

Orbeta, Aniceto C.

Working Paper

Population and Poverty: A Review of the Links, Evidence and Implications for the Philippines

PIDS Discussion Paper Series, No. 2002-21

Provided in Cooperation with:

Philippine Institute for Development Studies (PIDS), Philippines

Suggested Citation: Orbeta, Aniceto C. (2002) : Population and Poverty: A Review of the Links, Evidence and Implications for the Philippines, PIDS Discussion Paper Series, No. 2002-21, Philippine Institute for Development Studies (PIDS), Makati City

This Version is available at:

<https://hdl.handle.net/10419/127798>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

Population and Poverty: A Review of the Links, Evidence and Implications for the Philippines

Aniceto C. Orbeta Jr.

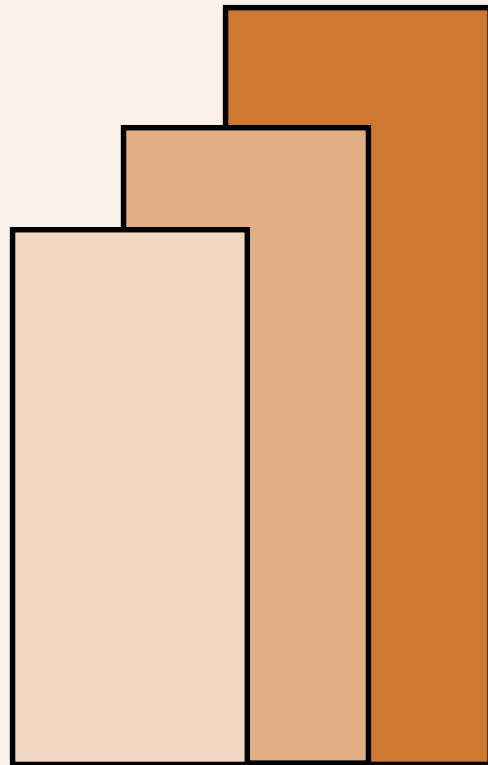
DISCUSSION PAPER SERIES NO. 2002-21

Service through policy research

The *PIDS Discussion Paper Series* constitutes studies that are preliminary and subject to further revisions. They are being circulated in a limited number of copies only for purposes of soliciting comments and suggestions for further refinements. The studies under the *Series* are unedited and unreviewed.

The views and opinions expressed are those of the author(s) and do not necessarily reflect those of the Institute.

Not for quotation without permission from the author(s) and the Institute.



December 2002

For comments, suggestions or further inquiries please contact:

The Research Information Staff, Philippine Institute for Development Studies
3rd Floor, NEDA sa Makati Building, 106 Amorsolo Street, Legaspi Village, Makati City, Philippines
Tel Nos: 8924059 and 8935705; Fax No: 8939589; E-mail: publications@pidsnet.pids.gov.ph
Or visit our website at <http://www.pids.gov.ph>

Population and Poverty: A Review of the Links, Evidence and Implications for the Philippines

Aniceto C. Orbeta, Jr.
Philippine Institute for Development Studies
November 2002

Abstract

This paper reviews the literature and evidence on the population and poverty nexus. The paper situates the role of demographic changes in development, in general, and poverty alleviation, in particular. It then presents the policy implications of the findings for the Philippines. It emphasizes that better fertility management is a critical component in any poverty alleviation package.

Keywords: Poverty, Inequality, Population, Demographic Changes

Prepared for the 2002 Population National Congress, INNOTECH Building, Diliman, Q.C., 29 November 2002.

Table of Contents

| | | |
|-----|--|----|
| 1. | Introduction | 1 |
| 2. | Trends in Population and Poverty | 1 |
| 2.1 | Population change and its components | 1 |
| 2.2 | Demographic Trends and Implications | 2 |
| 2.3 | Definition and Measures of Poverty | 3 |
| 2.4 | Trends in Poverty Alleviation | 3 |
| 3. | A Digression: Population and Development in the Philippines and Thailand | 4 |
| 4. | Population and Poverty: A Description of the Links | 6 |
| 5. | Review of Empirical Evidence | 8 |
| 5.1 | Growth Effects | 8 |
| 5.2 | Distribution Effects | 10 |
| 5.3 | Conversion Effects | 11 |
| 6. | Implications for Policy | 13 |
| 7. | References | 15 |

Population and Poverty: A Review of the Links, Evidence and Implications for the Philippines¹

Aniceto C. Orbeta, Jr.²
Philippine Institute for Development Studies
November 2002

1. Introduction

The relationship between demographic changes and poverty is an old issue that has gained currency because of the recent focus of governments, multi-lateral agencies and other development organizations on poverty alleviation. For the Philippines, it is worth noting that all of the post-Martial Law governments have made poverty alleviation their centerpiece program. Analysts have been trying to understand why, in spite of this consistent focus, gains in poverty alleviation in the country have been modest. The most accepted explanation, maybe because it is the most obvious, is the uneven economic growth performance. However, it is well known although heavily debated upon, that demographic factors play an important role not only on poverty alleviation but even on economic growth as well. Providing a systematic clarification of this role is the objective of this paper. It is expected that the clarification will be able to inform discussion on the role demographic changes play on poverty alleviation efforts in the country.

The paper is organized as follows. The next two sections provide a status report on the demographic as well as the poverty front. To provide a background on the interaction between population and development, the experience of the Philippines and Thailand are briefly compared in the following section. This is then followed by a description of the known links between demographic changes and poverty. Then a section where empirical evidence of the links are reviewed follows. The final section draws some implications for policy.

2. Trends in Population and Poverty

2.1 Population change and its components

Population change can be divided into changes in size, in structure, especially age structure, and distribution across space. This is easily derivable from the mathematical identity that changes in population size can come from either births, deaths or net migration. An empirical regularity, known as the demographic transition has been long observed by demographers. This is characterized as consequent on, and later on also causing, falling child mortality is

¹ Prepared for the 2002 Population National Congress, INNOTECH Building, Diliman, Q.C., 29 November 2002.

² Senior Research Fellow, PIDS. Correspondence: aorbeta@pids.gov.ph. The very able assistance of Fatima del Prado and Shine Cagas is gratefully acknowledged. This paper has benefited from the comments of the Steering Committee of the 2000 National Population Congress, E. Zobel de Ayala, M. de Nicolas, R. Tungpalan. All remaining errors, however, are the sole responsibility of the author. Opinion expressed here are solely of the author and not of the institution he is affiliated with.

followed by falling fertility. Accordingly, at the first stage population growth rises because of a decline in mortality, which is usually distributed almost evenly across age groups, with fertility remaining high. At this stage, the youth dependency ratio will be high. In the next stage, fertility starts to fall with mortality starting to settle at a low level so population growth will start to decline. In this stage, the youth dependency ratio will start to go down. Finally, both fertility and mortality will be low and remain low and population growth also low. This will be accompanied by high old-age dependency ratio. The period where the youth dependency starts to decline, which also means an increasing proportion of economically active population, provides a window of opportunity for the so-called “demographic bonus” that can spur economic growth. This is now one of the familiar explanations to the East Asia high economic growth phenomenon in the past two decades (e.g., Bloom and Williamson, 1998).

2.2 *Demographic Trends and Implications*³

Population size and growth. The Philippine population has almost quadrupled in 52 years (from 19.2 million in 1948 to 76.5 million in 2000). The growth rate was about 3 percent in the 1960s slowing down to 2.3 percent in the 1990s (Table 1). This growth rate is still very high compared to the country’s ASEAN neighbors. Thailand and Indonesia, for instance, have reduced their growth rates to 1.4 and 1.6, respectively, in the 1990s. As a consequence, in comparison to Thailand that almost had the same population size in 1965, the country now has about 14 million more people around year 2000.

