

Population Policies  
and Programs  
in East Asia

Edited by Andrew Mason

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EAST-WEST CENTER  
OCCASIONAL PAPERS  
Population and Health Series  
No. 123, July 2001



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# Population Policies and Programs in East Asia

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The papers in this volume examine the population policies in six East Asian economies as part of a larger project examining the links between population change and economic development in the most dynamic region in the world. The economies had varied approaches to population policy, but all achieved unusually fast fertility decline. Rapid social and economic development played a primary role in determining birth rates, but effective intervention by the state accelerated the transition to low fertility levels. A second volume, *Population Change and Economic Development in East Asia: Challenges Met, Opportunities Seized*, published by Stanford University Press, examines the economic consequences of population change in East Asia.

Support for this project was provided by the United States Agency for International Development (USAID), the Rockefeller Foundation, the William and Flora Hewlett Foundation, the World Bank, and the Ministry of Foreign Affairs (MOFA) of Japan. Support from USAID and MOFA was provided as part of the Common Agenda for Cooperation in Global Perspectives.

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This is one of two volumes that report the results of an East-West Center initiated project. Papers were presented at three meetings held in 1997: the Conference on Population and the Asian Economic Miracle, East-West Center, Honolulu, HI, January 7–10, 1997; a Learning Forum on Demographic Momentum and Macroeconomics, the World Bank Institute and the East-West Center, Washington, DC, July 21–22, 1997; and the Policy Seminar on Asian Economic Development: Long Term Perspectives, Nihon University, East-West Center, and the World Bank Institute, Tokyo, October 20–21, 1997. The second volume, *Population Change and Economic Development in East Asia: Challenges Met, Opportunities Seized*, published by Stanford University Press, examines the economic consequences of population change in East Asia.

Many individuals in addition to the authors contributed to this project by participating in the conferences, by discussing papers, and by providing valuable input. I would like to acknowledge Muthiah Alagappa, Sajeda Amin, Mahluddin Khan Alamgir, Nancy Birdsall, David Bloom, Colin Bradford, Jeff Brown, Lee-Jay Cho, Minja Kim Choe, Julie DaVanzo, Angus Deaton, Phil Estermann, Jacques van der Gaag, David Horlacher, Ponciano Intal, Jr., Andrew Kantner, Mitsuaki Kojima, Toshio Kuroda, Sumner La Croix, Karen Mason, Thomas Merrick, Duck Woo Nam, Naohiro Ogawa, Catherine Pierce, Mathana Phananiramai, Lant Pritchett, Robert Retherford, Gerard Russo, Joanne Salop, T. Paul Schultz, Sara Seims, Yukiyasu Sezai, R. Paul Shaw, Young-Soo Shin, Hananto Sigit, Steven Sinding, Kenji Sumida, Krishnamurthy Sundaram, Ann Takayesu, Noreen Tanouye, Pravin Visaria, Michael Ward, Sidney Westley, John Williamson, and Sharon Yamamoto. Two individuals contributed to this effort in special ways. Sandra Ward spent endless hours copyediting these papers. Burnham O. Campbell helped to initiate this project and would have served as co-editor had it not been for his untimely death.

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ABSTRACT

**Population Change and Economic Development in East Asia:  
Challenges Met, Opportunities Seized**

*Andrew Mason, editor*

The purpose of the volume is to provide a comprehensive answer to a simple question: "What role did population change play in East Asia's rapid economic development?" Answering the question is important because the extraordinary economic record of East Asian economies during their high growth era is central to current development policy debates. Previous studies have neglected the fundamental and important ways in which demographic forces have influenced economic growth and regional economic integration. Consequently, the significance of East Asia's remarkable decline in childbearing, the diminished rates of population growth, and the accompanying changes in age structure are not fully appreciated among individuals charged with framing and implementing programs designed to improve living standards throughout the world.

Two broad sets of issues are addressed. First, did rapid demographic change contribute to East Asian economic development? Specifically, what aspects of the region's development were influenced by demographic trends—economic growth, inequality, the economic status of women? What were the mechanisms through which population influenced the East Asian economies? What institutional, political, social, and economic features conditioned the influence of population on development? Does the East Asian experience provide useful lessons for other developing countries, or is its experience unique? Second, what was the role of population policy in East Asia? What policies and programs were implemented and at what cost? What evidence is there that East Asia's population policies achieved their goals? Is it possible or likely that demographic outcomes were a product only of the region's rapid economic development? Or did population policies accelerate the transition to low fertility and slower population growth?

These issues are addressed through a detailed examination of the experience between 1960 and 1990 of six East Asian economies: Japan, South Korea, Taiwan, Singapore, Thailand, and Indonesia. Their distinctive approaches to population policies are compared and the important channels through which population change has affected economic development are examined. Among the issues investigated are the impact of population on productivity and innovation; economic structure; saving, investment, and international capital flows;

international labor migration; human resource development; the distribution of income; and the economic status of women.

One of the most important lessons from the East Asian experience is that the impact of population changes on the economy depends to a great extent on the social, economic, and policy environment in which those changes occur. In the 1960s rapid population growth presented a number of potentially important impediments to East Asia's economic development. The adverse effects were avoided or minimized because of effective policies and institutions that were only indirectly related to population. The rapid growth of population did not lead to a decline in per capita production of grains because research institutions were established that could develop the high-yield varieties so essential to economic success. Rapid labor force growth in Northeast Asia did not lead to unemployment or underemployment in the agricultural sector because labor markets functioned well and because economic policies so successfully promoted growth of the manufacturing and service sectors.

Likewise, subsequent demographic changes only created *opportunities* for more rapid economic growth. Favorable outcomes depended as well on a variety of features of the countries in the region. The gap between labor force and population growth was advantageous only because development policies—for example, effective export promotion—provided gainful employment to a rapidly growing labor force. Demographic change led to high rates of saving because macroeconomic stability and the development of financial institutions encouraged saving and also because governments avoided large-scale transfer systems that would have undermined saving incentives. High rates of saving and investment were beneficial because policies, in particular stable macroeconomic policies that kept inflation rates low, created an economic environment in which firms could operate efficiently and maintain high rates of return to capital. Changes in the population age structure led to greater spending on education because public policy attached a high priority to education. Changes in the childbearing responsibilities of women had a favorable economic effect because governments eliminated laws and administrative policies that discriminated against women. In short, rapid demographic change was a necessary but by no means sufficient condition for rapid economic growth. Demographic changes created opportunities that East Asian countries seized by pursuing economic and social policies and developing institutions that supported development efforts.

Understanding the connections between demographic change and the economy also sheds light on the future of East Asia. Many of the demographic changes examined here are persistent in nature and will influence the economies of East

Asia for many decades. When East Asia's recent financial crisis has become a distant memory, demographic forces will still be exerting a deep and fundamental influence. With the exception of Japan, demographic conditions favor strong economic growth for several more decades. Only time will tell if the countries of East Asia will seize these continuing opportunities.



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# I

## Introduction

*Andrew Mason*

The twentieth century was a period of unprecedented demographic change. The global population increased nearly fourfold, growing from 1.6 billion in 1900 to 6 billion in 2000 (Cohen 1995, App. 2, 400–401; UN 1998). Population growth rates accelerated, particularly in the developing world, during the first part of the century, reaching a peak in the late 1960s. The response to rapid population growth was also unprecedented. Motivated by concerns about the environmental and economic effects of population growth, the United Nations (UN), bilateral foreign aid agencies, multilateral institutions, and private foundations invested billions of dollars in population programs. Many developing-country governments, especially in Asia, vigorously pursued policies aimed at slowing population growth.

The countries of East Asia were among the first and most active proponents of population policy.<sup>1</sup> Beginning in the 1960s, many East Asian developing countries abandoned pronatalist policies, identified population stabilization as a national development objective, and adopted comprehensive programs intended to slow population growth. At first glance, the East Asian experience appears to provide strong support for the value of population stabilization policies. Childbearing and population growth rates dropped more rapidly there than in any other region of the developing or industrialized world. During the same period, the countries of East Asia achieved unparalleled economic success. Within three decades, 1960–90, they were transformed from an economic backwater to the most dynamic region in the world economy. Countries that were impoverished in 1960 joined the ranks and, in some respects, surpassed the high-income countries of the West.

The research project of which this volume is part examines the connections between demographic change and economic development in East Asia with the goal of determining whether or not demographic change, in general, and population policy, in particular, played an important role in East Asia's economic success. The results of the study are reported in two volumes. The focus of this volume is population policy in East Asia. What policies and programs were implemented and at what cost? What evidence is there that East Asia's population policies achieved their demographic goals? Were there features of these programs that

led to their success and offer lessons for other countries? A companion volume examines the development impact of demographic change (Mason forthcoming). Specifically, what aspects of the region's development were influenced by demographic trends? What were the mechanisms through which population influenced the East Asian economies? What institutional, political, social, and economic features conditioned the influence of population on development?

The study examines the experience between 1960 and 1990 of six East Asian economies: Japan, South Korea, Taiwan, Singapore, Thailand, and Indonesia. These countries were selected for several reasons. First, they are the first group of developing countries to achieve low fertility, fertility low enough, except in Indonesia's case, to produce zero or negative population growth. The transition from high to low fertility has been so compressed that we actually have an historical record of the entire transition and accompanying economic changes. The demographic changes—the decline in fertility, the rise in life expectancy, and the swings in age structure—have been so substantial that their development effects should be evident if population really does matter.

Second, the governments of East Asia changed course with respect to population policy early in the post-World War II era. They abandoned the view that a large and growing population was a source of national strength, and embraced the view that population growth was a threat to development goals. Within a relatively brief period of time, pronatalist policies were abandoned and, over time, a wide variety of antinatalist programs and policies were adopted. Governments engaged in educational programs, increased the availability of contraceptive supplies and services, urged their citizens to adopt small family norms, and relied on incentives and disincentives to encourage couples to bear fewer children. The countries examined in this study, however, did not resort to coercive programs, such as India's short-lived compulsory sterilization program or China's one child policy.

Third, the East Asian experience is instructive because the development policy environment was so outstanding. Many scholars have maintained that rapid population growth exacerbates the costs of poor economic policy. Less clear, however, has been the impact of population variables in an environment of outstanding policy formulation and implementation. Of course, the countries of East Asia have made mistakes, as recent events have so convincingly demonstrated, but few countries have matched their record over the post-World War II era.

Although the shared experience of the six economies motivates this study, their differences are also instructive. The economies span a wide range of development and demographic circumstances. Income levels in Japan and Singapore

were substantially higher than those in Thailand and Indonesia in 1960. Women in Japan were already bearing only two children each in 1960, whereas in Indonesia fertility decline did not begin until the late 1960s. The populations of Indonesia and Japan are among the largest in the world; Singapore's is among the smallest. Immigration was an important component of demographic change in Singapore, but not elsewhere. Regional variation in the populations and economies of Thailand and Indonesia are critical to an understanding of development in those countries, much more so than in Taiwan or South Korea. The countries of Northeast Asia were densely populated by 1960 and possessed limited natural resources. Thailand, on the other hand, was still bringing land under cultivation in 1960, and Indonesia's development during the 1970s was aided by vast petroleum reserves.

#### EAST ASIA'S SUCCESS

In the 1950s, the countries of East Asia were poor and their prospects did not seem promising. By 1960 per capita income in Japan had increased to almost \$3,000, less than one-third of the U.S. level. In the other countries, however, per capita GDP ranged from a low of \$600 in Indonesia to a high of \$1,700 in Singapore.<sup>2</sup> Histories of foreign domination, except in Japan and Thailand, have undermined the development of strong political and economic institutions. Much of the region's wealth and the institutions that did exist were destroyed by revolution and war—World War II, civil war in China, and the Korean War. Efforts to rebuild physical infrastructure and to industrialize were hampered by very low saving and investment rates. The economies were overwhelmingly agricultural and, especially in Northeast Asia, prospects for increasing food production or agricultural employment appeared to be bleak because of the limited supply of agricultural land. With the exception of Indonesia's large petroleum reserves, the countries were poorly endowed in natural resources.

Accelerating rates of population growth were also a serious concern. Taiwan and South Korea both experienced large population inflows. More than a million Chinese nationalists fled to Taiwan from the mainland in 1949 and 1950. South Korea experienced two large-scale migrations—the first a repatriation of Koreans after the defeat of Japan in World War II, the second an influx from North Korea when China entered the Korean War. By the late 1950s and early 1960s, however, rapid population growth could be traced to declining death rates and high birth rates. Birth rates had declined in Japan, but elsewhere women were averaging about six births each over their reproductive span. Given mortality conditions

earlier in the twentieth century, many children died during the first few years of life. But significant declines in infant and child mortality led to much larger families and more rapid population growth.

There were a few bright spots. Wealth and income inequality were relatively low in Northeast Asia. This was a consequence of both wartime destruction and major land reform programs in Taiwan and South Korea. The countries enjoyed relatively high levels of literacy and significant pools of educated manpower. Substantial levels of foreign assistance, especially from the United States, helped with reconstruction efforts.

No one anticipated the economic success that the countries of East Asia would enjoy over the coming decades. Economic growth was exceptionally high in Japan beginning in the 1950s, in South Korea, Taiwan, Singapore, and Thailand beginning in the 1960s, and in Indonesia beginning in the 1970s. Between 1960 and 1990, real per capita gross domestic product grew at an annual rate of more than 6 percent in South Korea, Singapore, and Taiwan, at 5.3 percent in Japan, 4.4 percent in Thailand, and 3.8 percent in Indonesia. During the same period, U.S. growth averaged 2.0 percent per year. Per capita income in South Korea increased from \$900 in 1960 to \$6,700 in 1990. In Singapore, per capita income rose from \$1,700 to \$11,700 during the same period (Summers and Heston 1991).

The rise in per capita income is just one of many features of the region's economic success. Despite the limited supply of agricultural land, food production grew rapidly, easily outstripping population growth. Growth in the industrial and service sectors provided employment opportunities more than sufficient to match the rapidly growing working-age population and the increased entry of women into the workforce. Universal literacy and substantial improvements in educational attainment were achieved. Rates of saving and investment increased to high levels, and the more advanced economies became major lenders on international capital markets. The status of women improved, with substantial declines in the gender gap in educational attainment, employment, and wages in many countries.

Demographic change in East Asia was as dramatic as economic change. Infant and child mortality rates dropped to low levels, and life expectancy at birth approached (and in Japan surpassed) levels found in the West. The drop from high to low fertility came with remarkable speed. Of all the countries with high fertility in 1960, in only six were women averaging two or fewer births by 1990: Taiwan, South Korea, Thailand, Singapore, Hong Kong, and China. Of 36 countries with a per capita income of less than US\$1,000 and a population in excess of 2 million in 1960, only five had achieved a total fertility rate of three births or

fewer per woman by 1990: China, South Korea, Thailand, Indonesia, and Romania (Feeney and Mason forthcoming).

Changes in fertility and mortality influenced two other important demographic variables, population growth and population age structure. By the early 1990s, Japan's population growth had dropped to only 0.2 percent per annum. Population growth in South Korea, Taiwan, Singapore, and Thailand had declined to about 1 percent per annum. In Indonesia, where fertility declined somewhat later, population growth had dropped to 1.6 percent per annum by 1990–94. Despite the shift to slower growth, the countries of East Asia did not avoid large increases in their populations. Between 1950 and 1995, Japan's population increased by 50 percent, the populations of South Korea and Indonesia more than doubled, and those of Taiwan, Singapore, and Thailand nearly tripled (Feeney and Mason forthcoming).

Why did populations increase so substantially despite the dramatic decline in childbearing? The phenomenon, called *population momentum*, occurs because rapidly growing populations have a characteristic age structure that favors population growth. Large percentages of these populations are young adults, who are bearing children, and small percentages are at older ages, where the risks of mortality are high. Such an age structure leads to an elevated birth rate, a depressed death rate and, consequently, more rapid population growth. Slowly the age structure evolves as a result of lower fertility and higher life expectancy. The percentage in the childbearing years drops and the percentage at high-mortality ages increases leading to slower population growth. Eventually population growth stops if women average about two births each during their lifetime (replacement fertility) or if fertility drops below replacement level, populations begin to decline.

Japan's population is expected to begin declining during this decade, but the other countries of East Asia should continue to experience moderate population growth for at least several more decades. Recent UN population projections anticipate that Thailand will continue to experience population growth until 2040 and that Indonesia's population will still be growing in 2045–2050, the last period for which projections are available (UN 1998). Nonetheless, the era of rapid population growth has ended in East Asia, and populations are much smaller than would have been the case had fertility remained at high levels or declined only gradually.

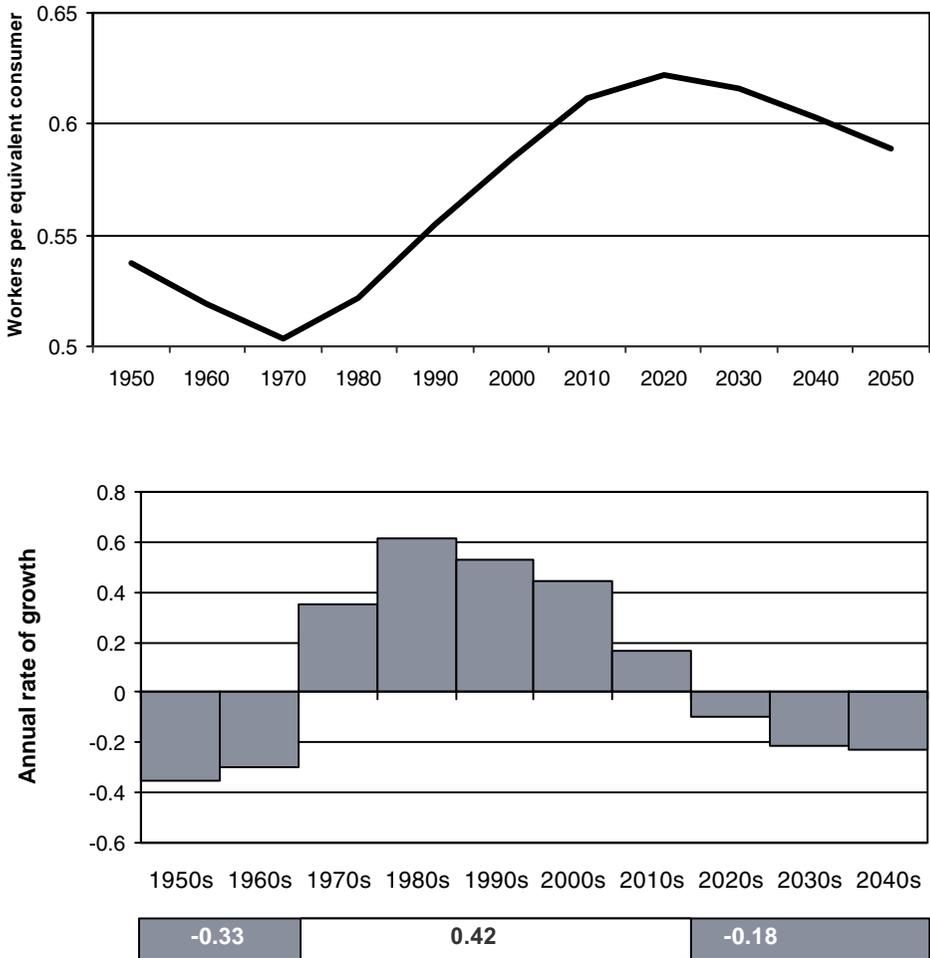
Changes in age structure in East Asia have been large and have occurred rapidly as compared with other countries. Of particular importance to economic growth have been changes in the size of the working-age population relative to

dependent populations, those who are either too young or too old to work. Most East Asian countries have gone through three phases. During the first phase, the dependent populations were growing relative to working-age populations because declining infant and child mortality rates led to rapid growth in child populations. During the second phase, working-age populations were growing relative to dependent populations. The numbers of dependent children stabilized with lower birth rates, but working age populations continued to grow rapidly with the entry of large cohorts of young workers. The second phase dominated changes in age structure in East Asia during the period 1960–90. Japan has entered the third phase, and other countries will follow in the coming decades. During this phase, growth of the working age populations slows while older dependent populations continue to experience rapid growth. Consequently, the working-age populations will decline relative to dependent populations.

These three phases are captured by the economic support ratio, which measures the working population relative to the consuming population.<sup>3</sup> Figure 1.1 shows the support ratio for Southeast Asia. The first phase during which the support ratio deteriorated is evident during the 1950s and the 1960s. The second phase began in the 1970s and is projected to last for 5 decades. During that period, the number of workers per consumer is expected to increase from 0.50 to 0.62, an increase of 24 percent. Starting in the 2020s, the support ratio is projected to begin a long and sustained descent. Two alternative representations of the support ratio are provided in the lower panel of Figure 1.1. The first gives the average annual rate of growth for each decade. The horizontal bar represents the three phases and reports the average rate of growth during each phase.

The varied patterns in the support ratio and the distinctive features of East Asia are evident in Figure 1.2. In South Korea and Indonesia, the growth phase of the support ratio is expected to last for five decades, and the annual rates of increase are substantial. Taiwan and Singapore experienced similar changes (figures are not shown). Changes in age structure in Thailand and the Philippines have also been favorable, but the increase in the support ratio has been somewhat smaller than in Indonesia or South Korea. Japan's growth phase is now complete. In India, where fertility decline began later and has been slower than in East Asia, the growth phase of the support ratio is both short in duration and modest in level. In Bangladesh, where fertility decline has been more rapid in recent years, the trend in the support ratio is more favorable.

The analysis presented in *Population Change and Economic Development in East Asia: Challenges Met, Opportunities Seized* (Mason forthcoming) examines the connection between the important demographic changes that occurred



**Figure 1.1.** Economic Support Ratio, Southeast Asia.

in East Asia and key economic variables, e.g., innovation, labor productivity, saving and investment, international capital flows, health, education, per capita income, and inequality.<sup>4</sup> The results are briefly described here before turning to the research presented in this volume.

## THE CHALLENGES OF POPULATION GROWTH

In 1960, East Asian countries faced two challenges—feeding rapidly growing populations and providing good jobs for rapidly growing and, except in Japan and Singapore, predominantly rural labor forces. Despite the speed of fertility decline,

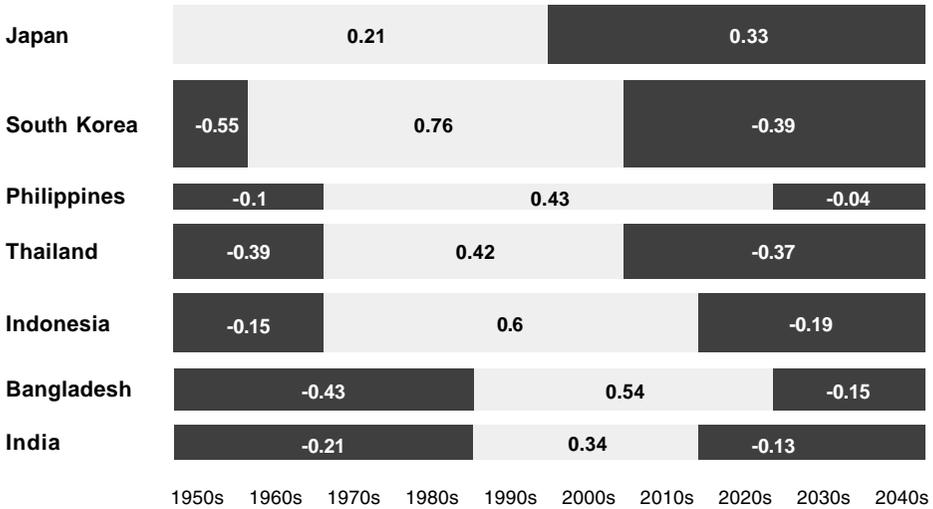


Figure 1.2. Growth Rates (%) of Economic Support Ratios, Selected Asian Countries.

substantial population growth was unavoidable for reasons discussed above. Population policy, no matter how effective, could not achieve population stabilization overnight. With one important exception, however, population growth did not impede East Asia's development efforts.

The food challenge was met with resounding success. Food output per capita increased by 36 percent in Asia and 47 percent in East Asia between 1963 and 1992, despite its limited supply of agricultural land. During the same period, food production per capita increased by only 13 percent in Latin America and declined by 7 percent in Africa. East Asia succeeded by greatly increasing agricultural yields. Increased demand for food, caused primarily by population growth, in conjunction with substantially lower fertilizer prices, led to the development of new high-yielding varieties of rice and wheat (Hayami forthcoming).

The employment challenge was met more successfully in East than in Southeast Asia. In Japan, Taiwan, and South Korea, where the supply of land was especially limited, employment opportunities were created through changes in industrial and occupational structure. Despite growth in the total labor force, the agricultural labor force declined by 4 percent per year in Japan, by 2 percent annually in Taiwan, and by 1 percent annually in South Korea between 1960 and 1990. Expansion of the manufacturing and service sectors was so rapid that the limited availability of land had no bearing on employment. Thailand and Indonesia responded somewhat differently to rapid labor force growth. In both countries, land under cultivation increased during this period. Thailand, in particular,

managed to absorb substantial numbers of agricultural workers with no substantial decline in arable land per agricultural worker. Of the countries examined in this study, only Indonesia experienced a significant drop in arable land per agricultural worker. Nonagricultural employment also grew very rapidly in Thailand and Indonesia, but the manufacturing and service sectors were so small in 1960 that even their rapid growth was insufficient to absorb the large number of new workers. In both countries, labor productivity in the agricultural sector grew much more slowly than in the non-agricultural sector. Not only was this a drag on economic growth, it was also a source of rising inequality (Mason forthcoming).

In retrospect, fears about the development impact of population growth per se were probably exaggerated in East Asia. Substantial population growth was accommodated in Northeast Asia with no apparent adverse economic effects, and in Southeast Asia with only modest difficulties. Several points, however, should be borne in mind. The first is that adverse effects of population growth may have been avoided, in part, because population growth did slow substantially during this period.

The second point is that the favorable outcome in East Asia was not automatic, but a consequence of very effective development policy combined with a favorable economic environment. East Asia's experience with agricultural innovation illustrates this point. Even before the mid-1960s, population growth was substantial, the price of fertilizer had declined, high-yielding varieties were available for temperate zones, and major advances were possible with relatively modest effort. Yet, gains in yield were unimpressive until after 1965, when a *social decision* was made to invest in research that would otherwise not have taken place. Moreover, as compared with other regions of the world, Asia had relatively well-developed transportation and irrigation systems that were essential elements of the green revolution. Both research efforts and infrastructure systems require the existence of political institutions that can effectively identify and respond to public needs (Hayami forthcoming).

The third point is that rapid changes in age structure, childbearing, and life expectancy created opportunities for more rapid economic growth in East Asia even as population growth abated. The opportunities came in three forms: the emergence of a large gap between population growth and potential labor force growth; changes in incentives and age structure that favored higher rates of saving and investment; and changes in incentives and age structure that favored greater human resource investment. A major part of the East Asian success story is how the region seized these opportunities.

## DEMOGRAPHIC CHANGE AND DEVELOPMENT OPPORTUNITIES

Between 1960 and 1990, the gap between labor force growth and population growth was so large that the region's labor force increased by 25 percent more than the population, producing additional growth in per capita income of about 0.8 percent per year. Labor force growth slowed much more slowly than population growth because of favorable changes in age structure and because of increased female labor force participation. The greater involvement of women in the formal labor force can be traced to a complex set of changes, some demographic (later age at marriage and declining childrearing responsibilities), others economic (rising wages and changes in employment structure), and still others political (changes in tax codes and policies toward discrimination) (see Bauer forthcoming, Okunishi forthcoming).

Dramatic increases in saving and investment are often cited as important sources of economic growth in East Asia (Bauer forthcoming). The effect of demographics on saving and investment rates is a controversial issue examined thoroughly in this project. Recent research shows that changes in age structure, childbearing, and life expectancy have an effect on saving rates, but estimates of the size of the effect vary greatly from study to study (Williamson and Higgins forthcoming, Lee, Mason, and Miller forthcoming, 2000, Toh forthcoming, and Deaton and Paxson 2000). Employing a "middle-of-the-road" estimate of the saving effects leads to the conclusion that higher rates of saving and investment *due to changing demographics* accounted for about one-fifth of the increase in output per worker. When combined with the gap between population and labor force growth, it appears that demographics accounted for about one-fourth of the increase in output per capita between 1960 and 1990 in Singapore and Northeast Asia.

