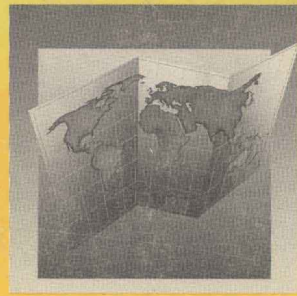
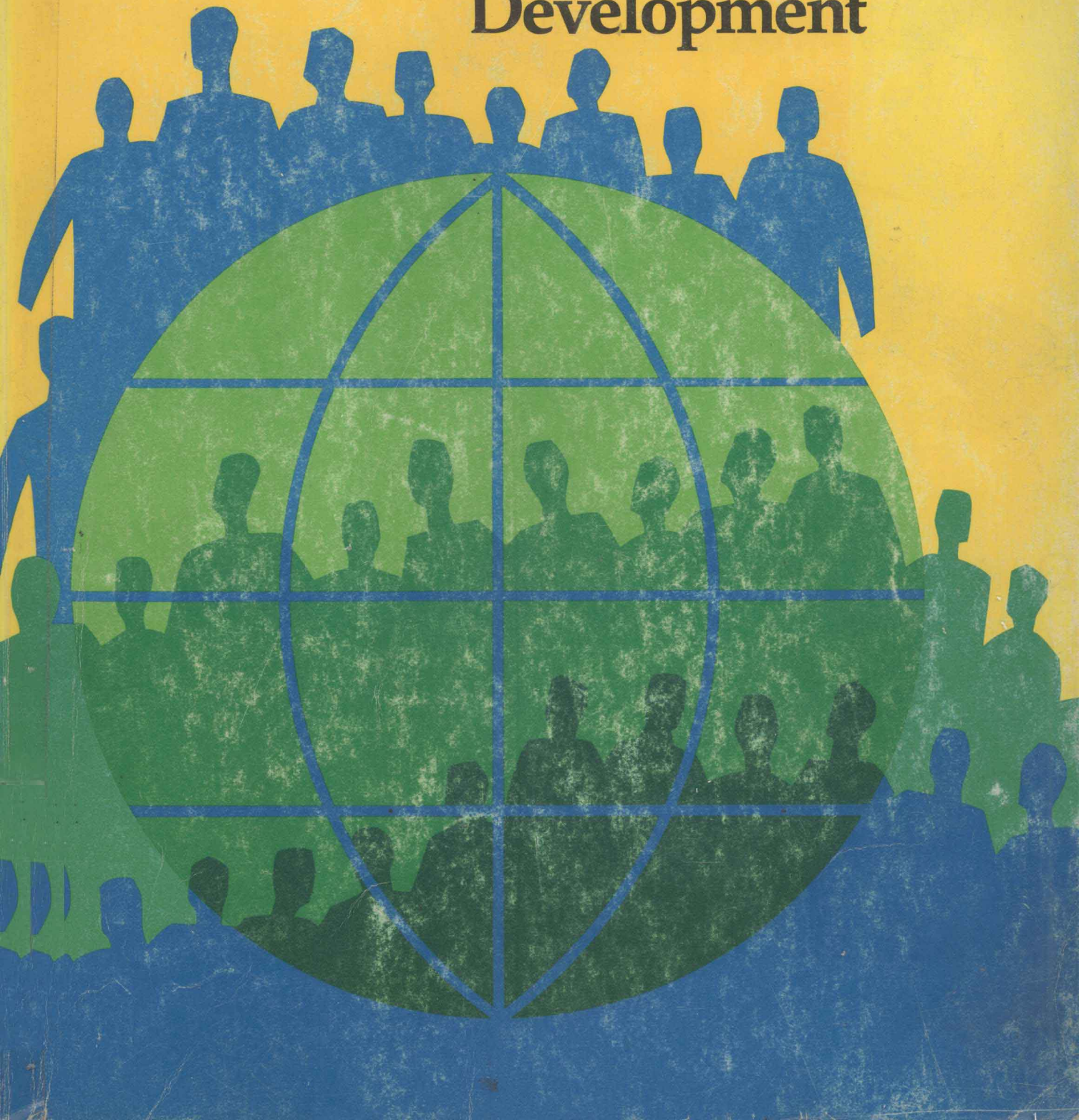


# Population Change and Economic Development



Reprinted  
from  
*World  
Development  
Report 1984*



# **Population Change and Economic Development**

**Published for The World Bank  
Oxford University Press**

Oxford University Press  
NEW YORK OXFORD LONDON GLASGOW  
TORONTO MELBOURNE WELLINGTON HONG KONG  
TOKYO KUALA LUMPUR SINGAPORE JAKARTA  
DELHI BOMBAY CALCUTTA MADRAS KARACHI  
NAIROBI DAR ES SALAAM CAPE TOWN

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for Reconstruction and Development/The World Bank  
1818 H Street, N.W., Washington, D.C. 20433 U.S.A.

