Fertility Targets and Policy Options in Asia

by Rodolfo A. Bulatao

In its call for action on population and development, the Third Asian and Pacific Population Conference in Colombo in 1982 recommended setting demographic objectives. The conference urged countries
to review and modify existing targets and goals . . . for reducing birth and death rates so as to attain low levels as early as possible and to attain a replacement level of fertility by the year 2000. (ESCAP 1982:42)

Several Asian countries have in fact set fertility targets for themselves, some of them fairly ambitious ones. This note assesses these demographic goals in the light of World Bank population projections, discusses the underlying rationale for setting fertility targets, and considers what government actions could make them more achievable. The note draws heavily upon the World Bank's 1984 World Development Report, which analyzed the demographic situation in developing countries and its socioeconomic correlates and effects.

Fertility Goals

Of 18 developing countries with demographic targets listed by the World Bank (1984:159), 10 are in Asia. Target crude birth rates have been set by the Philippines (28 by 1987), Pakistan (36 by 1988), Indonesia (22 by 1990), and India (21 by 1996). Indonesia has simultaneously expressed its target as a desired total fertility rate (2.7 by 1990). Total fertility rate targets have also been set by Thailand (2.6 by 1986), the Republic of Korea (2.1 by 1988), and Nepal (2.5 by 2000). In addition, Bangladesh seeks a net reproduction rate of 1 by 2000, as the Colombo conference recommended, and China would like a population of 1.2 billion by 2000.

These targets can be compared with projections for these countries prepared by the World Bank. Such comparisons show how ambitious the targets are. But the comparisons should not be taken as evaluations of the appropriateness of particular targets because they are made without consideration for the specifics of population dynamics and the policy process in each country.

The World Bank projects future fertility rates on the basis of expert judgments about the likely year in which a country will reach replacement fertility. Based on judgments for a few countries, an equation has been estimated to predict the replacement year from current total fertility, the change in total fertility over the previous ten years, the percentage using contraception, and current female life expectancy. This equation is used to assign a replacement year to each developing country. Then a series of total fertility rates is generated to produce a smooth and typically accelerating fertility transition up to this year.

How important is it to achieve rapid fertility declines? The consequences of failure could be quite severe for countries with limited land and other resources.

The World Bank fertility projections therefore essentially depend on the assumption that the future fertility experience of each country will follow the experience of developing countries in the recent past. A further implied assumption is that appropriate measures will be taken to keep fertility on a downward path; in other words, there will be no slowdown, and possibly an increase if appropriate, in activities leading to fertility reduction. Finally, it is assumed that fertility will remain constant once replacement is reached (except for China, where below-replacement fertility was allowed). This assumption is

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Asian and Pacific CENSUS FORUM

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THE ASIAN AND PACIFIC CENSUS FORUM is a quarterly publication of the East-West Population Institute supported by a cooperative agreement between the Institute and the Office of Population, Agency for International Development. The Census Forum reports on census, vital registration, and population survey activities in Asia and the Pacific in an effort to promote the effective collection and use of population data. It is available without charge to government agencies, private institutions, and individuals engaged in the collection of population statistics or in demographic research.

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critical in the long run, but is of limited relevance to the short- and medium-term demographic targets countries have chosen.

Figure 1 compares total fertility rate targets for four countries with the World Bank fertility projections; Figure 2 compares crude birth rate targets for three other countries. Also represented in these figures is an alternative set of fertility projections. These come from asking what would happen if the fertility transition in each country were to follow an accelerated pace. Such a pace might be defined from the experience of developing countries that have undergone particularly rapid fertility transitions. Eleven developing countries with rapid transitions (and good data) experienced a fall in the total fertility rate of about 0.22 points a year; in most cases, the decline was essentially linear. At this pace, a country would take only 17 years for a complete fertility transition from a total fertility rate of 6.0 to a total fertility rate of 2.3 (Bulatao and Elwan, forthcoming).

As the graphs show, most of the demographic targets are considerably more ambitious than the World Bank projections. The desired fertility decline between 1982 and 2000 in Bangladesh, for instance, is about three times the decline that the World Bank projects. In Nepal (which is not included in the graphs) the targeted decline is closer to four times the expected decline. Even for Indonesia the targeted decline is three times the expected decline. The single exception is China, where the World Bank expects that current trends will in fact allow the demographic target to be attained. In all the other cases, achieving the demographic targets would require accelerated fertility declines, as fast as the alternative fertility projections based on previous rapid fertility transitions. Since these rapid fertility decline projections were constructed before government fertility targets were examined, the close match between these projections and the targets is particularly notable.

Economic Urgency

How important is it to achieve such rapid fertility declines? The consequences of failure could in fact be quite severe, especially for those countries with limited land or other exploitable natural resources.

If fertility in Bangladesh, for instance, declines no faster than the World Bank projections, the year 2000 will see a country 15 percent more densely populated than it would be if accelerated fertility decline took place—and almost 70 percent more dense than at present (World Bank 1984:78). Assuming all arable land will be utilized and all Bangladesh farms will have intermediate levels of agricultural technology (a basic package of fertilizers, improved seeds, and simple conservation measures), maximum possible food production would fall short of supporting the population; only 94 percent of the people expected by 2000 could possibly be provided with an adequate diet from local resources. Since Bangladesh will probably have trouble living up to its agricultural potential—in the 1970s, in fact, food production did not keep pace with population growth—the situation by 2000 could be considerably grimmer.

