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Philippine Institute for Development Studies

Beyond 2000: Assessment of Economic Performance and an Agenda for Sustainable Growth

Josef T. Yap

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BEYOND 2000: ASSESSMENT OF ECONOMIC PERFORMANCE AND AN AGENDA FOR SUSTAINABLE GROWTH

Integrative Report (13 August 1998)

*Josef T. Yap*¹

1.0 Introduction

Newly elected President Joseph Ejercito Estrada is in a similar unenviable situation as his two predecessors. Like the two post-Marcos presidents, he inherited an economy reeling from a crisis. Former President Corazon Aquino presided over an economy battered by the 1984-1985 external debt crisis while immediate past President Fidel Ramos assumed office in the aftermath of the Gulf War and at a time the country was in the midst of an energy crisis. Nevertheless, the effect of the economic and social reforms implemented in the past 12 years and the smooth and peaceful transition of government should provide the Estrada administration enough momentum to steer the country through the adverse effects of the financial turmoil that is at present gripping the East Asian region. However, it remains to be seen if subsequent economic programs will carry the Philippines into the next century under the mantle of sustainable growth and development.

The current East Asian financial crisis raises very important issues and foremost of these would be the sustainability and relevance of the East Asian miracle.² The phenomenal growth of many of the economies in the region has been the subject of rigorous analysis over the past ten years. One section of this paper will attempt to explain the causes of the present crisis. The discussion will help us understand whether certain policies and structures that were successful in the past are now ineffective and even inimical to economic growth given the more open and competitive economic environment.

The primary objective of this paper, however, is to assess the performance of the economy over the period 1986-1997 and determine how far the Philippines has come toward the goal of sustainable growth and development. Special attention will be given to the economic program of President Ramos.

In order to give an impartial and comprehensive assessment, a framework or set of criteria on which to base the evaluation must be established. One approach is to use the 1992-1997 Medium-Term Philippine Development Plan (MTPDP) as a benchmark. The other

¹Research Fellow, Philippine Institute for Development Studies (PIDS). This paper would not have been possible without the excellent assistance provided by Ms. Vanessa M. Sumo. The usual disclaimer applies.

²This paper uses the terminology of the World Bank (1993). There are those who claim that no miracle was involved; nevertheless, what is referred to is the phenomenal growth of many of the economies of this region over the past three to four decades.

approach is to adopt a broader framework by examining the determinants of long-run economic growth using both theoretical and empirical standpoints and see how close the Philippines has come to satisfying these conditions.

The present crisis notwithstanding, valuable lessons remain to be learned from the East Asian experience. While it is acknowledged that there is no precise recipe that could be followed to replicate the performance of the tiger economies, a number of policies and conditions that were undoubtedly necessary for their success have been identified. These will provide the empirical basis for evaluating the Philippine situation.

After assessing the economy's performance for the past ten years, the next step would be to recommend a course of action in order to achieve sustainable growth and development. The present financial crisis, however, complicates this task. Thus, policy recommendations will have to be modified accordingly, if not their substance, at least their timing. It will be necessary to prescribe short-term measures to complement the longer-term policies to assure a smooth transition.

The crisis makes imperative the evaluation of existing paradigms. There has been a serious debate on the role of government intervention in the development process, and recent developments may compel a shift to a different framework. For example, the crisis may have been brought about by adhering too closely to the neoliberal paradigm, suggesting that the associated policies carry benefits that are only transitory in nature. It may also be the case that the crisis was triggered by policies inconsistent with the accepted paradigm.

2.0 Determinants of Economic Growth

Sustainable growth and development refers to a steady upward trend in real per capita income combined with an improvement in living standards. Keen interest in the study of long-run economic growth was revived in 1986 following the study of Paul Romer (1986) which signalled the advent of new theoretical models and started the proliferation of empirical models dealing with the determinants of growth. Prior to modern growth theory, studies in this area revolved around the standard neoclassical growth model of Robert Solow (1956) and Trevor Swan (1956). Their model simply states that output is higher the more capital and/or labor has been accumulated. Output will also increase with improvements in technology although it is not explicit in their model how technological development is brought about.³

In the standard neoclassical framework, the determinants of economic growth are factor accumulation and factor productivity. (Figure 1.) The faster the growth of capital and/or labor, the higher is the growth rate of output. Hence, the investment rate and employment generation

³In functional form, $Y = f(K, L, t)$ where K is capital, L is labor and t is a time trend representing technological development. The neoclassical framework implies that the functional form must satisfy certain conditions particularly diminishing marginal returns. A brief discussion of the economic jargon in layman's terms is given in Box 1.

are important elements of economic growth. The record of the Ramos administration in the area of employment and industrial relations is examined by Jurado and Sanchez (1998). The driving force of investment in East Asia is discussed in the next section.

When the dynamics of the standard neoclassical model are derived, one result would be that at equilibrium or in the long-run, per capita income does not change. The reason for this is the assumption of diminishing marginal returns to capital, where a rise in the capital stock per worker results in a fall in the rate-of-return to capital. Thus, as more capital is accumulated, per capita income grows but at a slower rate until eventually output simply keeps up with population growth.

The standard neoclassical model, also known as a conditional convergence model, supposes that after controlling for measures of government policies, poor countries tend to grow faster than rich ones. The assumption of diminishing returns to reproducible capital is also behind this result. Poor countries with low capital to labor ratios have high marginal products of capital and tend to grow at faster rates.

A long-run constant per capita income is not consistent with historical data and comparing the growth rates of poor and developed countries gives a mixed picture about conditional convergence (Barro and Sala-I-Martin 1995). In the standard neoclassical production function, what could bring about a change in per capita income growth is a change in t , the level of technology. But in the model t is exogenous which implies that there are no explicit policy measures and channels by which the level of technology can be changed. Thus, the force that drives long-run economic growth is generated outside the system, which is definitely not a desirable situation.

The shortcomings in the neoclassical model were corrected with the development of endogenous growth models. These models present the hypothesis that investment (either in physical capital, human capital, or research and development activities) generates externalities that offset the decreasing returns to inputs. Externalities arise when activity in one area or sector affects the activity in other sectors. This leads to the situation where investment in one sector does not result in diminishing returns for the aggregate economy because of its positive impact on other sectors (investment in computer technology is a prime example). This explains why rich countries, where technology development is more rapid, may be able to maintain or widen their lead over poor countries.

Three factors could create the externalities but empirical analysis is needed to determine which factor is dominant in a particular economy:

The first explanation presumes that increasing returns are incorporated in physical capital. As a result, an economy may grow faster if it increases its investment rate in physical capital above the level which would have been decided autonomously by private entrepreneurs. This suggests that government investments that complement the socially sub-optimal level of private investment can accelerate economic growth.

A second interpretation stresses new ideas and new products as the engine of long-term growth, rather than capital accumulation. This line of thought supports the hypothesis that

international trade and foreign investment are the factors that create the externalities which make the growth process endogenous and self-sustaining. Outward orientation allows firms to have greater access to foreign technology without excessive expenses in research and development (R&D) activities. The spillover effects and the externalities of this access accelerate technical progress, raise the total factor productivity of the economic system and spur economic growth.

A third interpretation stresses the importance of human capital. The increase in the stock of human capital is both the result of an increased rate of school attendance and of time spent in education, and an increase in learning related to production (learning by doing) by workers and managers. Some analysts emphasize the latter saying that exposure to new products as a result of outward orientation accelerates the accumulation of human capital through learning spillovers. The result is a sharp rise in productivity and an increase in the technological capability of an economy.

Hence, with the same level of capital and labor, growth can be accelerated if factor productivity--roughly defined as the quality of inputs into production--is enhanced through technology improvement or human capital deepening. The concepts and various measures of productivity and the Philippine record in this area are discussed by Austria (1997) and Cororaton and Abdula (1997). Cororaton and Abdula focused on the manufacturing sector, while Austria dealt with macroeconomic aggregates in measuring productivity. Some of their key findings are presented in Box 2.

Meanwhile, in the endogenous growth framework, technology policy becomes an important tool for accelerating economic growth. The relevant aspects of science and technology policy in the Philippines are considered by Magpantay (1998).

In developing countries, technological development and capital accumulation are not necessarily mutually exclusive processes. Advances in technology are usually embodied in new investment. While the experience of the East Asian economies in this regard vary greatly, the bottom line is that the economy must be able to absorb new technology, whatever its source. Herein lies the importance of human capital formation. The record of the Philippines in terms of human resource development is examined by Herrin (1998).

The neoclassical production function can be modified to account for the depletion of natural resources and damage to the environment. This suggests that output growth should be assessed in terms of its sustainability--a very important and relevant concept for developing countries. The record of the Philippines in environmental management is examined by delos Angeles (1998).

To summarize, in the endogenous growth framework, long-term per capita income growth can result from spillovers either from technology diffusion or learning by doing. Knowledge of the determinants of growth have tremendous policy implications for developing countries. On the one hand, policymakers can focus on capital accumulation and employment generation and create the conditions favorable for investment; on the other hand, they can reduce the emphasis on investment and ease the burden on the economy--usually in the form of foregone consumption--by accelerating the development of the technological capability of the economy

mainly through direct technology acquisition from foreign sources. The East Asia experience could shed light on this issue.

3.0 Key Elements of the East Asian Miracle

East Asia has been the fastest growing region in the world in terms of per capita income during the post-war period. A brief survey of the key issues which could help explain the East Asian Miracle will be useful in identifying policies on which to base the assessment of the Philippine economy. Though this exercise may not provide a comprehensive view of the economic development process, it covers the more important elements. The reference to East Asia is used quite loosely in this paper but is similar to the 1993 World Bank study which refers to the eight high-performing Asian economies or HPAEs, namely, Japan, Korea, Taiwan, Hong Kong, Singapore, Thailand, Malaysia, and Indonesia.

There has been an intense debate on two key dimensions on the reasons for the persistently high growth of the East Asian economies. One dimension, spawned by the work of Young (1994, 1996) and Kim and Lau (1994) and popularized by Krugman (1994), considers whether the primary source of growth was merely capital accumulation, or investment along with rapid growth in total factor productivity. The other dimension deals with the role of government intervention in the development process. While there is broad recognition that the HPAEs exhibit a range of government strategies, from extreme *laissez-faire* to extensive intervention in some sectors, and that some of the interventions were indeed beneficial, considerable disagreement remains over the importance and transferability of active intervention (Collins and Bosworth 1996). The essential arguments of these debates are presented in Annex 1.

At present, there is no compelling evidence to unambiguously support a particular position. There are, however, policies and conditions that are accepted by the different paradigms of the East Asian story. These are referred to as the basic supply side policies (Bertoldi 1997) or simply as the fundamentals for economic growth.⁴ The reasons for their importance is described in this section. This paper does not present any empirical evidence to show how the various economies subscribed to these conditions. This is done to avoid presenting too many data since a cross-country comparative analysis for some sectors will be presented in Section 5.

Two important features of the East Asian experience were earlier mentioned: human capital formation and outward orientation. They are the elements that are readily derived from the theoretical framework of economic growth. (Figure 1.)

⁴As in the statement “getting the fundamentals right.”

Human Capital Formation

Most of the recent empirical growth models introduced an estimate of human capital and have found this to be a significant determinant of economic growth (e.g., Mankiw 1995). In standard growth model, the level of employment is indexed by the level and quality of schooling.⁵

The availability of a well-trained and highly qualified workforce facilitates the transfer of technology that leads to an increase in productivity levels. Most empirical models, however, do not take into account the potentially significant positive implications for per capita income growth rates as increased education contributes to lower population growth rates (Collins and Bosworth 1996).

The 1993 World Bank study on East Asia shows that in the 1960s, the levels of human capital were already higher in the HPAEs than in other low- and middle-income economies. Governments built on this base--focusing education spending on the lower grades, first by providing universal primary education and later by increasing the availability of secondary education. Limited public funding of post-secondary education focused on technical skills, and some HPAEs imported educational services on a large scale, particularly in sophisticated vocational and technological disciplines. The result of these policies has been a broad, technically inclined human capital base well-suited to rapid economic development.⁶

Outward Orientation

The term outward orientation means two things: 1) export orientation and 2) openness to foreign technology. Outward orientation does not imply an open trade environment since many of the HPAEs cannot be described as having free trade regimes. Hong Kong may be the only exception.

The rapid growth of manufactured exports has many benefits, among them 1) the acceleration of economic specialization and technological progress by allowing exporting firms to learn by doing; 2) the promotion of higher rates of capital investment in profitable export sectors, and 3) the generation of foreign exchange needed to finance imports of capital goods (ADB 1997).

The export performance of the HPAEs was supported by the stable macroeconomic framework which prevented currencies from being overvalued. Active promotion of manufactured exports was a significant source of productivity change. In the case of the latecomers, i.e., Indonesia, Malaysia, Thailand and China, the primary catalyst of their export sectors was the massive influx of foreign direct investment.

⁵The model becomes $Y = f(K, L, C, H, t)$, where H is an index for the number of years and quality of schooling.

⁶World Bank (1993), p. 15.

The bottom line, however, is that export performance is directly proportional to a country's competitiveness which in turn is determined mainly by its level of technological capability (Fagerberg 1988).⁷ The importance of technology can be gleaned from the recent theories on international trade (Grossman and Helpman 1991) and the development of endogenous growth theory.

History shows that developing countries that closed themselves to foreign state-of-the-art technology failed to develop or at least failed to grow as rapidly as economies of the East Asia region. From the perspective of most developing countries, modern technology is developed abroad. The HPAEs, however, applied different modes of technology importation. Japan, Korea and Taiwan were selective on, even hostile to, foreign investment and it is no coincidence that they have the deepest local technological capability (Lall 1994). These countries preferred licensing arrangements and practiced "reverse engineering" extensively. The developing HPAEs, on the other hand, relied heavily on foreign direct investment to stimulate their technological upgrading and productivity enhancement.

A high investment rate was another important determinant of economic growth in East Asia. This element is also derived directly from the theoretical framework. Two factors are often cited as essential to rapid capital accumulation: a high saving rate and macroeconomic stability.

Promotion of Saving

A high level of savings provides the economy a ready source of investible funds. A larger pool of domestic savings also means less reliance on foreign sources thus reducing the vulnerability of an economy to external shocks. The saving rates of the HPAEs were not uniformly high, though, until recently. Saving rates of developing HPAEs were lower than in Latin America in 1965, but by 1990 they exceeded Latin America's saving rates by almost 20 percentage points (World Bank 1993).

Four groups of variables appear to play an important role in explaining saving behavior in Asia, particularly the HPAEs. These are demographic factors (including dependency ratios and life expectancy), government policies (broadly including central government saving, credit to the public sector, social security expenditures, and inflation), economic growth, and financial sector development (ADB 1997).

Particular attention was placed on the financial sector which was described by Stiglitz (1998) as the brain of the economy. Policymakers in East Asia enhanced the safety and soundness of their banking systems through prudential regulation, developed the postal saving system to attract small depositors and savers in rural areas, and discouraged consumer borrowing

⁷A country's international competitiveness is its ability to produce goods and services that meet the test of international markets and simultaneously maintain and expand the real income of its citizens. This definition is cited in Haque (1995).

to increase the flow of saving.

Macroeconomic Stability

Perhaps the most prevalent characteristic among the HPAEs was the adherence to sound macroeconomic policy. Fischer (1993) defines a stable macroeconomic framework as a situation where "inflation is low and predictable, real interest rates are appropriate, fiscal policy is stable and sustainable, the real exchange rate is competitive and predictable, and the balance-of-payments situation is perceived as viable." The World Bank defines macroeconomic stability in the context of the HPAEs as a condition where "inflation was kept under control, internal and external debt remained manageable, and macroeconomic crises that emerged were resolved quickly, usually within a year or two."

A stable macroeconomic framework encouraged long-term planning and investment and also contributed to the high saving rate. An environment of relatively high inflation creates price distortions. In particular, real interest rates will be negative and the currency will appreciate in real terms. A high inflation rate also reduces the efficiency of investment and discourages it.

Other conditions that were indispensable to the growth of the East Asian economies but are not derived directly from the theoretical model are: 1) creation of an efficient bureaucracy, 2) demographic transition, 3) agriculture development, and 4) relative income equality.

Bureaucratic Efficiency

Arguably, the most important contribution of the 1993 World Bank study was to stress the relevance of the quality of institutions in the development process. While this is not an innovative view, the influence of the World Bank caused this factor to gain prominence in subsequent discussions. One of the institutional aspects is the creation of an efficient bureaucracy, which in the ADB report translates to effective governance, leadership, and economic management.

There is general agreement that the excellent standards of the bureaucracies of East Asia are the result of recruitment methods, of the seniority/meritocratic promotion system and of efforts made by the government to keep the administration insulated from pressure groups. There is a difference in opinion, however, on the specific role of the bureaucracies.

One position asserts that a competent and efficient bureaucracy was essential in maintaining a stable economic framework and in implementing superior basic supply-side policies. Eventually, in countries that intended to apply selective policies, their efficient bureaucracies were able to 1) select interventions in sectors with market or coordination failures; 2) identify, through the use of performance criteria, selective interventions that did not work and abandon them; and 3) carry out policies that avoided excessive distortions in the structure of relative prices. These measures had a positive impact on growth by getting the fundamentals right

and neutralizing the adverse effects of interventionist policies. This position is largely supported by the neoclassical framework (Annex 1).

The second position argues that because East Asian governments were able to organize efficient, competent and motivated bureaucracies; they were able to design and implement ambitious selective policies that transformed initially backward economies into advanced industrial countries. Rodrik (1996) stresses that the quality of the bureaucracy enabled East Asian governments to avoid the rent-seeking activities that typically accompanied microeconomic interventions.

Demographic Transition

The impact of population growth on economic growth can be positive or negative. A large population with a high dependency ratio strains the resources of an economy. On the other hand, a high population growth rate increases the labor force of the country and increases the market size of the domestic economy making it possible to realize gains from economies-of-scale.

What is important though is the change in the structure of the population brought about by demographic transition. The analysis of the ADB study shows that a large part of East Asia's spectacular economic growth derives from a working-age population bulge.⁸ East Asia has had relatively more workers (savers) and relatively fewer nonworkers (nonsavers) compared with the rest of the world. In the case of Japan, however, this demographic "gift" will eventually become a burden. The challenge is how to make this burden less taxing.

Agriculture Development

Another factor that contributed to the strong economic growth of East Asian countries was the relatively high growth of the agriculture sector. The ADB study attributes the strong performance of the agriculture sector largely to government policies, thus:

"Green revolution breakthroughs, mainly in wheat and rice production, were the result of public investments and management reforms in national agricultural research systems and public support for cooperative arrangements with key international agricultural institutes. The initial introduction of high-yielding varieties often simply involved a transfer of technology from international centers, but this was followed by adaptive research and extension activities organized nationally that were vital for deepening and sustaining the green revolution process. In addition, investments in irrigation and other rural infrastructure (both public and private) in South and much of Southeast Asia were critical to the historically rapid growth rates in food production, as were the trade, commercial and industrial policy reforms that resulted in less expensive and more

⁸ADB (1997), p. 142.

efficient fertilizer use."⁹

The relatively strong agricultural growth in East Asia had several positive consequences: rural poverty was sharply reduced; and rising agriculture incomes improved the health, longevity, and productivity of the rural poor. In some cases, higher rural incomes contributed to the relatively egalitarian structure of society which had a beneficial impact on economic growth as will be discussed later. Higher rural incomes allowed the rural poor to invest more in education which increased their productivity and facilitated their absorption into nonfarm employment. Finally, strong agricultural production helped stabilize prices which contributed to the sound macroeconomic framework.

Income Distribution

Contrary to the Kuznets hypothesis, the HPAEs achieved relatively low and declining levels of equality along with high economic growth. Japan, Korea, and Taiwan also had relatively egalitarian income distributions prior to the surge in economic growth. This was brought about primarily by radical land reform programs. In the case of Malaysia and Indonesia, strong inequalities existed between Chinese minorities and indigenous majority groups and in the 1960s and 1970s, radical redistributive policies became a political priority. In the case of Malaysia, the Bumiputera policy was generally successful but a new elite class evolved giving rise to potential problems (Horii, 1991).

On the issue of income distribution, two key questions must be answered: 1) Is inequality harmful for growth? and 2) Are redistribution policies helpful for economic growth? A set of answers is summarized by Perrson and Tabellini (1994):

1. An egalitarian structure in society has a positive impact on economic growth. The perception that income distribution is relatively fair makes redistributive conflicts less frequent and intense. It also makes these conflicts easier to solve.
2. On the other hand, where there are strong income and wealth inequalities, there will be strong political and social pressure to carry out redistributive policies. If such policies create a situation where there is continuous concern for property rights and in the appropriation of returns to physical and human capital, they can become harmful for economic growth.

Perhaps the more pragmatic interpretation of the issue is that equitable wealth and income distribution is desirable but not a necessary condition for economic growth. Redistributive policies can be attempted so long as they do not create uncertainty resulting in reduced investment levels. This is one reason why emphasis on human resource development is important. As mentioned earlier, education improves productivity and increases employment

⁹ADB (1997), p. 104.

opportunities particularly in the nonfarm sector. Unlike land reform, expanding access to appropriate education especially to the lower income groups is a neutral policy in terms of gainers and losers. What may be affected though is the fiscal deficit and hence, macroeconomic stability, but this is another matter.

Reyes and del Valle (1998) examined the poverty and equity situation in the Philippines focusing on the Social Reform Agenda initiated by President Ramos. Bravo and Pantoja (1998) surveyed the impact of the agrarian reform program, especially its effect on agriculture productivity.

Surprisingly, there is no mention of infrastructure development as a crucial determinant of rapid growth. Most likely, the level of infrastructure development during the initial growth spurts was not exceptional. But this does not diminish the importance of providing adequate infrastructure support to encourage investment and improve productivity. Serafica (1998) evaluated the progress of the Philippine infrastructure sector over the past decade.

The 1997 financial crisis has cast doubt on the merits of the East Asian miracle. It is therefore imperative to examine the causes of the crisis to determine if the fundamental supply side policies are still relevant. This is the subject of Annex 2.

As a final note on the elements of the East Asian miracle, the records of Japan, Korea and Taiwan have been far from exemplary in terms of environmental preservation and their bitter experiences should be avoided. Unfortunately, the developing HPAEs seem to have missed out on this lesson. Part of Section 5 will determine whether the Philippines has suffered the same fate.

4.0 Blueprint for Economic Development

The performance of the Philippine economy during the post-war period has been directly linked to the fortunes of its industrial sector. The various studies on this sector came up with the following major conclusions (Medalla et al. 1995):

1. That the more than three decades of protection had been very costly in terms of its inherent penalty on exports, its serious adverse impact on resource allocation, and dynamic efficiency losses arising from lack of competition;
2. That a reform toward a more liberal and neutral trade policy is necessary to propel the economy to a higher level of industrialization.

This is the basic neoclassical view¹⁰ which revolves around the issue of comparative

¹⁰ A quote from Bernardo Villegas of the University of Asia and the Pacific is a cruder but more succinct description of the neoclassical view of the Philippine development process:

advantage. Economic protection in the past meant that resources of the country flowed into sectors where the Philippines did not possess a comparative advantage. Hence, production, particularly in the industry sector, became highly inefficient. The lack of competition deprived the protected firms of the incentive to become innovative and adopt more modern technology. This resulted in having monopolistic firms that produced poor-quality goods and services at relatively high cost, the burden of which was passed on to the Filipino consumer. Moreover, such policies prevented export-led industrialization to take root in the Philippine economy. Filipino entrepreneurs simply made profit behind the protective cover of tariff walls and nontariff barriers to trade and did not aggressively seek to manufacture products where the Philippines had a distinct comparative advantage in the world market.

The neoclassical framework has become the cornerstone of Philippine economic policy during the Ramos administration. Programs on deregulation (vs. mercantilism), liberalization (vs. protectionism) and privatization (vs. state intervention) have been simultaneously implemented with policies aimed at narrowing the fiscal deficit and stabilizing the exchange rate. Government intervention, as much as possible, has been limited to providing adequate infrastructure and the necessary social services to enhance human capital formation. The goal is to have rural-based industrialization that will modernize the agriculture sector, reduce the employment share of this sector, increase the output share of industry, bring down poverty incidence, and put exports at the helm of economic expansion.

Based on the discussion in Annex 1, there is no compelling historical and empirical evidence in the East Asian context for making trade liberalization, privatization and deregulation as the anchors of the economic program. There are other interpretations of the malaise in the Philippine economy which may lead to different policy prescriptions. For example, Rodrik (1996) contends that in describing the experience of developing countries, it has become common to lump together a wide range of policies under the label "import substitution policies." Confusion then arises because failures were often misattributed to microeconomic policies, when their sources lay either with unsustainable macroeconomic policies or bureaucratic and institutional shortcomings.

