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Policy Responses to Future Population Growth in the Philippines

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I. INTRODUCTION

The demographic and economic history of the Philippines is characterized by continued rapid population growth and an uneven economic performance. The population growth rate averaged around 3.0 percent in the 1950s and 1960s, moderating only slightly in the 1970s to around 2.7 percent per year. In the 1980s and 1990s, the growth rate averaged around 2.3 percent, which is still high by international standards. Economic growth in the past two decades paled in comparison with those of neighboring countries. While the real GNP grew at an average rate of 6.2 percent in the 1970s, the average growth rate fell to 1.7 percent in the 1980s. The economy in fact contracted in 1984 and 1985. Economic recovery in the 1990s has been slow so that it was only in 1997 that per capita GNP reached the level achieved in 1981 before the economic contraction. The poor economic performance over the last 20 years is further reflected in continued high poverty rates. Poverty rates were estimated to be 40 percent in 1988, 39 percent in 1991, 36 percent in 1994, and 32 percent in 1997. In terms of the number of families, there were 4,553,387 poor families in 1997, which is an increase of 22,217 families compared to 1994.

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Recent trends in human resource formation reveal slow improvements. The infant mortality rate slowed down considerably in the 1980s. For example, the male infant mortality rate of 94 infant deaths per 1,000 live births in 1970 declined to 65 in 1980 but to only 60 in 1990 (Flieger and Cabigon 1994). Recent data for nutrition for 1996 show that the prevalence of those underweight declined from 9.8 percent in 1989-90 to 8.4 percent in 1996; while the prevalence of those stunted declined from 6.5 percent in 1989-90 to 5.1 percent in 1996 (FNRI, 1997). Micronutrient deficiencies, particularly iron and iodine, remain high among children, and among pregnant and lactating women. Based on the *1993 National Nutrition Survey* of FNRI, the prevalence of iron deficiency anemia declined from 37.2 percent in 1987 to 28.9 percent in 1993 among the general population but the prevalence remained high in 1993, especially among children six months to one year (49.2 percent) and among pregnant (43.6 percent) and lactating (43.0 percent) women. Moreover, there has been an increase in the prevalence of iodine deficiency disorders (goiter) among the population 7 years and over from 3.5 percent in 1987 to 6.9 percent in 1993, affecting mostly females, particularly pregnant (around 25 percent) and lactating (21 percent) women (FNRI 1994).

Data in the field of education show a wide though narrowing gap between functional literacy and the conventionally measured literacy level: 77 percent versus 90 percent in 1989 and 86 percent versus 95 percent in 1994.[1] The cohort survival rate is low and has remained unchanged during the past 20 years (around 68 percent for elementary pupils and 75 percent for high school students). Achievement levels of elementary and high school students measured by mean scores in standardized tests are also low (a little over 50 percent) and have not significantly improved over the past 20 years (Republic of the Philippines 1992).

Rapid population growth, poor and uneven economic performance, and slow progress in human resource formation are inter-

1. Literacy is defined as the ability to read and write, while functional literacy is defined as the ability to read, write and compute (National Statistics Office, based on the *Functional Literacy, Education, and Mass Media Surveys* of 1989 and 1994).

related phenomena. However, while there is strong support for public policies aimed at economic recovery and human resource development, there is still no firm consensus on the need for public policy to moderate population growth and on the role of a government-sponsored family planning program in overall population and development activities. Part of the problem is the skepticism among some sectors of society about the adverse effects of rapid population growth and what could be gained from moderating such growth. While a case can be made regarding the adverse effects of rapid population growth in the context of current Philippine socioeconomic conditions based on the effects of the environment and human resource formation, and therefore, on sustainable development, perhaps the simplest perspective to take, taking into account the fact that *time* is a scarce factor, is as follows. Rapid population growth increases the pressure to provide for the growing population and reduces the time needed to make the necessary adjustments (technologically, they entail costs and take time to produce the desired results, and they have to be made quickly if population growth rates soar). Conversely, a slower population growth allows more time to bring about the necessary technological and institutional adjustments (Working Group on Population Growth and Economic Development et al. 1986)

While such perspective shows what can be gained from a moderate population growth, it does not necessarily imply that the government should intervene in moderating such growth through fertility reduction. People value children, and it is possible that society prefers more children (and hence rapid population growth) even with lower per capita income than higher per capita income but with less children. For the government to intervene in childbearing decisions, such interventions must be justified in terms of promoting efficiency (i.e., reduction of market and government failures associated with the childbearing decision making of couples) and equity (e.g., in financial access to effective means of achieving the desired number and spacing of children).

