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Population Growth and Economic Development  
in the Philippines: What Has Been  
the Experience and What Must Be Done?

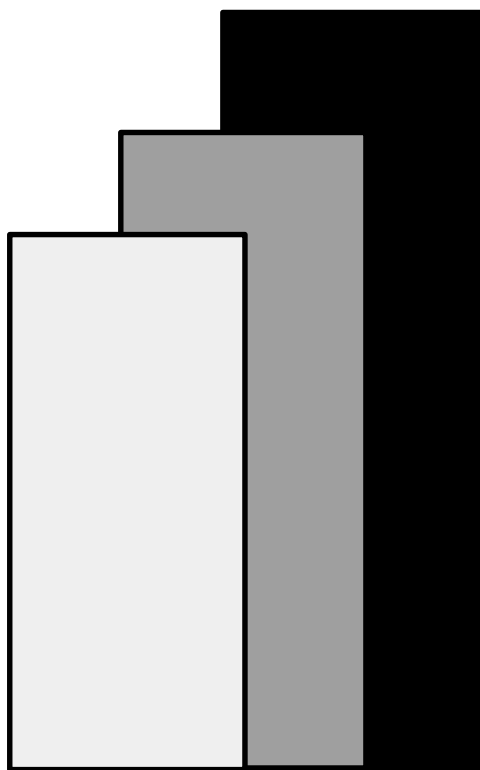
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## **Population Growth and Economic Development in the Philippines: What Has Been the Experience and What Must Be Done?**

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August 1999

### *Abstract*

The paper reviews the continuing debate on the interrelationships between population growth and economic development with particular attention to its relevance to Philippine socioeconomic development. The aim is to put the development history of the country in perspective so that a stronger resolve to address the population problem is established. The paper also discusses the prospects for the economy given the high population growth rate and the options for the Philippine population program.

Keywords: Population and Development, Demographic Economics, Philippines  
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## **Population Growth and Economic Development in the Philippines: What Has Been the Experience and What Must Be Done?**

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### **Introduction**

Philippine development over the past two decades is characterized by uneven economic growth and slow demographic transition. Respectable economic growth was experienced in the 1960s and early 1970s. This was followed by low and negative growth rates in the late 1970s up to the early 1980s. A tentative resurgence followed in the late 1980s and much better growth performance around the mid 1990s. On the demographic front, after a rapid decline in fertility rates in the 1970s, the gains have been very slow thereafter. While the neighboring countries of Indonesia and Thailand have successfully reduced their population growth rates to 1.5 and 0.9 percent, respectively, the Philippines is still growing at 2.3% as of the last census in 1995. One of the primary reasons identified is the equivocal support given the population program by the government. In a recent review of the relationship of population growth and development with particular attention to Asia, the Philippines was grouped with India as countries having good initial population programs that have been a model for many countries in the region but was later left behind by neighboring countries in terms of demographic transition [Jha, Deolalikar and Pernia, 1993]. The paper cited political problems as the cause why the program lost steam. It is interesting to review what has happened and understand better how much of this slow demographic transition accompanied the lackluster (compared to its neighbors) performance in many other areas.

It is important to note that the wavering official stance on the importance of reducing fertility rates continues to this day. In the 1970s, there was a strong resolve to pursue fertility reduction programs. The Aquino administration chose to be non-committal. This was followed by the Ramos administration that showed strong support to the family planning program. The current administration has initially shown signs of wavering<sup>1</sup> on this issue. In the 1999 State of the Nation address, however, President Estrada has specifically mentioned moderating population growth as one of his priority programs.

This paper reviews the continuing debate on the interrelationships between population growth and economic development with particular attention to its relevance to Philippine socioeconomic development. The aim is to put the development history of the

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<sup>1</sup> President Estrada, during his regular weekly radio program, told his listening audience that he was for responsible parenthood and against birth control. He added that if there was a strong family planning program during his time, he may have not been born. He is the eighth child in a brood of 10. The Secretary of Health, however, said that the implementation of the family planning program under the department's reproductive health program continues.

country in perspective so that a stronger resolve to address the population problem is established.

The paper is organized as follows. The next section reviews the country's demographic trends. This is followed by a review of the population policies and programs. The following section reviews the issues and recent evidence of the interaction of population growth and economic development with a discussion on their relevance to Philippine socioeconomic development trends. This is followed by a discussion of the prospects for the economy. The options for the population program are presented in the final section.

## Trends in Demographic Development

**Population size and growth.** The Philippine population has more than tripled in forty-seven years (from 19 million in 1948 to the estimated 74 million in 1999). The growth rate was about 3 percent in the 1960s slowing down to 2.2 percent in the 1990s (**Table 1**). Compared with its ASEAN neighbors, this growth rate is still very high. Thailand and Indonesia, for instance, have reduced their growth rates to 0.9 and 1.5, respectively, in the 1990s. Thailand and the Philippines were almost of the same size in 1965 but because of the difference in population growth rates, 30 years later there are about 10 million more people now in the Philippines.

**Fertility.** Total fertility rate (TFR) declined from about 6 at the beginning of the 1960s to 4 by the middle of 1990s (**Table 2**). This trend in fertility reduction is slow by East and Southeast Asian standards (**Table 2**). Starting with about the same TFRs at the start of 1960 Thailand and Indonesia has reduced their TFR to 1.9 and 2.9, respectively, by the middle of 1990s. This means a longer catch-up time to fertility levels already achieved by the ASEAN neighbors.

The period of rapid decline roughly coincided with the introduction and rigorous implementation of the government-sponsored family planning program. In the 1980s, however, the government wavered in its resolve regarding fertility reduction and was satisfied with general population policy statements such as family welfare and responsible parenthood [Herrin 1988]. The increase in contraceptive prevalence, albeit low compared with its ASEAN neighbors (**Table 3**) particularly the use of modern methods which was continuing even during the period of "weak" population policy, was the only preventive measure against increases in fertility rate [Casterline 1991, Zablan 1998]. As depicted in **Table 4** the retardation of the decline in fertility rate appears to be coming from the virtual absence of changes in the age of marriage as well as changes in the breast-feeding practices which worked against fertility rate decline particularly in the middle of 1980s [Casterline et al. (1988)]. Only in 1990s was there an indication that the proportion and duration of breastfeeding increased although this appears to have stagnated during the decade. The age of marriage, on the other hand, did not show clear signs of an increasing trend.

**Mortality.** Mortality rates declined rapidly after the war but slowed down starting the 1960s as the gains from technological advance were exhausted and further reduction

depended more on socioeconomic development [Herrin 1988]. This is clearly depicted in the movement of the infant mortality rate (IMR). The IMR for the Philippines declined from 76 in 1960-65 to 40 in 1990-95 (**Table 2**). With the uneven economic performance, the slow decline of the IMR in the Philippines is to be expected [de Guzman 1998]. In contrast, Thailand with a consistent high growth rate, was able to achieve lower rates than the Philippines as early as the 1970s even if it had a higher IMR in 1960-65. South Korea, starting with about the same level of IMR in 1960-65, achieved an even faster decline.