Fertility. Data show what appears to be a fairly rapid decline in fertility in the 1970s. This has been stalled in the 1980s and 1990s and lately even showing signs of a slight increase. Total fertility rate (TFR) declined from about 6 at the beginning of the 1960s to 3.6 by the middle of 1990s. This trend in fertility reduction is slow by East and even Southeast Asian standards (Table 2). Starting with about the same TFRs at the start of 1960s Thailand and Indonesia have reduced their TFR to 2.1 and 2.6, respectively, by the middle of 1990s. This means a longer catch-up time to fertility levels already achieved by the ASEAN neighbors.

Mortality. Mortality, measured either as Crude Death Rate or Infant Mortality Rate, showed rapid decline during the early post-war period because of advances in public health and rapid economic development. This decline has slowed down in the recent past as low levels of mortality or high levels of life expectancy have been achieved. This is clearly depicted by the developments in IMR (Table 2). With the uneven economic performance, the slow decline of the IMR in the Philippines is to be expected (de Guzman, 1998). Thailand with a consistent high economic growth rate, was able to sustain lower infant mortality rates than the Philippines through out the post-war period. South Korea, starting with a low, but not too far below, level of IMR in 1960-65, achieved an even faster decline.

Based on the above trends in fertility and mortality, it is understandable that our population growth rate is higher than many of our neighbors. It is also clear that since our fertility remains to be high, the only thing that prevented the full impact of that on population growth is that our uneven economic performance has prevented us from achieving even lower mortality rates. What is disturbing, and maybe unknown to many, is that the continued high fertility rates will also mean long years of high youth dependency burden which will rob us of

³ Largely taken from Orbeta (2002)

the window of opportunity for the demographic bonus that allowed other East Asian countries to increase their savings rates, physical and human capital investments that spur their economic growth in the last two decades. Herrin and Pernia (2000) describes what we continue to bear as “demographic onus” rather than a demographic bonus.

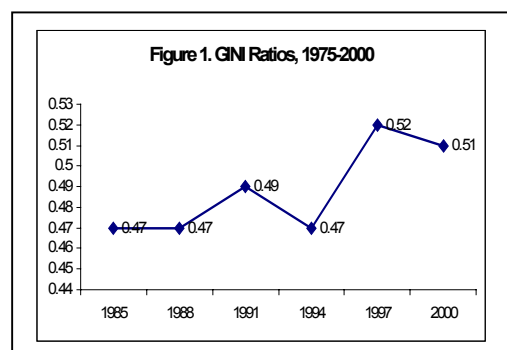
2.3 *Definition and Measures of Poverty*

There are many issues in poverty measurement. We will just concentrate on the main issues being discussed for the Philippines⁴. The official poverty statistics uses current income as the basis for computing poverty incidence. Balisacan (2001) argues that current consumption is better than current income as the basis for measuring poverty from both conceptual and practical grounds. He argued that income can under or over estimate living standards through borrowing and saving. Furthermore, he argued that welfare level is determined by “life-cycle” or “permanent” income and current consumption is a better measure of this income. Finally, income is much more difficult to obtain and more prone to under reporting. Self-rated poverty, which is neither dependent on income nor consumption but on qualitative self-assessment, has also been proposed by Dr. Mangahas of the Social Weather Stations.

There are also multi-dimensional measures of well-being. One that has gained local official acceptance is the so-called minimum basic needs (MBN) indicators. This consists of several indicators⁵ grouped into three, namely: survival, security and enabling. Reyes (2002) provides a short description of the genesis of this and the reader is referred to that paper for more discussion. Another multi-dimensional measure of well-being that has gained international acceptance is the Human Development Index (HDI) developed by UNDP. This is based on four indicators: life expectancy at birth; functional literacy and the combined elementary and high school enrollment ratio; and real per capita income.

2.4 *Trends in Poverty Alleviation*

The progress in poverty alleviation in the country is modest (Reyes, 2002). In fact the number of the poor has not declined but increased from 4.6 million in 1985 to 5.14 million in 2000. In addition, the reduction in poverty incidence is only happening in urban areas. While the poverty incidence in urban areas declined by 14 percentage points between 1985-2000, the



corresponding number for rural areas is only 4 percentage points (Table 3). It was also noted that there remains a wide disparity of poverty incidence across geographic areas, for instance, in 2000 it is almost 66% in ARMM and 55% in Bicol region while only 9% in NCR. Variation at the provincial level is even more pronounced.

Income inequality has not improved either. The share of the poorest quintile has even declined from 4.8% in 1985 to 4.7% in 2000 (Reyes, 2002). The

⁴ For a more complete discussion poverty measurement issues, the reader may consult Lipton and Ravallion (1993) and Reyes (2002) for issues in the Philippine context.

⁵ As of the last count it includes 33 indicators (Reyes 2002).

share of the richest quintile, on the other hand, increased from 51.2% to 54.8% over the same period. In addition, the Gini concentration ratio has also gone up from 0.47 in 1985 to 0.51 in 2000 (Figure 1).

The Asian crisis experience has also shown that the Philippine population is also vulnerable to shocks as gains in poverty alleviation during the earlier periods were easily reversed during the crises.

The poverty decomposition analysis done in Reyes (2002) revealed that for the period 1985-2000, the contribution of the growth component was larger than the distribution component. The growth component contributed a 16.5 percentage point reduction in poverty incidence but the worsening of the distribution increased it by 4.7 percentage points, thus a net decline of 9.4 percentage points with 2.4 percentage points classified as residual.

In comparison with neighboring countries, Table 4 show that our poverty reduction record using the US\$1 a day poverty threshold is slower. In addition, most countries were able to reduce the number of people in poverty. In terms of the HDI, our neighbors have also overtaken us (Table 5).

3. A Digression: Population and Development in the Philippines and Thailand

To illustrate the role of demographic changes in the development we compare briefly the socioeconomic development of Philippines and Thailand in the last 40 years. Table 1 shows that both had about 31 million people in 1965. In terms of per capita income in real US\$, however, Philippines had 725 while Thailand had a much lower 465 (Table 6). Forty years later, the latest estimate of Philippine population is 76.5 million while Thailand has 62.8 million or nearly 14 million more people. In per capita income, Table 6 shows that Philippines had 1,167 real US\$ while Thailand had 2,805 US\$ in 2000 or almost 2.5 times. The developments of these two indicators over the years are shown in Figures 2 and 3. While it would be wrong to attribute all of this difference to demographic changes, comparing the two in this area would be a useful background to the succeeding discussions.

The big difference between the two countries lies in the divergence in fertility levels with Thailand being able to bring down their TFR to around replacement level of 2.1 at the beginning of the 1990s while the Philippines still at more than 4 at that time and until today is still over 3 per woman (Figure 4). There is not much divergence in terms of infant mortality as both countries were able to reduce their mortality levels in a very similar fashion with Thailand protecting her initial gains all throughout the period (Figure 5). The difference in fertility levels spawned not only a divergence in population growth and population size (discussed above) but also a glaring deviation in youth dependency burden as shown in Figure 6. Given that the fertility rates are hardly closing, this difference in dependency burden is sure to continue for more years. Among the known impact of high dependency burden is that it depresses savings, consequently, also physical as well as human capital investments. Figure 7 and 8 show that indeed savings and investments have deviated starting the middle of the 1980s continuing until today. Finally, in recent years Thailand is also beginning to surpass the Philippines even in investments in human capital as their enrollment ratios in both secondary and tertiary levels are starting to surpass ours.

