

## **THE ECONOMIC IMPACT OF THE DEMOGRAPHIC CRISIS: ITS IMPLICATIONS ON PUBLIC POLICY**

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### **Abstract**

The Philippines is "over-populated" not in relation to its natural carrying capacity but in relation to the performance of its economy and government. Clearly, it would be better to improve the performance of the government and the economy than to just get government involved in fertility choices of households. However, given the history of the performance of both government and the economy, a population policy can clearly help improve the nation's welfare. Government must provide public goods and services and its capability to deliver them is affected by population growth. Moreover, the impact on government of high fertility may be even more serious than suggested by the average level of total fertility rate since children's education is closely correlated with their parent's education and poorer and less educated parents tend to have more children.

The government's capability to meet the needs of the country's growing population has been impaired by a weak economy and high levels of public debt. Due to high expenditures on interest payments and weak tax collections, the government's deficit is high and its level of indebtedness may become unsustainable even at present inadequate levels of spending on basic social services and infrastructure. The government's ability to meet the needs of the population will clearly be improved if fertility can be brought down. Fertility can be reduced significantly without resorting to coercive policies. Poor and less educated parents have higher fertility than average, but their desired fertility is much lower than their actual fertility. Population policy can go a long way simply by helping people attain their desired family sizes.

**Key words:** demographic crisis, economic impact, population policy, Philippines

### Introduction

My original assignment is to speak on "Economic Implications of the Demographic Crisis." I should explain why "public policy" was added to the title. This is best done by asking two simple questions. Is our population growth too high for the good of our country and our people? And if so, why is this the case? I have no comparative advantage in answering the first question. Indeed, every thing that I will say on the first question relies completely on research done by other social scientists. The second question, however, is related to public policy, to which I hope I can add a little to the discussion.

To make a long story short, our country is "over-populated" not because our population is near the limit of our country's natural carrying capacity. Our country is in a demographic crisis because our economy did not grow fast enough and because our political and social institutions have been unable to respond adequately to the consequences of the rapid population growth.

Those who oppose population management policies on the ground that higher economic growth and better governance are together vastly superior to having good population policy and little else are partly right. We would have been much better off even if, as it actually happened, government did not have population management policies but, which unfortunately did not happen, government had been run much better and the economy had grown much faster. Indeed, higher economic growth and a more educated population together would have resulted in lower population growth rate regardless of what the government had done with respect to population policy. Unfortunately, the pragmatic question that must be raised is that given the odds against government and the political system re-inventing themselves, isn't a sensible population policy long over due?

Another way to put it is that a rapidly growing economy with a high savings rate and good economic management needs to reduce fertility less than a slow growing economy plagued by low savings rate and fiscal deficits. Fertility would have come down on its own at a much faster pace than what actually happened if our economy and our public sector had performed as well (or even just nearly as well) as in our high performing Asian neighbors. However, given that economic growth and governance were not our strong suit, a much faster decline in fertility could have mitigated the negative long-term effects of bad economic policies and public sector mismanagement.

A weak state's room to maneuver is more severely curtailed by rapid population growth than a strong state's. To a large extent, this flows from the fact that poverty tends to be transmitted from one generation to the next. Poverty tends to replicate itself across generations to the extent that today's workers who have low human capital are more likely than not to be the children of parents who themselves had little human capital. Moreover, poverty would tend to grow if poorer and less educated parents had more children than average.

The vicious cycle can of course be broken if the economy is growing rapidly and creating many job opportunities and the state is strong enough to do asset reforms (e.g., land reform) and mobilize resources to reduce poverty. Conversely, a weak state's capability to break the cycle is eroded even further if the economy is performing poorly and less educated and poorer parents tend to have more children than average.