**Migration and Urbanization.** Migration in the 1950s and the early 1960s was characterized by frontierward movement, principally to Mindanao and Cagayan Valley, of men associated with agriculturally-based motivations. From the 1970s onward however, this trend was replaced by more complex migration streams. A notable pattern was a metropolitanward movement, principally to the National Capital Region, and the neighboring regions of Central Luzon and Southern Tagalog. This time it is dominated by young and single women who are less educated [Perez 1983, Engracia and Herrin 1984]. The migration stream picked up some more in the 1980s so that by 1990 the level of urbanization is nearly 50 percent which is highest in Southeast Asia and next only to South Korea (**Table 5**). In the absence of robust economic growth and structural transformation, these streams are mainly rural-urban migration on the supply side and the growing service sector in urban centers, mainly informal services sector, on the demand side [Pernia and Israel 1994]. Inter-provincial data between 1975-80 and 1980-90 subsequently revealed the emergence of urban-urban migration as reversed movements from crowded Metro-Manila to suburban and peripheral areas of the metropolis were reported [Go, et. al 1998]. This pattern of temporary circular migration between the metropolitan core and its periphery is expected to continue in the future [Perez 1999].

## Review of Population Policies and Programs

After an auspicious start, the Philippine population program received weak and equivocal support from the political leadership. Contributing, in no small a degree, to this stance is the continued opposition of the Catholic Church<sup>2</sup> to the introduction of artificial family planning methods. Ironically, the Philippines was among the first in Southeast Asia to launch in 1970 a population program that became a model for others.

The Philippine government signed the UN Declaration on Population in 1967. This can be considered as the first official act on the population issue. In 1969 a 22-member Commission on Population (POPCOM) was established through Executive Order 171. The commission was to coordinate all population-related activities. Prior to 1969 population matters were mainly taken on by private organizations. This act was followed, a year later, by a law (RA 6365) that launched a national family planning program. This law also defined the national population policy as "for the purpose of furthering national development

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<sup>2</sup> It must be noted, however, that the influence of the Catholic Church over family planning practices of families maybe overrated. Survey results show high approval ratings of family planning programs among Catholics and that approval of family planning was more because of economic rather than religious considerations (Guerrero and Ballescas 1994).

increasing the share of each Filipino in the fruits of economic progress and meeting the grave social and economic challenge of a high rate of population growth, a national program of family planning which respects the religious beliefs of the individual involved shall be undertaken." In 1972 PD 79, among other things, limited the number of dependents entitled to tax exemption to four. Analysts agree that throughout the Marcos period between official launching of population program in 1969 up to the EDSA revolution in 1986, with the exception of episodes when key POPCOM board members were not personally convinced of the importance of low fertility rates in socioeconomic development, was characterized by a strong population policy.

During the Aquino administration (1986-1992), the program suffered from much diluted commitment and ambiguities. The 1987 Constitution revised the basis for population policy to "defend the right of spouses to found a family in accordance with their religious convictions and the demand for responsible parenthood." POPCOM also issued a Population Policy Statement of 1987 which expanded population concerns "beyond fertility reduction to concerns about family formation, the status of women, maternal and child health, child survival, morbidity and mortality, population distribution and urbanization, internal and international migration, and population structure." Ironically, the same policy statement also states that "if the current economic and demographic trends continued, the pursuit of alleviating poverty and improving the quality of life will be come doubly difficult in the future, as rapid population growth exerts more and more pressure on scarce resources..." These statements were seen as ambiguous as to whether moderating fertility is a necessary component of overall socioeconomic development strategy or achieving economic and social development can be achieved without directly modifying fertility trends [Herrin 1988].

This ambiguity also characterized the development plans. For instance, for Medium-Term Development Plans for 1987-1992 the macroeconomic section is explicit in moderating fertility with achieving replacement fertility by 2010. However, in the chapter for health, nutrition and family planning program the fertility targets are more modest. Programmatically, family planning is viewed as a component of maternal and child health aimed at reducing infant and maternal morbidity and mortality. Consistent with this strategy, the responsibility for implementing the family planning program was transferred to the DOH in 1988. Contributing to the ambivalence were the too frequent change in leadership of the POPCOM board. It was attached to DSWD in 1987 then it came under the Office of the President before finally resting with the NEDA under EO 408.

A renewed stronger support for the family planning program from the Executive branch was experienced during the Ramos Administration (1992-1998). Accompanying this stronger support was also an emphasis for the fertility reduction objective. Consequently, the 1993-98 Medium-Term Development Plan sets the explicit objective of reducing population growth rate and fertility "through a wider recognition of the benefits of small family size and promotion of responsible parenthood." The plan further stated a vigorous implementation of the family planning program as a strategy for moderating population growth. During this period, the country also officially

participated in various international forums<sup>3</sup> where the thinking and policy on population, environment, women and development were being updated and revised. These revisions affected the local thinking of the population program. For instance, "population management" replaced "population control." The family planning program has been cast into a broader "population-resources-environment" framework. This framework emphasizes the inextricable interrelationships among population, socioeconomic and ecological concerns. Programmatically, family planning became a component of what is now known as reproductive health.

While the commitment in the executive was strong, the legislative branch was not as supportive. A population bill to replace RA 6365 and PD 79 was filed but not acted upon by the previous congress despite the executive certification that it is a priority measure. This was taken as a rational political decision of legislators. There appears to be little incentive for them to risk their political fortunes (they are required to run for re-elections every three years) on a potentially controversial national issue [UNFPA, 1998].

A major shift in the service delivery mechanism also happened towards the end of the Aquino administration. Passed in 1991, the Local Government Code (RA 7160) devolved many of the front line functions including health services where the family planning program is a component. It has also institutionalized the participation of NGOs in the policy making process of the government.

There appears to be a change of heart of the Estrada administration in the area of moderating population growth. The 1999 State of the Nation address specifically mentioned moderating population growth as one of the priority programs. As earlier noted, he was quoted in his weekly radio program that he was for responsible parenthood and against birth control. There was also no mention about moderating population growth in his 10-point action program -- his priority list of programs. Lately, however, this earlier stance was explained as something that may be rational during his childhood years but definitely indefensible today. Giving priority to moderating population growth is definitely much more consistent with the pro-poor stance of the Estrada administration.

## **Population Growth and Economic Development: Issues, Recent Evidence and Philippine Socioeconomic Development**

The role of population growth in economic development has been a subject of debate. This debate has also been reviewed, for example in NAS (1971), NRC (1986), Kelley (1988), and more recently with reference to Asia by Jha, Deolalikar and Pernia (1993), Cassen and contributors (1994) and Ahlburg et al. (1996).

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<sup>3</sup> These include: (1) The Earth Summit in Rio de Janeiro, Brazil (1992); (2) International Conference on Population and Development in Cairo, Egypt (1994); (3) 4<sup>th</sup> World Conference on Women and Development in Beijing, China (1995); (4) World Summit for Social Development in Copenhagen, Denmark (1995); and (5) Habitat II Conference in Istanbul, Turkey (1996).

Following Jha, Deolalikar and Pernia (1993), we focus on four key areas of interaction between population growth and socioeconomic development. These are (1) economic growth, (2) human capital investments, (3) poverty, and (4) the environment. In each of these areas Jha, Deolalikar and Pernia (1993) has provided the theoretical considerations and a survey of the empirical evidence and the policy implications. Since the theoretical considerations remains the same, this section will mainly provide updates to the empirical evidence as well use these pieces of evidence to shed light on Philippine socioeconomic development.

### ***Economic Growth and Employment Generation***

The impact of population growth on economic growth is oftentimes measured directly through its impact on the growth of per capita income / output or indirectly through its impact on savings and investments. Since economic growth is closely intertwined with employment generation, this is also discussed in this subsection.