Domestic demographics had smaller effects on the labor-population growth gap and saving and investment rates in Thailand and Indonesia prior to 1990. The demographic transition occurred somewhat later there than in Singapore and Northeast Asia. In Taiwan, for example, demographics became favorable to saving around 1970, but fertility did not begin to decline until a decade later in Thailand and later still in Indonesia. The labor-population growth gap was smaller in Thailand and Indonesia. Moreover, they were less successful in translating rapid labor force growth into higher per capita income because, as explained above, they were less successful at absorbing their labor forces into higher value-added, nonagricultural sectors. Thailand and Indonesia did benefit from changes in demographic conditions in Japan, which became a major source

of capital during the 1980s. Japan's enormous current account surplus can be traced, in part, to the effects of demographic conditions on the supply of savings and the demand for capital (Williamson and Higgins forthcoming).

Changing demographics in East Asia also had favorable effects on child health and education, but the resulting improvements in human resources exerted little influence on economic growth per se before 1990. Except in Japan, demographics began to have a favorable impact on human resource investment around 1970 or later. Given the inherent lags between investment in children and improvements in the characteristics of adults and workers, fertility decline could not have influenced labor force quality to any important extent until the 1980s or later. Human resource effects are important, but they will be felt in the future more than they have been evidenced in the past. Of course, the improvements in child health and education contributed more immediately to welfare in ways not captured by conventional economic measures such as per capita income (Ahlburg and Jensen forthcoming, Jensen and Ahlburg forthcoming).

As with the gains in agricultural productivity cited above, rapid growth in employment, increased rates of saving and investment, and greater investment in human resources were not inevitable consequences of East Asia's changing demographics. Rising unemployment was an alternative to rapid employment growth. A wide range of successful development policies created rapid expansion in job opportunities. These included outward-looking strategies that encouraged domestic enterprises to compete in the global market place; stable macroeconomic policies that ensured low rates of inflation, discouraged capital flight, and promoted economic efficiency; and the use of financial incentives, subsidies, and access to credit to promote the growth of key industries. In similar ways, increased investment in human and physical capital was not an automatic outcome of demographic change but depended, as well, on policies that promoted saving and increased spending on education.

## POPULATION POLICIES AND PROGRAMS

The chapters in this volume provide a careful documentation of the programs and policies implemented during the post-World War II era, the motivation behind those policies, the costs of the programs, and an assessment of their contribution to the rapid fertility decline in East Asia.

The countries of East Asia were pronatalist in their views and policies until the second half of the twentieth century. Inoue describes the situation in Japan in the chapter that follows (Chapter 2). Japan's Meiji government prohibited not just

infanticide and abortion, but also the manufacture and distribution of contraceptives, because it viewed a large population as important to its military and economic power (Inoue, Chapter 2). Sun Yat-Sen, the founder of the Republic of China, believed that slower population growth would undermine his nation's power (Liu, Chapter 4). Thailand's government was providing bonuses for large families as late as 1956 (Gullaprawit, Chapter 6). In Indonesia, President Soekarno was unconcerned about rapid population growth, and family planning efforts were unpopular with community and religious leaders (Pasay and Wongkaren, Chapter 7).

In the late 1950s and early 1960s, positive views toward larger populations began to give way to concern about the adverse consequences of rapid population growth. Despite opposition from some political groups, governments cautiously initiated efforts to slow rates of growth. They began to dismantle legal obstacles to fertility reduction. Japan led this trend by legalizing, in 1947, the manufacture and distribution of most contraceptive drugs and devices by private companies. (It legalized oral contraceptives only recently, however.) In 1948, it essentially legalized abortion—allowing it if a pregnancy threatened a woman's physical or economic well-being (Inoue, Chapter 2). In 1961, South Korea set aside its law prohibiting the importation or production of contraceptives. In Indonesia, the Ministry of Health ended its prohibition against the distribution of contraceptives in the 1960s. Governments also joined efforts by nongovernmental family planning organizations that had recently been established in the region. Private organizations such as the Population and Community Development Association of Thailand, the Indonesian Planned Parenthood Foundation, and the Planned Parenthood Federation of Korea played a particularly important role during this transitional period.

With varying speed, governments in the study-countries became increasingly involved in population policies and programs. Key political and religious groups were persuaded of the importance to development of slowing population growth. The governments adopted national development plans with specific population growth-reduction targets. They initiated public campaigns to persuade couples of the importance of bearing fewer children. They attacked ignorance about modern contraceptive methods through education efforts both in the communities and in schools. Family planning clinics and distribution systems, many of them heavily subsidized, were established to increase the availability of contraceptive supplies and services.

The earliest efforts focused on education, persuasion, and increased access to modern contraceptives. Beginning in the 1970s, however, some of the governments

implemented “beyond family planning” policies. Singapore adopted a comprehensive set of incentives and disincentives (Yap, Chapter 5), and similar efforts were pursued elsewhere in the region. Many of these efforts relied on financial incentives, but other initiatives were designed to attack some of the social underpinnings of high fertility. In South Korea, for example, legislative action addressed gender bias in the hope that reducing couples’ preference for sons would lead to lower birth rates (Kwon, Chapter 3). In the countries examined in this study, however, population measures stopped well short of coercive programs, such as India’s ill-fated sterilization campaigns and China’s one-child policy.

What led countries in developing Asia to respond so quickly and decisively to rapid population growth? And why was the response so much faster than in other developing regions? Part of the answer lies in changing demographic conditions. Asia was the most densely populated region of the world, and population growth rates were accelerating in the 1950s and 1960s. The view that a large population would contribute to the strength of a nation began to give way. Political and intellectual leaders were influenced, in part, by views in the West. Western academics involved in reconstruction efforts in Taiwan, South Korea, and Japan expressed concern about rapid population growth. Family planning activist Margaret Sanger, for example, was a frequent and influential visitor to Japan. Governments and scholars in East Asia conducted their own assessments, however, and many concluded that continued rapid growth represented a serious impediment to development objectives (Liu, Chapter 4; Yap, Chapter 5; Gullaprawit, Chapter 6).

Several other factors contributed to Asia’s rapid and vigorous policy response. First, few Asian governments faced active opposition from powerful religious groups, in contrast with Latin America. In the Philippines the Catholic Church and in Pakistan Islamic leaders have wielded considerable influence in opposition to contraception. In the study countries, however, religious opposition to family planning was either nonexistent or muted. Even in Indonesia, the largest Islamic nation in the world, religious leaders did not actively oppose President Soeharto’s decision to promote family planning efforts.

Second, Asian countries experienced more political stability than most of Latin America and Africa. Consequently, their governments could realistically pursue longer-term goals. In South Korea, President Park Jung-Hee remained in power for 18 years after announcing his support for slowing population growth. In Taiwan, President Chiang Kai-Shek held office from 1950 to 1975. Lee Kuan Yew served as Singapore’s Prime Minister from 1959 until 1990. Prior to its recent financial and political crisis, Indonesia had known only two heads of state,

Soekarno, who governed from 1945 to 1966, and Soeharto, who maintained his hold on power for more than three decades. Among the six study countries, only Thailand experienced repeated changes in government, but even there the monarchy provided continuity and a stabilizing influence. Its political transitions were often relatively peaceful and unaccompanied by wrenching changes in direction. Although strong political leadership in the region allowed a rapid shift in population policy, it by no means guaranteed that outcome. The particular policies pursued depended on the views of the leadership. A shift in policy was possible in Indonesia, for example, only with Soekarno's departure (Pasay and Wongkaren, Chapter 7).

Third, many Asian governments were inclined toward activism. Governments in India, Sri Lanka, the Communist regimes, and other Asian countries took it upon themselves to direct many details of their economies and social affairs. The study countries of East Asia avoided the disastrous consequences of command economies, but their governments were much more actively involved in directing their economies than were governments in the West. They were much more active in dealing with social issues as well.

East Asia's family planning programs were possibly the best run of any in the world. In a short period of time, they greatly expanded the supply of modern contraceptive services at relatively modest cost. Programs in Taiwan, South Korea, and Thailand have served as models for other countries. Tsui (forthcoming) attributes their success to four factors. First, despite the governments' primary objective of curbing rapid population growth, their programs and policies emphasized family planning and health objectives. Second, religious or other politically powerful groups did not mount strong opposition to the programs. Third, the governments maintained a significant and sustained effort, which included significant financial support. Finally, the governments willingly and successfully worked with nongovernmental entities.

Despite their success at meeting programmatic goals, it is difficult to assess the effects of population programs and policies on demographic outcomes—that is, to determine how rapidly fertility would have declined in the absence of government action. The study countries were all experiencing rapid social and economic development. Reductions in child mortality, increased female employment, higher wages, greater educational opportunities for women, and a host of other development factors contributed to changing attitudes toward childbearing. Fertility preferences may have changed more rapidly because of government initiatives, but assessing whether this was so is not easy. Likewise, it is difficult to determine how much more rapidly effective, safe, and inexpensive

birth control became accessible because of government programs. In an analysis of the determinants of fertility decline, Tsui (forthcoming) estimates the contribution of family planning and development factors. She concludes that the total fertility rate in other countries of the developing world would have been lower by one birth per woman from 1982 onward had they implemented family planning programs similar to those in the study countries of East Asia.

The success of population policies in East Asia came at a cost. Our authors provide differing views on the importance of external funding. Liu (Chapter 4) believes that external support played a critical role in Taiwan because of the controversial nature of family planning programs, not because of their cost. Public financing of family planning did not begin there until 1968. Kwon (Chapter 3) believes that external support was critical to South Korea's efforts because of financial constraints. Of course, South Korea was a good deal poorer in 1961 than was Taiwan in 1968.

As the countries of East Asia have developed, reliance on external resources has declined and family planning programs have increasingly been financed by governments and users. The best available information suggests that annual per capita funding of family planning was approximately US\$.20 cents or less in the mid-1970s and rose to around US\$1.00 by the early 1990s. In Singapore and South Korea, public spending peaked during the 1980s and has declined substantially in recent years as more and more couples have turned to private family planning sources (Tsui forthcoming). At no time have family planning expenditures been a large portion of government budgets. In Thailand, for example, the peak demand on public coffers occurred in 1977, when 0.38 percent of total government expenditures went to family planning (Gullaprawit, Chapter 6, Table 6.6.) In Indonesia, family planning expenditure reached 0.6 percent of the government's budget in 1986-87 (Pasay and Wongkaren, Chapter 7, Table 7.8). Clearly, funding population programs was not a major financial burden for the countries of East Asia.

## CONCLUSIONS

In 1960, the countries of East Asia faced difficult problems. In the view of many at the time, rapid population growth was one of the most serious of those problems. Over the next three decades, these countries were extraordinarily successful in reducing fertility and slowing population growth, overcoming potential problems associated with the significant population growth that did occur, and turning changes in age structure and other demographic characteristics to their economic advantage. How this was accomplished is an important story because

of its potential value to other developing countries confronting similar development issues.

Among the most important lessons that the East Asian experience offers are the following:

- First, given the right conditions, fertility will decline to low levels with remarkable speed. Within a period of two to three decades, the total fertility rate dropped from six births per woman to two births per woman or fewer. For the most part, coercion did not play a systematic or important role.
- Second, there are different paths to low fertility. In Japan and other more industrialized countries, social and economic development drove fertility to low levels. Governments played a secondary role by either impeding or facilitating the availability of contraceptive technology. But in East Asia's developing countries, rapid fertility decline occurred, in part, as a consequence of the region's rapid social and economic development and, in part, because effective and comprehensive public programs encouraged couples to reduce their childbearing and provided them with effective and low-cost means to regulate their fertility.
- Third, the development impact of population change is complex and multifaceted. During East Asia's unusually rapid demographic transition, countries were experiencing large changes in population size and growth rates, birth and death rates, and age structure. These demographic changes influenced the relative sizes of the dependent and working age populations, the economic roles of women, incentives for saving and investment, decision-making about investing in the health and education of children, various dimensions of income inequality, and international capital flows. In East Asia, rapid demographic transition had a substantial, favorable development impact.
- Fourth, the development benefits of fertility decline and demographic transition are not automatic. Favorable outcomes depended to a great extent on the effective development policies that characterized the region. The gap between labor force and population growth was advantageous only because effective export promotion provided gainful employment to a rapidly growing labor force. Demographic change led to high saving rates because macroeconomic stability and the development of financial institutions encouraged saving, and because governments avoided large-scale transfer programs that might have undermined saving incentives. Changes in the population

age structure led to greater spending on education because public policy and parents attached a high priority to education. Changes in the childbearing responsibilities of women had a favorable economic effect because governments eliminated laws and administrative policies that discriminated against women. In short, rapid demographic change was a necessary but by no means sufficient condition for rapid economic growth. Demographic changes created opportunities that East Asian countries seized by pursuing economic and social policies that supported development efforts.

That population policies and programs were a success in East Asia is an inescapable conclusion. Commitments to reducing rates of childbearing and slowing population growth rates were followed by unprecedented declines in fertility. Rapid social and economic development drove the region's demographic transformation, but government action accelerated population change and economic development.

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## ENDNOTES

- 1 Throughout this book we use the term East Asia to refer to countries in both Northeast and Southeast Asia.
- 2 All GDP figures in this chapter are expressed in 1985 international prices and taken from the Penn World Tables (Summers and Heston 1991).
- 3 The support ratio can be refined to incorporate age-variation in productivity and consumption needs. In this case, the numerator weights the population in each age by the average productivity of workers in that age group, usually measured using the age-earnings profile. The denominator allows for age-variation in consumption needs by using weights that are typically lower for children and may be lower or higher for the elderly than for prime age adults. Lee, Mason, and Miller (forthcoming) provide detailed calculations for Taiwan. The results presented here use a consumer weight of 0.5 for children aged 0–14 and a weight of one for all other ages.
- 4 See Bloom and Williamson (1998) for a similar approach.

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## Population Policies and Programs in Japan

*Shunichi Inoue*

Unlike other East Asian countries, Japan has had no government-sponsored family planning program in the course of its demographic transition, except during a brief period. According to periodic surveys conducted by the United Nations Population Division of official population policies and programs, the only concrete government action Japan has taken to affect its population trends has been an effort to modify its regional population distribution (UN Population Division 1995). It would be a mistake, however, to infer that the government has had no interest in population issues or that it has formulated no population policies.

As elsewhere, population characteristics in Japan have been closely related to economic development, and the government has played an important role in the development process. Why, then, has the government not sponsored a family planning program? How did Japan's fertility decline occur in the absence of such a program? How have population changes contributed to economic development, and what was the government's role in guiding population trends to accommodate economic needs?

This chapter traces the history of Japan's population policies and their relationship to economic development in the nation's modern era, particularly since World War II. For the sake of clarification, I define a population policy as a stated government policy aimed primarily at influencing the size, composition, or distribution of the population, and a population program as the legislative and administrative measures adopted to achieve such policy objectives. Population policies are often directed at influencing fertility because it strongly affects the growth and composition of the population. Strictly speaking, policies aimed at improving the health conditions of the population are not population policies, because their goals are fixed regardless of the demographic consequences. Nevertheless, health measures have demographic effects (Y. Okazaki 1997, 9–10), and for that reason I include them in my discussion. Policies intended to affect internal and international migration are population policies because they directly affect population distribution, although their immediate objectives are not demographic but rather aimed at serving social and economic purposes. The

following discussion is therefore divided in two parts: policies on population growth and policies on population distribution.

## POLICIES ON POPULATION GROWTH

Japanese population policy in the modern era (since the middle of the nineteenth century) has evolved in four successive stages, corresponding to four distinct demographic trends. They are (1) the period before the end of World War II; (2) the period of the postwar baby boom and subsequent rapid fertility decline under conditions of economic hardship; (3) the period of stable low fertility, accompanied by rapid economic growth; and (4) the recent period of subreplacement-level fertility and decelerated economic growth.

### The Period Before the End of World War II

After two centuries of self-imposed isolation from the rest of the world, in 1859 Japan opened three of its ports to five countries: the United States, Russia, the United Kingdom, Netherlands, and France. This exposure to external influences ultimately resulted in a wholesale restructuring of the society, punctuated by a political revolution called the Meiji Restoration in 1868. Under the new government, Japan began to build a modern and militarily stronger nation to protect itself from possible invasion and colonization by the Western powers. I do not intend to discuss the history of Japan's modernization and industrialization, but merely to note the resumption of significant population growth during this period. Records of population surveys conducted by the feudalistic Edo government since the seventeenth century indicate that the Japanese population was nearly stagnant during the eighteenth century and the first half of the nineteenth century.

In 1872 the new government conducted a nationwide census of the population and of Japanese households, counting 34.8 million residents. Between then and World War II, Japan's population more than doubled, reaching 71.9 million in 1940. The increase was due presumably to both a continuous decline in mortality and a rise in fertility. According to official statistics, however, between 1873 and 1920 both the crude birth rate and the crude death rate rose: from 23.1 to 36.2 births per 1,000 inhabitants and from 18.9 to 25.4 deaths per 1,000. These rising trends, especially the latter, must reflect, at least in part, an improvement of the registration system (Y. Okazaki 1987, 20–24). But even after an adjustment is made for earlier underregistration of births and deaths, fertility appears to have risen in the early part of the twentieth century. As a

result, population increase accelerated from an annual rate of 0.43 percent in 1873 to 1.08 percent in 1920, when the first modern population census was conducted.

Despite the many problems caused by such a rapid population increase, the Meiji government evidently desired a larger population to strengthen its military and economic power. To maintain high fertility, it took the legislative step of prohibiting abortion and infanticide, which had been widely practiced during the Edo era. In addition, the government prohibited the manufacture and distribution of contraceptive drugs and devices in an effort to suppress birth control.

Birth control was first publicly discussed in Japan in a book entitled *The Social Improvement (Shakai Kaizo Ron)*, published by Jinmin Shinbun Sha (People's Newspaper Company) in 1903, but without drawing much public attention. After Margaret Sanger first visited Japan in 1922, however, it became a subject of increasing public debate as several organizations—among them the Japan Society for Birth Control Studies (Nihon Sanjiseigen Kenkyukai), founded by Isoo Abe and Keikichi Ishimoto, and the Advising Office for Birth Control (Sanji Seigen Sodanjo), established by Umashima—began to actively advocate birth control (A. Okazaki 1957, 38–39).

In 1927, when the Central Statistical Office reported that annual population growth exceeded 1 million, the government formed the Board of Inquiry on Population and Food Problems (Jinko Shokuryo Mondai Chosakai). The Board took the view that a larger population was a welcome indicator of national prosperity and only discussed ways of increasing food production to accommodate the growing population. (A. Okazaki 1957, 31).

The Institute of Population Problems, now called the National Institute of Population and Social Security Research, was established in 1939 under the auspices of the Ministry of Health and Welfare for a similar purpose. In 1941 the government decided to strengthen its efforts to increase population and drew up *Guidelines for Establishing Population Policy (Jinko Seisaku Kakuritsu Yoko)*, which included such measures as preferential treatment for pregnant women and nursing mothers, child allowances, and tax benefits for large families (A. Okazaki 1957, 32, 39; Takeuchi 1996, 123; Y. Okazaki 1997, 91–93).

The government's efforts to encourage larger families, especially during World War II, were only partially successful and could not reverse a long-term decline in fertility, which had begun around 1920 (Oobuchi and Morioka 1981, 189–94). The crude birth rate fell from 36.2 births per 1,000 inhabitants in 1920 to 29.4 by 1940. It then rose slightly above 30.0 between 1940 and 1943, apparently in response to the government's pronatalist measures, but appears to have

dropped below 30.0 again as the war was reaching an end in 1945. Official records of births are not available from 1944 though 1946.

In the six decades between the 1870s and the late 1920s, natural increase of the population, which was very slow in the mid-nineteenth century, gradually gained momentum, peaking in the late 1920s at a rate around 1.5 percent per year. After that, it began to decelerate, dipping below 1 percent toward the end of the 1930s. Obviously, in this period the government's pronatalist policy was not successful in overcoming Japanese couples' preference for smaller families, which was prompted by the expansion of the modern sector of the economy and urbanization. Between 1920 and 1940 the share of the labor force engaged in agriculture and other primary industries had dropped from 54 percent to 25 percent, and the proportion of the population living in cities had risen from 18 percent to 38 percent (Japan BOS 1975, tables 3, 32).

In addition, it should be noted that Japan's universal, compulsory education system, which began with the enactment of the Educational System Law (*Gaku Sei*) in 1872, had developed into a six-year compulsory system by 1907. By the 1920s, when population growth began to decelerate, illiteracy among the adult population had been almost totally eliminated except among the elderly. There can be no doubt that the diffusion of education to the general public was related to the spread of modern reproductive behavior, contributing to the preference for small families.

The second phase of Japan's demographic transition, during which fertility fell to replacement level, thus began in the 1920s and took roughly 30 years to complete. In retrospect it appears that the irregularity in vital rates that occurred during and immediately after World War II was only a temporary disruption, not a reversal, of that sustained fertility transition.

### **The Postwar Baby Boom and Subsequent Period, 1945–55**

When World War II ended, defeated Japan faced a ruined economy in a small, overcrowded territory. Most of its factories and machines had been destroyed by the Allied Forces' air raids, and those that had survived were removed as reparation for Japan's role in the war. Millions of former soldiers and nonmilitary personnel began returning to Japan from abroad. The number of repatriated Japanese citizens has been estimated at more than 4.5 million in 1946 and 1947 alone. The repatriates, mostly men, were reunited with their wives or, if unmarried, found wives. This marriage boom led to a postwar baby boom, which lasted for several years. The birth rate returned to the prewar level in 1951.

During the boom period, the crude birth rate reached 34.3 per 1,000 in 1947 and remained above 30 for several years. The combination of repatriation and the baby boom caused a surge in the population growth rate, which reached 5.0 percent in 1946 and then began to decline—to 3.1 percent in 1947, 2.4 percent in 1948, and 2.2 percent in 1949. The rapidity of the population increase was unprecedented and surprised many people in Japan, including many influential economists and politicians. Suddenly overpopulation was viewed as a threat, and many raised voices of alarm (A. Okazaki 1957, 171–74).

This period also saw improvements in public health, due to the activities of Japan's public health centers and advances in medicine. The crude death rate dropped from 14.6 per 1,000 in 1947 to 7.8 in 1955. The mortality decline contributed to the rapid growth of the population.

From 1945 to 1951, Japan was occupied and ruled by the Allied Forces, whose power and moral authority strongly influenced the Japanese people, transforming this nation from an autocracy into a democracy. In 1949 the General Headquarters of the Allied Forces invited two American population experts, Warren S. Thompson and Pascal K. Whelpton, to Japan. Both experts warned the Japanese of the danger of rapid population increase and advocated the adoption of birth control measures. When their recommendations were reported in Japanese newspapers, they were met with strong opposition from representatives of the Roman Catholic Church, including the Catholic chaplains of the Tokyo-Yokohama area and the Allied Catholic Women's Club of Tokyo. Faced with these objections, the General Headquarters of the Allied Forces announced that the views expressed by Thompson and Whelpton were the experts' own opinions and that the Occupation Forces would be neutral on the subject of birth control. The issue of birth control was left for the Japanese people to decide (A. Okazaki 1957, 181–83; *Mainichi Shimbun* Sha 1992, 68–69).

Nevertheless, the opinion of the two foreign population experts apparently influenced many Japanese. At least 16 groups and foundations were formed to advocate birth control in Japan within the next few years. The contraceptive practice rate began to rise sharply (Matsumura 1977, 167–78).

The Japanese government, which was not particularly sympathetic to the birth control movement, maintained that contraception was a matter to be decided by the individuals. But in 1947 it changed the Drug Law (*Yakuji Ho*) to permit private companies to manufacture and distribute contraceptive drugs and devices beginning in May 1949. In April 1949, it established the Population Problems Council (*Jinko Mondai Shingikai*), which in November 1949 submitted its first

resolution on basic population policy. Among other things, it recommended strengthening the activities of the public health centers and the marriage consultation offices, and delivering contraceptive drugs and devices to poor families without charge. In 1954 the council submitted to the Ministry of Health and Welfare a resolution advocating the control of the country's population size, and in 1995 it advocated reducing population growth to a level enabling the country to support itself (Mainichi Shimbun Sha 1992, 345-46).

In October 1951 the Japanese Cabinet decided to promote birth control, and in June 1952 the Ministry of Health and Welfare adopted Guidelines for the Promotion of Birth Control. In the succeeding years the Ministry's Institute of Population Problems and the National Institute of Public Health (Koshu Eisei In) began promoting birth control in "model districts." Newspapers reported in 1955 that the Ministry was going to enlarge its birth control promotion activities, securing considerable budgetary support from the central and local governments for this purpose.

The government's involvement in birth control activities did not continue very long, however, because private organizations and individual couples assumed the initiative for family planning (Minami 1972, 67-70). Sanger visited Japan again in 1952 and strongly advocated making birth control methods available to those who wanted them. Her visit helped to create a fever of support for the Japanese birth control movement. Newspapers carried large advertisements of contraceptives almost daily, and many books and pamphlets were published describing human reproduction and specific techniques for contraception. According to surveys conducted by the Pharmaceutical and Supply Bureau of the Ministry of Health and Welfare, the supply of such contraceptive products as tablets, suppositories, jellies, creams, condoms, pessaries, sponges, tampons, and washing tools increased rapidly, their combined value reaching 400 million yen in 1953 (A. Okazaki 1952, 184-88).

As the birth control fever spread, the contraceptive practice rate among urban couples of reproductive age rose from 25 percent to 28 percent in just three years (between 1950 and 1952), and that among rural couples rose even more dramatically, from 12 percent to 18 percent, over the same period, according to surveys conducted by the Institute of Population Problems (IPP 1953, as quoted by A. Okazaki 1957, 185).

The diffusion of contraception among the Japanese did not stop at that. According to periodic surveys conducted by the Mainichi Newspaper Company (Mainichi Shimbun Sha) beginning in 1950, the percentage of Japanese women who were current contraceptive users or had ever used contraception rose from

29 percent in 1950 to 52 percent in 1955, and to 68 percent in 1961 (Mainichi Shinbun Sha 1992, 54). The most popular method of contraception has been condoms, used by more than 50 percent of all users since 1952 and even reaching a prevalence of about 80 percent in 1980. Next in popularity during the 1950s and 1960s was periodic abstinence, which 30–40 percent of contraceptors relied upon. Contraceptive failure was common, however, and many of those who experienced a failure sought an induced abortion, abortion having become legal in Japan in 1948 (Mainichi Shinbun Sha 1992, 54).

As early as 1917 Japanese scholars and politicians expressed concern about the inheritability of mental diseases. In 1938 the Ministry of Health and Welfare established a Eugenic Division to handle eugenic issues. Two years later the government enacted a National Eugenic Law (Kokumin Yusei-ho), which permitted doctors to conduct “eugenic” sterilizations upon the request of their patients. The number of operations that were performed was small, however, never exceeding 200 per year during the period from 1941 to 1947. This legislation was not aimed at affecting population growth and was unrelated to population policy (A. Okazaki 1957, 195–99).

In July 1948, a Eugenic Protection Law replaced the National Eugenic Law. The new law had two distinctive features: it permitted compulsory sterilization for eugenic purposes under certain conditions, and it allowed induced abortion for eugenic purposes as well as to protect the life and health of the mother. Under the new law, which still exists today, the life and health of the mother were considered to be in danger if she had an inheritable disease, if her pregnancy resulted from rape, or if she had a health problem or economic difficulties. In other words, it became possible for a pregnant woman to obtain a legal induced abortion if her pregnancy posed a threat to her physical or economic well-being. These broad grounds allowed a physician to perform an induced abortion whenever a pregnant woman requested one, regardless of her reason (A. Okazaki 1957, 199–203). It is difficult to regard this legislation as purely eugenic in its intent; rather, it became an effective legal measure for terminating unwanted pregnancies. As such, it quickly brought rapid population growth under control.

After the enactment of this legislation, the reported number of induced abortions increased rapidly, from 102,000 in 1949 to 1,170,000 in 1955. Many more went unreported. By 1955 the ratio of reported induced abortions to live births reached 68 percent (IPP 1996, 66). Owing to the frequent failure of contraception in the early years, many women sought induced abortion as an easy solution to an unwanted pregnancy. Some couples may not have even bothered using a contraceptive method, relying instead on induced abortions to limit

their family size. The large numbers of reported and unreported abortions indicate that this method of birth control was mainly responsible for Japan's rapid fertility decline in the early 1950s.

### The Period of Stable Fertility, 1955–75

The government's 1956 *Annual Economic Report (Keizai Hakusho)* announced that the postwar reconstruction period was over, as national income per capita had regained its prewar level in 1955. During the two decades following this announcement, Japan experienced remarkable economic growth. The gross domestic product (GDP) per capita reached the level of many European countries. Industrial output rose sharply, and a massive shift of the work force from agriculture to manufacturing industries took place to meet the growing demand for industrial labor. These changes led to a voluminous movement of the population from rural to metropolitan areas.