Fig 2. Per Capita GDP, Real US\$ (1995=100)
Source: World Bank, World Development Indicators 2002

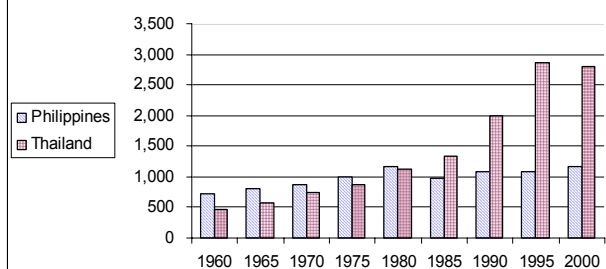


Fig 3. Population Size, 1960-2000
Source: UN World Population Prospects, 2000 Rev.

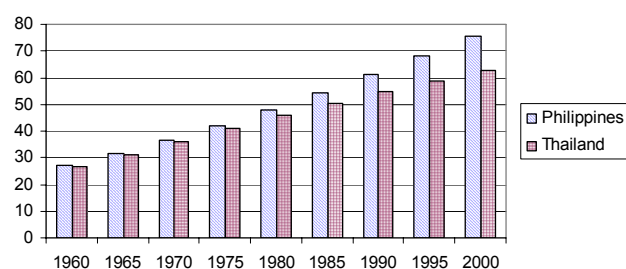


Fig 4. Total Fertility Rate, 1960-65 to 2000-05

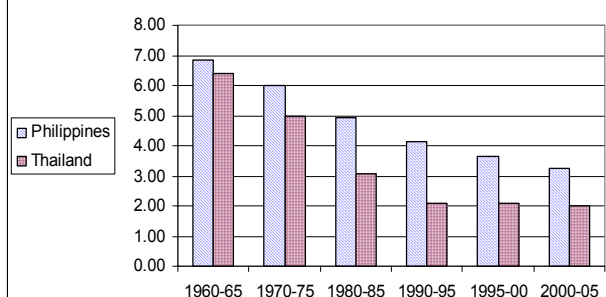


Fig 5. Infant Mortality, 1960-65 to 2000-05

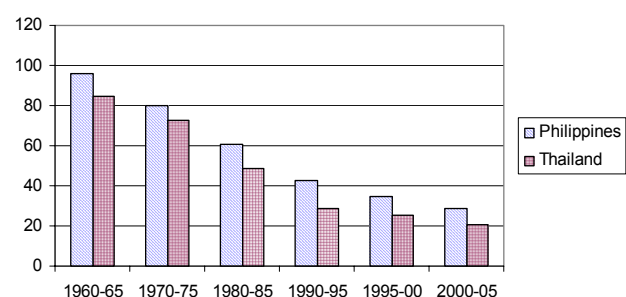


Fig 6. Youth and Old Dependency Ratios, 1960-2000

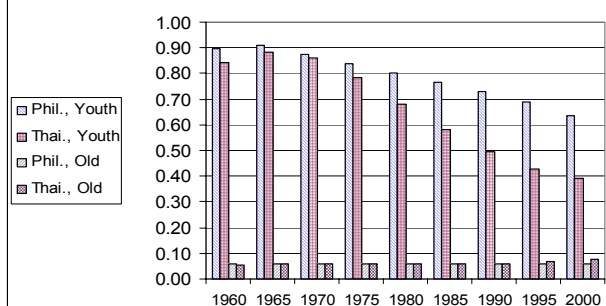


Fig 7. Gross Domestic Savings as % of GDP, 1960-2000

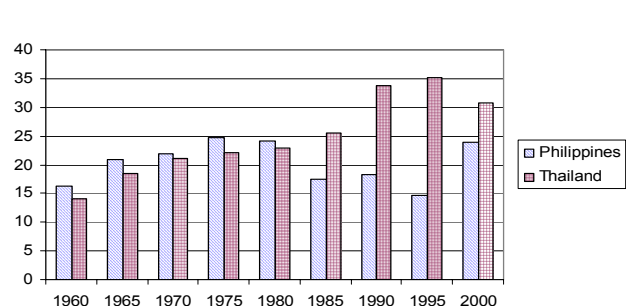


Fig 8. Gross Capital Formation as % of GDP, 1960-2000

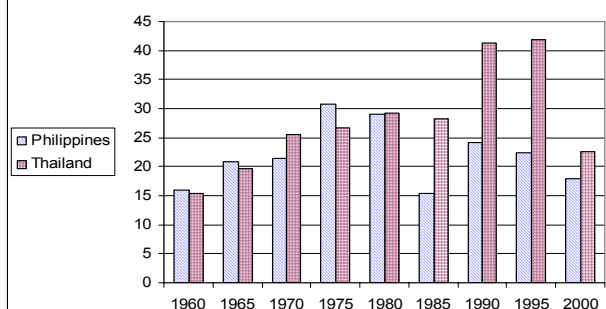
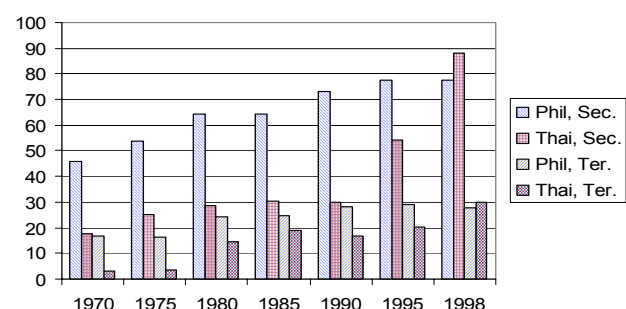


Fig 10. Gross Enrollment Rate, Sec. & Ter., 1970-1998



4. Population and Poverty: A Description of the Links

We start the description of the links between population and poverty with the Population and Sustainable Development Framework (henceforth, PSDF) presented in 2001-2004 Philippine Population Management Program Directional Plan (Figure 11) and explained in greater detail in Herrin (2002). The usefulness of starting with the framework is that, besides being familiar, it gives us the comprehensive view of the relationships between population change and the different dimensions of development one of which is poverty. Essentially, the framework shows that demographic processes (fertility, mortality, and migration) and outcomes (size, structure and distribution) affect productive capacities (natural resource and environment, human resource) and outcomes (goods and services provision and consumption) which are translated into measures of well-being (health, nutrition, education, desired fertility, etc.). In turn, these development outcomes affect demographic processes and outcomes. We focus next on the mechanisms through which population changes affect poverty. While not explicitly depicted, it would soon be clear that this is subsumed in the framework.