#### **Income Per Capita Growth**

Income per capita is a widely accepted measure of the level of development of a country. Analysts, therefore, have for years been trying to estimate the relationship between per capita output or income growth and demographic variables. While most agree that this simple correlation will not be able to capture the complex relationships underlying these variables, many believe that this will provide a good indication on the validity of the hypothesis on the relationship between population growth and growth in income or output per capita. The more recent estimates of the relationship between demographic variables and growth in income / output per capita was reviewed and extended by Kelley and Schmidt (1995)<sup>4</sup>. The study found a large negative effect of population growth on economic growth. Using international data for the 30-year period between 1960-1990, the computed impact of a unit decline from the recorded median population growth rate of 2.54 to 1.54 percent is an increase in per capita GNP growth from its median of 1.36 to 2.00 percent. In terms of the components of population growth, high crude birth rate reduces economic growth while decreases in crude death rates increases economic growth.

Bloom and Williamson (1997)<sup>5</sup> also found that demographic factors are important determinants of economic growth. Their results show that it is not overall population

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<sup>4</sup> In addition to estimating the basic relationship between growth in income per capita and population growth using a framework known in the literature as the convergence-pattern or technology gap model, they followed Brander and Dowrick (1994) and Barlow (1994) in replacing aggregate population growth rate with its components, namely, current crude birth and death rates. They have also added the interaction between the demographic variables and per capita income to capture level-of-development effects and lagged values to capture delayed impacts.

<sup>5</sup> The paper estimates a growth equation consistent with the conditional convergence concept in empirical growth literature with the growth rates of both the total as well as the economically active population among the determinants of GDP per person. The authors argued this method is much more theoretically appealing than the ad hoc addition of births and death rates in Barlow (1994), Brander and Dowrick (1994)



growth rate that drives economic performance but age distribution. The age distribution effect operates through the difference in growth rates of the working-age and the dependent population. The study found that population dynamics explain as much as 1.4 to 1.9 percentage points of the GDP per capita growth in East Asia or as much as one-third of the average East Asian miracle GDP per capita growth rate (1.9/6.1). In Southeast Asia, the estimated effect ranges from 0.9 to 1.8 points of economic growth or about half (1.8/3.8) of the recorded growth in GDP per capita.

Using an entirely different method, simulations using the Population and Development Planning (PDP) Model, an economic-demographic model estimated using Philippine data, show that higher population growth lowers GNP per capita level [Orbeta 1989, Orbeta, et. al. 1998]. Furthermore, this negative effect was found to be much bigger if foreign capital inflows are held fixed.

Looking at the growth performance of countries in Asia, the Philippines posted a relatively high economic growth in the 1970s. In the 1980s, while the neighboring ASEAN countries particularly Thailand and Malaysia continued to grow (**Table 6**), the growth performance of the country faltered even registering a minus 7 percent growth in 1984. The 1990s is characterized by slow recovery and uneven economic growth. This performance translates to more than a decade of per capita income level lost as the real per capita income level achieved in 1980 is still to be regained in 1994 (**Table 7**). Knowing that there is a negative relationship between high population growth and per capita income growth, it seems reasonable to attribute some of this slow growth in per capita income to the drag imposed by high population growth.

## Savings and Investment

The impact of population growth on savings is key to the analysis of the impact of population growth on development. Domestic saving is the primary determinant of investment given a certain level of foreign investment. The consensus is that high saving rate is a major contributor to rapid economic growth. Recent estimates [Kelley and Schmidt 1996b, ADB 1997, Higgins and Williamson 1997] confirm the strong effect of demographics on savings.

Kelley and Schmidt (1996b) found that demographics account for a major portion of the change in savings across countries and over time. Youth dependency<sup>6</sup> is negatively related to savings both in the Leff-model<sup>7</sup> and in the life-cycle (Mason) model<sup>8</sup>. The relationship also appears to be robust to changes in sample, estimation procedures, functional form and variable definition. Using the data for 1970 to 1992 in a sample of 75 countries, ADB (1997) also found a strong negative relationship between national savings

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and Kelley and Schmidt (1995). It is hypothesized that the demographic effect is not confined to the growth rate of total population but also to the age structure.

<sup>6</sup> Ratio of population aged 0-14 to population aged 15-64.

<sup>7</sup> The level and growth of per capita income, youth and old dependency ratios as determinants of savings rate.

<sup>8</sup> Growth of income and youth dependency ratio and the interaction of the two variables are the determinants of saving rate.

and young-age dependency. Using a slightly different formulation, Higgins and Williamson (1997) also found a negative effect of both youth-age and old-age dependency.

This result is borne out by estimates using Philippine data. For instance, Mason (1992) using the 1985 FIES found that: (1) the rate of savings is depressed by childbearing; (2) bearing additional children does not necessarily lead to a reduction in the absolute amount of savings or in the accumulation of wealth; and (3) asset per child is greater in lower fertility households than in higher fertility households. Canlas (1994) added demographic variables like crude birth rate, infant mortality rates and migration (international) as determinants of consumption. The study found that an increase in crude birth rates increases consumption or lowers savings.

The country's low saving rate compared to its neighbors appears to have something to do with its slow economic growth. While neighboring countries are saving more than one third of GNP, the Philippines mustered to save only one fifth (**Table 8**). Consequently, investment is also lower than those of neighboring countries. While Thailand is investing over 40% of its GNP and Indonesia over 30%, the Philippines manages to invest at most 25% of GNP (**Table 9**). Given the evidence on the negative relationship between population growth and saving rate, high population growth rate likely to have kept saving propensity low.

## Employment Generation

Bloom and Freeman (1986, 1988) provided a comprehensive organizing framework for analyzing the impact of population growth on labor supply and employment. In particular, they have identified two distinct mechanisms through which population growth affects labor supply and employment. One is the "accounting" aspect that refers to changes in the demographic structure and cohort size. The other is the "behavioral" aspect that refers to the decision to participate in the labor force, particularly for women. Fertility, mortality and migration will affect labor supply differently. Mortality and migration will have immediate effects while fertility will have delayed effects. They also pointed out that the structure of the labor market mediates the impact of population growth on employment. For instance, in a neoclassical labor market rapid population growth will instantaneously depress wages. In a dual labor market where one market (modern) is behaving like a new classical labor market and another (traditional) is characterized by surplus labor and low wage rates, rapid population growth will delay the tightening of and eventual dissolution of the low wage traditional labor market (or the elimination of the dualistic structure).

In their review of labor markets in developing countries covering the period 1960-80, they concluded that despite population increasing rapidly, developing countries managed, on the whole, to improve their economic positions significantly (Bloom and Freeman, 1988). They have qualified this conclusion, however, saying that simply

because they were able to manage their labor supply growth well does not mean that they will be able to continue doing so in future periods.

What has been the performance of the Philippines in employment generation? Data show that it is not impressive and studies [e.g. de Dios et al., 1993] lamented this slow growth in employment opportunities. For one, it has one of the highest unemployment rates in the region (**Table 10**). For another, the unemployment problem is such that it has not spared even educated workers [Orbeta and Sanchez 1997]. Furthermore, the flow of overseas contract workers<sup>9</sup> is testimony to the lack of employment opportunities domestically. This is not difficult to understand as the country's economic growth is low by Asian standards and its population growth rate is one of the highest in the region.

Turning to the speed of structural transformation of the economy, it is at best slow. While Thailand has successfully reduced the share of agriculture in total output from 30% down to 10% between 1970 and 1996, the country continues to draw as much as 20% percent of its output from agriculture in 1996 (**Table 11**). In addition, while Thailand has increased tremendously the share of output from industry, the Philippines draws an increasing share of its output from low productivity services. In terms of employment, agriculture continues to provide employment to a large proportion of the population. It is noteworthy that it is not industry that is absorbing surplus workers from agriculture but the service sector (**Table 12**). Workers leaving agriculture appear to go to the service sector rather than to industry.