There are many ways to avoid the agricultural dilemma, but none of them provides an easy escape. Agricultural technology
could be improved, but the cost and training required would be considerable. Food could be imported, but nonfood exports would have to increase substantially to generate the foreign exchange needed. These are only partial solutions and will be even less adequate because Bangladesh is not an isolated case. The Food and Agriculture Organisation estimates that, by the year 2000, up to 29 developing countries, many of them still at low levels of agricultural technology, will be unable to feed themselves even with full utilization of all resources and with technology rising to intermediate levels (Higgins et al. 1982).

Other dilemmas produced by rapid population growth may be less visible than a food crisis, but in the long run they will be no less harmful. Rapid growth limits the education successive generations receive and can reduce its quality. If fertility in Bangladesh follows the World Bank projection, the school-age population by 2000 will be 30 percent greater than it would under rapid fertility decline. The working age population, however, would be virtually the same size in the World Bank projection as under rapid fertility decline. Certainly it will entail additional sacrifices for the same number of workers to provide support for, and generate the resources to educate, 30 percent more children.

Even a country like the Republic of Korea, often considered a demographic model, would benefit from continued fertility reduction. Rapid fertility decline would mean that primary school costs by 2000 would be 12 percent below what they would be otherwise. This saving comes on top of the benefits Korea is already enjoying from lower fertility. If fertility had stayed at 1960 levels, children of primary school age in 1980 would have been two million more; the savings from
fertility reduction are estimated to be US$600 million for 1980, or about 1 percent of Korea's gross domestic product (World Bank 1984:86).

Other problems are produced by the historically unprecedented rates of population growth in the developing world, though not by population growth alone. Deforestation, for instance, is a severe problem in many areas, as in the upland areas of Nepal and northern India. The demand for firewood and for new agricultural land are major causes of deforestation, and population growth adds to these pressures on fragile watersheds. Controlling population is only a part of the solution to the problem, however, especially where steep deforested slopes already produce severe floods, erosion, and landslides. Planting trees, terracing farmland, developing village woodlots and fuel wood plantations, and designing more efficient wood stoves—all these steps are also necessary.

If lower fertility will not by itself solve the problem of deforestation, it is clearly only part of the solution to producing satisfactory rates of economic growth as well. Lower fertility cannot substitute for appropriate macroeconomic and sectoral policies—to eliminate discrimination against agriculture, remove barriers to job creation, reduce bias against exports, and so on. Without lower fertility, however, the policy task is complicated considerably, and some long-run options may be permanently foreclosed.

Policy Possibilities
Asian countries have been in the forefront in the development and implementation of policies for controlling population. The World Bank report (1984:156) distinguishes six stages of policy commitment:

1. the collection and publication of reliable demographic data, which is essential for generating political interest and for economic and social planning;
2. enunciation of an official policy to reduce population growth, either by a high official or in a government development plan;
3. development of appropriate institutions, including a planning unit to integrate demographic projections into economic plans and a high-level coordinating body to set population policy and oversee implementation;
4. promotion of family planning, in five steps: government support for private family planning associations, provision of public services, implementation of outreach programs, use of the media to promote family planning and smaller family sizes, and subsidization of commercial sales of contraceptives;
5. incentives and disincentives, including elimination of all implicit and explicit subsidies for childbearing, small-family incentives to individuals and families, and strong disincentives for third and higher-order births;
6. birth quotas requiring individuals to obtain permission for each child.

Only China has gone as far as the sixth stage, implementing birth quotas. The majority of East and Southeast Asian countries are one stage back, having tried some incentives and disincentives. Most of the South Asian countries are slightly farther behind in policy and program development, but nevertheless clearly ahead of most developing countries in Latin America, Africa, and the Middle East.

This progressiveness has translated into family planning successes of varying dimensions. Between 1965 and 1982, total fertility declined 60 percent in China, and about 40 percent in Korea, Thailand, and the Philippines. In Bangladesh, India, Pakistan, and Sri Lanka, total fertility declines for the same period were more modest, falling between 15 and 30 percent. Although the South Asian successes appear more limited, fertility has fallen substantially more than would be expected given the low per capita incomes, which average only US$260 annually in these four countries.

What should be done to maintain and to accelerate these fertility declines, in order to meet demographic targets? Prescriptions for specific countries are beyond the scope of this note, but a few general principles are worth emphasis.

- First, appropriate and equitable development policies are essential to demographic success. A record of economic failure can contaminate other government programs and bury promising demographic trends in dispiritedness and disorganization. On the other hand, successes in raising education levels (especially among women) and in improving child survival make an essential contribution not only to individual welfare but also to fertility declines.

- Second, many weaknesses remain in particular family planning programs. The unmet need for contraception—the proportion of married women wanting no more children but not contracepting—is estimated at 10 to 15 percent in four Southeast Asian countries, and at 17 to 25 percent in four South Asian countries (Boulier, forthcoming). Access to contraception is uneven: in Nepal, for instance, half of married women are unfamiliar with any modern contraceptive method, and in the Philippines regional disparities in contraceptive access are marked. The contraceptive methods available are not always adequate to the demand. South Asian countries have successfully emphasized sterilization but provide little support for reversible methods appropriate for younger, lower-parity women: the only widely available reversible method in India is the condom; injectable contraceptives are popular in rural areas of Sri Lanka, but are available at only 120 centers. Various organizational problems hamper family planning programs in some countries, and reorganization itself has created instability and discontent in some cases. Even the most successful programs must confront problems of this sort.