This paper attempts to examine alternative population projections and analyzes the contribution to future population growth of unwanted fertility, high desired family size, and population

momentum. The aim of such an analysis is to highlight the multiple policy responses that are needed to moderate population growth and to clarify a number of issues that have prevented the development of a stable consensus on Philippine population policy, particularly the role of a government-sponsored family planning program.

II. DEMOGRAPHIC TRENDS

The census population grew from 48.1 million in 1980 to 60.7 million in 1990, and to 68.6 million in 1995. The average annual growth rate in the 1980s and 1990s is 2.3 percent. This growth rate represented a decline from the average annual growth rate during the 1970s of 2.7 percent. However, the 2.3 percent growth rate is still high by international standards, implying a doubling of the population in 30 years.

In 1993, the total fertility rate was estimated at 4.1 births per woman, down from 5.1 births per woman in 1983, and around 6.0 births per woman in 1973. Contraceptive use among currently married women aged 15-44 years rose from 15 percent in 1968 to 42 percent in 1993, based on data from *National Demographic Surveys* (NSO and Macro International 1994). A large part of this increase in contraceptive use up to 1993 was due to the use of modern methods. Results from the *Family Planning Surveys* conducted by the National Statistics Office from 1995 to 1997 show that contraceptive use among currently married women aged 15-49 was 55.0 percent in 1995, 48.1 percent in 1996, and 47.0 percent in 1997. The decline in contraceptive prevalence was due to the decline in the use of traditional methods, without a compensating increase in the use of modern methods (DOH 1995; NSO 1998).

Data from the *1993 National Demographic Survey* revealed that 50.6 percent of married women did not want any more children (with the percentage increasing to 62.8 if we include women who had voluntary surgical sterilization), with the desire to limit childbearing increasing with the age of the woman. The data also showed that the desire to limit childbearing in-

creased with the number of living children. For example, among women with one living child, 13.5 percent wanted no more children, while among women with six or more living children, 79.2 percent wanted no more children.

Table 1 shows the distribution of births in the five years preceding the survey by fertility planning status, according to birth order and mother's age at birth. Fifty-six percent of all births were wanted at the time of conception, 28 percent were wanted but at a later time, and 16 percent were reported as unwanted. The percentage of unwanted births increased with birth order and mother's age.

TABLE 1

Fertility Planning Status: Percent of Births in the Five Years Preceding the Survey by Fertility Planning Status, According to Birth Order and Mother's Age, Philippines 1993

	Planning status of birth					
	Wanted then	Wanted later	Wanted no more	Missing	Total	Number of births
Birth order						
1	79.1	18.4	2.3	0.3	100.0	2190
2	58.7	35.9	5.1	0.3	100.0	1961
3	54.9	32.7	11.9	0.6	100.0	1605
4+	41.9	27.6	30.0	0.5	100.0	4061
Age at birth						
<20	67.3	29.5	3.3	0.0	100.0	783
20-24	62.6	31.0	5.8	0.6	100.0	2651
25-29	57.0	30.2	12.4	0.4	100.0	2758
30-34	50.8	27.2	21.6	0.4	100.0	1985
35-39	45.1	21.4	32.8	0.6	100.0	1188
40-44	34.9	16.6	48.3	0.2	100.0	420
45-49	**	**	**	**	100.0	33
Total	55.7	28.0	15.9	0.4	100.0	9817

** Less than 50 cases.

Note from source: Birth order includes current pregnancy.

Source: NSO and Macro International, Inc., 1994, National Demographic Survey 1993

Table 2 shows the total wanted fertility rates and total fertility rates for the three years preceding the survey by place of residence and level of education. The data imply that women will bear 1.2 (4.1 minus 2.9) children more than they desire if they continue to reproduce at current levels. This difference represents close to 30 percent of total fertility. Unwanted fertility tends to be higher among rural women than urban women, and among women with lower education than among those with college or higher education.

III. SOURCES OF FUTURE POPULATION GROWTH

Alternative Population Projections

The decomposition of future population growth into the contributions from unwanted fertility, high desired family size, and population momentum[2] requires three population projections: (1) a standard projection using official Philippine population projections based on the 1990 census; (2) a projection that eliminates all unwanted births after 1995; and (3) a projection in which replacement fertility is assumed starting in 1995. This decomposition follows the approach adopted by Bongaarts (1994).