### Long-Term Economic and Demographic Trends

A comparison of the Philippines and Thailand gives a very stark contrast in both demographic and economic trends. Philippine population has quadrupled during the last 50 years. Growth rate of population was around 3% in the 1960s falling very slowly to around 2.3% in 2000. On the other hand, Thailand's economy grew much faster than the Philippines' and its government played a leading role in bringing down fertility rates. As a result, its population growth rate is now more than one percentage point lower than ours. Thailand was hit harder by the Asian financial crisis, but its economic growth was on average much higher than the Philippines over the last 40 years, with the highest gap in growth rates occurring in the 1980s and the first half of the 1990s.

In 1960, Thailand and the Philippines had the same population. In the last census, our population was 14 million more. This is due to the fact that total fertility rate in the Philippines is much higher than in Thailand (3.7 children compared to 2.1 children). Due to the combined effects of the wide disparities in demographic and economic trends, per capita income of Philippines, which was more than 50% higher than Thailand's in the mid-sixties, is now around 40% of Thailand's. It would of course be both simplistic and wrong to attribute the Philippines being left behind by Thailand to the difference in total fertility. For one thing, although Thailand's economy has been performing better than the Philippines' throughout the last forty years, it was in the 1980s and the first half of the 1990s when the gap in the per capita incomes of the two countries widened the fastest. Indeed, that the GNP of the Philippines contracted by nearly 15% in just two years in 1984 and 1985 and the fact that Japanese industries relocated mostly in Thailand and Malaysia and almost totally skipped the Philippines (due largely to the yen's appreciation relative to the dollar) three or four years after the fall of Marcos account for a significant part of the difference in the economic performance of the two economies. In short, although much of the difference in rate of economic growth is due to non-demographic factors, failure to adopt a sensible population policy aggravated the situation in the Philippines. (For a comparison of the economics of Thailand and the Philippines, see Yoshihara 1994.)

### **The Relationship Between Population Growth and Progress**

There are two extreme views on the consequences of the demographic crisis in our country. One extreme view is that overpopulation is one of the major causes of Philippine poverty. This view grabbed the headlines, both here and abroad, when Mr. Lee Kuan Yew of Singapore said that the three things that have hampered Philippine progress were the behavior of the traditional elites (who cared very little about the suffering of the masses), the country's soft and forgiving culture and overpopulation. The other extreme view, which is often associated with the conservative sectors of the Catholic Church, is that the promotion of population control through artificial contraceptive methods is bad for economic development in the long run because it is immoral and has little or no impact on the growth rate of per capita income.

As is usually the case with extreme positions, polemical ends, not empirical validity, are the main objectives. A "soft and forgiving culture" is nearly all encompassing. It covers so many things, from voters' tolerance for poor governance to the academic community's tolerance for lazy professors. On the other hand, that the traditional elite hampered economic development is widely accepted by scholars in most social sciences such as history (e.g., our colonial history and the rise of the elite), political science (e.g., elections, corruption and governance) and economics (e.g., rent-seeking and free rider problems). Demographic problems certainly cannot be even a close third when compared to the role of the elite and culture in explaining economic growth or the lack of it.

On the other hand, the view that it is immoral even for married couples to have sex except for the purpose of having babies has no scientific or logical basis. There's very little scientific data (or even theological arguments) that support the view that people who have sex only for procreation (and therefore abstain from sex when they do not want to procreate) are more moral than those who practice artificial or modern methods of contraception. On the contrary, it can be argued the parents have the moral duty not to bring additional children in to this world if they cannot give them good education, nutrition and housing. If governments that do not promote modern contraceptive methods are more moral than those that do, then we have arguably one of the most moral governments among Asian economies. It is of course rather sad that such morality has not given us the best government in the region.

One can of course argue that a country that succeeds in significantly reducing fertility solely through celibacy and natural family planning must be a truly disciplined country indeed and has a great economic future ahead, or is already a very rich country. But how many countries have succeeded in reducing fertility solely through celibacy and natural family planning? The answer of course is none. (This point is analogous to Ursula Hick's put down of tax advisers from developed countries who advocated the adoption of progressive

consumption taxes in developing countries. She said that the less developed country that had the capability to follow that particular tax advice must be already developed and therefore did not need the advisers.)