- Third, each country needs to explore innovative approaches to encouraging smaller families. Incentives and disincentives, both at the individual and community level, are worth considering in some cases, though careful analysis is

(continued on page 8)
Childhood Mortality Estimated from Reports on Previous Births Given by Mothers at the Time of a Maternity: I. Preceding-Births Technique

by William Brass and Sheila Macrae

To simplify means to eliminate the unnecessary so that the necessary may speak.

Hans Hofmann
"Search for the Real"
1967

Registration of births and deaths in less developed countries is either nonexistent or seriously incomplete, with that of deaths being poorer than that of births. In the interim before the situation improves, it is important to utilize to the maximum whatever systems exist, albeit inadequately. The collection of maternity history data at the time of registration of a current birth for the study of childhood mortality would seem to be one such profitable approach. Although El-Badry (1967) and Jain (1965) previously considered the use of such data, they did not fully recognize the inherent problems.

Brass (1969) recognized both the value of the data and the associated problems and conducted the initial studies on which further work by Macrae (1979, 1982) was founded. The present paper is a product of collaboration between Brass and Macrae that has resulted in the development of two techniques—one of which will be presented here—for estimating child mortality from reports on previous births given by mothers when registering a current birth. These techniques are concerned with the limited use of only that part of the maternity history data concerning mortality of recent past births.

Although registration data are continuous and are collected each year, they are not longitudinal data as such. Each year's data form a discrete cross-sectional entity, and the separate years then form a series of discrete observations. Obviously, many of the women will be sampled repeatedly, but there is no means of measuring this.

The nature of any incomplete coverage of birth registration can be biased in several ways, and account has to be taken of such potential biases. It can be assumed that the extent of the coverage of registration increases with time. It seems intuitively inevitable, if only because of the distribution of health personnel and the inaccessibility of some areas, that the majority of births and maternity histories initially reported will be those occurring in hospitals and health centers. Only later will coverage extend beyond such centers into the rural areas. Hence there may be a bias in coverage towards urban areas. There may also be a higher proportion of younger women registering a current birth than reporting one in a census. Likewise, there may be a higher proportion of first births registered than are reported in a census. These two potential biases are probable because younger women are more educated and enlightened and therefore more likely to have their births attended by a recognized nurse than are older women who prefer to have their births at home attended by a relative. However, these potential biases can be monitored and account taken of them.

Analytical Problems of Child Survivorship Data Collected at Birth Registration

The idea that for the estimation of childhood mortality the data can be analyzed as if they came from a sample of women, random with respect to their reproductive state, must immediately be rejected. In such a sample, the density of previous births back from the date of interview changes regularly and slowly from the present levels back to a point in time before the start of reproduction where it is zero—for each age group of women and also for all ages combined. But this situation does not hold for a sample where the women are interviewed at the time of a current birth. The birth immediately prior to the current one cannot have occurred less than nine months ago and is unlikely to have occurred less than one year previously. There is a clustering of the first preceding birth around the mean birth interval. Further back in time, the clustering around two, three, etc., birth intervals will be smoothed because of variations in the reproductive characteristics of the women.

There are also certain unavoidable methodological difficulties inherent in all cross-sectional surveys where the subjects are chosen when a demographic event (e.g., first birth) has occurred. These problems refer to the effects of the intervention of data collection, which excludes those women who have not yet achieved the event under observation. For example, if the women are studied by age group, the younger women have obviously not yet been as exposed to the risk of the event occurring as have the older women. Thus the younger women who are in the sample are a selected group of "rapid movers" biased against the "late starters." In the situation where maternity histories are collected at the time of birth registration, such effects are clearly in operation. In addition, the older women in the sample are the hyper-fertile ones, since those with earlier sterility will be excluded from the sample. This bias is substantial, but the proportion of current births in the group is small.

Even within a cohort, there is bias towards the more fecund women who, having experienced certain events at a younger age, move on to the next event more quickly than the less fecund women in the same cohort. Although in this sample the intervention is actually the event of a birth, these problems
still apply and have to be remembered when comparisons are made between age groups. This particular sample presents even more acute problems because of the nature of its selection by the occurrence of a birth. The women are all of proven fertility and therefore are not comparable with an unconditional sample of all women.

The Preceding-Births Technique

An innovative approach, originally considered by Brass (1969), can be made using data collected on preceding births. For the application of this method in its simplest form, the only question to be put to a mother is whether the child from the birth immediately preceding the current birth is alive or dead. (If this question is supplemented by one concerning the length of this birth interval, the possibilities for increased precision and control are extended.) These data afford an opportunity of determining indices of the most recent childhood mortality using a totally different approach independent of the age of the mother reporting on the survivorship of previous children. Special tabulations are produced of the proportions of children dead among the immediately preceding births for all ages of women. These tabulations by first preceding births rather than by the conventional birth order (e.g., first birth) give births in an approximately equivalent time period (though there is likely to be some variation with parity), since women are entering the survey at the time of a current birth and the distribution of the immediately preceding births is fairly narrow around the mean birth interval.

Since none of the preceding births has occurred in the past nine months and few within a year, the high mortality risks of the earliest part of life have been experienced by all. The varying intervals are then over a range where the rates of change in proportion dead are small compared with the level. Consequently the effects of different distributions of the birth intervals on the survivorship of the children will be modest.

The proportion of the preceding births that have died, II, will be a consistent index of child mortality over populations. To a first crude approximation it may be taken as \( q(I) \), the probability of death by the age equal to the mean birth interval, \( I \). However, death rates fall increasingly slowly with age between the second and fifth years of life, the critical period. The effect of this is to make the proportions dead equal to \( q(I^*) \) where \( I^* \) is somewhat less than \( I \). Since birth interval distributions and mortality patterns are quite similar in different populations, it is possible to deduce that taking \( I^* \) as \( aI \), where \( a \) is a constant fraction, will give an accurate relation of \( q \) to the proportions dead.