In those years the large labor demands of the expanding manufacturing industries were also met by the fairly rapid growth of the productive-age population, which sprang from the relatively high prewar birth rates and the postwar baby boom. The annual rate of increase in the productive age group (15–49) was around 2 percent in the 1950s and still well above 1 percent in the 1960s (Figure 2.1). Because fertility had already declined substantially, the gap between the growth rate of the total population (consumers) and the productive-age population (producers) widened considerably. This created what might be called a demographic bonus in the sense that the number of producers was increasing much faster than the number of consumers.

This period was characterized by stable fertility. Between 1955 and 1975, the net reproduction rate (the number of daughters borne by the average Japanese woman who survived to reproduce themselves) remained around the replacement level, with only small variations (between 0.9 and 1.06). A sharp drop in fertility in 1966, when the net reproduction rate fell to 0.73, was an exception. That year was the *Hinoeuma*, the Year of the Fire-Dragon in the traditional Chinese calendar. According to traditional Chinese belief, a girl born in that year would kill her future husband. Many Japanese parents avoided having a baby in that year to prevent future marital difficulties for their daughter, should the baby be a girl.

During this period of stable fertility, contraception became more widely practiced. According to the Mainichi Shinbun surveys, the percentage of married women under age 50 who were currently using contraception rose from 33.6 to 60.5 between 1955 and 1975. If those who had ever used contraception are added to these figures, the percentage of users rose from 52.5 to 81.5 (Mainichi Shinbun

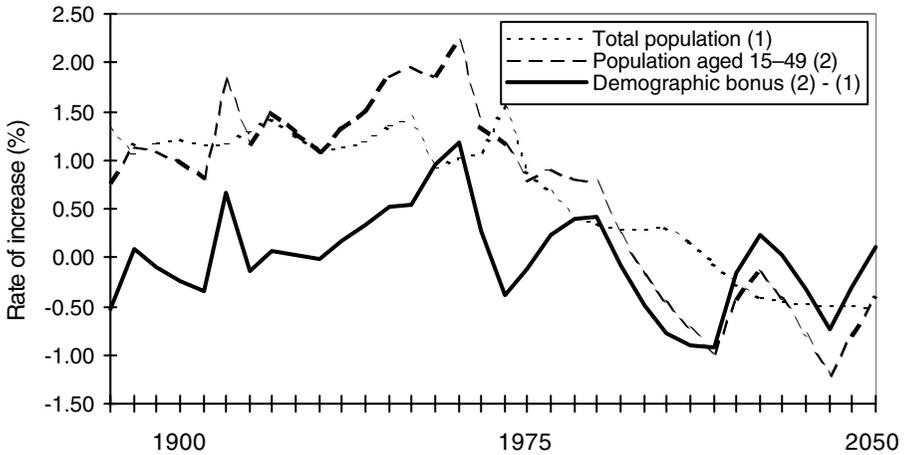


Figure 2.1. The demographic bonus in Japan.

Sha 1992, 54). As a result, the government stopped regarding family planning as a population policy issue and began basing its support for family planning on the health and welfare benefits to individuals. In 1959 the Ministry of Health and Welfare reassigned matters related to family planning to its Mother and Child Hygiene Division.

Initially, migration from rural to urban centers and the increasing stock of young people born during the baby-boom years met industry's need for workers. It was only toward the end of this period that a labor shortage began to be felt in the construction industries and other small-scale manufacturing industries, where the work was generally considered to be hard and dangerous. Economists pointed out the possibility of a serious labor shortage (Oobuchi 1992, 135-51), and many economic leaders demanded that the government adopt a pronatalist population policy and grant visas to unskilled foreign workers.

Prior to the first World Population Conference, held in Bucharest in 1974, Japanese population issues were discussed by the population experts assembled in the Population Problems Council. The council, considering the rapid global population expansion at the time, recommended that Japan adopt a policy to achieve a stationary population in the future (Matsumura 1977, 176). This recommendation, together with the effects of the economic slowdown in the latter half of the 1970s, offset the pronatalist arguments in the country.

### The Period of Further Fertility Decline, 1975 to the Present

After the oil crises of 1973 and 1980, the Japanese economy stopped its rapid growth, despite many industrial innovations and hard efforts by workers. The

annual increase of GDP declined to slightly more than one-half of the pre-crisis level. Suddenly it became more difficult for young people to borrow money to finance their marriages and housing needs. At the same time the enrollment of women in colleges and universities increased, reaching 32 percent by 1975 and continuing to rise thereafter. Female enrollment at the tertiary level surpassed that of males in 1989 and reached 48 percent by 1995. This trend was accompanied by the increasing labor force participation by women. According to the 1995 population census, 74 percent of women in the 20–24 age group and more than 50 percent of those in all age groups between 20 and 60 were in the labor force (IPP 1996, 133, 144).

Perhaps the combination of all these factors contributed to the rising age at marriage and subsequent decline of fertility. The share of women who had never married at ages 25–29 rose from 21 percent in 1975 to 49 percent in 1995. Although the desired family size among married persons remained unchanged at about two children, the increasing proportion of single persons continued to depress the fertility level. Unlike European countries, cohabitation outside marriage is not common in Japan, and births to unmarried women are still rare. The number of out-of-wedlock births in 1994 was less than 15,000, or 1.2 percent of all births (IPP 1996, 65). As a consequence of all these factors, the total fertility rate, which had remained above 2.0 until 1974, dipped below 2.0 per woman in 1975 and has continued to decline, reaching 1.76 in 1985 and 1.43 in 1996.

This very low level of fertility has raised serious concerns among government officials and the public (Kono and Okada 1992). These concerns focus mostly on population aging and its implications for future public-welfare expenditures. Moreover, a possible shortage of labor, which should have been given more attention when Japanese fertility fell below the replacement level, has not yet resulted because the recession that began in 1991 has produced an exodus of Japanese industries to developing countries. Only one newspaper, to my knowledge, has urged the government to pay more attention to fertility as a way to solve the population-aging problem. The government has taken the position that it should not interfere with the private lives of individuals, and its population policy remains *laissez-faire*. Only under its social policies for improving conditions for women and families has the government begun to enact such pronatalist measures as granting maternity leave, providing nurseries for preschool children, increasing the amount of the child allowance, and easing the way for mothers to return to the workplace after bearing and rearing their children (Y. Okazaki 1997, 131–36).

## POLICIES RELATED TO POPULATION DISTRIBUTION

As noted earlier, the rapid economic expansion that took place in Japan from the mid-1950s through the 1970s was accompanied by the massive redistribution of the work force from agriculture to the industrial sector and, geographically, from rural to metropolitan regions. Broadly defined, the Tokyo Metropolitan Region, which comprised nearly 16 percent of the Japanese population in 1950, contained 26 percent of the population within its fixed boundary by 1994. The share of the population living in the three largest metropolitan regions—those surrounding Tokyo, Osaka, and Fukuoka—grew from 37 percent to 51 percent during the same period.

The mass exodus of young workers from rural areas, however, has resulted in uneven distributions of the population throughout the country. The metropolitan regions have become heavily congested, whereas many rural communities have been depopulated. This redistribution of population has caused a great deal of pain in smaller localities, where normal social and economic activities have been disrupted.

To remedy this situation, shortly after the war the government began to adopt population redistribution plans. National land development began in 1950 with the enactment of a National Land Development Law (Kokudo Sogo Kaihatsu Ho). In 1962 the Cabinet decided to implement a Consolidated Plan for National Land Development (Zenkoku Sogo Kaihatsu Keikaku), which was intended to ease the overcrowding in metropolitan regions and to create several development nuclei in other regions. At the same time a Special Law for Construction of New Industrial Cities (Shin Sangyo Toshi Kensetsu Tokubetsu Ho) was enacted to designate 13 areas (later expanded to 15 areas) outside the metropolitan regions as centers of regional development. In 1969 the plan was revised to place emphasis on infrastructural development, and its name was changed to the New Consolidated Plan (Shin Zen So). To capitalize on the rapid redistribution of the population, in 1972 then Prime Minister Kakuei Tanaka published a book entitled *Nihon Retto Kaizoron (Remodeling the Japanese Archipelago)* and vigorously implemented his programs. In recent years the New Consolidated Plan has been periodically revised, and today it still serves as the basic tool for national land development.

All these plans were intended to encourage population movement from metropolitan to nonmetropolitan regions by creating industries and providing infrastructure and amenities in the destination areas. Although the plans were successful in redistributing industries, their demographic objective of redistributing

population fell short of realization in many cases because the demand for labor in the metropolitan regions remained strong and many of the new industries created in the nonmetropolitan regions were not labor intensive. Thus, the government's policy to redistribute population to nonmetropolitan regions served mainly its internal political purposes. It failed to counterbalance the economic force that attracted people to the existing metropolitan regions, where spontaneous and robust labor demands already existed.

## SUMMARY AND DISCUSSION

Since the middle of the nineteenth century, a significant population increase has accompanied Japanese economic expansion and modernization. During the first phase of its modern history, which ended at the close of the World War II, Japan pursued two national objectives: wealth and military power. To gain military strength, the government sought to enlarge its population. It encouraged high fertility and suppressed the birth control movement to achieve it. However, this policy was not entirely consistent with the other objective, which was to build a wealthy nation. The rapid increase of population surpassed the country's economic needs and employment capacity, resulting in serious unemployment and underemployment, especially in rural areas. Despite the government's efforts to encourage population growth, however, fertility decline, accompanied by other social changes, began to take place around 1920. It has continued with only brief interruptions to the present.

In the second phase that began after World War II, population growth and economic development maintained a mostly mutually beneficial relationship, in part because of a fortuitous timing of the economic growth, and in part because of the government's *laissez-faire* population policy. Immediately after the war, the government took the rather drastic step of legalizing induced abortion. As it did so ostensibly on eugenic grounds, the measure was not, strictly speaking, a population policy. It seems clear now, as it did at the time, however, that the measure was intended to help the nation survive the severe economic difficulties of the postwar period. In retrospect, it was a *de facto* population policy that had definite social and economic objectives. But the voluntary and rapid diffusion of contraception among the general population soon made the government's effort to slow the birth rate unnecessary. The growth of the modern sector of the economy and compulsory education for men and women helped to create Japan's small-family norm.

During the first 25 years of the postwar period, the labor force continued to grow rapidly as a result of the relatively high birth rate that had prevailed in the prewar years and the short-lived baby boom immediately after the war. The large labor supply, together with the redistribution of many workers from rural to metropolitan regions, helped to expand heavy and chemical industries. Meanwhile, the government maintained its laissez-faire population policy, allowing couples to practice family planning. When the industrial demand for additional labor was suddenly reduced in the middle of the 1970s, the effect of the sustained low fertility became increasingly visible, as fewer young workers entered the labor market. In the 1980s and 1990s, when the domestic labor supply dwindled further and a labor shortage was becoming severe, a large share of Japanese capital and technologies moved to foreign countries, thus effectively reducing the demand for an additional internal labor supply.

In summary, Japan has faced two population dilemmas since World War II. The first was the very rapid population increase immediately after the war. The second is the current prospect of a rapid aging population. In both situations the government's policy has been restrained. Earlier it removed all legal obstacles to the voluntary diffusion of birth control, including induced abortion, leaving the family planning movement in the hands of private organizations and individuals. In recent years it has commissioned studies on the relationship between demographic trends and socioeconomic change and is aware of the economic and social implications of Japan's unprecedented low fertility. Nonetheless it has declined to take a pronatalist stance in response to the current dilemma.

Obviously, current government policies are consistent with the constitutional guarantees respecting individual dignity and freedom. In October 1998 the Population Advisory Council of the Ministry of Health and Welfare submitted its latest report, and Japan's Prime Minister organized a group of informed people to address the issue of low fertility. The policy options of both groups are directed mostly at improving childrearing conditions of working mothers and at encouraging new family life-styles that might replace the traditional division of labor between husbands and wives.

These approaches seem to be a rather weak and indirect way to raise fertility (Ozaki and Kaizuka 1994, 41-45). In other respects, the government's policy can be described as a "symptomatic response" in the sense that it does not address the cause of the dilemma—below-replacement fertility—but concentrates instead on palliative measures. Currently it is modifying the old-age pension and the medical insurance systems and welfare programs for the elderly to lessen the financial burden on the working-age population caused by rapid aging.

It has not taken direct steps to encourage higher fertility. Its policies and programs aimed at improving the welfare of families, the status of women, and especially the plight of working mothers have not yet, however, produced positive or significant demographic effects.

Moreover, the current government's reluctance to adopt a pronatalist strategy may be due in part to the failure of Japan's pronatalist policy before and during World War II. The attempt to prevent the use of birth control measures in the early part of the twentieth century was ineffective. Even so, if the government had not suppressed the diffusion of family planning information then, Japan's demographic transition might have proceeded more smoothly. Many of its social problems, such as severe unemployment in the cities and underemployment in villages, which ultimately led the country into the war, might not have occurred.

One important lesson taught by the Japanese experience is that the demographic bonus has a short life. If a nation's economy fails to benefit from it, it soon must face what might be called a demographic handicap. The rapid increase of Japan's labor force was advantageous to its expanding economy in the 1950s and the 1960s. The low ratio of dependent children to the working-age population, a result of the fertility decline in the 1950s and 1960s, encouraged investment, which fueled economic growth. That auspicious period, however, passed quickly. With the slowdown of population and economic growth in the mid-1970s came the prospect of rapid population aging and the problems it entails. This current new phase of the demographic transition presents historically unprecedented challenges.

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## The National Family Planning Program and Fertility Transition in South Korea

*Tai-Hwan Kwon*

South Korean society has undergone a demographic and economic transformation since the early 1960s, when its war-torn economy was still in shambles, its people suffered from extreme poverty, and its political system faced an uncertain future. The per capita gross national product (GNP) was then about \$80. Some 72 percent of Koreans resided in rural villages and eked out their subsistence as rice farmers. In the cities the rate of unemployment was almost 30 percent. Most of Seoul, the capital city, consisted of slums occupied by squatters.

Despite the extreme poverty, mortality was relatively low and still declining. Death rates had been falling since the early part of the twentieth century as a result of medical and health improvements. The introduction of antibiotics by United Nations forces during the Korean War caused a significant decline in mortality among infants and children, increasing survival rates. Declining mortality, combined with traditionally high fertility, had produced rapid population growth. During 1955–60, the annual rate of population growth was 2.9 percent, the highest in the country's history. The rapid increase in the number of mouths to be fed exacerbated the economic situation.

Then suddenly a transformation began to take place in various sectors of Korean society. The birth rate fell precipitously. The economy began to take off with the start of industrialization. Large numbers of rural inhabitants began to move to urban areas. Political stability was ensured with the institution of civil government through the electoral process. These changes altered the patterns and quality of Korean life. This process has been continuous for nearly four decades. Now the rate of population growth has dropped to less than 1 percent, and fertility has reached a level below that required for population replacement. The per capita GNP has climbed to US\$10,000, and the urban share of the population is about 80 percent. The enrollment ratio for middle and high schools rose from about 26 percent in 1955 to 98 percent in 1990.

This transformation had many distinctive features. It started suddenly, affected all sectors of the society, proceeded at an unprecedented tempo, and was facilitated by government intervention. These features are often referred to as "total, condensed, and planned" change. In such a situation, it is difficult at best

to provide an orderly explanation to the entire process of social change, although economic development is cited most frequently as the prime cause.

Sociocultural explanations of South Korea's economic development and fertility transition have also been advanced. In particular, the government has been credited for the country's rapid economic growth, industrialization, and fertility transition because it pursued those objectives in a series of five-year economic development plans beginning in 1962. State intervention and government policies, however, were not successful in other sectors. For example, although the population policy in regard to fertility worked well, with respect to migration and population redistribution it has been a complete failure. Thus, simple causal relationships among the major societal forces are difficult to establish because they are closely interwoven within a system. The idea is widely accepted that there is no single path of social transformation, economic development, or demographic transition. For each case, therefore, it is important to examine in detail the process of change, the specific mechanisms involved, and environmental factors in order to gain a fuller understanding of socially meaningful change. I adopt this approach here in investigating the major features of the government's fertility-control policy, the trends and patterns of fertility transition, and the effects of the policy on fertility transition in South Korea.

#### THE NATIONAL FAMILY PLANNING PROGRAM

South Korea's fertility transition started in the early 1960s and coincided with the initiation of the government's Family Planning Program. This very fact is often taken as an indication that the government was the most decisive factor in the fertility transition. The program received all the support it needed from the government until the late 1980s, when the total fertility rate fell below the replacement level. The support of the Korean president was considered essential in the effort to lower fertility because at that time Korean society was extremely authoritarian. The program enjoyed the full support of the two presidents who ran the country for 26 years, from 1961 through 1987.

It is commonly acknowledged that the pattern and pace of fertility transition in a society depend upon couples' perceived need for smaller families and their means for meeting that need. By providing the means, the Korean Family Planning Program was undoubtedly instrumental in reducing Korean fertility. But there is general agreement that it also created the need and thus led the entire course of fertility reduction. That view is based on the argument that a traditional, large-family ideal prevailed in the early 1960s, that contraception and

family planning were alien to Korean society, and that there had been no response from the public to the private family planning movement. Today, however, Korean demographers reject that view on the grounds that the country was under strong population pressure around 1960 and that the desire for smaller families began spreading rapidly around then (e.g., Kwon 1993, 43–45). According to this argument, the government's policy was bound to succeed. Nevertheless, its role in the fertility transition should not be depreciated. The government responded to a major social need by removing obstacles to widespread contraceptive use and helped to build an infrastructure for family planning services. A new appraisal of the Korean Family Planning Program is therefore needed.

### The Formation of a Fertility-Control Policy

The implementation of a fertility-control policy in South Korea was simple and straightforward. The military, headed by Park Jung-Hee, took control of the country by force in May 1961 and established the Supreme Council for National Reconstruction (SCNR) as the top decision-making body of the temporary government. The major task of the council was to develop policies to activate the traditionally stagnant economy. Its most important achievement was the drafting of the First Five-Year Economic Development Plan. The idea of population control, or birth control, came from the Social Advisory Committee (SAC) of the SCNR. Professor Koh Whang-Kyung, a sociologist, first called for a policy to curb births, and she received support from a male colleague, Professor Lee Hae-Young. They proposed to the committee a birth control policy on the grounds that the country's high rate of population growth aggravated poverty and was detrimental to the national economy. First the SAC and then the Economic Advisory Committee reviewed their proposal. With the endorsement of those two committees, the proposal was submitted to and finally accepted by the SCNR. The whole process took only two months (Caldwell 1969; Kim, Ross, and Worth 1972, 39–44). In October 1961, Park, who was chairman of the council, announced the adoption of the population planning policy at a national news conference. A newspaper report on 19 October 1961 described the government's decision as follows:

General Park stated that the Ministry of Health and Social Affairs was examining and preparing a proposal for a new national movement called "family planning" in order to control population growth. Claiming that the unchecked expansion of population would interfere with the success of the economic plan, he indicated that a new government national plan would be implemented, not through registration, but through a voluntary movement. (*Dong-A Ilbo*, 3)

From this brief, but historic, statement, it is possible to discern the major characteristics of the Korean Family Planning Program during its initial stage. The basic reason for the policy was to promote the growth of the national economy. Persuasion, not force, was taken as the policy means. Given that approach, the task of implementing the program was assigned to the Ministry of Health and Social Affairs, and that of carrying out the civilian movement to the Planned Parenthood Federation of Korea (PPFK). The PPFK had been founded just before the military coup d'état, and most of its members were physicians. In actuality, the program has hardly been a private voluntary effort. The state has intervened in every aspect of the program, as evidenced by the fact that the program has been an integral part of each successive national Economic Development Plan. This very fact is considered to be the major strength of the Korean Family Planning Program.

The adoption of the policy without much discussion or preparation caught elite groups unprepared to discuss population issues. Around 1960 there had been scattered efforts by a handful of physicians, social scientists, and missionaries to promote the idea of family limitation and population control (Yang 1991). The idea came mostly from the United States. The results of South Korea's 1960 census raised alarm in some quarters about a "population explosion," but most Koreans, including responsible policymakers and politicians, had not been exposed to the idea of fertility control prior to the government's adoption of the population policy. Despite the widespread need for contraception, as evidenced by the increasing incidence of induced abortion among married women, a pronatalist view prevailed in official circles. Demographic knowledge was almost nonexistent. Few population courses were offered in the universities until 1960, and no comprehensive population research was conducted before 1962 (Lee 1970). Thus, the government's adoption of a population policy did not come about as a result of professional and public support; rather, it provided an impetus for population research and teaching.

### **Building the Infrastructure**

With the adoption of the population-control policy, the government began to build its organizational apparatus for the Korean Family Planning Program. Offices for providing family planning services were opened in all of the 183 county (*gun*) and district (*gu*) health centers in 1962, and in 1964 some 1,473 family planning workers were recruited and dispatched to *eups*, *myuns*, and *dongs* (lower-level administrative units) for family visits (KIHASA 1991, 103-4). Family planning activities were in full operation by 1965. Initially the program

concentrated on rural villages, where fertility was highest and knowledge of family planning was extremely limited. Later it was expanded to urban areas. This organizational approach is thought to have contributed significantly to the development of the country's health system and the increasing exposure of rural people and urban poor to primary health services. Given that mortality decline is a precondition for fertility transition in most societies, this unintended effect of the program on mortality should not be overlooked.

The general lack of knowledge about Koreans' reproductive attitudes and behavior constituted a major barrier to the development of a viable fertility-control program. To collect the basic information required for formulating and evaluating its fertility-control policies, the government conducted a national family planning survey for the first time in 1964. Since then, surveys of Koreans' family planning knowledge, attitudes, and practice have been conducted frequently, with the emphasis changing over time. The Ministry of Health and Social Affairs established a National Family Planning Center in 1968 to conduct family planning research. (Later the center's name was changed successively to the Korean Institute for Family Planning, the Korean Institute for Population and Health, and the Korean Institute for Health and Social Affairs.) Several independent or university-affiliated population and family planning research institutes were established in the latter half of the 1960s with financial support from the government and from foreign organizations such as the Population Council in New York City. Most of these institutes were involved in policy research related to family planning. In 1964 the Population Studies Center (successively renamed the Population and Development Studies Center and the Institute of Social Development and Policy Research) was established solely to conduct demographic research and create an academic discipline of Korean demography. Despite many undesirable effects of government involvement in population regulation, it is acknowledged that the development of population studies in South Korea owes much of its success to the Family Planning Program.

### Program Development

Table 3.1 summarizes the major features of the national program. The program was developed in three stages, each comprising roughly a decade.

The first stage, in the 1960s, consisted in building the program's infrastructure: clearing legal obstacles, setting up national organizations for family planning, recruiting family planning workers, adopting a target system, and so forth. Led by health and medical personnel, the program focused on reaching rural women in areas where fertility was highest and the means of birth control were

**Table 3.1.** Major features of the Korean Family Planning Program

Feature	1960s	1970s	1980s
Policies adopted	Family planning policy and abolition of laws prohibiting importation and production of contraceptives (1961)	Mother and Child Law (1973)	Intensified population control policy (1981)
	Population and program targets (1965) United Nations Population Declaration signed (1966)	Establishment of Committee of Population Policy (1976)	Revision of MCH Law (1986)
Ministry in charge	Health and Social Affairs	Health and Social Affairs	All ministries involved
Target population	Rural residents (1962)	Extension to urban poor and factory workers	Vulnerable groups (ages 20–29)
Methods emphasized	Temporary methods, including IUDs	Female sterilization	Sterilization
		Local production of contraceptives	
Campaign and education	Promotion of three-child family Emphasis on personal contacts between FP workers and eligible women	Promotion of two-child family Extensive use of newspapers and magazines Population education in middle and high school curricula	Promotion of one-child family Extensive use of radio and television
		Social supports	Revision of Income-tax Law to limit personal deduction to two children (1976)
Nongovernmental organizations	Planned Parenthood Federation of Korea (founded 1961) Family Planning Mothers' Club (founded 1968)	Sterilized couples with two children permitted to apply for public housing	Institutional changes to enhance women's status and discourage son preference
		Revision of Family Law (1978)	
		FP section within <i>Saemaeul</i> (New Village) Women's Club (established 1977)	

Source: Kwon and Kim (1990, 313).  
MCH—maternal and child health.

not readily available. It disseminated contraceptives, in particular intrauterine devices (IUDs), and attempted to change the desired family size from five to three children. Personal persuasion through discussion was adopted as the major means of program implementation so as not to offend respected village elders, many of whom were opposed to the idea of family planning. The program was well received, and fertility declined rapidly.

In the early 1970s the Korean fertility decline began to slow down. At the same time, as the government was preparing its country report for the 1974 United Nations World Population Conference, social scientists introduced a debate over population measures that went "beyond family planning." In response to these developments, the government incorporated new elements into the program. Population education, which emphasized the social and economic disadvantages of rapid population growth for both the nation and individuals, was introduced into middle and high school curricula. An incentive approach was employed to aid the campaign by encouraging two-child families regardless of the children's sex. It included the provision of a tax deduction for one or two children and the right of sterilized couples with only one or two children to apply for public housing. To cope with the rapid pace of urbanization, the government extended the target population to cover the urban poor and factory workers. To induce men to participate in family planning, special lectures were introduced in work places and Army Reserve training sessions. On the assumption that Koreans' traditional preference for sons was the greatest barrier to further progress in lowering fertility, the program launched campaigns with slogans and posters that attacked son preference and boosted the value of girls. In the late 1970s, however, social scientists and policymakers began to criticize the program for its total dependency on the government and to question whether it would have as much impact on fertility behavior in the future as it had had in the past. Such criticisms led some policymakers to consider gradually withdrawing the government's involvement in family planning.

In the early 1980s, however, the new military government headed by Chun Doo-Hwan intensified its support for the Family Planning Program. Its rationale for doing so was to curb a second baby boom caused by entry of the post-Korean War baby-boom generation into the reproductive age span around 1980. The government adopted a comprehensive plan to control population growth as a component of the Fifth Five-Year Economic and Social Development Plan (1982-87). The plan called for (1) changes in the program's implementation and management system to revitalize family planning activities, (2) strengthening the social supports for the creation of a small-family ideal, (3) changes in social institutions

to eliminate son preference, (4) intensifying educational campaigns about population and family planning, and (5) the formation of a state-sponsored system for the effective control of population growth through the active involvement of all government ministries in the Family Planning Program (KIHASA 1991, 91-98).

The major policy measures adopted to encourage further fertility decline were the promotion of sterilization as the prime means of birth control and the provision of additional incentives for one- or two-child families. Those incentives included the payment of a family allowance and school fees for the first child (the first two children in the case of public servants), and free child-delivery service and free primary health care for the child and the mother if one of the parents agreed to be sterilized after the first birth. The government also launched vigorous campaigns to promote the one- or two-child family ideal. To incorporate the concept of "population quality" into its population policy, it revised the Maternal and Child Health (MCH) Law. To weaken the basis for son preference, many gender-discriminatory items in the family law and in medical-insurance regulations were abolished. In response, fertility dropped rapidly, reaching a level below population replacement in the mid-1980s, and the process of fertility reduction continued into the early 1990s. Alarmed by this unexpected result, the government began to withdraw from the Family Planning Program in the late 1980s. This policy change coincided with a change in the presidency.

From these observations, one can characterize the Korean Family Planning Program as having had the following elements: strong state initiative and involvement, particular emphasis on an economic rationale for lowering fertility, strong leadership support for building a consensus among the public, implementation through the public health structure, target-setting, a diversified approach, national coverage, and financial security. In sum, it can be described as "a strong program" (Ross and Finnigan 1968, 682-86).

### **The Dissemination of Family Planning Methods**

Prior to the establishment of the national program in 1962, the idea of contraception was alien and knowledge about contraceptive methods was very limited. Although many Korean men knew about condoms, they used them mostly to avoid contracting venereal diseases from prostitutes. The public had formed a negative impression of condoms as a consequence. Some couples, though not many, used vaginal rings for contraception. During its early stage, the major challenge of the Family Planning Program was to introduce safe and reliable contraceptive methods. Given the initial lack of such methods, it appears to have

**Table 3.2.** Percentage of contraceptive users among currently married women, ages 15–44, by area and by method: South Korea, 1971–94

Area or method	1971	1976	1982	1985	1988	1991	1994
<b>Area</b>							
Whole country	24.6	44.2	57.7	70.4	77.1	79.4	77.4
Urban areas	27.4	48.0	58.7	71.5	77.7	79.3	77.1
Rural areas	22.7	40.2	55.7	67.7	75.5	80.0	78.4
<b>Method</b>							
Tubal ligation	—	4.1	23.0	31.6	37.2	35.3	28.6
Vasectomy	3.3	4.2	5.1	8.9	11.0	12.0	11.6
IUDs	7.2	10.5	6.7	7.4	6.7	9.0	10.5
Orals	6.8	7.8	5.4	4.3	2.8	3.0	1.8
Condoms	3.2	6.3	7.2	7.2	10.2	10.2	14.3
Others	4.2	11.3	10.3	11.0	9.2	9.9	10.6

Sources: Park, Choi, and Kwon (1979, 188); Hong M.-S. et al. (1994, 85).

endorsed induced abortion. The introduction of the intrauterine Lippes loop and oral contraceptives in the mid-1960s marked the program's first breakthrough. The proportion of married couples currently practicing family planning rose quickly, from 16 percent in 1965 to 25 percent in 1971, and further to 44 percent by 1976. Those two contraceptives constituted the major family planning methods used in the program until the mid-1970s.

