertiary Education (% of population of graduating age)
Japan	329	1.70	26840	10.8	99 ^{/c}	23.7
USA	27	0.03	22340	12.4	NA	29.6
Canada	3	0.02	20510	12.2	101 ^{/c}	33.3
Australia	2	0.02	17120	12.0	91 ^{/c}	24.4
Hong Kong	5800		13580	7.2	75	6.7
South Korea	445	4.50	6350	9.3	86	37.7 ^{/d}
Singapore	2800		14140	4.0	71	5.8
Indonesia	100	3.70	610	4.1	41	0.6
Malaysia	57	1.10	2520	5.6	58	1.4
Philippines	217	3.60	740	7.6	75	6.7
Thailand	109	1.50	1650	3.9	32	5
Vietnam	209	6.10	150	4.9	40	NA
China	124	8.00	370	5.0	41	0.5
Bangladesh	830	8.70	220	2.0	11	0.6
India	268	3.20	330	2.4	33	NA
Pakistan	162	3.10	400	1.9	13	NA
Sri Lanka	268	4.70	500	7.2	77	1.4
Fiji	39	1.20	1920	5.1	57	1.1
Papua New Guinea	9	6.60	930	1.0	10	0.6
Solomon Islands	10	5.60	700	1.0	NA	NA
/a Agricultural Population as a ratio of agricultural land (defined to include arable land and permanent crop land)						
/b As percent of cohort						
/c Male and female						
/d Enrollment rate						
Source: Intal and Geron (1996)						

Table 4
Revealed Comparative Advantage of Asia-Pacific Economies, by Group

	Agricultural Products	Minerals	Labor-Intensive Manufactures	Machinery	Capital-Intensive Manufactures
Japan					
1970	0.31	0.11	1.01	1.61	1.44
1990	0.10	0.09	0.58	1.97	0.67
NIEs					
1970	0.70	0.18	2.61	0.50	0.62
1990	0.41	0.12	2.45	0.97	0.65
USA					
1970	1.11	0.60	0.43	1.63	1.02
1990	1.16	0.43	0.71	1.34	0.94
Aust-NZ					
1970	3.57	1.46	0.05	0.25	0.53
1990	3.32	2.06	1.05	0.18	0.45
ASEAN					
1970	3.51	1.94	0.26	0.13	0.22
1990	1.56	1.57	1.18	0.82	0.42
China					
1970	3.14	0.29	1.18	0.13	0.76
1990	1.44	0.71	2.23	0.51	0.73
South Asia					
1970	2.54	0.59	1.44	0.18	0.61
1990	1.86	0.41	2.62	0.15	1.06

Source: Intal, et. al. (1996)

Table 5
Revealed Comparative Advantage Indices: ASEAN-4

		RCA Indices			
		1975	1980	1985	1990
1. Indonesia					
	ARI	1.29	1.47	1.66	2.19
	MRI	3.36	2.59	3.53	3.11
	ULI	0.01	0.07	0.41	1.14
	HRI	0.03	0.02	0.06	0.05
	TI	0.01	0.01	0.03	0.06
2. Malaysia					
	ARI	3.76	3.16	2.89	2.09
	MRI	1.07	1.19	1.80	1.36
	ULI	0.46	0.37	0.34	0.27
	HRI	0.21	0.05	0.67	1.07
	TI	0.24	0.16	0.13	0.34
3. Philippines					
	ARI	2.03	1.63	1.48	1.18
	MRI	0.39	0.42	0.34	0.46
	ULI	0.62	0.86	1.11	1.42
	HRI	0.36	0.64	1.01	1.02
	TI	0.06	0.16	0.11	0.21
4. Thailand					
	ARI	4.82	3.93	4.46	2.74
	MRI	0.47	0.49	0.46	0.38
	ULI	1.10	1.18	1.79	1.85
	HRI	0.46	0.13	0.28	0.64
	TI	0.05	0.27	0.20	0.13

Notes:

ARI = Agricultural Resource-Intensive

MRI= Mineral Resource-Intensive

ULI=Unskilled Labor-Intensive

HRI=Human Resource-Intensive

TI= Technology –Intensive

Source: Intal, et. al. (1996)

Table 6
INDICES OF AVERAGE LABOR PRODUCTIVITY
Overall, Agriculture and Manufacturing
(1975=100)