To determine \( a \), calculations have been made from several model birth distributions in conjunction with the Brass General and African standard mortality schedules. The models are all based on empirical data with varying adjustments to allow for limitations such as truncation, amalgamated categories, and sample fluctuations. None of these is of any significance for the broad features of the distributions that matter for the present purpose. The distributions are shown in table 1.

The model calculations of the proportions of preceding births dead, II, are given in table 2. Also shown are the \( q(2) \) measures of the standard mortality schedules, which were used in the calculations with all the birth models. Inspection of the \( \Pi \) suggests that \( \alpha \) of about 4/5 is satisfactory for determining the adjusted interval \( I^* \) to which the proportions surviving can be most closely related. The corresponding \( q(0.8I) \) are, therefore, also given in the table.

### Table 1. Model Distributions of Intervals Between Live Births (per thousand)

<table>
<thead>
<tr>
<th>Interval in years</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
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<tr>
<td>&lt;1</td>
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<td>15</td>
<td>16</td>
<td>16</td>
<td>80</td>
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<tr>
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Mean \( \Pi \) = 2.24, 2.73, 3.83, 3.79, 2.72, 3.40

A. Constructed from life table analysis of birth intervals reported in World Fertility Survey of Colombia.

B and C. From durations of time to the last birth reported at 1978 birth registrations in Italy with interpolation at published grouped higher durations; C—all births, B—high birth orders.

D. From durations of time to the last birth reported at 1977 birth registrations in USA, with interpolation at over six years.

E and F. Mathematical models developed by Brass and Farahani for fitting England and Wales statistics of births by order and marriage duration.

### Table 2. Proportion Dead (per 10,000 preceding births)

<table>
<thead>
<tr>
<th>Model Mortality Schedule</th>
<th>General Standard</th>
<th>African Standard</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>( q(0.8I) )</td>
<td>( q(2) )</td>
</tr>
<tr>
<td>Model</td>
<td>( \Pi )</td>
<td>( \Pi )</td>
</tr>
<tr>
<td>A</td>
<td>2.24</td>
<td>1,885</td>
</tr>
<tr>
<td>B</td>
<td>2.73</td>
<td>1,975</td>
</tr>
<tr>
<td>C</td>
<td>3.83</td>
<td>2,093</td>
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<tr>
<td>E</td>
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<td>1,942</td>
</tr>
<tr>
<td>F</td>
<td>3.40</td>
<td>2,016</td>
</tr>
</tbody>
</table>

**NOTE:** The results in the table represent a hypothetical population with alternative specifications of mortality distributions and preceding birth intervals (the latter taken from table 1). The observed \( \Pi \) were calculated by applying each of the specified model life tables to each of the model birth interval distributions from table 1. When this was done, it was found that \( \Pi > q(I) \) (for the reason why this was to be expected, see text). Visual inspection revealed that \( \Pi \uparrow q(0.8I) \), and the results in the table indicate also that \( q(0.8I) > q(2) \). Thus the table yields the simple result, \( \Pi > q(2) \), which appears to be quite robust to variations in both mortality patterns and birth interval distributions.
as close as could be wished for practical applications. The model F where the divergence is greatest (3 percent) is probably outside the range of patterns encountered in less developed countries.

In many noncontracepting populations the mean birth interval $I$ is around 2.5 years (30 months), giving an $I^*$ of two years. This is the mean obtained by putting together the average natural fertility components of the birth interval (length of pregnancy, delay to conception, contribution from fetal wastage, and postpartum infertility of 10–11 months). Some populations in this category have intervals a few months shorter mainly through reduced lengths of amenorrhea; in others there may be extensions of six months or more because of various combinations of increased postpartum infertility and abstinence. Over the whole of this range, however, it appears that $I^*$ can be taken as $q(2)$ for operational purposes.

This is an attractive result since $q(2)$ is the single best index of early childhood mortality; it is much more robust against pattern variations and reporting errors than the infant death rate. In the earlier stages of the adoption of family limitation, the changes in the mean birth interval are generally small and the movement may be either up or down. It is only in low fertility populations that $I^*$ may differ so considerably from 2 years that $I$ will need to be estimated. Clearly a rough value will be sufficient.

A further important property of the preceding-births method is the inclusion of mothers of all ages and births of all orders in the data from which the proportions dead are found. In the established unconditional sample procedure the estimates of childhood mortality are usually based on reports of younger women about births of lower order since these are the most recent. There is some degree of selection with the preceding births since there can never be a record for the final child born to a mother, but it seems unlikely that this will be a serious source of bias in populations of moderate to high fertility.

If information on the total births to each woman is collected it is possible to examine mortality by birth order since this can be specified for the child preceding the notified one. However, birth interval distributions vary with order; it would be necessary to estimate $I$ by parity of women. In addition the selection bias from omission of final births mentioned above might significantly distort differentials. The extreme simplicity of the method, which is its strongest attraction, disappears.

The preceding-births technique was applied to data collected in the Solomon Islands' birth notification scheme. The general title “notification” was used for this scheme as it differed from the more usual birth registration system. Not only were the few women who reported their current births to a registrar asked about their previous births but the nurses and midwives attending the delivery of the current birth were also asked to complete the same special questionnaire concerning the mother's previous birth history. Hence the data were collected by the field health personnel in the course of their normal duties as well as by the registrar. Appropriate tabulations were prepared and the resultant values of proportions of preceding births dead were directly acceptable as values of $q(2)$ (table 3).