*This edition first printed March 1985.*

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*Library of Congress Cataloging in Publication Data*

*Main entry under title:*

*Population change and economic development.*

*Bibliography: p.*

*1. Population policy. 2. Economic development.*

*I. International Bank for Reconstruction and Development.*

*HB849.41.P65 1985 338.9 85-5126*

*ISBN 0-19-520484-0 (pbk.)*

The text of this book is reprinted with adaptations from *World Development Report 1984*, of which it formed Part II. That Report, like its predecessors, is a study by the staff of the World Bank, and the judgments in it do not necessarily reflect the views of the members of the Bank's Board of Directors or of the governments they represent.

The 1984 edition of *World Development Report* was prepared by a team led by Nancy Birdsall and comprising Martha Ainsworth, Rodolfo Bulatao, Dennis Mahar, William McGreevey, Nicholas Prescott, and Gurushri Swami, and assisted by Jill Armstrong. Staff of the Economic Analysis and Projections Department prepared the Statistical Appendix. Staff of the Population, Health, and Nutrition Department provided extensive help. The work was carried out under the general direction of Anne O. Krueger and Costas Michalopoulos.

## Definitions and data notes

The principal country groups used in this study are as follows:

- *Developing countries* are divided into: *low-income economies*, with 1982 gross national product (GNP) per person of less than \$410; and *middle-income economies*, with 1982 GNP per person of \$410 or more. Middle-income countries are also divided into *oil exporters* and *oil importers*, identified below.

- *Middle-income oil exporters* comprise Algeria, Angola, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Islamic Republic of Iran, Iraq, Malaysia, Mexico, Nigeria, Peru, Syria, Trinidad and Tobago, Tunisia, and Venezuela.

- *Middle-income oil importers* comprise all other middle-income developing countries not classified as oil exporters. A subset, *major exporters of manufactures*, comprises Argentina, Brazil, Greece, Hong Kong, Israel, Republic of Korea, Philippines, Portugal, Singapore, South Africa, Thailand, and Yugoslavia.

- *High-income oil exporters* (not included in developing countries) comprise Bahrain, Brunei Darussalam, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

- *Industrial market economies* are the members of the Organisation of Economic Co-operation and Development (OECD, identified in the glossary) apart from Greece, Portugal, and Turkey, which are included among the middle-income developing economies. This group is commonly referred to in the text as industrial economies or industrial countries.

- *East European nonmarket economies* include the following countries: Albania, Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, and USSR. This group is sometimes referred to as *nonmarket economies*.

The Statistical Appendix uses the same groups but includes only countries of 1 million or more.

In this study, regional groupings of countries are as follows:

- *Sub-Saharan Africa* comprises all thirty-nine developing African countries south of the Sahara, excluding South Africa, as given in *Accelerated Development in Sub-Saharan Africa*, World Bank, 1981.

- *Middle East and North Africa* includes Afghanistan, Algeria, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, Yemen Arab Republic, Yemen (PDR), and the United Arab Emirates.

- *East Asia* comprises all low- and middle-income countries of East and Southeast Asia and the Pacific, east of, and including, Burma, China, and Mongolia.

- *South Asia* includes Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka.

- *Latin America and Caribbean* comprises all American and Caribbean countries south of the United States.

*Billion* is 1,000 million.

*Tons* are metric tons (t), equal to 1,000 kilograms (kg) or 2,204.6 pounds.

*Growth rates* are in real terms unless otherwise stated.

*Dollars* are US dollars unless otherwise specified.

All tables and figures are based on World Bank data unless otherwise specified.

Data from secondary sources are not always available through 1983. The numbers in this study shown for historical data may differ from those shown in earlier editions of *World Development Report* because of continuous updating as better data become available.

Growth rates for spans of years in tables cover the period from the beginning of the base year to the end of the last year given.



# Glossary

## Demographic terms

*Amenorrhea.* Absence or suppression of menstruation.

*Child death rate.* The number of deaths of children aged one to four in a given year per 1,000 children in this age group.

*Cohort.* A group of people sharing a common temporal demographic experience who are observed through time. For example, the birth cohort of 1900 would be the people born in that year. There are also marriage cohorts, school class cohorts, and so on.

*Completed fertility rate.* The number of children born alive per woman in a cohort of women by the end of their childbearing years.

*Contraception.* The conscious effort of couples to avoid conception through rhythm, withdrawal, abstinence, male or female sterilization, or use of contraceptives: intrauterine device (IUD), oral contraceptives, injectable contraceptives, condom, spermicides, and diaphragm.

*Contraceptive prevalence rate.* The percentage of married women of reproductive age who are using (or whose husbands are using) any form of contraception.

*Crude birth rate.* The number of births per 1,000 population in a given year.

*Crude death rate.* The number of deaths per 1,000 population in a given year.

*Dependency ratio.* The ratio of the economically dependent part of the population to the productive part; arbitrarily defined as the ratio of the young (those under fifteen years of age) plus the elderly (those sixty-five years and over) to the population in the "working ages" (those fifteen to sixty-four years of age).

*Family planning.* Conscious effort of couples to regulate the number and timing of births.

*Family planning programs.* Programs that provide

information about, and services for, use of contraception.

*Fecundity.* The physiological capacity of a woman, man, or couple to produce a live birth.

*Fertility.* The reproductive performance, measured by number of births, of an individual, a couple, a group, or a population.