In 1976 the program began promoting female sterilization as its major method of fertility control, and since then tubal ligation has emerged as the most popular method, as is evident from Table 3.2. With this development, the program recorded another leap. The proportion of currently married women practicing contraception grew dramatically in the first half of the 1980s and continued to rise until 1991. The proportions of men receiving vasectomies and using condoms for fertility control have increased since 1971, whereas the use of oral contraceptives has declined to a negligible level since the mid-1970s. Overall, Korean couples still heavily prefer female to male methods, although the gap between the two has been reduced substantially. Moreover, the most used methods have become more diversified since 1982. This trend appears to be associated with couples' declining dependency on the national program for their contraceptives and a growing involvement of the private sector in contraceptive provision.

In 1965, 21 percent of married women of reproductive age in urban areas were currently using contraception; in rural areas the percentage was 14. With the activation of the Family Planning Program in the mid-1960s, the urban-rural difference narrowed. In recent years, rural areas have recorded higher acceptance

**Table 3.3.** Percentage of contraceptive users by method and source of services: South Korea, 1973–94

Method	1973		1979		1985		1994		
	Govt.	Market	Govt.	Market	Govt.	Market	Govt.	Market	Other
All methods	21.4	14.9	29.5	25.0	39.7	30.7	34.7	38.3	4.3
Tubal ligation	—	—	9.8	4.7	26.1	5.5	21.4	4.9	2.2
Vasectomy	4.6	—	5.4	0.5	7.4	1.5	8.9	1.4	1.3
IUD	7.9	—	9.0	0.6	4.3	3.1	3.4	6.4	0.7
Oral pill	5.3	2.7	3.7	3.5	0.8	3.5	0.1	1.7	—
Condom	3.6	2.9	1.6	3.6	1.1	6.1	0.9	13.3	0.1
Others	—	9.3	—	12.1	—	11.0	—	10.6	—

Sources: Cho N.-H. and Chang (1987, 428). Figures for 1994 calculated from Hong M.-S. et al. (1994, 102–3).

rates than urban areas. These trends reflect the changing age structure of women in the reproductive age span in both areas. Proportionally more urban women than rural women tend to be at the younger end of the reproductive age span, and most women in that age span have not achieved their desired number of children. Another important development revealed by Table 3.2 is that contraceptive use, in both urban and rural areas, peaked in the early 1990s. No significant change is expected in the future family planning behavior of Korean couples.

In the early years of the program, contraceptive markets were not developed, and accordingly the government was the major source of contraceptive methods. Data from national surveys indicate that about 40 percent of all contraceptive users purchased their contraceptives on the market in 1973 (Table 3.3). The majority of those users resided in urban areas, where it was much easier to obtain contraceptives from pharmacies and clinics than it was in rural areas. The proportion of privately supplied users increased continuously, and now more couples rely on the private sector than on the government for their contraceptive needs. One reason is that the government's services have been limited to two or three effective methods—mostly IUDs in the 1960s, vasectomy in the early 1970s, and tubal ligation since the late 1970s.

### Financing the Program

Although the Korean government established the national program and developed an infrastructure for it in the early 1960s, the poor economy placed the government under a severe budgetary constraint until the end of the decade. The budget allocated to the program was therefore initially small, and foreign aid constituted the major funding source for program services. The PPF of Korea was

designated as the major arm of the national program, but until 1977 the government's contribution to its budget was a meager 13 percent, foreign aid accounting for 83 percent during the 1960s. The remaining 4 percent came from membership fees, payments from regional branches of the federation, and unspent funds carried into the new budget year. The government's share increased to 36 percent in 1977, jumped again to 66 percent in 1982, and peaked at 77 percent in 1984 (KIHASA 1991, 314-15).

The importance of foreign agencies in promoting family planning activities in South Korea until the mid-1970s is demonstrated by the fact that the amount of foreign aid earmarked for family planning surpassed the government's total budget for all family planning services. In 1975 the government's budget for the Family Planning Program was 834 million Korean won, or 931 million won including the budget for the MCH program. It jumped by more than 10 times in 1980, and another big rise was observed in 1983. The government's budgetary support for the Family Planning Program reached the highest point in 1986, at nearly 32 billion won. It then began to decrease, falling sharply in 1990 (Table 3.4). Despite these impressive figures, the proportion of the national budget allocated to the Family Planning Program did not exceed 0.1 percent until the mid-1970s. The proportion increased to 0.2 percent in 1983 and to 0.25 percent in 1985. If the MCH program is included in the calculation, the budget peaked at 0.3 percent in 1983. By 1990, family planning accounted for less than 0.01 percent of the national budget.

## THE FERTILITY TRANSITION

The Korean population followed the Malthusian process of population change during the entire period of the Chosun Dynasty (1392-1910). It peaked twice, first in the late sixteenth century and again in the mid-nineteenth century. Each peak was followed by social unrest, poor harvests, and foreign invasions or internal warfare (Kwon and Shin 1977). Japan's occupation of Korea early in the twentieth century took place during a period of Malthusian dilemma. The preceding century had been marked by extreme social and political unrest due to a series of famines, epidemics, and insurrections. The population had been reduced from an estimated 18.6 million to an estimated 17.4 million between 1807 and 1910. Between 1910 and 1920 it began its demographic transition.

Early colonial censuses (of the 1920s and 1930s) revealed a stable population profile. The age structure indicated a total fertility rate for 1925-30 of 6.2 children per woman (Kwon 1977b, 347). In view of the fact that marriage was universal

**Table 3.4.** Government budgets for family planning (FP) and maternal and child health (MCH) programs: South Korea, 1975–96

Year	Total (in billion won)	FP (in million won)	MCH (in million won)	Exchange rate (won/US\$)	Percentage of total	
					FP	MCH
1975	1,587	834	97	400	0.053	0.006
1980	5,804	8,457	988	485	0.146	0.017
1981	7,851	8,709	5,240	600	0.111	0.067
1982	9,314	9,826	12,953	715	0.106	0.139
1983	10,417	20,532	12,253	768	0.197	0.118
1984	11,173	22,227	9,981	780	0.199	0.089
1985	12,275	30,237	2,794	780	0.246	0.023
1986	13,801	31,760	2,975	900	0.230	0.022
1987	15,560	27,599	4,240	865	0.177	0.027
1988	17,464	26,767	4,273	790	0.153	0.024
1989	19,228	22,026	3,554	700	0.115	0.018
1990	22,689	10,932	3,458	665	0.048	0.015
1991	28,973	9,459	4,157	715	0.033	0.014
1992	36,224	7,563	4,363	725	0.021	0.012
1993	41,939	5,644	4,632	770	0.013	0.011
1994	47,594	4,514	4,703	800	0.009	0.010
1995	54,845	3,618	4,776	800	0.007	0.009
1996	64,927	2,358	2,776	750	0.004	0.004

Sources: Cho N.-H. (1996, 95); ROK NSO (1996, 226).

Note: Budgets for FP and MCH refer to program activities only, not to personnel expenditures for family planning workers employed in local health centers or to subsidies to private groups such as the Planned Parenthood Federation of Korea.

and the age at first marriage for women was 16.6 years in 1925, that rate is considered to have been somewhat lower than in other traditional societies. It persisted with only minor fluctuations until the late 1940s. During 1950–55 the total fertility rate dropped to 5.6 as a consequence of the Korean War, which took place between 1950 and 1953. Immediately after the war, South Korea experienced a baby boom that caused the rate to rise to 6.3 during 1955–60.

The relatively low level of fertility early in the century appears to have been associated with the traditional Korean family system, which has many elements that discourage high fertility. For example, widowed women were prohibited from remarrying, the culture of *Yangban* (the aristocratic class) required self-restraint of sexual desire, mothers often intervened in sons' relationships with their wives—particularly in the case of elder sons, who usually remained in their parental home after marrying. Moreover, poor housing conditions prevented young couples from having their own rooms (Kwon 1984, 49–54). The singulate mean age at marriage for women rose continuously, reaching 21.5 years in 1960.

**Table 3.5.** Percentage change in the total fertility rate (TFR) and its components: South Korea, 1960–90

TFR or component	1960–65	1965–70	1970–75	1975–80	1980–85	1985–90
TFR	-16.8	-17.6	-13.4	-24.6	-25.7	-18.3
Component						
Marital composition	-6.3	-3.7	-3.5	-5.6	-6.4	-6.5
Age at marriage	-7.6	-3.4	-3.7	-4.9	-6.7	-7.9
Marriage dissolution	1.3	0.5	0.2	0.7	0.3	1.4
Marital fertility	-10.5	-14.1	-9.9	-19.1	-19.3	-11.8
Contraception	-1.7	-9.5	-5.9	-23.0	-23.9	-13.4
Induced abortion	-5.1	-4.6	-4.0	3.9	4.6	1.6

Source: Jun (1996, 36).

But the effect of rising age at marriage on fertility was counterbalanced by improvements in health and mortality conditions.

After reaching its highest point in 1960, Korean fertility underwent a revolutionary change. Although there are some discrepancies among fertility estimates, all the estimates confirm a rapid fertility decline in the 1960s. Given that the Family Planning Program started in 1962 and did not begin to operate nationwide until 1965, the program was not the only factor responsible. Dividing the fertility decline into its various components suggests that postponement of marriage by women and induced abortion were the main causes of fertility decline in the early years of the transition (Table 3.5). The Family Planning Program began to show an effect on fertility after 1965, as expected. During 1965–70, contraception surfaced as the most important component of fertility decline, although the effects of the other two components were also significant. Overall, those three components appear to have played more or less equal roles in the first phase of the fertility transition.

The demographic and economic conditions prevailing earlier in the century created enormous pressures for a fertility decline. During the colonial years of 1910–45, a large number of Koreans had migrated to Manchuria and Japan, relieving the demographic pressure on the Korean Peninsula. But the population exploded with Korea's liberation from Japanese rule in 1945 and the political division of the country soon afterward, both events causing a huge influx of repatriates and returnees from Japan and China, and refugees from North Korea. The number of Korean migrants entering South Korea during 1945–49 was approximately 2.6 million, equivalent to 12 percent of the total population in 1949 (Kwon et al. 1975, 32–35). The migrants did not return to their native villages, but

headed for cities near their places of origin. As a result, all the cities' populations exploded.

The high mortality caused by the Korean War (1950–53) checked population growth temporarily, but it did not decrease the population size of the southern part of the Korean Peninsula because refugees poured in from the north. After the war South Korea experienced a baby boom as couples were reunited and marriages deferred during the war took place.

Conditions in rural areas were so destitute that about 17 percent of the rural population left for Seoul in the second half of the 1960s, when poor harvests were recorded in two successive years. This mass migration suggests that increasing population pressure in rural areas was responsible for the rapid urbanization that took place between 1945 and 1970.

Early surveys of Korean women about their fertility histories and preferences have documented the intensity of population pressure felt by individuals. A survey investigating the incidence of induced abortion in Seoul revealed that abortion was practiced widely among married women in the early 1960s (Hong S.-B. 1971). A 1965 fertility survey conducted by Lee Hae-Young in Ichon, near Seoul, found that women desired to limit their births and that many of them had tried folk methods or unproved contraceptives sold by peddlers. This explains why the Family Planning Program enjoyed such rapid acceptance. The survey findings indicate that population pressure felt by individuals was the most important factor in the onset of South Korea's fertility transition. For Korean couples, poverty and an uncertain future pushed them to limit their family size. Birth rates began to plunge in large urban centers while the Family Planning Program was concentrated in rural areas.

National fertility and family planning surveys suggest a disturbance in the fertility decline around 1970, raising questions about the quality and comparability of the surveys taken during 1968–71 (Table 3.6). Other estimates based on census data, however, confirm that the tempo of fertility change slowed in the late 1960s and the early 1970s. The pace of decline was quickly resumed. The total fertility rate calculated for 1970 ranged between 4.2 and 4.5 children per woman. Between then and 1990 the fertility decline was continuous and accelerating. Estimates from national surveys indicate a total fertility rate of 3.9 in 1973, 3.2 in 1976, 2.7 in 1982, 2.1 (the population-replacement level) in 1984, and 1.6 in 1990. Since 1990 the fertility rate has been fluctuating under the replacement level. South Korea's achievement of replacement-level fertility in just 25 years was hardly expected and shocked most planners and demographers, who had believed that it could not be achieved until Koreans overcame their strong preference for sons.

**Table 3.6.** Total fertility rates, by source of estimation: South Korea, 1925–93

Period or year	Kwon T.-H. et al. (1975, 12)	L.-J. Cho, Arnold, and Kwon (1982, 35)	Hong M.-S. et al. (1994, 65)
1925–30	6.2		
1930–35	6.1		
1935–40	6.2		
1940–45	6.1		
1945–50	6.0		
1950–55	5.6		
1955		5.5	
1955–60	6.3		
1960		6.0	6.0
1960–65	6.0		
1965		4.6	
1966			5.3
1968			4.2
1965–70	4.6		
1970		4.2	
1971			4.4
1970–75	4.2		
1973			3.9
1974			3.6
1975		3.1	
1976			3.2
1980		2.7	
1982			2.7
1984			2.1
1990			1.6
1993			1.8

### Forces of the Late Transition

The fertility decline since the mid-1970s has had different characteristics from that of the 1960s. The early reduction took place in a traditional socioeconomic setting and under heavy population pressure. For many couples it had been necessary to limit their family size in order to survive, and this was the most important force pushing Korean society to enter the fertility transition. In the mid-1970s, however, the economy began to expand with the implementation of the First Five-Year Economic Development Plan in 1962. Although life was still desperate in the cities, people began to see the fruits of economic growth and to express confidence in the country's future. The migration of rural residents to cities continued, and as a result the demographic dominance of rural areas ended and an absolute decline in the size of the rural population began. With these developments, the problem of survival was no longer a crucial factor in

the fertility decline. Instead, parents' concern about their children's future emerged as the major reason for limiting family size.

This change in motivation occurred as younger women entered the reproductive age span. The former generation of women had learned about family planning and contraception after marriage or after having two or three children, whereas the new generation was exposed to those ideas early through mass media and had formed definite ideas about their desired family size prior to marriage. They were thus motivated to practice family limitation before they started child-bearing.

As Koreans' standard of living improved, the emotional value that parents placed on their children increased as the utilitarian value diminished. Regarding their children as their most precious possessions, most parents tried to give them everything, including the highest level of education within their means. This attitude is rooted in the traditional Korean value system, and accordingly having fewer children did not reduce, but rather increased, the economic burden on their parents (Kwon 1993, 48–49).

In the mid-1980s, Korean society began to undergo a further transformation. The government instituted various welfare measures, and new life-styles surfaced. A medical insurance system had been introduced to a limited portion of the population in the late 1970s, and the coverage was extended until it reached the entire population in 1990. During the 1980s a pension system was introduced to the entire public sector. The labor movement became active, and this resulted in an improvement in the living standard of workers. A rapid rise in the percentage of girls enrolled in high school, from 30 percent in 1970 to 97 percent by 1990, signaled a marked improvement in female education. The labor force participation of women in their 20s began to soar in the mid-1980s. Private ownership of cars doubled in the first half of the 1980s and tripled in the second half.

With these trends, attitudes toward work began to change. According to various social surveys, until the early 1980s most Koreans were eager to work extra hours to earn more money. But by the mid-1980s a desire for leisure began to replace the emphasis on hard work and high earnings. For ordinary families who owned cars, family outings and travel became popular, and gradually a car came to be regarded by the younger generation as a necessity. The notion of a "one-car family" became inseparable from the idea of a one- or-two child family.

### Components of the Fertility Decline

Demographers have long recognized the importance of intermediate, or proximate, variables in explaining fertility decline. It is also well known that delayed

marriage, contraception, and induced abortion are the major intermediate variables explaining South Korea's fertility transition, and that changes in their relative importance over time reflect changing patterns of the reproductive behavior of Korean women. The singulate mean age at first marriage for Korean women, calculated from census data, rose continuously from 21.5 years in 1960 to 25.2 years by 1990. The proportion of contraceptive users among currently married women at ages 20–44 climbed from 16 percent in 1965 to 79 percent in 1991. The proportion of women who had induced abortions was 16 percent in 1966, increased to 53 percent by 1985, and changed little during 1985–91. The early 1990s witnessed a slight decline in contraceptive practice and induced abortion among currently married women. But the incidence of induced abortion has increased considerably among young single women in recent years, along with a growing social permissiveness toward sexual activity by single women. From these simple facts, one can conjecture that these three mechanisms of fertility change—rising age at marriage, contraception, and induced abortion—have all played key roles in South Korea's more recent fertility decline. A component analysis provides a better picture of the relative importance of each.

Turning once again to Table 3.5, we see that during the second stage of the fertility transition, starting in the mid-1970s, a new pattern emerged. Despite the growing incidence of induced abortion in South Korea, the effect of that factor on the decline of *marital* fertility became negative because abortions were increasingly concentrated among unmarried women. On the contrary, contraception emerged as the dominant component of the fertility decline. The effect of deferred marriage also increased.

#### POPULATION POLICY AND FERTILITY BEHAVIOR

The Korean government's policy objective of reducing fertility to the replacement level, and its means of achieving it—providing family planning services on a wide scale and promoting the small-family norm—met with little resistance from the populace. The objective was achieved in a remarkably short period of time, and the Family Planning Program is judged to have been highly successful. Its success took many observers by surprise, given the support for high fertility within the traditional Korean family system, particularly its emphasis on the value of sons. Average family size, both desired size and completed family size, dropped rapidly, whereas son preference remained strong.

### Family-Size Values

Data from surveys conducted around 1960 indicate that for most Korean women of reproductive age, the ideal or desired family consisted of about five children, including three sons and two daughters (Table 3.7). This ideal size has diminished without interruption throughout the entire period of the fertility transition. It dropped to four children in the mid-1960s, to three children in the early 1970s, and to two children in the mid-1980s. These changes lagged behind the reductions in ideal family size promulgated by the Family Planning Program. The program was promoting a three-child family in 1968, two children in 1971, and one or two children in the early 1980s. Moreover, the campaign's ideal was far lower than the ideal expressed by married women of reproductive age, and Koreans' ideal family size has been persistently smaller than the total fertility rate observed for the same year. Nevertheless, the gap between ideal size and actual fertility has been reduced.

These changes suggest that the campaign may have had a chain effect on fertility—that is, the campaign caused a change in family-size values, which in turn caused birth rates to fall. It is difficult, however, to determine the extent to which the campaign messages contributed to changes in desired family size. For example, desired or ideal family size changed little during 1968–71, indicating that the campaign had no impact. During the 1970s, however, the ideal number of children dropped substantially, suggesting a possibly large impact. In any case, an important aspect of the campaign was its contribution to consensus-building among the public about ideal family size. It led women to adopt contraception without hesitation after having two or three children. In an authoritarian society, such as South Korea was until the 1980s, strong government messages can function as a normative constraint for individuals. Table 3.7 reveals that younger women had a smaller family ideal than older women during the three decades. This may indicate that the trend favoring smaller families had already begun in the early 1960s.

Another important observation can be drawn from Table 3.7. A comparison of the ideal family size for women at ages 25–29 with the cohort total fertility rate of women who were 25 years of age around the time of each survey reveals that the two figures are almost identical. This strongly suggests that since the early 1960s the socialization of women about family size before or at the time of marriage was the most important determinant of their subsequent fertility behavior. If this is the case, the national campaign to promote a specific ideal family size would have had little immediate impact on fertility.

**Table 3.7.** Total fertility rate, ideal family size, and cohort total fertility rate: South Korea, 1960–94

Year	TFR	Ideal no. of children for women at ages		Birth year	Cohort TFR
		15–44	25–29		
1960	6.0	5		1935	5.1
1965		3.9		1940	4.3
1966	5.3				
1971	4.4	3.7	3.4	1945	3.2
1973	3.9	3.1	2.9		
1974	3.6	2.8			
1976	3.2	2.8	2.5	1950	2.5
1982	2.7	2.5	2.2	1955	2.2
1984	2.1				
1985		2.0	1.9	1960	2.0
1988		2.0	1.9		
1990	1.6				
1991		2.1	2.0		
1993	1.8				
1994		2.2	2.1		

Sources: TFR and ideal family size: Hong M.-S. et al. (1994, 65–67); Park, Choi, and Kwon (1979, 88); ROK NSO (1994, 227). Cohort rates based on age-specific fertility rates in Kwon et al. (1975, 16); Repetto (1981, 28); Hong M.-S. et al. (1994, 65–67).

### Son Preference

The attack on son preference was a major component of the national program until the late 1980s, the government regarding son preference as a serious obstacle to fertility reduction. In an earlier study (Kwon 1977a) I pointed out that this view was based on an invalid assumption: that couples would decide whether to have another child only after they had achieved their desired family size. According to that assumption, if they did not have their desired number of sons or no son at all, the couples would likely have another child. But responses to a survey showed that the decision to stop or not to stop childbearing arose when couples had achieved their desired number of sons, even though they had no daughter or had fewer than their desired number of daughters. The negative effect on fertility of this decision-making process offset the positive effect of continued childbearing, due to son preference, after couples had achieved their desired family size. In other words, gender preference affects the reproductive behavior of individuals, not in one direction, but in two opposing directions. Accordingly, its impact on fertility at the societal level is negligible.

Furthermore, strong son preference appears to have supported the Family Planning Program, though indirectly, by increasing the tempo of reduction in desired family size. As I have noted, the average ideal or desired family size was five children before the start of South Korea's fertility transition, around 1960. It dropped to three children in 15 years. For individuals, the change in family-size value was even more conspicuous, falling directly from five to three children. Both ideals, for five and for three children, were an expression of son preference; in each case Koreans desired to have more sons than daughters. Accordingly, for most families the reduction of the desired number of children meant a reduction in the desired number of sons from three to two. Because of son preference, the desired number of daughters changed simultaneously to one, and the total desired number of children to three. Later, the desired family size decreased to two children. But it is difficult to view this attitude as free from gender bias because the ideal of two children implies the inclusion of at least one son. Korean society has completed the fertility transition, but strong son preference still prevails as evidenced by the increasing incidence of sex-selective abortion in the third- or higher-parity pregnancies.

Another dimension of differential preference for children exists in South Korea that affects the relationship between the family and the Korean fertility transition. It is discrimination between the first son and other sons. In the traditional family system, the importance of the first son is absolute. All the important institutional functions of the family are assigned to the eldest son, who enjoys privileges not accorded the other sons and daughters, but also assumes most familial responsibilities. He inherits the family lineage, is obliged to observe ancestor-worship rituals, and is expected to care for his parents in their old age. The other sons have a security value to the parents in case the eldest son dies prematurely (Kwon 1984). Even before the South Korean population became predominantly urban, the value of children as a labor force was limited because most families lacked land. "Too many mouths to feed" was often mentioned as parents' biggest worry. Thus, even the traditional Korean family has a propensity for very low fertility. The preference for at least one son, no less than other factors, has contributed to the acceptance of the one- or two-child ideal and consequently the rapid fertility transition.

### **Costs of Childrearing**

Having many sons was regarded as a blessing in Korea until the early 1960s. Even so, it was obvious that many children meant a hardship for most families. With the increasing likelihood of children's survival, a large number of children became a liability.

This does not imply, however, that a smaller family has been beneficial to the family economy in South Korea. Although economic growth and improvements in living standards have accompanied the fertility decline throughout its course, the increased cost for childrearing has more than outweighed the economic benefits of smaller families, mostly because parents' expectations for their children have risen disproportionately. The traditional value placed on education as an avenue to success has increased dramatically during the social transformation of the past four decades, and the parents perceive it their duty to pay for the best education they can afford for their children. Competition for placement at the better institutions has intensified with growing educational opportunities and attainment, and as a result the financial burden of education has multiplied for parents. The official costs of primary and secondary education are minor. Because graduation from a good university is regarded as a guarantee of success in the world, parents mobilize every possible resource to assure their children's acceptance at a prestigious university. They pay huge fees for private lessons, and many mothers sacrifice their own careers to advance those of their children.

Big spending on children's education is a problem not only for individual families. It poses many problems for the society as well. It has been blamed for irregularities in formal education, hindering the emotional development of children, and fostering extremely egoistic personalities.

### **The Cost of Fertility Control**

Couples' economic situations are known to affect their decision to practice fertility control in conditions of extreme poverty. Many poor couples are unable to purchase contraceptives, although their desire to do so may be strong. This may have been the case during the early 1960s in South Korea. As the evidence of widespread induced abortion suggests, the desire to limit family size was intense among Korean couples hoping to alleviate their economic hardship. Given the urban-rural differences in families' economic circumstances and in the accessibility to and cost of contraceptives, the decline in fertility should have been more rapid in rural areas than in cities in the 1960s in Korea. The pattern of fertility change indicates, however, that fertility declined much more rapidly in urban centers than in the villages, even though program efforts were concentrated in rural areas.

Urban families were not better off than rural families in the 1960s. According to a survey on urban poverty, about 55 percent of the population of Seoul lived under conditions of absolute poverty in 1965 (Suh et al. 1981, 102). Poverty in Seoul was aggravated by the large influx of rural poor. Nevertheless,

the fertility decline was greatest in Seoul, and the major method used to control births was induced abortion, which was available on the black market. This seems to indicate that the intensity of desire and the availability of means are more important determinants of fertility control than is the free distribution of contraceptives, even in very poor societies.

In 1966 fertility plunged nearly to the replacement level in Seoul, where a large black market in induced abortions had already formed. The desire for birth control was particularly strong in 1966 because that was the Year of the White Horse, according to the Chinese lunar calendar. According to traditional belief, women born in that year are destined to be widowed or to harm their husbands, and therefore they ought not marry. The belief was much stronger in Japan, where a 30 percent reduction of fertility was reported in 1966. In South Korea, traditional beliefs are known to be stronger in rural areas, but the effect of this belief on fertility was marked only in Seoul, where accessibility to the means of contraceptives and induced abortion was the greatest. The pace of fertility decline in Seoul slowed substantively after 1966; but, contrary to the situation in Japan, fertility did not rebound there. This occurrence suggests that the government's strategy of making contraceptives available through private pharmacies in urban areas was more successful than its free distribution of contraceptives in rural areas.

### Limits of the Family Planning Program

As discussed earlier, a major component of South Korea's fertility decline has been the postponement of marriage by women. The trend toward late marriage has been associated with a large volume of migration by young, single women from rural areas to cities and their increasing employment in urban manufacturing and service sectors. These changes have led to the growing independence of single women from their families and loosened parental and community controls on premarital sexual activity. According to a 1992 survey, 70 percent of young women working in the entertainment business and 30 percent of those working in manufacturing firms of various industrial districts had engaged in premarital sex [Kwon, Jun, and Cho 1997, 43-44]. These young women, some of whom were teenagers, were at high risk of contracting sexually transmitted diseases as well as at risk of premarital pregnancy and induced abortion. They were rarely exposed to sex education and proper information about contraception before their first sexual contact, which was usually accidental.

The Korean Family Planning Program has paid little attention to teenagers and young unmarried women, although an increasing need for assistance to this group was anticipated. Unprepared sex frequently leads to pregnancy, and most

out-of-wedlock pregnancies are terminated by induced abortion because of strong social censure of unmarried mothers and their children.

The program's social-support policies have often been mentioned as one of its strong points. In actuality, however, there is little evidence of their having had an impact on fertility, and the policies were inconsistent with the concept of social and family welfare. The direct financial support offered to families with two or fewer children was not enough to motivate young couples to regard children as a "negotiable commodity" instead of an "unconditional asset." For example, the right to apply for public housing was not a particularly attractive incentive because Koreans aspire to private home ownership, which they regard as an important asset and a symbol of lifetime security. Income-tax reductions for up to two children and free medical and health services to the mother and child if couples had only one child did not constitute incentives for family limitation at all. The amount of tax benefit offered was minor compared with the level of income, and the public medical and health services offered by the program were considered to be greatly inferior to private services. In view of the increasing emotional value placed on children with decreasing family size, these social supports seem not to have had much influence on the fertility behavior of individual couples. Furthermore, if one considers that having a large family poses a greater hardship for the poor than for the better-off, such program incentives to restrict fertility can be interpreted as punishment of the more needy by denying them social welfare. Real social welfare and social equity are lacking from the Korean Family Planning Program, mainly because social scientists have rarely been involved in formulating its policies.