### ***Human Capital Investments***

The negative impact of population growth on education and health status found in earlier studies continues to hold. Jha, Deolalikar and Pernia (1993) listed studies showing empirical evidence on the association of high parity and or close birth-spacing and lower levels of child nutrition intake, poor nutritional status, higher infant mortality, smaller per capita health and food expenditures, poorer access to preventive and curative medical care, lower schooling expenditures per child, lower grades for children enrolled in school, lower child intelligence. In addition, they pointed out that this negative relationship between family size and human capital investments are much more pronounced in poor than in non-poor families.

In terms of health and nutrition, the country is an average performer. Starting with about the same infant mortality rates (IMR) as Korea in the 1960s, the country lagged behind in 1970s. Thailand which had a higher IMR in the 1960s left behind the country starting in early 1980s. Sri-Lanka with about the same IMR in the 1960s has less than half the country's IMR by 1990s (**Table 2**). Since most of the gains from technological advance have already been exhausted and further decline will come from socioeconomic

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<sup>9</sup> This phenomenon has been construed as a deviation from the East Asian model, i.e., while neighboring countries attracts foreign direct investments the Philippines sends its workers abroad [Orbeta and Sanchez, 1997].

performance [Herrin 1988], this poor performance is again attributable to slow economic growth and still high fertility rates which is known to be positively related with IMR.

At the household level, studies show that education and health status of children decline with family size. Analysis using Philippine data confirms this result. Nutritional status is negatively affected by fertility. Using Bukidnon data, Bouis and Haddad (1990) found that longer birth spacing is positively related to height-for-age among preschoolers. The same study found that the number of household members, expressed in adult equivalent units, negatively affects household calorie intake. Horton (1988), using data from Bicol, found a negative effect of birth order on height-for-age (representing long-run nutritional status) and weight for height (representing short-run nutritional status). Garcia and Pinstrup-Andersen (1987), using data from three provinces (Abra, Antique, and South Cotabato), found negative birth order effects on weight-for-age and weight-for-height of preschoolers. Valenzuela (1978), using data from Laguna, found negative impact of large family size on nutrient intake adequacy, particularly, for calories and Vitamin A.

Education status is also negatively affected by fertility. At the aggregate level, Schultz (1987) provided two key results on the impact of population growth on human capital investment, particularly education. First, he found that enrollment rates continued to increase even with rapid population growth. Second, he also found that while enrollment rates were not affected by rapid population growth, per capita expenditure clearly declined. Orbeta (1992) corroborated this result using Philippine data. The study analyzed the impact of population growth on human capital expenditures using an economic-demographic model. One of the simulation results showed that while human capital expenditures rise with population growth, the increase is insufficient to maintain per capita expenditure levels, having adverse implications on education quality.

At the household level, Herrin (1993), using data from Misamis Oriental, found that while the number of siblings and birth order does not affect the school participation and number of school years completed of children aged 7-12, the participation and attainment of children 13-17 is significantly reduced. Paqueo (1985), on the other hand, found a negative effect of the number of siblings on the highest grade completed of children 7-12 years old. Bankosta and Evenson (1978) found that the number of children negatively affects completion rates of both sons and daughters. DeGraff, Bilborrow and Herrin (1993) found that the education of male children is negatively affected by high fertility. The negative effects on female children are only found among older ones. Bauer and Racelis (1992) found that additional young children reduce the probability of enrollment of older siblings.

The country has been known to register among the highest participation rates in all levels of education compared to many LDCs (**Table 13**). Behrman and Schneider (1994) analyzed schooling investments in several Asia countries between 1965 and 1987 and found the Philippines an outlier whether income and adult literacy were controlled for or not. In fact, it is approximating the participation rates of developed countries. However, accompanying this continued educational expansion is a worrisome indication

of declining quality. In international examinations on science and mathematics involving some 45 countries, the performance of Filipino students is way below average in 1980s and in the recent mid-1990 examinations [Mingat and Tan 1992, IEA 1996]. In terms of local achievement tests, the performance is not encouraging either. The mean percentage scores (MPS)<sup>10</sup> are low and there is a large regional disparity. For instance, in the 1996-97 National Elementary Achievement Test (NEAT), the national MPS is 51% while that for the National Secondary Achievement Test (NSAT) is 49%. The range across regions for the NEAT is 41 to 63 while that for NSAT is 42 to 53. The same is true in the tertiary level as the average percentage passing the profession examinations is also low at around 40%. It seems clear that educational expansion has been achieved at the expense of quality. This is shown by the perennial shortage of school teachers, classrooms and a prevailing textbook to pupil ratio of 1:6 for elementary and 1:8 for secondary<sup>11</sup>.

### **Poverty**

Ahlburg (1996) provides a recent review of studies on the impact of rapid population growth on poverty. He finds that studies looking at the direct relationship found little or no effects. He found that, with some exceptions in Africa and Latin America, countries with rapid population growth rate have accommodated the growth in labor force. He, however, warns that this accommodation will become much more difficult in the future. He then examined the impact of rapid population growth on the correlates of poverty, namely: low wages, lack of human capital such as education and health, and lack of income-earning assets such as land; income inequality and loss of economic growth; and gender, and sometimes, race and ethnicity. He found that there is a negative impact of rapid population growth on the correlates of poverty. For instance, at the household level he found that additional children reduce the average health and education of other children in the family. At the aggregate level, education expenditure per capita declines with rapid population growth. However, he warns that in tackling these problems it is better for governments to use direct instruments such as policies to increase access of the poor to land, credit, public infrastructure, and services, particularly education and health, than wait for the achievement of moderate population growth.

High population growth has been identified as one of the reasons<sup>12</sup> for poverty in the Philippines [de Dios et al. 1993]. It was argued that high population growth aggravates poverty as it disproportionately affects the poor who tend to have larger families.

It is also incontrovertible that poverty is intense among large families [Intal 1994]. For instance, using the 1994 FIES a three-member household has a poverty rate of only 21%, seven-member households have a poverty incidence of 47% and nine-member households have poverty incidence of 69% (**Table 14**).

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<sup>10</sup> Percent of correctly answered items.

<sup>11</sup> Highlighted in the 1999 DECS budget presentation.

<sup>12</sup> The other reasons include: (1) the failure of growth and the lack of employment opportunities; (2) inequality of income; (3) declining productivity; and (5) inadequate provision of social services.

Given the country's weak growth performance, the decline in the overall poverty incidence is gradual at best. Using the US\$1 per person per day poverty line, Thailand, Indonesia and even Vietnam have better poverty eradication records than the Philippines (**Table 15**). Besides the impressive decline in incidence, most countries have succeeded in reducing the number of people in poverty unlike the Philippines where this number is clearly not declining. Using the country's official threshold, poverty incidence decline from 45% in 1985 to 32% in 1997 or an average annual decline of less than 2.3%. As in many developing countries, the decline of poverty incidence in urban areas is much faster than in rural areas. The national capital region exhibited the fastest decline and the lowest poverty incidence. On the whole, while high poverty incidence cannot be attributed to rapid population growth alone, it is clearly more difficult to reduce poverty when population grows faster than slower.