*Infant mortality rate.* The number of deaths of infants under one year old in a given year per 1,000 live births in that year.

*Life expectancy at birth.* The average number of years a newborn would live if current age-specific mortality were maintained. Life expectancy at later ages is the average number of years a person already at a given later age will live. Life expectancy at age five and above can exceed life expectancy at birth substantially if the infant mortality rate is high.

*Married women of reproductive age.* Women who are currently married, or in a stable sexual union, generally between the ages of fifteen and forty-nine. Some analysts count only women between the ages of fifteen and forty-four.

*Maternal mortality rate.* The number of deaths of women due to complications of pregnancy and childbirth per 100,000 live births in a given year.

*Mortality.* Deaths as a component of population change.

*Net reproduction rate.* The average number of daughters that would be born to a woman (or group of women) if during her lifetime she were to conform to the age-specific fertility and mortality rates of a given year. This rate takes into account that some women will die before completing their childbearing years. A net reproduction rate of 1.00 means that each generation of mothers is having exactly enough daughters to replace itself in the population.

*Parity.* The number of children previously born alive to a woman.

*Population growth rate.* The rate at which a popula-

tion is increasing (or decreasing) in a given year due to natural increase and net migration, expressed as a percentage of the base population.

*Population momentum.* The tendency for population growth to continue beyond the time that replacement-level fertility has been achieved because of the large and increasing size of cohorts of child-bearing age and younger, resulting from higher fertility and/or falling mortality in preceding years.

*Postpartum.* Refers to the time immediately after childbirth.

*Rate of natural increase.* The rate at which a population is increasing (or decreasing) in a given year due to a surplus (or deficit) of births over deaths. The rate of natural increase equals the crude birth rate minus the crude death rate per 100 people. It also equals the population growth rate minus emigration.

*Replacement-level fertility.* The level of fertility at which a cohort of women on the average is having only enough daughters to "replace" itself in the population. By definition, replacement level is equal to a net reproduction rate (see above definition) of 1.00. Replacement-level fertility can also be expressed in terms of the total fertility rate. In the United States today a total fertility rate of 2.12 is considered to be replacement level; it is higher than 2 because of mortality and because of a sex ratio greater than 1 at birth. The higher mortality is, the higher is replacement-level fertility.

*Total fertility rate.* The average number of children that would be born alive to a woman (or group of women) during her lifetime if during her child-bearing years she were to bear children at each age in accord with prevailing age-specific fertility rates.

*Urbanization.* Growth in the proportion of the population living in urban areas.

## Acronyms and initials

**CPS** Contraceptive Prevalence Survey.

**FAO** Food and Agriculture Organization.

**IBRD** International Bank for Reconstruction and Development.

**IDA** International Development Association.

**IMF** International Monetary Fund.

**IPPF** International Planned Parenthood Federation.

**NGO** Nongovernmental organization.

**ODA** Official Development Assistance.

**OECD** The Organisation for Economic Co-operation and Development members are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

**OPEC** The Organization of Petroleum Exporting Countries comprises Algeria, Ecuador, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**UNDP** United Nations Development Programme.

**UNESCO** United Nations Educational, Scientific, and Cultural Organization.

**UNFPA** United Nations Fund for Population Activities.

**WFS** World Fertility Survey.

**WHO** World Health Organization.

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# 1 Introduction

Population growth does not provide the drama of financial crisis or political upheaval, but as this study shows, its significance for shaping the world of the future is at least as great. What governments and their peoples do today to influence the demographic future will set the terms for development strategy well into the next century. In the poorest countries of the world, and among the poorest groups within countries, poverty contributes to high mortality and even higher fertility. It thereby creates a vicious circle: the slow pace at which development reaches the poor contributes to rapid population growth, making the elimination of poverty increasingly difficult. Slowing population growth is a difficult challenge to humanity—but a challenge that must and can be successfully addressed.

On the one hand, the situation is grave: this study concludes that in some countries development may not be possible at all unless slower population growth can be achieved soon, before higher real incomes would bring fertility down spontaneously. On the other hand, there is reason for hope: the experience of the past decade shows that education, health, and other development measures that raise parents' hopes for their children, along with widespread access to family planning services, create a powerful combination in reducing fertility.

The discussion of population places special emphasis on the role of public policy in an area in which fundamental human values are at stake. Population is a subject that touches issues central to the human condition, including personal freedom and the very definition of economic and social progress. This study tries to do it justice, while taking account of the fact that governments and peoples hold a wide range of views on this subject.

Even with success in efforts to slow population growth, future population growth will still be heavily concentrated in what are now the poorer areas of the globe. Thus, the average level of human welfare will depend largely on the degree

of economic and social transformation in those areas. The poverty of those areas cannot be blamed on rapid population growth alone; the causes of poverty go well beyond population change. Nor will reducing population growth alone ensure their economic transformation. But this study shows that slowing the pace of population growth can make a difference—and that the ingredients for doing so are also those which will increase economic growth.