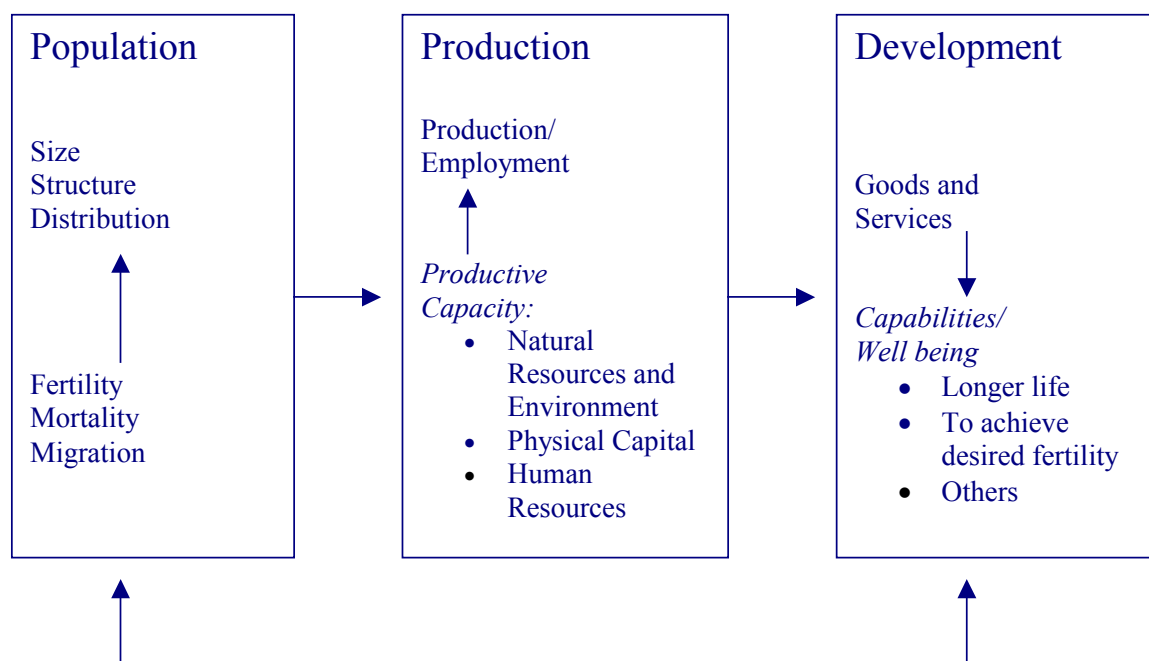


Figure 11. Population and Sustainable Development Framework

There are three main channels through which population affect poverty⁶. Following the taxonomy in Eastwood and Lipton (1999, 2001), these are: the growth, distribution and conversion channels. The growth channel refers to the impact of demographic variables on the level or growth of attainable welfare per person, usually measured by mean income or average consumption, given the distribution of income. The distribution channel refers to the impact that alters the distribution of income given the attainable welfare per person. The conversion channel refers to the changes in actual well-being or capabilities given the attainable welfare per person. In terms of the PSDF, the growth channel refers to the impact on the middle box; the distribution channel refers to the impact on the elements of both the

⁶ This and the subsequent paragraphs in this section draw heavily from Eastwood and Lipton (1999, 2001).

middle and the right boxes; the conversion channel refers to the impact on the right box. It has been pointed out in Eastwood and Lipton (2001) that among the three only the growth channel has received considerable attention while the two others did not receive as much attention.

The growth channel refers to the impact of demographics on mean income or average consumption. Based on the production function concept, the discussions on the growth channel focused on the impact on the means of generating income or factors of production, namely, physical and human capital as well as technology and productivity. This is usually discussed in two levels, the macro or aggregate level and the micro or household level. At the aggregate level, the issues revolve around the impact of population changes in the aggregate accumulation of physical and human capital. Central to the discussion is the impact on savings because it finances investments. The impact on aggregate investments on human capital, e.g., education and health, has also been given ample attention. Finally, on the role of population changes on the development of technology and productivity, the central question is whether population changes affect the development of technology and thereby affect productivity. At the household level, similar issues are relevant for almost identical reasons.

What are the mechanisms in the distribution channel? Even if relatively little work has been done in this area this issue has a long history. Eastwood and Lipton (1999) traced the origins of the income distribution effect of higher fertility to Malthus. He hypothesized that at the aggregate level high fertility would raise the price of food and lower the price of labor. Since the main asset of the poor is his labor, this is expected to affect the distribution of income. Eastwood and Lipton (1999, 2001) identified two groups of ways through which demographics affect inequality and poverty. These are the *dependency effect* and the *acquisition effect*. These two subsume the aforementioned Malthusian effect. The dependency effect refers to the hypothesis that higher fertility worsens the distribution of consumption if the extra births are concentrated in the poorer households, raising dependency ratios among the poor disproportionately. The acquisition effect, on the other hand, refers to the worsening of consumption distribution via the ability or willingness of non-dependents to acquire income or via their savings behavior and factor rewards. The key to the distribution effect is differential impact on the poor vs. the non-poor households. Thus, the distribution effect can be looked at both at the aggregate and household levels.

Dwelling some more on the acquisition effect, this can be expressed in four ways, namely: (1) child costs, (2) labor supply, (3) savings, or (4) factor rewards. Child cost refers to added costs due to the presence of an extra child, such as the direct or opportunity cost of childcare. Additional dependents in a household may induce greater labor supply from non-dependents. Fertility may affect household accumulation. It is also noted that, while initially the effect of an additional child on household labor supply is indeterminate due to the opposing negative effect via demands for child care and positive effect due to induced labor supply, over-time the child enters the labor force and increase household labor supply. This may depress real wages for the poor who tend to be unskilled compared to the rich – the Malthusian effect.

Finally, what are the mechanisms in the conversion channel? As noted earlier, this channel refers to whether demographics affect the capacity to transform a given income or consumption expenditure level into welfare or capabilities such as health and schooling. Necessarily, this effect will primarily have to be looked at the household level. Again, like the distribution effect, this is also dependent on differential behavior between the poor and the non-poor households. The key issues here include: (1) whether large family is a rational

choice for the poor; (2) are the economies of scale in consumption more important than sibling crowding; (3) do children in large households enjoy worse education and health care prospects; (4) whether getting out of poverty is rendered easier or more difficult by extra births.

Three more concerns have to be mentioned on the relationship between population and poverty. These are differential demographic transition, mutual causation, and intergenerational transmission. Differential demographic transition refers to the observed regularity that the poor usually experience declining mortality and subsequently falling fertility later, and with a longer lag between them, than the non-poor. This has important implications for the distribution and conversion effects. Mutual causation, refers to the fact that ‘rapid population growth - early first births, large families, high child-adult ratios and closer spacing of siblings – may not only be a cause of poverty but also a consequence of it due largely to constraints on, and even rational behavior by, the poor’. This has troubled empirical tests on the relationship between demographic changes and poverty. Finally, intergenerational transmission of poverty and inequality has been cited as a very important welfare issue. Lam (1987), for instance, was not as strong on the other of aspects of the impact of demography on inequality but identified this issue as very important. His basis is the well-accepted negative impact of high fertility on child endowments (including human capital). Incidentally, this has also been identified as the basis for the intergenerational vicious cycle of poverty argument triggered by high fertility rates among the poor.

5. Review of Empirical Evidence

5.1 *Growth Effects*

The relationship between population change and the level and growth in per capita income has been the subject of scrutiny and a long-drawn debate. The assessment in the 1980s qualified the strong negative impact verdict in the 1970s. For instance, a more calculated assessment exemplified by the statement from the NRC (1986) states that ‘on balance, we reach the qualitative conclusion that slower population growth would be beneficial to economic development for most developing countries.’ More recent empirical results utilizing convergence-pattern or technology gap models such as Kelly and Schmidt (1995, 2001), however, yielded large negative impact of population change on growth of per capita income. In particular, Kelley and Schmidt (1995) using data from the 30-year period 1960-1990 yielded the result that a unit decline from recorded median population growth rate of 2.54 to 1.54 percent results in an increase of per capita GNP growth from its median of 1.36 to 2.00 percent. High crude birth rates were found to reduce economic growth while decreases in crude death rates increases economic growth. A survey and re-estimation of eight models incorporating several economic-demographic approaches given in Kelly and Schmidt (2001) also validated this earlier result. The survey highlighted the following results: (1) demographic trends (declining population growth, fertility, mortality; changing age distribution; and rising density and population sizes) have sizeable impact on economic growth; (2) while the overall impact of population growth is negative, fertility and mortality effects have offsetting effects with increases due to mortality decline stimulating growth while increases due to rise in fertility attenuating growth; (3) increasing densities and population size contribute a positive but relatively small boost to economic growth, with scale effects dominating density; (4) in most models the impact of demography has declined over time.