### ***Environment***

Jha, Deolalikar and Pernia (1993) pointed out that one of the primary mechanisms of the impact of rapid population growth on the environment is that, holding per capita income constant, larger population means greater demand for goods and services which means greater demand for energy for household use (e.g. cooking), transport, power and industry. This is validated by recent Environmental and Natural Resource Accounting Project (ENRAP) estimates where households were found to be the major source of air and water pollution in the Philippines. ENRAP estimates for 1992 attributes 64% of particulate matter (PM), 89% of volatile organic carbon (VOC), and 90% of carbon monoxides (CO) to households through the use of fuel wood and vehicles. In terms of water pollution, 44% of biological oxygen demand (BOD), 61% of suspended solids (SS) and 76% of phosphate (P) also come from households [Orbeta and Indab 1996]. Thus, sheer growth of households contributes significantly to growth in these pollutants.

Along the same line of causation as the foregoing, Padilla (1996) pointed out that while deterioration in water quality may not be directly attributable to population size or growth, it is related to activities that are directly proportional to population size or growth. He cites as example the case of water pollution. Water pollution is directly proportional to the quantity of waste discharged. The quantity of waste discharged, in turn, is directly proportional to population size. Another example cited is the case of over-fishing. This can be traced, on the one hand, to fish demand that is directly proportional to population size and, on the other hand, to fish supply which is positively affected by water quality. As earlier pointed out, water quality is indirectly affected by population size.

Panayotou (1994) provides a recent review of the relationship between population growth, environment and development. He concludes that while on the surface rapid population growth is correlated with deforestation, soil erosion, destruction of local ecosystems, and general environmental degradation, a closer look will show that it is more how population behaves rather than how population grows that determines the

impact of population on the environment. Even then, it should be noted that how population behaves is affected by population size, congestion and shortages. In addition, the impact was found to be strongly mediated by the efficacy of markets and governments.

The role of policies in mediating the impact of population on the environment is well documented in Philippine studies. Cruz and Francisco (1993), for instance, found that the availability of open access land is the primary determinant of upland migration. A similar result was found also by Amacher and Hyde (1996). Finally, Cruz (1994) has identified past government policies that played a part in inducing population pressure on forest resources. The policies include: (1) promotion of programs that opened up forest land to migrants; (2) institution of planned resettlement schemes, (3) effects of lowland agricultural policies; and (4) ineffective population control program. While policies mediate undesired migration patterns the primary impetus to move is usually population size or growth related.

## **Prospects for the Economy**

What are the prospects for the economy given the aforementioned trends? The ongoing regional currency crisis is likely to further delay the return to the level of real per capita income achieved in the 1980s because economic recovery is expected to be slow even as population growth remains high.

Raising the savings rate, a key ingredient to meeting the challenge of globalization [Intal and Basillo 1998], will continue to be dragged down by high dependency ratio due to high population growth. This does not augur well for investments including those required to take advantage of growth opportunities created by globalization.

Globalization is expected to provide a boost to employment generation as the country restructure along the lines of its comparative advantage. The ability to restructure, however, depends on complementary inputs such as physical investments. To the extent that these are not forthcoming fast enough, the ability of the economy to harness its potential and generate employment will be hampered.

While the country has high participation rates in all levels of education, there are clear signs that this is being accommodated at the expense of quality. High quality educated labor is key to technology adoption and development. Technology is expected to be increasingly critical with globalization. Raising the quality of education will be hampered by the rapid growth of school-aged population.

If high economic growth cannot be achieved and sustained, poverty eradication will also be difficult to accomplish [Reyes and del Valle 1998, World Bank 1995]. The slow pace of decline of poverty rural areas can be traced to, among others, higher fertility rates in these areas.

Environmental problems can be expected to deteriorate with rapid population growth. For instance, as long as population growth is high, migration to urban and fragile environments, such as the uplands, will continue. The high rate of urbanization is also expected to continue carrying with it congestion and urban pollution problems. Finally, fishing beyond sustainable levels is expected to continue given the double squeeze of increasing demand for fish products and deteriorating quality of water due to rapid population growth.

In summary, while rapid population growth cannot solely be blamed for all or any of the country's development problems, it is clearly a critical factor. The prospects for catching up with its neighbors is evidently hampered by the country's rapid population growth.

## Options for the Population Program

What options are available for a meaningful population program? Herrin and Costelo (1996) provide a very useful way of looking at the Philippine population problem. The idea is to improve the chances of gaining wider support for the population program. Using the decomposition approach presented in Bongaarts (1994), their study proceeded to compute the contributions of unwanted fertility, high fertility preference, and population growth momentum to the growth of future population. This was implemented using the following population assumptions and scenarios: (1) the official population projection using the 1990 census as base, (2) all unwanted births (estimated<sup>13</sup> in the 1993 National Demographic and Health Survey (NDHS)) are eliminated by 1995, and (3) replacement fertility (TFR around 2.1) is achieved in 1995. The decomposition showed that of the 37.1 million projected increase in population between 1995 and 2020, 15.6% (5.8 million) is due to unwanted fertility, 18.1% (6.6 million) is from high desired family size, and 66.3% (24.6 million) is from population growth momentum. This decomposition highlights several approaches in dealing with population growth which have traditionally focused on the family planning program. While reducing unwanted fertility is clearly the province of an effective family planning program, the other two factors call for other approaches. Altering fertility preferences require working on the incentives for having many children. Well-targeted human capital investments are known to facilitate the decline in the demand for children. Decelerating the population growth momentum, which is the biggest contributor to future population growth, can be achieved by delayed marriage and longer birth spacing. Again here the incentives for early marriage and shorter birth spacing need to be altered. Human capital investments, particularly concerning women, form one major part of the solution; greater economic opportunities for women constitute another part<sup>14</sup>.

A still largely untapped resource is the expanded role LGUs have in the population program with the devolution of front line services. For one, the local leaders

<sup>13</sup> The TFR is estimated to be 4.1 while wanted fertility is only 2.9.

<sup>14</sup> It is worth noting that one of the few studies on this issue showed that the economic contribution of daughters is an important factor in delaying marriage (Domingo, 1993).



may be "nearer" to poverty groups and the rapidly deteriorating environmental conditions where large families concentrate. This physical proximity may make them better appreciate the extent of the problem. In addition, the battle for support for the program will be much more dispersed and the prospects of winning may be better.

Another option that needs looking into, given the continued reluctance of the Philippine government<sup>15</sup> to provide money for contraceptive supplies, is using NGOs more in the delivery of family planning services. NGOs may be freer from legal and administrative constraints that typically bind government agencies.

It is clear from the foregoing review that the success of slowing population growth derives from a combination of sustained economic growth accompanied by an effective family planning program. The family planning program is best targeted at solving unmet need. The other sources of population growth, namely fertility preferences and population growth momentum, will need well-targeted human capital investments and employment-generating growth.

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<sup>15</sup> It should be noted that the population program continues to depend on donors for almost half of its resources.

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Table 1  
**Estimated and Projected Size, Average Annual Growth Rate and  
and Absolute Increase of Population, 1965-2025**

	Total Population (millions)			Growth Rate %			Absolute Increase (millions)	
	1965	1995	2025 *	1960-1965	1990-1995	2020-2025 *	1965-1995	1995-2025
<b>NIEs</b>								
Hongkong	3.7	6.1	6.5	3.7	1.4	-0.1	2.4	0.4
Republic of Korea	28.5	44.9	52.5	2.6	0.9	0.3	16.4	7.6
Singapore	1.9	3.3	4.2	2.8	2.0	0.5	1.4	0.9
Taipe, China								
PRC	729.2	1220.2	1499.8	2.1	1.1	0.4	491.0	279.6
<b>Southeast Asia</b>								
Indonesia	107.0	197.5	275.2	2.1	1.5	0.9	90.4	77.8
Malaysia	9.5	20.1	31.6	3.1	2.4	1.2	10.6	11.4
Philippines	32.0	67.8	105.2	3.0	2.2	1.0	35.8	37.4
Thailand	30.6	58.2	69.1	3.0	0.9	0.4	27.6	10.8
Vietnam	38.3	73.8	110.1	2.0	2.0	1.1	35.5	36.3
<b>South Asia</b>								
Bangladesh	58.3	118.2	180.0	2.5	1.5	1.0	59.9	61.8
India	495.2	929.0	1330.2	2.3	1.8	0.9	433.8	401.2
Pakistan	57.1	136.3	268.9	2.7	2.7	1.6	79.1	132.6
Sri Lanka	11.2	179.3	23.9	2.4	1.0	0.7	168.1	-155.3

\* Medium assumption

Source: Population Division, Department of Economic and Social Affairs, UN. World Population Prospects, The 1996 Revision.