Development assistance is critical, in addressing many of the fundamental development issues of the era, including population. Especially for the poorest countries, a substantial increase in concessional flows of funds is needed to secure development momentum. And although the direct costs of programs to reduce population growth are not large, a greater commitment by the international community is needed to assist developing countries in the challenge of slowing population growth.

## Recent demographic change

The links between population change and economic development can be understood only by going back into the past. In the long run of history, the second half of the twentieth century stands out for its remarkable population growth. Consider that in the year 1 the world had about 300 million people. Its population then took more than 1,500 years to double. Though the general trend was rising, population growth was not steady; the balance of births over deaths was tenuous, and crises such as war or plague periodically reduced populations in parts of the world. Only in the eighteenth century did the number of people start to rise steadily. From 1750 until well into the twentieth century, the world's population grew at the then unprecedented rate of about 0.5 percent a year, faster in today's developed countries, slower elsewhere. World population size doubled again, this time in about 150 years; it had reached about 1.7

billion by 1900. In the twentieth century, growth continued to accelerate, from 0.5 to 1 percent until about 1950 and then to a remarkable 2 percent. In just over thirty years, between 1950 and today, world population nearly doubled again—growing from 2.5 billion to almost 4.8 billion (see Figure 1.1).

Since 1950 population growth has been concentrated largely in the developing countries. Although a postwar baby boom was combined with falling mortality in the industrial countries, the population growth rate never exceeded 1 percent in Europe and seldom exceeded 1.5 percent in North America. At its peak, fertility in the United States meant that families had on average little more than three children; in Europe and Japan postwar families were even smaller. By the 1970s, in most developed countries fertility had fallen to a level near or even below “replacement”—about two children per couple being the level which, over the long run, holds population constant (demographic terms are defined in the glossary).

The postwar experience of developing countries was not only different but historically unprecedented. Driven by falling mortality and continued high fertility, their population growth rate rose above 2 percent a year. It peaked at 2.4 percent in the 1960s. It is now around 2.0 percent a year, because of a slightly greater decline in birth rates than in death rates (see Figure 1.1). Further decline in population growth will not come automatically. Much of the slowdown so far can be attributed to China, where fertility is already low, close to an average of two children per family. Most families in other developing countries now have at least four children, in rural areas five and more. In a few countries in which fertility fell in the 1970s, there is evidence that it has leveled off recently. For parts of South Asia and the Middle East, forecasts of a lower rate of population growth are based more on hope than on present trends. For much of Africa and Central America, population growth rates are rising and could rise still further. In Africa couples say they want more children than in fact they are having, while mortality—though high—can be expected to decline.

Furthermore, population “momentum” means that growth rates in developing countries will remain high for several decades even if couples have fewer children (see Box 1.1); absolute annual increases will be close to or more than 80 million people a year in developing countries well into the next century. The baby “bulge” that resulted from the trends of high fertility and falling mortality that

started twenty years ago is now entering child-bearing age. In China, for example, the number of women aged twenty to thirty-four almost doubled between 1950 and 1980; throughout the 1980s, as the children born in the 1960s enter their twenties, the number of women marrying and bearing children will continue to increase. To reduce population growth to 1 percent a year by the early 1990s, couples in China would need to have fewer than two children on average.

These considerations should not obscure the central fact that the world’s population growth rate is falling. The latter part of the twentieth century has been a demographic watershed, the high point of several centuries of accelerating growth and the beginning of what demographers project to be a continuous decline, until world population stabilizes sometime in the twenty-second century. Though absolute numbers will continue to increase for several decades, the issue now is how quickly the rate of increase can be slowed down—and how individual countries (and the international community) are to cope with continued growth in the meantime.