Country		1975	1980	1985	1990	1996
China	overall	100	122	131	140	...
Indonesia <i>(1993 prices)</i>	overall	100 ^{a/}	126	131	148	204 ^{b/}
	agri	100 ^{a/}	104	121	114	160 ^{b/}
	mftg	100 ^{a/}	155	194	242	310 ^{b/}
Malaysia <i>(1978 prices)</i>	overall	100	125	138	161	216
	agri	100	133	158	201	281
	mftg	100	104	118	143	181
Philippines <i>(1985 prices)</i>	overall	100	119	92	102	99
	agri	100	117	100	109	108
	mftg	100	119	96	108	100
Singapore <i>(1985 prices)</i>	overall	100	116	137	171	233
	agri	100	114	194	177	288
	mftg	100	115	128	171	272
Thailand <i>(1988 prices)</i>	overall	100	116	132	181	297
	agri	100	101	113	118	234
	mftg	100	121	133	178	210

a/ 1976

b/ 1995

Data sources: Intal (1996); ADB Key Indicators, 1988 & 1997

Table 7
Real Effective Exchange Rates of Selected Countries*
1975-1997^{p/}

Country	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 ^{p/}
Philippines	91.83	91.01	90.68	93.31	89.07	86.96	84.08	80.17	97.24	97.87	88.25	100.13	104.75	105.11	98.19	100.00	97.86	85.98	86.04	79.51	76.28	70.50	72.29
Singapore	99.55	112.16	117.47	118.35	122.34	123.45	113.69	109.98	109.00	109.37	109.83	109.57	112.45	111.06	107.18	100.00	95.34	92.59	91.87	86.38	84.24	82.32	79.22
Thailand	90.90	91.56	93.91	98.70	99.12	92.92	88.68	86.16	85.42	86.75	97.52	98.80	103.58	104.19	101.63	100.00	97.21	96.50	95.74	94.44	94.51	87.91	98.70
Indonesia	48.05	42.06	41.49	47.91	62.75	61.23	57.92	52.16	64.71	66.20	67.41	82.42	106.11	109.70	106.98	100.00	101.12	101.13	99.74	99.95	102.22	90.37	97.45
Malaysia	72.75	78.48	78.86	80.70	82.09	88.22	89.85	82.12	78.06	75.28	78.04	83.50	89.49	95.34	98.05	100.00	99.68	90.00	87.06	89.05	86.11	81.47	84.57
Korea	126.71	115.75	114.84	113.56	104.96	114.83	111.83	109.82	115.93	119.08	126.76	130.57	126.18	114.08	100.08	100.00	98.08	101.17	105.68	103.74	100.93	98.10	108.83
Hongkong	129.34	128.33	125.42	130.35	147.90	149.12	149.12	140.63	223.70	201.52	167.77	145.55	134.40	127.95	117.26	100.00	86.10	77.52	67.93	54.47	53.89	51.18	47.82
Taipei	135.44	139.87	141.69	148.40	145.33	133.15	121.06	127.21	132.07	132.46	134.44	129.36	113.88	106.87	97.73	100.00	99.96	93.23	98.16	98.11	99.78	99.99	102.31
PROC	35.03	38.12	37.56	36.56	33.32	30.63	30.46	31.72	32.63	38.65	50.23	61.03	71.27	75.24	77.17	100.00	115.61	123.02	128.06	193.48	191.15	182.62	175.70
India	59.59	71.99	72.13	75.60	77.87	75.52	75.51	74.22	72.26	75.27	79.86	80.21	82.40	85.80	94.46	100.00	117.62	124.34	136.62	132.22	131.48	131.75	124.81
Pakistan	58.16	57.01	60.04	62.52	60.64	62.72	56.62	61.94	66.77	64.64	72.40	80.56	89.07	89.25	94.82	100.00	101.49	101.94	104.34	104.89	102.63	106.04	107.03
Bangladesh	60.27	76.92	81.05	90.23	87.50	88.02	89.75	95.53	102.73	95.99	96.58	101.21	101.81	99.04	92.90	100.00	100.03	105.03	103.62	104.38	105.37	107.43	99.07
Sri Lanka	39.83	48.83	56.68	100.30	101.68	95.61	96.58	92.47	95.46	88.55	95.44	93.51	99.07	99.38	102.25	100.00	93.38	91.26	89.23	86.36	88.38	81.70	77.38