It is worth noting that the role of changing age structure accompanying demographic change was found to have a considerable explanatory power to rapid economic growth in East Asia in the past two decades. Because of this, it has been even argued that population neutralism of the 1980s maybe was the offshoot of the too much focus on impact of aggregate population growth to the neglect of the impact of changes in the age structure (Bloom, Canning and Sevilla, 2001). Several recent reviews on this line of thought are available such Williamson (2001) and Bloom, Canning and Sevilla (2001). It is argued that in early stages of the demographic transition, per capita income declines because of large youth dependency burden and a small proportion of working-age adult working and saving. As the transition proceeds, per capita income increase as the share is reversed with relatively more workers and savers. This constitutes a potential window of opportunity, now popularly known as the “demographic bonus,” which will evaporate as the share of the elderly rises in the later phase for the transition. Simulations done by Lee, Mason and Miller (2001) using data from Taiwan indeed validated the hypothesis of increases in savings rates as the proportion of working age population increase under the assumption of constant interest rate and constant productivity rate. Bloom and Williamson (1997), 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. Finally, Eastwood and Lipton (2001) estimated that had the average country⁷ reduce its birth rate by 5 per thousand throughout the 1980s, the average poverty incidence would have been reduced from 18.9 percent in the mid-1980s to 12.6 percent between 1990 and 1995. About half of this reduction is attributable to increases in economic growth.

Simulations using the Population and Development Planning (PDP) Model, an economic-demographic model estimated using Philippine data, also 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 had lagged behind Thailand which had about the same population size and even lower per capita income in 1965. It is noteworthy that today Thailand’s population is growing at less than 1% while the Philippines is still growing at more than 2%. As a result, after 35 years the Philippines has about 14 million more people and about less than half of Thailand’s per capita income.

As noted earlier, growth in per capita income is also affected by physical and human capital investments. At the macro-level, using an economic-demographic model, it was found that while rapid population growth increases human capital expenditures (aggregate expenditures on education and health), the increase is insufficient to maintain per capita levels which would imply negative impact on education and health output (Orbeta, 1992).

At the household level, Herrin (1983) found that accumulation of household assets is negatively affected by the number of young children 0-6 and 7-12 years old. This result is corroborated Mason (1992). The study found that child bearing negatively affects the saving rate. Although it does not affect the absolute amount of savings, asset per child was found to be greater in lower fertility households.

⁷ The dataset includes 45 less developed and transition countries.

5.2 *Distribution Effects*

As has been mentioned earlier, there has been not as much work on this channel compared to the growth effects. In an earlier review, Lam (1987) noted that the empirical evidence lead to mixed conclusions. Furthermore the review emphasized that the ‘certainty of negative distributional effects of population growth expressed in the 1974 World Bank report on population and development ... seems to be a much stronger conclusion than the empirical and theoretical analysis of the issues can currently support.’

Utilizing newer modeling ideas, recent results such as Eastwood and Lipton (1999; 2001), provide more definitive conclusions. The study not only found that high fertility retards economic growth (as noted above) but also skews the distribution of income against the poor. Their estimate revealed that half of the estimated decline in poverty could be attributed to increases in economic growth and half to changes in the distribution of income. The results further highlighted the fact that, as fertility decline spreads to poor households, the poverty reducing benefits of fertility decline increases even more. Reinforcing this result is the findings in Brazil, a country that is in the later stages of fertility transition (Paes de Barros et al. 2001).

Dependency effects. In trying to find evidence for the dependency effect, Eastwood and Lipton (1999) used 18 of the 56 World Bank Poverty Assessments that have data on dependency ratios for the poor and non-poor. The data show only a slight dependency effect as the dilution ratio of the poor was found to be only slightly higher than those for the non-poor.

Acquisition effects. In terms of acquisition effect, studies on the impact of additional children on time allocation show that, mother’s labor market hours decline in the 14 months postnatal and returns to the previous level after that; the father’s labor market hours is not affected, neither does the loss of the labor market hours of the mother induce more labor market hours for the father; the labor market time of older daughter, however, increased (Tiefenthaler, 1997). It appears that the older daughter replaces the lost market time of the mother. Earlier studies both provide support and opposing results to this study. For instance, Quiazon-King (1978) found that the labor market time of both the mother and father are not affected and only the home time of mothers increase. This is largely corroborated in King and Evenson (1983). Garcia (1990), on the other hand, found that young children decreases the market time of the mother but also increase the market time of fathers.

On the labor force participation of older children, a joint schooling-labor force participation model for children 10-24 years old was estimated using a merged FIES, LFS and FLEMMS for 1994 in Orbeta (2000). He found that family size does not significantly affect school attendance but positively affects labor force participation. Corroborating this result, Villamil (2002) using the 1995 Child Labor Survey, found evidence that the probability of not going to school and working for children 5-14 years old is positively related with the number of young children (0-9 years) but is negatively related with number of older children (15-17 years) in the family.

On the aspect of the impact of rapid population growth on wages, Bloom and Freeman (1988) found that for the period 1965-1985 developing countries were able to shift the labor force

from low productivity agriculture to higher productivity industry and services sectors despite the rapid growth of their population indicating that there may not be much depressing impact on wages. They have cautioned, however, that such adjustments may become increasingly difficult in the future. In the case of the Philippines, the studies (e.g. de Dios et. al, 1993) continue to lament the slow growth in employment opportunities. This is further buttressed by the high open unemployment and underemployment rate that did not spare even educated workers (Orbeta and Pernia, 1999). Finally, the continued flow of overseas contract workers is testimony to the lack of employment opportunities domestically. All of these are indicative that the Malthusian negative impact of rapid population growth on poverty via the distribution effect may be operating.

5.3 *Conversion Effects*

While primarily the evidence on conversion effects would come from household level analysis, there are indications that can be gleaned from the aggregate level. For instance, there are countries where per capita incomes or per capita consumption are lower but indicators of well-being are better than those with higher incomes. Sri Lanka, for instance have lower income than Indonesia, Philippines and Thailand (Table 6) but it has better infant mortality record and school attendance, particularly at the secondary level.

Fertility preferences. As noted earlier, the evidence on the conversion effects will be seen at the household level. An empirical regularity one finds worldwide is that poverty incidence is always higher among households with larger family size. The Philippines is not an exception to this as shown in Table 7. The question is whether the poor rationally chose to have large families. There are indeed conceptual reasons and even empirical evidence that the poor may prefer to have large families. These include either because they put high value to the benefits from many children, low value on costs of having them, and/or small probability to enjoying the alternatives. Among the commonly mentioned reasons are that children add to family income and provide old-age security and that fewer and better-educated children with better earning prospects may be just a remote option for the poor. The reasons could include requiring what to them could be unaffordable savings, delayed (or heavily discounted) and risky returns, and very high opportunity cost from foregone child labor income. However, Birdsall and Sinding (2001), would like to pose a fair challenge those who believe that indeed the poor rationally chose to have large families to show proofs on the following concerns that has been highlighted by recent studies: (a) that the choices of the poor are not limited; (b) that the poor have the required information for an informed choice; (c) that men do not dominate the choice over the number of children while not fully sharing the costs; (d) that there is no higher prevalence of unwanted pregnancies among the poor; (e) that fertility has increased among the very poor who have good access to health and family planning information and services. It would require intensive tests to know the answers to these questions. But we can have a glimpse of the answer for some of the questions from data that are already available for the Philippines. Table 8 shows the differential contraceptive practice of the poor and the non-poor. It must be noted that the classification, due to data limitations, may be a bit loose. But if contraceptive practice is an indication of the extent of control over fertility, the table shows that, from either the actual contraceptive practice or access to family planning services, the poor may have lesser control over their fertility than the non-poor. Had access and contraceptive practice been even for both the poor and the non-poor, then one can claim that the poor, as shown in Table 6, may indeed have large family size by choice. Finally, the evidence on unwanted fertility and unmet need for family planning points to the disparity

between the poor and the non-poor. Pamaran and Ramos-Jimenez (2000), using the 1993 NDS and 1998 NDHS and a wealth index, show that women in the poorest 20% of households are 27% more likely to have unwanted fertility and 122%-154% more likely to have unmet need⁸ for family planning compared to women in the richest 20%.