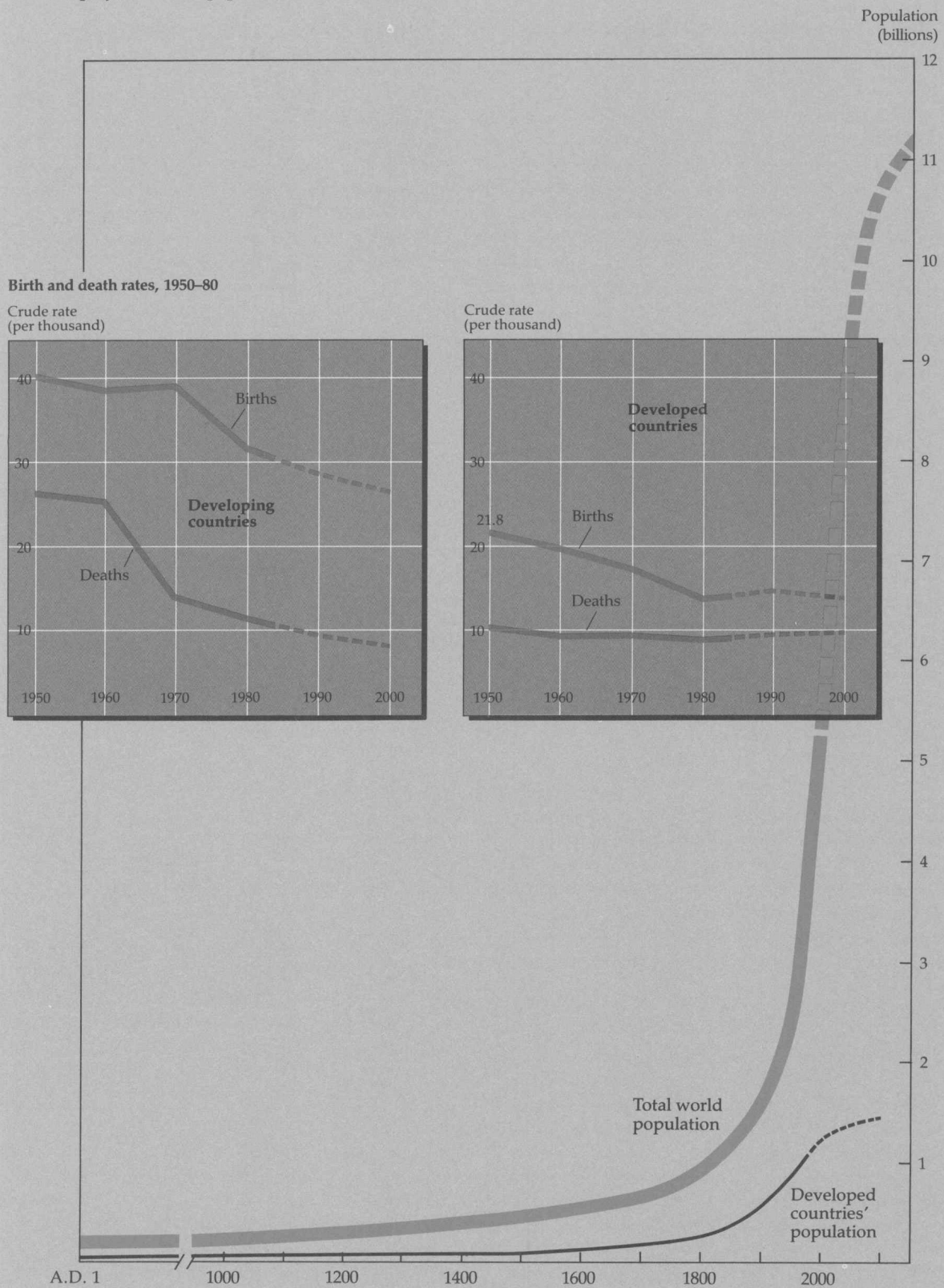
### **The rise in living standards**

Until the seventeenth or eighteenth century, life expectancy had probably changed little, and few people were literate. Since 1850, however, while world population size has more than tripled, income per person has increased perhaps six times in real terms, life expectancy has risen dramatically, and education has become widespread. Progress in education and life expectancy in developing countries has been especially notable since 1950. Even in today’s poorer developing countries, primary-school enrollment rates and life expectancy are above the levels achieved by richer countries eighty years, though income per person and adult literacy are not (see Figure 1.2).

But these averages can be misleading. Though most people are better off today, for many the gains have been small. Since 1950 it has been the countries with lower levels of income per person that have had much faster population growth. In those countries absolute increases in income have been much smaller than in the countries which began the period already richer. Consider a simple example. Between 1955 and 1980 income per person in the United States grew at an average 2.0 percent a year. In 1980 dollars, average income increased from \$7,030 to \$11,560. Meanwhile, in India, income per person grew at about 1.7 percent

FIGURE 1.1

Past and projected world population, A.D. 1-2150

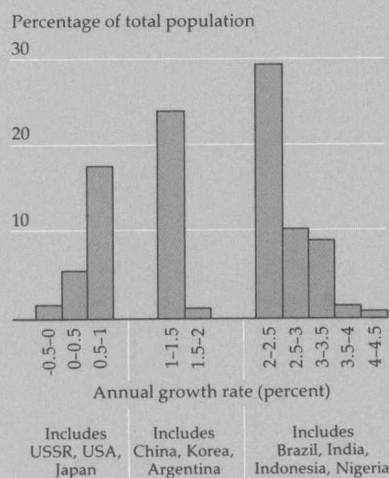


Sources: Durand, 1977; UN, 1966.

## Box 1.1 The arithmetic of population growth: compounding and momentum

Rates of population growth among countries tend to fall into two main groups: rapid growth countries of Africa, Asia, and Latin America, with annual growth rates for most between 2.0 and 4.5 percent; and slow growth countries, primarily the industrialized nations, with growth rates below 1 percent. In a few

**Distribution of countries with 1982 populations exceeding 1 million by average 1980–85 growth rate**



countries, including China, the growth rate falls between 1 and 2 percent (see first chart). Because of compounding, small differences in annual growth rates over long periods make a big difference in population increases. An average growth of 1 percent over a 100-year period would cause a population to multiply 2.7 times. A rate of 2 percent in the same period would bring an increase of about 7.4; 3 percent an increase of 20; and 4 percent an increase of 55. Today's population of Zambia, 6 million, would grow to more than 120 million in 100 years were growth to continue at the present rate of 3.4 percent.