The latter aspect is considered by Hutchcroft (1990, 1991) who maintains that the Philippine oligarchy has retained a dominant position over the state throughout almost the entire course of the country's modern history. The oligarchs' main economic base lies outside the bureaucracy, but they thrive upon particularistic manipulation of the political machinery as the primary means of accumulating wealth. Because of the elite's thorough penetration of the state, the bureaucracy has displayed little cohesiveness or continuity. In contrast, Thailand and Indonesia (and Japan and Korea, for that matter) are examples of more modern and stable

"The Philippines' downfall to being the sick man of Asia in the 80s from a progressive economy in the 60s is not due to commonly held reasons. Not corruption--China, Vietnam, and Indonesia have corrupt governments, yet they have high levels of economic growth. Not resources (Japan), nor population (Hong Kong). The basic reason is that the Philippines followed the Latin American model of mercantilism, protectionism, and state intervention."

bureaucracies. The non-insulation of the Philippine bureaucracy from the particularistic interests of the oligarchy can explain why selective interventions deteriorated into rent-seeking activity.

It is not surprising then that Stiglitz (1996), after a long exposition on the East Asian miracle, finally concluded that the real miracle of East Asia may be political rather than economic.¹¹ Pursuit of this line of analysis is not feasible in a purely economic framework which is rather unfortunate. Perhaps a multi-disciplinary study could be conducted to fashion a holistic development framework for the Philippines.

Nevertheless, the economic blueprint in the past decade has followed closely the so-called Washington consensus. This policy choice is driven primarily by disappointment over the results of earlier import substitution regimes, frustration over the high-handedness of monopolies, the convictions of the country's economic managers and, as will be mentioned later, the dictates of the international policy environment. The effectiveness of this program will be assessed in the subsequent sections. Needless to say, if these programs do not yield the desired results in the future, then the alternative explanations should deserve a closer look.

5.0 Assessment of Economic Performance, 1986-1997

5.1 Overview

Overall Performance

The Philippines has definitely come a long way from the political and economic turmoil that characterized the end of the Marcos regime. During the period 1986-1997, the Philippines transformed from the “sick man” of Asia to an economy which stands to recover the fastest from the 1997 financial crisis. Gross Domestic Product (GDP) expanded at an average rate of 3.9 percent from 1986-1991 and 3.7 percent from 1992-1997. Per capita income measured in 1990 US dollars was \$426 in 1986 and stands at \$502 as of 1997, an average increase of 1.5 percent per annum. Poverty incidence was 44 percent in 1985 and the last Family Income and Expenditure Survey (FIES) shows that the incidence declined to 36 percent in 1994. Accelerated economic growth from 1995-97 has further brought down poverty incidence to 32 percent in 1997.

Other economic indicators also show a more robust economy. The consolidated public sector accounts yielded a deficit of 6.6 percent of Gross National Product (GNP) in 1986 but in 1996, the consolidated accounts showed a surplus for the first time in more than two decades.

¹¹The critical questions that must be answered are: Why did governments undertake these policies? Why did politicians or bureaucrats not subvert them for their own self-interest? (Stiglitz 1996, p. 174). The rhetorical question is not an argument for an authoritarian form of government. Rather, it is directly related to the need for good government in order to bring about successful selective intervention. However, this begs the question of how a good government is formed in the first place; hence the contention that it is a political rather than an economic issue.

Inflation has been on a downward trend from 1991 at least up to 1997. Export growth has been strong for the past six years and as a result, the share of the Philippines in the world market more than doubled, from 0.24 percent in 1986 to 0.40 percent in 1996.

Despite the economic gains, there is no room for complacency. The same economic data show that the country still faces daunting problems. The number of families below the poverty threshold actually increased between 1985 and 1994, and between 1994 and 1997. Saving and investment rates still pale in comparison to its East Asian neighbors. Even with all the reforms in the trade and industry sector, the manufacturing sector has been experiencing a slowdown since the last quarter of 1995. And despite all the hype surrounding the economic performance, the GDP growth rate in 1996, which was the peak under the Ramos administration, was the lowest in Southeast Asia in that same year at 5.7 percent.

The succeeding pages will present a more detailed assessment of the economy. Economic performance will be directly related to the factors discussed in Sections 2 and 3. Much of the progress during the Ramos administration, for instance, could be attributed to developments in infrastructure: a) the quick and decisive resolution of the energy crisis in 1992; b) the deregulation of the telecommunications industry; and c) the fast tracking of road infrastructure projects. On the other hand, the sharp peso depreciation and fiscal difficulties that emerged in the latter part of 1997 show that macroeconomic stability remains an elusive goal.

It will be useful to classify the factors affecting sustainable growth and development into two broad categories. One category would be the elements of recovery and economic growth. This category would include the more aggregate factors including trade and industrial policy, productivity trends, macroeconomic stability, and infrastructure. The other category would include the microeconomic set of factors, which relates more to the sustainability of economic growth and the development aspect, encompassing technology policy, human resource development, poverty alleviation and equity promotion, and environmental management. The primary interface of these two sets of factors is productivity performance.

International Economic Environment

The economic program implemented during the past decade should be evaluated *vis-à-vis* developments in the international environment to determine if policy measures are consistent with worldwide trends.

The international economy is described as being increasingly open and integrated, which are the principal features of the globalization process. Major international policy developments have contributed to greater openness and competition especially in the Asia Pacific region (Intal and Basilio 1997).

The General Agreement on Tariffs and Trade (GATT) Uruguay Round, the most ambitious in the series of multilateral trade negotiations in the post-war period, expanded the discussions to the hitherto excluded sectors of agriculture, textiles and garments, and services. The Uruguay Round also deepened tariff reductions, lowered nontariff barriers and widened

tariff bindings. But the most important achievement of the Uruguay Round is the strengthening of the institutional structure of international trading, especially the improvement of the dispute settlement system which came about with the establishment of the World Trade Organization (WTO).

Meanwhile, 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. In tandem with trade and investment liberalization, the APEC member economies are also in the process of formulating "collective action plans" that endeavor to address trade and investment facilitation issues like customs procedures, standards and conformance and transparency in government procurement. Thus, the Philippines is facing not only a more open and integrated regional economy but also one where standards of trading and facilitation as well as domestic policies are increasingly circumscribed.

The latter condition is actually the most forceful argument against industrial policy. As Lall (1994) points out: "...the international scene, the GATT, and the pressures exerted by the developed Western countries, are inimical to selective intervention...Many instruments of industrial policy are increasingly constrained in the name of liberalization." He correctly asserts, however, that if there is a valid case for intervention, then there should be a review of the international rules of the game.

5.2 Elements of Recovery and Economic Growth

Trade and Industrial Policy and the Performance of the Manufacturing Sector

Not surprisingly, it is in the area of trade and industrial policy where reforms under the neoclassical rubric are concentrated. The primary objective is to increase the outward orientation of the economy through greater trade liberalization. After the trade reform process was disrupted during the external debt crisis in 1984-1985, major import liberalization programs were implemented from 1986-1988. During this period, imports for more than 1,400 items were liberalized bringing down the percentage of import-restricted items to less than 10 percent.

This was followed by the second phase of the Tariff Reform Program which narrowed down the tariff range to mostly within 30 percent. This was implemented by the Aquino administration under EO 470 which covered the period 1991-1995. Tariff reform was accelerated during the third phase of the program, this time under the Ramos administration. EO 264 calls for a tariff range from 3 to 10 percent by the year 2000 and a uniform 5 percent tariff by the year 2004.

Based on empirical studies, the impact of the trade reforms is encouraging. Medalla (1998) shows that the average Effective Protection Rate (EPR) across all sectors declined from 44.2 in 1983 to 29.4 in 1990 to 24.1 in 1995. The gap in EPRs especially between agriculture and industry and between the exporting sector and the import substituting sector has been significantly reduced. Moreover, although exports remain penalized by the protection structure, the degree of the penalty has declined. Less sectors are now artificially profitable (i.e., they are

profitable only because they are protected from competition) allowing resources to flow to areas where the economy has a comparative advantage and where they will be used more efficiently.

For the entire manufacturing sector, the DRC/SER ratio¹² went down from 1.72 in 1983 to 1.54 in 1988 and further to 1.22 in 1992. These data show that the costs of protection have been declining relative to the benefits derived. The latest estimates using data from the 1994 Census of Establishments confirm the trend with a 1.18 DRC/SER ratio for 1994, a clear indication of the increase in the overall competitiveness of the manufacturing sector. Likewise, the share of highly efficient firms ($0 < \text{DRC/SER} < 1$) in terms of both total number and production value increased substantially over the period 1983-1992. The share fell slightly in 1994 but is still larger than the figure in 1988 (Table 1). These data imply there is a greater number of efficient firms and that resources are used more productively.

Not only has there been a reduction in the average DRC/SER ratio for manufacturing, there has been a leveling of the ratio across sectors as well. In 1983, the DRC/SER ratios for consumer goods, intermediate goods, and capital goods were 1.43, 1.81, and 2.24 respectively. By 1992, the ratios for these types of goods were 1.21, 1.23, and 1.23 respectively.

Partly because of the reforms in the trade sector, both total exports and the share of manufactured exports increased during the period under study. From only \$4.8 billion in 1986, total exports surged to \$20.5 billion in 1996 (Table 2). This represents an increase in the share of the world market of the Philippines from 0.24 percent in 1986 to 0.40 percent in 1996 (Table 3). Its share, however, is lower than that of most East Asian economies.

The proportion of manufactured exports also increased, from 55 percent in 1986 to 83 percent in 1996. Exports, however, are still concentrated in electronics and garments (at least up to 1993 for garments) revealing a slow pace of change in the structure of the trade sector. Even a breakdown of electronics shows that semiconductors still dominate in this category. While it is true that the growth rate of gross valued added in electrical machinery, which includes electronics, has been relatively high in the past decade, as a share of GDP, it increased from 0.9 percent of GDP in 1986 to only 2.1 percent in 1997 (Figure 2). This implies that import intensity of manufactured exports of the Philippines is still high.

Similarly, the share of value added in manufacturing in total output (as measured by GDP) has remained stagnant for the past ten years and is even lower than the value in 1980 (Table 4). The year-on-year growth of value added in the manufacturing sector in real terms has actually declined for ten consecutive quarters (1995Q4-1998Q4). The sectors adversely affected were garments, tires, and iron and steel. Medalla attributes this phenomenon to three factors: 1) adjustment (sometimes a painful one) to a more open trade regime, 2) an overvalued currency¹³, and 3) the switch in relative protection from manufacturing, this time in favor of agriculture.

¹²The measure of efficiency used in the study of Medalla (1998) is the ratio of the domestic resource cost (DRC) to the shadow exchange rate (SER). The former indicates the value of resources used to produce a unit of net foreign exchange while the latter indicates how society truly values foreign exchange. Thus a ratio of less than or equal to one indicates efficiency since the activity is using domestic resources whose cost is lower than value of the net foreign exchange it earned or save. The lower the DRC/SER ratio, the higher the allocative efficiency.

¹³The issue of whether or not the peso was overvalued is discussed in Box 3.

An inevitable outcome of a more open trade regime is that inefficient local firms are weeded out almost immediately because of the deluge of imports. It will take some time before the resources are re-invested in more efficient sectors which are usually export-oriented. The restructuring process is akin to the "J-curve" effect of a currency devaluation. In this case, the manufacturing sector contracts because of the closure of noncompetitive firms but it should start to grow rapidly once resources are used more efficiently.

The restructuring process would have been smoother if the currency were allowed to depreciate in real terms following the increase in demand for imports. The lower value of the peso would have acted as a cover for import-competing industries. Because of the overvaluation of the peso (see the section on Macroeconomic Stability) import-competing firms were hit with a double-whammy: lower tariffs and an artificially strong peso both of which made imports cheap.

The low value added of electronics and garments in the export sector also contributed to the stagnation of the manufacturing sector. But an overvalued currency could also explain why exports are heavily concentrated in commodities that are import-dependent. Because it is relatively cheap to import, exporters focus on products whose inputs can be sourced from abroad making labor the primary source of value added.

The slow down of growth in the manufacturing sector and its stagnant share in total output can be also be traced to low labor productivity and high unit labor costs, two measures that are arithmetically related. This aspect will be considered in greater detail in a subsequent section.

Overall, the Philippines has taken great strides to enhance its outward orientation and is bordering on being an open economy by the year 2004. This progression is dovetailed to the process of globalization. Despite the policy reforms, however, manufacturing growth has not performed up to expectations. This is related to exchange rate policy and, as will be shown later, the poor record in labor productivity and total factor productivity growth.

Agriculture Sector Performance¹⁴

The agriculture sector which accounts for slightly more than 20 percent of GDP and over 40 percent of employment has performed poorly since the 1980s. The Philippines had one of the lowest growth rates of agricultural gross value added and exports among developing Asian countries over the past two decades (Table 6). Measures of revealed comparative advantage (Table 7), land and labor productivity (Table 8), and shares of major agricultural exports to world trade have declined over time indicating declining competitiveness of the sector. The three major causes of such poor performance are: 1) increased protection of the agriculture sector especially when compared to the manufacturing sector, 2) widening price distortions within the sector, 3) inadequate agricultural support services, and 4) distortions in the land market.

¹⁴The discussion in this section is largely based on David (1998).

The bias against agriculture caused by price and trade policies was corrected by mid-1990s when nominal protection rates of import-competing agricultural commodities were raised (particularly corn, sugar, rice; see Table 9), implicit tariffs on traded agricultural inputs declined (fertilizers, agriculture chemicals, and farm machineries), and protection of the industry sector was reduced. Intervention policies have become generally more favorable to agriculture as EPRs rose to levels that are almost equal to manufacturing in the recent period.

Consequently, improvements in agricultural incentives were accomplished at the cost of greater inefficiencies in resource allocation arising from widening price distortions within agriculture, specifically against agricultural exports in favor of corn, sugar, and rice where the country has less comparative advantage in production. The bias against agricultural exports was also exacerbated by the substantial appreciation of the peso in real terms between 1990 and early 1997.

Moreover, the rising trade protection caused the significantly higher domestic prices of rice, corn, sugar, poultry and other importable agricultural products that were detrimental not only to efficient resource allocation within the crop sector (where relatively more of the scarce land resources are allocated to less socially profitable crops), but also to the growth of the livestock and poultry sectors, and to the agro-processing sectors which were penalized by the artificially high domestic prices of feed ingredients and sugar, and resulted in lower supply of importable agricultural raw materials.

The excessively high protection of major food commodities also had adverse effects on equity because the majority of rural and urban poor are net buyers of the highly protected food commodities. High food prices also put pressure on wages making labor-intensive manufacturing industries less competitive relative to the low wage-cheap food economies such as Vietnam and China.

The WTO agreement has not accelerated trade liberalization in agriculture. On the contrary, it has delayed the original schedule of the trade liberalization program, as new tariffs replacing quantitative trade restrictions were higher than previous bound tariff rates and the nominal protection rates computed as the ratio of domestic and border prices. Thus, reductions in tariff rates by 2004 will only accomplish the programmed tariffs for 1995 as embodied in EO 470. The Philippines now has the highest nominal protection rates on major food commodities, as evidenced by a comparison of domestic prices of corn, sugar, and rice across ASEAN countries.

Furthermore, the quantitative trade restrictions which are supposed to have been abolished under the WTO agreement, continue to be the mechanism used to regulate imports of major agricultural products. Since the new tariffs are excessively high (100 percent in many cases), the volume of allowable imports under the lower in-quota tariff (or minimum access volume, MAV) is often adjusted to prevent sharp increases in domestic prices. Rice has been exempted from tariffication up to 2004.

The continued use of quantitative trade restrictions rather than tariffs promotes rent-seeking, reduces government revenues, incurs bureaucratic cost, and worsens price uncertainties. It has also put back the National Food Authority (NFA) or the government in the business of

international trading, better left to the private sector.

Another source of malaise in the agriculture sector is the existence of weak property rights structure in the land market. As land becomes increasingly scarce, long-term investments in land improvements and flexibility in land market transactions (sales and rental) to facilitate changes in land use/cropping patterns, as well as land management patterns (small vs. land farm vs. contract farming, etc.) are necessary to maintain agricultural competitiveness.

Government upland policies and agrarian reform programs, however, have stifled the efficient operation of land markets, lowered incentives for long-term investments in land improvements and tree crops, and eroded the collateral value of land. Thus, agricultural loans in real terms and as ratios to gross value added in agriculture and total loans have been declining since the 1980s.

Most of the uplands (with a slope over 18 percent) are still classified as public land and hence, full property rights cannot be conferred, even in slightly sloping areas suitable for crop production, agroforestry, or livestock pasture. The granting of a variety of user rights arrangements (Certificates of Stewardship Contracts, Community Forest Management, Industrial Forestry Management Arrangements) has been quite limited and does not confer any collateral value because of the limited terms of tenure and non-transferability of rights. On the other hand, the very low rental fee for pasture leases has led to excess demand with rights to large parcels being allocated to politically powerful families.

The situation has been exacerbated by the agrarian reform program's slow and uncertain implementation, as well as certain provisions which increased distortions in land markets resulting in unintended negative effects. The threat of land reform and restrictions in land sales even after land transfer lowered incentives for long-term investments because of the risk of not reaping the returns. Although difficult to empirically document, these largely explain the rapid cutting of coconut trees for lumber, the limited availment of the government coconut replanting program, and the limited investments in the modernization of sugar milling factories or in the mechanization of sugar production despite low milling efficiency, rising real wages, and relatively large farm sizes. By contrast, performance of rice production, where land reform has been largely accomplished by the 1980s, has been much better.

The confusion in the implementation of the Comprehensive Agrarian Reform Program (CARP) was aggravated by the lack of national land use or zoning policy and weak controls since the expectation of agrarian reform promoted the premature conversion of agricultural land use for non-agricultural purposes.

One more issue in the sector's performance is the inefficient allocation of public expenditures in agriculture. While public expenditures in this sector have recovered since the late 1980s, these have been allocated mostly for redistributive purposes (agrarian reform and market subsidies) and for strengthening natural resources and environmental management, rather than on long-term productivity-enhancing investments to reverse the sector's declining competitive advantage.

Close to one-fourth of public expenditures has been allocated for forest rehabilitation and protection; while another one-fourth of total expenditures was spent on the agrarian reform program. Although about half of the agrarian reform expenditures was spent on support services, most of these are redistributive in nature, i.e., subsidies for credit programs and inputs, cooperative development, and others. Another 10-12 percent of the budgetary allocation has went to the National Food Authority for the purpose of rice price stabilization.

In contrast, budgetary allocation for irrigation--the single largest item of public expenditures between 1974 and 1984--dropped sharply since mid-1980s, constituting only about 8 percent of the total. Agricultural research or technology generation was severely underfunded with only 0.3 percent of agricultural gross value added, in contrast to an average of 1 percent among developing countries and 2-3 percent among developed countries, and equivalent to only 5 percent of total agricultural public expenditures.

Public expenditures for agriculture continue to be disproportionately in favor of the rice sector. Rice accounts for about half of agricultural expenditures (excluding DENR appropriations) but accounts for less than 15 percent of gross value added of the sector. Aside from the budgetary allocation for irrigation and price stabilization, rice dominates expenditures for extension, land redistribution, credit programs, subsidies for feeds, fertilizers, farm machineries, and post-harvest facilities. In contrast, budgetary allocations for the exportable sub-sector have been quite meager in comparison to the implicit tax imposed by the overvaluation of the peso.

The issue is not only the level of public expenditure and its allocation, but equally important are the inefficiencies caused by weaknesses in the bureaucracy in terms of organizational structure, incentive problems, and instability in leadership. A fragmented research and development system, as well as the weak linkage between research and extension failed to promote technological development in many major agricultural commodities.

Employment, Wages and Productivity

The common thread that links the performance of the agriculture and manufacturing sectors is their low level of labor productivity and the adverse impact of an overvalued currency. Productivity trends will be discussed in this section while exchange rate policy will be considered in the section on macroeconomic stability. A simple framework adopted from Haque (1995) will be used to relate all the relevant variables.

A country's per capita income, taken as a measure of the standard of living, can be expressed as the product of labor productivity, the proportion of the labor force that is employed, the labor force participation rate, and the country's terms of trade with respect to the rest of the world. The exact relationship can be described as follows:

$$v = \frac{Y}{L} \cdot \frac{P}{d} \cdot \frac{L}{N^*} \cdot \frac{N^*}{N}$$

In this case, real per capita income v is equal to the value of output per employed person (Y/L) deflated by the cost of living index d , and multiplied by the product of the rate of employment L/N^* and the labor force participation rate N^*/N . Y is total output or GDP in a given period, P the price of output, L the number of persons employed, N^* the size of the labor force, and N the size of the population.

Let the cost of living index d be measured by the geometric mean of domestic and foreign prices (P and P^* respectively) with proportional weights (that is, $d = P^b \cdot P^{*(1-b)}$), where b is the proportion of income spent on domestic goods. Then the above equation can be rewritten as:

$$v = \frac{Y}{L} \cdot \frac{P}{P^*}^{(1-b)} \cdot \frac{L}{N^*} \cdot \frac{N^*}{N}$$

where Y/L is output per employed worker, or labor productivity, and P/P^* is the ratio of domestic to foreign prices, or the terms of trade.

This section will look at the behavior of labor productivity and employment and their contribution to economic growth. An exchange rate depreciation generally leads to an improvement in the terms of trade that is why an overvalued currency is detrimental to growth. Meanwhile, movements of N^*/N captures the demographic transition that was generally beneficial to the HPAEs.

Data show that employment grew by a net of three million during the period 1993-96 or an average of one million a year (Jurado and Sanchez, 1998). This is short of the target of the Medium-Term Philippine Development Plan which is 1.1 million per year, but the performance is quite commendable. The improvement led to a decline of the open unemployment rate from 8.6 percent in 1992 to 7.4 percent in 1996, an extension of the trend since 1987 (the beginning of the Aquino administration) 1987 when the unemployment rate stood at 9.1 percent.

The direction of movements in nominal wages, however, is upwards while labor productivity is stagnant (Table 10). Compared to other ASEAN countries and China, the Philippines is at the tailend in terms of productivity performance between 1975 and 1996 (Table 11). As a result, unit labor cost in the Philippines, which is the ratio of nominal wage and labor productivity, has significantly increased between 1987 and 1995. For the entire Philippines, unit labor cost rose by 19 percent, while for the manufacturing sector the unit labor cost rose by 21 percent. Judging from the simple model above, the problem is more with stagnant labor productivity than with rising nominal wages.¹⁵

Real wages have remained practically constant over the period 1989-1995 and econometric studies have shown that wages are not the primary source of inflationary pressure in the Philippines. As pointed out earlier, wages respond strongly to food prices which are relatively high in the Philippines. The high food prices in turn can be traced to the price distortions and low productivity in the agriculture sector. Ultimately, it is productivity that drives the movement of unit labor costs in the Philippines.

The sluggish labor productivity is mirrored in the trend of total productivity. Econometric estimates by Austria (1997) show the erratic behavior of growth in total productivity with most of the values in the negative axis (Box 2). A cross-country study conducted by Collins and Bosworth (1996) shows that the Philippines has the lowest average growth in total factor productivity between 1986 and 1994 (Table 12).

What then are the causes of the sluggish performance in labor productivity and total productivity? Based on the model in Section 2.0, one factor is a low domestic investment rate which means that not enough capital is accumulated to support the labor force. Because of limited capital resources and the operation of diminishing returns, labor productivity stagnates as employment increases.

Two other factors are infrastructure development and social sector policies particularly those related to education. Persistent underinvestment in human resource development has had a cumulative impact on productivity growth. The East Asian economies, however, were able to improve their productivity mainly through enhancing their technological capability. Investment in R&D partly explains this phenomenon. These topics will be discussed in separate sections that follow.

For the developing HPAEs (i.e., Indonesia, Malaysia and Thailand), technological upgrading came principally through foreign direct investment (FDI). The importance of FDI in enhancing productivity in the Philippine case is verified by the econometric results of Austria (1997) and Cororaton and Abdula (1997). Data on FDI also show that the Philippines garnered lower shares than ASEAN members who are also HPAEs (Table 13). China, by far, had the largest chunk of FDI and this explains its phenomenal growth during the last decade.

¹⁵The variable wage, w , is not explicit in the model and does not affect per capita income v . It can be surmised though that w and P have a positive relationship. Hence the conclusion that low labor productivity Y/L is the more critical reason for high unit labor cost.