Economies of scale in consumption. On the aspect of economies of scale in consumption, evidence on both sides of the argument exists. It has been shown that the negative impact on consumption of large family size will not hold under some plausible assumptions about economies of scale in consumption (e.g. Lanjow and Ravallion (1995) for Pakistan; Anand and Morduch (1996) for Bangladesh). But there are also evidence on the congestion effects. King (1987), for instance, noted crowding in the poor's small dwellings.

Investments in human capital. Empirical evidence that high fertility is associated with decreasing investments in education and health abound. King (1987) provides a review of studies on the effect of population change on household welfare. The conclusions include: (a) children in large families perform less well in school; (b) children in large families have poorer health, lower survival probabilities, are less developed physically; (c) impact on parental welfare is not as clear. These conclusions are substantially echoed in a more recent review of studies with some added dimensions (Lloyd, 1994). In particular, the study found that the adverse impact on children born into large families can be grouped into: (a) resource dilution which each child getting smaller share of family resources including income, time and maternal nutrition; (b) the "opportunity effect" by way of diminished access to public resource, such as health care and education; (c) the "equity effect" which means the unequal distribution of resources among siblings; and (d) the "intergenerational effect" with the adherence to the traditional role affecting the transmission of opportunities to the next generation.

Several more studies showing similar results in the Philippines are reviewed in Orbeta (2002). High fertility does not affect school participation of younger children (7-12 years old) but negatively affects school participation and attainment of older children (13-17 years old) (Herrin 1983). This result on older children is corroborated in Bauer and Racelis (1992). DeGraff et al. (1993), particularly emphasized the large negative impact on boys. In addition, it does not only affect school completion rates of children but also expenditure per child (Bankosta and Evenson, 1978).

Vulnerability. Finally, there is growing evidence that larger family size makes it difficult for poor families to get out of poverty as well as it makes the currently not poor more prone to slide down below the poverty threshold. Glewwe and Hall (1998), for instance, using panel data from Peru found that families that have more children are more vulnerable to macroeconomic shocks. Vulnerability is defined as changes in the one's socio-economic status. It is interesting to note that using the 1997 FIES, and 1998 and 1999 APIS, Reyes (2002) showed a very revealing dynamics of poverty. She traced the movement of families in and out of poverty over this three-year period. She found that 46% of the families are not affected remaining to be non-poor throughout while 22% remained to be poor. Table 32 in the paper is quite revealing. The table show that as one goes from those who have remained to be poor to the households who remained to be non-poor, the family size declines. It clearly implies that the getting out of poverty is harder with larger family size.

⁸ Total of spacing and limiting unmet need.

6. Implications for Policy

The foregoing discussions illuminate several guidance for policy, namely:

One, while it would be wrong to attribute solely to high fertility the high incidence of poverty in the country, recent research provide even stronger evidence that show the important roles demographic changes play in development, in general, and poverty alleviation, in particular. At the aggregate level, it retards the growth in per capital income as it lower savings rates and investments in physical and human capital. An even much more overwhelming evidence exist at the household level on the depressing impact of high fertility particularly on savings and human capital investments. The impact through the distribution channel was also found to be equally potent by recent research showing that it skews the distribution of income against the poor. Finally, household level studies continue to reveal the deleterious effect of high fertility on the attainment of well-being of the poor given income. These results should further strengthen the resolve to include, as part of the poverty alleviation package, programs to improve fertility management of poor couples.

Two, while it has been argued that the observed pattern that the poor have larger family size is the result of rational choice of the poor, there are indications that make this claim maybe difficult to believe particularly for the case of the Philippines. Foremost, is that the poor don't really have better control over their fertility. This is clearly indicated by their more limited access to family planning and allied services, lower contraceptive prevalence rates, higher unwanted fertility and higher unmet need for family planning. While undoubtedly there maybe conditions prevailing that favors large family size, this will be much more difficult to ascertain under conditions of loose control over fertility due to absence of family planning services. Only when we have a better understanding of fertility preferences, which from the foregoing arguments can come only with good family planning services, can we better target to influence those preferences.

Three, current fertility choices do not only have current effects but have intergenerational impact. There is overwhelming evidence, even during the period of the 1980s where analysts have doubted the importance of fertility regulation in development, that high fertility lead to decreased investments in human capital. This has been identified as the main engine of intergenerational transmission of poverty. It might too late to wait for the poor to reduce their fertility to solve this problem. This requires pro-active subsidy and better targeting of public services to improve human capital investments (e.g., education and health) of the poor. It is worth noting that this has both short and long-term effects. In the short-term it shields the poor from deprivation due to their current economic status. Over the long-term it helps stop the intergenerational transmission of poverty. It is worth noting that these interventions have good socioeconomic returns apart from dealing with the externalities of fertility decisions.

Four, it has been shown by decomposition analysis that in the Philippines growth is the primary contributor to the decline in poverty incidence while cross country analysis credited some role for the lowering inequality. Sustained economic growth should therefore remain the primary strategy of development in the immediate term with lowering inequality given the supporting role. On the role of demographics, even those who believe on the important role it plays in development are quick to add that these are mostly potential benefits. A conducive economic environment is required to translate these into reality. This is clearly demonstrated by the difference in the impact of similar demographic transition happening in

countries in East Asia, where it created a window for rapid economic growth, and countries in Latin America where more modest economic growth are being achieved.

Five, globalization introduces at least two elements that have important implications based on the foregoing discussions: (i) it creates opportunity, and (ii) it can mean rapid changes in the economic environment. At the aggregate economy level, to benefit from opportunities created by globalization the economy must be able to shift resources to sectors where demand is high from sectors where demand have contracted. To the extent that high population growth deters investments in both physical and human capital, means that it can hinder these shifts. Similarly, at the household level, those who have fewer (and by all indication well-endowed) children will have better chances of benefiting from globalization. Finally, recall that increases in family size increases the vulnerability of households to changes in economic conditions as well as to slippage into poverty. To the extent that globalization implies more rapid changes in the economic environment, means increasing vulnerability for those who have large families.

Six, all of the foregoing point to the important role demographic changes play in development, in general, and poverty, in particular. The question to ask is whether the foregoing discussions also provided enough reasons for government to intervene in fertility decisions, in general, and for what Herrin (2002) calls “with persuasion” in the case of poor households. If it does, then providing information on the implications of high fertility and family planning services for the general public should be justified. In the case of poor households, subsidized family planning services should be an integral component of any poverty alleviation package that should include, among others, basic social services, particularly, education and health.

7. References

- Ahlburg, D. (1996). "Population Growth and Poverty," in Alhburg et al. (eds.) *The Impact of Population Growth on Well-Being in Developing Countries*, Springer-Verlag.
- Anand, S. and J. Morduch (1996) "Poverty and the Population Problem: Evidence from Bangladesh," HIID Development Discussion Paper No. 559.
- Balisacan, A. (2001) "Poverty Comparison in the Philippines: Is What We Know About the Poor Robust?" Paper delivered at the Asia and Pacific Forum on Poverty: Reforming Policies and Institutions for Poverty Reduction, to be held at the Asian Development Bank, Manila, 5-9 February 2001.
- Birdsall, N., A. Kelley and S. Sinding (2001) *Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World*, Oxford University Press.
- Birdsall, N. and S. Sinding (2001) "How and Why Population Matters: New Findings, New Issues," in Birdsall, Kelley and Sinding (eds.)
- Bloom, D., D. Canning and J. Sevilla (2001) "Economic Growth and the Demographic Transition," NBER Working Paper No. 8685.
- Bloom and Freeman (1988). "Economic Development and the Timing and Components of Population Growth," *Journal of Policy Modeling*, 10(1): 57-81.
- Bloom D.E. and Williamson J.G. (1998), "Demographic Transitions and Economic Miracles in Emerging Asia," *World Bank Economic Review*, Vol. 12, No. 3, pp. 419-55.
- De Dios and Associates (1993). *Poverty, Growth and the Fiscal Crisis*. PIDS and IDRC.
- Eastwood, R. and M. Lipton (2001) "Demographic Transition and Poverty: Effects via Economic Growth, Distribution and Conversion," in Birdsall, Kelley and Sinding (eds.)
- Eastwood, R. and M. Lipton (1999) "Impact of Changes in Human Fertility on Poverty," *Journal of Development Studies* 36(1), 1-30.
- Glewwe, P and G. Hall (1998) "Are Some Groups More Vulnerable to Macroeconomic Shocks Than Others? Hypothesis Test Based on Panel Data From Peru," *Journal of Development Economics*, 56:181-206.
- Herrin, A. (2002) "Population, Poverty and Development: A Framework," Prepared for the Population Commission.
- Herrin, A. (2001) "Population Policy in the Philippines, 1969-2000," Paper prepared for the "Policy Evaluation Research for the Philippine Population Management Program (PPMP)".