Standard (Base) Projection. The standard projection was based on the official population projection (medium series) made by the Technical Working Group on Population Projections based on the *1990 Census of Population,* which was subsequently approved for adoption by the National Statistical Coordination Board. The fertility assumptions of the Philippine projection in-

2. Population momentum is the tendency for population growth to continue beyond the time that replacement level fertility has been achieved because of a relatively high proportion of the population in the childbearing ages, which in turn is due to past high fertility. In this situation, the number of births will exceed the number of deaths and the growth rate will remain positive for several decades before the age distribution fully adjusts to the changed fertility rates. Moreover, the early onset of childbearing shortens the length of a generation, i.e., the number of years after birth when a woman replaces herself with female children. The length of a generation affects the rate of growth of a population independently of the number of children born. This is so because the more rapidly a generation replaces itself, the more rapidly it will add new members to the population.

TABLE 2
Wanted Fertility Rates: Total Wanted Fertility and Total Fertility Rates for the Three Years Preceding the Survey, Philippines 1993

	Total wanted fertility rate	Total fertility rate
Residence		
Urban	2.6	3.5
Rural	3.3	4.8
Mother's education		
No education	4.0	4.9
Elementary	3.7	5.5
High school	2.9	3.9
College or higher	2.4	2.8
Total	2.9	4.1

Note from source: Rates are based on births to women 15-49 in the period 1-36 months preceding the survey.
Source: National Statistics Office and Macro International, Inc., 1994, Philippines: National Demographic Survey 1993, Table 6.8.

clude a low, medium and high series. The three series differ with respect to the year replacement fertility is achieved. In the low series, this is achieved in the year 2010, in the medium series, in the year 2020, and in the high series, in the year 2030.[3]

Wanted Fertility. The estimate for 1993 was obtained by taking the estimated wanted total fertility of 2.9 births per woman (the average for the past three years preceding the survey) from the *1993 National Demographic Survey* shown in Table 2 and distributing this according to the age pattern of wanted births shown in

3. The Philippine standard projection differed somewhat from World Bank projections. The World Bank assumed a slower decline in fertility and lower life expectancy levels. These differences are shown in Figure 1. For purposes of this paper, the Philippine standard projection (medium series) is used.

Table 1.[4] The resulting estimate for 1993 is shown in Table 3. Wanted fertility is then assumed to decline up to 2020 when replacement fertility shall have been reached. The projection assumed that wanted fertility would be achieved starting 1995.

Replacement Fertility. The estimate for replacement fertility used in the projection is the replacement fertility that is projected to be achieved in year the 2020 according to standard Philippine projections. The replacement fertility at any given year depends on the mortality schedules for that year, and therefore, the value for replacement fertility should differ as mortality declines over time. This is taken into account in estimating the total fertility rate corresponding to replacement fertility from 1990-95 to 2020-25. Thereafter, the total fertility values of the standard Philippine projections are used.