*Export shares: 1980, 1985, 1990, 1995

Basic data IMFInternational Financial Statistics

sources:

ADB Key Indicators for Developing Asian and Pacific Countries

Statistical Yearbook of the Republic of China, 1993

Monthly Bulletin of Statistics - China, March 1997

Financial Statistics in the Taiwan Area of China

IMF Direction of Trade, 1995 Yearbook

Table 8
GROSS DOMESTIC SAVING
(Percent of GDP)

Country	1971-80	1990	1996	1997
Indonesia	21.6	32.3	30.2	31.0
Korea	22.3	36.2	35.2	34.5
Malaysia	30.4	33.4	42.6	43.8
Philippines	23.4	18.7	18.8	19.2
Thailand	22.2	34.2	33.7	31.0

Sources: ADB Key Indicators 1985 & ADO 1998

Table 9
Wages and Value Added per Worker and Ratio of Wages to Labor Productivity

<i>Wage & Salary per worker (US=100)</i>								
	1979	1982	1986	1989	1990	1991	1992	1993
Japan	69.2	59.6	82.3	101.3	98.0	106.9	111.8	126.6
Korea	18.9	31.8	15.1	31.8	34.8	39.2	40.5	43.0
Hongkong	22.7	22.9	25.1	29.7	32.3	35.7	38.2	41.8
Singapore	23.6	28.9	29.7	35.0	40.0	44.4	49.2	52.5
Indonesia	3.9	2.8	3.7	3.3	2.5	2.6	3.0	3.1
Malaysia	12.2	12.9	12.5	11.0	10.9	12.3	12.8	13.1
Philippines	6.6	6.1	5.4	7.3	6.7	6.9	8.7	8.3
Thailand	...	11.6	7.5	8.8	9.5	...	...	...
Bangladesh	3.5	2.6	2.5	2.3	2.5	2.2	2.0	...
India	5.6	5.3	5.2	4.9	5.0	4.0	3.9	3.5
Sri Lanka	2.0	4.9	2.3	2.2	2.2	2.6	0.0	4.9
Australia	77.7	78.3	61.1	73.5	77.0	83.5	0.0	69.4
Canada	91.4	93.5	82.2	99.4	102.1	104.5	98.3	93.1
Italy	60.4	49.7	50.4	108.0	130.4	131.3	132.8	104.9
Netherlands	111.8	78.8	73.6	110.4	127.0	106.9	113.5	108.9
New Zealand	51.9	56.6	45.5	60.7	65.5	0.0	57.6	65.2
United Kingdom	61.7	60.0	49.8	70.8	83.0	86.0	86.5	73.5
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Value Added per worker (US=100)</i>								
	1979	1982	1986	1989	1990	1991	1992	1993
Japan	77.0	68.3	87.1	108.1	105.7	114.4	112.0	119.3
Korea	30.6	47.9	22.4	36.7	44.8	52.7	53.5	54.9
Hongkong	17.9	18.9	14.2	19.1	20.9	24.2	26.1	27.4
Singapore	29.2	34.2	36.4	40.2	44.9	48.3	50.7	56.0
Indonesia	6.3	4.6	6.3	5.8	6.8	6.6	7.3	7.3
Malaysia	19.5	16.4	16.2	15.0	14.2	16.2	15.9	16.0
Philippines	11.0	11.0	10.1	9.7	10.6	10.5	13.1	13.9
Thailand	...	24.7	13.9	22.0	22.2	...	...	...
Bangladesh	4.3	3.3	3.2	2.6	2.3	2.1	1.9	...
India	4.5	4.5	4.2	4.3	4.6	3.6	3.4	3.6
Sri Lanka	4.4	11.4	5.8	4.5	4.9	4.8	0.0	8.1
Australia	57.5	60.2	49.1	66.8	70.4	0.0	0.0	57.5
Canada	78.0	84.0	70.5	79.3	79.3	77.2	73.0	71.7
Italy	63.7	53.6	47.1	59.6	69.5	67.8	68.0	54.3
Netherlands	98.7	57.2	60.3	65.8	74.5	72.5	73.5	69.5
New Zealand	31.4	37.7	30.5	40.5	43.6	0.0	41.4	43.1
United Kingdom	53.9	53.6	50.5	61.9	70.3	68.9	69.1	59.5
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Ratio of Wages to Labor Productivity (US=100)</i>								
	1979	1982	1986	1989	1990	1991	1992	1993
Japan	89.9	87.3	94.5	93.7	92.7	93.4	99.8	106.2
Korea	61.7	66.3	67.4	86.8	77.5	74.5	75.7	78.3
Hongkong	126.9	121.1	175.9	155.2	154.0	147.8	146.3	152.7
Singapore	81.0	84.6	81.6	87.0	89.0	92.0	96.9	93.7
Indonesia	61.2	60.8	58.3	57.5	36.7	40.2	40.9	42.7
Malaysia	62.6	78.5	76.9	73.3	76.4	76.0	80.6	82.2
Philippines	60.3	55.4	53.4	75.4	63.4	65.4	66.3	59.4
Thailand	...	47.0	54.0	39.9	42.6	...	...	...
Bangladesh	80.0	78.3	77.4	90.0	110.0	103.3	102.1	...
India	124.1	118.3	124.9	115.5	108.9	111.1	112.9	98.4
Sri Lanka	46.3	42.6	40.6	49.6	45.5	54.8	55.0	61.4
Australia	135.1	130.0	124.5	110.0	109.3	...	...	120.6
Canada	117.2	111.2	116.7	125.4	128.6	135.3	134.5	129.9
Italy	94.8	92.8	107.0	181.1	187.7	193.6	195.4	193.3
Netherlands	113.3	137.8	122.0	167.8	170.4	147.5	154.4	156.8
New Zealand	165.1	150.1	149.1	149.9	150.4	...	139.3	151.1
United Kingdom	114.4	111.8	98.6	114.4	118.0	124.7	125.3	123.6
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Basic data source: UNIDO International Yearbook of Industrial Statistics, various years