Herrin, A. and E. Pernia (2000) "Population Growth, Human Resources and Employment in the Philippines," Paper prepared for the ANU-UP conference on the Philippine economy in Canberra, 2-3 November 2000.

Kelley, A. and R. Schmidt (1995). "Aggregate Population and Economic Growth Correlations: The Rule of the Components of Demographic Change", *Demography* 32, pp. 543-55.

Kelley, A. and R. Schmidt (2001). "Economic and Demographic Change: A Synthesis of Models, Findings and Perspectives," in Birdsall and Sinding (eds.).

King, E. (1987) "The Effect of Family Size on Family Welfare: What Do We Know?" in Johnson and Lee (eds.) *Population Growth and Economic Development, Issues and Evidence*. Madison: University of Wisconsin.

Lam, D. (1987) "Distribution Issues in the Relationship Between Population Growth and Economic Development," in Johnson and Lee (eds.) *Population Growth and Economic Development, Issues and Evidence*. Madison: University of Wisconsin.

Lanjow, P. and M. Ravallion (1995) "Are Larger Households Really Poorer? *Economic Journal*, 105.

Lipton, M. and M. Ravallion (1995) "Poverty and Policy" in Behrman and Srinivasan 1995 *Handbook of Development Economics*. Vol. 3.

Lloyd, C. (1994) "Investing in the Next Generation: The Implications of High Fertility at the Level of the Family," in Cassen et al. (eds.) *Population and Development: Old Debates, New Conclusions*. New Brunswick and Oxford: Transaction Publishers.

McNicoll, G. (1997) "Population and Poverty: A Review and Restatement," POPCouncil paper 105.

Merrick, T. (2002) "Population and Poverty: New Views on an Old Controversy," *International Family Planning Perspectives*, Vol 28., No. 1.

Merrick, T. (2001) "Population and Poverty in Households: A Review of Reviews," in Birdsall, Kelley and Sinding (eds.).

Orbeta, Aniceto C. and Ernesto M. Pernia (1999). 'Population Growth and Economic Development in the Philippines: what has been the Experience and what Must Be Done?' PIDS Discussion Paper Series No. 99-22.

Orbeta, A. (2002) "A Review of Research on Population-Related Issues: 1980-2002." Paper prepared for the "Policy Evaluation Research for the Philippine Population Management Program (PPMP)". PIDS Discussion Paper Series No. 2002-17.

Reyes, C. (2002) "The Poverty Fight: Have We Made An Impact?" PIDS 25th Anniversary Symposium Series on Perspective Papers.

Villamil, W. (2002) "Strengthening the Role of International Labor Standards in Selected Developing Member Countries: Country Report on child labor in the Philippines," ILO/ADB RETA project, Manila, Philippines.

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 |
| <i>NIEs</i> | | | | | | | | |
| Hongkong | 3.7 | 6.2 | 8.7 | 3.7 | 1.7 | 0.7 | 2.5 | 2.5 |
| Republic of Korea | 28.5 | 45.0 | 52.1 | 2.1 | 1.0 | 0.3 | 16.5 | 7.1 |
| Singapore | 1.9 | 3.5 | 5.0 | 2.8 | 2.8 | 0.5 | 1.6 | 1.5 |
| Taipei, China | | | | | | | | |
| PRC | 729.2 | 1219.3 | 1470.8 | 2.1 | 1.1 | 0.3 | 490.2 | 251.4 |
| <i>Southeast Asia</i> | | | | | | | | |
| Indonesia | 106.7 | 197.6 | 272.9 | 2.1 | 1.6 | 0.8 | 91.0 | 75.3 |
| Malaysia | 9.5 | 20.0 | 31.3 | 3.1 | 2.3 | 1.1 | 10.5 | 11.3 |
| Philippines | 31.6 | 68.3 | 107.1 | 3.1 | 2.3 | 1.1 | 36.8 | 38.7 |
| Thailand | 31.2 | 58.7 | 77.5 | 3.2 | 1.4 | 0.6 | 27.5 | 18.8 |
| Vietnam | 38.1 | 72.8 | 105.5 | 2.5 | 2.0 | 1.0 | 34.7 | 32.6 |
| <i>South Asia</i> | | | | | | | | |
| Bangladesh | 58.5 | 123.6 | 210.8 | 2.5 | 2.3 | 1.3 | 65.1 | 87.2 |
| India | 495.2 | 927.1 | 1351.8 | 2.3 | 1.9 | 0.9 | 431.9 | 424.7 |
| Pakistan | 54.8 | 123.6 | 251.0 | 2.3 | 2.4 | 1.9 | 68.9 | 127.3 |
| Sri Lanka | 11.0 | 18.0 | 22.5 | 2.5 | 1.2 | 0.4 | 7.0 | 4.5 |

* Medium assumption

Source: Population Division, Department of Economic and Social Affairs, UN. World Population Prospects, The 2000 Revision

Table 2
Fertility and Mortality Indicators

| Countries | Total Fertility Rate | | | | | | Infant Mortality Rate | | | | | |
|-----------------------|----------------------|---------|---------|---------|---------|---------|-----------------------|---------|---------|---------|---------|---------|
| | 1960-65 | 1970-75 | 1980-85 | 1990-95 | 1995-00 | 2000-05 | 1960-65 | 1970-75 | 1980-85 | 1990-95 | 1995-00 | 2000-05 |
| <i>NIEs</i> | | | | | | | | | | | | |
| Hongkong | 5.31 | 2.89 | 1.80 | 1.22 | 1.17 | 1.17 | 33 | 17 | 10 | 5 | 4 | 4 |
| Rep. of Korea | 5.63 | 4.28 | 2.23 | 1.68 | 1.51 | 1.51 | 70 | 38 | 23 | 12 | 8 | 7 |
| Singapore | 4.93 | 2.62 | 1.69 | 1.75 | 1.60 | 1.45 | 30 | 19 | 8 | 6 | 5 | 5 |
| Taipei, China | | | | | | | | | | | | |
| PRC | 5.72 | 4.86 | 2.55 | 1.92 | 1.80 | 1.80 | 121 | 61 | 52 | 47 | 41 | 37 |
| <i>Southeast Asia</i> | | | | | | | | | | | | |
| Cambodia | 6.29 | 5.54 | 6.40 | 5.40 | 5.25 | 4.77 | 140 | 181 | 129 | 91 | 83 | 73 |
| Indonesia | 5.42 | 5.20 | 4.11 | 3.00 | 2.60 | 2.27 | 166 | 126 | 89 | 59 | 48 | 40 |
| Lao PDR | 6.15 | 6.15 | 6.69 | 5.80 | 5.30 | 4.80 | 150 | 145 | 128 | 104 | 97 | 88 |
| Malaysia | 6.72 | 5.15 | 4.24 | 3.62 | 3.26 | 2.90 | 63 | 42 | 28 | 15 | 12 | 10 |
| Philippines | 6.85 | 6.00 | 4.95 | 4.14 | 3.64 | 3.24 | 96 | 80 | 61 | 43 | 34 | 29 |
| Thailand | 6.40 | 4.97 | 3.05 | 2.10 | 2.10 | 2.00 | 85 | 73 | 49 | 29 | 25 | 21 |
| Vietnam | 7.25 | 6.70 | 4.50 | 3.30 | 2.50 | 2.25 | 130 | 107 | 70 | 47 | 40 | 34 |
| <i>South Asia</i> | | | | | | | | | | | | |
| Bangladesh | 7.10 | 6.40 | 5.30 | 4.30 | 3.80 | 3.56 | 178 | 150 | 122 | 91 | 79 | 67 |
| India | 5.81 | 5.43 | 4.48 | 3.70 | 3.32 | 2.97 | 157 | 132 | 107 | 79 | 73 | 65 |
| Pakistan | 6.28 | 6.28 | 6.23 | 5.83 | 5.48 | 5.08 | 161 | 142 | 123 | 104 | 95 | 87 |
| Sri Lanka | 5.50 | 4.08 | 3.40 | 2.40 | 2.10 | 2.09 | 65 | 47 | 36 | 27 | 23 | 20 |