This finding then raises the question of what attracts FDI to the host country. By studying the behavior of FDI and implementing measures conducive to foreign investment, policymakers can focus on "attracting winners" rather than on "picking winners." Some studies have shown that the key determinants of FDI are political stability and macroeconomic stability (De Jong and Vos 1994). The econometric results of Mercado-Aldaba (1995) and Lamberte (1993) indicate that the real effective exchange rate is a significant variable in explaining the amount of FDI inflows into the Philippines. The less is the real appreciation of the peso, the greater is the inflow of FDI. This is the closest representation of macroeconomic stability in their models.

The exchange rate emerges as a key variable in the discussion so far. It must be properly managed to maintain macroeconomic stability and competitiveness. The challenge becomes greater in a more open and integrated international economy.

Investment, Saving, Fiscal Adjustment and Macroeconomic Stability

Investment is at the heart of economic growth. Data in Table 14 show that the Philippines has a very low investment rate compared to the HPAEs and China. This is probably the most crucial factor in explaining the mediocre performance of the Philippines and the concomitant poor labor productivity.

One reason for the low investment rate in the Philippines is its low saving rate. It was noted earlier that the HPAEs exhibited exceptionally high saving rates. This is gleaned from the data in Table 15.

Both the low investment and saving rates in the Philippines are related to the country's poor record in macroeconomic stability. The economy has been plagued by periodic boom-bust cycles making it difficult to maintain a stable environment suitable for long-term decisions. This is the gist of the options approach to investment behavior (Box 4).

During the period 1992-1997, the Philippines showed marked improvement in terms of macroeconomic stability. Inflation was on a downward trend, the current account deficit was under control and the consolidated public sector account recorded a surplus for the first time in two decades. Added to this was a rising M3/GNP ratio (Figure 3) which indicated a greater amount of savings flowing into the formal financial sector and the economy's increased ability to absorb credit into the system without generating inflationary pressure. It was in this period, however, that economic managers faced new threats to macroeconomic stability and at the same time had to contend with old ones.

The liberalization of the capital account in 1992 and the surge in global capital flows has significantly changed the parameters of macroeconomic policy making and financial regulations in the Philippines. Table 16 shows the composition of foreign exchange flows of the country from 1990-1997 focusing on the capital account. Medium- and long- term (MLT) loans have been greater sources of financing than FDI, similar to the external borrowing episode in the mid- to late 1970s. Unlike that period, however, MLT loans in recent times have been primarily

private sector debt.

FDI flows were dominated by debt conversions during the early 1990s and privatization proceeds especially in 1994 and 1995. This indicates that the Philippines is still a laggard in terms of attracting export-oriented FDI. Contrary to popular perception, portfolio capital on a net basis is relatively low although the level of gross flows rose sharply in recent years. The breakdown of portfolio capital reveals, however, that non-resident portfolio investment has been positive and increasing since 1991. The accumulated non-resident portfolio investment for the period 1991-96 is slightly over \$5 billion. Given that the foreign exchange reserves of the Bangko Sentral ng Pilipinas (BSP) hover around the \$10 billion level, large and sudden movements in non-resident portfolio capital will have a tremendous impact on macroeconomic variables.

The experience in a number of Southeast Asian countries and Korea is that the periods of large net capital inflows were associated with rapid expansion in the banking sector, in their foreign liabilities, deposits, and domestic lending. The Philippine experience in the past three years seems to indicate a similar trend. The sharp rise in foreign liabilities of the commercial banks contributed to the rapid increase in loans and advances to the private sector and the total assets of the banking system (Tables 16, 17, 18 and 19). Thus, it is apparent that the soundness of the banks' credit decisions has a large bearing on whether the capital flows will eventually result in a robust economy or undermine the growth process. This situation makes prudential regulation by the BSP a very important function and greater transparency in the bank lending process a significant issue.¹⁶

The greatest challenge to macroeconomic managers is to minimize asset price volatility in the face of these capital flows. Figure 4 shows that among the ASEAN countries and China, the Philippines had the highest appreciation of the real effective exchange rate between 1991 and 1996. Because of its sharp devaluation in 1994, China had a real exchange rate depreciation.

The extent of the appreciation may have been higher if BSP had not bought dollars in the market to increase demand for foreign exchange. This intervention, however, had limited effects because of International Monetary Fund (IMF)-imposed ceilings on monetary aggregates. The BSP had to sterilize the monetary effects of its dollar purchases in the market and this put upward pressure on domestic interest rates. This, in turn, attracted more capital inflows which partly offset the sterilization measures. Lamberte (1995) estimates the offset coefficient at 0.88 for the Philippines which is higher than estimates for other countries (Leung 1996).

Sterilization measures also carried a quasi-fiscal cost owing to the interest differential between domestic and international interest rates. High interest rates also have a dampening influence on investment spending.

¹⁶Quoted from Intal and Llanto (1998). See Annex 2 for a discussion of the implications of financial sector behavior on the present crisis.

The most effective response to large foreign exchange flows is sustained prudent fiscal policy. It makes monetary policy more flexible and reduces pressure on domestic interest rate by reducing the public sector borrowing requirements. The challenge is how to maintain a tight fiscal policy without sacrificing much-needed public sector expenditures particularly in infrastructure.

In her review of fiscal policy for the period 1986-1996, Manasan (1998) commends the depth of fiscal adjustment during the last decade. From 6.6 percent of GNP in 1986, the consolidated public sector deficit reached a surplus in 1996 equal to 0.2 percent of GNP. She notes, however, that the bulk of fiscal adjustment in recent years was due to the large inflow of privatization proceeds. Capital outlays and government expenditures on maintenance and other operating expenditures (MOOE) which suffered major cutbacks during the adjustment period have not been restored to their normal levels. With the impending sharp fall in tariff revenue following the tariff reduction program, it remains to be seen whether the fiscal position is sustainable.

Following the 1986 Tax Reform Package, the tax effort of the Philippines has reached a level comparable with its Asian neighbors (Table 20). Direct taxes experienced the highest increase with revenue from individual tax being the fastest growing item in the period 1987-1996 (Table 21). Corollarily, there was a general downward trend in individual tax evasion rate during the same period.

Revenue from import duties was the fastest growing source of revenue from 1987-1992 but the growth plunged during the period 1993-1996 as a result of the tariff reform program. Despite this development, the Philippines still has the highest tariff revenue effort compared with its Southeast Asian neighbors. This is an indication of the extent of adjustment the Philippines has to undertake as it moves toward a more open trade regime.

A cause for concern is the deterioration in the overall tax buoyancy coefficient from 1.41 in 1987-1992 to 1.15 in 1993-1996 (Table 22). Buoyancy measures the percentage change in tax yield given a percentage change in the tax base. The decline is a reflection of less effectiveness in tax administration.

On the expenditure side, the unabated decline in MOOE and capital spending does not augur well for sustainable economic growth. Aggregate capital outlays of the national government shrank from 4.6 percent of GNP in 1975-85 to 2.9 percent in 1986-1991 before settling at 2.7 percent for the period 1992-96. Total public sector investment, however--incorporating the national government, government corporations and local government units--increased from 4.3 percent of GNP in 1986-91 to 5.2 percent from 1992-96.

A more detailed analysis of the structure of the Consolidated Public Sector Deficit (CPSD) reveals, however, that the government over-adjusted its fiscal position. Manasan shows that the actual primary surplus is consistently higher than a computed sustainable primary surplus. This condition holds even if transitory adjustments--which include temporary revenue measures, underspending on MOOE and capital outlays, and one-shot privatization receipts--are accounted for. The over-adjustment may actually reflect the prudent stance of the government

following the debt crisis in 1984-1985 and its continuation should help in riding out the present crisis.

The over-adjustment of the fiscal position also implies that the public sector cannot be relied upon to contribute substantially to an increase in the saving rate of the economy in the future. Apart from fiscal prudence, the impact of foreign exchange flows can be mitigated by capital market deepening which will allow capital surges to be accommodated without resorting to raising domestic interest rates to temper the inflationary pressure. Capital market deepening, however, has to be supported by an increase in the level of domestic savings.

Improvement should come mainly from the household and unincorporated sector, which experienced a steady decline over the past decade (Figure 5). But based on the analysis of determinants of saving behavior, direct measures to increase savings are limited. A compulsory saving scheme like the Central Provident Fund of Singapore can be implemented. Other recommendations will be discussed in a subsequent section.

Two important implications arise from the previous discussion. First, that achieving a sustained fiscal surplus and increasing the domestic saving rate are medium-to-long term issues. They cannot be relied upon in case there is another surge in foreign capital inflows within the next few years. This puts a great deal of pressure on sound monetary policy. Second, that despite the underspending over the past decade, the new government has to grapple with a widening fiscal deficit. Emphasis, therefore, must be placed on the revenue side particularly on tax administration. This will be discussed further in Section 6.

Infrastructure

Infrastructure development has been described as the weak link in the economic growth chain (e.g. Fabella 1990). During the 1980s, the expansion of infrastructure in the Philippines lagged behind other Asian countries in terms of paved roads, electricity generation capacity, electricity production, telephone main lines, railroad tracks, and access to sanitation. It is only in the area of access to safe water that progress is notable (Table 23). This explains why the Philippines was not a favorite destination of FDI and why productivity has stagnated.

Part of the neglect in infrastructure investments can be attributed to the macroeconomic crisis experienced by the country and the need to apply draconian stabilization policies. As noted in an earlier section, capital expenditures and MOOE have not been restored to their normal levels. The National Economic and Development Authority's (NEDA) own estimates indicate that the gap in infrastructure spending (i.e., the difference between programmed and actual expenditures) amounted to nearly P81 billion for the period 1986-1992. Serafica (1998) analyzed the major problems that beset the various infrastructure sectors.

In the area of power generation, only 60 percent of the population had access to electricity as of 1994. Data show that compared to Indonesia, Malaysia, and Thailand, Philippine electricity rates are much higher. This is aggravated by the fact that electric intensity in GDP for the Philippines is also higher.

From 1984-1994, the compounded annual growth rate for main telephone lines and pay phones were 8.2 percent and 5.9 percent, respectively. This is less than half the compounded annual growth rate of Indonesia, the country which is most similar to the Philippines in terms of phone density in 1993. This would explain why it takes a typical consumer an average of 8.9 years to get a telephone installed, much lower than Indonesia's 0.4 year waiting time.

The number one transportation problem of the country is the maintenance, rehabilitation, and upgrade of current infrastructure, particularly of the road network. Building new infrastructure is not considered a priority since the government has evaluated the road network to be adequate and the railway already extensive though quite underused. For domestic shipping, most passenger services, especially in the third class, were substandard in terms of comfort and safety. Finally, for ports, cargo-handling equipment, port land, and storage areas were rated as inadequate and unsatisfactory. An archipelago like the Philippines should have fully developed port facilities.

As for the water situation in the country, only three-quarters of the population had access to potable water in 1992. Only 62 percent of residents in Metro Manila had access to potable water while in other urban areas, it is only 58 percent. There is the general problem of unpriced raw water and underpriced treated water that threatens the viability of water supply. It is ironic then that the poor, particularly those in the urban areas, have to rely on expensive vended water.

Given the various competing needs that confront the government budget, it was imperative that other resources be tapped to increase investments and improve service delivery in infrastructure. Towards the latter part of the Aquino administration, the Build-Operate-and-Transfer (BOT) law was enacted signaling greater public-private cooperation in infrastructure development. The Ramos administration sealed this new partnership by adopting bold policies that placed greater reliance on the private sector and on the market. Privatization, deregulation, and liberalization of the various infrastructure sectors were undertaken to spur development.

Overall, the outcomes of the sectoral reforms have been beneficial in terms of increased supply, lower rates, and better quality of service, acquiring high marks in terms of public satisfaction, particularly in the liberalized telecommunications and transportation industries.

To end the power crisis that crippled industrial production and overall economic growth in 1992 and 1993, the government engaged the participation of the private sector in power generation through EO 215. The immediate impact of the reform was several fast-track power projects. Currently in the pipeline is a proposed bill to unbundle the generation and distribution aspects of the industry. The measure is generally aimed at opening the sector to new players and in time bring about lower tariffs, total electrification of the country, and secure electric power for the coming years. The privatization of the National Power Corporation (NPC) and the consolidation of regulatory functions into a single agency are among the proposals. Explicit provisions against market dominance and anti-competitive behavior are also contained in the proposed bill.

Telecommunications experienced unprecedented market activity beginning 1993 when

the government opened the market to competition. EO 59 and EO 109 mandated the interconnection of networks and required licensees of lucrative cellular and international franchises to provide fixed-link telephone service in underserved parts of the country. From an waiting period of 8.9 years, this figure dwindled to a mere 2-30 days for a business line and 14-385 days for a residential line. By the end of 1998, most municipalities are expected to have access to telephone service.

Aviation and shipping are the two sectors where major reforms can be identified. The opening up of civil aviation ushered the entry of three new local companies: Grand International Airways, Inc., Cebu Pacific Air, and the Air Philippines Corp. Although Philippine Airlines remains to be the major industry player, the effect of the liberalization is demonstrated in the lower rates offered by the new airlines. For shipping, EO 185 likewise opened the domestic transport water industry to new operators. Correspondingly, there was sustained increase in the number of vessels approved for acquisition from years 1994-1995. One obvious manifestation of the liberalization of the sector was the deployment of luxury passenger vessels in major routes (with amenities that approximate those being offered by hotels).

In March 1996, the government transferred responsibility for water supply and sanitation to the private sector to induce changes and drastic improvements in water provision. For the operation, maintenance, and upgrade of the infrastructure, two concessionaires were awarded (through public bidding) although the Metropolitan Water and Sewerage System (MWSS) still retains ownership of all fixed assets. The service areas of the two concessionaires were geographically divided into the east and west zones. The fierce competitive bidding brought down water rates by almost half for the west zone and more than half for the east zone. Winning concessionaires were required to attain certain performance targets in the areas of water supply, sanitation, sewerage, and non-revenue water. For example, in just five years, water coverage should be at 87 percent up from 67 percent in 1996. Meanwhile, non-revenue water should go down from 56 percent in 1996 to 37.1 percent in just five years.

There is strong doubt, however, about the sustainability of the initial price scheme. The winning bid price was quite low and will likely lead to losses on the part of the concessionaire. In addition, the institutional structures for water supply planning and operations, pollution control and watershed/ground water protection remain weak and fragmented.

5.3 Elements of Sustainability

Human Resource Development

Health, nutrition, and basic education comprise a nexus that has a significant long-term impact on labor productivity. The relationship can be described as follows (Herrin 1998):

1. The mutually reinforcing effects of malnutrition and poor health among infants and young children reduces the survival chances of these children;
2. Among the survivors, malnutrition and poor health will adversely affect the

mental and physical development of these children;

3. These mental and physical handicaps are carried forward to the time when these children are of school age, contributing significantly to low levels of achievement and early dropping out of school;
4. Upon entering the labor force, these children who are now young adults are doubly handicapped, first by the effects of poorer mental and physical development during early childhood, and second, by less schooling and poor achievement in school;
5. As a consequence, these young adults will become less productive members of the labor force, thus significantly reducing the overall productive potential of the economy.

This set of relationships is reinforced by two other important factors: poverty and high fertility. Poorer households have less capacity to obtain adequate nutrition and health care, and to provide better education for its members. Higher fertility adversely affects infant and child health survival, child nutritional status and child care, and schooling performance of children. Lower fertility not only benefits the health of the mother, it also enables the household to invest more resources and time per child to improve their health, nutrition and schooling performance.

Recent trends indicate that there is still much to be done in these areas. For example, infant mortality rate fell only from 65.2 in 1980 to 59.9 in 1990 after the drastic improvement from the 1970 level of 93.8. Despite a reduction to 48.9 in 1995, the rate is still very high compared to other countries (Table 25)¹⁷. Moreover, large differentials among provinces exist.

Some progress has been achieved in reducing malnutrition between 1987 and 1993 but the rates remain high and large variations across regions are still prevalent. Access to health services has been lower when compared to other Southeast Asian countries (Table 26). In education, the performance of Philippine students continues to falter in international achievement tests. Public expenditure on education has also been on the low side (Table 27).

Realizing the gravity of the situation and the importance of human development in fostering sustainable economic growth, the government has embarked on a number of programs and implemented policies to achieve set targets in quantitative terms. In the updated MTPDP (1996-1998), some of these targets are:

1. *For health and nutrition:* increased life expectancy from 68.7 years in 1995 to 69.7 years in 1998; reduction in infant mortality rate from 48.9 in 1995 to 44.3

¹⁷Data in Table 25 are different from those quoted in the text. This is due to adjustments that make international comparison possible.

in 1998; and an increase in per capita energy intake from 1,872 kilocalories in 1993 to 1,977 kilocalories in 1998.

2. *For education:* increased simple literacy rate from 95.8 percent in 1995 to 98 percent in 1998, and functional literacy rate from 83.9 percent in 1995 to 84.2 percent in 1998; and increased elementary and secondary level participation rates from 91.1 percent and 61.2 percent in 1995 to 95.8 percent and 65.8 percent in 1998, respectively.

Several key programs were implemented during the past ten years. In 1991, the Local Government Code, which devolved substantial political and administrative authorities to local governments, was enacted with the hope that greater decentralization will lead to more efficient delivery of basic services. Health and education services were the first to be devolved. The implementation of the program, however, has been bogged down by problems. These include concerns regarding the financial support which centers on the equitable distribution of internal revenue, participation of non-government organizations (NGOs) and people's organizations (POs), and problems arising from the transfer of devolved personnel from national to local government units.

The National Health Insurance Act provides for universal health insurance coverage by subsidizing premium payments of indigents. The Act was meant to be an improvement over Medicare (which covered only 40-50 percent of wage and salaried workers and whose premium contribution was largely regressive) but little progress has been observed in terms of membership and in creating a more progressive premium contribution scheme. The main problem is that the extent to which it can subsidize the premium payments of the poor depends on the budget. Unfortunately, not enough budget had been provided to make a significant impact.

The ECCD program for early education and development was designed to respond to the problems of a) poor health and nutritional status among 0-6 year old children due to economic problems and b) a high dropout rate among Grade 1 pupils resulting from poor adjustment to schools. A specific ECCD project, the Early Childhood Development Project, was approved for funding and will be implemented in three regions for six years beginning in 1998. The success of this project in an actual field situation needs to be closely monitored so that lessons can be drawn for possible wider adoption.

Two critical areas in elementary education remain to be variations in outcomes and adverse social selectivity. As summarized by the World Bank and quoted by Herrin:

"Most children have access to school but only 68 percent complete elementary education. For many of those who complete, little learning takes place as evidenced by low mean achievement scores. Moreover, there are great variations around the mean, both student scores and school scores, and urban-rural differences were particularly pronounced. This suggests that raising quality would require not only increasing average performance but also reducing variations across students and schools by targeting the worst schools."

The more fundamental problem in human resource development, however, is still insufficient funding. Despite the emphasis of the Aquino administration on spending for social services, the share of this sector in the budget is only one-half of the UNDP norm of 40 percent and also below the 32-35 percent average for selected countries surveyed by the UNDP in 1988. The structure of expenditures for the Aquino and Ramos administrations is almost the same.

Corollary to this fiscal constraint is the relationship of poor access to health, nutrition, and education services and the problems of poverty and high fertility. A vicious circle of poverty ° inadequate human development ° low productivity ° low-income growth ° poverty may be a more accurate reflection of the existing situation. Breaking this vicious circle through strategic government intervention in the sectors themselves has limited viability because of budget restrictions brought about by low income growth. The most realistic solution is to spur economic growth and reduce poverty from other sources in order to get out from this vicious circle.

Poverty Alleviation and Equity Promotion

The reduction of poverty and greater income equality improve social cohesion which in turn promotes collective action among economic agents. This is the message from the experience of the HPAEs. Poverty alleviation also means freeing up resources among households for investment in health and education services which improves productivity and has a significant impact on long-run economic growth.

While poverty incidence in the Philippines declined between 1985 and 1994, the number of poor families actually increased (Table 28). A similar pattern was observed between 1994 and 1997. This implies that there is a core segment of the population that is marginalized and is affected very minimally by developments in the mainstream of society. Compared to other countries in East Asia, the country is near the bottom of the rung in terms of poverty alleviation (Table 29).

Liberalization and deregulation measures have been shown to increase economic growth but do not improve equity (Yap 1997). Data from the 1997 family income and expenditure survey (FIES) show a sharp deterioration in equity with the Gini ratio rising from 0.45 in 1994 to 0.49 in 1997. This is the worst state of income distribution in nearly four decades.

The adoption of the Social Reform Agenda (SRA) by the Ramos administration is therefore timely and necessary. The SRA is a package of government interventions aimed at integrating society's disadvantaged groups into the political and economic mainstream.

Reyes and del Valle (1998) identified some weaknesses in the implementation of the SRA. Additional resources for the program, called the Poverty Alleviation Fund (PAF), are actually very limited since a bulk of the funding earmarked for the SRA already existed. Moreover, the budget allows allotments for only three of the nine flagship projects. The second phase or PAF-2 has an even smaller amount than PAF-1.

Funding for individual programs is inadequate. For example, the P850 million reserved for communal irrigation fund can finance only 4.9 percent of unirrigated lands in the Cordillera Autonomous Region (CAR) and in Mindanao. The Local Government Empowerment Fund accords P4.5 million for each of the 20 priority provinces for the construction of public markets and post-harvest facilities. The Department of Public Works and Highways, however, estimates that one public market costs P5 million to construct.

Aside from satisfying basic economic needs, the SRA also calls for new laws, programs and processes that work toward improving the social welfare of the poor. There are 10 priority social reform bills under the SRA and eight have been passed into law. Majority of these, however, still have to be implemented.

Part of the social reform process under the SRA is the direct and constant participation of the different disadvantaged groups in the identification of sectoral and local problems and in the formulation of solutions to these problems. One commendable aspect of the SRA is the volunteerism fostered among residents of beneficiary barangays.

Reyes and del Valle caution, however, against prematurely evaluating the final impact of the SRA. The paucity of poverty data precludes a more careful analysis. It must also be understood that the SRA encompasses a wide spectrum of social problems and poverty reduction is just one of the many goals. Moreover, the SRA takes an institutional approach to tackling social problems, hence, it will take some time for the intended effects to be realized.

As for the centerpiece of the government's equity promotion program, the CARP continues to be mired in bureaucratic inefficiency. From 1972-1996, the program covered only 53 percent of the agricultural lands initially targeted for redistribution (Bravo and Pantoja, 1998). The slow pace can be traced primarily to the land valuation problem which has often been the source of dissatisfaction among land owners.

A significant amount of resources of the Department of Agrarian Reform (DAR) has been allocated to support services when its main function is land redistribution. Despite this emphasis, the productivity levels of Agrarian Reform Beneficiaries (ARBs) are not significantly different from the national average.

In terms of income distribution, the status of ARBs is not different from that of farmers taken as a whole. A majority still fall below the poverty line. In fact, sharing arrangements have worsened for those who remained as share tenants (Bravo and Pantoja, 1998).

CARP's lack of focus and slow pace of implementation has led to a situation where 10 million Filipinos in the uplands have uncertain and unstable land tenure. There is a lack of a basic policy and of legal instruments to deal with the issue of forest land tenure. The impact on the environment in terms of forest cover has been tremendous.

It should also be recognized that poverty, like progress in human resource development, is very much a reflection of the overall progress of the country. Thus economy-wide policies that promote output growth, rather than specific anti-poverty programs, may have greater impact on

the objectives of poverty alleviation and equity promotion.

Technology Policy

The increasingly integrated global economy generates greater competition among firms for export markets. Enhancing a firm's competitiveness and improving a country's comparative advantage require the development of technological capability or, more broadly, a country's national innovation system. This has been the emphasis of the new trade theory and endogenous growth framework mentioned in Section 3.

Based on standard indicators, the technological development in the Philippines is at an early stage compared to other Asian countries. The country lags behind in terms of the ratio of R&D expenditures to GNP (Table 30), the number of scientists and engineers per million population (Table 30), the share of manufacturing to GDP (Figure 6), and the growth of total productivity (Table 12). It has also been observed that the science and technology sector is not effectively integrated with productive activity. Moreover, the dependence on foreign firms in the sectors of telecommunications, power generation, transportation, agricultural inputs and machinery, machine tools, pharmaceuticals, and consumer electronics manifests the low capability in second and third wave technologies (Magpantay, 1998).

Science and technology (S&T) policy--defined by UNESCO as the "principles and methods, together with the legislative and executive provisions required to stimulate, mobilize and organize the country's scientific and technological potential"--is more than programs and institutions. It involves inculcating a culture in the people. Magpantay laments the way technology is treated as a cost to be minimized rather than as an investment that must be managed well. He also describes the educational system as being weak in science and technology at all levels.

