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Population Policy in Transition in the Developing World

John Bongaarts^{1*} and Steven Sinding²

Population growth remains rapid in the poorest countries, particularly in sub-Saharan Africa, despite substantial AIDS mortality. Voluntary family-planning programs reduce unplanned pregnancies by providing access to and information about contraception and by reducing socioeconomic obstacles to use. With sufficient political will and resources, well-run voluntary programs have been shown to bring about sustained declines in fertility and population growth across much of Asia, the Middle East, and Latin America, simply by permitting people to realize their individual reproductive goals. Such programs represent a cost-effective approach to relieving population pressures, stimulating economic development, improving health, and enhancing human freedom.

After more than a decade of relative neglect, population growth and its adverse environmental, social, economic, and political effects in the developing world are returning to the global policy agenda. Expressions of concern have resurfaced in recently increased United States- and United Kingdom-government budgets for international reproductive health and family-planning assistance (1, 2), in major publications (3-8), in a report from the U.S.-based Council on Foreign Relations (9), and in conclusions of international conferences (10) and meetings of heads of state of the African Union (11). Recent media attention has focused on the day—later this year—when the world's population is expected to reach 7 billion and on the unexpected upward revision of United Nations (UN) projections for the world population, from 9 billion up to 10 billion in 2100 (12). This revision is largely due to changed assumptions about future fertility that have been subject to debate.

Countries have different types of population-relevant policies (e.g., to address migration, aging, or family welfare). We focus on family planning in the developing world because it has been the main approach used to address rapid population growth, high fertility, and unintended childbearing (13). The relative neglect of family-planning policy in the 1990s and early 2000s had several causes, including premature claims of an end to the population "explosion," shifting attention from population growth to the AIDS epidemic and a consequent reallocation of resources, and growing conservative religious and political opposition. International funding support for family planning programs declined by 30% between 1995 and 2008 (14).

There are several reasons for the renewed interest in family-planning and reproductive-health programs:

- The recent rise in food and energy prices and increasingly solid evidence of global warming

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antibiotics) rapidly reduced death rates while birth rates remained high. This was the main reason the world population expanded from 2.5 to 7 billion between 1950 and 2011 (12). As this population explosion got under way during the 1950s and 1960s, national and international policy-makers became concerned about the threat to the well-being of mostly poor societies. Many governments in the developing world—with substantial international assistance—implemented voluntary family-planning programs to provide information about, and access to, contraceptives. This permitted women and men to control their reproductive lives and to avoid unwanted childbearing. Only in rare cases has coercion been used, most notably in the one-child policy in China and during the brief emergency period in India in 1976-77.

Throughout the past half-century, the choice of voluntary family-planning programs as the main population policy instrument rested on a substantial level of unwanted childbearing caused by an unsatisfied demand for contraception (20). Each year about 184 million pregnancies occur in the developing world, and 40% of these (74 million) are unintended because they occur when women want to avoid or delay pregnancy (21). These unintended pregnancies end in abortions (48%), unintended births (40%), or miscarriages (12%), with detrimental health and economic effects for many women and their families (Fig. 1).

Among the reasons for the unmet need for contraception are a lack of knowledge about the existence and availability of contraception, insufficient contraceptive supplies and services, the cost of contraception, an exaggerated fear of side effects, and opposition from spouses and other family members (20). To be successful in reducing unintended pregnancies and birth rates, family-planning programs must go beyond simply providing narrowly defined physical access to supplies and services and reduce or eliminate these other obstacles as well (22).

Persuasive evidence that unmet need is substantial and that family-planning programs can reduce it comes from successful family-planning programs of many countries over the past 40 years. But decisive evidence can also be found in actual field experiments, such as those undertaken in the Matlab district of Bangladesh. In 1977, the study divided Matlab's population of 173,000 into roughly equal experimental and control areas. The control area received the same very limited family-planning services as the rest of the country, whereas in the experimental area, high-quality family-planning services were provided aimed at reducing the broad range of costs of adopting contraception (monetary, social, psychological, and health). The intervention provided free services and supplies of a range of

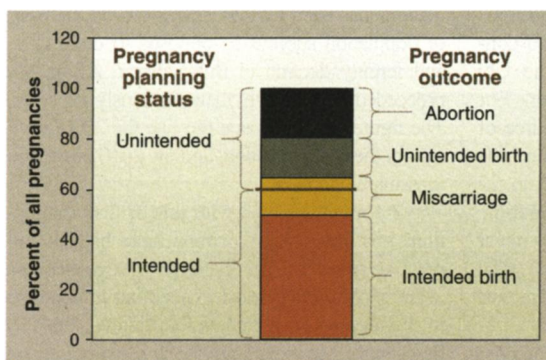


Fig. 1. Planning status and outcome of all pregnancies in the developing world, 2008. Data from (21).

signal pressures on the environment from growing human populations and consumption (15). Although some per capita impacts, e.g., CO₂ emissions, are much worse in high- than in low-income countries, there is little doubt that slower population growth makes it easier to deal with a range of environmental issues. Rapidly rising living standards mean that demographic giants China and India are contributing at accelerating rates.