Table 2  
Fertility and Mortality Indicators

Countries	TFR				IMR			
	1960-1965	1970-1975	1980-1985	1990-1995	1960-1965	1970-1975	1980-1985	1990-1995
<b>NIEs</b>								
Hongkong	5.31	2.89	1.80	1.32	33	17	10	6
Republic of Korea	5.63	4.28	2.50	1.65	70	38	23	11
Singapore	4.93	2.62	1.69	1.79	30	19	8	5
Taipei, China								
PRC	5.72	4.86	2.55	1.92	121	61	52	44
<b>Southeast Asia</b>								
Cambodia	6.29	5.53	5.06	4.89	140	181	160	116
Indonesia	5.42	5.57	4.06	2.90	133	114	90	58
Lao PDR	6.15	6.15	6.69	6.69	150	145	122	97
Malaysia	6.72	5.15	4.24	3.62	63	42	28	13
Philippines	6.61	5.50	4.74	4.00	76	71	60	40
Thailand	6.39	4.99	2.96	1.94	95	65	44	32
Vietnam	6.05	5.85	4.69	3.40	130	106	63	42
<b>South Asia</b>								
Bangladesh	6.68	7.02	6.15	3.40	150	140	128	91
India	5.81	5.43	4.47	3.39	157	132	106	78
Pakistan	7.00	7.00	6.50	5.51	155	140	115	85
Sri Lanka	5.16	4.00	3.25	2.20	65	56	35	18

Source: Population Division, Department of Economic and Social Affairs, UN. World Population Prospects, The 1996 Revision.

Table 3  
**Contraceptive prevalence rate, any method**  
 (%)

Countries	1970	1977	1985	1990-1995
<b>NIEs</b>				
Hongkong	50	64	72	86
Republic of Korea	32	44	70	79
Singapore	45	77	74	74
Taipe, China				
PRC	36	61	77	83
<b>Southeast Asia</b>				
Indonesia	na	19	48	55
Malaysia	7	34	51	48
Philippines	8	22	44	40
Thailand	na	32	65	74
Vietnam	na	na	58	65
<b>South Asia</b>				
Bangladesh	na	9	25	49
India	12	24	35	41
Pakistan	4	6	11	18
Sri Lanka	8	44	62	66

Source:

1990-1995: UNDP Human Development Report 1998

1970, 1977: World Bank, World Development Report 1979

1985: World Bank, World Development Report 1989

Table 4  
**Trends in Fertility and Its Proximate Determinants: 1968-1998**  
(unadjusted survey estimates)

	1968 NDS	1973 NDS	1978 RPFS	1983 NDS	1986 CPS	1988 NDS	1993 NDHS	1998 NDHS
Total Fertility Rate/a	5.7	6.0	5.2	5.1	4.6	4.3	4.1	3.7
Marriage:								
Singulate mean age at First marriage (females)/b	23.4	23.8	24.5	23.3	23.4	23.8	23.4	23.5
Post-partum behavior /c								
Percentage breastfed /d	88.9	84.4	83.5	83.6	85.1	87.2	87.2	88.0
Duration B-feeding (mos.)		13.3	12.0	9.4	9.9	13.2	13.7	13.7
Duration full B-feeding (mos.)		3.3		3.0	2.3			
Duration amenorrhea (mos.)			8.2	7.2	7.6	7.8	6.8	6.9
Duration non-susceptible period (mos.) /e			8.8	7.9		8.2	8.0	8.5
Contraception: Percentage using /f								
All methods	15.4	17.4	38.5	32.0	45.8	36.1	40.0	46.1
Modern methods /g	2.4	9.9	13.3	17.6	20.7	20.9	24.9	28.2
Other methods	13.0	7.5	25.2	14.4	24.1	15.2	15.1	17.9

Source:

Casterline (1991)

For 1993, Macro International and NSO (1994)

For 1998, NSO, DOH, Macro Int'l (1998)

Notes:

a/ Based on age-specific fertility rates for the five-year historical period preceding the survey, i.e. 1963-67,1968-72,...,1983-1987. (1968 NDS estimates based on marital births only.). Source: 1968 NDS: Flieger and Smith (1975).

b/ Calculated from age-specific proportions never married at the survey. Proportion never married at ages 40-44 used to estimate proportion never marrying. Source: 1968 NDS: Smith et al. (1984), Table 1.1

c/ Mean durations estimated by current status methodology (prevalence/ incidence means, with births in the period 1-24 months preceding the survey providing estimates of births/month).

d/ Percentage breastfed among births in months 1-12 preceding the survey; for 1993 & 1998 percent ever breastfed, all children

e/ Non-susceptible period is the period either amenorrheic or abstaining.

f/ Currently married women, aged 15-44.

g/ Oral contraceptive, injectable, IUD and sterilization.

Table 5  
Trends in Urbanization

Countries	Urban Population (as % of Total)		Urban population annual growth rate
	1970	1995	(%) 1970-1995
<b>NIEs</b>			
Hongkong	88	95	2.1
Republic of Korea	41	81	4.2
Singapore	100	100	1.9
Taipei, China			
PRC	17	30	3.8
<b>Southeast Asia</b>			
Indonesia	17	35	5.0
Malaysia	34	54	4.5
Philippines	33	54	4.4
Thailand	13	20	3.6
Vietnam	18	19	2.5
<b>South Asia</b>			
Bangladesh	8	18	6.0
India	20	27	3.3
Pakistan	25	34	4.3
Sri Lanka	22	22	1.5

Source: UNDP, Human Development Report 1998

Table 6  
GDP Growth Rates, 1970-1995

Country	Growth in Real GDP Simple Average				
	1971-75	1975-1979	1980-84	1985-90	1990-95
NIEs					
Hongkong	6.7	10.2	7.9	6.4	5.2
Republic of Korea	9.0	9.6	6.6	9.7	7.9
Singapore	9.6	7.4	8.5	6.4	8.6
Taipe, China		10.3	7.2	8.1	6.5
PRC	9.0	2.7	8.6	8.5	10.5
Southeast Asia					
Indonesia	7.9	6.9	6.2	5.3 <sup>b</sup>	5.4
Malaysia	7.3	7.2	6.9	5.4	7.3
Philippines	6.1	6.4	1.4	2.7	2.4
Thailand	6.3	8.5	5.9	8.9	6.0
Vietnam	...	...	...	...	5.6
South Asia					
Bangladesh	7.8 <sup>a</sup>	5.6	4.1	4.2	4.5
India	3.0	3.9	5.6	5.9 <sup>b</sup>	4.3 <sup>c</sup>
Pakistan	3.4	4.8	6.8	6.3	4.8 <sup>c</sup>
Sri Lanka	5.6	4.1	5.2	3.6	5.6