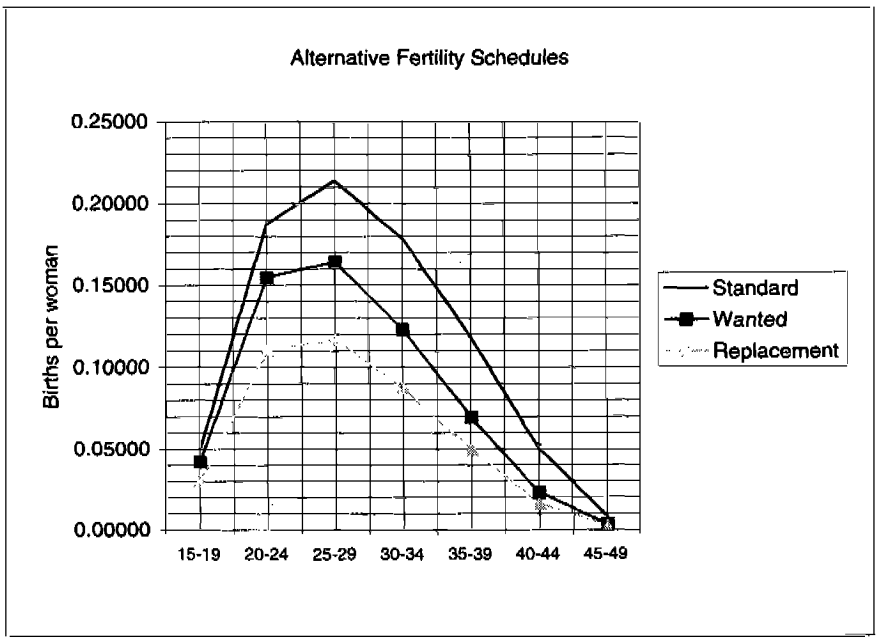
Sources of Future Population Growth

The alternative fertility assumptions are summarized in Table 4. On the other hand, the alternative population projections are shown in Table 5 and the decomposition of the sources of growth in Table 6. The results of the decomposition show that by 2020, the increase in population from 1995 due to unwanted fertility will come to 5.8 million, that due to large family size preference will reach 6.7 million, and that due to population momentum will register at 24.6 million. By 2040, the increase in population over the 1995 population will be 57.8 million, of which 9.3 million will be due to unwanted fertility, 10.9 million to large family size preference, and 37.6 million to population momentum.

4. "Wanted fertility" as used by demographers is estimated based on responses to household surveys which ask mothers whether births were planned or wanted at the time of birth. Economists adopting the "Easterlin framework" estimate a demand for children and a supply for children. For the Philippines, Boulier and Mankiw (1986) estimated a demand for children of 3.12 and a potential supply of children of 7.98. Actual observed fertility was 6.23, implying an excess supply of 3.11 children.

TABLE 3
Alternative Age-Specific Fertility Schedules, Philippines

Age group	Standard	Wanted	Replacement
15-19	0.04930	0.04182	0.02970
20-24	0.18740	0.15487	0.10998
25-29	0.21400	0.16446	0.11679
30-34	0.17850	0.12277	0.08719
35-39	0.11840	0.06980	0.04957
40-44	0.05030	0.02281	0.01620
45-49	0.00790	0.00347	0.00246
TFR	4.02900	2.90000	2.05950

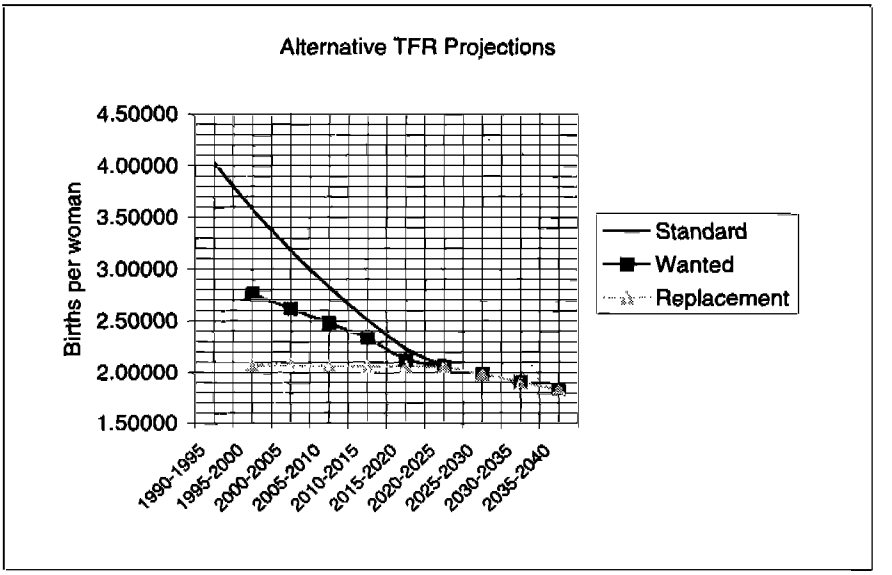


IV. APPROACHES TO POPULATION GROWTH MODERATION AND FERTILITY REDUCTION

The analysis above shows the nature of future population growth that requires three distinct policy responses within an overall population policy. First, there is growth resulting from unwanted fertility, as defined by couples. This requires efforts to assist couples in eliminating unwanted fertility and achieving their fertility goals