- Continued rapid population growth in the poorest countries is hampering their development (12, 16). Economists, once notably skeptical, increasingly acknowledge that fertility decline has beneficial economic effects for nations and families (17).

- High fertility leads to a young population that competes for often scarce and low-paying jobs and contributes to political instability (18).

- Sub-Saharan Africa is the most rapidly growing region of the world, despite the AIDS epidemic (12). This was not expected in the 1990s and is in part due to the global effort to treat AIDS patients. Fertility in this region is also declining at a slower than expected pace. (19)

Family Planning Programs: Rationale and Impact

Population growth in Asia, Latin America, and Africa accelerated sharply after 1950 as the spread of medical technology (e.g., immunization and

methods (pills, condoms, injectables, intrauterine devices, and sterilization), home visits by educated and well-trained female family-planning workers, regular follow-up to address any health issues, comprehensive multimedia communication, and menstrual regulation services (a simple medical procedure that extracts the uterine contents shortly after a missed menstrual period). Outreach to husbands, village leaders, and religious leaders addressed potential social and familial objections from men (23).

The impact of the new services was large and immediate. Contraceptive use jumped from 5 to 33% among women in the experimental area. As a result, fertility declined more rapidly in the experimental than in the control area and a difference of about 1.5 births per woman was maintained through the 1980s until the services in the rest of the country were also improved. The Matlab experiment demonstrated that family-planning programs can succeed even in highly traditional societies.

It is instructive to compare Bangladesh and Pakistan, which were one country from 1947 until Bangladesh became independent after the civil war in 1971. These two populations have similar cultures and levels of social and economic development. However, the countries have differed in their commitment to family planning, beginning a few years after Bangladesh achieved independence. Pakistan's program was weak and ineffective and lacked government funds and commitment. In contrast, Bangladesh implemented one of the world's most effective voluntary family-planning programs, after the success of the Matlab experiment became well established.

A unique feature of the Bangladesh program is its cadre of literate female workers who counsel women and distribute supplies at the doorstep, overcoming barriers posed by Purdah customs which restrict women's movement outside the home (24). In addition, messages from an intensive information and education program on radio and television emphasized benefits of smaller families and contraception (25). Bangladesh substantially increased contraceptive availability by launching a national "social-marketing" system of small retail outlets for pills and condoms. In 1975–80, the two countries had nearly the same high fertility of 6.8 births per woman, but trends diverged in subsequent decades. By the late 1990s, Bangladesh's fertility had declined to 3.3 births per woman, while in Pakistan, fertility stood at 5.0, a difference of 1.7 births per woman.

Similar results hold for other comparisons of country pairs: Kenya and Uganda, Indonesia and the Philippines, and Iran and Jordan (26). Fertility declined to substantially lower levels in countries with strong programs (Kenya, Indonesia, and Iran) than in corresponding weak program countries (Uganda, Philippines, and Jordan). These findings from both controlled and natural experiments support the conclusion that a well-organized family-planning program can reduce fertility by about 1.0 to 1.5 births per woman.

Any program-induced fertility decline changes the future trajectory of population growth. This impact can be large, as demonstrated by a comparison of alternative UN population projections for sub-Saharan Africa (12). According to the standard (medium variant) projection the population of sub-Saharan Africa will more than double from 0.86 billion in 2010 to 1.96 billion in 2050. A low-variant projection was based on reducing fertility by a half birth (from 2020 onward), leading to a quarter-billion fewer people by 2050. Given that good programs can reduce fertility by 1.0 to 1.5 births, such a program implemented now could reduce population by considerably more than a quarter-billion by 2050. This could only be achieved if family-planning programs are scaled up rapidly to have their full impact within a decade.

Family-planning programs are most effective where socioeconomic conditions are improving. In particular, education of girls is a powerful driver of fertility decline because educated women have lower than average desired family size (in part because the opportunity costs of childbearing are higher for these women) and are more capable of overcoming obstacles to use of family planning (27, 28). However, educated women must have access to contraception to implement their reproductive preferences efficiently. Family planning and socioeconomic development operate synergistically. In addition to the commitment to family planning, the fertility difference between Bangladesh and Pakistan is also attributable to higher investments in education, especially girls' education, in the 1980s and 1990s in Bangladesh.

Reducing fertility and population growth brings a range of benefits that provide a powerful rationale for investing in family-planning programs (16, 29). Fewer pregnancies (both intended and unintended) mean fewer maternal deaths (more than a third of these deaths are due to unintended pregnancies, in part because some end in unsafe induced abortion). Slower growth in the number of infants and children permits more investment in the quality rather than quantity of health care and education. Smaller family sizes free women to join the labor market. A slower growth in the number of young people seeking employment reduces job competition and its wage-depressing effect. Slower growth may make it easier for societies to address several adverse environmental trends.

The Way Forward

Between the late 1960s and the 1990s, international cooperation between developing countries and industrialized donor countries produced one of the great success stories of development assistance. The system included financial support and technical assistance and training. Much of the steam has gone out of that system in recent years. Industrialized and developing countries must rebuild effective international cooperation. High-income countries should follow the example of the U.S. and U.K. administrations and substantially increase funding

for international family planning, particularly in sub-Saharan Africa, where leadership and funding have been most lacking. Government leaders in developing countries, especially those in sub-Saharan Africa who have neglected these issues, should follow the example of the Rwandan government, which has made a successful new effort to strengthen health and family-planning services (30, 31).