Today's high growth rates in developing countries are caused not only by high fertility (between four and eight births per woman) but by the "momentum" created by the high fertility and falling mortality of the past three decades. Past

high fertility and falling mortality mean women entering childbearing age now constitute a large proportion of the total population. In most developing countries, the next generation of women will outnumber the previous one. Thus, even if the number of births per woman declines rapidly, the birth rate can stay high and the total number of births can be greater than it was.

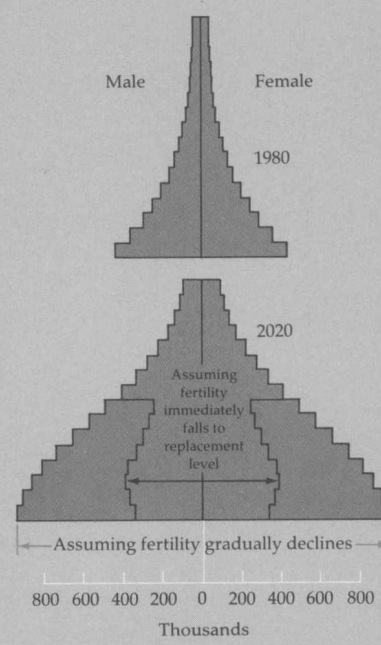
In some countries of Asia and Latin America, even with recent fertility decline (Chapter 2), birth rates remain high and average annual increases in population size are larger now than they were in 1965. Brazil's fertility rate fell from 5.8 in 1965 to about 4.0 in 1980, a decline of almost 30 percent. Yet the birth rate has fallen by only 19 percent and the total number of births has increased from about 2.9 million a year in the late 1950s to about 3.7 million in the early 1980s. The World Bank now projects that fertility in Brazil will fall to 2.1 by 2025. Yet by that year the total number of births will have increased further, to nearly 3.9 million a year.

To see how much of total population growth is due to momentum alone, imagine a population in which the fertility rate declines instantaneously to replacement level—the level at which each couple has only enough children to replace themselves (the exact number will be more than two, varying from country to country and from period to period, because of different mortality rates). The top population pyramid in the second chart shows the distribution of the actual 1980 population of Senegal by sex and by five-year age groups. The pyramid for 1980 has a wide base and a narrow top. Each five-year group is exponentially larger than the one preceding it. The bottom pyramid is actually two pyramids, which show the population distributions for the year 2020 under two different assumptions: fertility gradually declines, in keeping with the standard World Bank country projection for Senegal (the broader pyramid); and fertility instantaneously falls to replacement level (the narrower pyramid). The

broader pyramid for 2020, which assumes some, though gradual, fertility decline, is shaped like the 1980 pyramid but is almost three times larger. The narrower pyramid for 2020 shows the growth that is generated by momentum alone. It has a different shape than the 1980 pyramid; its base has not expanded, yet it is 1.6 times larger.

But the smaller pyramid for 2020 does not even show the full effect of momentum, which would not have run its full course by 2020. By the time Senegal's population would become stationary (assuming instantaneous replacement fertility), the pyramid would be 2.2 times larger in area than the pyramid for 1980. In other words, the population of Senegal would increase 2.2 times from the

**Age structure in Senegal, 1980 and 2020**



force of momentum alone, even if fertility rates there dropped to replacement level now. The corresponding ratio of stationary to current population for the United States would be 1.3. Table 2 of the Statistical Appendix provides numbers for other countries.



a year—but only from \$170 to \$260 (in 1980 dollars). What had been a \$6,860 income gap between Americans and Indians in 1955 had almost doubled to \$11,300 in 1980; America's average income, some forty-one times India's in 1955, had become forty-four times larger by 1980. Large absolute differences in average income between developed and developing countries have persisted and have even increased since 1950 (see Figure 1.3). Among and within developing countries, differences in education and life expectancy also persist.

By 1980, 79 percent of the world's total output was produced in the developed countries, where about 25 percent of the world's people live. The remaining 21 percent was shared by the other 75 percent of people. Only 5 percent was shared among the 47 percent living in low-income countries such as Bangladesh, China, India, Pakistan, and most countries of tropical Africa.

Such comparisons raise several statistical difficulties. They exaggerate differences between poor and rich countries because not only incomes but also prices, especially for services, are lower in poor countries, and this is not reflected in official exchange rates. But even with appropriate adjustments (based on the UN International Comparison Project), the income gap between India and the United States is still estimated to have increased from almost \$5,000 to almost \$8,000 between 1955 and 1980. The general conclusion is inescapable: much of the world's output is produced and consumed by relatively few of its people.