The claim, however, that there is a weak link or no link at all between the growth rates of per capita income and population is an empirical issue. Unfortunately, there are tremendous measurement problems. If one resorts to statistical regression using measured variables from a cross-section of countries, there is a high risk of attributing to population growth the impact variables missing from the equation that may be correlated with both population and economic growth. At any rate, the cross-country regressions have yielded mixed results. Barro (1997) found from cross-country data a positive correlation between low fertility and economic growth. However, other research that also used cross-section data found neither significant positive nor negative impact on economic growth. Overall, the view that there is a neutral relationship between population growth and the growth of per capita income seems to be more widely accepted among economists than the view that there is a negative relationship.

The literature also discusses, however, that simply correlating demographic and economic growth rates results in specification errors on the effect of demographic variables on the economy (Bloom and Williamson 1997; Bloom et al 2003). To see this, consider an economy where young and old people consume but do not work. An increase in birth rates will initially reduce economic growth as investment in physical capital is reduced in order to finance the consumption and human capital requirements of the young. However, economic growth may rise after some lag when the baby boomers start working. Similarly, a drop in birth rates may initially result in higher economic growth as expenditures that are needed to prepare the young for future work are reduced. Eventually, however, this may result in lower economic growth as the share of retired workers in total population rises. In short, the effects of fertility change on the economy depend on its effects on the age structure of the population and the long-term effects of changes in the growth rate of population on the rate of increase in both physical and human capital.

Another point to stress is that a drop in population growth initially creates additional funds for increasing either physical capital or human capital per worker. It of course does not necessarily follow that this will have significant long-term effects on economic growth. In countries where capital is misallocated, the demographic dividend may not have lasting effects. In short, a reduction in birth rates frees up resources, but the gain will be temporary unless the resources that are freed up are invested well. The successful East Asian and Southeast Asian countries seem to have gotten both sides of the equation right. They reduced birth rates, generated demographic dividends, and invested the demographic dividends wisely as well (Bloom and Williamson 1997).

The Philippines, on the other hand, has yet to realize a demographic dividend similar to those experienced by our Asian neighbors. Still, high population growth rates alone cannot explain our *recent* mediocre economic performance. Philippine population has been growing rapidly for around fifty years. Theoretically, the economy should now be on the upside part of the demographic cycle (e.g., with labor force growth at least matching population growth). Many of the babies born at the time that population growth went on the upswing are now of working age. In short, if our *current* economic growth is low, it cannot be necessarily attributed to demographic variables because labor force growth is not lower than population growth—4.5% in the 1980s, 2.7% in the first half of the 1990s and 1.9% in the second half of the 1990s. Our high unemployment and under-employment rates would suggest, however, that many of the babies born more than twenty years ago are not contributing as much to economic growth as the baby boomers of Thailand and Malaysia did.

More than thirty years ago, Dr. Bernardo Villegas was asked in a forum about the negative effects of high birth rates on the economy. He simply replied that there were two hands for every mouth. Conveniently obscured was the fact the mouths start working decades ahead of the hands. But that was more than thirty years ago and the many of the hands connected to those mouths are now already experienced members of the labor force. In short, age structure should be much more favorable now than two or three decades ago. Unfortunately, high unemployment and underemployment rates may have severely dampened much of the favorable effects of the coming of age of the baby boomers.

As employment opportunities became scarcer, Filipinos found jobs abroad in greater and greater numbers. The rapid rise in the number of Filipinos working abroad resulted in GNP growth rates that were consistently higher than GDP growth rates. (The difference between GNP and GDP is net factor income from abroad, which is largely just the difference between Filipino overseas worker's income and net interest and dividend payments to foreigners.) That GNP was six percent lower than GDP some 15 years ago but is now around six percent higher in spite of the fact that interest payments on the country's foreign debt have been consistently rising can be seen as a demographic dividend from the high birth rates.