Family planning is highly cost-effective (32). The UN estimates that "for every dollar spent in family planning, between two and six dollars can be saved in interventions aimed at achieving other development goals" (33). With sufficient political will and resources, well-run voluntary programs have brought about sustained declines in fertility and population growth across much of Asia, the Middle East, and Latin America, simply by permitting people to realize their individual reproductive goals. Such programs represent a cost-effective approach to relieving population pressures, stimulating economic development, improving health, and enhancing human freedom.

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REVIEW

India's Demographic Change: Opportunities and Challenges

K. S. James

This paper discusses emerging demographic patterns and its opportunities and challenges for India. It investigates the specificities in the demographic transition in terms of various demographic parameters and the lack of homogeneity in the transition across states in the country. It presents some opportunities that can arise from having demographic changes, particularly the demographic dividend and interstate migration to overcome labor shortage in some parts. At the same time, there are serious challenges in the form of enhancing human capital development, addressing the issue of skewed sex ratio, and the possible rise in social and political unrest and conflict.

India accounts for nearly 17% of the world's population and is experiencing rapid demographic changes, with wide implications not only for the country but also across other regions of the world. The country exhibits one of the highest demographic heterogeneities ever experienced anywhere in the world at the regional and state levels. Demographic changes taking place across the country are often unaccompanied by substantial socio-economic changes. Hence, India stands to contradict the most often quoted theories of demographic change and poses a greater challenge to predicting the impact of demographic changes on the economy and society. There are also considerable benefits arising out of drastic demographic changes and demographic diversity. What follows is a brief critical discussion on the Indian demographic pattern and its likely impact on the economy and society.

National Trends and Population Projections

According to the provisional results of the 2011 census, India's population as of 1 March 2011

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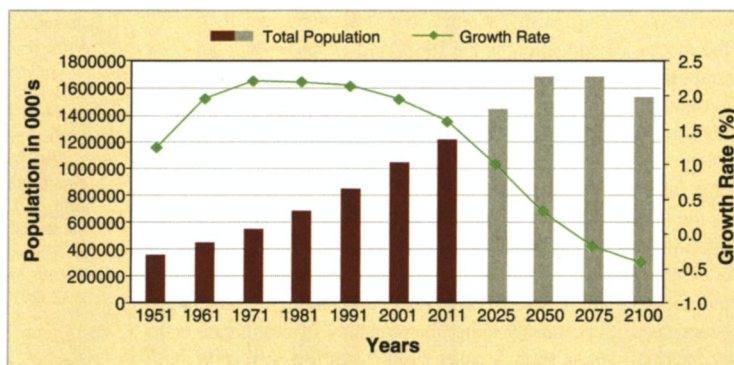


Fig. 1. Population size and its annual growth rate in India for 1951–2100. The 1951–2011 data are enumerated by decadal census (1), and 2025 and 2100 data are projections by the United Nations (5).

stands at 1210 million (1). In other words, currently one out of every six persons in the world lives in India. The difference in the total population between India and China has narrowed and now stands around 131 million. Despite the recent decline in the birth rate throughout the country, India has recorded a growth rate of 1.6% per year during 2001–2011 census periods, adding around 181 million people to the total during the decade (1). This addition is only marginally lower than the population of Brazil, the fifth most populous country in the world.

India experienced a rapid increase in population all through the second half of the past

century (Fig. 1). The growth rate remained at the peak of more than 2% per year between the 1961–1991 census periods. Such rapid growth in population was considered to reflect the dismal failure of the family planning program adopted by the country in the early 1950s (2–4). It appears that since 1991, the population growth in India has been slowing down. Although the growth rate has declined compared with the previous decade, the annual addition to the population remained nearly the same.

The ultimate size of India's population when the population stabilization is achieved will be about 1.72 billion around 2060, according to the latest population projection released by the United Nations Population Division (UNPD) (5). Accord-

ing to this projection, India will overtake China close to the year 2020, which is nearly a decade earlier than expected by the earlier projection (revision 2008) (6). By 2050, India is expected to have around 400 million more inhabitants than will China. After the peak in the total population in 2060, the size is projected to come down to 1.56 billion by 2100 (5). However, the projection by the Population Foundation of India and the Population Reference Bureau (PFI-PRB) expects stabilization only beyond 2080, with a population size of 1.86 billion (7).

Contrary to these, the probabilistic projection carried out by the International Institute for Applied Systems Analysis (IIASA) gives a median population projection of 1.4 billion and an 80% uncertainty range from 1.2 to 1.6 billion in 2050 (8). This projection explicitly considered the changing educational composition of the population and the strong existing educational fertility link for the future population.

Perhaps, all the above projections illustrate the extreme uncertainty inherent in the assumptions of future fertility, mortality, and migration in India. Although the UNPD projection assumes India will achieve replacement-level fertility [total fertility rate (TFR) of 2.1] around 2040, the