A significant milestone in the development of technological capability of the Philippines was the introduction of the Science and Technology Master Plan in 1990. The major strategies are:

1. Modernization of the production sectors through massive technology transfer from domestic and foreign sources;
2. Upgrading of research and development capability through intensified activities in high priority sectors; and,
3. Development of S&T infrastructure including institution building, manpower development and development of an S&T culture.

The debate on specific programs focuses on the weight given to either a demand pull or supply push approach. The first strategy should naturally emphasize the demand pull approach since it deals with existing local industries. The second strategy can be either demand pull or

supply push, depending on how it is implemented and what is considered as a high priority sector. Magpantay criticizes programs under the second strategy as being too demand pull oriented. He specifically cites the STAND program (science and technology agenda for national development) which is the S&T component of Philippines 2000.

Magpantay's major reservation over STAND is that areas identified for intervention could have been left to the private sector since these are relatively successful or where technological requirements are not too demanding. Moreover, DOST has no control over factors that are crucial to the success of some of these sectors. In the case of the coconut industry, the fortunes of this sector depend a great deal on the resolution of disputes over coconut plantations under the agrarian reform program. Magpantay proposes a combination of demand pull and supply push strategies and perhaps this should be fleshed out with an explicit role for foreign direct investment. Specific recommendations are given in Section 6.

Environmental Management

The depletion of natural resources and degradation of the environment adversely affects the country's capacity to meet the increasing needs of a growing economy and population. Environmental management, thus, becomes the core of the sustainability of economic growth.

There is grave concern for leaving sufficient natural capital stock so as to allow for nondeclining income through time. This may be investigated through an indicator termed "genuine savings" which includes adjustments for both human and natural resources. Table 31 reflects the adjustments as follows: a) add expenditures on health and education to investment in produced assets to reflect investment in human capital; and b) include estimates of natural resources depletion and environmental degradation as components of depreciation. Results for the period 1988 and 1992 reveal a 3 percent decline in genuine savings which may be interpreted as an early signal of the economy's tendency toward unsustainable growth.

As data may show, key natural resources have depreciated, with the problem being more severe for the potentially renewable natural resources, fish and forests, and an increasing problem in the case of depletion of upland soils. While the current state of natural resources is the result of a long period of extraction until the 1970s, the more important issues to address in the 1980s and 1990s are the: a) population pressure in the uplands and coastal areas; b) open access to these areas; and c) fostering of conditions that would encourage investment in resource renewal.

Table 32 shows that the Philippines has the lowest protection rate of natural areas. Estimates indicate that six million hectares of forest land or 20 percent of the country's land area, remains unallocated and unprotected. The main reason for this is that the decline in timber harvesting license areas--whether caused by cancellation, expiry or the selective logging ban--has not been adequately followed through by an increase in the areas held by small holders, indigenous peoples or for watershed protection. This lack of tenure for approximately 10 million people was earlier mentioned in the discussion of CARP.

The Ramos administration's efforts to promote equitable access to upland and coastal

resources is noteworthy considering the following: community based-forest management through Executive Order 231 (1995); the rights of cultural minorities are finally recognized by the state through RA 8371 Indigenous People's Rights Act (1997); and the Fisheries Code of 1998 (RA 8550) which extends the municipal waters from 7 to 10 kilometers from the shoreline.

The implementing rules and regulations that specify the mechanisms for clarifying the property rights related to these measures have yet to be formulated. It should be noted that while clarifying property rights is an important first step to improving the management of environmental and natural resources, the other ingredients to resource conservation--enforceability and transferability of rights, and favorable relative prices of inputs and outputs that predispose individual users to conservation technologies--have yet to be addressed.

In the case of environmental degradation, pollution of air and water have caused damages that is at least equivalent to natural resource depletion. Air pollution in Metro Manila alone caused damages P2 billion in 1992 (at 1988 prices) as a result of increased incidence of respiratory ailments and hypertension. Damage was caused mostly by fine particulate matter and lead emissions from motor vehicles, transport fuels and power generation. The phase-out of lead in gasoline is targeted for the year 2000 (EO 246, 1997) and the interim measure to impose higher taxes on low-lead gasoline over unleaded gasoline are important steps that need to be followed through by similar reforms.

5.4 Overall Assessment

Two key statements could summarize the economic performance over the past ten years.

First, despite the significant gains in almost all the sectors, the Philippines still lags behind its neighbor countries. Per capita income in PPP terms is still lower than most East Asian economies and improvement in the quality of life as measured by the UN Human Development Index has not been as dramatic as these countries over the past fifteen years (Table 33). It is of little comfort that some East Asian neighbors are in a deeper rut as a result of the 1997 financial crisis. Despite the less adverse impact on the Philippine economy, it would still take some time before the country can reach the development level of Malaysia or Thailand.

Second, while there has been a marked improvement in the investment climate through greater outward orientation, better infrastructure and more sound macroeconomic fundamentals, there has been a notable lag in the progress of microeconomic reforms. The poor record in technology upgrading, persistent underinvestment in human resource development, and extremely slow pace in poverty alleviation and equity promotion has prevented potential gains from being realized. Meanwhile, the sharp deterioration in the quality of the environment poses a threat to the sustainability of economic growth and development. The inappropriate exchange rate policy has also contributed to the generally disappointing growth performance particularly in the manufacturing sector.

It is in this sector where policy inconsistencies are magnified. Despite the trade and industrial reforms that were implemented and the apparent efficiency gains, the performance of

the manufacturing sector has been disappointing (Section 5.2). An inappropriate exchange rate policy has not only hurt exporters and import-competing sectors, the lack of a clear cut technology policy has also prevented backward linkages to be developed. As a result, employment generation is low, import dependence of Philippine exports is high, and productivity is stagnant.

At this juncture, it would be circumspect to scrutinize more closely the economic program anchored on trade liberalization. While greater openness (in terms of reduced tariffs and dismantling of nontariff barriers) would definitely lead to greater outward orientation, it is a sufficient but not necessary condition. This is borne by the experience of the developed HPAEs and to some extent some of the developing HPAEs which relied greatly on foreign direct investment. Concerns have been raised as to the alacrity in the reduction of tariff levels. The pace of tariff reform could have been dovetailed to the level of technological development and to the crafting of an industrial policy designed to accelerate technological progress.

Unfortunately, policy options have been circumscribed by international agreements like the WTO and any reversal in the pace of liberalization, even if optimal from a domestic perspective, may invite retaliation and reduce foreign investor confidence. But if there is enough evidence later to merit a review of the mainstream economic program (i.e., the Washington Consensus), then perhaps enough effort on an international scale should be mustered to restructure some agreements. This would allow developing countries some policy leverage but this should be within a well-designed and transparent framework.¹⁸

6.0 Economic Agenda for the Year 2000 and Beyond

Despite the many shortcomings in the economy, there is not enough evidence to castigate the basic economic program set by the Aquino and Ramos administrations. A prudent approach would be to give it the benefit of the doubt and simply gear up the country for the increased integration of the world economy. The direction of the economy, however, must be vigilantly monitored and its performance continuously assessed in an objective manner. Paradigms proven to be ineffective must eventually be discarded. The financial turmoil in East Asia should not also distract policymakers from the fundamental reforms that must be implemented to achieve sustainable growth.

These are outcomes from the PIDS assessment of the Philippine economy based on the framework derived from growth theories and the policies and conditions that worked for East Asia. The recommendations are grouped into four major categories according to their primary objective: 1) Macroeconomic Stability; 2) Productivity and Efficiency; 3) Social Cohesion; and 4) Environmental Management.

6.1 Macroeconomic Stability

¹⁸See for example the comments of Lall (1995) cited in Box 2.

*Capital markets must be further developed to spur domestic resource mobilization.*¹⁹

There are two elements which could lead to the deepening of the capital markets. First, the saving rate must be increased. Second, savings must be increasingly mobilized by the financial system. While the latter may not necessarily bring about an increase in the saving rate, it will definitely improve efficiency in allocation of funds, resulting in higher economic growth and greater return to savings.

Econometric results indicate that economic growth is still the primary source of increased savings. Harrigan (1996) found income to be a "weakly exogenous" determinant of saving in his econometric study of ASEAN economies. Hence, the major task of economic managers is to push the Philippines toward the virtuous cycle of higher economic growth \circ higher saving \circ higher investment \circ higher economic growth. This is largely a medium-term issue hence, short-term measures must focus on the second element of savings mobilization.

One area where domestic resources could be mobilized is small savings which, when pooled together, will be quite a substantial amount. Hence, small savers must be given access to the financial system by offering them financial instruments that suit their preferences. This is the logic behind the proposal for small savers instruments, one example of which are treasury bills with smaller denominations. Promotion of the mutual fund system is another alternative for pooling small savings.

Another area that must be studied closely is pension reform. The existing government-initiated pension system is a reserve funded system and not one characterized by pay-as-you-go type. Some of the issues that merit attention are: 1) Transportability of the benefits when a member moves from the government to the private sector and vice-versa. One way to achieve this is to merge the two systems; 2) Protection of the actuarial value of the premia by doing away with subsidized credit; 3) Improvement of fund management in order to increase the returns. One way is to deregulate the investment allocations of pension funds to enable them to earn higher returns on their investments. Under their charters, the GSIS and SSS are required to hold a certain proportion of their investment portfolio in government securities.

Chile is often cited as an example of a success story in pension reform. It encouraged private sector-initiated pension systems that competed for investible funds. Contrary to the view that this resulted in a sharp increase in the saving rate, Solimano (1996) presented data indicating that the rise in the Chilean saving rate was due to an increase in retained earnings by private corporations. In this regard, the private corporate sector could be another possible source of added savings for the Philippines.

Lastly, the Securities Act must be revised to enable the capital market to adopt to international standards. Some of the issues that must be addressed are greater transparency and greater participation by small investors.

¹⁹The author would like to acknowledge the contribution of Mario B. Lamberte to this section.

Fiscal prudence must be maintained to make monetary policy more flexible.

To enhance its revenue performance, government must shift its attention away from enacting new tax laws and instead focus on improving tax administration. Manasan (1998) listed a number of measures: a) improve monitoring of stopfilers; b) install selective audit policy and procedures; c) collect third-party information; d) improve performance evaluation system for revenue officers; e) train frontline personnel to prepare them for a computerized regime; and f) create data centers.

Manasan also recommended that capital outlays and government expenditures on maintenance and other operating expenditures must be restored to their levels, as a percentage of GNP, prior to the 1984-1985 external debt crisis. The amount can be adjusted to account for the increased involvement of the private sector but it is most likely that only government capital outlays will be affected. The government must put emphasis on maintenance and operating expenditures since the adverse effect of underspending on the upkeep of infrastructure is cumulative and manifests itself mostly in the medium term, creating severe disruptions and damage to the economy.

Monetary policy must continue to be prudent and an appropriate exchange rate policy must be implemented.

The fiscal problem that emerged in the latter part of 1997 proves that macroeconomic imbalances still pose a serious threat to sustainable growth. Dealing with the government deficit and the aggregate saving rate are medium-term issues, i.e., no lasting solutions are expected in the next three to five years. Under this scenario, monetary policy will be crucial in maintaining macroeconomic stability particularly in dealing with the more open capital account.

The BSP must implement an appropriate exchange rate policy and the corresponding monetary measures that define sharply the intermediate targets of monetary policy to make it more effective. The recent debate focused on using net domestic assets rather than the aggregate base money variable to provide greater flexibility in accommodating foreign capital flows. Corollary to this, the BSP must calibrate its sterilization measures to the existing demand for money in order not to tighten liquidity unreasonably.

To enhance the ability of the BSP to carry out its mandate in a more integrated financial environment, its capitalization must be strengthened. The national government must accelerate its remaining financial commitment of P10 billion.

Financial reforms must be implemented to maintain investor confidence in the economy.

The 1997 East Asian crisis has emphasized the need for a robust financial system. Despite being among the least affected by the crisis, the Philippines must push harder for reforms in the financial sector at least to placate investors. Some proposed reforms that touch on strengthening the capacity of banks for supervision and examination and the improvement of the

surveillance system are outlined in Annex 2.

In addition to these measures, the General Banking Act can be amended to create a level playing field for banking institutions and to address the safety and soundness of the financial system. It will also be useful to develop an appropriate merger and consolidation policy to increase the flexibility of the financial system.

The problem of volatile foreign capital flows must also be dealt with. Strong financial systems may not be enough to cope with the effects of a sudden reversal in capital flows. The analogy is that developing countries are like small ships in a very rough sea (Stiglitz 1998). The best that economic managers can do is steer the ship well and keep it sturdy. With greater financial integration, the role of self-fulfilling hypotheses and contagion effects become amplified generating potentially huge waves that put the small ships in a more vulnerable position. A number of proposals are outlined in Annex 2 with the central message being that effort on an international scale is necessary to deal effectively with this problem.

6.2 Productivity and Efficiency

The primary concern in this area is the stagnant manufacturing sector and the declining agriculture sector. While trade liberalization gave industry a boost, the expansion was constrained by basic problems such as insufficient infrastructure and low labor productivity. Meanwhile, price distortions and infrastructure bottlenecks continue to hamper the performance of the agriculture sector.

The first consideration must be to raise the investment rate to improve productivity.

An increase in the saving rate would be the most critical element in supporting a rise in the investment rate. This would, of course, be accompanied by a more stable macroeconomic framework. Infrastructure development should give a tremendous lift to the private sector's animal spirits.

Since higher savings and improved infrastructure are medium-term issues, the government must step up its efforts to attract FDI to the Philippines. The experience of developing HPAs shows that the inflow of large amounts of FDI should make domestic investment more profitable, particularly those designed to support foreign investment.

The policy regime governing infrastructure must be further refined

Serafica identifies five critical areas for reform. *First*, the government must be proactive in creating a competitive environment. Liberalization or deregulation does not automatically lead to effective competition. For instance, where only a segment of a vertically integrated monopoly is opened to competition, the incumbent still retains control of the bottleneck facility where he can engage in non-cooperative behavior. *Second*, agencies must be better equipped to deal effectively with the demands of a market-oriented policy regime. *Third*, the lead agencies in

charge of infrastructure must be organized in such a way that facilitates coordination and strategic planning. *Fourth*, even as the private sector takes a bigger role in infrastructure development, the government must be prudent in assuming and managing contingent liabilities. *Lastly*, addressing the infrastructure problem requires proper delineation of national-local government roles.

Foreign direct investment, especially export-oriented ventures, must be encouraged.

Without doubt, FDI would be the *deus ex machina* for the Philippines in a more integrated global economy. It would directly lead to capital accumulation, be a major source of technology, and give access to export markets. The determinants of FDI must be studied more closely but macroeconomic and political stability are expected to remain as crucial factors and perhaps less emphasis must be placed on incentives.

Strategic HRD and S&T interventions must be implemented to improve technological capability.

There are four key areas in this proposal: a) technology transfer mechanisms must be made more effective; b) R&D effort must more focused and integrated; c) human resource development must be oriented to improve factor productivity; and d) the functions of the Department of Science and Technology must be streamlined.

Technology transfer mechanisms

Government must first set clear strategies for technology development--whether adoption, modification, or generation--by industry. This recommendation hints of industrial policy but given that technology does not have the standard characteristics of a commodity (in economic jargon, it is "nontradable") government intervention may be justified. As pointed out in Box 2, government intervention can be effective if "carefully designed, sparingly granted, strictly monitored, and offset by measures to force firms to aim for world standards of efficiency." Magpantay (1998) identified four advanced technology areas for aggressive supply push strategies: microelectronics, materials science, information technology, and genetic engineering.

The private sector must be encouraged to practice "mirroring" in their ventures with multinational corporations. As Magpantay explained, regardless of the initial arrangement of technology transfer, the Koreans instituted incremental changes to absorb the technology, like replacing foreign personnel with local people, substituting local engineering for foreign engineering, doing forward and backward integration, and others. Similarly, multinational corporation-local enterprise technology transfer programs, similar to what Singapore and Malaysia, did must be encouraged.

R&D effort

R&D capability must be enhanced to eventually achieve technological self-reliance. The

linkages among the government, private sector, and academe must not only be strengthened along specific technological programs but at the same time, their roles must be clearly delineated. For example, the responsibility for developing advanced technologies will rest primarily with the public sector. There should also be investment in industry-linked R&D institutions and university-linked basic research in selected areas.

For this to succeed, there should be greater investment in R&D. This can be achieved through larger government appropriations for this purpose. Private investment in R&D can be encouraged with greater competition, by strengthening laws related to patents and intellectual property rights (IPR) and by implementing incentives (e.g., tax breaks) to increase fund allocation toward R&D.

Finally, institutional gaps that weaken the linkage among technology generation, adaptation and use must be addressed. For example, the government can support pilot testing of inventions to determine their commercial and technical feasibility.

Human Resource Development

A well educated labor force is the *sine qua non* of technological development. The government can start with the basics by strengthening education in the primary and secondary levels. Magpantay proposes that mathematics and science must be taught in the regional language during the elementary phase to ensure that basic concepts are well assimilated.

At the level of tertiary education, government support to science, engineering and other laboratory intensive courses must be emphasized. To remedy the incentive system, salaries of professors in centers of excellence must be exempted from the salary standardization law but at the same time, a strict accreditation system for the faculty must be instated.

The country should train its manpower for the higher stages of production activities not only to prime qualified skilled workers to work in developed countries but also to prepare them for future shifts toward higher skill-intensive domestic production activities (Orbeta and Sanchez 1997). This should complement the rising labor costs relative to countries like Indonesia, China and Pakistan. This can be supported by government and private sector investments in industry-linked polytechnics and HRD programs.

Trade liberalization and reduction in tariff dispersion must be continued.

The economic program initiated in 1980, continued in 1986 by the Aquino government and pursued relentlessly by the Ramos administration must be carried to its logical conclusion. Between now and the year 2004 when a uniform 5 percent tariff will be imposed, government must remedy the existing structure to eliminate or minimize price distortions that create inefficiencies.

The primary focus in this area should be the restructuring of agriculture tariffs. The

recent devaluation of the peso presents an opportunity to correct the high protection rates of major commodities such as rice, corn, sugar, livestock and poultry and other minor crops. As the peso cost of importables increased by 50-55 percent, the out-quota tariffs may be similarly lowered without reducing the nominal prices of agriculture commodities.

At the same time, a market based-approach, i.e., auctioning, must replace the current system of in-quota imports of these commodities, as specified by the minimum access volumes, to transfer to the general public the rents received by quota holders. In the case of livestock and poultry, this will benefit the small growers who become less competitive *vis-a-vis* large hog and poultry producers who have access to lower cost corn imports.

*Other Reforms in the Agriculture Sector*²⁰

Aside from increased public expenditures for agriculture, more efficient allocation within agriculture and streamlining of the bureaucracy are required to strengthen support services to agriculture. A greater proportion of the budgetary allocation for agriculture must be spent for productivity-enhancing investments, especially agricultural research, development and extension, market infrastructure, and irrigation support. Moreover, the organizational structure of the Department of Agriculture and other related agencies, Department of Agrarian Reform, and DOST's Philippine Council and Agricultural and Resources Research and Development and Philippine Council for Aquaculture and Marine Research and Development must be rationalized and streamlined to enable more efficient operations of their necessary functions. In particular, a functional, rather than a commodity-based organizational structure that consolidates all technology R&D efforts of the above institutions, under the Department of Agriculture, will greatly strengthen public sector's ability to generate new technologies. Together with the shift of support service activities of the DAR to DA, these institutional reforms will facilitate the streamlining and strengthening of coordination between local and central governments in delivering better quality support services to the sector.

The legislation of national land-use or zoning policy is a key step toward minimizing premature land conversion, induced by the CARP. The CARP itself must be modified to increase collateral value of land by allowing private land sales after full transfer has been effected. Likewise, after land redistribution, share-tenancy and other voluntary labor and land market arrangements must be allowed in order not to lower production efficiency.

A package of incentives and support services for the agrarian reform beneficiaries must be designed to facilitate the transition from tiller to owner without a significant drop in productivity and output. This would include investment counseling, provision of additional capital, and technical assistance. Such a function should be under the purview of the Department of Agriculture.

6.3 Social Cohesion

²⁰Taken mainly from David (1998).

Reforms in this area center on the access of low income groups to basic services that will help improve their general well-being. They must also address the need to expedite the access of underprivileged groups to both physical (including land) and human capital to enhance their productivity.

The CARP must be reinvigorated to push forward agrarian reform.

The existing land valuation formula must be reviewed to arrive at more acceptable land values for all parties involved. This would help accelerate land transfer and resolve land titling problems.

Meanwhile, DAR must focus its attention on land distribution problems and leave support services for the agrarian reform beneficiaries to the DA. In addition, DAR must cooperate with DENR in addressing the tenure problem in the upland areas.

Better targeted equity interventions to break the vicious cycle of poverty ◦ inadequate human development ◦ low productivity ◦ low economic growth ◦ slow poverty alleviation

The critical elements of effective poverty alleviation and equity are: a) focus on broad based economic growth to generate gainful employment and livelihood projects especially in the rural areas; b) improvement of the efficiency of basic social services proven to be effective in alleviating poverty (basic education, health, nutrition and rural infrastructure); c) making poverty groups and not geographic areas the focus of programs; d) instituting well-targeted safety nets to assist the poor during the transition period toward a globalized economy; and e) operationalizing a monitoring system to identify beneficiaries. Recommendations for basic services will be outlined following Herrin (1998).

Public Health Programs

- The problem of mismatch of internal revenue allocation (IRA) and cost of devolved functions must be resolved via an amendment of the Local Government Code.
- The backlog in the upgrading and maintenance of the physical facilities/infrastructure that were devolved to local governments must be reduced (this backlog was a problem prior to devolution).
- New structures for coordination, technical supervision, and monitoring and evaluation to deal with the administrative fragmentation of the health care delivery system that resulted from devolution must be developed (e.g., through regional-local and inter-LGU cooperative agreements).

In the area of personal health care, access can be improved by getting the National Health Insurance program off the ground. This can be achieved by addressing the pending issues of:

mechanisms of enrollment, design of benefit and contribution structures, provider payment modes, provider accreditation, and protection of consumers in the areas of drugs and providers.

Nutrition and Education

The effectiveness of nutrition programs can be improved if the government focuses on few interventions that can be adequately financed and properly implemented. This would include redesigning the interventions to improve cost effectiveness.

Addressing protein energy malnutrition requires food assistance and increasing access to related health services. Similarly, micronutrient deficiency disorders can be corrected by diet supplementation and fortification.

The appropriate reference for estimating malnutrition prevalence rates is an old issue that has to be resolved. The published data from the FNRI are based on the Philippine reference rather than on an international reference and the results obtained from these two benchmarks differ considerably. This must be resolved in order to assure more effective intervention programs.

The main challenge in basic education remains to be the low survival rate in elementary and secondary education and the low achievement scores, particularly among the low income groups. Many issues, some fundamental, still have to be addressed. They are: financing and budget allocation issues, decentralization of school management and allowing schools more flexibility in administrative matters to improve effectiveness, and enhancing teacher effectiveness. Other system-wide issues include the adoption of bilingual instruction, an additional year of basic education (one year of high school or financing kindergarten) and program issues. The latter cover the proposed multigrade program, preschool or early child development and the dropout intervention program.

The population management program must be put in the mainstream.

Underlying the problems in health, nutrition and basic education are the uneven economic performance and continued rapid population growth. Demographic transition would also boost the saving rate. Unfortunately, the population program has not been given sustained attention and this is because it is not clear what aspect of fertility decisionmaking justifies government intervention. This needs to be clarified as a basis for forging a stable consensus on the role of government in population matters (Herrin 1998).

Restructure labor-management relationships emphasizing improved work conditions, security of tenure, and human resource development.

Housing needs of the low income groups also have to be addressed

To make the housing program for the poor more effective, market-oriented interest rates must be allowed to prevail in the mortgage market for low-cost housing. Subsidies should not be transferred in the form of concession loans, rather they should be funded by budgetary appropriations and directly transferred to poor beneficiaries. Finally, infrastructure should be provided in order to open up new lands for low-cost housing.

6.4 Environmental Management

The environmental conservation and management agenda revolve around the issues of correct pricing of the use of natural resources, reform of property rights, and strong monitoring and enforcement of prices and property rights.

As earlier mentioned, DAR and DENR should work closely to formulate property rights in the upland areas. Moreover, DENR should be equipped with the dispute settlement capabilities to enforce these property rights.

Effective management requires adequate and timely information. DENR must coordinate with information technology (IT) bodies and the National Mapping and Resource Information Authority (NAMRIA) to generate timely information and data which will function as an alert system.

7.0 Concluding Remarks

As the Philippines embarks on a new phase in its quest for sustainable growth and development, it is evident from the analysis and evaluation that many basic reforms still have to be designed and implemented. Even the fundamental framework anchored on the Washington consensus should not be regarded as sacrosanct. However, the policy agenda derived from this framework cannot be readily changed given the risk of international censure.