TABLE 4
Alternative Total Fertility Rate Assumptions, Philippines

Year	Standard	Wanted	Replacement
1990-1995	4.02900		
1995-2000	3.57900	2.75992	2.06880
2000-2005	3.17950	2.61983	2.06613
2005-2010	2.82400	2.47975	2.06368
2010-2015	2.50800	2.33967	2.06185
2015-2020	2.22850	2.11958	2.06065
2020-2025	2.05950	2.05950	2.05950
2025-2030	1.98200	1.98200	1.98200
2030-2035	1.90800	1.90800	1.90800
2035-2040	1.83500	1.83500	1.83500



in ways that are safe, legal, affordable and consistent with their moral convictions and religious beliefs. Such efforts will have a direct impact on the well-being of couples. Secondly, there is growth resulting from a desired family size or wanted fertility that is higher than replacement fertility. This requires efforts to modify fertility preferences of couples towards a small family size norm. Finally, there is growth resulting from population momentum, which by far is the largest source of future population growth. Momentum

TABLE 5
Alternative Population Projections, Philippines

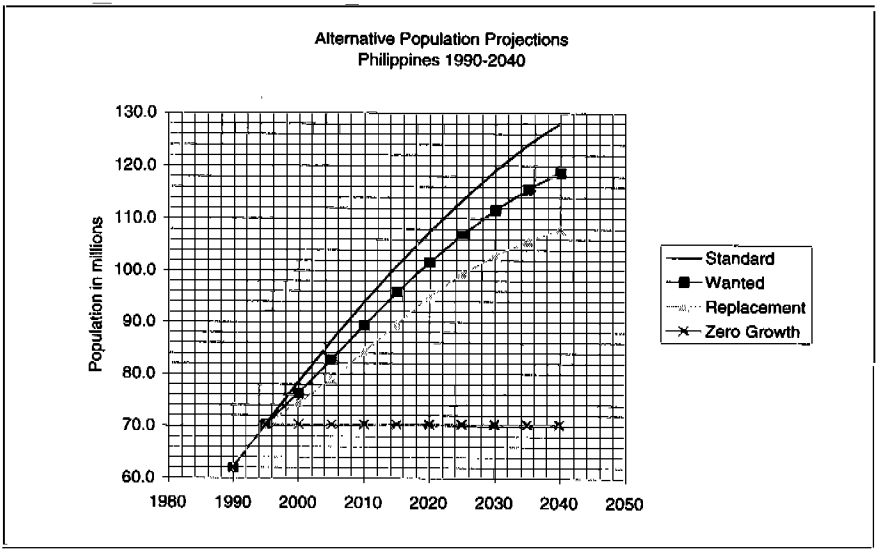
Year	Standard Philippine Projections Constant	Wanted fertility starting 1995	Replacement fertility starting 1995	Zero population growth from 1995 onwards
Population Size in Millions				
1990	62.0	62.0	62.0	62.0
1995	70.3	70.3	70.3	70.3
2000	78.4	76.3	74.4	70.3
2005	86.3	82.7	79.0	70.3
2010	93.9	89.3	84.2	70.3
2015	101.0	95.8	89.6	70.3
2020	107.4	101.6	94.9	70.3
2025	113.5	106.9	99.3	70.3
2030	119.1	111.6	102.9	70.3
2035	124.1	115.6	105.7	70.3
2040	128.1	118.8	107.9	70.3
Average Annual Growth Rate				
1990-1995	2.49	2.49	2.49	2.49
1995-2000	2.19	1.65	1.13	0.00
2000-2005	1.92	1.61	1.21	0.00
2005-2010	1.68	1.53	1.26	0.00
2010-2015	1.45	1.41	1.25	0.00
2015-2020	1.25	1.18	1.13	0.00
2020-2025	1.09	1.02	0.92	0.00
2025-2030	0.97	0.85	0.70	0.00
2030-2035	0.82	0.70	0.53	0.00
2035-2040	0.65	0.56	0.41	0.00

can be reduced somewhat by raising the age at first birth (and hence increasing the length of a generation). We now proceed to describe each of these policy responses and their corresponding economic justification.

Family Planning to Reduce Unwanted Fertility. First, there is a need to distinguish between wanted and unwanted fertility. A family planning program could be designed to focus exclusively on reducing unwanted fertility (unwanted as defined by the couples