#### SUMMARY AND CONCLUSION

South Korea's fertility transition started in the early 1960s, and in the mid-1980s fertility fell below the replacement level. The process has had few elements in common with the experience of Western countries. It occurred in the presence of significant social development and proceeded hand in hand with such socio-economic changes as economic growth, industrialization, urbanization, and improvements in education. The initial decline in fertility coincided with the government's adoption of a fertility-control policy. Accordingly, South Korea's fertility transition can be evaluated from several perspectives. It can be viewed in the context of a demographic transition, in relation to societal development, or from the perspective of state intervention for planned change.

During the early part of the colonial period, mortality began to decline with the introduction of Western medicines and health practices. Ruthless colonial exploitation, however, caused Korean farmers and laborers to become increasingly destitute, and population pressure built up rapidly. The social, economic, and demographic situation worsened after Korean liberation in 1945 and the Korean War that followed. These events and conditions created a demographic exigency in South Korea as huge numbers of former migrants returned from Japan and China and refugees fled south from the North. In this period of desperation, the birth rate began to plummet. The primary force behind the onset of the fertility transition was thus the mortality transition during the previous 40 to 50 years, and the major mechanism for it was the impoverishment of the Korean people.

The process of fertility transition was accompanied by social and economic development, and that fact lends support to the received view that economic development and modernization were the forces behind South Korea's demographic transition. There is no doubt that a social setting favorable to fertility decline has evolved in South Korea during the socioeconomic transformation of the four decades. But the validity of the received view is open to question. For example, North Korea is known to have almost completed its fertility transition without any improvement in living standards or health conditions during the last 15 years at least. Koreans living in China also achieved a level of fertility below replacement in the late 1970s before any substantive development took place there (Han et al. 1988). These two cases suggest the importance of state intervention in fertility control. But government intervention has failed to produce a similar result in many other countries. Consideration of a society's culture seems to be crucial to a full understanding of its fertility transition.

Many observers regard the Korean experience as lending support to the view that a strong family planning program, together with a high level of social development, is necessary for achieving a low level of fertility in developing countries (Berelson 1978). The Korean Family Planning Program covered the entire country, placing emphasis initially on rural areas and later on reaching the urban poor. Adopting a multidimensional approach, it enjoyed strong leadership support and encountered little resistance from the populace. Contrary to the expectation of program authorities, policymakers, and most demographers, the transition from a large-family to a small-family norm was rapid and unobstructed. Lack of resistance to the program indicates that social conditions favorable to it existed before it began. Economic pressures felt by parents were undoubtedly one reason for their receptivity to contraception, whether due to their inability to provide for many children or to their growing expectations for their children. The vigorous

campaign and strong leadership support were probably others. But the most important factor in reducing desired family size may have been the traditional Korean family system, with the strong value it places on sons and, in particular, the first son. Despite fears to the contrary, son preference did not deter the fertility decline at all; rather, it facilitated the transition. Moreover, elder parents' dependence on the first son in the Korean family tends to support the one-son family ideal, which is consistent with a fertility rate below the level of population replacement.

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## Population Policy and Programs in Taiwan

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Over the last 50 years Taiwan has not only made remarkable economic progress, but has also completed its demographic modernization. Its per capita gross national product increased from current US\$100 in 1952 to US\$12,439 in 1995. During the same period the population's annual rate of natural increase fell from 3.67 percent to 0.99 percent, with the crude birth rate falling from 46.6 per thousand population to 15.5 per thousand, and the crude death rate from 9.9 per thousand to 5.6 per thousand. This remarkable accomplishment was the reward for pragmatic, hard work, and attention to the family and public education. This chapter examines the role of the Taiwanese government in influencing and regulating childbearing and assesses the demographic impact and the costs and benefits of population and development programs in the postwar period.

Like many developing countries, Taiwan confronted the problem of excess population after World War II. The pressure felt in Taiwan was especially acute because of a sudden influx around 1950 of about 1.3 million migrants from mainland China into a war-torn, small (36,000 square kilometer) island with a preexisting population of 6 million. In 1950 the average area of cultivated land per farm in 1950 had been reduced to 1.4 hectares. By 1964 Taiwan had suffered for two decades the highest under- and unemployment in its history, 10 percent to 15 percent. Nevertheless, with the help of aid from the United States, Taiwan stabilized its economy and resumed its normal course of development. In the early 1950s the government successfully carried out land reform and subsequently introduced agricultural development programs with energetic assistance and advice from the Chinese-American Joint Commission on Rural Reconstruction and the Council on United States Aid, the predecessor of the Council for Economic Planning and Development. The production of the island's major agricultural crops—rice, sweet potatoes, bananas, and pineapples—surpassed prewar peaks. Innovations in farming techniques and infrastructure were introduced, but even these could not achieve a sustained rate of increase in agricultural production sufficient to support for very long a population that was growing at the rate of 3.5 percent a year. The fundamental solution lay in reducing fertility and promoting industrialization.

## EVOLUTION OF VIEWS AND POLICIES ON POPULATION

Officials in charge of the production of basic needs were particularly sensitive to the population pressure on resources. As early as 1950, John E. Baker, a member of the Joint Commission on Rural Reconstruction, noted the dangerous disparity between the high rate of population growth and the sluggish rate of agricultural production. With the approval of Dr. Chiang Molin, chairman of the Joint Commission, and the cooperation of Dr. Hsu Shih-Ju, head of the Rural Health Division of the Joint Commission, a million copies of a booklet entitled *The Happy Family* were printed and distributed through a rural health network. The booklet explained and promoted periodic abstinence as a method of birth control.

This effort provoked strong opposition from some legislators and intellectuals, who denounced it as a conspiracy to reduce the nation's military manpower (Cheng and Guan 1977). The reasons for the opposition were mainly that birth control was incompatible with the Chinese tradition of a large family and that it was against the teaching of Dr. Sun Yat-Sen, the founder of the republic. Dr. Sun had believed that China would be taken over by the Western powers if its population growth rate could not keep pace with the rapid demographic growth in the West over the past hundred years (Sun Y.-S. 1924).

In 1953, after the defeat of the Chinese Nationalists by the Communists of mainland China, President Chiang Kai-Shek, reminiscing about Dr. Sun's teaching, published a supplementary exposition of the late Dr. Sun's ideas on nurture and recreation (Chiang K.-S. 1953). Chiang Kai-Shek stated that Dr. Sun had asserted the importance of industrialization for China. "The future of human civilization also depends on industrialization," he wrote, describing Dr. Sun's views. "It cannot be held back by any human effort, and will take place in our country with certainty" (Chiang K.-S. 1953, 4). Chiang Kai-Shek then presented the following argument:

During the transitional period from the agricultural to the industrial social order, a population normally tends to concentrate in urban areas. ... During the process of urbanization, certain tendencies reveal themselves very clearly. Thus, the big household is broken up into a number of small ones, ... the custom of early marriage becomes out of date, the divorce rate increases, while the birth-rate decreases. ... Evidently the national birth rate does not increase with the progress of industrialization; on the contrary, it declines as a result. (Chiang K.-S. 1953, 17)

Concerned about the decline in fertility that Dr. Sun had predicted would accompany industrialization, Chiang Kai-Shek proposed the following policies for solving the republic's population problems (Chiang K.-S. 1953, 19–20):

- The development of a “national reconstruction project” to ensure a balanced economic development and population distribution.
- An educational policy aimed at teaching the younger generation to shoulder its parental responsibilities after marriage. Young men and women were to realize that the family as a social institution was based not just on personal attachment, nor did it concern the nuptial contact alone, but was basically a social unit having duties to the society and the state.
- A social policy providing for marriage loans, maternity leaves, extra pay for workers with large families, and full employment. “In addition, every family should have the right and the means to own a house where healthy children can be raised in an atmosphere of happiness and security. When this policy is successfully implemented, the birth rate will no longer decline despite the growth of industrialization.”

Many observers considered Chiang Kai-Shek’s proposals to be motivated by a plan to counterattack mainland China, and the belief that rapid population growth on Taiwan would strengthen the Nationalist government’s military power.

To gain a better understanding of Taiwan’s population problem and its possible solutions, in 1952 the Joint Commission on Rural Reconstruction, with assistance from the Rockefeller Foundation, invited George W. Barclay of Princeton University to set up a population research team. *A Report on Taiwan’s Population* appeared in 1954 (Barclay 1954b). It concluded that the large influx of migrants from mainland China was a temporary phenomenon, but that the high rate of natural growth due to the excess of births over the deaths would last for some time before it was curbed by a lower birth rate or a rising death rate. Because people in Taiwan were no longer willing to endure poverty and high mortality, a small-family pattern like that in most of the developed countries seemed unavoidable.

Concurrently, Barclay conducted a study on Taiwan’s prewar population and development experience. In it he stated:

Today it is doubtful whether any non-industrial nation, desirous of securing for itself the advantage of an industrial system of production, can afford to rely on this “automatic” decline in fertility, even if it is prepared to let the social changes run their course. The time is too short, the starting position too precarious. ... Agrarian countries that wish to play safe in their plans for development are now left with little choice but to promote the idea of deliberative fertility control among their people. (Barclay 1954a, 262)

Barclay’s research attracted the attention of government officials and intellectuals in Taiwan. Spurred by a growing demand for basic needs, schooling, and

jobs, they opened debates on population issues that were echoed by the press, legislative bodies, and the general public. Despite strong opposition, the Joint Commission financially supported a dedicated group of people to organize a China Family Planning Association in 1954. Its mandate was to sponsor training and provide information on traditional contraceptive methods. The work of the private association won support and cooperation from married couples serving in the Army and in public enterprises, but it encountered hostility and misunderstanding from agrarian and coastal fishing villages in southern Taiwan.

In 1956 opponents of the association raised their objections in the Provincial Assembly. K.C. Yen responded that the government had no intention of encouraging population control or family planning. He stated that a civic organization wished to promote the idea, that it was not improper for it to do so from a legal point of view, but that abortion was illegal and should be prohibited.

At a press conference in April 1959, Chiang Molin made an emotional appeal in support of family planning, urging the government not to intervene in his efforts to promote it. He asserted that he would take his life if his endeavor did any harm to the nation (Chiang M. 1959).

At about the same time, K.Y. Yin, vice chairman of the Council on U.S. Aid, calculated that if Taiwan's population growth rate had declined from 3.5 percent to 1.5 percent between 1953 and 1958, and if the populace had consumed 90 percent of the consumption saved from the reduction in population growth, per capita income would have risen by 12.4 percent, consumption by 11.7 percent, and total gross investment by 3.3 percent. If instead the populace had consumed only 50 percent of the consumption saved, per capita income and consumption would have increased by 13.5 percent and 9.6 percent, respectively, and total gross investment would have grown by 18.9 percent. He concluded that population control was a necessary but not a sufficient condition for accelerating investment and economic growth. He urged the government to take measures to regulate population growth, to restrict increased consumption, and to encourage investment (Yin 1959).

In 1960 the Taiwan Provincial Maternal and Child Health Institute, with assistance from the Joint Commission, experimented with a pre-pregnancy health program at eight health stations in rural townships in Nantou County (central Taiwan). A full-time worker was assigned to each health station to promote conventional methods of contraception in the townships. Each prepregnancy health worker was required to recruit at least 15 new couples with two or more sons every month for family planning guidance and to make follow-up visits 15 days, 60 days, six months, and one year after each couple accepted a contraceptive

method. A match study of the case records of 1,361 women acceptors indicated that both the pregnancy rate and birth rate of the prepregnancy health participants declined substantially (Takeshita, Peng, and Liu 1964).

### The Integration of Population and Development Strategies

In September 1961 the Taiwan Population Studies Center, with technical and financial support from the Population Studies Center of the University of Michigan and the Population Council in New York City, was established within the Provincial Health Department. A carefully designed action and research program was launched. A 1962–63 pre-action sample survey in Taichung City indicated that 70 percent of the couples surveyed unconditionally approved of family planning and 36 percent had already practiced one or more of the major methods of birth control (Freedman and Takeshita 1969). More important, the survey found that couples of higher socioeconomic status desired a moderate-size family containing an average of 3.1 children, and those of lower status desired an average of 4.6 children. Thus, if couples were able to achieve their desired family size, a substantial fertility decline could take place without disturbing traditional Chinese family-size values.

The Taichung survey findings clarified a widespread misunderstanding about those values and inspired confidence among advocates of family planning. Advocates' sense of urgency about government involvement in the private family planning effort increased when in early 1963 the United States Agency for International Development (USAID) announced its decision to terminate aid to Taiwan within a few years. The inflow of \$100 million in U.S. aid annually since 1951 had been critical in enabling Taiwan to develop the capability of providing an acceptable standard of living for its people without causing intolerable price inflation (Jacoby 1966). Some prominent economists believed it would be disastrous to the economy if the government did not take prompt action to improve the economic environment and regulate the rapid population growth. Yin (1962, 20), for example, made the following observations:

... more than half of our net domestic capital formation (8.1 percent out of 14.5 percent for 1952–59) is financed, not from domestic savings, but from U.S. aid. Consequently, if there had been no U.S. aid, our rate of growth would have been much smaller. In fact, with the population growing at 3.5 percent per annum, real per capita income would decrease! On the other hand, if we should increase our rate of savings and achieve independently our present rate of growth (as was done in Meiji Japan and in Soviet Russia), we could easily accomplish a rate of growth of over 7.1 percent per annum by utilizing external capital to accelerate our economic growth.

Yin recommended raising the domestic savings rate by controlling consumption:

Between 1951 and 1960, Taiwan's real national income and per capita income increased by 95.2 percent and 44.9 percent, respectively, showing an average annual increase of 7.7 percent and 4.2 percent. However, between 1951 and 1959, Taiwan's national consumption increased by 96.0 percent while net savings [increased] by only 40.1 percent, or 8.8 percent a year vs. 4.3 percent a year. ... While it is true that consumption is the ultimate objective of economic development, it must be remembered that we are still a recipient of U.S. foreign aid and that a rapid increase in national consumption will retard the accumulation of capital and, therefore, undermine the future growth of consumption. (Yin 1962, 26-27)

Yin foresaw that lowering the rate of population growth could ease the population burden on the economy, but it would not achieve the goal of creating a self-supporting economy. His emphasis on controlling both private consumption (mobilizing savings from rising real income) and population growth indicated his support for integrating population planning into economic policies.

In December 1963, speaking to journalists from Los Angeles, Chiang Kai-Shek acknowledged for the first time that Taiwan's population growth rate was extremely high. In the following June, Vice President Chen Cheng introduced the subject of rapid population growth at a ceremony marking the completion of Shihmen Reservoir.

I must raise the population problem of Taiwan at this occasion. The population has increased over 350,000 a year in Taiwan. The annual increase in rice production made possible by this new reservoir is only enough for the one and a half years of population increase. Despite our endeavors in agricultural development, we will soon confront the limits of natural resources. To solve these problems, we must first have an appropriate population policy and second promote industrialization. (Cheng and Guan 1977, 32)

In September 1964, Chiang Kai-Shek announced at an interview with Chilean journalists that "we have made efforts to raise the agricultural and industrial productivity and, at the same time, taken measures to slow down the population growth rate, and both efforts have shown achievements" (Cheng and Guan 1977, 32).

These statements had a profound influence on the formulation of population and development policies in Taiwan. In January 1964, immediately after the president publicly acknowledged the problem of rapid population growth for the first time, a Manpower Development Committee was established in the Council for International Economic Cooperation and Development (CIECD), the successor of the Council on U.S. Aid. Its mission was to prepare the first Manpower Development Plan. The task of the committee was not so much to

generate original proposals, as to consolidate and synthesize available information—to assemble demographic data, opinions, and suggestions, and to structure possible alternative solutions. The first plan called for a family planning program aimed at reducing the population growth rate from 3 percent to 2 percent within five years. Projects for job creation and educational improvement were also recommended. The Executive Yuan (Cabinet) approved the plan in October 1966 and incorporated it into the Fourth Four-Year Economic Plan (1965–68) as an integral element.

In 1966 the government established within the CIECD an Urban and Housing Development Committee, with technical assistance from the United Nations, to prepare comprehensive plans for urban and regional development. Its creation was prompted by problems caused by Taiwan's recent rapid industrialization and urbanization. The plans prepared by the Manpower Development Committee and the Urban and Housing Development Committee were coordinated with those of the local and central governments and integrated into successive Four-Year Economic Development Plans.

By 1968 the pool of agricultural surplus labor was almost depleted by the low-skilled, labor-intensive manufacturing sector. The government extended the six-year compulsory primary-education system to nine years to upgrade labor quality and, even more important, to reduce the pressure of the postwar baby boom on employment as baby boomers reached the working age group.

After periodic evaluation of their performance, the Manpower Development Committee and the Urban and Housing Development Committee underwent a series of reorganizations. In 1971 the Urban and Housing Development Committee was reorganized into a permanent Urban and Housing Development Department in the CIECD. In 1985 the Manpower Development Committee was reorganized as the Manpower Planning Department in the Council for Economic Planning and Development (CEPD, the successor of the Economic Planning Council, which had succeeded the CIECD in 1973). Since then the CEPD has been responsible for coordinating all aspects of population policy.

Although the government acted in many ways to promote its new population policy, the implementation of its family planning program still encountered many difficulties. The government-initiated program had to operate under the officially acceptable name of pre-pregnancy health services and had to be financed by resources outside the government budget. In 1963 the Taiwan Population Studies Center program was strengthened with a newly invented intrauterine device, the Lippes loop. This inexpensive, convenient, and effective contraceptive led to an expanded program covering 120 of the 361 townships. During the first

year alone, 3,650 women received the device. The widespread acceptance of the Lippes loop in rural areas lent confidence to family planning supporters.

In 1964 the Provincial Department of Health proposed a Five-Year Family Health Plan for 1964–69, with a target of 600,000 loop insertions, equivalent to 45 percent of all married women between the ages of 20 and 39. The target was set in accordance with the aim of the Fourth Four-Year Economic Plan (1965–68) on the assumption that each loop insertion would prevent one birth during the five years. The plan won support from the vice chairman of CIECD and a timely financial appropriation of US\$1.5 million from the Chinese-U.S. Funds, the funds from USAID that were controlled directly by the Executive Yuan and the USAID Mission. Expenditure of these funds did not require the approval of the Legislative Yuan (Congress).

Opposition to birth control among some influential government officials, legislators, and elected representatives remained still strong, however. A private Maternal and Child Health Association was established in March 1964 to provide contraceptive support to obstetricians and gynecologists in private clinics throughout 331 of 361 townships. Omitted from coverage were only the 30 mountain townships where about 200,000 aboriginal inhabitants lived.

### Population Policy Formulation and Its Effects

To remove political obstacles to family planning activities, the CIECD held a seminar on manpower in July 1966 and invited Dr. Sun Fo, son of Sun Yat-Sen, as keynote speaker. In his speech he reinterpreted his father's population theory, emphasizing that international and national conditions had changed from those that had prevailed when Sun Yat-Sen had called for a larger population to fight Western imperialism. What determined a country's wealth and strength, Sun Fo asserted, was not its population size, but the quality of its population. He rejected the literal interpretation of his father's writings and stated that family planning was compatible with his father's fundamental view. Echoing the keynote speech, Premier C.K. Yen, Minister of the Interior Hsu Ching Chung, Minister of Education T.H. Yen, and Minister of Economic Affairs K.T. Li all emphasized the urgent need to control population growth in order to accelerate national development. They urged the government to adopt a population policy aimed at regulating the rapid rate of growth (ROC CIECD 1966). A month later Sun Fo urged the government in a written statement to adopt an explicit population policy and to increase industrial production and employment opportunities (Sun F. 1966). In December 1966, Chiang Kai-Shek signed the United Nations Statement on Population, which endorsed family

planning programs and population programs aimed at slowing rates of population growth.

A Population Policy Committee was established within the Ministry of Interior Affairs to prepare an official population policy for Taiwan. The Sixth National Congress of the Kuomintang had already passed, in 1965, revised guidelines for population policy, and in July 1967 it endorsed the committee's proposed regulations governing the implementation of family planning in Taiwan and the draft of a eugenic law. The proposed law then went to the Executive Yuan for approval.

In November 1967 Dr. K.T. Li presented to the Central Committee of the Nationalist Party a report asserting the urgent need for a population policy in Taiwan. With support from Sun Fo and other senior members, the Central Committee, chaired by Chiang Kai-Shek, passed a resolution to "formulate a population policy, adjust the size of the population, and reduce population pressure" (Li 1988, 77).

An International Conference on Population Programs in East Asia, organized jointly by the Population Council of New York, the CIECD, and the Joint Commission on Rural Reconstruction, was held in Taipei in May 1968. At his opening address before 62 participants from 11 countries and regions, Premier C.K. Yen announced the republic's regulations governing the implementation of family planning in Taiwan. His announcement legitimized the government's family planning program, which had existed since 1964, and permitted government funds to be used in support of the program.

A remarkable shift in public opinion in favor of population control became evident at this time. As Li (1976, 294) stated,

The most important thing that has happened on Taiwan in the last several years in connection with the population problem is the conceptual breakthrough—a change in attitude of the leaders of the government that a large and rapidly growing population can be a real deterrent to socioeconomic progress, and that the centuries-old Chinese tradition in favor of large families is no longer compatible with the process of transformation from a backward agricultural country to a modern industrial society.

In April 1969 the Executive Yuan promulgated the government's guidelines for population policy. To ensure their successful implementation, the government set up family planning offices as an integral part of health agencies at all levels of the government. Agencies concerned with social, cultural, and interior affairs also participated in promoting the program. To demonstrate the government's support for small families, all public employees were discouraged from

having more than three children. The measures included disincentives, such as cutting fringe benefits for large families, and positive inducements, including efforts to improve women's status. In 1973, for instance, the government stopped issuing food rations, which civil and military employees had been receiving for dependents, to employees with more than three children. In 1982 only couples with two or fewer children were allowed an income tax deduction for their dependents. In 1983 allowances for birth delivery and children's tuition subsidies were limited to the first three children, and marriage subsidies and the right to purchase low-cost public housing were restricted to men of ages 25 and older and to women of ages 22 and older. The Legislative Yuan added an article to the Civil Law in 1985 stating that a woman who had no brothers could pass her maiden surname on to her children with the consent of her husband. In 1987 the government began paying food rations to female employees' parents. The effectiveness of most of these incentives and disincentives lasted only a short time because public servants' salaries were rising as a consequence of a rapid increase in the country's productivity.

Promoting a reasonable rate of population growth through voluntary family planning programs, incentives, and disincentives was one element of the government's guidelines for population policy. The guidelines also included measures to improve the quality of the population through better education, nutrition, and eugenic protection and to promote a rational distribution of the population.

The government set the reasonable rate of population growth at 2 percent per year. This goal was achieved by 1979. In that year President Chiang Ching Kuo set as a new goal a further decline in the population growth rate to 1.25 percent within 10 years and urged the passage of a eugenic protection law that would legalize induced abortion in certain circumstances. The guidelines for population policy were amended in 1983 to incorporate a target population growth rate below 1.25 percent by 1989. Much to everyone's surprise, the revised target was reached three years earlier, in 1986, when the growth rate fell to 1.10 percent. One reason for the sharp decline was that induced abortion had become an increasingly important method of birth control. The proportion of married women 22–39 years old who had obtained abortions at private clinics increased from 4 percent in 1965, to 12 percent in 1976, and to 24 percent in 1985, although the Eugenic Protection Law, which legalized abortion for medical reasons only, had not been approved until 1985.

By 1983, in fact, Taiwan had attained replacement-level fertility and almost universal use of contraception by married couples. In 1988 the government set a new target for population growth: a level below 0.8 percent by the year 2000,

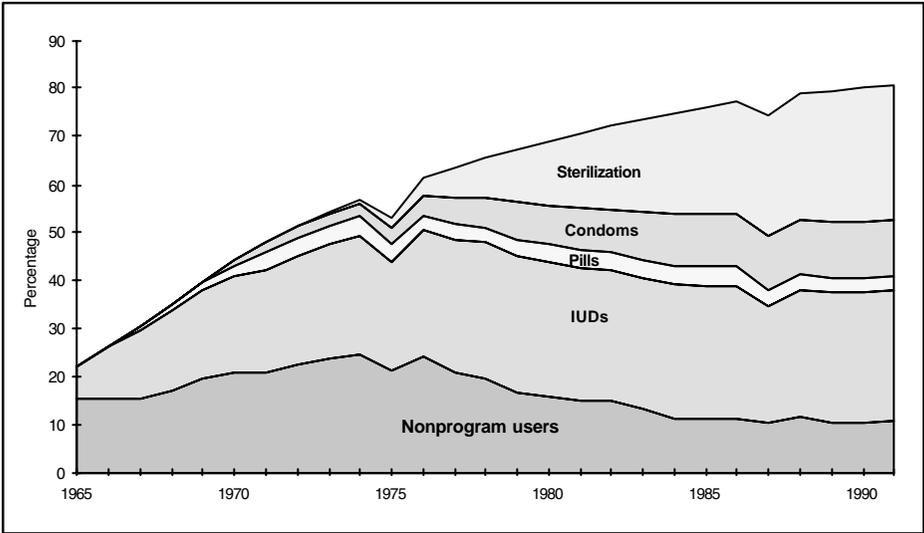
followed by a rise in the total fertility rate to 1.8 children per woman beginning in that year and a further gradual increase to 2.1 children per woman. This new target, if achieved, would produce a growth rate of approximately zero in 2025 (ROC CEPD 1996). In 1992 the Executive Yuan reaffirmed its support for replacement-level fertility in the following statement:

Since 1984, the net reproduction rate has been below the replacement level. If the downward trend continues, the population of Taiwan area will reach the stage of "zero population growth" soon and [that will] turn into a "negative growth" quickly. This means a decrease in the young population and an increase in the aging population, which will lead to different sorts of social problems, such as the lack of labor force and high dependency ratio. Therefore, the future policy should promote a reasonable growth of the population. The new policy aims to achieve the guidelines of the "two child family," but advocates the increase of the marriage rate and birth rate of married women to maintain the net reproduction rate at the replacement level. (Freedman, Chang, and Sun 1994, 328)

Indeed, a labor shortage had become an increasing policy concern since the depletion of the surplus labor pool around 1968. Prior to 1986 the lack of skilled labor and professionals was a major obstacle to economic development. Efforts to upgrade the nation's human resources through education and training had overcome this difficulty, however, and created a technology-intensive economy (Liu 1992). A lag in structural adjustments of the economy produced a demand for unskilled labor in low-technical manufacturing and construction industries, which has been met by the importation of workers from Southeast Asia since the early 1990s. By 1996, alien workers with official permits accounted for 220,000, or 2.4 percent, of the total labor force. The total number of aliens working in Taiwan could be substantially greater. The recent rise in unemployment among higher-educated Taiwanese workers is probably the result of the importation of alien workers and their employment in the labor-intensive sectors, where firms hire them to avoid upgrading their enterprises to capital and technology industries. The current policy of permitting the importation of low-level technical labor is obviously contrary to the aims of the government's population policies.

#### THE DEMOGRAPHIC IMPACT OF THE PROGRAM

After the 1962-63 preprogram sample survey was conducted in Taichung City, the Taiwan Population Studies Center set up a recording system for program acceptors and began conducting periodic nationwide sample surveys of married women. Seven surveys took place between 1965 and 1992. Responses to questions about married women's acceptance of various contraceptive methods were



**Figure 4.1.** Percentage of married women aged 20–39 currently using contraceptives, by program method, and nonprogram users: Taiwan, 1965–91.

Source: Lee (1993, table 20).

forwarded to the Taiwan Population Studies Center for analysis and evaluation. The reports derived from this quick reporting system kept program staff well informed and enabled them to make timely decisions in improving their services.

The estimated percentage of married women 20–39 years of age currently using contraceptives rose from 22 percent at the beginning of the organized family planning program in 1965 to 74 percent by 1983 and to 81 percent by 1991 (Figure 4.1). Among the current users in 1965, only a third had been recruited by the IUD program; the other two-thirds were using contraceptives supplied by the private sector. Thereafter, except in 1975 and 1987, the percentage of IUD users increased rapidly, reaching a high of 28 percent in 1978 and stabilizing at 27 percent to 28 percent between 1989 and 1991. (The years 1975 and 1987, which preceded the Year of the Dragon in the traditional Chinese calendar, were considered auspicious for giving birth to a son.) The program introduced oral contraceptives in 1967. The proportion of women using pills was 4 percent in 1974 and then fluctuated around 2 percent to 3 percent thereafter. Condoms, offered from 1970 onward, gained acceptance from a steadily growing group of couples, reaching 12 percent of acceptors by 1991. Sterilization, the fourth program method, was first offered as a permanent method in 1972 and quickly became the choice of an increasingly large number of women. By 1989 more women had opted for

sterilization than were using the IUD, and since then sterilization has been the program's leading method. By 1991, 70 percent of married women were using contraceptives offered through the program and only 10 percent were using contraceptives provided by the private sector. Thus, in recent years the program has played a major role in providing the means of birth control to Taiwanese couples.