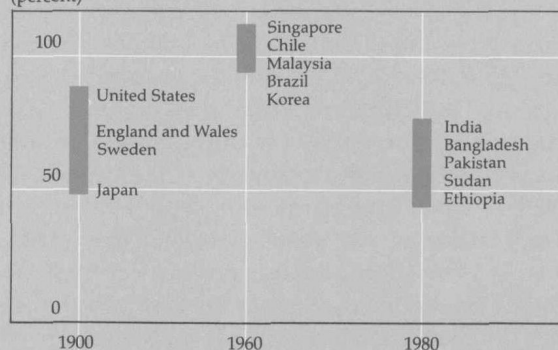
### The demographic future

World Bank population projections are shown in Table 2 of the Statistical Appendix at the back of this study. These, and alternative projections prepared for this study and shown in the Population Data Supplement, are explained in Chapter 2. The projections should not be treated as predictions, but as illustrations of what can happen given reasonable assumptions. If the assumptions underlying the "standard" projections in Table 2 are correct, world population would stabilize around the year 2150, having risen from almost 4.8 billion to more than 11 billion (see Figure 1.1). It would reach 9.8 billion by the year 2050. The population of today's developed countries would grow from 1.2 billion today to 1.4 billion in 2050, while that of those countries now classified as developing would grow from over 3.6 billion to 8.4 billion. By the time world population stabilized, the population of India would be 1.7 billion, making it the

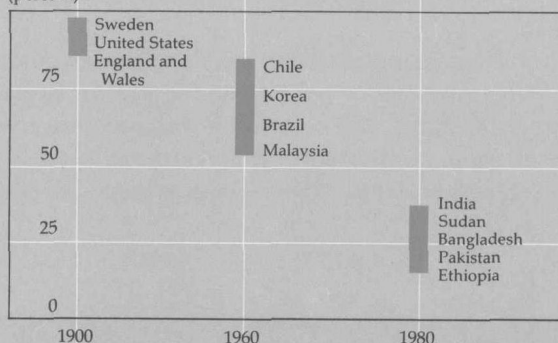
FIGURE 1.2

Indicators of standard of living, selected countries and years

Primary school enrollment rate  
(percent)



Literacy rate  
(percent)



Life expectancy at birth  
(years)



GNP per capita  
(constant 1980-82 dollars)



Sources: Tan and Haines, 1984; U.S. Bureau of the Census, 1960; Keyfitz and Fleiger, 1968; Mosk, 1983; Johansson, 1977; Zimmerman, 1965.

most populous nation on earth. Bangladesh, a country about the size of the state of Wisconsin in the United States, would have a population of 450 million. Nigeria, Ethiopia, Zaire, and Kenya, among the most populous countries in Africa, would have populations of 620 million, 230 million, 170 million, and 150 million, respectively. As a group, sub-Saharan Africa and South Asia—today's poorest countries with the fastest population growth—would account for 50 percent of the world's people, compared with 30 percent today.

Even allowing for some error in such projections, it is clear that future population increases will be concentrated in what are now the poorer areas of the globe; the average level of human welfare will depend largely on the degree to which economic and social transformation occurs in these areas.

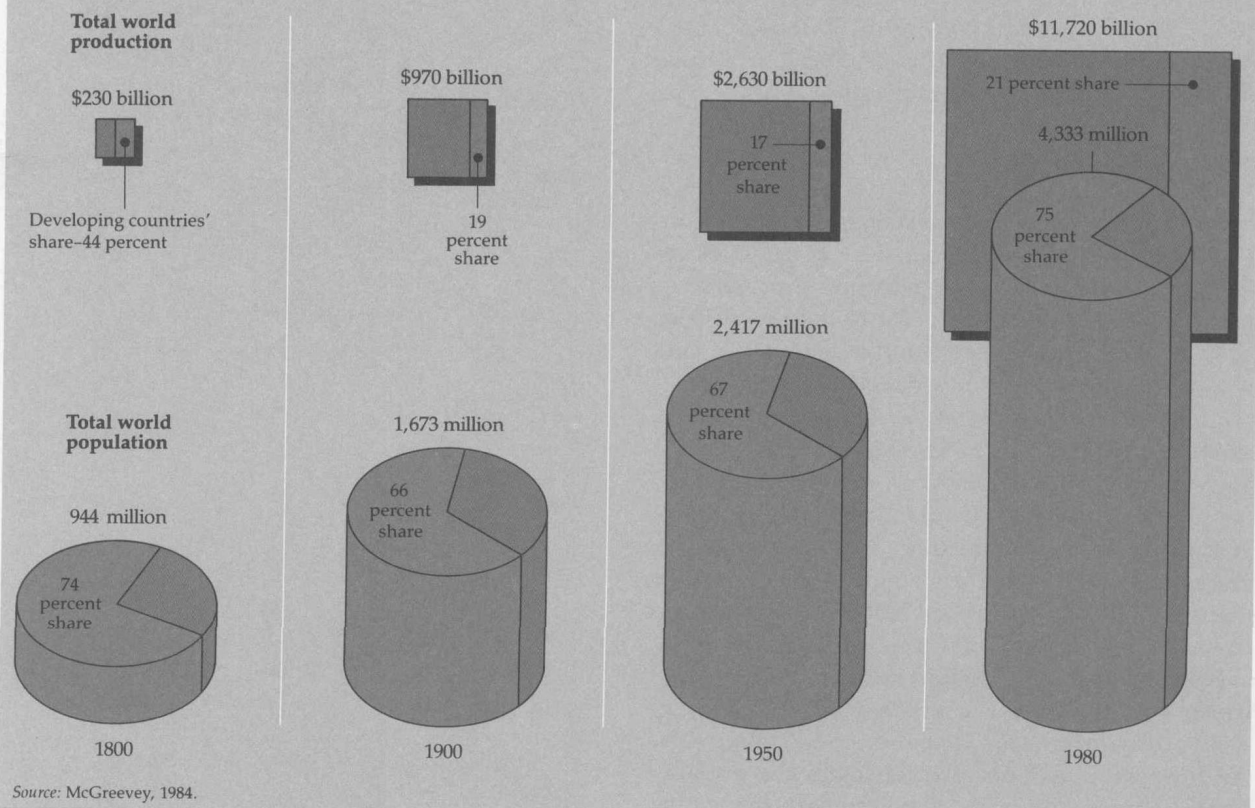
Are the assumptions that produce these projections realistic, and what do they imply for future human welfare? The critical assumptions are that the decline in mortality will continue until life expectancy of about eighty years is reached, and