The illustration is particularly appropriate since it demonstrates the use of the method for monitoring the trends of childhood mortality over time from a continuous recording system. Even if the specification of $I^*$ as two years was not correct, changes in the birth interval distribution could hardly have introduced appreciable distortions in the comparisons over years. Any such effects are clearly negligible in relation to the substantial mortality falls shown.

**Conclusion**

This paper has demonstrated that, by capitalizing on the unusual nature of maternity history data collected at the time of registration or notification of a birth, acceptable childhood mortality indices can be derived. The preceding-births technique is particularly simple since it requires only one question on the birth registration or notification form ("Is your last-born child still alive?") no complex analysis, and no dependence on other data sources or model life tables.

The addition to a birth registration or notification form of one or a few questions does not add a great burden to the field personnel (registrars, midwives, nurses) completing the forms. This is an important factor in gaining the cooperation of these personnel for the completion and subsequent transmission of these forms to, for example, a central bureau of statistics. The scheme is extremely simple and inexpensive, involving no special survey—the questionnaire is completed during routine work and visits and so is readily incorporated into an existing work program. All stages of data collection, processing, and analysis are straightforward, can be understood by local personnel, and can therefore be completed within the developing country itself. Some selection bias is likely since the births notified may be to women who are better educated or otherwise socially advantaged, but this bias will usually change slowly over time. This method of data collection is recommended particularly for monitoring trends and evaluating intervention; its potential should not be underestimated, and the appropriate question or questions should be added to birth registration or notification forms. In the interim before full registration exists in less developed countries it is a valuable and viable means of estimating childhood mortality.

(References on next page)
REFERENCES

FERTILITY TARGETS (continued from page 4)
necessary of their costs and benefits and the welfare impact they may have on poor families. New approaches will undoubtedly be devised in the future, and some effort will be required to adopt each approach to different target groups.
As far as birth quotas are concerned, they probably remain a specialized measure of use only in unusual circumstances: whereas China has shown some success, attempts to introduce similarly strong measures in India produced a negative reaction. If only for political reasons, birth rationing is not likely to spread in the near future.

International debt, political instability, and ethnic divisiveness will not be swept away by fertility reduction, but neither will they avoid complication should fertility remain high.

• Fourth, implicit in the previous points is the idea that the political commitment to population control must remain firm. Some countries are increasingly distracted by diverse problems, like international debt, political instability, and ethnic divisiveness. None of these problems will be swept away by fertility reduction, but none of them will avoid complication should fertility remain high.

Rapid fertility decline will also require financial commitments. The World Bank estimates that population program expenditures in South Asia in 1980 were about US$315 million. By 2000, in order to produce rapid decline, this amount would have to rise to US$1,873 million annually (in constant dollars). In East and Southeast Asia, annual program expenditures should roughly double in the same 20-year span. Although these required increases may seem large, per capita population expenditures would still be under US$1.50. The amount currently spent on population is less than 1 percent of government budgets, and the potential savings from fertility reduction could make up for much of the required increases. Willingness to spend the amounts necessary, and the capacity to spend them well, will determine whether the countries of Asia enter the next century in control of their populations, and therefore of their own future.

REFERENCES

SHORT NOTES
Improved health care results in fewer child deaths in developing countries. But when more children survive, what happens to a country's population growth rate? It declines, according to UNICEF's *The State of the World's Children 1984.* "At first sight, it would seem paradoxical that the rate of population growth should fall when the rate of child survival has been drastically improved." Nevertheless, the report states, "Child survival tends to reduce birth rates in three separate ways.
"First, child survival usually means that the mother continues breastfeeding. As is now well established, breastfeeding is a natural contraceptive.
"Secondly, improved child survival means that the parents can more confidently give birth to only the number of children they actually want—rather than having extra children to compensate for the fact that one or two or more of their children might die.
"A third mechanism by which an increase in survival can lead to a decrease in births is... if... progress... has helped to create a greater sense of mastery over one's own destiny—a sense that decisions can be taken, circumstances changed, and lives improved—then the idea of family spacing is likely to be welcomed as another opportunity to take more control over one's life." [International Dateline]

One participant's summary of the proceedings of the International Population Conference held in Mexico City in August: "The South hopes the North will succeed economically so that the North will continue to provide assistance. The North hopes the South will succeed to pay back the debts they owe." [International Demographics]
JAPAN

Japan has broken Sweden's record for the lowest infant mortality rate in the world. In 1983 the infant mortality rate in Japan reached 6.2 deaths per thousand births. This represents a 0.4 per thousand drop from that of the previous year, according to the Vital Statistics Survey for 1983 conducted by the Ministry of Health and Welfare.

Japan's birth rate is also decreasing. A total of 1.51 million births were recorded in 1983, which is 12.7 births per 1,000 population. There were 5,000 fewer births, representing a 0.3 per thousand decrease, compared with 1982. [Asian-Pacific Population Programme News]

MALAYSIA

With the formulation of a new population policy calling for a larger population, the ultimate population of Malaysia is expected to reach 70 million. Once the 70 million target is incorporated into a long-term economic plan, planners will for the first time be able to evolve a long-term plan based on a specific and explicit target population size. New strategies therefore will have to be formulated, which will include the following:

1. the plan to reduce infant and maternal mortality levels;
2. recognizing the necessity of ensuring that all couples are able to achieve their desired number and spacing of children;
3. the full integration of women into the development process;
4. the protection of the family as the basic unit of society.