As Table 4.1 indicates, during the early period of the program, most acceptors were over age 30, had three or more children, and had only a primary-school education or less. Most had never practiced birth control before and used the program methods as a way to terminate childbearing. As the program matured, the recruited women tended to be younger and to have fewer children and more education. More and more women began using the pill and condoms to space births.

### Changes in Preferred Family Size and Reductions in Unwanted Fertility

The program has offered contraceptives to assist couples in achieving their preferred family size. The average number of children preferred by married women age 22–39 decreased from 4.0 in 1965 to 2.9 in 1976 and then to 2.4 by 1992. The average number of children ever born to these women declined from 3.8 to 3.3 and then 2.2 over the corresponding period (Table 4.2). A comparison of preferred family sizes among broad age groups of married women indicates that, on average, women attained their preferred number of children at about age 30. For women beyond 30 years of age, the ratio of the number of children ever born to the number of preferred children rose rapidly as the women's age advanced. Except for an unusual rise in birth rates in 1976, the Year of the Dragon, the time series of ratios in the 35–39 age group narrowed steadily toward a negligible margin by 1992. This rapid trend in the elimination of excess births appears to have resulted largely from the government's effort to promote the family planning program.

The total fertility rate in Taiwan declined to the replacement level of 2.1 children per woman around 1983 and leveled off slightly below that figure thereafter (Figure 4.2). The average preferred number of children declined to slightly above the replacement level for all age groups by 1992. If we assume that a cohort of women born in the same five-year period gave birth at current rates of age-specific fertility as they passed through their reproductive age span, then in Taiwan the positive difference between the total fertility rate and the average preferred number of children would be due to the excess number of births to women aged 30 and over, minus births to women under 30 in later years. The negative difference between the total fertility rate and the average preferred number of children would be due to births not yet experienced by women under age 30, minus excess births to women aged 30 and over. Accordingly, Figure 4.2 includes a time-series

**Table 4.1.** Acceptors of the four program methods, by demographic, social, and family planning status: Taiwan, 1965–89

Method	1965	1969	1977	1981	1989
Number of acceptors					
All program methods	126,805	211,687	338,056	389,005	279,907
IUD	99,253	130,358	177,436	161,564	159,291
Pill	27,552 <sup>a</sup>	32,208	52,366	69,930	27,789
Condom	*	49,121 <sup>b</sup>	67,719	106,393	47,166
Vasectomy	*	*	3,537	2,650	2,523
Tubal ligation	*	*	36,998	48,468	43,138
Percentage of acceptors aged 29 or less					
IUD	34.1	44.1	61.6	63.7	52.3
Pill	40.0	47.3	75.5	81.3	81.3
Condom	*	41.5	71.3	77.6	78.3
Vasectomy	*	*	48.4	47.0	31.8
Tubal ligation	*	*	49.4	52.9	39.0
Percentage of acceptors with 2 or fewer children					
IUD	13.3	21.3	43.4	54.9	71.6
Pill	18.9	22.0	57.5	68.9	86.0
Condom	*	26.1	59.1	73.4	90.0
Vasectomy	*	*	24.2	39.8	64.6
Tubal ligation	*	*	10.8	15.7	32.5
Percentage of acceptors with junior high school or more education					
IUD	12.4	12.8	27.6	45.7	75.8
Pill	22.5	15.4	31.2	48.0	82.4
Condom	*	29.5	39.5	57.1	87.5
Vasectomy	*	*	31.4	46.9	81.2
Tubal ligation	*	*	13.3	22.6	65.6
Percentage of women who had previously practiced family planning					
IUD	*	35.7	48.3	49.7	58.1
Pill	89.9	80.5	49.2	50.9	43.7
Condom	*	73.5	52.0	54.9	48.9
Vasectomy	*	*	75.5	72.2	80.1
Tubal ligation	*	*	57.9	52.4	55.9
Percentage of acceptors using method for spacing					
IUD	*	18.3	26.7	33.5	31.1
Pill	8.1	14.2	40.5	48.8	60.4
Condom	*	19.1	40.8	53.0	67.3
Percentage of acceptors using method for termination					
IUD	*	81.7	73.3	66.5	68.9
Pill	91.9	85.8	59.5	51.2	39.6
Condom	*	80.9	59.2	47.0	32.7

Source: Adapted from Lee (1993, tables 10, 14–16).

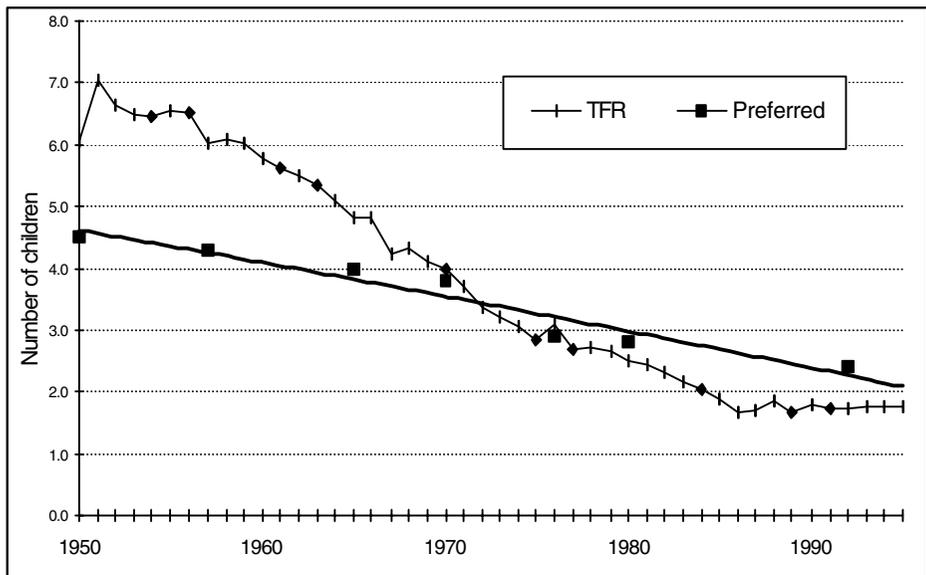
\*less than 0.001.

<sup>a</sup> Number of pill acceptors in 1967.<sup>b</sup> Number of condom acceptors in 1970.

**Table 4.2.** Average preferred number of children and number of living children among married women aged 22–39, by woman's age: Taiwan, 1965–92

Age group	1965	1970	1976	1980	1992
<b>Preferred number of children</b>					
22–39	4.0	3.8	2.9	2.8	2.4
22–24	3.7	3.6	2.7	2.6	2.3
25–29	3.8	3.6	2.7	2.7	2.3
30–34	4.0	3.8	3.0	2.9	2.4
35–39	4.3	4.1	3.2	3.1	2.6
<b>Number of children ever born</b>					
22–39	3.8	3.6	3.3	2.8	2.2
22–24	1.5	1.8	1.9	1.5	1.3
25–29	2.8	2.7	2.6	2.3	1.7
30–34	4.3	4.0	3.6	3.0	2.3
35–39	5.5	4.9	4.3	3.7	2.7
<b>Ratio of number of children ever born to number of preferred children</b>					
22–39	95.0	94.7	113.8	100.0	92.5
22–24	40.5	50.0	70.4	57.7	56.1
25–29	73.7	75.0	96.3	85.2	75.2
30–34	107.5	105.3	120.0	103.4	96.7
35–39	127.9	119.5	134.4	119.4	105.4

Source: Lee (1993, table 33).

**Figure 4.2.** Trends in the total fertility rate and preferred number of children: Taiwan, 1950–95.

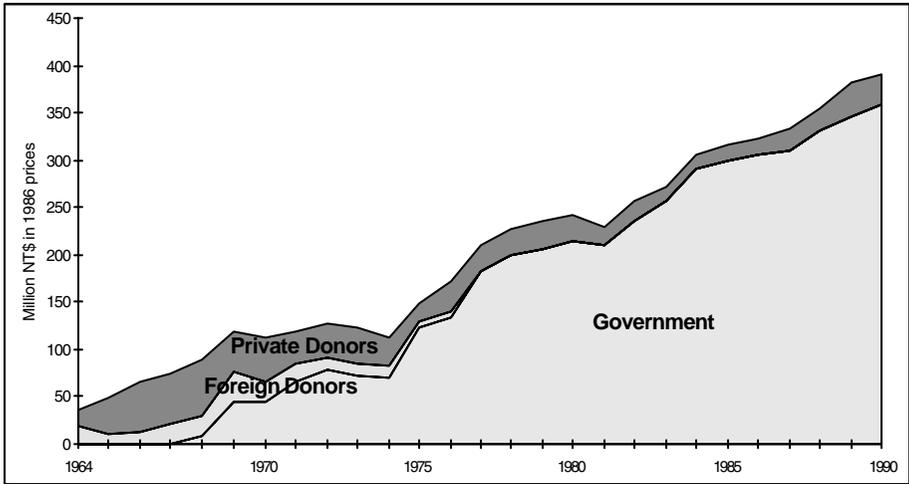
Sources: Total fertility rate (TFR): ROC, MOI, 1995. Preferred number of children: Lee (1993, table 33).

indicator showing that before 1970, excess fertility declined rapidly in response to the diffusion of the family planning program. Since the early 1970s, however, the decline in fertility below the average preferred number of children may be due to the rise in women's median age at first marriage, from 21.8 years in 1965 to 22.3 years by 1972, and to 26.3 years by 1994. This rise in age at marriage caused women to postpone their childbearing. If the preferred number of children remains constant at slightly above the replacement level, the total fertility rate can be expected to rise to the level of the preferred number.

Evidence to support that expectation is strong. First, the Chinese traditional preference for sons persists among all Taiwanese women, although the proportion of younger wanting only one son has increased significantly in the post-transition period (Freedman, Chang, and Sun 1994, 324). Second, nearly all couples are able and determined to achieve their fertility goals. This is seen from the rise in total fertility rate in the two "Dragon Years" of 1976 and 1988, and the resumption of the normal trend in subsequent years.

#### COSTS AND BENEFITS OF THE FAMILY PLANNING PROGRAM

Since the mid-1950s the government has tacitly supported virtually all family planning activities in Taiwan, but before promulgating its population policy in 1968, it did not allot funds for the family planning program in the annual budget. The Rural Health Division of the Joint Commission for Rural Reconstruction, which was financed by U.S. aid, founded a Family Planning Association of China in 1953 and financially supported it until the government's program began replacing its services around 1965. At that time the Rural Health Division allocated funds from nongovernmental sources to set up pre-pregnancy health clinics in 12 provincial hospitals, and by 1963 it had dispatched 120 pre-pregnancy health workers to local health stations after completing a successful experiment in eight townships of Nantou County. Between 1964 and 1968, the nationwide program received support from two major sources: a special five-year fund made available from the Sino-U.S. counterpart funds (the "second-generation" of USAID funds to Taiwan), and funds and technical assistance from the Population Council, the University of Michigan, and other foreign and international donors. The special five-year fund amounted to US\$300,000 annually and was used for the active administration of the program by the Committee on Family Planning under the Provincial Department of Health. A large part of the foreign funds was used to support program research and evaluation conducted by the Taiwan Population Studies Center. Another part was allocated to the private Maternal and Child



**Figure 4.3.** Total spending on the family planning program, by source: Taiwan, 1964–90.

Source: Lee (1993, table 17).

Note: Private donors include a special five-year fund (Sino-U.S. counterpart funds), Planned Parenthood of China, and others.

Health Association for contraceptive supplies. Acceptors paid part of the cost of the contraceptives, and their fees were pooled in a rotating fund used to buy more supplies. When the government officially announced its population policy in 1968, government funds were made available to continue the program from 1968 onward. In 1969 the Committee on Family Planning and the Population Studies Center were reorganized into the Provincial Institute of Family Planning and placed in charge of administering and evaluating the program. The Maternal and Child Health Association provides contraceptives to the government program under the name of the Planned Parenthood Association of China.

### Program Costs

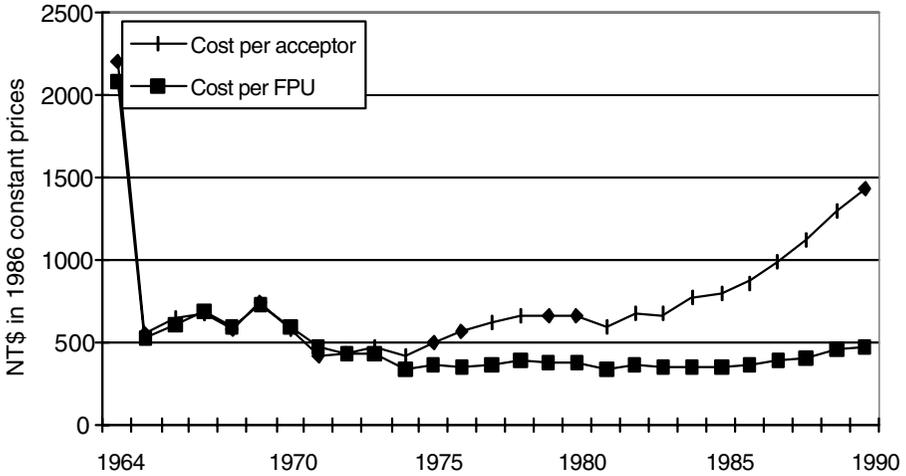
Total spending on the family planning program from the government, foreign aid, and private donors increased from NT\$35 million (measured in 1986 constant prices) in 1964 to NT\$113 million 1974, NT\$307 million by 1984, and NT\$390 million by 1990 (Figure 4.3). The amount of total spending and its rapid rate of increase were impressive; but compared with public health expenditures and the gross domestic product (GDP), the level of spending was negligible. The program's share of total public expenditures increased from 2.1 percent in 1964 to a peak of 6.3 percent in 1969, decreased to 4.0 percent in 1978, and then fluctuated around 2 percent to 3 percent thereafter. Its share of GNP has never exceeded 0.02 percent. Compared with 0.36 percent of GNP spent on family planning in

Bangladesh in 1989, 0.14 percent spent in India, and 0.10 percent spent in China, Taiwan's level of expenditure has been insignificant. Obviously, opposition to the implementation of family planning in the early years was not based on concern about the fiscal burden, but on the conservative attitudes of some intellectuals and government leaders.

The annual cost of the program or the cumulative cost per acceptor is generally the measure used to evaluate its efficiency. The effort spent to recruit an acceptor varies significantly among contraceptive methods and among women of different demographic characteristics. The program developed measures called "family planning units" (FPUs) to credit the workload of the field workers (T.H. Sun 1987). Prior to 1990, for example, an IUD acceptance was equivalent to one unit, an IUD acceptance by a woman with two children was equivalent to 1.2 units, and an IUD acceptance by a woman with one or no children was worth 1.5 units. A female sterilization was worth three units, a vasectomy worth six. Ten cycles of pills and six dozen condoms were worth one unit. Since 1990, workers have earned more points by recruiting women with better education to accept IUDs. Besides providing a means of crediting workers' achievements, this system indicates which methods the program emphasizes.

Over time the average cost per acceptor has risen substantially, whereas the average cost per FPU has remained stable (Figure 4.4). The reason is that the program has been reaching a different type of acceptor in recent years. In the early period of the program, most acceptors were counted as one FPU because they were IUD acceptors with two or more children. As the program progressed, there were fewer such women, and consequently the program recruited more acceptors who had few children, thus inflating the FPU. Therefore, the increase in cost per acceptor in recent years was not due to a deterioration of the program, but rather to the program's having to spend more effort to recruit younger married women with few children.

The low direct cost of the program has been due in large part to social and economic conditions in Taiwan that facilitated the promotion of the urgently needed family planning services. This can be seen in both supply and demand factors related to those services. On the demand side, during the early period of the program the population pressure on resources motivated couples, particularly those with less education and those living in rural areas, to limit their family size. Their readiness to accepting family planning increased the efficiency of the program. On the supply side, the long-established nationwide public health system and Taiwan's population registers enabled the program to efficiently dispatch messages about the availability of its family planning services to couples in need.



**Figure 4.4.** Average cost per acceptor and cost per family planning unit (FPU): Taiwan, 1964–90. Source: Lee (1993, tables 28 and 29).

For example, field workers stationed at the township health stations could draw up home-visit plans using detailed information about married women (their address, age, educational attainment, and fertility history) available from the household records in the township population registers. The costs of service delivery were kept at the lowest possible level by integrating the family planning services into the network of public health and private clinics. Some 600 contracted obstetricians and doctors at public health stations and private clinics perform IUD insertions, for example. In a study of the fertility effect of family planning acceptance in 282 townships of Taiwan between 1963 and 1965, Hermalin (1968) found that the program's influence was greater than could be explained by socioeconomic variables. He concluded that it "served, at a minimum, to hasten the rate of decline that might have otherwise taken place" (p. 11).

### Benefits of the Program

The hastened fertility decline had many implications, and its advantages were profound. As Kuznets (1979, 113) observed with reference to the fertility decline that took place in Taiwan between 1951 and 1973,

Marked declines in fertility imply a wide diffusion of its reduction among the country's population. In societies that allow adequate freedom to consumers and families, such widespread reductions in fertility represent significant economically rational responses of the population to changes in economic and social conditions that favor fewer children and greater investment in their education and training. Hence, such wide diffusion of fertility reduction is a

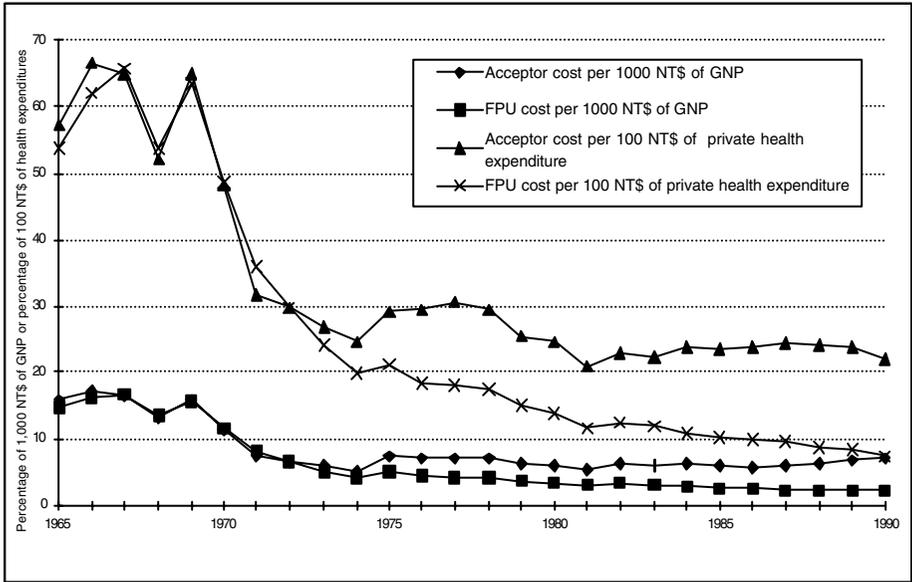
significant index of the extent to which the revised view on children and their future prospects has spread, and thus an index of the spread of the positive contributions of economic growth in their distribution among population. Finally, wide diffusion of fertility reduction among all strata of the population prevents or minimizes the inequality effects of uneven diffusion, which in the past of many currently developed countries meant a gradual and slow spread of the pattern from the higher income brackets to the lower.

On the basis of findings from these and other studies, the family planning program in Taiwan has been credited with playing a key role in the country's widespread fertility reduction and its rapid socioeconomic growth with equity.

### The Costs Borne by Couples

A comparison of the per capita costs of family planning provided through the private sector versus through the government's program indicates that the average cost of the program, per acceptor or per family planning unit, was fairly substantial. Before 1970, acceptors' share of the cost of the government program was 50 to 60 percent, but it fell 20 percent to 30 percent in later years (Figure 4.5). Acceptors' share of each FPU declined from 20 percent to 10 percent over the same period. For an IUD insertion, an acceptor paid NT\$30 (US\$0.75) during 1964-74, NT\$50 (US\$1.25) during 1975-90, and NT\$80 (US\$3.10) from 1992 onward. These payments consisted of only one-half of the fees charged by the contracted physician; the program subsidized the other half. For oral contraceptives acceptors paid NT\$10 per month during 1967-69, NT\$1.5 during 1970-71, and an increasing fee reaching NT\$20 in 1980. Condom acceptors paid NT\$1 per dozen in 1970; this amount gradually increased to NT\$15 in 1985. Acceptors of all methods benefited from the low fees for contraceptive supplies in the early period of the program.

Increases in acceptor fees did not keep pace with Taiwan's rapid increase in per capita income, and therefore over time the economic cost of program services to users became negligible. Compared with per capita GNP, the level of the total program spending was low, accounting for only about 1.0 percent to 1.5 percent in the early period and falling to 0.7 percent for each acceptor and to 0.2 percent for each family planning unit in recent years (see Figure 4.5). Given the low cost of program contraceptives to average couples and the achievement of replacement-level total fertility in 1983, government subsidies for program services were gradually limited to disadvantaged groups, such as the disabled, the poor, and people living in remote mountain areas. The energies of family planning staff are being redirected to a more general health program for the elderly. The family planning program of Taiwan, in effect, has become substantially privatized in recent years.



**Figure 4.5.** Average cost per acceptor and cost per family planning unit (FPU) as a percentage of per capita private health expenditure: Taiwan, 1964–90.

Sources: Calculated from ROC DGBAS (1987, 1994); Lee (1993, tables 28 and 29).

## SUMMARY AND CONCLUSION

Initially a few government officials, mostly those responsible for the production of food, observed that Taiwan was experiencing population pressure on its resources, caused by rapid population growth. In 1950 the Chinese-American Joint Commission on Rural Reconstruction initiated a small program to spread knowledge of family planning methods. The commission's effort did not win immediate support from the government, in part because some officials thought that family planning was taboo in Chinese tradition, and because other officials adhered to Dr. Sun Yet-Sen's teaching on population. A few years later, however, the Council for United States Aid (now the Council for Economic Planning and Development), which was, and remains, in charge of national economic planning, supported the view that a reduced population growth rate would benefit the economy. A public discussion of family planning ensued, and its advocates increased greatly in number.

With tacit support from most high-ranking officials and assistance from the Population Council and the University of Michigan, the Taiwan Provincial Government set up an island-wide family planning program in 1964. The program aimed to recruit 600,000 IUD acceptors within five years, a number corresponding

to about 34 percent of all married women between the ages of 20 and 44. This target was achieved in 1969. In that year the government promulgated a population policy to legitimize the family planning program. Gradually the program introduced other types of contraceptives, including orals, condoms, and female and male sterilization. Its cost, to the government and to acceptors, was negligible.

During the program's early phase, it focused on providing family planning services to rural married women with three or more children to enable them to avoid additional births. With improvements in Taiwan's economy, preferred family size gradually decreased—from 4.0 children in 1965 to 2.9 in 1976, and then to 2.2 by 1992. More and more women used contraceptives provided by the program to space wanted births and prevent unwanted ones.

By 1983 Taiwan's total fertility rate had declined to the replacement level of 2.1 children per woman, and it has remained below that level ever since. The rapid fertility decline has contributed greatly to socioeconomic growth with equity. Now that Taiwan has completed its fertility transition and entered a postindustrial phase, its future population policy should give due attention to the social and educational policies prescribed by Chiang Kai-Shek.

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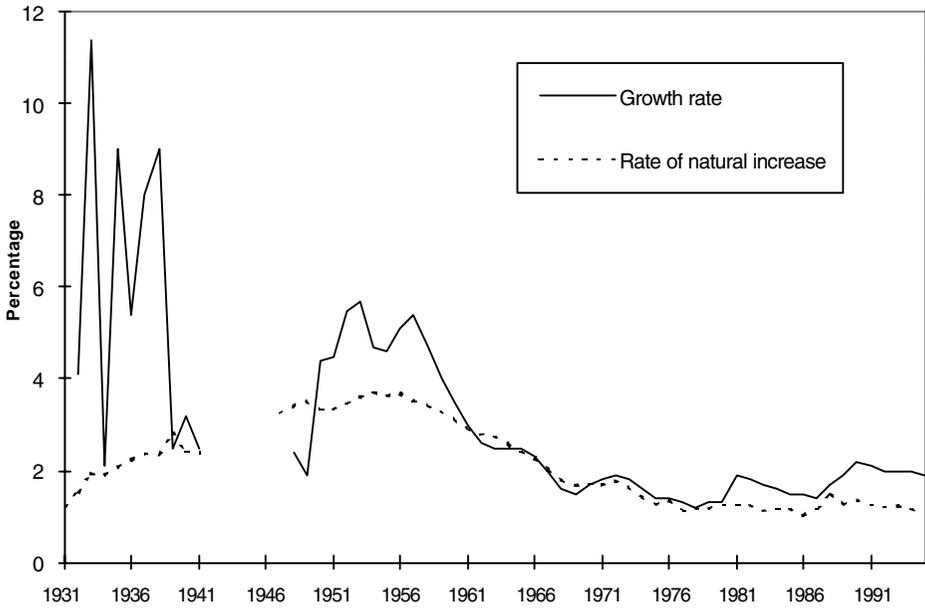


## Population Policies and Programs in Singapore

*Mui Teng Yap*

The story of Singapore's economic achievements over the past 30 years and its inclusion as one of the "little dragon" or "tiger" economies of Asia need not be repeated here. This story has been told in many places, among them the World Bank's 1993 research report, *The East Asian Miracle: Economic Growth and Public Policy*. Perhaps no less well known to Asian observers is Singapore's demographic transformation from a very young and rapidly growing population, with a high rate of unemployment, to one that is rapidly aging and a net labor importer. The total fertility rate plunged from more than six children per woman at the height of the post-World War II baby boom in 1957, to below-replacement level from 1977 onward. It has been projected that Singapore's elderly population (ages 65 and over) will double, growing from 7 percent to 14 percent of the total population, in only 21 years—less time than the 26 years taken by Japan, the most rapidly aging country in the world to date (Kinsella and Gist 1995). Given the simultaneity of events, it is not possible to measure directly the contribution of the government's population policies and programs, begun in the early stages of the country's independence to control the rate of population growth; but those policies and programs have generally been considered successful. In particular, Singapore has been noted for the stringency of its National Family Planning Program, which included "beyond family planning" measures such as incentives and disincentives to reduce fertility. Today, however, Singapore is one of a handful of countries that have adopted pronatalist policies. It also has a policy of selective immigration (see Martin forthcoming).

The urgency with which the Singapore government has always regarded the population issue can best be understood in the context of the country's small size. As Paul Cheung, the former head of Singapore's Population Planning Unit, has observed, "Population planning in Singapore is essentially one of managing population growth to meet economic needs, given the extreme land constraint" (Cheung 1995, 100). Prior to recent land reclamation, the total land area of Singapore in 1995 amounted to about 650 square kilometers. With a population of 3 million citizens and permanent residents, its population density exceeded 4,600 persons per square kilometer. This figure excludes the many foreigners



**Figure 5.1.** Population growth rate and rate of natural increase: Singapore, 1931–95.

Note: Rates for the period before 1980 refer to the total population. From 1980 onward, rates are based on the resident population.

living and working in Singapore who, according to the 1990 census, numbered about 300,000 in that year. Being an island city-state with no hinterland, Singapore lacks natural resources except for its people. Hence, its emphasis on maximizing its human resources is not surprising.

When the present Singapore government, led by the People's Action Party, came into power in 1959 as Singapore became a self-governing state within the British Commonwealth, the annual population growth rate was about 4 percent to 5 percent. This high growth rate was due mainly to a high rate of natural increase, but it was augmented by net in-migration (Figure 5.1). The newly formed government faced problems of high unemployment, which persisted despite economic growth, and growing demand for social services, which it rightly attributed to the rapid population growth (S.A. Lee 1979). Singapore became a fully independent nation in August 1965, after a short two-year merger with Malaysia ended suddenly, and with it a much hoped-for common market. The British military withdrawal in 1968 heightened feelings of insecurity as jobs were lost. Concerns since the mid-1980s have turned to issues of labor force growth, the vibrancy of the workforce, and the country's ability to sustain economic growth in the face of persistent below-replacement fertility and population aging.