TABLE 6
Projection of Population Size and Sources of Growth, Philippines

	Population in millions)		Percent Distribution	
	2020	2040	2020	2040
Population Projections				
Standard Projection (replacement at 2020)	107.4	128.1		
Reducing unwanted fertility by 1995	101.6	118.8		
Replacement at 1995	94.9	107.9		
Decomposition				
Increase due to unwanted fertility	5.8	9.3	15.6	16.1
Increase due to family size preference	6.7	10.9	18.1	18.9
Increase due to momentum	24.6	37.6	66.3	65.1
Total increase from 1995 population	37.1	57.8	100.0	100.0



themselves) and leave the reduction of wanted fertility to other means (see below). Since the primary justification for the family planning program now is the reduction of unwanted fertility rather than overall fertility reduction, the design of the program may have to be drastically modified to emphasize the provision of information and services that are oriented towards helping couples

reduce unwanted fertility safely and effectively, as opposed to those that are oriented towards achieving national fertility and contraceptive use targets. An important aspect in this change in program design is the emphasis on the provision of quality services. Quality includes such dimensions as expanding the choice of contraceptive methods, greater information given to clients particularly on risk and potential side effects and what to do when side effects do occur, high level of technical competence of providers, friendlier interpersonal relations, and wider range of services, particularly in the area of reproductive health and safety (Population Council 1994). Considering that a large part of unmet needs described earlier is due to fear of side effects, this suggests that greater attention must be paid to quality of care in the provision of family planning services.

A family planning program designed to reduce unwanted fertility directly improves the well-being of families (couples and their children). On the specific issue of government support for such a program through allocation of public funds, such support can readily be justified in economic terms. First, all couples have the basic human right to decide freely and responsibly on the number and spacing of their children. This is one of the basic principles embodied in the Philippine Population Policy Statement of 1987, and it is also a basic principle adopted by the Programme of Action of the United Nations International Conference on Population and Development. However, the ability of couples to achieve the fertility they desire may be less than perfect because of lack of information and lack of access to privately-provided family planning services consistent with religious beliefs and acceptable health risks. Hence, public funds, for efficiency and equity reasons similar to those used to justify public support to other areas of social action, can be used to help provide or finance such information and services.

Investment in Human Development to Reduce High Desired Family Size. The second approach is to deal with the wanted fertility. Reducing unwanted fertility through redesigned family planning may still leave wanted fertility higher than necessary to achieve replacement levels. Hence, there is a need to consider a

wider array of policy interventions to modify fertility preferences. It is well recognized that investments in human development not only directly promote well-being but also create the necessary conditions for the reduction in the demand for children. These include investments in child education and child survival and the promotion of gender equity. Reforms in these areas of human development are already underway.[5] However, there is a long way to go given the relative neglect of past policies in this area, and the difficulties that both government and households have in making large investments in human capital due to the economic difficulties experienced in the recent past. Among the areas of human development that require the most urgent attention in the light of past experience and current reform efforts, the following provide a good starting point for demonstrating how to translate policy into action. First, there is a need to address the problem of low school participation among the children of low-income families (the bottom 30 percent of the income distribution). Second, there is a need to effectively address the problem of child malnutrition, which over the past 15 years had not shown signs of improving significantly. Finally, in support of activities promoting greater gender equity, there is a need to focus on creating opportunities for women to perform nontraditional roles by redesigning current training and economic programs. Specific activities in these areas need to be fleshed out in more detail up to the funding, implementation and monitoring and evaluation stages to demonstrate how elements of policy are eventually translated into concerted action.

5. There is a constitutional provision to give education the "highest budgetary priority," and indeed, allocations for education have been increasing since the passage of the 1987 Constitution. A number of programs in maternal and child health often supported by international donors have been or are currently being implemented. Finally, strong efforts are being made to integrate gender concerns in development planning after the passage of Republic Act 7192 entitled "An Act Promoting the Integration of Women as Full and Equal Partners of Men in Development and Nation Building and for Other Purposes." These include the adoption by the government of the Philippine Development for Women and the passage of the New Family Code.

The role of the government in this area of human development, i.e., child survival, basic education, and gender equity, can similarly be justified in terms of efficiency (addressing market failures arising from lack of information and externalities) and in terms of equity. Note that while the primary objective of these human development interventions is to directly promote the well-being of individuals, their overall impacts also indirectly affect perceptions of possible alternative lifestyles that are consistent with a small family norm.

Investments in Human Development and Family Planning to Reduce Population Momentum

As demonstrated earlier, population momentum is by far the largest source of future population growth. Population momentum can be reduced somewhat by increasing the length of generations. This involves the raising of the age at first birth (or age at marriage if births occur mainly within marriage) and increased birthspacing.[6] Investments in human development, particularly education and greater employment opportunities for women, have been associated with increasing age at marriage, while a responsive family planning program is needed to make birthspacing effective.