Under the long-term plan to achieve a population of 70 million, a closer monitoring of population growth will have to be instituted so that population growth will be in consonance with socioeconomic development. If development is allowed to proceed without properly monitored population planning, changes in social values and attitudes towards family size will result in a too rapid fertility decline, which will eventually result in the aging of the population with such consequences for development efforts as labor force shortages. [NFPB, Malaysia, reported in Asia-Pacific Population Programme News]

A recent survey in Malaysia indicated that squatters now comprise about one-third of Kuala Lumpur's population. In fact, squatter settlements in the city have increased dramatically in the last 10 years. There were only about 26,000 squatter households in Kuala Lumpur in 1967–68, according to a city hall official who was interviewed by Depthnews Radio. Ten years later, the number increased to 48,700 households, comprising about 250,000 people located in 140 urban villages.

A recent Kuala Lumpur count, however, showed that there were 200 squatter settlements in the city, or more than 350,000 people—one-third of Kuala Lumpur’s population. One big problem in this connection, said the official, is the fact that most of the squatters prefer to remain squatters instead of settling down in low-cost flats or longhouses.

Under the third Malaysian plan, the public sector constructed 26,250 low-cost housing units. The target figure was 56,800 units. In the fourth plan period (1981–85), a total of 176,500 low-cost houses are targeted to be built by the public sector. [Depthnews Radio reported in Population Headliners]

PHILIPPINES

The government of the Philippines seeks to bring down the country’s population growth to 2 percent by 1987, a level considered conducive to national welfare, according to studies released by the Commission on Population (POPCOM).

The POPCOM statistics also revealed the following:

- The country’s population growth rate declined from 3.01 percent in the 1960–70 period to about 2.66 percent in 1983.
- The average number of children born to women aged 15–49 went down from 6.3 in 1965 to 4.5 in 1982.
- The average age of marriage at present is 24 compared with 22 in the 1960–70 period.
- In 1968 only 16 percent of married women used contraceptives. The number increased to 41 percent in 1980 and is expected to reach 64 percent in 1992.

Filipinos' level of knowledge of family planning is very high—94 percent. More and more couples also tend to favor a small family.

To insure the continued success of the program, POPCOM has intensified its delivery of family planning services and supplies to the rural areas; its training and research activities; and its information, education, and communication activities.

Service delivery is carried out mostly through POPCOM’s network of clinics and the outreach or community-based network structure. Under the outreach project, which POPCOM undertakes jointly with local governments, a total of 3,264 outreach personnel have been deployed to bring population and family planning messages and services to the people, especially those in remote villages. They are supported by 51,864 volunteer barangay service point officers. [Perla B. Sanchez in Asian-Pacific Population Programme News]

THAILAND

Thailand's family planning program has surpassed all expectations and is the most successful in the world according to officials engaged in the program. At a press conference on 29 October they announced that the national population growth rate had declined from 3.3 percent in 1970 when the program was initiated to 1.6 percent at present.

The officials were confident that by the end of the current Five-Year Development Plan in 1986, the rate would drop to 1.5 percent, and at the end of the next plan in 1991 would be 1.1 percent.

The speakers were Deputy Public Health Minister Therdpong Chaiyanand, Health Department Director-General Pirote Ningsanonda, and Population and Community Development Association Secretary-General Mechai Veersaydya.
Pirote said new entrants to the family planning program had soared from 200,000 a year in its early days to well over one million a year since 1979. Some four million couples use contraception and the birth rate is 21 per thousand. The family unit in 1981 averaged 3.9 children against 6.3 over a decade ago.

Mechai, who attributed the success to “good planning, hard work and continuous cooperation between numerous concerned groups,” said population growth remained Thailand’s most important development problem. “At current growth rates, Thailand’s population will reach 74 million by the year 2000,” he said. “However, if we can lower the growth rate to 1 percent a year by 1990, then Thailand’s population in the year 2000 will be only 66 million.” [Bangkok Post reported in Population Headliners]

INDIA

The Indian Association for the Study of Population (IASP) organized a symposium on Tribal Demography and Development at Bhopal, from 10 to 12 October. The seminar was attended by many participants representing governmental organizations and voluntary agencies. The focus of the seminar was the socioeconomic and demographic situation of the tribal population living in the four states Rajasthan, Gujarat, Maharashtra, and Madhya Pradesh. These four states account for 52 percent of India’s total tribal population. The discussions included such items as demographic, development, and regional perspectives; nutrition and family planning; and education and culture.

During the discussions, Professor Ashish Bosh, president of IASP, stressed the need for innovation in the management of the tribal development program and a more dynamic approach to tribal development. The symposium is expected to create a meaningful understanding of the status and needs of the tribal population and to further help the formulation of strategic development plans for them. [D. N. Saksena in Population Headliners]

CANADA

By an act of Parliament, Canada has established the Asia Pacific Foundation of Canada. Speaking to the inaugural meeting of the board of directors on 18 July, John Bruk, the Foundation’s first chairman, said, “I am pleased that the special act of Parliament to establish the Foundation was supported by all three parties and that encouragement to establish the Foundation has come from all provinces. This will indicate to our neighbors in the Asia-Pacific region that Canada is united in the task of taking her role as a Pacific nation seriously, and that we are moving with determination to ensure that Canadians become as familiar with the Pacific community as we are with the Atlantic one.”

In speaking to the board, Bruk noted that “The Foundation will be a unique institution in Canada dealing with cultural, academic, and commercial relationships between Canada and the countries of the Asia-Pacific region. It will join a very short list of institutions that have been incorporated by a special act of Parliament and, to the best of my knowledge, it is the first to provide for participation by the federal government, the provinces, and the private sector including labor, academia, as well as the cultural and corporate communities. It will be a truly national organization and is unique in that it is completely independent of any government.”