Source: Population Division, Department of Economic and Social Affairs, UN. World Population Prospects, The 2000 Revision.

Table 3
Poverty Incidence of Families, Urban-Rural, 1985-2000

| | Poverty Incidence | | | | | |
|-------------|-------------------|------|------|------|------|------|
| | 1985 | 1988 | 1991 | 1994 | 1997 | 2000 |
| Philippines | 44.2 | 40.2 | 39.9 | 35.5 | 31.8 | 33.7 |
| Urban | 33.6 | 30.1 | 31.1 | 24 | 17.9 | 19.9 |
| Rural | 50.7 | 46.3 | 48.6 | 47 | 44.4 | 46.9 |

Source of Basic Data: Family Income and Expenditure Surve, 1985-2000
Table 7, Reyes (2002)

Table 4
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 ^a | 398.3 | 269.3 | 59.5 ^a | 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 ^b | 31.3 | n.a. | 74.0 ^b | 42.2 | n.a. | 28.0 ^b | 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.

Table 5
Human Development Index Trends

| Country/Year | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 |
|--------------|-------|-------|-------|-------|-------|-------|
| Philippines | 0.652 | 0.684 | 0.688 | 0.716 | 0.733 | 0.754 |
| Malaysia | 0.616 | 0.659 | 0.693 | 0.722 | 0.76 | 0.782 |
| Thailand | 0.604 | 0.645 | 0.676 | 0.713 | 0.749 | 0.762 |
| Indonesia | 0.469 | 0.53 | 0.582 | 0.623 | 0.664 | 0.684 |
| Vietnam | . | . | 0.583 | 0.605 | 0.649 | 0.688 |

Source: Human Development Indicators, HDR 2002
Table 24, Reyes (2002)

Table 6
GDP per capita (constant 1995 US\$)

| Country Name | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 |
|-----------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| <i>NIEs</i> | | | | | | | | | |
| Hong Kong, China | 3,008 | 4,604 | 5,947 | 7,404 | 11,290 | 13,690 | 18,813 | 22,619 | 24,218 |
| Korea, Rep. | 1,325 | 1,547 | 2,283 | 3,023 | 3,910 | 5,322 | 7,967 | 10,874 | 13,062 |
| Singapore | 2,676 | 3,249 | 5,426 | 7,836 | 11,048 | 13,163 | 17,693 | 23,650 | 28,230 |
| Taipei, China | | | | | | | | | |
| PRC | 112 | 106 | 120 | 138 | 168 | 261 | 349 | 581 | 824 |
| <i>Southeast Asia</i> | | | | | | | | | |
| Cambodia | .. | .. | .. | .. | .. | | 240 | 275 | 297 |
| Indonesia | 249 | 247 | 298 | 384 | 503 | 602 | 777 | 1,042 | 994 |
| Lao PDR | .. | .. | .. | .. | .. | 290 | 313 | 376 | 450 |
| Malaysia | 975 | 1,165 | 1,371 | 1,712 | 2,297 | 2,587 | 3,104 | 4,310 | 4,797 |
| Philippines | 725 | 801 | 867 | 999 | 1,173 | 974 | 1,091 | 1,085 | 1,167 |
| Thailand | 465 | 566 | 752 | 860 | 1,117 | 1,330 | 1,999 | 2,871 | 2,805 |
| Vietnam | .. | .. | .. | .. | .. | 183 | 206 | 277 | 356 |
| <i>South Asia</i> | | | | | | | | | |
| Bangladesh | 217 | 240 | 249 | 208 | 225 | 258 | 278 | 316 | 373 |
| India | 183 | 194 | 211 | 217 | 226 | 264 | 323 | 380 | 459 |
| Pakistan | 181 | 225 | 274 | 274 | 318 | 385 | 448 | 500 | 516 |
| Sri Lanka | 279 | 292 | 345 | 381 | 451 | 534 | 589 | 718 | 860 |

Source: World Bank, World Development Indicators 2002 CD.

Table 7
Poverty Incidence by Family Size

| Family Size | Poverty Incidence | | | | | |
|-----------------|-------------------|-------------|-------------|-------------|-------------|-------------|
| | 1985 | 1988 | 1991 | 1994 | 1997 | 2000 |
| National | 44.2 | 40.2 | 39.9 | 35.5 | 31.8 | 33.7 |
| 1 | 19.0 | 12.8 | 12.7 | 14.9 | 9.8 | 9.8 |
| 2 | 20.0 | 18.4 | 21.8 | 19.0 | 14.3 | 15.7 |
| 3 | 26.6 | 23.2 | 22.9 | 20.7 | 17.8 | 18.6 |
| 4 | 36.4 | 31.6 | 30.1 | 25.3 | 23.7 | 23.8 |
| 5 | 42.9 | 38.9 | 38.3 | 31.8 | 30.4 | 31.1 |
| 6 | 48.8 | 45.9 | 46.3 | 40.8 | 38.2 | 40.5 |
| 7 | 55.3 | 54.0 | 52.3 | 47.1 | 45.3 | 48.7 |
| 8 | 59.8 | 57.2 | 59.2 | 55.3 | 50.0 | 54.9 |
| 9 or more | 59.9 | 59.0 | 60.0 | 56.6 | 52.6 | 57.3 |

Source of basic data: Family Income and Expenditures Surveys, 1985-2000, NSO
Reyes (2002)

Table 8
Differential Family Planning Practice by Socio-economic Class

| Source | Poor | Non-Poor | Total |
|---|------|----------|-------|
| <i>Contraceptive prevalence</i> | | | |
| FPS 2000\la | | | |
| Modern | 26.3 | 35.0 | 32.3 |
| Traditional | 13.9 | 15.1 | 14.7 |
| Any method | 40.1 | 50.1 | 47.0 |
| APIS 1998\lb | 40.5 | 46.2 | 44.1 |
| APIS 1999\lb | 33.7 | 37.0 | 35.8 |
| <i>Access to family planning services</i> | | | |
| APIS 1998\lb | 85.2 | 90.7 | 88.7 |
| APIS 1999\lb | 89.1 | 93.1 | 91.7 |

\la - socioeconomic status is based on a score derived from questions about housing convenience/durable goods

\lb - socioeconomic status based on income deciles: poor = lowest 40%; Non-poor=highest 60%

FPS - Family Planning Survey

APIS - Annual Poverty Indicators Survey