Table 10
Ratio of Wages to Labor Productivity*
 At current prices in US dollars (US=100)
(In percent)

ISIC	Industry	INDONESIA				KOREA				MALAYSIA				PHILIPPINES				THAILAND			
		1982	1986	1990	1993	1982	1986	1990	1993	1982	1986	1990	1993	1982	1986	1990	1993	1982	1986	1990	1993
311/2	Food Products	102	114	48	56	90	89	94	92	85	101	102	103	66	66	73	83	60	117	62	...
321	Textiles	67	49	38	54	79	67	93	82	93	78	78	80	68	115	85	79	92	59	25	...
322	Wearing apparel, except footwear	81	73	66	43	103	102	104	93	112	125	119	134	108	176	122	105	97	111	134	...
323	Leather and fur products	51	21	38	45	89	67	74	75	68	104	121	135	116	128	119	140	...	40	180	...
324	Footwear, except rubber or plastic	111	59	58	44	134	85	78	111	134	112	117	127	100	162	125	49	91	71	115	...
331	Wood products, except furniture	53	47	34	40	67	93	81	89	84	93	83	79	56	109	85	77	56	76	51	...
332	Furniture and fixtures, excl. metal	121	86	72	69	121	84	74	75	110	110	92	97	97	146	106	84	241	98	72	...
341	Paper and products	112	77	28	36	92	68	86	73	83	84	92	95	68	26	60	58	86	65	49	...
342	Printing and publishing	99	104	78	58	90	84	84	92	98	123	97	97	88	129	106	84	183	259	88	...
351	Industrial chemicals	49	89	60	51	57	58	84	84	75	34	45	40	45	31	68	64	84	102	84	...
352	Other chemicals	143	150	105	102	86	86	85	94	118	131	129	138	77	136	108	93	80	104	94	...
355	Rubber Products	73	76	47	61	113	91	108	71	68	65	73	85	57	108	98	89	51	54	53	...
356	Plastic products	118	93	47	75	90	75	77	70	87	90	77	85	83	104	71	65	53	131	30	...
381	Fabricated metals	55	55	36	38	76	72	71	77	87	87	74	67	67	76	74	74	88	57	43	...
383	Electrical machinery	46	52	36	49	67	56	70	70	85	83	80	85	60	78	61	78	35	54	28	...
384	Transport equipment	52	59	20	18	67	68	74	85	84	109	43	67	52	84	44	38	54	96	41	...
390	Other manufacturing industries	99	86	66	57	105	94	100	98	100	95	80	95	113	143	96	98	59	67	36	...