A larger population is now considered desirable to provide the critical mass for future economic growth (GOS 1991). Planners consider the constraint of geographic size to be less critical than in the past because they believe that the country can comfortably accommodate a much larger population 4 or even 5 million people (Cheong-Chua 1995; Cheung 1995) as compared with the 3 million thought desirable earlier (Wan, Loh, and Chen 1976). Cheung (1995), however, cautions against too rapid population growth to reach the larger population size, citing the momentum generated by pronatalist population policies and the difficulty of reversing them (see also Yap 1995a). Population planning in Singapore has become a much more complex balancing act between the needs of the economy for more and better-qualified workers and such social and political considerations as the size of the dependent population and ethnic balance.

Four factors in the balancing equation directly affect population growth: birth rates, death rates, in-migration, and out-migration. Over the last 30 years the Singapore government has introduced measures to influence the levels of births and in-migration. No direct policy measures exist to control out-migration of Singaporeans, although the government would like to minimize it. The government is also committed to providing a high level of health care for its populace, thereby reducing unnecessary morbidity and mortality.

This chapter reviews Singapore's procreation policies and programs, beginning with a description of their evolution and following it with a discussion of their estimated demographic impact and costs. Next it discusses trends and policies relating to immigration, the government's other strategy for population management. Both the procreation policies and the immigration policies are integral parts of Singapore's development strategy.

## PROCREATION POLICIES

The evolution of Singapore's procreation policies and programs can be divided into three phases: the phase of indirect government involvement in family planning activities, 1949–65; the antinatalist phase, 1966–86; and the pronatalist phase, 1987 to the present.

### Phase I: Indirect Government Involvement

Strictly speaking, Singapore had no official policy on family planning or fertility control until 1966. Family planning was introduced in 1949 by a group of volunteers who were moved mainly by the high level of poverty in the aftermath of World War II and by concern about the deleterious effects of frequent childbearing on

the health and welfare of mothers and their families (Pakshong 1967; Saw 1980, 1991; Zhou 1996). They established the Family Planning Association of Singapore as a voluntary organization whose main goals were (1) to educate the people about family planning and provide contraceptive facilities to enable married couples to space and limit their families; (2) to promote the establishment of family planning centers at which, in addition to advice on contraception, women could obtain treatment for sterility and minor gynecological ailments and advice on marital problems; and (3) to encourage the production of healthy children, who would be an asset to the nation if their parents were able to give them a reasonable chance in life (Family Planning Association, *Fifth annual report, 1954*, cited in Saw 1991, 227). From merely three clinics operating on the premises of physician-members in late 1949 and early 1950, the number of clinics offering services rose rapidly, reaching 34 by 1965. The number of new acceptors registered rose from 600 to nearly 10,000 over the same period. The clinics also saw more than 94,000 revisits in 1965 alone. Owing to the heavy demand, which the association's leaders felt was beyond the organization's ability to meet, they repeatedly requested the government to assume responsibility for its clinical services. This happened in 1966 with the establishment of the Singapore Family Planning and Population Board and the launching of the National Family Planning and Population Program (henceforth called the National Family Planning Program), although the Family Planning Association continued to provide services at its own three premises until 1968. The association was renamed the Singapore Planned Parenthood Association in 1986, and henceforth its work became educational and advisory.

Although the Family Planning Association was the main provider of family planning services from 1949 through 1965, the government (at first British colonial administrators and subsequently the government headed by Singaporeans) played an increasingly important role. It provided ever larger grants to the association (Table 5.1), increasing space in government clinics for the association to provide family planning services, and a valuable piece of land at a prime site for the association's headquarters, charging a nominal S\$1 annual rent for the site. Funding for construction, equipment, and staff training came from the Ford Foundation. In November 1960, the government and the association launched a three-month nationwide family planning campaign as part of the government's Mass Health Education Program. The People's Action Party's intention to spread the family planning message was one of the platforms in the party's manifesto for the 1959 general elections, *The Task Ahead: PAP's Five-Year Plan, 1959-1964*. This document also became the party's program of action after it won the elections and assumed the governance of the island.

**Table 5.1.** Annual government grants to the Family Planning Association: Singapore, 1949–68

Year	Amount (in Singapore \$)
1949–50	5,000
1951	10,000
1952	20,000
1953	30,000
1954	45,000
1955	60,000
1956	85,000
1957	100,000
1958	120,000
1959	100,000
1960	100,000
1961	100,000
1962	100,000
1963	100,000
1964	100,000
1965	100,000
1966	10,000
1967	10,000
1968	10,000

Source: Saw (1980, 35).

### Phase II: Antinatalist Policy

The antinatalist phase was characterized by strong and direct assumption of responsibilities for family planning by the Singapore government. The catalyst for this change, besides requests by the Family Planning Association for the government to take over, had to be the sudden attainment of independence in 1965. The People's Action Party leaders had not believed that Singapore, as a tiny island with no natural resources, could survive on its own; but the attempt at a merger with Malaysia had failed after only two years. Although the annual rate of population growth had already slowed from the excessively high 4 percent to 5 percent per year in the late 1950s, it had remained quite high, at around 2.5 percent, in the years immediately preceding independence (see Figure 5.1). Control of immigration was easily achieved as both Singapore and Malaysia introduced border controls soon after separation, although there continued to be low levels of selective immigration. It was in the area of fertility control that Singapore was noted for its innovative and, in some views, stringent programs and policies.

The Singapore government launched the National Family Planning Program in January 1966. Responsibility for the day-to-day running of the program

was placed under the Singapore Family Planning and Population Board, a statutory body established under the Ministry of Health by an act of Parliament in December 1965. The objectives of the board were (1) to act as the sole agency for the promotion and dissemination of information pertaining to family planning in Singapore, (2) to initiate and undertake the population control program, (3) to stimulate interest in demography in Singapore, and (4) to advise the government on all matters relating to family planning and population control (Saw 1991, 230). The establishment of the board followed a review of the status of family planning activities in Singapore after yet another request by the Family Planning Association for the government to take over its family planning clinical services. The government accepted the recommendation of the review committee that it assume full responsibility for clinical work, research, and publicity but deferred the takeover to 1 January 1966 instead of 1 October 1965 as the committee had recommended (GOS 1965, *Family Planning in Singapore*, White Paper). As in the past, the government provided space for family planning services in its island-wide network of maternal and child health (MCH) clinics. Government personnel, from senior administrators (including several departmental heads) to physicians, nurses, midwives, and nonprofessional staff, were shared with the board in a practically seamless network of service provision.

The act establishing the board also provided that any person, association, or body "interested in promoting and disseminating information on family planning," or in "selling or distributing any medicine, preparation, or article for such purpose" must register with the board. Accordingly, the Family Planning Association (except during a short break between 1968 and 1971) and the Catholic Medical Guild became registered bodies under the board beginning in 1966. Private medical practitioners, who were already registered with the Singapore Medical Council and allowed to prescribe and sell contraceptives, were not required to re-register with the Ministry of Health under the act.

Initially the National Family Planning Program promoted the message of a "small family," without specifying the size. A "two-child family" norm was adopted in 1972, and with it, the goal to reduce fertility to replacement level and then to maintain it at that level so as to achieve zero population growth. In 1977, as the prospect of the echo of the baby boom loomed, the program added the message to delay marriage and the first birth and to space the two children. Demographic and programmatic targets were defined in terms of reductions in births or fertility rates and the number of acceptors to be reached by the end of each five-year plan period (Table 5.2). Most of these targets were achieved and even exceeded, the most significant of which was the attainment

**Table 5.2.** Five-Year Plan family planning targets and achievements: Singapore Family Planning and Population Board, 1966–70 to 1986–80

Plan and period	Targets	Achievements
1st Five-Year Plan (1966–70)	To reduce the crude birth rate from 32 per 1,000 in 1964 to around 20 per 1,000 by 1970 To provide family planning services to 60% of all married women aged 15–44 years	Crude birth rate reduced to 22.1 per 1,000 in 1970 156,556 married women of reproductive ages (62%) accepted family planning with the board's clinics
2nd Five-Year Plan (1971–75)	To reduce the crude birth rate from 22.1 per 1,000 in 1970 to 18 per 1,000 by 1975 To recruit 16,000 new acceptors per year from 1971 to 1975, for a total of 80,000 over the 5-year period To retain through sustained service the 156,556 acceptors already registered in the Programme To promote male and female sterilization for those who had completed their family size To create awareness of family planning's benefits among youths, those of marriageable age, and newlyweds, particularly those in the lower-income and education groups	Crude birth rate reached 17.8 per 1,000 in 1975 Program recruited 89,501 new acceptors, exceeding the target by 11.9%
3rd Five-Year Plan (1976–80)	To maintain replacement-level fertility so as to achieve zero population growth by 2030	Total fertility rate reached 1.8 children per woman in 1980

Source: SFPPB, Annual report (various years).

of a replacement-level period total fertility rate in 1975, five years ahead of the original target date. The practice of developing five-year plans ended after 1980 as the total fertility rate continued to decline below replacement level. Activities in the early 1980s focused mainly on program maintenance.

While it lasted, the National Family Planning Program provided a wide range of contraceptive services through an island-wide network of family planning and maternal and MCH clinics run by the government. Other services included home visits, a mobile clinic to reach the rural areas, and a family planning clinic for men. Besides offering reversible contraceptive methods, the government legalized sterilization in 1970. In 1975 it further liberalized the grounds for its use, so that the procedure became available on demand and at an affordable

**Table 5.3.** Sources of contraceptive supplies (%): Singapore, 1977–92

Source	1977	1982	1987	1992
Government clinics and hospitals	74.1	70.1	61.6	50.9
General practitioners	14.8	18.4		
Pharmacies and chemists	4.9	5.0		
Others	6.2	6.5	38.4*	49.1*

Source: Government of Singapore, Ministry of Health, Population Planning Section, personal communication.

\*All private sector sources.

cost of S\$5 per procedure at government hospitals and the vasectomy clinic. Abortion was also legalized in 1970 and liberalized in 1975. According to Saw (1991, 233), the decision to liberalize abortion followed a review that found the 1970 law to have “worked satisfactorily” and, moreover, “the Government had decided upon a comprehensive population control program to work towards replacement fertility.” Following the liberalization of sterilization and abortion, private medical practitioners were allowed to perform these procedures provided that they and their premises were licensed by the Ministry of Health in accordance with the Abortion Act. The results of knowledge, attitude, and practice (KAP) surveys carried out since 1973 showed that government hospitals and clinics were the main sources of contraceptive supplies for the majority of women (Table 5.3). Reliance on private-sector sources, however, has grown over the years.

Besides clinical services, the Singapore program featured a strong, multifaceted communication program that reached out to practically every segment of the population, including students. When births began to increase and the fertility rate leveled off in the early 1970s, an Information, Education, and Communication (IEC) Unit was created in 1972 to reinforce the family planning message and acceptance of two-child family norm. Practically every mass-communication medium was used, including radio, television, newspapers and magazines, cinemas, billboards, and bus panels. Publicity materials of many kinds—posters, pamphlets, bumper stickers, coasters, key chains, calendars, and pens—were distributed free of charge. Lectures and seminars were organized for newlyweds, community leaders, unionists, teachers, and school principals. Face-to-face motivation included a postpartum and postabortion contact service. A telephone information service was also established. The small size of the country and its highly urbanized population probably facilitated the outreach effort.

Perhaps the most distinguishing feature of the Singapore program, however, was the comprehensive package of social policies, or incentives and disincentives,

used to promote the acceptance of sterilization and the small family and to discourage large families. First introduced in 1969, the incentives and disincentives were intensified over the years. According to Wan and Loh (1979, 102–3), “the basic purpose of many of the social policies ... was to reduce or eliminate heavy government subsidizing of certain services. ... The rationale is that individuals who use services paid for by other taxpayers should adopt a more responsible reproductive behaviour.” The specific measures included the restriction of maternity leave, initially for the first three, then for the first two, children born; progressively higher delivery charges for higher-order births; restriction of income-tax relief to the first three children born; priority in the allocation of public flats to families with fewer children; and priority in the registration of children in primary one (the first grade) to children from families of three or fewer children. The incentives aimed at promoting voluntary sterilization included paid maternity leave for female civil servants who underwent sterilization after the third or higher-order birth, seven days of unrecorded full-pay leave for civil servants after sterilization, waiving of delivery charges for B and C class patients (those whose hospital care was partly subsidized by the government) if they accepted sterilization, and priority in registration for primary one for children whose parents were sterilized before age 40 after having no more than two children. No child was denied a place in school under the primary-one enrollment schemes, although parents of three or more children might not be able to register their younger children at the school of choice. Similarly, given the expanding public housing program at the time, no family was likely to have been denied public housing if they met the housing authority’s requirements.

In 1984 the government began to relax its strong antinatalist stance and introduced selective measures to promote larger family sizes among better-educated women. This development followed public discussion by then Prime Minister Lee Kuan Yew of the “lop-sided pattern of procreation.” Better-educated women were having on average fewer than two children, whereas those with no educational qualifications were bearing an average of three children. In addition, the better-educated women were more likely than others to remain single (Lee K.Y. 1983, in Saw 1990, appendix A). The prime minister recommended amending the existing policies “so that our better-educated women will have more children to be adequately represented in the next generation” (p. 44). Although he acknowledged that nature determined an individual’s performance more than nurture, in the proportion of 80 percent to 20 percent, better-educated mothers were thought to possess the resources for providing a nurturing environment “much more than [the] 20 percent of the performance of human beings as a group

depends on training and organization" (p. 41). "So," he concluded, "it is crucial to help every Singaporean, whatever his inherited characteristics, to achieve his best through improved training and education" (p. 41).

The government amended its policies relating to primary-one registration to give priority to children of women who were university graduates and who had at least three children (the "graduate mother scheme"). The level of income-tax relief for mothers with certain academic qualifications was also increased (Saw 1990). At the same time the government increased the charges for third and subsequent deliveries in government hospitals, making it relatively more expensive for the lower-income groups to have more children; and it also introduced a S\$10,000 housing grant to encourage low-income parents with little education to become sterilized after having two children. A government agency was set up to promote interaction among men and women with university degrees, with a view to increasing the marriage rate among them. The "graduate mother scheme" was abandoned in 1985 on account of the controversy it had raised and the small numbers of children who were likely to benefit from the measure.

The Singapore Family Planning and Population Board was dissolved in June 1986 after Parliament repealed the act that had created it following a management rationalization exercise by the government's Management Services Department. The board's staff and functions were transferred to the Ministry of Health. It can be said that the antinatalist phase of Singapore's population policy ended with the dissolution of the board, which had sole responsibility for the National Family Planning Program. The government, however, has continued to provide family planning services at its MCH clinics.

### **Phase III : Selectively Pronatalist Policy**

The latest phase of Singapore's population policy began officially in March 1987 when then First Deputy Prime Minister (and current Prime Minister) Goh Chok Tong announced the new population policy, exhorting Singaporeans who could afford it to have families of three or more children. The promotion of marriage is an integral part of the new policy. As before, the government backs up its exhortation for larger families with a package of financial and other incentives. The package includes (a) incentives to ease the financial burden of childrearing through tax rebates for the third and fourth child and income-tax relief for up to four children; (b) incentives to ease the conflict between women's work and child-rearing roles in the form of a childcare subsidy, rebates on levies paid to the government by employers of foreign maids, paid leave for the care of an ill child, and unpaid leave and part-time work in the public sector; and (c) modification of the

earlier incentives promoting the two-child family, including priority in the allocation of housing and primary-school registration for families with three instead of two children (Yap 1995b, 1995c). Women with two or fewer children who request an abortion or sterilization are now required to undergo counseling and encouraged to reconsider their decision. Poorly educated, low-income couples, however, are still encouraged, through housing grants and children's education bursaries, to practice family planning and to limit their family size to two children, although they are not required to be sterilized.

#### INTEGRATION OF POPULATION AND DEVELOPMENT POLICIES

Singapore adopted an industrialization policy in the early 1960s, following reviews and recommendations by experts from institutions such as the United Nations and the World Bank. As Cheng (1991, 182) has observed, "from an underdeveloped country heavily dependent on entrepot trade, Singapore joined the ranks of the newly industrialized countries and built up a diversified economy in which trade was supplemented by manufacturing, transport and communications, banking and finance, and tourism." Cheng argues that the Singapore economy's dynamic performance during the postwar period, in particular after independence, "was due to a great degree to the determined efforts of the Government," and that "to ensure that the fruits of development led to yet higher standards of living, the Government was very active and successful in promoting family planning" (p. 215). Fawcett and Chen (1979, 252) make the following observation in their appraisal of the Singapore experience:

Population growth, distribution, and composition are matters of strong concern and high salience throughout the government. ... The political leadership has consistently stressed the importance of population control, based largely on arguments related to Singapore's small size and lack of natural resources. ... In short, the physical and social characteristics of Singapore have facilitated, indeed demanded, that demographic considerations be given high priority in development planning, and the political leadership has not hesitated to articulate this as a key element of national policy.

The place of demographic changes, particularly fertility decline, in development planning in Singapore is perhaps best demonstrated by a speech given by pioneer Cabinet Minister Goh Keng Swee to members of the International Monetary Fund and the World Bank in 1969. According to former Minister Goh, who has been hailed as the architect of the Singapore economy, the declining birth rates in the late 1950s and early 1960s made it possible to increase expenditures on education.

...without dreading that the inevitable outcome would be to flood the labor market with unemployable educated school-leavers, as had happened in so many other developing nations. Further, there was hope of a leveling off of expenditure on education. ... The problem had assumed a finite dimension, and it was possible to proceed with development planning with the hope that the resulting increment in GNP will not be eaten up by uncontrolled population increase. (Goh K. S. 1969 [1972 and 1995, 131])

With characteristic candor, however, Goh Keng Swee admitted that the initial fertility decline was not the result of the government's development planning but rather a useful discovery after the fact: "If regard had been taken to the demographic trends of the previous two decades, the [People's Action] Party might have hesitated to make [its electoral promise to provide free universal primary education]. But demographers are seldom consulted in the drafting of election manifestos" (p. 130).

Be that as it may, the relationship between population growth and development, and its effect on the quality of life of the populace, had not been lost on the government. The Singapore Development Plan for 1961–64 identified control of population growth, both fertility control and control of immigration, as the solution to the problems of high unemployment and economic pressures that confronted Singapore. According to Lee S.A. (1979), however, the plan placed emphasis instead on industrial development because of political constraints the government faced, particularly with regard to the control of immigration from Peninsular Malaysia. The White Paper on family planning (GOS 1965, para 8.1), while proclaiming that the "chief purpose" of the proposed family planning program was to "liberate our women from the burden of bearing and raising an unnecessarily large number of children and as a consequence to increase human happiness for all," added the following statement (para. 8.4):

We are already spending hundreds of millions of public funds each year to provide better social services for our people in Education, Housing, Health, etc. It will be almost impossible to maintain this standard in the future if our present rate of population growth continues unchecked. ... By restricting the number of babies born each year, there will not only be increased happiness for mothers but also for their families, and we can at the same time improve the general welfare of our people by raising living standards, through channeling millions more of public funds into *productive economic development* of Singapore and thus to increase more job opportunities and prosperity, all round [emphasis in the original].

Former senior official of the Singapore Family Planning and Population Board Margaret Loh explained the relationship between population control and economic development thus:

The National Family Planning and Population Program in Singapore can be said to have been instituted firstly to improve the health and welfare of [the] mother, child and the total family unit at the micro level and at the macro level to accelerate fertility decline to aid the socio-economic development process. Both objectives ... meet the ultimate goal of improving the quality of life for the people. (Loh 1976, 26)

The participation of various sectors of the government in population planning and policy development occurred in two ways. First, members of the Family Planning and Population Board included top-level officials from government ministries and departments, such as Education, Social Affairs, and the Singapore Broadcasting Corporation, as well as academics and members of the medical community. Similarly, the Inter-Ministerial Population Committee, appointed in the mid-1980s to advise the government on the new population policy, was headed by the permanent secretary for health but included his counterparts from other government ministries, along with academics. In this way, the relevant sectors of government were made aware of the "population problem," and various government ministries instituted their own incentives or disincentives to encourage couples to have small families. For example, the Education Ministry instituted the incentives and disincentives relating to primary-one enrollment, whereas the Housing and Development Board initiated those relating to public housing (Loh 1976).

Another way in which planners became involved in population planning was a colloquium organized by the Family Planning and Population Board after the National Family Planning Program had completed its first decade, in April 1976. Administrators from government ministries, together with academics, were invited to examine the implications of various demographic scenarios for the country's economic development, physical development, the environment, and so on. On the basis of their recommended demographic scenario, the board set specific programmatic targets (Wan, Loh, and Chen 1976; GOS MOH 1977). Similarly, in the early 1990s a population and housing subcommittee was included among the subcommittees that reviewed the Singapore Concept Plan, the blueprint for Singapore's physical development (Cheong-Chua 1995, annex 4.2, p. 126).

The government has rationalized the new, pronatalist population policy, which is seemingly at odds with its previous strongly antinatalist position, as necessary for the long-term development of the country. Expressing his concern about Singapore's continued low fertility, Goh Chok Tong stated in a speech delivered in 1986: "We have to pay close attention to the trend and pattern of births because of their consequences on our prosperity and security, in fact, on our survival as a nation" (Goh C.T. 1986 [1990, 58]).

Early on, the government's concern was not just about the size of the population or the rate of population growth, but also about its quality. Both its procreation and its immigration policies have been important parts of its development strategy. In launching the National Family Planning Program, the health minister at that time, Yong Nyuk Lin, declared: "Family planning is ... a matter of national importance and indeed, one of urgency for us. Our best chance for survival in an independent Singapore is [to lay] stress on quality and not quantity" (quoted in Saw 1980, 52). Former Prime Minister Lee Kuan-Yew explained the government's strong antinatalist stance in an interview in 1974 as follows: "The day we are able to break through this hard core, we shall have solved our population problem. We can achieve zero growth, possibly even negative population growth. Then we can make up for it by selective immigration of the kind of people we require to run a modern higher technology economy" (quoted in Fawcett and Chen 1979, 251). Hence, the new population policy of 1987, in being selectively pronatalist, represents a continuation of the government's emphasis on population quality. Indeed, in spite of its desire to control the rate of population growth, Singapore has always permitted an inflow of persons deemed to be net contributors to the economy (Yap 1993). Selective immigration, dubbed "the search for talent," has been stepped up in recent years as the country has planned to move toward high-technology, high value-added production.

#### DEMOGRAPHIC IMPACT

Singapore's fertility decline began before the National Family Planning Program was established. As former Cabinet Minister Goh Keng Swee noted, this might be attributed in large part to the good work of the Family Planning Association in meeting demand for services. Acceptance of family planning was such that the number of new contraceptive acceptors at the association's clinics jumped from 600 in 1949 to nearly 10,000 by 1965 (SFPPB 1970). Pakshong (1967) estimated that the proportion of women at risk of unwanted pregnancy who attended the clinics for the first time (new acceptors) rose from 2 percent in 1957 to 4 percent by 1963–64. She also estimated that the clinics served about 9 percent to 10 percent of eligible women, with an unknown proportion obtaining contraceptives from other sources or practicing traditional methods such as coitus interruptus or periodic abstinence.

Table 5.4 shows the number of acceptors of reversible methods, sterilization, and abortion between 1966 and 1995 as first-level measures of the effect of the population program. The data for reversible contraceptive methods refer to

**Table 5.4.** Contraceptive acceptors, sterilization cases, and abortion cases: Singapore Family Planning and Population Board, 1966–95

Year	Contraceptive acceptors		Sterilization cases		Abortion cases <sup>b</sup>
	New	Existing <sup>a</sup>	Female	Male	
1966	30,410				
1967	30,935				
1968	35,338				
1969	35,643				
1970	24,230		2,321	51	1,913
1971	17,749		3,871	99	3,407
1972	17,666		5,842	347	3,806
1973	19,102		8,964	374	5,252
1974	18,292		9,241	326	7,175
1975	16,692		9,495	453	12,873
1976	17,674		10,310	408	15,496
1977	15,158		8,236	351	16,443
1978	15,192		7,447	340	17,246
1979	15,266		6,768	495	16,999
1980	15,009		6,487	458	18,219
1981	14,534		6,312	486	18,890
1982	14,651		6,011	494	19,110
1983	13,741		5,571	456	19,100
1984	12,481		5,417	369	22,190
1985	12,686	69,772	5,233	257	23,512
1986	11,460	67,410	4,504	264	23,035
1987	8,573	59,416	3,524	128	21,226
1988	7,412	52,414	4,398	171	20,135
1989	7,436	44,976	4,367	172	20,619
1990	6,535	41,653	4,394	134	18,470
1991	6,575	42,019	4,697	163	17,798
1992	5,581	35,986	5,225	154	17,073
1993	5,061	33,621	5,549	128	16,476
1994	4,716	31,649	5,309	125	15,690
1995	3,892	29,024	5,410	152	14,504

Source: GOS MOH, Annual report (various years).

Note: Figures for contraceptive acceptors pertain to Singapore Family Planning and Population Board cases only, whereas figures for sterilization and abortion cases include private-sector cases.

<sup>a</sup> Figures not available prior to 1985.

<sup>b</sup> Figures for 1970–74 exclude menstrual regulation.

acceptors registered with the Singapore Family Planning and Population Board, whereas those for sterilization and abortion include procedures performed in approved private facilities. Data on users of reversible contraceptive methods who obtained services from the private sector are not available. The number of contraceptive acceptors exceeded even the board's ambitious target.

**Table 5.5.** Current contraceptive use (%), by method, among married women aged 15–44: Singapore, 1973–92

Method	1973	1977	1982	1987	1992
All methods	60.1	71.3	74.2	67.4	64.8
Pills	21.7	17.0	11.6	7.3	6.9
Condoms	17.0	20.8	24.3	17.3	21.7
Sterilization (male and female)	10.8	21.9	22.9	21.8	15.3
IUDs	3.3	3.1	u	4.6	6.5
Traditional methods <sup>a</sup>			1.2	14.4	13.3
Other methods	7.3	8.5	14.2	2.0	1.1

Source: Government of Singapore, Ministry of Health, Population Planning Section, personal communication.  
u—data unavailable.

<sup>a</sup> Not shown separately in 1973 and 1977. Traditional methods include periodic abstinence and withdrawal.

Estimates of the prevalence of specific methods currently in use were obtained from periodic KAP surveys conducted between 1973 and 1992 (Table 5.5). The total current practice rate rose from 60 percent of married women of reproductive ages in 1973, when the first survey was conducted, to 74 percent by 1982. The latter figure is likely to be the saturation level for contraceptive prevalence, given that at any time there would be a segment of the population who would not require contraceptives because they were either planning for a child, pregnant, sterile, or postmenopausal. Contraceptive prevalence declined to 67 percent in 1987, coinciding with the introduction of the new, pronatalist population policy in March of that year. The current use rate fell further to just under 65 percent in 1992. The contraceptive method mix also changed over the years. The proportion of couples sterilized rose sharply between 1973 and 1977, doubling from about 11 percent to 22 percent, then dropped to 15 percent between 1987 and 1992. Along with the decline in contraceptive use in general has been a switch to the use of condoms and less reliable traditional methods.

Another reason for the decline in contraceptive use in 1987 might have been that many couples were planning to have babies the following year, which was deemed doubly auspicious because it was a Dragon Year in the Chinese lunar calendar and because the figure “88” signifies double prosperity in Mandarin and the Cantonese dialect. The number of births was sharply higher in 1988, nearly 53,000 as compared with about 44,000 in 1987 and 40,000–42,000 in the early 1980s (Figure 5.2).

The results of the KAP surveys also showed that the number of children born to married women of reproductive ages fell from an average of 3.4 per woman in 1973 to 2.0 by 1987 (Table 5.6). More remarkably, there was convergence

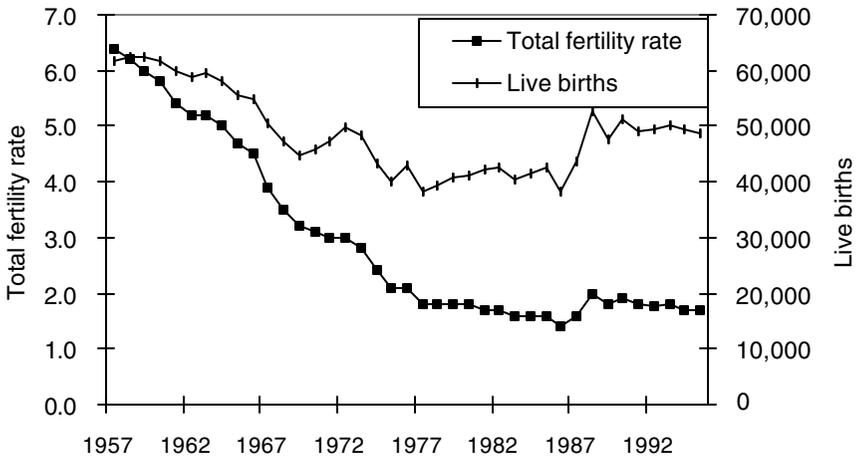


Figure 5.2. Live births and total fertility rate: Singapore, 1957–95.

among all three major ethnic groups. Actual and preferred family sizes had traditionally differed, Malays wanting and having the most children, Chinese the least. Educational differentials also narrowed. Most notably, family sizes among women with no formal education continued to decline while marginal increases occurred in 1992 among women with at least some education. It is difficult to pinpoint the contribution of the new population policy to these changes, although evidence based on birth-registration data show that more children were born after the implementation of the policy than before it (approximately 50,000 annual births as compared with 40,000–42,000).