Policymakers should then direct their energy at the more micro level reforms to ensure a more sustainable form of economic growth. Until such time that a global critical mass develops and effectively challenges the orthodoxy, the overall development framework will continue to be based on globalization policies.

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Box 1: A Layman's Guide to Economic Growth Theory

The standard neoclassical production function can be represented by the equation $Y = (K, L, t)$. Y is output, K is capital, L is labor and t is technological progress. Capital and labor are the factor inputs. The concepts could be further simplified using the following example.

Let *output* be a formal report that needs to be submitted to one's superior in a company. The report can be typed by a secretary which is the *labor input*. The secretary has two options: the report can be typed using a standard typewriter or a computer with an attached printer. Either machine would be the *capital input*. Here, it is obvious that the computer/printer combination is a more efficient factor input, i.e., it has greater factor productivity.

However, the computer will be useless if the secretary does not know how to use it or is too sick to come to work. This is why human resource development--which encompasses education and health--is important for economic growth. The quality of the labor input can be modeled by adding a quality index to the variable L (see footnote 5).

Without a computer, a secretary can produce no reports. By giving her a computer she can produce one report. The marginal product of one computer is one report. If the secretary is given an additional computer, she still can only manage to type one report (she cannot use two computers at the same time). The marginal product of the additional computer is zero. This is what is meant by diminishing marginal returns--added inputs of capital, keeping the labor inputs constant, will lead to lower increments in output.

If there are several secretaries and only one computer, then labor productivity will be low. It could be increased by providing more computers. This is why one recommendation to enhance labor productivity is to increase investment.

Finally, when the company discards its typewriters and buys more computers, it moves up the technology frontier. This can be captured in the model by a shift in the variable t . The problem with the standard growth model is that it cannot explain the shifts in technology. Endogenous growth theory addressed this problem by incorporating spillover effects in the model.

Box 2: Defining and Measuring Total Factor Productivity

Total Factor Productivity (TFP) is a concept of efficiency where the economy's productive inputs like labor and capital are jointly used in production. TFP is roughly equivalent to the quality of the factors of production. It can be measured in two ways: 1) the deterministic approach, and 2) the stochastic approach. The deterministic approach is further divided into two categories: (a) index number approach, and (b) growth accounting approach. Both methodologies are simple and TFP estimates can be easily computed. However, a weakness of these approaches is the residual treatment of TFP which could render biased estimates.

In the growth accounting approach, total factor productivity is the part of output growth not explained by the changes in factor accumulation, i.e., growth in capital and the labor force. In algebraic terms, the equation is:

$$f_t = y_t - a_t l - (1 - a_t)k_t$$

where f is the growth rate of TFP and y, l, k are the growth rates of output, labor and capital, respectively. The parameter a is the share of labor and $(1-a)$ is the share of capital. In practice a is taken to be constant over time usually measured using data from a representative year. Collins and Bosworth (1996) applied the growth accounting methodology in their study of East Asia.

The direct estimation of the production function is one example of the stochastic approach. The standard form of the estimating equation is:

$$\log Y_t = c + a \log L_t + b \log K_t + fT + u_t$$

Here, f , the coefficient of the trend variable T , measures the average rate of TFP growth over the sample period.

Austria (1997) applied the econometric approach using an aggregate production function modified to capture the dynamic effects of inflation on output. Her estimates showed that the average TFP growth for the Philippines for the period 1960-1996 is -0.4 percent. The annual TFP growth for this same period is shown in Fig. B1 and it can be observed that the values fall mostly in the negative axis.

Meanwhile, another stochastic approach assumes the existence of an unobservable production frontier function and from this, the actual production frontier is compared. In doing so, the residual treatment is eliminated and all factors contributing to production are accounted for. This approach can be used in time series and cross sectional data.

Two other concepts are introduced in this stochastic approach of TFP. The first is the technical efficiency (TE) estimate which is simply the ratio of actual output to potential output. A ratio equal to 1 suggests that the sector is operating along the best-practice frontier. A ratio below 1 signifies the sector's technical inefficiency; the more the ratio falls below 1, the higher is the level of technical inefficiency. Depicted graphically, a technically inefficient sector is one that lies below the production possibility frontier. The other concept is the technical progress (TP) estimate. This is interpreted as the natural measure for innovation and can be graphically depicted as the shifts in the production frontier. The sum of TP and TE is TFP.

Cororaton and Abdula (1997) employed the stochastic approach and obtained estimates of TP and TE for the major manufacturing sectors. Results showed that TFP growth for the aggregate manufacturing sector experienced wide swings over the period from 1958 to 1991, with sharp drops during the balance-of-payments crises in 1984-1985 and early 1990s. Their regression results showed TFP growth to be positively related to exports, a reduction in tariffs, and R&D investment. On the other hand, TFP growth is negatively affected by higher legislated minimum wages and by macroeconomic instability caused by high inflation.

The entire approach to TFP estimation has been criticized by the so-called nihilist view (Felipe 1997; Felipe and McCombie 1997). They cited the serious methodological problems in using an aggregate production function to represent the economy. And even if an aggregate function were a valid representation, the residual (in the case of the growth accounting approach) and the coefficient f (in the econometric approach) are merely the weighted average of the growth rate of the return to capital and the return to labor. The whole process, according to the nihilist view, is nothing more than an exercise in validating accounting identities.

Deciding which side of the argument is correct is not part of the paper. What is clear from the estimates of TFP and those of labor productivity (Table 11) is that they are consistent in depicting the Philippines as lagging behind its East Asian neighbors in terms of technological development. This important insight--which holds whether the TFP estimates are valid or not--is what should concern policymakers.

Box 3: Was the Peso Overvalued?

Despite the sharp appreciation of the peso in real terms (Figure 4) and its adverse impact on the performance of the agriculture and manufacturing sectors (Section 5.2), there is still a debate whether the peso can be described as overvalued.

The argument against labelling the peso as overvalued revolves around the Balassa-Samuelson theorem which shows that the real appreciation of a currency can be caused by shifts in the relative prices of the tradable and nontradable sectors in favor of the latter. In the Philippine case, the increase in investor confidence following the resolution of the energy crisis in 1992 and the liberalization of the capital account in that same year, caused a rise in the price of nontradables. This was brought about by increased activity in this sector particularly in construction and real estate. The real appreciation could not have been brought about by a surge in portfolio capital flows as net portfolio investment was quite small even during the period after the capital account was liberalized (Table 16). The only other major inflow of foreign exchange was remittances of overseas workers but this was used to cover the trade deficit. The current account deficit was generally manageable, ranging from 3-4.5 percent of GDP. Hence, the appreciation in real terms was an equilibrium response to improved economic conditions.

On the other hand, movements in the nominal exchange rate show that the appreciation of the peso in real terms was directly related to its sharp appreciation in nominal terms from P29.2 in October 1993 to P24.1 in December 1994. Other Southeast Asian countries were able to prevent large changes in their nominal exchange rate. Real interest rates have always been on the high side during this period indicating that monetary policy was extremely tight. Lamberte (1993) cited the IMF-imposed ceilings on monetary variables as the culprit. Empirical evidence also shows that the Bangko Sentral ng Pilipinas was targeting the exchange rate (Gochoco 1992, Reyes and Yap 1993).

The notion that there was increased investor confidence in the Philippine economy because of major structural reforms hangs by a thin thread. As Krugman (1995) convincingly argued, the spectacular economic performance of some developing countries was based not on solid achievements, but on excessively optimistic expectations on the part of international and domestic investors or, using the terminology of Federal Reserve chairman Alan Greenspan, on their irrational exuberance. While Krugman was specifically referring to Mexico, his analysis can apply to Indonesia and the Philippines.

The initial successes that followed the implementation of economic reforms (note that the

term “followed” and not “caused” was used deliberately) led to a speculative bubble. Krugman described this process as follows: “Markets poured money into developing countries, encouraged both by the capital gains they had already seen and by the belief that a wave of reform was unstoppable. Governments engaged in unprecedented liberalization, encouraged by the self-reinforcing conventional wisdom and the undeniable fact that reformers received instant gratification from enthusiastic investors.” The bubble did burst for many developing countries, the major lesson being that the real currency appreciations that resulted from the apparent increase in investor confidence did not reflect changes in real exchange rate equilibria. Rather, the currency appreciations should have been interpreted as transitory in nature given the fact they resulted from excessively optimistic expectations of international investors that were not warranted by structural economic change.

To give an empirical sense to the debate, an equilibrium real exchange rate was calculated with monthly data from 1980-1997 using the Hodrick-Prescott filter as applied by Goldfajn and Valdes (1997). The real effective exchange rate, based only on trade with major partners, was used to approximate a real exchange rate. The results are shown in Fig. B2. The degree of overvaluation (undervaluation) is derived by taking the ratio of the actual value of the real exchange rate and its corresponding equilibrium value. Based on the definition of the real exchange rate index used, a ratio above 1 (below 1) indicates that the currency is overvalued (undervalued).

As shown in Figure B3, the ratio is above one for most of the sample period. The only times the ratio would dip below unity was when there was a sharp peso depreciation (October 1983, November 1990, and the second half of 1993). Thereafter, the ratio would climb back above 1 implying that the tendency is for an overvalued currency. The degree of overvaluation, however, is generally mild (in the order of 10 percent).

Given the weight of the theoretical arguments and the empirical evidence, the answer to the question posed in the title of this box is definitely YES.

Box 4: The Options Approach to Investment

Conventional investment theories focus on the cost of capital and the replacement cost, as compared to market value of new capital goods. They fail to consider, *first*, that most investment decisions face inherent uncertainty about future benefits and costs; *second*, that investors can control the timing of investment, waiting for relevant information that may reduce investment uncertainty; and third, that most investment decisions are partly or completely irreversible--once the capital stock is installed, it cannot be put to new uses without incurring a substantial economic cost.²¹

These crucial features have led to a new option approach that sees an investment opportunity as an option to buy an asset at different points in time, balancing the value of waiting with the opportunity cost of postponing investment decisions. The option approach shows that the standard net-present-value rule of investment (investment when $NPV > 0$) must be modified. The correct rule is that the anticipated return on the new investment project must exceed the purchase and installation cost by an amount equal to the value of keeping the investment option alive ($NPV > \text{value of option to wait}$).

The “options” approach to investment enhances the role of uncertainty in investment decisions. Any hint of instability in key macroeconomic parameters will lead to postponement of investment projects. An important policy implication is that uncertainty tends to make investment less responsive to incentives such as subsidies and tax concessions and that huge incentives would therefore be necessary to counteract the impact of high uncertainty on private investment.

²¹Dixit and Pindyck (1994) as cited by Schmidt-Hebbel, et al. (1996).

Annex 1: Development Paradigms and Strategies²²

The most prevalent paradigm in economic literature is the neoclassical model and its variants which include endogenous growth models. The appeal of this model lies in its theoretical underpinnings which lead to a consistent and robust framework from which policy prescriptions are readily drawn. The standard model emphasizes that economic growth depends on capital accumulation.

The versions of the neoclassical model associated with economists like Krueger, Balassa, Bagwhati, and T. N. Srinivasan considered that the opening up of the East Asian economies and possibly export promotion schemes played a key role in promoting growth. This model is sometimes referred to as the 'classical theory of economic growth' (Asian Development Bank 1997) and its cornerstone is the principle of comparative advantage. The proponents argued that by removing price distortions through trade liberalization and deregulation, resources in East Asian economies were allocated to the sectors where they were used optimally. This brought about the most efficient use of production factors and fastest possible economic growth.

The main outcome of this strategy is the rise in exports and the structural transformation toward manufactured exports. A more open economy forces firms to be more competitive, hence, they are able to penetrate the international market. Also because of a larger market, firms are able to take advantage of scale economies thereby bringing down unit costs.

The "governing the market/developmental state" approach seriously questioned the claim of the classical school that the policies carried out in East Asian economies did not distort prices and allocation of resources. This approach emphasizes two aspects in its analysis: 1) the importance of industrial policies and strategic trade policies in shaping the economic structure and ultimately the growth path of a country; and 2) the role played by the "synergetic connections" (Wade 1990) between the state and the private sector in the growth process of East Asian economies.

Critics of this framework assert that the main weakness of the "governing the market/developmental state" approach is the absence of a consistent theoretical framework that depicts the interrelations between selective policies and economic growth. Therefore, the analysis is always ex-post and ex-ante, it cannot determine whether a particular measure is appropriate or not. In other words, the scope and extent of state intervention is indeterminate.

Parallel to the debate about the appropriate paradigm to explain the East Asian miracle is the debate on the strategy that was adopted by the East Asian governments following import-

²²This section is derived largely from Bertoldi (1997).

substitution policies. There are three general positions which, in simplified form, can be identified as 1) the outward oriented-export led strategy position; 2) the investment-led strategy position; and 3) export-investment led strategy position. Depending on the strategy that was pursued, the implications for economic policy will be different. It would be interesting to note that in some cases the division on this issue is not between the neoclassical and non-neoclassical approaches since the particular strategy cuts across the different theories.

The outward oriented-export led strategy is a direct outgrowth of the classical theory. This position is criticized by economists who consider that the high East Asian economic growth was investment-led. The criticism stems not only from the "governing the market/developmental state" school of thought but also within the ranks of the neoclassical school. One variant of the latter is the so-called minimalist view of Young (1994, 1996) and Krugman (1994) who claimed that there is nothing miraculous in the economic of East Asian countries because it can be fully explained by the conventional neoclassical growth model.

The arguments of Young and Krugman are based on the TFP estimates for the region which are not particularly high and they, therefore, concluded that the economic growth was due primarily to mobilization and accumulation of productive factors similar to the experience of socialist economies in the 1950s and 1960s. In particular, the post-war growth could be traced to increased labor participation rates, a rise in the investment to GDP ratio and an improvement in educational standards. All these factors are contained in the neoclassical growth model.

Similarly, the "governing the market/developmental state" school argues that investments and not exports are the real engine of growth of East Asian countries. Because of the rapid increase in capital formation, there was a strong increase in demand and productivity. A virtuous circle of investment \rightarrow productivity \rightarrow exports + domestic demand \rightarrow profits \rightarrow new investments was established. This virtuous circle was further strengthened by the ability of East Asian governments to pick winners, i.e., select sectors in rapid expansion, with potential economies of scale, increasing returns and strong technological spillovers. In doing so, they pushed the private sector to move its specialization toward the modern sector of the economy and, in this way, increased the potential growth rate of the economy. In this process, outward oriented policies played a minor, albeit important, role. On the one hand they guaranteed new markets for the newly created productive capacity; on the other hand, they put domestic producers under strong pressure because of the need to stay competitive in the international environment.

Meanwhile, the "export-investment led strategy" position considers that the transmission mechanisms of exports on economic growth put forward by "outward oriented-export led" strategy exist and played a significant role in the growth process of East Asian economies. However, the productive specialization of the countries was inadequate to acquire all the advantages that outward oriented-export led policies could provide. Therefore, the East Asian governments complemented their export-push policies with active selective policies, which moved up the production frontier of the countries in sectors that could better benefit from the advantages of international trade.

Lall (1995) placed this strategy in the context of the development of technological capability. He argued that the more important and pervasive source of market failure is likely to be the learning processes in production rather than scale economies or externalities. This fact is

particularly important for developing countries, which are latecomers to industrialization and must face already established competitors which have already undergone the learning process.

Depending on the extent of the learning costs and the efficiency of the relevant factor markets and supporting institutions, it may be necessary to have selective and variable infant industry protection and gradually expose existing activities to import competition. Since protection itself reduces the incentive to invest in capability building, it has to be carefully designed, sparingly granted, strictly monitored, and offset by measures to force firms to aim for world standards of efficiency. The most effective counter measure to the disincentives that arise from protection seems to be strong pressure to enter export markets, since a commitment to export disciplines not only firms but also those who design and administer policy. In Lall's view, the true contribution of export orientation to industrialization is to provide the right framework for selective interventions.

In sum, the neoclassical view is that East Asian success was due to neutral incentives between domestic and foreign markets and limited government interventions, permitting the realization of static comparative advantage. The "revisionist" view, akin to the "governing the market/developmental state" approach, is that interventions were central to East Asian success because of the presence of pervasive market failures.

Government interventions are taken to be industrial policies in this context since their objective was to spur industrialization. Industrial policies refer to those measures capable of attracting additional resources to the industry sector, to modify the allocation of resource within the industry sector or to intervene in the organization of a particular sector. They generally fall into two categories:

Horizontal interventions include government subsidies and transfers to the industry sector; fiscal policies favoring investments to the industry sector; financial and technical assistance to small- and medium- size enterprises; provision of infrastructure for the development of the industry sector; and the creation of special zones with special privileges.

Vertical interventions include investments carried out by publicly owned firms to promote specific sectors; public-private joint intervention or cooperation to develop new products and/or to enter new sectors; measures to limit competition; trade policies like tariffs and quotas in favor of infant industries aimed to support the sectors picked as winners; and R&D subsidies to promote high technology sectors.

The aim of horizontal industrial interventions is to increase the level of investment, to improve productivity and to encourage innovation in industry as a whole and just in specific sectors. On the other hand, the aim of vertical industrial policies is to promote or protect specific industrial sectors and possibly to create vertically integrated sectors.

The resolution of the debate on the appropriate paradigm and strategy of the East Asian miracle was the primary reason why the World Bank conducted its 1993 study. The study developed the market-friendly approach which advocates for getting the fundamentals right instead of proposing to get prices right,. The market-friendly approach drops some of the

assumptions of the neoclassical model. It accepts that factor markets may not operate perfectly, and that education markets in particular may need interventions to create the human capital base for industrialization. This type of intervention is nonselective or of the horizontal type.

The market-friendly approach also differs from the neoclassical development approach in accepting that there may be market failures in coordinating investment decisions within industry for several reasons: missing information markets, capital market deficiencies, economies of scale, interdependent investments in vertically related activities, and externalities in skill creation and learning. These are reasons for government intervention. The main conclusion of the World Bank study, however--that export push strategies, supported by strong formation of human capital, a stable economic framework and strong fundamentals would explain the miracle --is nearly equivalent to that of the neoclassical paradigm. It concedes that selective policies sometimes worked but only under very stringent conditions (e.g. contest-based mechanisms, insulated bureaucracy) and hence, should be avoided.

The World Bank presented empirical evidence for its findings particularly the case against selective policies but the results and methodology have been heavily criticized (Amsden 1994; Lall 1994). Moreover, the report did not have a strong theoretical framework for its empirical analysis. Critics argued that the conclusion favoring the effectiveness of export-led strategies was an ideological concession to the early neoclassical theory, because such strategies do not require selective intervention by the government.

After an exhaustive survey of the literature on the East Asian miracle, Bertoldi (1997) concluded that economic policies were very important for economic growth. Fundamental policies (i.e. high saving, outward orientation, macroeconomic stability and income distribution policies) created the foundations for the miracle but they do not tell the entire story. Government interventions did have an impact but in the absence of realistic counter-factual analysis and more robust evidence about the direction of causality, it cannot be determined what type of interventions (horizontal or vertical) and strategies (outward-oriented export-led, investment-led, export-investment led) contributed significantly to the high growth rates of East Asian economies.

A parallel view is offered by Hattori and Sato (1997) in their study of the development mechanisms of Korea and Taiwan. The differences--where they find Korea's to be government-led and that of Taiwan to be market-led--are attributable to social and political differences and differences in the relationship between government and society.

These conclusions are hardly inspiring given that it is difficult to judge the expertise of economists in terms of their understanding of the social and political dynamics of countries like the Philippines. Thus, if used as a basis for justifying an economic program in a particular country, the interpretation of the East Asian story will largely depend on the ideological biases of policymakers. Since the evidence for the various types of strategies and government intervention is generally inconclusive, the *null hypothesis* of economic managers--to use a statistical phrase--will ultimately determine the policy recommendations and, most likely, the actual economic programs pursued in the country.

Annex 2: The Financial Crisis in East Asia

From Miracle to Debacle

The current financial turmoil in East Asia has sent shock waves across the global economy even eliciting dire predictions of another "Great Depression." A World Bank (1989) study lists three possible sources of a financial crisis: macroeconomic conditions, industrial and financial policy, and debtor and creditor behavior. The predominant view is that the present crisis was brought about by weaknesses in the financial system of the economies, bringing into focus specific financial policies and debtor and creditor behavior.

Many of the East Asian economies implemented twin liberalizations: a) opening up of the capital account which allowed foreign investment to flow in and out of an economy with very minimal regulation; and b) liberalization of the domestic financial system. The first measure allowed domestic firms to gain access to foreign capital while the second increased competition among financial institutions operating locally.

One view of the crisis is that existing regulatory framework could not cope with the new demands brought about by these structural changes. Prudential regulations and bank supervision were inadequate to cope with the more liberalized economic climate. The riskiness of loans was not evaluated thoroughly, financial institutions did not disclose enough information, and even if they did, the data were not timely.

The stance of the government, particularly the monetary authorities also encouraged the expansion of the financial system and dollar borrowing. There are at least two elements to this aspect:

1) By standing behind the viability of the domestic financial system, the government always gives an implicit guarantee to private debt. This guarantee encouraged bankers to take on riskier loans knowing that even if these fail, they will be bailed out eventually. Deposit insurance forms part of this guarantee, but in this case, it discouraged depositors to monitor the performance of the banks.

2) Economic managers were not able to respond properly to the rapid inflow of foreign capital.²³ Exchange rates appreciated in real terms and/or interest rates rose. The interest rate differential encouraged dollar denominated borrowings. In the Philippines, instead of working to keep the exchange rate at a competitive level, the BSP gave a strong signal that the level of the exchange rate was not only appropriate but would remain stable for an extended period of time.

²³See Section 5.0, discussion on macroeconomic stability.

This stance further encouraged foreign borrowing.

The increased access to funds and greater competition led to a rapid expansion in the assets of the domestic financial system, mainly in the form of loans to the private sector (Tables 17 and 19 for the Philippine case). An unhealthy mismatch of funds in terms of maturity and currency base developed. Banks would lend long-term based on deposits and borrowings that were short-term in nature; and banks would lend dollars to firms that earned revenue in domestic currency. Data show that 40-50 percent of Foreign Currency Deposit loans in the Philippines went to non-exporters (Table A1). Thailand, Indonesia and Korea, meanwhile, had a rapid build-up of short-term foreign debt.

It was inevitable that there would be some bad loans because of the overinvestment in some sectors particularly in real estate. As a result of the intense competition, profits were squeezed, projects failed and loans were not repaid. In the case of Thailand, the crisis in the financial sector was relatively widespread. This prompted foreign investors to start pulling out of the stock market. Because Thailand had a huge current account deficit at that time, the pullout of foreign money put tremendous pressure on the baht. There was no recourse but to allow the baht to depreciate sharply.

Neighboring countries were then drawn into the crisis, the so-called contagion effect. One reason was that the structure of the export sectors of Malaysia, Thailand, Indonesia and the Philippines are similar hence, to remain competitive with each other, their currencies must depreciate in tandem. It should be noted that China experienced a sharp depreciation in 1994 and this put competitive pressure on the Southeast Asian countries. This explanation, however, lost some of its strength when the crisis spread to Hong Kong and Korea.

The second reason for the contagion effect was that foreign investors acted like a herd in withdrawing their funds from the region. This is attributed to incomplete information on the part of the investors; they could not or did not bother to differentiate among the various economies. This type of behavior is the central theme of the literature on self-fulfilling crises.

Since many of the debts were dollar denominated and did not carry a natural hedge against sharp depreciations, the fall in the value of domestic currencies weakened the financial viability of many projects. The situation was exacerbated by the rise in interest rates. The higher cost of money and the larger debt overhang in terms of local currency magnified the crisis and caused a downward spiral in the East Asian economies, especially Indonesia.

Some pundits contend that it was less a case of overinvestment than a case of unwise investment. This is another view of the cause of the weaknesses in the financial sector. They cite as examples the national car program of Tommy Suharto in Indonesia, the Petronas tower in Malaysia and the steel industry in Thailand. A Newsweek issue (26 January 1998) even revived the phenomenon of crony capitalism.

The analysis above gives the distinct impression that some of the factors responsible for the rapid growth of East Asia as discussed in Section 3.0 are now absent or were themselves the cause of the problem. For example, promoting competition, especially through export-oriented

policies, was hailed as one of the key ingredients of their rapid growth, yet lack of competition in the business conglomerates is seen as one of the critical failings; and what were previously viewed as strong financial markets, which were able to mobilized huge flows of savings and allocate them efficiently, have transformed into weak financial markets which sparked the economic debacle (Stiglitz 1998). And as a swipe against government intervention, some quarters contend that the close relationship forged between the bureaucracy and private sector in several of these economies to address information problems brought about political cronyism and a general lack of transparency in credit allocation leading to the bad loans.