* Wages and labor productivity are in US dollars at current prices

Basic data source: UNIDO, International Yearbook of Industrial Statistics, various years.

Table 11
INDICES OF PER CAPITA OUTPUT
(1989-91=100)

Country	Agricultural Production					Food Production				
	1970	1980	1990	1996	1997	1970	1980	1990	1996	1997
Indonesia	68	78	101	113	111	67	77	101	113	111
Malaysia	73	86	100	103	104	56	72	100	110	111
Philippines	89	108	104	106	104	90	109	104	107	105
Thailand	81	96	95	108	108	81	97	105	105	104
Viet Nam	76	79	100	121	120	76	79	100	119	118
China	60	69	101	144	148	60	70	102	149	152

Source: FAOSTAT Database Collections, online edition (May 1998).

Table 12
Investment in Infrastructure, 1992 (US\$ M)
(In million US dollars)

Country	Total	GDP (US\$B)	Invest. as a % of GDP
China	24637	484	5.1
Indonesia	4800	126	3.8
Korea	13844	296	4.7
Malaysia	3473	58	6.0
Philippines	1287	52	2.5
Thailand	4780	110	4.3
Others*	2268	57	4.0
East Asia	55089	1183	4.7

* Others include: Cambodia, Fiji, Kiribati, Lao PDR, Maldives, Mongolia, Myanmar, PNG, Solomon Islands, Tonga, Vanatu, Vietnam and western Samoa

Source: World Bank (1995)

Table 13
Infrastructure Competitiveness Indicators

Country	% of Roads Paved 1995	Normalized Road Index 1995	Phone Lines per 1000 pop 1995	Waiting Time for a Line (yrs) 1994	Average Price per 3 min. call 1995
China	89.7	..	34	0.3	..
Indonesia	45.5	38	17	0.3	6.07
Korea Rep.	6.3	118	415	0.0	4.88
Malaysia	75.0	..	166	0.3	5.99
Philippines	16.7	47	21	5.5	6.22
Singapore	97.3	..	478	0.0	4.02
Thailand	..	140	59	4.0	7.30
Viet Nam	25.9	..	11	1.5	..

Source: World Bank Competitiveness Indicators, internet edition.

Table 14
Gross Enrolment Ratios by Level, Adult Literacy and Primary Level Completion Rates
Selected Asian Countries

Country	Gross Enrolment Ratio		Adult Literacy Rate		Primary Level Completion Rate (1990)
		1970	1994	1970	1995
China				...	81
	1st Level	85	118/ <u>a</u>		
	2nd Level	23	55/ <u>a</u>		
	3rd Level	0.1	3.8/ <u>a</u>		
Indonesia				54	84
	1st Level	77	115/ <u>a</u>		
	2nd Level	15	44/ <u>a</u>		
	3rd Level	2.8	8.5/ <u>c</u>		
Korea Rep.				88	97
	1st Level	103	95/ <u>b</u>		
	2nd Level	42	99/ <u>b</u>		
	3rd Level	7.9	54.8/ <u>b</u>		
Malaysia				60	83
	1st Level	87	93		
	2nd Level	34	61		
	3rd Level	1.6	7.2/ <u>c</u>		
Philippines				83	95
	1st Level	108	111		
	2nd Level	46	79		
	3rd Level	19.8	26.8/ <u>a</u>		
Singapore				...	91
	1st Level	106	107		
	2nd Level	46	69		
	3rd Level	6.8	35.2/ <u>c</u>		
Thailand				79	94
	1st Level	83	87		
	2nd Level	17	49		
	3rd Level	2.7	20.6		

/a 1993

/b 1995

/c 1990

Sources: Enrolment Ratio: UNESCO Statistical Yearbook, 1983 & 1996
Column 3: UNDP Human Development Report, various years

Table 15
Public Expenditure on Education

Country	As % of GNP		As % of Total Gov't Expenditure	
	1970	1994	1970	1994
China	...	2.6	...	12.2
Korea	3.6	4.5	21.4	16.6
Malaysia	4.4	5.3	17.7	15.5
Philippines	2.6	2.4	24.4	10.5
Singapore	3.1	3.3	11.7	24.2
Thailand	3.5	3.8	17.3	18.9