The need for the Foundation was underscored by recent trade statistics. “We are now exporting more Canadian goods across the Pacific Ocean than across the Atlantic,” said Bruk. Canada’s two-way trade with the Asia-Pacific region has passed $17 billion per year and the region is now second only to the United States in terms of significance to Canadian trade. From 1981 to 1982, Canadian exports to Asia climbed from $7.4 billion to $8.1 billion, an increase of 7.9 percent. In 1983, they climbed a further 7.0 percent to $8.6 billion.

The first priority of the board of directors will be the staffing of the Foundation’s offices, which will be located in Vancouver. “It is my hope that the staff for the Foundation can be in place by the end of the year and that programs will be underway early in 1985,” Bruk said. The Foundation’s funding will come from the federal government, the provincial and territorial governments, and from the private sector. [Asia Pacific Foundation press release]

UNITED STATES

Estimates of state populations in 1983 show that the West continued to be the fastest growing region. In fact, Texas has been receiving one-fifth of the nation’s population growth. There were 1.5 million more Texans on 1 July 1983 than there were 1 April 1980. This represented 20 percent of the national gain for the period, and increased Texas’s population by 10.5 percent. California added as many people, but that only represented a 6.4 percent growth for the state. Florida’s population grew 9.6 percent (0.9 million). Together, California, Florida, and Texas gained 3.9 million people—53 percent of the national gain.

These new figures come from Estimates of the Population of States: July 1, 1981 to 1983 (Advance Report) (Series P-25, No. 944, U.S. Census Bureau). They indicate that Alaska is now the fastest growing state, up 19.2 percent since 1980. Last year Nevada was the fastest growing state, this year it is second—its population has grown 11.3 percent since 1980. The East North Central division (Indiana, Illinois, Michigan, Ohio, Wisconsin) was the only division that lost population between 1980 and 1983, down 0.4 percent. This division’s decline may be slowing: between July 1981 and July 1982 it lost a net of 118,000 people, while between July 1982 and July 1983 it lost a net of only 51,000 people.

Four states in the greater North Central region lost population since 1980: Indiana, Michigan, Ohio, and, from the West North Central division, Iowa. Michigan, the biggest loser, was down 2.1 percent.

The North Central region as a whole only grew 0.1 percent between 1980 and 1983, posting the slowest growth overall. The Northeast region grew 0.8 percent. Every state in the Northeast and North Central regions grew at a rate slower than the 3.3 percent national growth rate with the exception of

(continued on page 12)
PUBLICATIONS THAT COUNT

by Alice D. Harris


Political scientists have generally made use of demographic variables such as age, sex, migration patterns, and mortality to explain certain kinds of political behavior. However, up until now they have left demographic analysis to the demographers. This volume breaks that tradition; its authors—three political scientists and one population specialist—use politics to explain changes in fertility and mortality. They pose this question: "What effect do the processes that have come to be known as ‘political development’ have on birthrates and deathrates in national populations?" (p. xi) Organski et al. feel that people are unaware of the link between the growing power of a government and the reproductive behavior of its population. They have set out to prove the connection between governmental power and fertility and in the process have constructed an index for measuring political development. They explain how this index was devised and then apply it to a number of national governments for a time span of 20 years. They conclude that the larger the scale of government, the lower the rate of childbearing and the rate of mortality. China is the example they use to show that fertility can be lowered without the other elements of modernization being present, but with a strong government policy of population control.

The first chapter describes the now-familiar concept of the demographic transition, and later criticisms of the model, but notes the lack of a political component to complement the social and economic changes that accompany modernization. In chapter 2, Organski et al. explain how state-making and the expansion of the political system might affect vital rates. They also describe the forces that push for development of the political system and present the theory behind their methodology for measuring state growth. Chapter 3 details how their model was made operational, and chapter 4 explains the testing of their hypotheses. The concluding section reviews the authors’ work and raises other questions, among them the impact of this research for governmental population policy. If nations can make their political systems truly effective, they can bring down birthrates and buy time to start economic growth. If they cannot, the authors state, they may never have a chance to rise above the lowest rung of the international ladder.

This is a provocative little book for demographers, economists, and political scientists alike. Readers may not agree with its thesis but should be aware of what the authors have stated. It is available in a hardcover and a paperback edition from The University of Chicago Press, Chicago, Illinois 60637, U.S.A.


This report presents the results of an application of the own-children method of fertility estimation to the 1981 census of Sri Lanka. It is the result of collaborative research and analysis done by Kanthi Ratnayake of the Department of Geography, Ruhuna University, Maharaj; Robert D. Retherford, East-West Population Institute; and S. Sivsubramaniam, Sri Lanka Department of Census and Statistics. Financial support for the research was provided by East-West Population Institute, East-West Center; the U.S. Agency for International Development, and the Department of Census and Statistics in Colombo. Printing was made possible by financial support provided by UNFPA through its deputy representative in Sri Lanka, Dr. Dan D. Vanderportaele.

Ratnayake and her associates present findings on fertility trends and levels by districts and zones in Sri Lanka. They used several related measures for their analysis, including total fertility rates and age-specific birth rates for both all women and currently married women; singulate mean age at marriage and age-specific proportions currently married, as well as the Coulé-Trussel m index of marital fertility control.