This sweeping analysis tends to gloss over the fact that similar crises have occurred in countries with sophisticated financial regulation (e.g., the US savings and loan debacle) and in places with high levels of transparency (e.g., Scandinavia) [Stiglitz, 1998]. Moreover, two-thirds of external bank lending in Indonesia was to the non-bank private sector indicating that foreign lenders were willing to extend credit to Indonesian firms. The latter did not have to resort solely on behest loans from “friendly” domestic banks.

A third line of argument lays the blame squarely on the liberalization of the capital account and the liberalization of the banking sector as the cause of the weaknesses in the financial sector (Montes 1997). Ready access to international credit amplified existing market failures leading to the profligacy and excesses of the private sector. Both Stiglitz and Uy (1996) and Rodrik (1998) note that market failures arising from asymmetric information, incompleteness of contingent markets, and bounded rationality are endemic to financial markets.

Despite the seemingly consistent analysis, the framework rooted on financial sector weaknesses is still incomplete. The macroeconomic parameters of many of these economies (except perhaps for Thailand) did not warrant the excessive deterioration in their conditions, particularly the exchange rate. Thus, to put the entire blame on domestic policy mistakes, particularly in the financial sector, can lead to misleading policy prescriptions.

Krugman (1998) echoed this sentiment when he stated that "it is clearly wrong to blame all of overinvestment and overvaluation of assets in Asia on domestic financial intermediaries. After all, private individuals--and foreign institutional investors--did buy stocks and even real estate in all the economies now in crisis. This suggests that other kinds of market failure, notably 'herding' by investors, still have some role to play." It is evident that contagion through the panic of fund managers had an impact on the economic performance of the East Asian economies.

The discussion on this subject reveals that there is still much to be learned about the present crisis before dismissing the East Asian miracle, particularly the idiosyncratic financial practices associated with some of the economies. What is clear is that the lessons from the experience of the HPAEs as discussed in Section 3 are still valid. The crisis was caused by an aberration in the financial sector and had little to do with supply side fundamentals.

Policy Implications of the Crisis

Several lessons, however, could be drawn from the tumultuous experience during the past six months. First, prudential regulations and supervision of financial institutions must be strengthened in order to prevent moral hazard problems. Intal and Llanto (1998) list some specific recommendations:

1. Strengthen prudential regulation and supervision by implementing comprehensive risk-based assessment and supervision instead of focusing primarily on credit risk. In addition, there is a need for more stringent information disclosure requirements, adequate accounting and auditing standards, as well as clearer rules and greater transparency in asset classification and provisioning.
2. Review the policy on capital accounts and foreign borrowing. It would be useful to look into the Chilean case which entailed stricter rules on domestic firms borrowing directly abroad (e.g., minimum credit rating rule), the imposition of reserves on short-term foreign currency deposits by nonresidents and other short-term portfolio flows, and a one-year residency requirement on foreign direct investment. Furthermore, dollar lending from FCDs to unhedged borrowers must not be allowed.

Second, the timing, extent, and pace of the twin liberalizations, including trade liberalization should be reviewed. It is not surprising that since 1980 when financial liberalization was began in earnest around the world, the number of BOP crises associated with banking crises increased (Kaminsky and Reinhart, 1996). Public authorities would do well not to let the ideology of liberalization obstruct the specific objectives of monetary policy--the sound development of the financial system and the increase in the productivity of investment (Montes 1997). In this regard, measures should be implemented to regulate the flow of short-term capital although this is closely related to recommendation (2) above.

Finally, the behavior of the international private sector should be examined. First, international lenders must be more prudent and not be swayed by herds nor be afflicted with disaster myopia. Second, foreign investors should be encouraged to hedge at least the currency risk of their investments to prevent sudden withdrawals from domestic capital markets (Montes 1997). But beyond this, the current situation where there is simply too much liquidity in the global system should be corrected. This situation encourages very short-term investment and fuels speculative activity which generates the volatility that makes globalization a threat instead of a challenge and an opportunity.

Figure 1

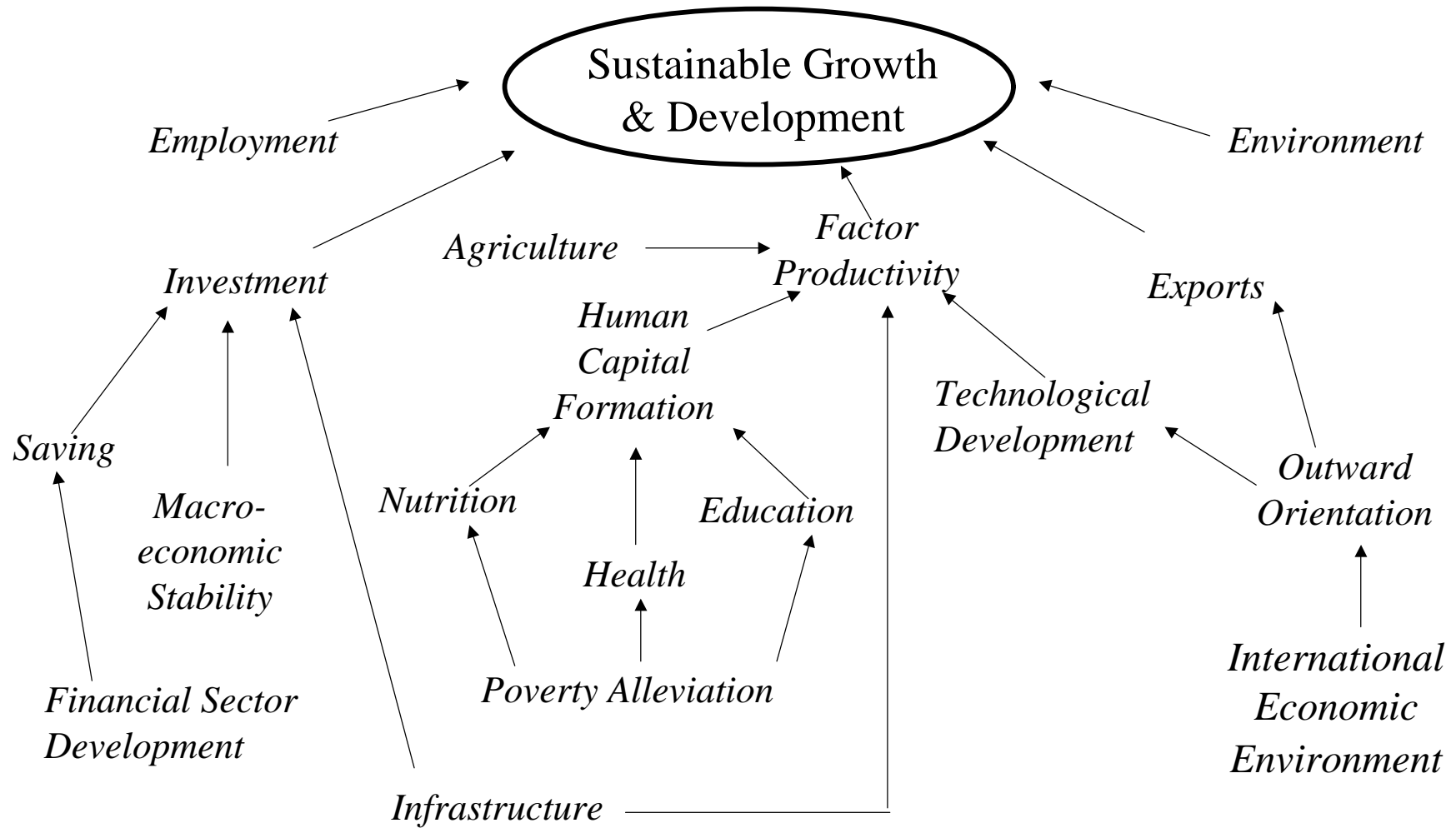
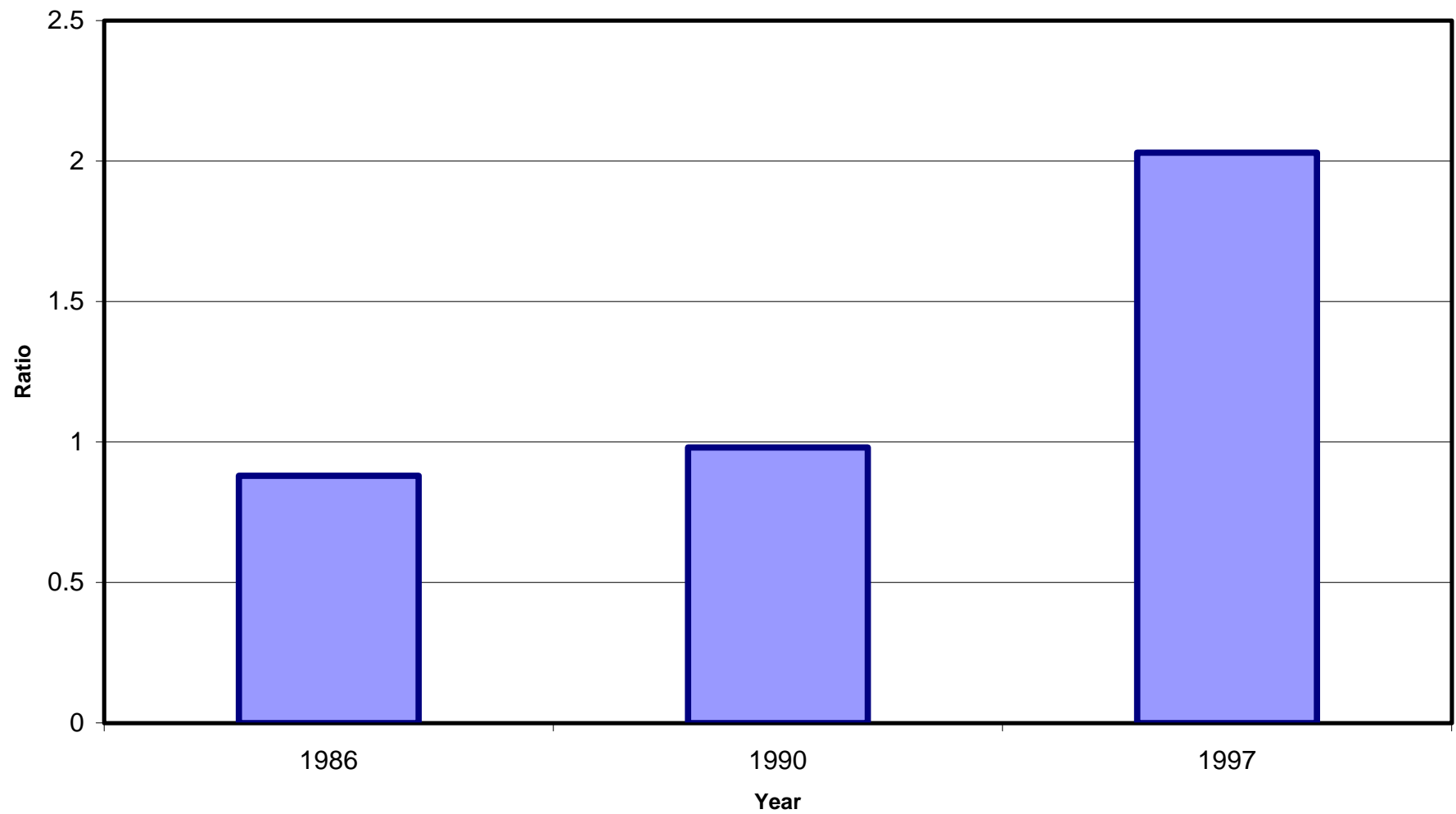
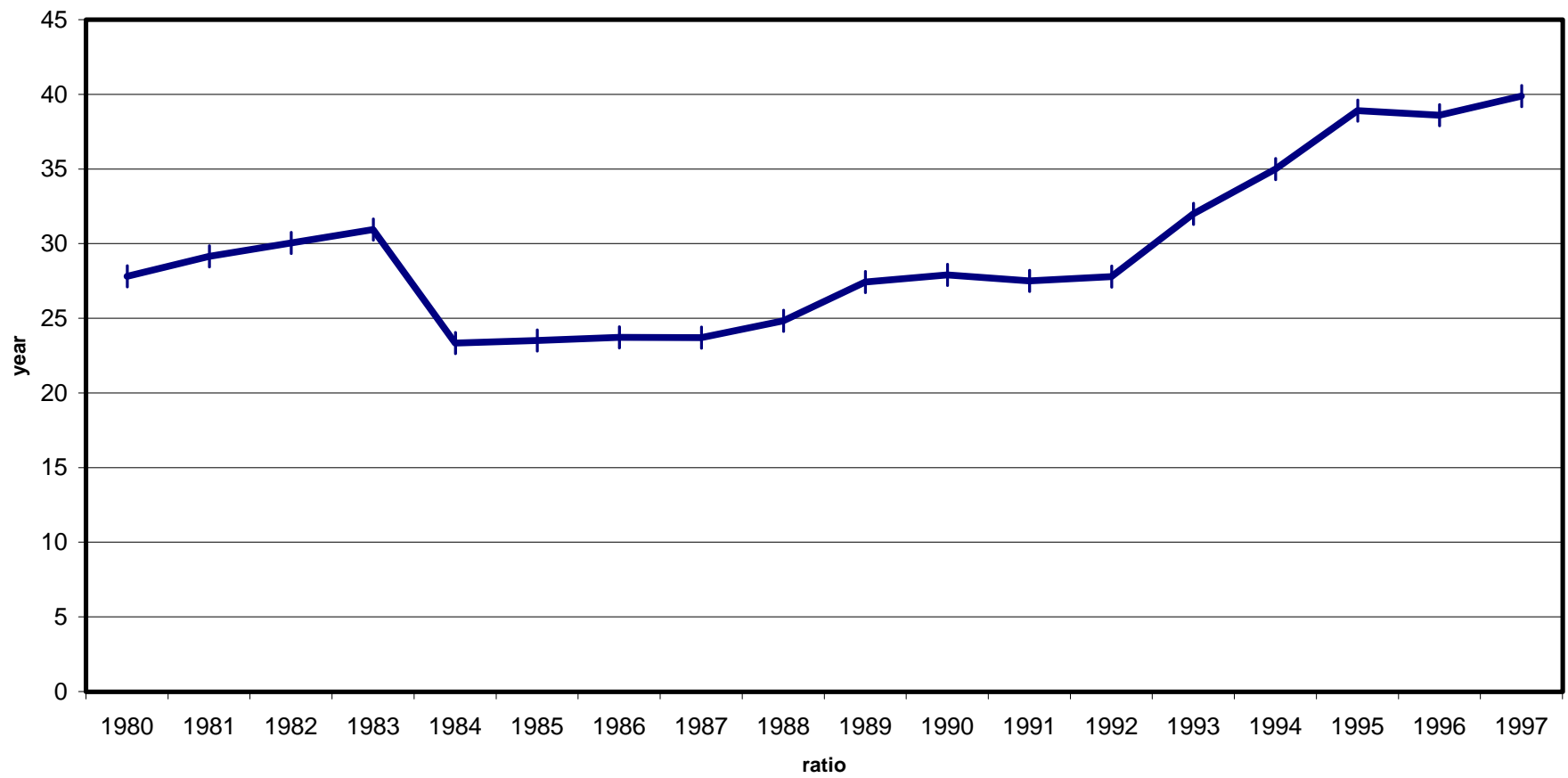


Figure 2
Ratio of GVA in Electrical Machinery to GDP



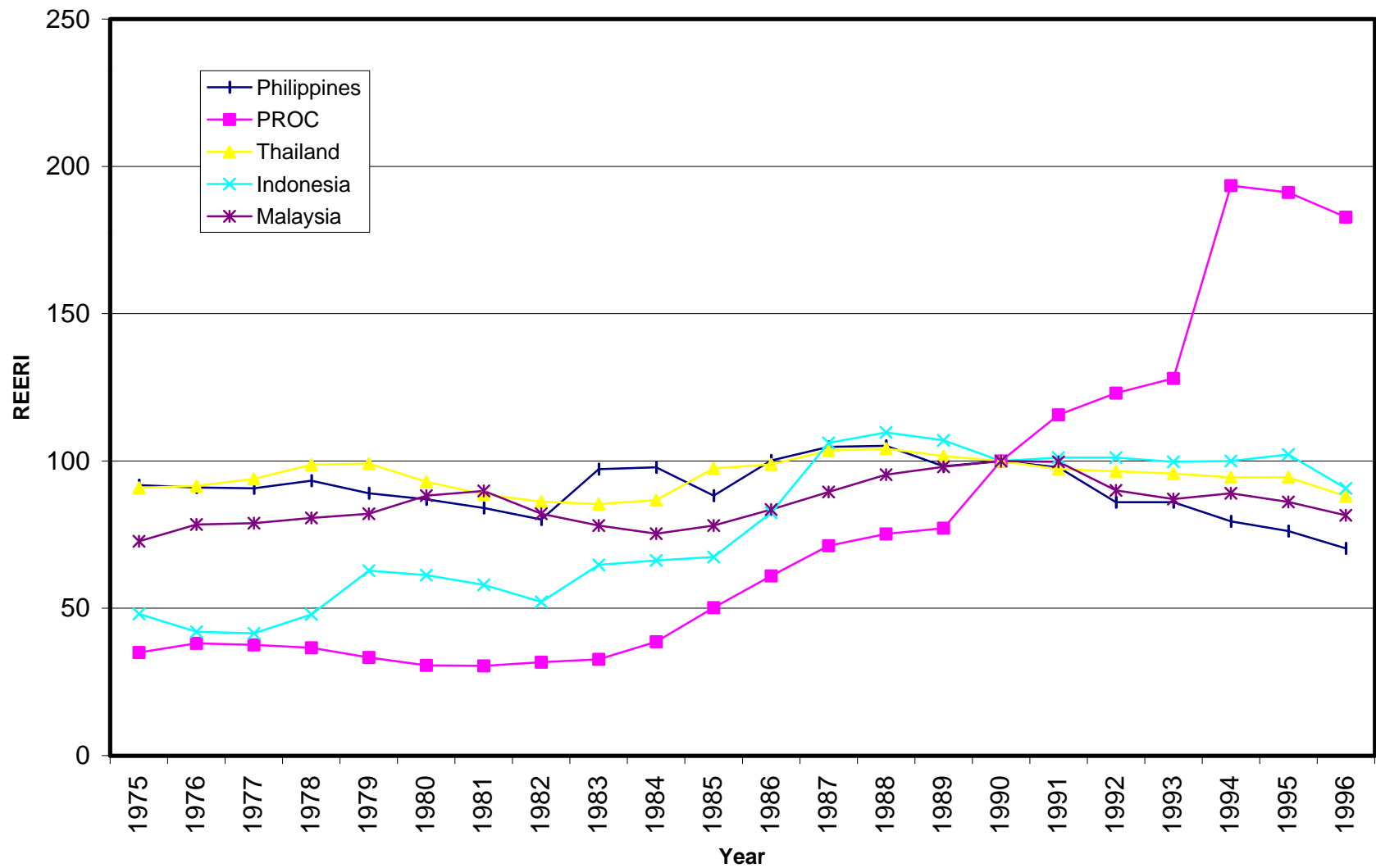
Source: National Income Accounts, NSCB

Figure 3
Ratio of M3/GNP (1980-1997)



Source: Selected Philippine Economic Indicators, BSP

Figure 4
REER of Selected Asian Countries 1975-1996



Source: Estimates by Intal and Basilio (1998)

Figure 5
Philippine Saving Rates (1970-1996)

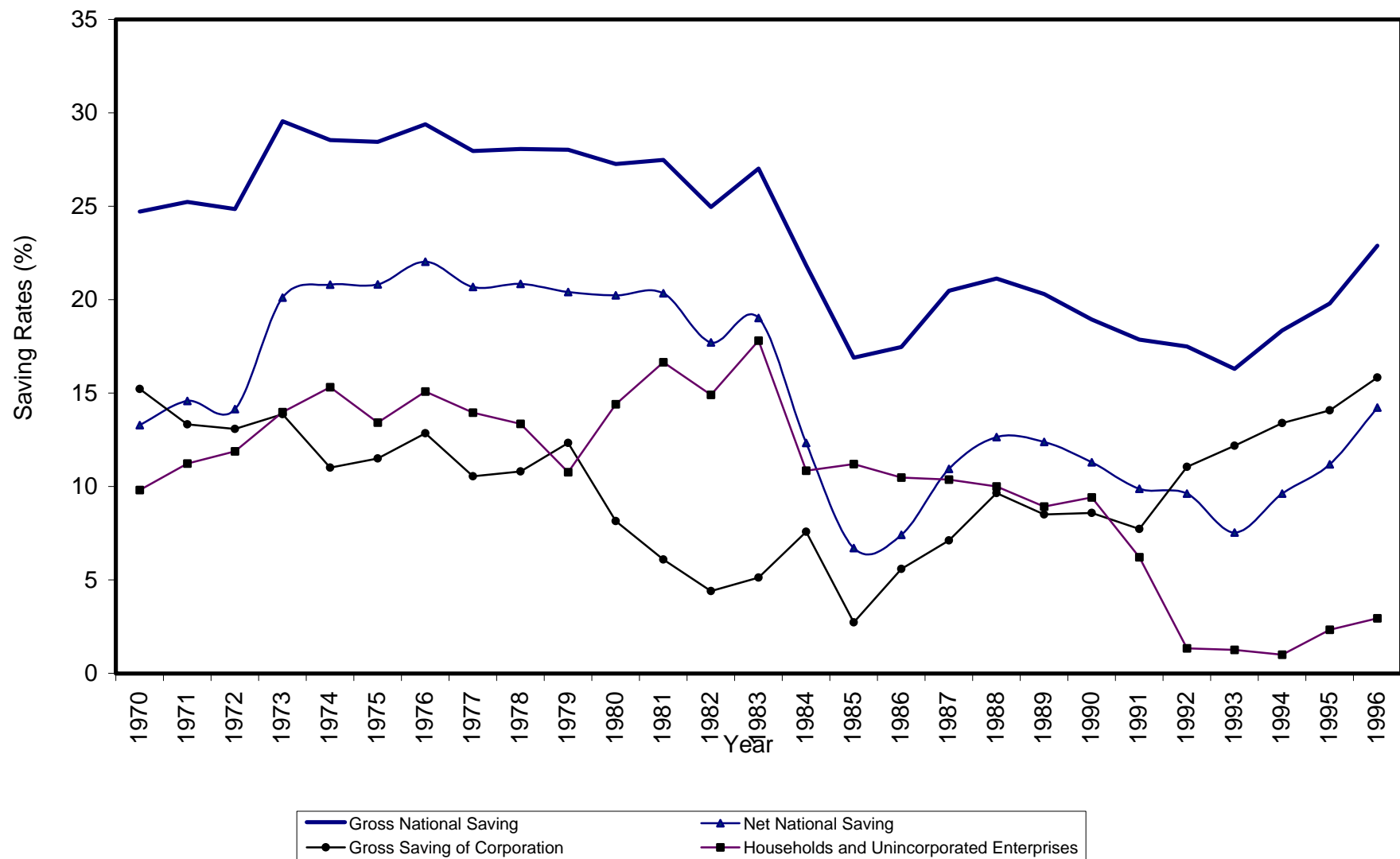


Figure 6
Share of Manufacturing to GDP - ASEAN

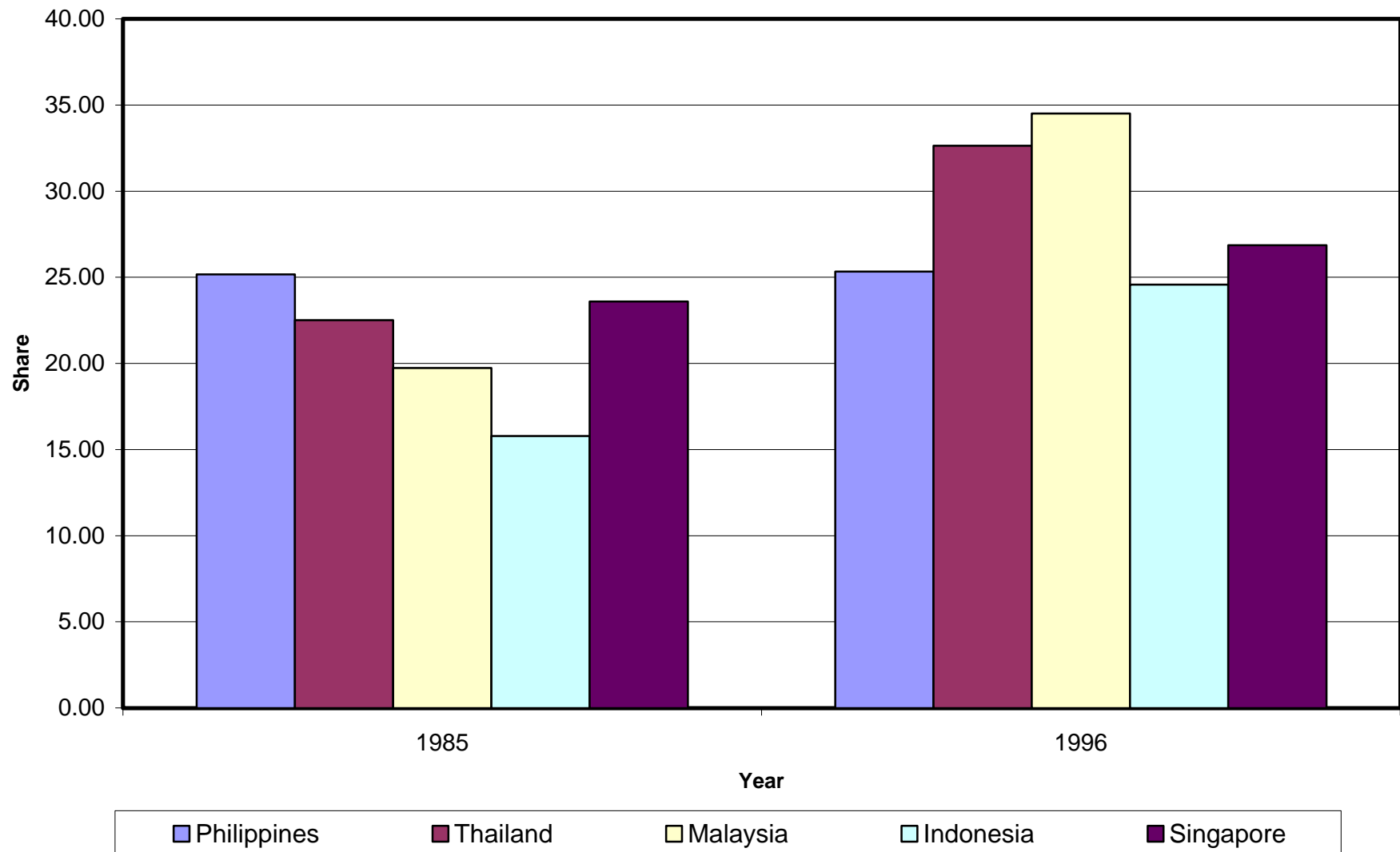


Table 1									
Resource Allocation and Efficiency									
DRC/SER Range	Efficiency Classification	<u>Share in Production Value (%)</u>				<u>Share in Number of Establishments (%)</u>			
		1983	1988	1992	1994	1983	1988	1992	1994
0<DRC/SER<1	Highly efficient	18.84	39.51	43.95	41.63	19.60	30.25	33.22	22.38
1.0<DRC/SER<1.5	Efficient-Mildly Inefficient	28.75	22.76	29.48	37.86	17.16	27.73	31.17	40.45
1.5<DRC/SER<2.0	Inefficient	12.30	14.68	8.36	7.56	14.20	13.00	12.69	16.30
DRC/SER>2.0	Highly Inefficient	39.58	21.77	18.07	12.94	46.01	26.61	21.87	20.76
DRC/SER<0	Negative foreign exchange earner/saver	0.53	1.28	0.14	0.01	3.03	2.41	1.06	0.10
Average DRC/SER		1.72	1.54	1.21	1.18				