Sources: UNESCO Statistical Yearbook, various years;
UNDP Human Development Report, various years

Table 16
Gross Expenditure on R&D
(In percent of GDP)

Country/Area	1981	1991
Japan	2.13	3.02/ <u>a</u>
USA	2.43	2.75
Korea Rep.	0.62	1.86
Taipei	0.93	1.69/ <u>a</u>
Singapore	0.28	1.27/ <u>b</u>
China	0.80	0.72
Malaysia	...	0.80
Indonesia	...	0.20
Philippines	...	0.20
Thailand	0.02/ <u>c</u>	0.16

/a 1990

/b 1992

/c 1986

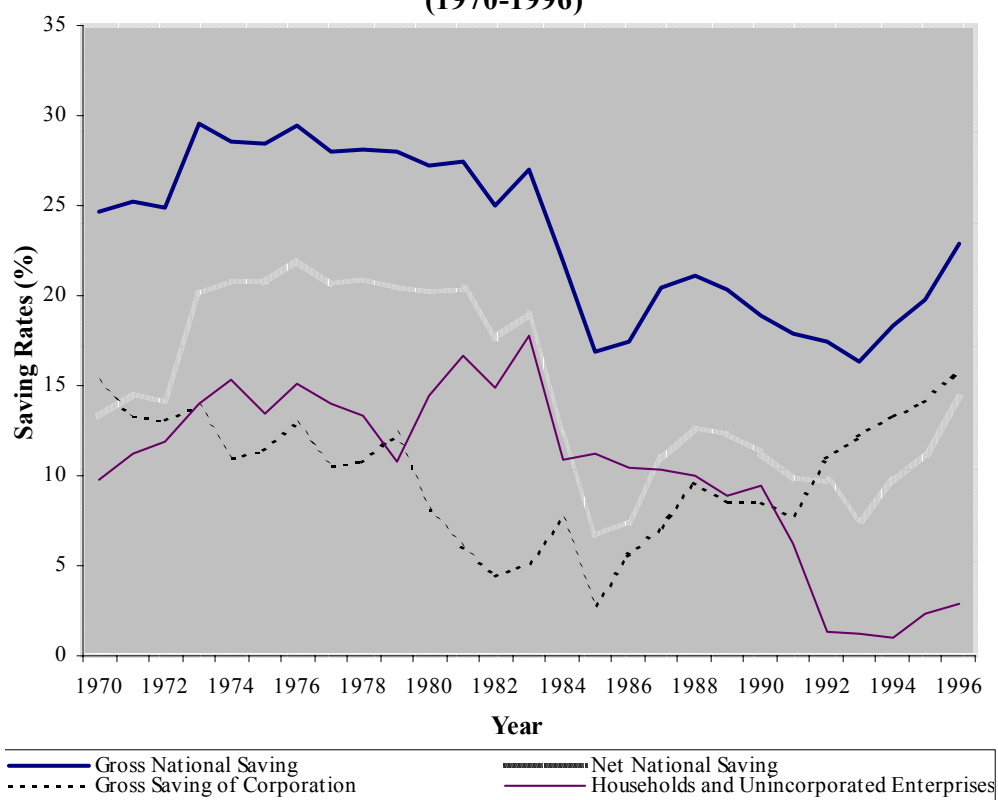
Source: UNESCO World Science Report, 1996

Table 17
Philippine Exports and Imports by Pollution Intensity

Type of Product	% of Total Exports		% of Total Imports	
	1975	1990	1975	1990
Highly Pollutive/Extremely Hazardous	2.3	5.0	32.5	24.4
Highly Pollutive/ Hazardous	31.3	10.4	14.8	19.4
Highly Pollutive/Non-Hazardous	17.4	6.5	4.5	4.6
Pollutive/Extremely Hazardous	0.3	2.1	1.7	5.3
Pollutive/ Hazardous	17.7	18.9	34.5	19.7
Pollutive/Non-Hazardous	0.3	1.3	0.9	1.3
Non-Pollutive/Hazardous	21.9	11.2	8.1	9.2
Non-Pollutive/Non-Hazardous	8.9	44.6	3.2	16.2

Source: Intal (1994)

**Figure 2. Philippine Saving Rates
(1970-1996)**



**Figure 3. Real Effective Exchange Rate, 1975-1996
(1990=100)**