At any rate, the widening gap between GNP and GDP growth demonstrates that rapid population growth need not result in lower per capita incomes. Ultimately, the economic implications of demographic change would depend on whether the younger generations could find jobs that pay well. In general, their ability to find jobs would depend on both the growth of the economy and the skills that they possess. The exception to the rule of course is overseas employment, which is a function not of domestic economic growth but of economic growth abroad. But whether the jobs are found here or abroad, the growth of human capital is very important. In particular, as will be discussed

later, it is important to ask how a higher or a lower population growth rate affects human capital accumulation.

Finally, it is worth noting that the rising share of income from abroad in GNP may be seen as a safety valve. Without the rise in overseas employment, the consequence of rapid population growth could have been much more serious. Overseas employment mitigated the negative impact of rapid population growth. It is still not clear, however, what the social costs are of using overseas employment as a safety valve. For instance, what are the effects on children in the long-run (i.e., when they become adults) of being separated from their overseas worker parents for extended periods of time? The optimistic view is that the Filipino extended family (e.g., grandparents, aunts, etc.) will help ensure that the children will turn out alright. But it does not take much mind-stretching to imagine other scenarios.

### Fertility and Human Capital Transmission

So far I have not discussed in detail the effects of higher or lower population growth on the rise of productivity from one generation to the next. It matters a lot whether the children of the present poor are much more likely to be the future poor and whether the poor have higher fertility than the non-poor (Orbeta 2002c). The burden of the state is clearly higher if poor people beget poor people and do it at a faster rate.

On the surface, the Philippine educational system seems to be doing well. It has one of highest growth rate of school age population in the region but this is matched by an even higher growth rate of enrollment, resulting in school attendance rates closer to those of developed countries. Average years of schooling among those who are employed rose from 6.4 years in 1976 to 8.0 in 2000.

The share of expenditures on education rises as income rises. As a result, inequality in the distribution of education is probably even greater than the inequality in the distribution of income. One reason for the inequality is the low survival rates in elementary schools. Nearly forty percent of pupils who enter grade school do not reach high school.

Children of parents who have no education or only elementary education are only half as likely to go to college as the children of those who gave gone to high school or to college. Moreover, although high fertility does not affect school attendance of younger children it reduces number years of schooling among the poor. Studies have shown for instance that school attendance among older children is inversely correlated to the number of their younger siblings. In short, the bigger and poorer the family, the greater is the likelihood that older children have to drop out of school to augment the family's resources (Orbeta 2002b).

As discussed earlier, the negative effects on economic growth of higher birth rates are merely transitional if the higher birth rates do not reduce the per capita stock of human capital. Suppose, for instance, that financing the human capital of the additional children comes from longer work hours and the reduction of consumption and capital accumulation. In this case, growth of human capital per capita is not reduced by higher fertility and the younger generation would tend to be more skilled than the older generation. In this case the effects of higher fertility on per capita income growth are conflicting. In the short or medium run, economic growth declines as the growth of physical capital is reduced. As soon as the higher fertility begins to increase the growth rate of the labor force, however, growth will start to increase (since the young workers are more productive than the retiring workers who are replaced).

Thus, as long as one takes a very long run point of view (which is the most meaningful way of looking at population), the crucial point is the extent to which the younger generation is more productive than the older generation and the extent to which a higher dependency ratio reduces investment in both human and physical capital. Ultimately, the impact of demography on long run growth depends on which types of families are likely to have more children, those that invest less in human capital tend to have more children).

There is substantial evidence that poorer, less educated and rural parents both invest less in human capital and have more children. This means that the transmission of poverty is intergenerational and would tend to become more serious over-time if the economy is not growing fast enough or the government is not capable for making up for poor parents' low capability to bequeath human capital to their children.

Data from the National Demographic Surveys (NDS) show that mothers belonging to the two lowest income quintiles have significantly higher total fertility rate (6.5% and 4.7%) than the average for the entire country (3.7%). Similarly, mothers with no education or only elementary education also have significantly higher total fertility of 4.9% and 5.5%, respectively (Herrin 2003). Since the difference in mortality rates is not as great as the difference in fertility across classes, that part of population that has lower human capital will grow faster. Moreover, considering how fast the countries we are competing with are increasing their human capital stock, our country may lose rather quickly its much-advertised advantage in human resources. This is of course one area where government intervention can make a difference. It seems, however, that other Asian countries are spending more on basic education than the Philippines. (Note for instance the recent news report that Thailand spends nearly six times more on basic education per pupil than the Philippines.)