that fertility will decline to replacement level—in developing countries between the years 2005 and 2045, depending on recent mortality levels, fertility trends, and family planning efforts; and in most developed countries in the year 2010. (In the several developed countries in which fertility is now below replacement level, it is assumed to rise and then stabilize at replacement.)

In some respects these assumptions are optimistic. Consider the poorer countries of Africa and South Asia. Even with rapid income growth and advances in literacy in the next two decades, they are not likely to reach the income and literacy levels that triggered fertility declines in such countries as Brazil, Korea, and Malaysia in the 1960s (see Figure 1.2). Yet their fertility is projected to decline significantly—and even with those declines their populations will more than double in the next fifty years. A pessimist might wonder whether for some countries it is not already too late—whether rising unemployment and increasing landlessness will overwhelm social and political institutions; whether fragile administrative systems will be

FIGURE 1.3

Developing countries' share of population and production, 1800–1980



unable to maintain health programs; whether, in countries that are already crowded and still heavily reliant on agriculture, mortality will rise to check further population growth.

Such speculative pessimism needs to be set against the concrete reasons for optimism. The experience of the past two decades shows that economic growth and social development are possible, even starting at low initial income levels, and that developing countries can take conscious steps to influence their demographic futures. Both mortality and fertility—the latter matters much more for population growth—can be brought down more quickly than projected. Declines need not rely, solely or even primarily, on per capita income growth. Educational change can occur rapidly; policy effort can make a difference. Moreover, the actions that would speed the demographic transition are also those which would increase economic growth.

### Causes, consequences, and cures

This study discusses three themes.

- *Rapid population growth is a development problem.* Although population growth does not provide the drama of financial crisis or political upheaval, its significance for shaping the world is at least as great. In the past three decades many developing countries managed to raise average income even as their populations grew rapidly. In that strict sense, rapid population growth has been accommodated. But the goal of development extends beyond accommodation of more people; it is to improve people's lives. The cost of rapid population growth, at least for the world as a whole, may not be a catastrophe—with luck sudden famine, war, political or environmental collapse can be avoided. But continuing rapid growth on an ever larger base is likely to mean a lower quality of life for millions of people. The main cost of such growth, borne principally by the poor in developing countries, has been and will be faltering progress against what is still high mortality, and lost opportunities for improving people's lives.

Why does rapid population growth slow development? First, it exacerbates the awkward choice between higher consumption now and the investment needed to bring higher consumption in the future. Economic growth depends on investment—all the more so if human skills are scarce and technology limited. But if consumption is low already, the resources available for investment are limited; faster population growth makes invest-

ment in "population quality" more difficult. Second, in many countries increases in population threaten what is already a precarious balance between natural resources and people. Where populations are still highly dependent on agriculture and the potential for increasing production through extending cultivation is limited, continuing large increases in population condemn many households to continuing poverty. Such increases can contribute to overuse of limited natural resources, mortgaging the welfare of future generations. Third, rapid increases in population make it hard to manage the adjustments that accompany and promote economic and social change. The growth of cities in developing countries, largely due to high rates of natural increase, poses serious management problems; so too does continued rapid growth that in some rural areas threatens permanent environmental damage.

These costs of rapid population growth differ among countries. Where education levels are already high, investment in transport and communications is in place, and political and economic systems are stable, countries are in a better position to cope with the strains of rapid growth—whether their natural resources are limited or they are already "crowded." But countries in that category—Colombia, the Republic of Korea, Malaysia, Singapore, and Thailand—also tend to be those in which population growth is already declining. In countries where the population is still largely dependent on agriculture, and the amount of new land or other resources is limited—including Bangladesh, Burundi, the Arab Republic of Egypt, India, Kenya, and Nepal—progress in the face of continuing rapid population growth will be extraordinarily difficult. Agricultural modernization and diversification into manufacturing will require large new investments in both human and physical capital, and considerable administrative and political skill to ensure efficient allocation of scarce investment resources. Even in countries with untapped natural resources—Brazil and Ivory Coast, for instance—rapid population growth makes it harder to effect the investments in complementary inputs (roads, public services, drainage, and other agricultural infrastructure) and in the human skills needed to tap such resources.

The costs of rapid population growth, moreover, are cumulative. More births now make the task of slowing population growth later more difficult, as today's children become tomorrow's new parents. Population policy has a long lead time; other development policies must adapt in the meantime.