Source: Estimates by Medalla (1997)

Table 2
Value of Exports by Major Commodity Group 1/
In million US dollars

	Total	Agro-	Forest	Mineral	Petroleum	Manu-	Electronic		Special	
	Exports	Based	Products	Products	Products	factures 2/	Equip/	Garments	Transactions	Re-exports
		Products					Parts			
1986	4842	1216	201	539	94	2672	919	751	8	112
		<i>25.11</i>	<i>4.15</i>	<i>11.13</i>	<i>1.94</i>	<i>55.18</i>	<i>18.98</i>	<i>15.51</i>	<i>0.17</i>	<i>2.31</i>
1987	5720	1296	243	462	133	3430	1119	1098	7	149
		<i>22.66</i>	<i>4.25</i>	<i>8.08</i>	<i>2.33</i>	<i>59.97</i>	<i>19.56</i>	<i>19.2</i>	<i>0.12</i>	<i>2.6</i>
1988	7074	1442	261	764	162	4338	1476	1317	27	80
		<i>20.38</i>	<i>3.69</i>	<i>10.8</i>	<i>2.29</i>	<i>61.32</i>	<i>20.87</i>	<i>18.62</i>	<i>0.38</i>	<i>1.13</i>
1989	7821	1427	197	829	95	5192	1751	1575	10	71
		<i>18.25</i>	<i>2.52</i>	<i>10.6</i>	<i>1.21</i>	<i>66.39</i>	<i>22.39</i>	<i>20.14</i>	<i>0.13</i>	<i>0.91</i>
1990	8186	1393	94	723	155	5707	1964	1776	19	95
		<i>17.02</i>	<i>1.15</i>	<i>8.83</i>	<i>1.89</i>	<i>69.72</i>	<i>23.99</i>	<i>21.7</i>	<i>0.23</i>	<i>1.16</i>
1991	8840	1480	73	610	175	6403	2293	1861	17	82
		<i>16.74</i>	<i>0.83</i>	<i>6.9</i>	<i>1.98</i>	<i>72.43</i>	<i>25.94</i>	<i>21.05</i>	<i>0.19</i>	<i>0.93</i>
1992	9824	1556	57	633	150	7298	2753	2140	32	98
		<i>15.81</i>	<i>0.58</i>	<i>6.43</i>	<i>1.52</i>	<i>74.15</i>	<i>27.97</i>	<i>21.74</i>	<i>0.33</i>	<i>1</i>
1993	11375	1576	45	686	136	8729	3551	2272	38	165
		<i>13.85</i>	<i>0.4</i>	<i>6.03</i>	<i>1.2</i>	<i>76.74</i>	<i>31.22</i>	<i>19.97</i>	<i>0.33</i>	<i>1.45</i>
1994	13483	1675	26	780	132	10615	4996	2375	74	181
		<i>12.1</i>	<i>0.19</i>	<i>5.63</i>	<i>0.95</i>	<i>76.68</i>	<i>36.09</i>	<i>17.16</i>	<i>0.53</i>	<i>1.31</i>
1995	17447	2096	38	893	171	13868	7413	2570	108	273
		<i>12.01</i>	<i>0.22</i>	<i>5.12</i>	<i>0.98</i>	<i>79.49</i>	<i>42.49</i>	<i>14.73</i>	<i>0.62</i>	<i>1.56</i>
1996	20534	1861	42	772	273	17106	9990	2423	157	323
		<i>9.06</i>	<i>0.20</i>	<i>3.76</i>	<i>1.33</i>	<i>83.31</i>	<i>48.65</i>	<i>11.8</i>	<i>0.76</i>	<i>1.57</i>
1997	25228	1899	45	764	257	21488	13052	2349	263	512
		<i>7.53</i>	<i>0.18</i>	<i>3.03</i>	<i>1.02</i>	<i>85.18</i>	<i>51.74</i>	<i>9.31</i>	<i>1.04</i>	<i>2.03</i>

1/ Shares to total in italics

2/ Breakdown of major Manufactures (Garments and Electronic Parts/Equip) follow

Source of basic data: BSP, Selected Philippine Economic Indicators

Table 3
Share to World Exports - ASEAN

	1971	1976	1981	1986	1991	1996
<i>Philippines</i>	0.34	0.28	0.31	0.24	0.25	0.40
<i>Thailand</i>	0.26	0.32	0.38	0.45	0.80	1.09
<i>Indonesia</i>	0.38	0.93	1.28	0.75	0.82	0.98
<i>Malaysia</i>	0.51	0.57	0.64	0.71	0.96	1.53
<i>Singapore</i>	0.55	0.71	1.13	1.14	1.66	2.46
<i>China</i>	0.62	0.88	1.16	1.59	2.02	2.97

Source: Key Indicators of Developing Asian and Pacific Countries, 1996

Table 4
PRODUCTION STRUCTURE OF THE ECONOMY
Percent Distribution - in real terms

INDUSTRY	1975	1980	1983	1985	1988	1990	1993	1996	1997
1. AGRI.FISHERY,FORESTRY	24.74	23.55	22.04	25.28	23.80	22.19	22.37	20.21	19.62
a. Agriculture industry	21.06	20.54	20.00	23.66	22.07	21.18	21.90	20.10	19.54
b. Forestry	3.68	3.00	2.05	1.62	1.73	1.01	0.47	0.10	0.08
2. INDUSTRY SECTOR	38.48	40.59	41.01	36.06	35.56	35.28	33.67	34.30	34.27
a. Mining & Quarrying	1.27	1.50	1.41	2.14	1.79	1.53	1.55	1.19	1.09
b. Manufacturing	28.39	27.65	26.49	25.87	25.95	25.39	24.27	24.34	23.91
c. Construction	7.01	9.41	10.70	5.22	5.09	5.78	5.13	5.60	6.15
d. Elect,Gas and Water	1.82	2.04	2.41	2.84	2.73	2.58	2.71	3.18	3.12
3. SERVICE SECTOR	37.04	36.05	38.44	41.50	41.56	42.02	42.26	41.56	41.63
a. Trans., Comm. & Stor.	4.77	4.79	4.97	5.69	5.81	5.67	5.75	5.77	5.88
b. Trade	12.55	13.04	13.68	14.90	14.59	14.83	15.06	14.77	14.54
c. Finance	3.36	3.94	3.80	3.08	3.65	4.14	4.00	4.37	4.64
d. O. Dwellings & R. Estate	6.49	5.20	5.29	5.78	5.62	5.54	5.53	5.17	5.07
e. Private Services	5.18	4.91	6.45	7.04	6.94	6.81	6.83	6.61	6.56
f. Government Services	4.69	4.17	4.24	5.02	4.95	5.03	5.10	4.87	4.94
GROSS DOMESTIC PRODUCT	100.26	100.19	101.49	102.84	100.92	99.49	98.29	96.06	95.53
Net factor income from abroad	-0.26	-0.19	-1.49	-2.84	-0.92	0.51	1.71	3.94	4.47
GROSS NATIONAL PRODUCT	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: The National Accounts of the Philippines, NSO

Table 5
Quarterly Growth Rate for the Manufacturing Sector
1994Q4-1998Q1

94Q4	6.50	95Q4	6.04
95Q1	6.63	96Q1	4.90
95Q2	8.26	96Q2	6.23
95Q3	6.36	96Q3	6.34
95Q4	6.04	96Q4	4.90
96Q1	4.90	97Q1	2.33
96Q2	6.23	97Q2	5.33
96Q3	6.34	97Q3	4.34
96Q4	4.90	97Q4	3.80
97Q1	2.33	98Q1	1.3

Source: National Income Accounts, NSCB

Table 6
Average Growth Rates of Agriculture Value Added and Exports

	1980 - 1990		1990-1996	
	GVA	Exports	GVA	Exports ^a
Philippines	1.0	-4.6	1.6	5.5
Indonesia	4.9	4.7	4.5	12.1
Malaysia	3.8	3.1	2.0	9.9
Thailand	3.9	4.9	2.9	6.1

a: 1990 - 1994 only

Sources: Key Indicators, ADB

Trade Yearbook, FAO

National Income Accounts, NSCB

Table 7
Trends in Revealed Comparative Advantage

	Agriculture ^a	Coconut	Sugar ^b	Banana	Pineapple
1980	2.9	224.1	12.1	30.4	82.2
1985	2.4	212.3	7.6	31.2	91.6
1990	1.5	210.8	3.8	23.3	69.7
1995	1.2	181.2	1.5	13.8	40.5

a: Includes fisheries

b: Note that sugar has been historically exported to the US typically at a price (i.e., higher than the world prices). Hence a value greater than unity in this case does not reveal comparative advantage. However, the sharp declining trend may still be interpreted as a rapid deterioration in comparative advantage.

Source: Trade Yearbook, FAO

International Trade Statistical Yearbook

Table 8
Growth of labor and land productivity of the crop sector (%)

	Labor	Land	
		<i>Cultivated</i>	<i>Crop</i>
1980-1985	-4.4	-2.0	-1.3
1985-1990	1.6	0.4	1.7
1990-1995	-0.5	0.2	2.0

Source: Production Yearbook, FAO

Table 9
Nominal Protection Rates

	1985-89	1990-94	1995	1996	1997
Rice	16	19	68	65	49
Corn	67	76	127	69	105
Sugar	154	81	104	113	60
Copra	-6	0	0	0	0
Coconut oil	7	18	10	5	0
Copra cake & meal	0	0	0	0	0
Bananas, pineapples, tobacco, abaca	0	0	0	0	0
Pork	43	31	44	-	-
Chicken	39	74	84	-	-

Source: Estimates by David (1998) using Bureau of Agriculture Statistics

Table 10
PHILIPPINE INDEXES, 1987-1995
(1992=1.00)

	Nominal Wage	Implicit GDP	Average Labor		Unit Labor	Share of Labor
Year	(w)	Deflator (p)	Productivity (h)	Real Wage (w/p)	Cost (w/h)	in GDP (w/ph)
1987	0.50	0.59	0.99	0.85	0.50	0.86
1988	0.56	0.65	1.02	0.86	0.55	0.84
1989	0.67	0.70	1.06	0.96	0.63	0.91
1990	0.80	0.80	1.06	1.00	0.75	0.94
1991	0.93	0.93	1.04	1.00	0.89	0.96
1992	1.00	1.00	1.00	1.00	1.00	1.00
1993	1.07	1.07	1.00	1.00	1.07	1.00
1994	1.23	1.17	1.02	1.05	1.21	1.03
1995	1.34	1.26	1.04	1.06	1.29	1.02

Source: Estimates by Jurado and Sanchez (1997)

Table 11
INDICES OF AVERAGE LABOR PRODUCTIVITY
Overall, Agriculture and Manufacturing (1975=100)

		1975		1980	1985	1990	1996
China	overall	100		122	131	140	...
Indonesia	overall	100	a/	126	131	148	204
(1993 prices)	agri	100	a/	104	121	114	160
	mftg	100	a/	155	194	242	310
Malaysia	overall	100		125	138	161	216
(1978 prices)	agri	100		133	158	201	281
	mftg	100		104	118	143	181
Philippines	overall	100		119	92	102	99
(1985 prices)	agri	100		117	100	109	108
	mftg	100		119	96	108	100
Singapore	overall	100		116	137	171	233
(1985 prices)	agri	100		114	194	177	288
	mftg	100		115	128	171	272
Thailand	overall	100		116	132	181	297
(1988 prices)	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 12 Annual Growth Rate of TFP, ASEAN				
	Philippines	Malaysia	Indonesia	Thailand
1960-73	0.7	1.0	1.1	1.4
1973-94	-1.1	0.9	0.7	2.1
1973-84	-1.3	0.4	0.5	1.1
1984-94	-0.9	1.4	0.9	3.3
1960-94	-0.4	0.9	0.8	1.8

Source: Collins and Bosworth (1997)

Table 13 Average Share in Total FDI (of developing member countries of the ADB)		
Country	1985-90	1990-95
Philippines	5.71	3.20
Indonesia	8.15	7.72
Malaysia	15.85	17.57
Thailand	13.89	9.69
Vietnam	0.11*	0.17
China	41.64	54.61

*1988-1990 only

Source: Key Indicators 1997, ADB

Table 14 Gross Domestic Investment (percent of GNP)					
	1971-1980				
	<i>Average</i>	<i>1981</i>	<i>1986</i>	<i>1991</i>	<i>1996</i>
<i>Philippines</i>	26.7	30.6	12.9	20.2	23.7
<i>Thailand</i>	25.9	26.3	22.0	42.7	41.0
<i>Indonesia</i>	24.8	25.4	28.9	32.0	39.0
<i>Malaysia</i>	20.5	35.0	26.0	35.8	41.0
<i>Singapore</i>	41.1	46.3	38.2	35.1	34.5
<i>China</i>	34.2	27.8	38.7	35.4	38.7

Source: Asian Development Outlook, various years

Table 15 Gross Domestic Saving Rate (percent of GDP)				
	1971-80	1990	1996	1997
<i>Philippines</i>	23.4	18.7	18.8	19.2
<i>Indonesia</i>	21.6	32.3	30.2	31.0
<i>Korea</i>	22.3	36.2	35.2	34.5
<i>Malaysia</i>	30.4	33.4	42.6	43.8
<i>Thailand</i>	22.2	34.2	33.7	31.0

Sources: ADB Key Indicators & ADO 1998

Table 16
Foreign Exchange Flows
In million US dollars

Levels	1990	1991	1992	1993	1994	1995	1996	1997
<i>Trade Balance</i>	-4020	-3211	-4695	-6222	-7850	-8944	-11342	-10708
<i>Current Account</i>	-2567	-869	-858	-3016	-2950	-3297	-3914	-4303
<i>Short-Term Capital, net</i>	19	349	660	-148	1002	-56	540	495
<i>MLT Loans, net</i>	674	835	633	2455	1313	1276	2690	4688
<i>FDI, net</i>	528	529	675	864	1289	1361	1338	1117
<i>Portfolio, net</i>	-56	125	62	-52	269	248	-170	-461
<i>Non-residents, net</i>	-52	125	155	897	901	1485	2101	-55
<i>KBs</i>	603	40	289	-299	674	1574	4211	1191
Share to GDP								
<i>Trade Balance</i>	-9.07	-7.07	-8.86	-11.44	-12.25	-12.06	-13.54	-12.87
<i>Current Account</i>	-5.79	-1.91	-1.62	-5.55	-4.60	-4.45	-4.67	-5.17
<i>Short-Term Capital, net</i>	0.04	0.77	1.25	-0.27	1.56	-0.08	0.64	0.59
<i>MLT Loans, net</i>	1.52	1.84	1.19	4.52	2.05	1.72	3.21	5.63
<i>FDI, net</i>	1.19	1.16	1.27	1.59	2.01	1.84	1.60	1.34
<i>Portfolio, net</i>	-0.13	0.28	0.12	-0.10	0.42	0.33	-0.20	-0.55
<i>Non-residents, net</i>	-0.12	0.28	0.29	1.65	1.41	2.00	2.51	-0.07
<i>KBs</i>	1.36	0.09	0.55	-0.55	1.05	2.12	5.03	1.43

Source: BSP, Selected Philippine Economic Indicators

Table 17
Foreign Exchange Liabilities
As of the dates indicated
In million US dollars

	1990		1991		1992		1993		1994 a/		1995 a/		1996		1997	
	Amount	% Share to Total	Amount	% Share to Total	Amount	% Share to Total	Amount	% Share to Total	Amount	% Share to Total	Amount	% Share to Total	Amount	% Share to Total	Amount	% Share to Total
By Type of Debt	28549	100	29956	100	30934	100	34282	100	37079	100	37778	100	41875	100	45433	100
<i>Medium and Long-Term</i>	24173	84.67	25129	83.89	25678	83.01	29247	85.31	31882	85.98	32499	86.03	34668	82.79	36994	81.43
<i>IMF</i>	997	3.49	1165	3.89	1183	3.82	1312	3.83	1139	3.07	814	2.15	405	0.97	889	1.96
<i>Others</i>	23176	81.18	23964	80.00	24495	79.18	27935	81.49	30743	82.91	31685	83.87	34263	81.82	36105	79.47
<i>Short-Term</i>	4376	15.33	4827	16.11	5256	16.99	5035	14.69	5197	14.02	5279	13.97	7207	17.21	8439	18.57
<i>Trade</i>	4099	14.36	4589	15.32	4937	15.96	3495	10.19	3401	9.17	2674	7.08	4096	9.78	4032	8.87
<i>Non-Trade</i>	277	0.97	238	0.79	319	1.03	1540	4.49	1796	4.84	2605	6.90	3111	7.43	4407	9.70
By Borrower	28549	100	29956	100	30934	100	34282	100	37079	100	37778	100	41875	100	45433	100
<i>Non-Banking</i>	20744	72.66	22491	75.08	26720	86.38	31879	92.99	34052	91.84	33591	88.92	33244	79.39	34768	76.53
<i>Public</i>	16958	59.40	18453	61.60	21745	70.29	26583	77.54	27193	73.34	26340	69.72	24132	57.63	22271	49.02
<i>Public (NG & Others)</i>							24969	72.83	25526	68.84	24886	65.87	22943	54.79	21393	47.09
<i>Central Bank - BOL</i>							1614	4.71	1667	4.50	1454	3.85	1189	2.84	878	1.93
<i>Private</i>	3786	13.26	4038	13.48	4975	16.08	5296	15.45	6859	18.50	7251	19.19	9112	21.76	12497	27.51
<i>Banking</i>	7805	27.34	7465	24.92	4214	13.62	2403	7.01	3027	8.16	4187	11.08	8632	20.61	10664	23.47
<i>Central Bank of the P</i>	5481	19.20	5325	17.78	2303	7.44										
<i>Bangko Sentral ng Pilipinas</i>							1288	3.76	855	2.31	1212	3.21	1415	3.38	2499	5.50
<i>Banks</i>	2324	8.14	2140	7.14	1911	6.18	1115	3.25	2172	5.86	2975	7.87	7217	17.23	8165	17.97
By Creditor	28549	100	29956	100	30934	100	34282	100	37079	100	37778	100	41875	100	45433	100
<i>Banks & Other Financial</i>	11491	40.25	11007	36.74	9407	30.41	5985	17.46	5529	14.91	6345	16.80	8373	20.00	10176	22.40
<i>Suppliers</i>	2312	8.10	2802	9.35	2963	9.58	3185	9.29	3549	9.57	2587	6.85	2588	6.18	2359	5.19
<i>Multilateral</i>	6005	21.03	6499	21.70	7168	23.17	7949	23.19	8216	22.16	8028	21.25	8634	20.62	8638	19.01
<i>Bilateral</i>	8547	29.94	9572	31.95	11328	36.62	13369	39.00	15033	40.54	14393	38.10	13439	32.09	13307	29.29
<i>Others</i>	194	0.68	76	0.25	68	0.22	3794	11.97	4752	12.82	6426	17.01	8841	21.11	10953	24.11

a/ As adjusted; excludes "Due to Head Office/Branches Abroad" accounts amounting to \$519 million for end-1994 and \$861 million for end-1995.