Much of the Philippines' failure to measure up to demographic changes lies in the poor fiscal position of the national government and its inability to use funds efficiently. The Philippines' tax-GNP ratio is the lowest among original members of the ASEAN. The ratio of public debt to GNP ratio of the Philippines



is the highest in the ASEAN and growing. Not counting contingent liabilities, the ratio of public debt to GNP was 65.5% in 2001, up from 53.2% in 1996. Including contingent liabilities, the ratio increased from 53.2% in 1996 to 79.1% in 2001 (Manasan 2002). In short, the government's fiscal position is close to becoming unsustainable. This means that interest expense eats up a significant chunk of the budget, leaving very little for infrastructure and basic social services. (Indonesia also has high public sector debt relative to GNP. But the Philippines is in a more difficult fiscal position than Indonesia since the latter has oil resources and has greater access to official development assistance.)

The principal reason rapid population growth is considered a problem is that the government does not have the resources to keep up with population growth. Conversely, lower fertility, especially among households that draw resources from government but contribute little to its tax revenue, can improve the government's capability to meet the needs of a growing and poverty-stricken population. Indeed, what is scary about the size of the government deficit is not its size alone but the fact that it is so large in spite of the fact that expenditures on basic social services and infrastructure are so inadequate. While it is true that the fiscal problem cannot be cured simply by reducing the growth rate of population, lower birth rates can make the national government's fiscal position much more manageable in the long run.

Hardin in his classic article *The Tragedy of Commons*, advocated coercive methods to control "freedom to breed" and put an end to "*laissez faire* in reproduction." Difficult as the fiscal situation is, there is no need for coercive methods in reducing fertility in our country. "A significant difference between the fertility of educated and the less educated mothers is due to differences in unwanted fertility. Mothers with no education or just elementary education in the 1998 NDS had total wanted fertility rates of 3.9% and 3.3% respectively compared to actual total fertility rates of 5.0 for both groups. In contrast, the wanted and actual fertility rates for mothers with college education were 2.4% and 2.7%, respectively. More educated parents plan to have fewer children and are in a much better position to achieve their plans. Government can significantly reduce fertility simply by helping poor and less educated families reduce unwanted fertility. Moreover, once such a program is under way, desired family sizes may decline as people find the contraceptive methods that best suits them and as government assistance reduces the out-of-pocket cost reducing family size.

### **Other Consequences of the Demographic Crisis and the Weak State**

Hong Kong and Singapore, two of the most open and market-oriented economies in the world, intervene most actively in the use of land and the provision of housing. They also intervene most in the use of roads and ownership of motor vehicles. In Hong Kong, land reclamation is a government monopoly

and more than half of the households live in housing provided by the public sector. The reason of course is that housing, just like use of motor vehicles, generate strong externalities. Since land price goes up very rapidly with development density, the pressure to provide public housing is understandably highest in densely populated city-states. Thus, the alternatives are to use the fiscal powers of the state, tolerate sub-human housing conditions or let the urban poor take matters into their own hands. Unfortunately, a weak state would end up choosing the latter two alternatives by default. Moreover, in a democratic setting, punitive measures against squatting are either likely to be stricken off the books (e.g., the so called Lina Law) or not to be enforced at all (e.g., the situation before the Lina Law). In a way, tolerance or even rewarding of squatting is a way of delegating the state's taxation powers directly to the squatters. Unfortunately, such result in chaos, which impinges on the environment and the transport system. How often have we read in the news that an important public infrastructure project or flood control project has been delayed by relocation problems? Similar problems recur in matters affecting the environment. The number of people living in public forests is astonishing.