The role of government in providing greater educational and employment opportunities to the youth can be justified on equity grounds. Moreover, the government has a role to play in providing information regarding the potentially adverse impacts of early childbearing. Such investments, while improving well-being directly, have indirect impacts on age at marriage or childbearing, and, therefore, on population momentum.

6. Bongaarts (1994), using simulation based on world population projections up to 2100, showed that a rise in the age at childbearing by 2.5 years and 5 years, respectively, over a 25-year period from 1995 to 2020 would result in a reduction of population momentum from 2.8 billion to 2.2 billion and from 2.8 billion to 1.6 billion, respectively.

Age at marriage for both male and female has been increasing in the Philippines over several decades, reaching 25.5 years for males and 23.2 years for females in 1975, declining somewhat in 1980 to 24.8 for males and 22.4 years for females (Xenos and Gultiano 1992). Preliminary estimates from the 1990 census show that the mean age of marriage for females rose to 23.8 years., while that for males rose to 26.3 years. Based on the experience of some countries in the region that have achieved rapid demographic transition such as Singapore and South Korea, there is still some room for raising the age at marriage for both men and women through the effects of investments in keeping elementary and high school children especially of low-income families in school longer, and in areas that promote nontraditional roles for women, both through the formal education process and ongoing programs of employment and entrepreneurship for women.

V. SUMMARY AND CONCLUSION

This paper analyzed future population growth in terms of the contributions to such growth of unwanted fertility, high desired family size, and population momentum. The analysis was undertaken to help sort out a number of issues confronting Philippine population policymakers particularly that on the role of a government-sponsored family planning program, and to highlight the need for multiple approaches to moderate population growth.

The results of the analysis reveal that by 2020, out of the increase in population from the 1995 level of 37.1 million, 5.8 million will have been due to unwanted fertility, 6.7 million to high desired family size and 24.6 million to population momentum. By 2040, the increase in population over the 1995 population will have reached 57.8 million, of which 9.3 million is attributable to unwanted fertility, 10.9 million to family size preference, and 37.6 million to population momentum.

The analysis suggests the need for distinct policy responses within an overall population policy to deal with the different sources of future population growth. First, with respect to popu-

lation growth resulting from unwanted fertility, efforts are required to assist couples to eliminate unwanted fertility (which still represents 30 percent of total fertility, on the average) and to achieve their fertility goals in ways that are safe, legal, affordable and consistent with their moral convictions and religious beliefs. In the light of Philippine experience, a strengthened government-sponsored family planning program that is responsive to individual needs and that offers high quality family planning and related health services should play a major role in these efforts.

Second, with respect to population growth resulting from high desired family size, that is, wanted fertility that is higher than the replacement fertility (which at present is still one birth higher than the replacement rate, on the average), efforts are needed to modify the fertility preferences of couples towards a small family size norm. Here, a broader set of policies is needed that would create socioeconomic conditions that favor a smaller family size *and* greater human capital investment per child. In the light of recent Philippine conditions, special attention should be focused on child health and survival, child education, and gender equity.

Finally, with respect to growth resulting from population momentum, which by far is the largest source of future population growth, some reduction in momentum could still be achieved by reducing the length of the generation through delayed age at marriage or childbearing and birth spacing. In the light of Philippine experience, greater investments in human development, particularly in basic education and employment opportunities for women, should play a major role in delaying the age at marriage and childbearing. Moreover, a responsive and high quality family planning program could make birth spacing effective.

The distinction between the three sources of future population growth, in particular the distinction between unwanted fertility and wanted fertility, should help clarify issues that in turn could lead to the development of a comprehensive population policy with wide popular and political support. An important issue in the Philippine context is what ought to be the

primary objective of the family planning program. In line with basic principles contained in the Philippine Constitution and the Philippine Population Policy Statement of 1987, the objective of the family planning program should focus on the achievement of family well-being through a reduction of unwanted fertility as defined by the family in the context of responsible parenthood and freedom of conscience, rather than on the reduction of national fertility levels through the reduction of wanted fertility. From this shift in objective, a truly responsive program could evolve with wider support, since the achievement of desired fertility, as with other basic human rights, is more universally accepted than the reduction of population growth rates.

This reformulation of the objectives and primary role of the family planning program is crucial to Philippine population policy development because, unless this is done, together with what is implied in terms of program design, there is a danger that family planning will be left out as a component strategy for directly achieving individual and family well-being. The success of the strategy in indirectly reducing population growth would be considered an additional benefit.

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