Source: Bangko Sentral ng Pilipinas (BSP)

Table 18
Loans Outstanding of Commercial Banks 1/
(in million pesos)

	1994	1995	1996	1997
A. Classified by Economic Activity				
1. <i>Agriculture, Fisheries, & Forestry</i>	49845.0	59603.0	63433.9	70705
2. <i>Mining & Quarrying</i>	5585.6	8710.6	9529.3	16231
3. <i>Manufacturing</i>	189457.5	253638.9	361555.9	424255
4. <i>Electricity, Gas, & Water</i>	13199.4	16460.3	31368.9	42024
5. <i>Construction</i>	18019.6	24759.8	43132.1	51590
6. <i>Wholesale & Retail Trade</i>	95089.6	130568.1	180281.4	230765
7. <i>Transportation, Storage, & Communication</i>	25988.4	44708.0	68556.7	101253
8. <i>Fin Inst., Real Estate, & Bus. Services</i>	99333.7	123943.9	244422.1	348477
9. <i>Community, Social, & Personal Services</i>	46277.0	74867.8	117984.2	131485
TOTAL	542795.8	737260.4	1120264.5	1416785
B. Growth Rate (%)				
1. <i>Agriculture, Fisheries, & Forestry</i>	8.1	19.6	6.4	11.5
2. <i>Mining & Quarrying</i>	-48.1	55.9	9.4	70.3
3. <i>Manufacturing</i>	32.5	33.9	42.5	17.3
4. <i>Electricity, Gas, & Water</i>	25.7	24.7	90.6	34.0
5. <i>Construction</i>	32.3	37.4	74.2	19.6
6. <i>Wholesale & Retail Trade</i>	39.8	37.3	38.1	28.0
7. <i>Transportation, Storage, & Communication</i>	53.8	72.0	53.3	47.7
8. <i>Fin Inst., Real Estate, & Bus. Services</i>	37.4	24.8	97.2	42.6
9. <i>Community, Social, & Personal Services</i>	-10.4	61.8	57.6	11.4
TOTAL	25.4	35.8	51.9	26.5
C. Share (%)				
1. <i>Agriculture, Fisheries, & Forestry</i>	9.2	8.1	5.7	5.0
2. <i>Mining & Quarrying</i>	1.0	1.2	0.9	1.1
3. <i>Manufacturing</i>	34.9	34.4	32.3	29.9
4. <i>Electricity, Gas, & Water</i>	2.4	2.2	2.8	3.0
5. <i>Construction</i>	3.3	3.4	3.9	3.6
6. <i>Wholesale & Retail Trade</i>	17.5	17.7	16.1	16.3
7. <i>Transportation, Storage, & Communication</i>	4.8	6.1	6.1	7.1
8. <i>Fin Inst., Real Estate, & Bus. Services</i>	18.3	16.8	21.8	24.6
9. <i>Community, Social, & Personal Services</i>	8.5	10.2	10.5	9.3
TOTAL	100.0	100.0	100.0	100

1/ Peso and Foreign Accounts but excluding transactions of local banks' foreign offices

p/ preliminary

Source: Commercial Banks Monthly Statements of Condition

Table 19
Indicators of Banking Activity*, 1980-1997
In percent GDP

<i>Year</i>	<i>Total Assets</i>	<i>Total Deposits</i>	<i>Loans & Advances to Private Sector</i>
1980	56.8	30.7	30.9
1981	58.5	29.0	32.4
1982	60.2	30.0	32.7
1983	69.5	32.3	36.3
1984	57.1	26.2	23.7
1985	51.9	26.0	19.4
1986	43.5	24.0	13.9
1987	42.1	23.0	15.5
1988	42.8	24.9	15.0
1989	45.4	27.3	16.8
1990	50.3	29.0	18.9
1991	48.1	29.4	17.6
1992	51.1	31.6	20.2
1993	58.6	37.8	25.7
1994	62.5	40.7	29.1
1995	70.7	45.8	37.2
1996	85.4	51.0	49.3
1997	90.0	53.2	51.8

*Commercial Banking System

Sources: BSP Statistical Bulletin, various years

BSP Department of Economic Research

Table 20
Tax Effort in Selected Asian Countries, 1991/1994
(in percent of GDP)

	1991	1994
Indonesia	17.2	15.5
Malaysia	21.2	21.4
Philippines	14.6	16.0
Singapore	15.8	16.9
Thailand	17.6	16.8
South Korea	14.9	16.9

Source: Estimated by Manasan (1998) using revenue data from the Government Finance Statistics and GDP data from the International Finance Statistics

Table 21
Ratio of National Government Revenue to GNP, 1976-1996
(in percent)

	1975-1985	1986-1991	1992-1996	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>TOTAL REVENUE</i>	12.90	15.97	18.18	13.29	15.39	14.25	16.71	16.71	17.44	17.52	17.36	19.36	18.44	18.01
<i>TAX REVENUE</i>	11.26	13.12	15.67	10.98	12.81	11.41	13.43	14.01	14.40	15.06	15.34	15.62	15.85	16.15
<i>Income and Profits</i>	2.85	4.07	5.45	3.21	3.25	3.46	4.12	4.56	4.82	5.06	4.99	5.29	5.58	5.98
<i>Corporate</i>	1.46	1.75	2.60	1.44	1.90	1.64	1.67	1.78	1.92	2.21	2.39	2.53	2.65	2.99
<i>Individual</i>	1.10	1.30	1.90	1.00	1.11	1.00	1.21	1.45	1.65	1.65	1.70	1.97	1.94	2.10
<i>Others</i>	0.23	1.02	0.94	0.78	0.24	0.82	1.25	1.33	1.25	1.20	0.89	0.79	0.99	0.90
<i>Excise</i>	2.02	2.59	2.11	2.75	3.38	2.47	2.73	2.67	2.01	1.99	2.02	2.28	2.10	2.12
<i>Sales Tax/VAT and Licenses</i>	2.31	2.76	3.61	2.17	2.98	2.48	2.82	2.98	2.85	3.02	3.66	3.33	3.71	4.07
<i>Other Domestic Taxes</i>	0.91	0.62	0.94	0.54	0.50	0.75	0.65	0.67	0.57	0.74	0.65	1.25	0.98	0.96
<i>Import Duties</i>	2.91	3.08	3.57	2.21	2.70	2.24	3.10	3.13	4.15	4.25	4.04	3.47	3.48	3.00
<i>Export Taxes</i>	0.26	0.03		0.11	0.002	0.0004								
<i>NON-TAX REVENUE</i>	1.64	2.84	2.50	2.31	2.58	2.84	3.28	2.70	3.04	2.45	2.02	3.74	2.59	1.84
<i>of which:</i>														
<i>Collection from Other Offices</i>	1.47	1.94	1.72	1.24	1.72	1.83	2.12	1.90	2.34	2.04	1.77	1.97	1.37	1.59
<i>Grants</i>	0.19	0.54	0.15	1.06	0.67	0.24	0.71	0.41	0.37	0.27	0.13	0.04	0.05	0.02
<i>Sale of Assets</i>		0.48	0.70		0.19	0.76	0.46	0.39	0.33	0.14	0.11	1.72	1.17	0.25

Source: Estimates by Manasan (1997) using government revenue from Bureau of Treasury;
GNP from National Statistical Coordination Board

Table 22
Overall Buoyancy Coefficients of Major Tax Groups, 1976-1996

	1976-1986	1987-1996	1987-1992	1993-1996
<i>TOTAL TAX REVENUE</i>	<i>0.93</i>	<i>1.31</i>	<i>1.41</i>	<i>1.15</i>
Individual Income Tax	0.62a/	1.62	1.67	1.53
Corporate Income Tax	0.90a/	1.60	1.57	1.67
Sales Tax/VAT and Licenses	0.95	1.52	1.43	1.67
Excise Taxes	1.22	0.80	0.60	1.14
Import Duties	0.71	1.25	1.88	0.29

^a refers to average for 1980-1986

Source: Estimates by Manasan (1998)

Table 23
Growth in Infrastructure Stock and Services
(period growth rates; percent)

Country	Paved Road	Elec. Gen. Capacity	Elec. Prod'n.	Tel Main Lines	Railroad Tracks	Access to Safe Water 1/	Access to Sanitation
<i>Philippines</i> 2/	-20	48	46	45	-55	36	-2
China	...	105	107	64
Indonesia	106	312	534	184	5	11	22
Korea	120	134	197	299	38	18	...
Malaysia	36	107	143	301	7	15	24
Thailand	69	142	206	262	6	14	...

1/ % change in coverage

2/ (For paved roads) According to DPWH's Bureau of Maintenance, the decrease of the length of road network was due to correction and/or revision in the measurement of physical length

Source: Harinder Kohli, Infrastructure Development in East Asia and Pacific (WB 1994)

Table 24
Infrastructure Indicators

	Telephone Mainlines per 100l		% of Roads Paved		Water Coverage (%) ^d	
	1990	1995	1986	1994	1990	1995
Philippines	10	21	13	17	71	67 ^g
Indonesia	6	17	30 ^b	45.5 ^c	25 ^e	27 ^h
Malaysia	89	166	... ^b	75 ^c	100 ^f	100
Thailand	24	59	87	92	79	82

^a World Development Report 1994 and World Bank Competitiveness Indicators, 1996 (internet edition)

^b 1988 data used instead of from the World Development Report 1994

^c 1995 data used from the World Bank Competitiveness Indicators, 1996 (internet edition)

^d Water Utilities Data Book and The Second Water Utilities Data Book, ADB

Figures are represented by the service coverage of the water utility of the major city of each country:

Philippines - Metropolitan Waterworks and Sewerage System (Manila)

Malaysia- Selangor Waterworks Department (Kuala Lumpur)

Indonesia- Pdam Dki Jakarta (Jakarta)

Thailand- Metropolitan Waterworks Authority (Bangkok)

^e Other sources of water for the rest of the population are mostly dug and deep wells; water vending is common; data as of 1991

^f Bulk supplies to condominiums and flats provide coverage not reflected under domestic use but under institutional and others; data as of 1991

^g Most areas not served by MWSS depend on wells

^h estimate given by utility is 38% (the given figure was computed); other sources of water for the rest of the city population are tubewells and rain collectors

Table 25
Infant Mortality Rate (per 1,000 live births)

	1988	1989	1991	1992	1994
Philippines	44	44	42	44	36
Indonesia	84	73	68	58	53
Malaysia	24	23	15	13	12
Thailand	38	27	28	37	29
Singapore	9	8	7	6	5

Source: Human Development Report, UNDP

Table 26
Access to Health Services

	1991	1993	1995
Philippines	75	76	76
Indonesia	80	80	80
Malaysia	90	-	-
Thailand	70	90	90
Singapore	100	100	100

Source: Human Development Report, UNDP

Table 27
Public Expenditure on Education (%GNP)

	1970	1985	1990	1995
Philippines	2.6	1.4	2.9	2.2
Indonesia	2.8	-	1.1	1.3
Malaysia	4.4	6.6	5.5	5.3
Thailand	3.5	3.8	3.6	4.2
Singapore	3.1	4.4	3.1	3.0
China	-	2.6	2.3	2.3

Source: UNESCO Database

Table 28			
Poverty Indicators			
	1985	1994	1997
Poverty Incidence (%)	44.2	35.5	32.1
Number of poor families	4,355,052	4,531,170	4,553,387
Urban	1,250,398	1,521,882	1,246,173
Rural	3,104,655	3,009,288	3,307,215

Source: Economic and Social Statistics Office, NSCB

Table 29			
Poverty in East Asia (\$1 per day PPP)			
	Headcount (%)		
	1985	1993	1995
East Asia	37.4	27.9	21.2
Philippines	32.4	27.5	25.5
China	37.9	29.7	22.2
Indonesia	32.2	17.0	11.4
Thailand	10.0	<1.0	<1.0
Malaysia	10.8	<1.0	<1.0

Source: Estimates by Ahuja et al. (1997)

Table 30		
R&D Indicators		
	Scientists & Engineers (per mil. pop.)	Gross Expenditure on R&D
Philippines (1992)	152	0.2
Thailand (1991)	173	0.2
Indonesia (1988)	181	0.2
Malaysia (1992)	326	0.1
Singapore (1984)	1284	0.9
China (1991)	1128	0.5
Vietnam (1985)	334	0.4

Source: UNESCO Statistical Yearbook

Table 31
Genuine Savings for the Philippines
(in 1988 million pesos)

		1988	1992
Gross Investments		169,189	200,487
Produced Assets	b/	149,193	174,155
Public expenditure on Education	c	15,100	20,852
Public expenditure on Health	c,	4,896	5,480
Less: Foreign Borrowings	d/	(15,484)	15,067
Gross Savings		184,673	185,420
Less: Depreciation of Produced Assests	b/	67,162	65,871
Net Savings		117,511	119,549
Less: Depreciation of Natural resources	e/	2,508	7,680
Forests		936	504
Fisheries		838	6,560
Minerals		354	26
Soils		380	590
Degradation of Environment	e/		
(Environmental Damages)		2,710	3,372
Health damages from air polluti		1,297	1,942
Health damages from water pol		596	615
Off site damages		817	815
Genuine Savings	a/	112,293	108,497

Sources of Basic Data: a/ Revised version of Hamilton and Lutz (1996), with expenditure on Education and Health.

b/ National Statistical Coordination Board (personal communication).

c/ Department of Budget and Management(1988 and 1992)

d/ Bangko Sentral ng Pilipinas (personal communication)

e/ IRG, Edgevale and REECS (1996). The items cited here are depreciation figures as computed net of appreciation from growth and increases in real values.

Table 32
Protection of Natural Areas 1994
(% of Land Area)

Philippines	2.0
Indonesia	9.7
Korea	7.0
Malaysia	4.5
Singapore	4.5
Thailand	13.7

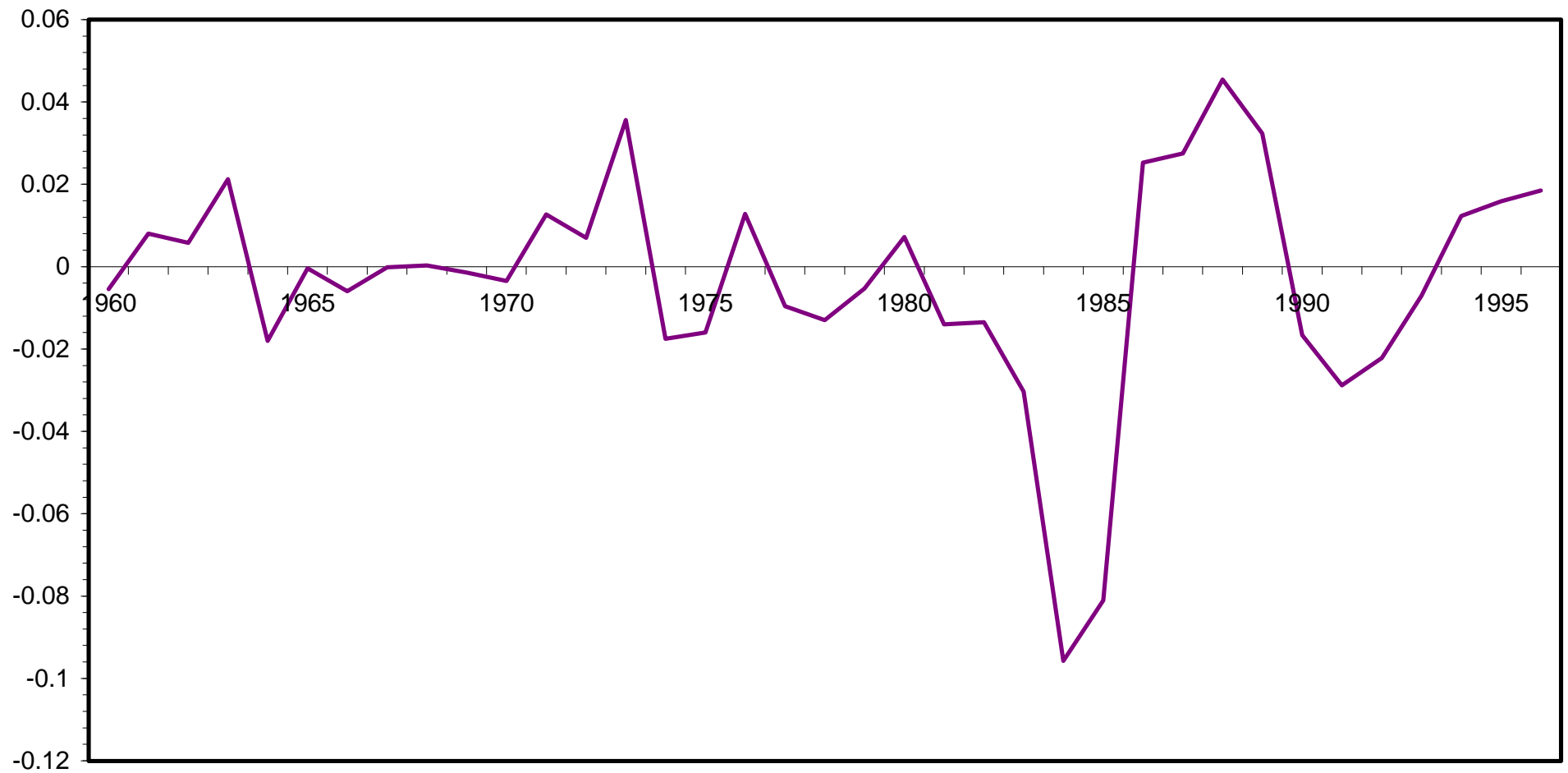
Source: World Resources (1996)

Table 33
Economic Indicators

	Per Capita Income (PPP\$)		HDI	
	<i>1985-88</i>	<i>1994</i>	<i>1980</i>	<i>1994</i>
Philippines	2,170	2,681	0.557	0.672
Indonesia	1,820	3,740	0.418	0.668
Malaysia	5,070	8,865	0.687	0.832
Thailand	3,280	7,104	0.551	0.833
China	2,470	2,604	0.475	0.626

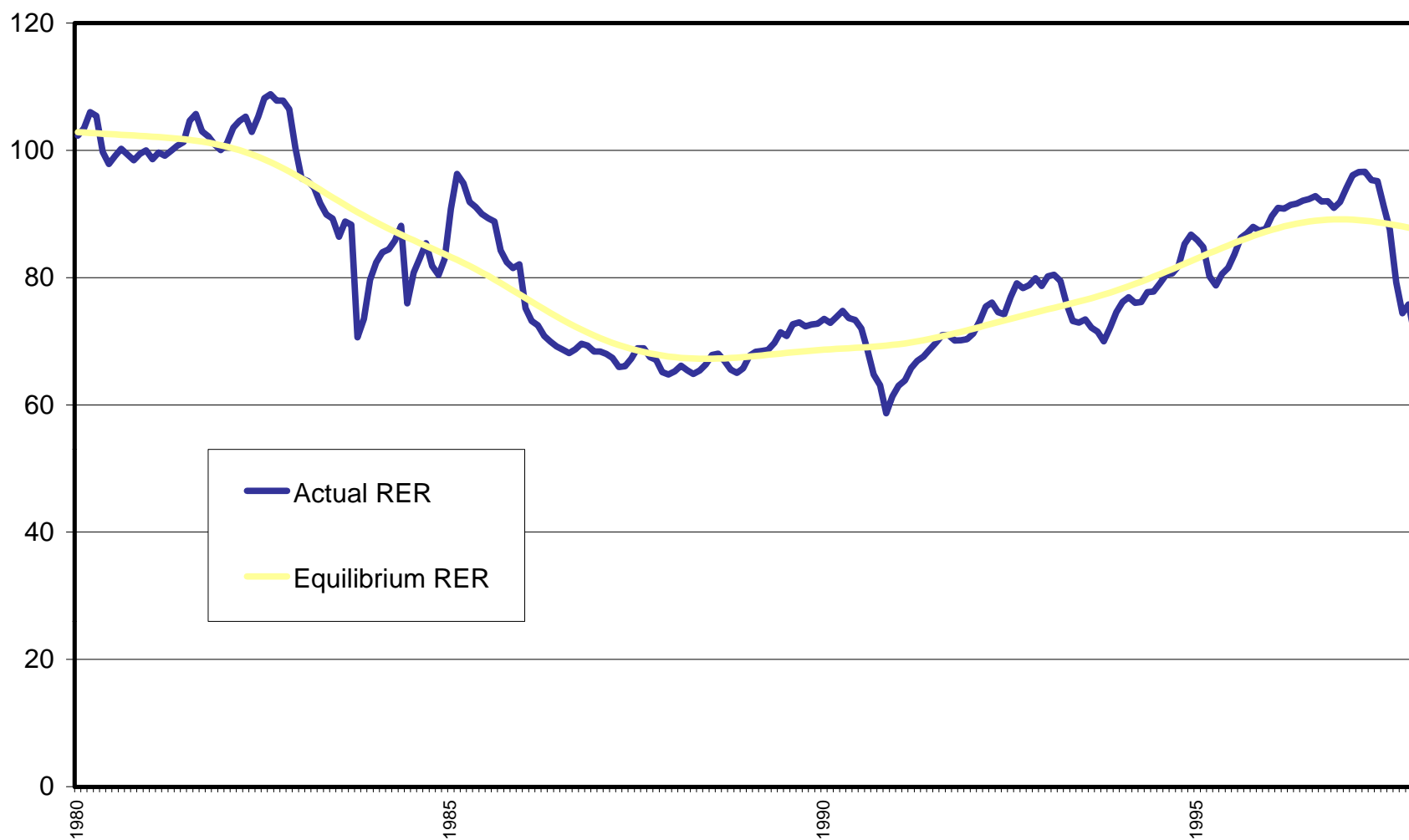
Source: Human Development Report, UNDP

Figure B1
ANNUAL TFP GROWTH RATE
1960-1996



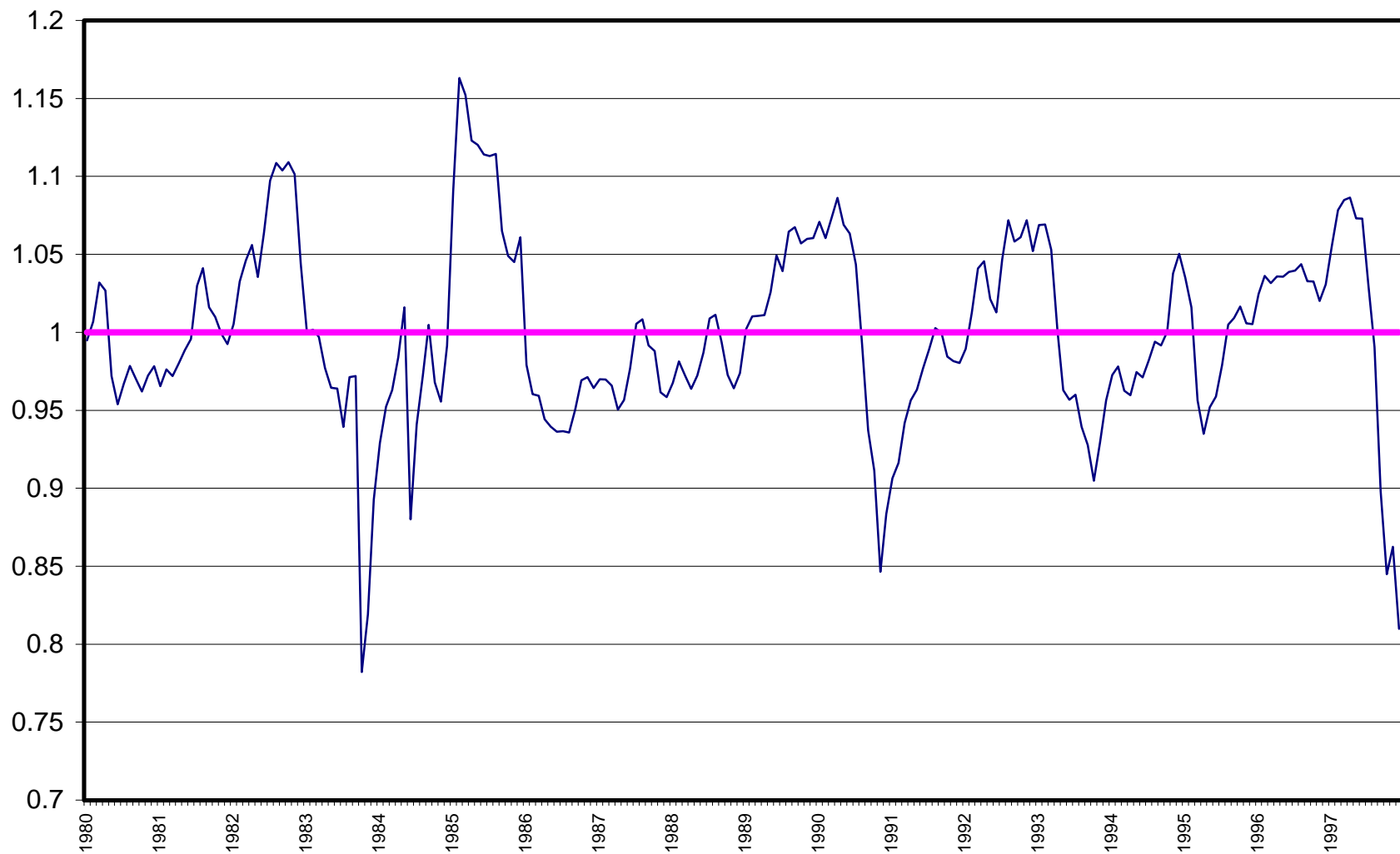
Source: Estimates by Austria (1998)

Figure B2
EQUILIBRIUM REAL EXCHANGE RATE
1980-1997



Source: Author's estimates

Figure B3
DEGREE OF OVERVALUATION
(Ratio of Actual to Equilibrium), 1980-1997



Source: Author's estimates

Table A1
Foreign Currency Deposit Unit Loans
(million US\$)

LEVELS	1993	1994	1995	1996	1997
Commodity Exporter	1108.9	1715.8	2985.8	5868.0	5171.2
Service Exporter	44.1	56.3	107.5	285.6	351.1
Producers/ Manufacturer	18.5	14.6	56.6	89.3	150.5
Oil Companies	492.4	538.7	400.3	448.7	402.1
Public Utilities	335.0	448.6	869.6	1484.5	1614.6
Others	16.1	320.5	614.0	2400.8	2713.5
TOTAL	2015.0	3094.5	5033.8	10576.9	10403.0
SHARE TO TOTAL					
Commodity Exporter	55.0	55.4	59.3	55.5	49.7
Service Exporter	2.2	1.8	2.1	2.7	3.4
Producers/ Manufacturer	0.9	0.5	1.1	0.8	1.4
Oil Companies	24.4	17.4	8.0	4.2	3.9
Public Utilities	16.6	14.5	17.3	14.0	15.5
Others	0.8	10.4	12.2	22.7	26.1
TOTAL	100.0	100.0	100.0	100.0	100.0

Source: Bangko Sentral ng Pilipinas