This kind of problems can be essentially classified as "tragedy of the commons." The solution entails either the use of coercive powers of the state or its redistributive powers (which is also by nature coercive). Hardin's pessimism regarding government's capability to manage the commons was probably misplaced if the analysis is applied to China and other successful Asian countries. Unfortunately, it may be on target when applied to the Philippines.

### Conclusion

High unemployment and under employment are the biggest consequences of rapid population growth. The rising share of overseas workers' income in GNP, only partially offset the fact that job creation could not keep up with population growth. One can of course quibble whether the high unemployment is due to low economic growth or to high population growth, but it is hard to defend the argument that the Philippines would have worse off if it had tried and succeeded in reducing population growth. This of course does not mean that good population policy is a good substitute for good governance and economic policies. But every little bit helps.

Countries with good economic policies and management have benefited the most from the demographic transition. On the other hand, countries with weak institutions, slow economic growth and large fiscal deficits would benefit the most from reductions in fertility rates. Countries that have done little by way of social and economic reforms may be precisely the ones that cannot afford not to have a population policy.

Fortunately, coercive population policies are not needed. The poor and the less educated want more children than the non-poor and the educated, but the principal reason their fertility is high is that they do not have access to or cannot afford effective methods of contraception. Thus, non-coercive contraceptive assistance, which is targeted at poor and less educated families, can have significant impact on fertility.

However, such measures are not a panacea to our long-standing socioeconomic problems. Moreover, it would take time for their beneficial effects to be felt. That is probably why conservative religious opposition to them is quite likely to succeed. But that is another recurring story.

### References

Barro R. 1997. *The Determinants of Economic Growth: A Cross Country Empirical Study*. Cambridge, Mass., MIT Press.

Bloom D, Canning D, Sevilla J. 2003. *The Demographic Dividend: A New Perspective on the Consequences of Population Change*. RAND, 2003.

Bloom D, Freeman R. 1986. "The effects of rapid population growth on labor supply and employment in developing countries". *Population and Development Review*, 12(3): 381-414

Bloom D, Williamson J. 1998. *Demographic transitions and economic miracles in emerging Asia*. *World Bank Economic Review* 12: 419-456.

Herrin A. 2003. *Can the Filipino be competitive in the 21<sup>st</sup> century?: Population, human resource and development*. A presentation made at the U.P. Alumni Council Meeting, June 20, 2003.

Herrin A, Pernia E. 2003. *Population, human resources and employment*. In: *The Philippine Economy: Development, Policies and Challenges* (Balisacan A; Hill H, eds) Ateneo de Manila University Press and Oxford University Press.

Kelley A. 2001. *The Population debate in historical perspective: Revisionism revised*. In: *Population Matters: Demographic Change, Economic Growth and Poverty in the Developing World*, (Birdsall A; Kelly C; Sinding SW, eds.) Oxford University Press, pp. 24-54.

Kelly A, Schmidt R. 1995. *Aggregate population and economic growth correlations: The role of the components of demographic changes*. *Demography* 32 (4): 543-555.

Manasan R. 2002. Analysis of the President's budget for 2003. Discussion Paper Series No. 2002-24, Philippine Institute for Development Studies.

Norris K. 1996. *The Cloister Walk*. Lion Publishing UK, 400 pp.

Orbeta A. 2002a. A review of research on population-related issues: 1980-2002. Discussion Paper Series No. 2002-19, Philippine Institute for Development Studies.

Orbeta A. 2002b. Education, labor market and development: A review of the trends and issues in the Philippines for the past 25 years. Discussion Paper Series No. 2002-17, Philippine Institute for Development Studies.

Orbeta A. 2002c. Population and poverty: A review of the links, evidence and implications for the Philippines. Discussion Paper Series No. 2002-21, Philippine Institute for Development Studies.

Orbeta A, Matro J, del Prado F. 2002. Review of the population program: 1986-2002. Discussion Paper Series No. 2002-18, Philippine Institute for Development Studies.

Yoshihara K. 1994. *The National and Economic Growth: Philippines and Thailand*. Oxford University Press.