Their findings indicate that the fertility transition is well underway in Sri Lanka and is most advanced among women who are urbanized and educated. Ethnicity and religion have significant effects on fertility that appear to be independent (for the most part) from socioeconomic factors. The Indian Tamils living on estates show increased fertility over the period, and this is attributed to a shorter span of breastfeeding. Other variations in fertility levels by geographic subdivisions and socioeconomic characteristics are not touched on due to the general nature of the report.

Anyone interested in obtaining a copy of the report should write to East-West Center, Publication Orders, 1777 East-West Road, Honolulu, HI 96848, U.S.A.


This volume contains the papers from an IUSSP meeting held in the Genting Highlands, Malaysia, in December 1981. It was the second of two seminars organized by the IUSSP Committee for the Analysis of Family Planning Programs. The first, held in Bogota with the collaboration of the Corporacion Centro Regional de Poblacion, culminated in the book, *The
Role of Surveys in Family Planning (Liège: Ordina Editions, 1982). The success of the first meeting as well as questions left unanswered there led to the seminar in Malaysia. Sponsors with the IUSSP on this occasion were the National Family Planning Board of Malaysia and the World Fertility Survey. While the earlier seminar concerned itself with surveys on a more general basis, the Genting Highlands meeting focused on the analysis of data contained in the WFS modules and on substantive and methodological issues of data analysis. Another topic of discussion was the utilization of survey results for program policy and administration.

The present volume, Survey Analysis for the Guidance of Family Planning Programs, covers five topics in the field of family planning. The first is the problem of demand, or unmet need for services. This topic is approached both by a cross-sectional analysis by Westoff and Pebley and a time model to measure demand by Nortman and Lewis. The second topic is the use of WFS data for policy development and program planning. Authors Koo, Bhat, and Rahardjo et al. discuss how Korea, India, and Indonesia have used this data to make programs more effective. Reasons for the use or nonuse of contraception are covered in another section of the volume. Entwistle et al. have developed a regression model to handle information from different sources; they found that personal factors often affect contraceptive use. Johnson-Acsadi and Szykmman used WFS data from eight countries to examine the discrepant behavior of women who fail to use contraception while claiming to want no more children. Unfortunately—as their analysis proved—this kind of behavior is not easily explained. Pullum et al. encountered similar problems when trying to get at solutions for nonuse of contraception in the Philippines.

The fourth topic is the availability of family planning services. Survey data from Thailand and Malaysia are explored by Chamratrithrong and Kamnuansilpa and Noor Laili et al. Their findings indicated that the number of service outlets is important, but so are motivational factors. In the concluding section the topic of privacy during home interviews is analyzed by Casterline and Chidambaram for 24 WFS country surveys. They conclude that the presence of additional persons during the interview is probably not significant, and that it is best to leave well enough alone particularly in rural societies where insistence on privacy would lead to noncooperation.

What major developments have emerged from the two IUSSP volumes? There have been more cross-national analyses; more repeat surveys in given countries to reveal changes in the use of contraceptives; more efforts to determine source of contraceptives through questionnaires; more use of survey data to assess respondents' access to contraceptives; a shift from using acceptance and continuation rates to more direct estimation of contraceptive prevalence; greater attention to methodology and error sources; more theoretical development; the confirmation of earlier survey results; and finally, a growing specialization of focus in surveys. While surveys are costly, the family planning programs themselves are far more expensive to operate, and they depend upon good survey analysis for guidance and direction.

Both Survey Analysis for the Guidance of Family Planning Programs and its predecessor, The Role of Surveys in Family Planning, are important additions to any demographic library. They can be purchased through your local bookstore, or by writing: Ordina Editions, 10 place Saint Jacques, B-4000, Liège, Belgium.


Greenwood Press is in the process of publishing a series of monographs under the general editorship of Pradip K. Ghosh on international development and the Third World. The series, International Development Resource Books, is intended to give readers "a comprehensive look at the current issues, methods, strategies and policies, statistical information and comprehensive resource bibliographies, and a directory of information sources on the topic." (Preface, p. xxvii) Twenty volumes are to be released including such titles as Urban Development and the Third World; Health, Food and Nutrition; Development Policy and Planning; Multi-national Corporations; Third World Development: A Basic Needs Approach; as well as regional monographs on Asia, Africa, and Latin America.

Population, Environment and Resources describes the interrelationships among resources, the environment, population growth, and Third World development and the progress made in formulating policies in this area. Its format is similar to other books in the series: there are several chapters by population and environmental experts on current issues, trends, methods, policies, and country studies. Among the authors of these chapters are Leon Tabah, Moni Nag, Julian Conde, Geoffrey McNicoll, Ghazi M. Farooq, Nancy Birdsell, Paul Demeny, and Tomas Frejka. The substantive chapters are followed by a statistical section on population growth and social and economic data and a resource bibliography that covers the literature since 1970 and includes books, periodical literature, and special reports. A directory of information sources, a bibliography of bibliographies on population and the environment, and a list of periodicals and research institutions are also included.

The book should be useful to policymakers in the development field as well as to the general reader interested in how developing countries are solving the population, resource, and environment situations facing them. Unfortunately the titles in the International Development Resource series are not inexpensive. This means that they will be beyond the budgets of many demographic libraries in the Third World. However, those able to pay for the book will find it a valuable addition to their collections.

**ENUMERATIONS (continued from page 10)**

New Hampshire, where population was up 4.1 percent since 1980.

The District of Columbia is the only Southern or Western state to lose population since 1980; it lost 15,000 people over the three-year period. Oregon, while not showing a net loss for the three-year period, lost population each year since 1981; it lost 7,000 people between 1981 and 1983. [The Numbers News]