Notes:

<sup>a</sup> 1974-75

<sup>b</sup> 1985-89

<sup>c</sup> Based on GDP at constant factor cost

Sources:

for 1971-75: Key indicators of DMC of ADB, 1985

for 1975-79; 1980-84; 1985-90: Key indicators of Developing Asian and Pacific Countries, 1991, ADB

for 1990-1995 Basic data from Key indicators of Developing Asian and Pacific Countries, 1996, ADB

Table 7. GNP per capita in constant 1987 US\$\*

Country	1962	1965	1970	1975	1980	1985	1990	1994	1997
US CPI (1987=100)	0.27	0.28	0.34	0.47	0.72	0.95	1.15	1.30	1.43
NIEs									
Hong Kong	1,729	2,416	2,752	5,238	7,989	6,425	11,026	16,607	17,627
Korea, Republic of	451	469	791	1,352	3,215	2,388	5,021	6,305	7,356
Singapore	1,842	1,911	2,752	5,851	6,692	7,767	11,086	17,919	22,968
Taipei, China									
China					386	370	357	407	600
Southeast Asia									
Indonesia			234	465	676	549	487	606	774
Malaysia	1,128	1,154	1,142	1,880	2,484	2,018	2,089	2,700	3,263
Philippines	827	649	644	782	952	549	653	736	851
Thailand	451	505	615	824	993	856	1,331	1,695	1,952
Viet Nam								146	223
South Asia									
Bangladesh	263	252	293	317	207	159	183	176	188
India	263	325	322	380	345	296	322	238	272
Pakistan	301	361	469	296	400	380	348	338	342
Sri Lanka	601	577	527	655	386	391	409	491	558

Source: World Data 1995, CD-ROM and World Development Report 1998, World Bank.

CPI for 1997 derived from International Financial Statistics, March 1999, International Monetary Fund

GNP per capita in constant prices was derived by using the World Bank's atlas method GNP per capita in current US\$ divided by the corresponding US Consumer Price Index for that year.

The atlas method involves using a three-year average of exchange rates to smooth the effects of transitory exchange rate fluctuations. The atlas conversion factor for any year is the average of a country's exchange rate for that year and its exchange rates for the two preceding years, after adjusting them for differences in relative inflation between the country and the US. This three-year average smoothes fluctuations in prices and exchange rates for each country. The resulting GNP in US\$ is divided by the midyear population for the latest of the three years to derive GNP per capita.

Table 8  
Gross National Savings (percent of GNP)

	Average 1981-1990	1991	1992	1993	1994	1995	1996	1997*	1998*
<b>NIEs</b>									
Hongkong	33.5	33.8	33.8	34.6	33.1	31.0	31.0	33.7	34.2
Republic of Korea	30.5	36.0	34.7	35.0	35.2	36.2	35.4	34.7	34.7
Singapore	42.4	45.8	46.5	45.9	49.2	49.9	49.7	51.3	52.3
Taipe, China	33.9	29.3	28.2	27.9	26.7	26.4	26.0	26.5	26.7
PRC	34.3	39.3	40.1	41.6	41.5	39.0	39.3	38.6	38.8
<b>Southeast Asia</b>									
Indonesia	31.8	30.4	32.3	32.8	31.9	31.4	33.7	35.2	36.7
Malaysia	29.1	29.9	34.1	35.3	35.5	36.4	38.8	41.2	41.6
Philippines	...	18.2	19.4	18.1	19.0	19.0	20.5	21.0	22.0
Thailand	26.2	35.4	34.5	34.2	35.2	35.0	35.3	35.6	35.0
Vietnam	...	6.7	10.9	11.2	16.6	17.4	18.0	19.6	21.2
<b>South Asia</b>									
Bangladesh	2.1	9.9	12.4	14.2	15.6	15.9	15.4	14.5	15.3
India	21.4	22.4	22.8	22.0	25.4	28.5	27.1	27.7	27.7
Pakistan	16.3	19.3	17.8	15.2	16.9	16.4	12.5	13.3	14.9
Sri Lanka	12.7	11.0	13.4	13.0	13.2	14.8	14.2	15.6	16.4

\* beginning years 1997 and 1998, the ratio of gross national saving to GNP for most countries is used  
Source: ADB Asian Development Outlook 1997 and 1998

Table 9  
Gross Domestic Investment (percent of GNP)

	Average 1981-1990	1991	1992	1993	1994	1995	1996	1997*	1998*
<b>NIEs</b>									
Hongkong	27.2	27.2	28.5	27.6	31.9	34.5	32.0	32.9	32.7
Republic of Korea	31.4	39.2	36.8	35.3	36.3	37.4	36.5	36.2	35.3
Singapore	41.8	34.2	35.3	38.0	32.3	33.0	34.8	33.8	33.3
Taipe, China	22.5	22.8	24.5	24.9	23.6	23.4	21.2	21.6	21.4
PRC	33.3	34.7	36.2	43.4	40.0	41.2	39.6	39.8	39.7
<b>Southeast Asia</b>									
Indonesia	30.4	33.5	33.9	34.5	33.7	34.8	37.7	39.2	40.0
Malaysia	32.4	39.3	37.1	39.8	42.5	45.4	45.1	45.6	45.8
Philippines	22.4	19.9	20.8	23.6	23.5	21.6	23.9	25.5	26.5
Thailand	31.1	43.4	40.8	41.3	42.0	44.2	43.8	44.1	44.0
Vietnam	...	15.6	18.3	26.0	26.0	27.5	30.1	31.0	31.5
<b>South Asia</b>									
Bangladesh	13.1	11.2	11.7	13.8	14.8	16.0	16.4	18.8	20.9
India	22.8	23.1	24.4	21.4	24.4	26.7	28.8	29.5	29.9
Pakistan	17.5	18.5	19.9	20.5	19.4	18.6	19.4	21.1	21.8
Sri Lanka	25.2	23.3	24.7	23.9	26.7	25.6	23.7	25.1	26.6

\* beginning years 1997 and 1998, the ratio of gross domestic investment to GNP for most countries is used  
Source: ADB Asian Development Outlook 1997 and 1998



Table 10  
Unemployment Rates

Country	1971	1975	1980	1985	1990	1995
<b>NIEs</b>						
Hongkong	4.2	9.1	3.8	3.2	1.3	3.2
Republic of Korea	4.5	4.1	5.2	4	2.4	2
Singapore	4.8	4.6	3.5	4.1	2	2.7
Taipei, China	...	...	1.2	2.9	1.7	1.8
PRC*	1.66	2.41	4.9	1.8	2.5	2.8 <sup>b</sup>
<b>Southeast Asia</b>						
Indonesia	...	...	1.7	2.1	2.5	1.6 <sup>b</sup>
Malaysia	6.8	6.9	5.6	6.9	5.1	2.8
Philippines	4.8	4.2	5	7.1	8.1	8.4
Thailand	...	0.4	0.9	3.7	2.2	1.5 <sup>c</sup>
Vietnam	...	...	...	...	...	...
<b>South Asia</b>						
Bangladesh	...	41 <sup>a</sup>	38.5 <sup>a</sup>	1.7	2 <sup>d</sup>	...
India	...	...	...	...	...	...
Pakistan	1.7	1.7	3.6	3.7	3.1	4.8
Sri Lanka	15.6	...	...	14.1	16.3	13.7 <sup>b</sup>

Notes:

\* for 1980-1995, refers to urban unemployment only

<sup>a</sup> includes underemployed

<sup>b</sup> 1994

<sup>c</sup> 1993

<sup>d</sup> 1991

Sources:

1971-1975: Key Indicators of DMCs of ADB, 1985

1980-1995: Key Indicators of Developing Asian and Pacific Countries, ADB, 1996

Table 11  
Sectoral Share of GDP

	Agriculture			Industry			Services		
	1970	1980	1996	1970	1980	1996	1970	1980	1996
<b>NIEs</b>									
Hongkong	...	0.9	0.2	...	32.0	14.9	...	67.2	84.9
Republic of Korea	29.8	14.2	6.0	23.8	37.8	44.5	46.4	48.1	49.5
Singapore	2.2	1.1	0.2	36.4	38.8	36.9	61.4	60.0	62.9
Taipei, China	...	7.9	2.8	...	46.0	38.2	...	46.1	59.0
PRC	42.2	25.6	18.1	44.6	51.7	54.2	13.2	22.7	27.7
<b>Southeast Asia</b>									
Indonesia	35.0	24.4	15.2	28.0	41.3	42.9	37.0	34.3	41.9
Malaysia	...	22.9	12.2	...	35.8	46.9	...	41.3	40.8
Philippines	28.2	23.5	21.0	33.7	40.5	35.7	38.1	36.0	43.3
Thailand	30.2	20.2	10.4	25.7	30.1	43.0	44.1	49.7	46.6
Vietnam	...	42.7	32.3	...	26.3	28.6	...	31.0	39.0
<b>South Asia</b>									
Bangladesh	...	49.4	31.9	...	14.8	19.7	...	35.8	48.4
India	44.5	38.1	26.1	23.9	25.9	31.7	31.6	36.0	42.2
Pakistan	40.1	30.6	24.8	19.6	25.6	26.4	40.3	43.8	48.7
Sri Lanka	30.7	26.6	19.1	27.1	27.2	32.1	42.2	46.2	48.7

Source: ADB Asian Development Outlook 1997 and 1998

Table 12  
**Percentage labour force in Agriculture, Industry and Services**

	Agriculture				Industry				Services			
	1965	1970	1985-88	1990	1965	1970	1985-88	1990	1965	1970	1985-88	1990
<b>NIEs</b>												
Hongkong	6	4	1	1	53	55	29	37	41	41	70	62
Republic of Korea	55	49	19	18	15	20	27	35	30	31	54	47
Singapore	6	3	0	0	27	30	28	36	68	66	71	64
Taipei, China												
PRC	81	78	74	72	8	10	14	15	11	12	13	13
<b>Southeast Asia</b>												
Indonesia	71	66	54	55	9	10	8	14	21	23	38	31
Malaysia	59	54	42	27	13	14	19	23	29	32	39	50
Philippines	58	58	43	46	16	15	10	15	26	27	47	39
Thailand	82	80	72	64	5	6	6	14	13	14	22	22
Vietnam	79	77	68	71	6	7	12	14	15	15	21	15
<b>South Asia</b>												
Bangladesh	84	84	57	65	5	7	10	16	11	10	34	18
India	73	73	63	64	12	12	11	16	15	16	27	20
Pakistan	60	65	41	52	18	16	10	19	22	19	49	30
Sri Lanka	56	55	43	49	14	14	12	21	30	30	46	31

Sources: 1998 Human Development Report, UNDP  
1991 Human Development Report, UNDP

Table 13  
Gross Enrolment Ratios by Level

	First Level				Second Level				Third Level			
	1965	1975	1985	1995	1965	1975	1985	1995	1965	1975	1985	1995
<b>NIEs</b>												
Hongkong	103	123	105	96	29	50	71	75	5.4	10.4	13.3 ...	
Republic of Korea	101	109	97 ...		35	59	92	101	6.2	9.8	34.0	52.0
Singapore	105	110	108 ...		45	53	59 ...		9.9	9.2	13.6	33.7
Taipei, China												
PRC			123	118		46	40	67		0.6	2.9	5.3
<b>Southeast Asia</b>												
Indonesia	72	81	117		12	19	41		1.5	2.4 ...		
Malaysia	90	94	101	91	28	45	53	57	1.9 ...		5.9 ...	
Philippines	113	105	107	116	41	56	64	79	18.8	20.1	24.9 ...	
Thailand	78	84	96	87	14	25	30	55	1.5	3.5	19.0	20.1
Vietnam*	82	136	103	114	22	48	43	47	2.0	3.0	1.9	4.1
<b>South Asia</b>												
Bangladesh	49	73	63		13	25	18		0.8 ...		4.8	
India	74	78	96	100	27	26	38	49	5.0	6.6	6.0	6.4
Pakistan	40	50	44		12	17	17		1.8	2.0	2.5	
Sri Lanka	93	77	103	113	35	48	63	75	1.5	1.3	3.7	5.1

1965 and 1975 Gross Enrolment Ratio taken from the 1978-90 UNESCO Statistical Yearbook

\*Vietnam 1965 entry from the 1974 Statistical Yearbook

1985 and 1995 entries taken from the 1997 UNESCO Statistical Yearbook

....: data not available

blanks means no entry

Table 14  
**Poverty Incidence by Family Size and Occupation**  
**Philippines, 1991 and 1994**

	1991		1994	
	Poverty Incidence %	% to Total No. of Poor Families	Poverty Incidence %	% to Total No. of Poor Families
<b>All Families</b>	39.2	100.0	35.5	100.0
<b>Family Size</b>				
1	12.5	0.9	14.9	0.9
2	21.5	3.9	19.0	3.3
3	23.7	7.2	20.7	6.5
4	29.5	13.0	25.3	12.0
5	38.7	18.9	31.8	16.9
6	46.4	18.6	40.8	19.0
7	52.0	14.4	47.1	16.0
8	58.9	10.6	55.3	11.8
9	60.8	6.6	59.4	7.2
10 and above	56.7	6.1	53.8	6.3

Sources: Intal, P. S., Jr., 1994. "The State of Poverty in the Philippines"  
 Understanding Poverty and Inequity in the Philippines: A Compendium of Policy  
 and Methodological Researches.  
 Basic data of the 1994 Family Income and Expenditures Survey (NSO).

Table 15  
**Poverty in Selected Asian Countries, Summary Statistics:1975-95**

Economy	People in poverty (million)			Head-count Index (percent)			Poverty Gap (percent)		
	75	85	95	75	85	95	75	85	95
China	568.9 <sup>a</sup>	398.3	269.3	59.5 <sup>a</sup>	37.9	22.2	n.a.	10.9	7.0
Indonesia	87.2	52.8	21.9	64.3	32.2	11.4	23.7	8.5	1.7
Malaysia	2.1	1.7	0.9	17.4	10.8	4.3	5.4	2.5	<1.0
Philippines	15.4	17.7	17.6	35.7	32.4	25.5	10.6	9.2	6.5
Thailand	3.4	5.4	<0.5	8.1	10.0	<1.0	1.2	1.5	<1.0
Vietnam	n.a.	44.3 <sup>b</sup>	31.3	n.a.	74.0 <sup>b</sup>	42.2	n.a.	28.0 <sup>b</sup>	11.9

n.a.: not available

Notes: All numbers in this table are based on the international poverty line of US\$1 per person per day at 1985 prices

a.: Data relates to 1978 and applies to rural China only.

b.: The figures refer to 1984. "Vietnam Household Welfare in Vietnam's Transition" in Macroeconomic Reform and Poverty Reduction, edited by D. Dollar, J. Litvack, and P. Glewwe. World Bank Regional and Sectoral Study, 1998

Source: Everyone's Miracle?, World Bank 1997.