There were also more third-order births after the policy went into effect, approximately 18 percent of total births as compared with about 14 percent earlier; and women with a secondary or higher level of education were having more third- and higher-order births (Yap 1995b, 1995c). Better-educated mothers, however, continued to be underrepresented among women having higher-order births. Thus, while 61 percent of the women giving birth in 1992 had secondary and higher qualifications, the proportion among third-order births was 52 percent and among fourth- and higher-order births it was 36 percent.

The number of children that the KAP survey respondents reported having was consistently lower than the number of children they desired, indicating an absence of unwanted fertility (see Table 5.6). Desired family size, which has remained fairly constant at about three children since 1977, has been consistently higher than the total fertility rate (Figure 5.3). There are several possible explanations for this. It could be an indication of the effectiveness of government

**Table 5.6.** Mean number of children born and mean number of children desired, by ethnicity and mother's education: Singapore, 1973–92

Children born/desired	1973	1977	1982	1987	1992
Mean number born, by ethnicity					
All ethnicities	3.4	2.8	2.2	2.0	2.0
Chinese	3.2	2.7	2.2	2.0	1.9
Malay	3.9	3.4	2.5	2.1	2.4
Indian	3.7	3.1	2.3	2.0	2.0
Mean number born, by mother's education					
No formal education	4.5	4.0	3.4	2.7	2.4
Primary	3.1	2.9	2.5	2.1	2.2
Secondary	1.9	1.9	1.7	1.8	1.8
Tertiary	1.7	1.7	1.4	1.2	1.4
Mean number desired, by ethnicity					
All ethnicities	3.7	3.1	2.7	2.9	2.9
Chinese	3.6	2.9	2.6	2.8	2.7
Malay	4.5	3.7	3.2	3.6	3.6
Indian	3.8	3.2	2.7	3.0	2.9

Source: Government of Singapore, Ministry of Health, Population Planning Section, personal communication.

policies to promote the acceptance of the two-child family. For example, among survey respondents in 1982, the incentives and disincentives had variously affected family-size decisions of about 6 percent to 24 percent of those who had completed their families; and among respondents who had yet to complete their families, the policies were likely to affect the family-size decisions of 11 percent to 35 percent of those with no children or only one child (Emmanuel et al. 1984). As Cheng (1991) and Fawcett and Chen (1979), among others, have noted, however, the role of social and economic development must not be forgotten. Increased female education and labor force participation, better health, and improved social security in Singapore are likely to have affected the calculus of childbearing and the costs and values of children to parents.

Another way of measuring the effect of the National Family Planning Program is to estimate the number of births it averted. Assuming a one-year lag between contraceptive use and an averted birth, Chen and Pang (1977) estimated that more than a quarter-million births were averted in Singapore over the 10-year period between 1967 and 1976, and that the program accounted for nearly three-quarters of that figure. They estimated the proportionate contribution of the program to have risen from 27 percent (3,937 births) in 1967 to nearly 88 percent (35,725 births) in 1976. Among the methods used to avert births through the program, the oral contraceptive ("pill") made the greatest contribution (nearly 54

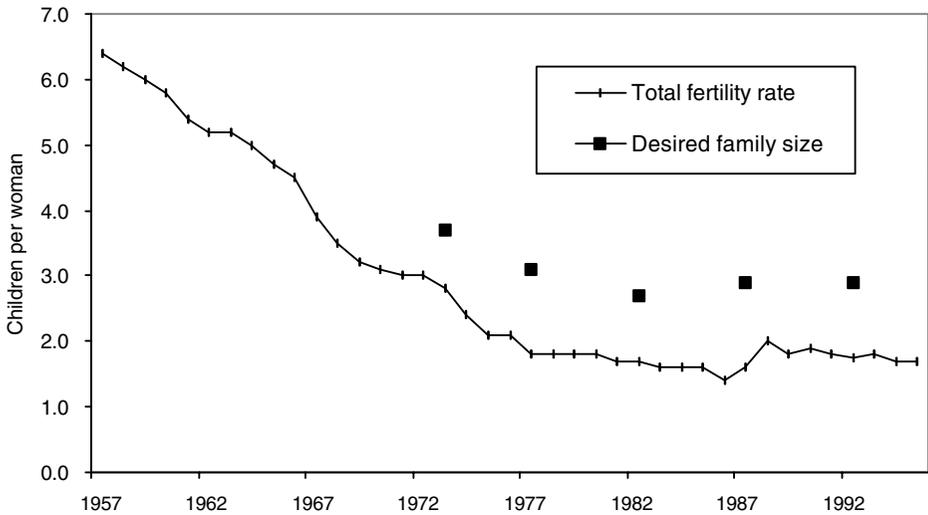
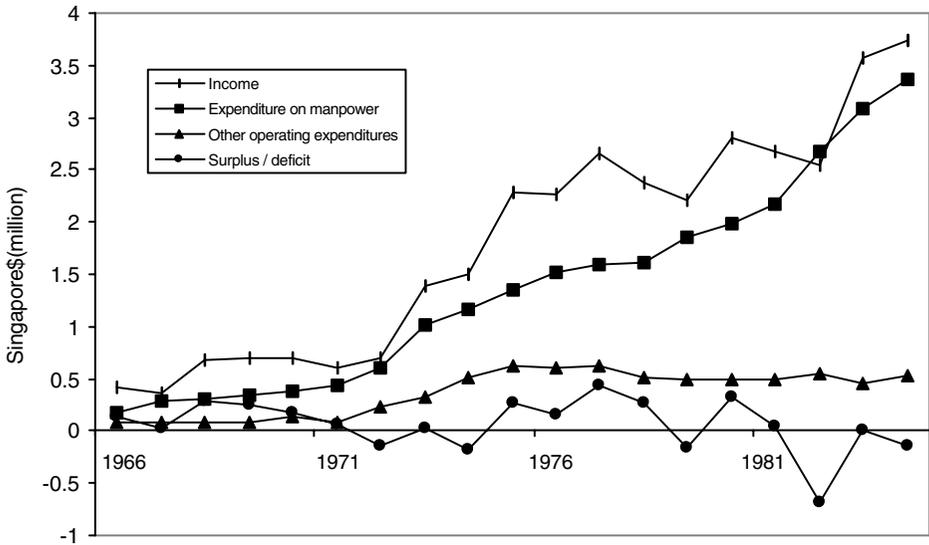


Figure 5.3. Total fertility rate and desired family size: Singapore, 1957–95.

percent of averted births), followed by sterilization (19 percent), and condoms (15 percent).

#### COSTS OF FAMILY PLANNING ACTIVITIES

From the beginning the program provided contraceptive services and supplies to users at low cost. The White Paper on Family Planning (GOS 1965) established the following subsidized fee structure for Singapore citizens: S\$10 for the first insertion of a Copper-T intrauterine device (IUD) and S\$5 for each subsequent insertion, S\$1.50 per monthly cycle of oral contraceptives, and S\$25 for surgical ligation. Moreover, welfare cases received contraceptive services free of charge, but noncitizens were charged at nonsubsidized rates (S\$50 for first IUD insertion and S\$25 for subsequent insertions; S\$4.50 per cycle of oral contraceptives, and S\$100 for surgical ligation). Beginning in 1967 the fee for an IUD insertion was reduced to S\$5; it has remained at that level since, although users of the newer Multi-load IUD, introduced in 1983, pay S\$30. The fees for condoms (S\$0.50 for six pieces) and diaphragms (S\$2 per piece) have remained unchanged since 1966, whereas the fee for pills has remained at S\$1 per cycle since 1968. Charges for sterilization (male and female) and abortions performed at government clinics and hospitals were initially pegged at S\$5 per procedure, but these have been allowed to vary since government hospitals were privatized in the mid-1980s.



**Figure 5.4.** Income and expenditure of the Singapore Family Planning and Population Board, 1966–84  
Source: SFPPB (n.d.), *Annual report 1984*.

As mentioned earlier, the Singapore government began providing financial support for family planning activities even before it established the national program. The value of its grants rose from S\$5,000 in 1949–50 to S\$120,000 by 1958, and then declined to S\$100,000 for the period 1959–65 (see Table 5.1). Even after it assumed full responsibility for the National Family Planning Program in 1966, the government continued to provide an annual grant of S\$10,000 to the Family Planning Association until 1968. With the establishment of the Singapore Family Planning and Population Board, the government doubled its grants from S\$100,000 to S\$200,000 during the First Five-Year Plan period (1966–70). Its financial support for the board's family planning activities rose significantly in the 1970s, reaching S\$1.5 million, and ultimately more than S\$3 million in the 1980s (Figure 5.4).

These figures do not include costs of the program to the Ministry of Health, which shared staff and premises with the board. As Table 5.7 shows, the family planning budget represented less than 1 percent of the total government budget and less than 2 percent of the total health budget. As of March 1997 the Ministry of Health estimated that its current expenditure on family planning services amounted to about S\$1.1 million annually (Ministry of Health, personal communication, December 1996).

Another measure of the costs to the government of its population policy is the revenue forgone under the various incentive schemes. According to the

**Table 5.7.** Family planning, health, and total government budgets: Singapore, 1978–83

Year	Family Planning Program (S\$million)	Ministry of Health (S\$million)	Total government budget (S\$million)	Family planning budget as % of total budget	Health as % of health budget	Health as % of total budget
1978	2.8	177.6	3668	0.08	1.6	4.8
1979	2.9	187.8	3885	0.07	1.5	4.8
1980	3.3	217.0	4113	0.08	1.5	5.3
1981	3.6	272.3	6335	0.06	1.3	4.3
1982	3.7	318.7	7638	0.05	1.2	4.2
1983	3.9	363.5	8871	0.04	1.1	4.1

Source: Nortman (1985, table 8).

Note: The family planning budget is not included in budget of the Ministry of Health. Hence, in the column headed "Family planning as a percentage of health budget," the figure shown is the ratio of the family planning to health budget.

Ministry of Health, it does not monitor this information because the incentives are administered by various government agencies, and therefore it would be difficult to estimate (Ministry of Health, personal communication, December 1996). Various international agencies and overseas foundations have made cash and in-kind contributions to the program as well. Most notably, the Ford Foundation funded building construction, training, and equipment of the National Family Planning Program's headquarters, which later became the headquarters of the Singapore Family Planning and Population Board. The International Planned Parenthood Federation (IPPF) has continued to provide funding to the Singapore Planned Parenthood Association, ranging from S\$77,000 to nearly S\$105,000 per year over the period 1985–96 (IPPF, personal communication, March 1997). Funds raised locally complement this contribution. The amount of foreign aid received by the Singapore program is probably minuscule by international comparison.

## IMMIGRATION POLICIES

Immigration has been an important part of Singapore's demographic history.<sup>1</sup> Some observers (e.g., Pang 1992) would argue that the Singapore economy has been built on immigration. At the founding of the city-state in 1819, there were reportedly only 150 persons on the island. Migration from China, India, and the countries surrounding Singapore was the main contributor to population growth up to the period around World War II (see Figure 5.1). Peninsular, or West, Malaysia (then known as Malaya) was the main source of in-migration during the 1950s, after Singapore introduced legislation in 1953 sharply restricting

immigration from sources other than Malaysia (Arumainathan ca 1973). The free flow of mostly unskilled migrant workers from West Malaysia was stopped as well when Singapore and Malaysia dissolved their union in 1965, and Singapore embarked on a policy to control its population growth and the high level of unemployment. Since that time an increasing number of foreigners have entered the country either as temporary workers or for permanent residence. In 1995 some 300,000 foreign blue-collar workers were reportedly in the country with temporary work permits, up from 60,000 two decades earlier (*Business Times*, 5 January 1996). In addition, another 50,000 foreigners worked on employment passes in supervisory, managerial, and professional positions, up from 20,000 in 1980.

There has been a steady increase in the number of foreigners granted permanent residence. Deputy Prime Minister Lee Hsien Loong announced in a speech in May 1996 that 25,000 foreigners became permanent residents "every year," but he did not specify the period to which he was referring (*The Straits Times*, 29 May 1996). It is likely that he was referring to 1994–95 because the Ministry of Health (GOS, MOH 1994) reported that 22,000 foreigners had been granted permanent residence in 1993. The number of new permanent residents during 1994–95 represents a fivefold growth compared with 1986, when only about 5,000 permanent-residence permits were given out (Cheung 1991). The government may grant permanent-residence status to holders of employment passes and skilled-work permits and to entrepreneurs, but not to unskilled workers.

Singapore's immigration policy since independence has been described as one that tries to maximize the economic benefits of immigration while minimizing its social and economic costs (Pang 1992). Besides weighing the immigrants' potential contributions to the economy, the policy has been to selectively open Singapore's doors to people from countries that share its cultural values. Hence, recruitment was permitted initially only from "traditional" sources, essentially Malaysia, but this criterion has had to be broadened as Singapore's manpower needs continued to expand. The search for skilled workers and professionals has been extended worldwide, although the sources for recruitment of unskilled foreign workers remain confined largely to the Asian region.

Depending on foreigners' skill levels, the terms and conditions for their stay in Singapore differ substantially. Skilled workers, professionals, and entrepreneurs are encouraged to take up permanent residence and may be granted citizenship after 2 to 10 years of residence (GOS SIMS 1994). Unskilled foreign workers, on the other hand, are permitted to work only for limited time periods, after which they are expected to return home. Selective immigration of persons who can

contribute economically is not a new or recent policy in Singapore. The British administrators in charge of Singapore apparently adopted this policy as early as 1953 (Arumainathan ca 1973).

Regardless of the government's immigration policies, immigration, as Cheung (1995) pointed out, has yet to make an impact on the demographic structure of Singapore. This is perhaps not surprising, given both the country's cautious immigration policy and the fact that substantial immigration is required to offset the aging of the native population. (See Yap 1995a for a summary of the relative efficacy of immigration versus fertility increase as a means of rejuvenating aging populations.)

## CONCLUSION

Population policies, both those related to procreation and those directed at controlling immigration, continue to be an integral part of Singapore's development strategy. The prevailing view in Singapore is that the fertility decline contributed to, or at least provided breathing space for, development in the early days of Singapore's independence, permitting resources that would otherwise have been spent on merely sustaining a rapidly growing population to be channeled into productive development. If, for example, the development of human capital has generally been instrumental in promoting economic development, as the World Bank (1992) suggests, then the stringent procreation-control policies adopted by Singapore earlier must have contributed to its economic growth, just as they are generally acknowledged to have contributed to its fertility decline. Singapore's population policies have been adjusted to meet what planners consider to be the requirements for the next stage of Singapore's economic development. Among those requirements is more rapid labor force growth (and thus more population growth). The success of the new procreation policy remains to be seen, for the total fertility rate appears to be on a downward path again after some initial rises. Because rapid augmentation of the population through immigration has social and political consequences, it will have to be handled with care.

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## ENDNOTES

- 1 This section is drawn from Yap (1997).

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## Population Policy and Programs in Thailand

*Chirapun Gullaprawit*

After a decade of consensus building in the 1960s, Thailand adopted an official population policy in March 1970. Since then it has not wavered in giving top priority to lowering rates of population growth. The Third Five-Year Development Plan (1972–76) was the country's first to express concern about the "population problem" (GOT NESDB 1972). It emphasized family planning as a way of influencing fertility trends and lowering rates of population growth, and that emphasis has persisted in all subsequent plans. The National Family Planning Program has been the main lever for lowering fertility, although other factors, such as the expansion of education, have played a role.

Through its own dedicated efforts, and with assistance from donor agencies, the program has achieved one of the fastest declines in fertility ever recorded by a developing country, an achievement that has been accompanied by rapid economic growth and nearly universal literacy for men and women. Only a generation ago married women had, on average, six to seven live births. By 1981, 11 years after the program's initiation, only 1 in 10 women wanted more than two children. This means that Thai women have not been burdened with having to raise at least four additional children. Consequently, they have been entering the labor market at earlier ages and have been able to make greater contributions to their own, their families', and the nation's rapid socioeconomic advancement. Today, Thailand's population program and the country's social and economic development are considered to be among the success stories of the Third World.

This chapter begins with a description of the evolution of views on population in Thailand. Next it discusses the government's role in regulating demographic change and the population policies and programs it has adopted. The following two sections consider the factors in the rapid decline of Thai fertility and examine the costs of the National Family Planning Program. The chapter concludes with several observations about current demographic problems facing the nation.

## EVOLUTION OF VIEWS ON POPULATION

During the early part of the twentieth century and into the 1960s, Thailand's official stance on population was predominantly pronatalist. In 1911, when the first census was taken and there were only about 8 million persons in Thailand, the minister of the interior stated reasons why "five to six times" the population at that time were needed. When the government first established health services in the early part of the twentieth century, one of its stated reasons was to lower mortality in order to increase the size of the population. During World War II, the prime minister declared that 100 million persons were needed to make the country a major power. Early marriages were encouraged to "make the nation prosper." As late as 1956, the government offered bonuses to large families.

Although a few people spoke out about the problems associated with a high rate of population growth, it remained for a World Bank economic mission in 1958-59 to recommend that the government seriously consider the adverse effects of the high population growth rate on economic development. The Office of the Prime Minister established a series of committees to study the problem and make recommendations to the Cabinet. In addition, between 1963 and 1968, Thailand sponsored three national population seminars.

In 1963 the first national population seminar took place, at which Thai intellectuals in the fields of medicine, economics, and other social sciences discussed their concerns about the high rate of population growth. As a result of that seminar, the Institute of Population Studies, Chulalongkorn University, undertook a small research project in Potharam, a rural district in Rachaburi Province approximately one and a half hours' travel from Bangkok. A baseline survey there indicated that only about 3 percent of married women between the ages of 15 and 45 were currently practicing contraception. Despite the low contraceptive prevalence, more than 70 percent of the women questioned stated that they did not wish to have more children than they already had, a percentage that was even higher for women with four or more children. During an 18-month action program, more than 30 percent of eligible women in the district accepted contraceptive services, the great majority of them choosing the intrauterine device (IUD). This was the first of many projects to demonstrate that rural, poorly educated women in Thailand were interested in the concept of family-size limitation and that they would make use of available contraceptive services.

With the exception of one committee, the committees participating in three national seminars submitted reports warning of the dangers of too rapid population growth. During the 1960s the Cabinet received many recommendations

about the population issue, but it was not until it received the recommendations of the Third Population Seminar in 1968 that it referred the issue to the National Economic Development Board (now called the National Economic and Social Development Board). The board created a small population section and charged it with preparing a final recommendation for the Cabinet concerning the population issue.

During the period prior to making a population policy declaration, the Cabinet did agree to permit the voluntary practice of family planning, and in 1967 the prime minister signed the United Nations World Leaders' Statement on Population. Beginning in 1968 the Cabinet authorized the Ministry of Public Health to develop family planning services for the purpose of research.

In early 1970, the National Economic Development Board, together with the Ministry of Public Health and the Institute of Population Studies at Chulalongkorn University presented to the Cabinet a comprehensive report on the adverse effects of Thailand's high rate of population growth on economic and social development. The report strongly recommended the adoption of a population policy. In March of that year the Cabinet accepted the report and officially declared that the Thai government had a policy of supporting voluntary family planning "in order to resolve various problems concerned with the very high rate of population growth, which constitutes an important obstacle to the economic and social development of the nation" (Population Council 1972, 5). The government reaffirmed its population policy in the 1974 Constitution of Thailand (Section 86), declaring that "the State is to formulate population policy to suit the natural resources, socioeconomic context, and technological situation in order to achieve the socioeconomic development target and the security of the nation" (Robinson 1980, 1).

#### THE INTEGRATION OF POPULATION AND DEVELOPMENT STRATEGIES

After adopting the population policy, the government developed guidelines and strategies to encourage fertility reduction and included them in the Third National Economic and Social Development Plan (1972-76). The goal of the Third Plan was to reduce the rate of population growth from more than 3 percent per annum to 2.5 percent by 1976. To achieve that goal, the government established a National Family Planning Program within the Ministry of Public Health and integrated family planning activities into the existing health services of other governmental agencies that were providing health care. The National Family Planning Program had two other objectives besides reducing the population

growth rate: (1) to inform eligible women, particularly those living in rural and remote areas, about the concept of family planning, to motivate them to use contraception, and to make family planning services readily available throughout the country; and (2) to integrate family planning activities with overall maternal and child health (MCH) services and thus to strengthen the activities within both those closely related fields.

The ultimate objective of the government's policy to reduce the population growth rate was to enable it to allocate the money saved to other development activities devoted to raising the quality of the population, such as improving the education and health systems. The perception that rapid population growth was a major impediment to development made the rate of population growth the key target variable of development and population planning in Thailand. Consequently, all development plans from the Third Plan (1972–76) to the Seventh Plan (1992–96) specified target rates of population growth for their terminal years. Policymakers sought to achieve those targeted rates by reducing fertility, thus making fertility the major concern of population policy. To achieve fertility reduction, they relied primarily on the National Family Planning Program.

### **The National Family Planning Program**

To ensure the success of the National Family Planning Program, the government developed a variety of measures (Vuthipongse 1996). Those measures included the following:

- Expanding the family planning service infrastructure in the public and private sectors throughout the country, particularly in high-fertility areas and for targeted populations
- Increasing and improving dissemination of information on family planning to all levels of the population
- Developing the nation's manpower, for example by increasing the number of auxiliary midwives and assistants; training doctors and other public health staff in sterilization techniques; training nurses and midwives in IUD insertion; and coordinating, supervising, and evaluating activities of personnel trained in family planning
- Encouraging research and evaluation, particularly action-oriented research on family planning
- Establishing funds for quality-of-life development in communities for the purpose of integrating family planning into development activities, and promoting the participation of nongovernmental organizations

- Accelerating “beyond family planning” activities—for example, population education; legal measures and incentives such as limiting the living allowance for government employees to those with no more than three children; and payments to service providers, motivators, and acceptors of sterilization
- Supporting the family planning services of nongovernmental organizations

The Ministry of Public Health has primary responsibility for managing, coordinating, and monitoring the National Family Planning Program. It provides contraceptive supplies and logistical support to the program; oversees foreign assistance to family planning activities; and conducts training, supervision, research, evaluation, and information, education, and communication (IEC) activities. Through its nationwide delivery system of hospitals and health centers, the ministry has played a crucial role in providing family planning services throughout the country.

In addition to the Ministry of Public Health, two other ministries with vast administrative networks provide support to the National Family Planning Program. They are the Ministry of Education and the Ministry of Interior. The Ministry of Education offers population education, whereas the Ministry of Interior, a relative newcomer in the field, provides family planning services to selected groups such as hill tribes, people in the border areas, and people in remote rural areas. The recent involvement of the Interior Ministry in family planning activities is expected to have a significant impact on the national program because that ministry has the largest network, reaching from the national level down to the village level.

### **Support from the Private Sector**

Private organizations also play a significant role in the National Family Planning Program. They include the Thai affiliate of the International Planned Parenthood Federation, the Planned Parenthood Association of Thailand, the Population and Community Development Association, the Association for Strengthening Integrated National Population and Health Development Activities in Thailand, and the Thailand Association for Voluntary Sterilization. These nongovernmental organizations have been active in promoting and delivering family planning services. Most motivate and refer their clients to the services of the national program as well as to private sources of services.

The Planned Parenthood Association of Thailand has been active in developing IEC resources, youth programs, and training for teachers and resource per-

sons in family-life education. It also operates two family planning clinics in Bangkok and, through its volunteers, distributes contraceptives in 40 provinces. It has developed several innovative approaches for the national program. Nevertheless, the organization faces diminishing support from the International Planned Parenthood Federation. Its role in the program will soon diminish unless that role is clarified or reinforced.

The Population and Community Development Association has been regarded as Thailand's most active private organization in the fields of population, development, and family planning. It has developed a number of innovative models for integrating family planning into local community development activities.

The Association for Strengthening Integrated National Population and Health Development Activities of Thailand enlists the resources of the private sector in support of the National Family Planning Program. It uses more than 3,000 privately owned hospitals and clinics to extend the availability of public information and fertility services throughout the country. Especially noteworthy is its educational effort to dispel rumors and misunderstandings about vasectomies. Its IEC project uses a variety of media to supply health and family planning education through private medical institutions.

The Thailand Association for Voluntary Sterilization has helped to develop a national group of specialists who work on medical safety standards for voluntary surgical contraception (VSC), quality VSC services, counseling for VSC, and the promotion of vasectomies.

The commercial sector complements the government's and the nongovernmental organizations' roles by providing family planning services and contraceptives through drug stores and private clinics. These services are available mainly in urban areas.

### **Policies Aimed at Affecting Population Distribution**

In recent years the government began to regard Thailand's uneven distribution of population among regions and between urban and rural locations as a problem to be addressed by the national population policy. As a result, all development plans since the Fourth Plan (1977-81) have advanced several objectives related to population distribution. These have included, among other things: (a) a pattern of population distribution and human settlement that would be consistent with existing resources, job opportunities, and national security concerns; (b) a pattern of population distribution and human settlement in urban areas that would prevent environmental degradation and make energy conservation possible; and (c) a more balanced distribution of the educated population

throughout the country to achieve a more equitable pattern of socioeconomic development.

The government has used various instruments to meet these objectives. For example, it has adopted measures to improve conditions for agricultural production in underpopulated but potentially productive rural areas and to enable low-income populations living in high-density areas to move into targeted agricultural zones. It has made investments in the social and economic infrastructure of low-density urban areas to encourage industrial development and employment generation in those areas. It has also invested in educational facilities for rural areas.

In 1993 the government announced a decentralization scheme that divided the country into three investment-promotion zones—Bangkok (Zone 1), the provinces surrounding Bangkok (Zone 2), and the remaining provinces (Zone 3). The scheme encourages industrial development outside Bangkok by granting tax and duty privileges to the other two industrial zones. Zone 3 receives twice the tax privileges of Zone 2, whereas Zone 1 receives none. A recent increase in the number of Zone 3 industrial-investment applications suggests that the country's population distribution will improve in the future.

### Policy Formulation

The National Economic and Social Development Board, at the center of the government's development planning apparatus, is in charge of both macro and sectoral policy formulation. One of its divisions, the Human Resources Planning Division, together with several relevant ministries, is responsible for the formulation of short-run and long-term population policies and plans. In addition, together with selected ministries, it is charged with the design of policies for developing short-term and long-term employment and human resources.

The Human Resources Planning Division studies the current population, manpower, and employment situation; monitors and evaluates the implementation of population, employment, and human resources policies and plans; and coordinates its work with that of sectoral agencies in those fields. That planning activities related to population, employment, and human resources are all concentrated in the division reflects the importance that the Thai government attaches to the integration of population variables in planning for employment, school enrollment, and human resources.

The division comprises four sections: a Population Section, a Manpower Assessment Section, a Manpower Development Section, and an Employment and Wages Section. As the focal point for national population planning, the Population Section plays an important role in the National Economic and Social

Development Board's efforts to formulate population policies and plans that are consistent with broad development policies and programs. The section analyzes population trends, evaluates the implementation of existing population policies and plans, and helps formulate future population policies and plans.

The Human Resources Planning Division also provides the basis for integrating population concerns into planning and policymaking in areas directly related to population. In particular, working with sectoral ministries and research and educational institutions, it prepares the population projections that the other three sections of the Human Resources Planning Division, other divisions of the National Economic and Social Development Board, and the sectoral ministries use in formulating their policies, plans, and programs. Thus, for example, the Population Section provides the Manpower Assessment Section of the division with population data and projections that it needs to project changes in the labor force and employment.

In the course of formulating the Fourth National Economic and Social Development Plan for 1977-81, the National Economic and Social Development Board assessed previous plans and their implementation. It found that the economic growth that had taken place in Thailand since the early 1960s had been mainly confined to the central region. Moreover, although the population policy in force during the Third Plan had successfully achieved the population growth-reduction target, the rapid rate of population increase before the Third Plan began had accelerated the growth of the labor force. This labor could not be readily employed in the modern industrial sector because more than 70 percent of the labor force had no more than a primary education.

It was also apparent that Bangkok had emerged as the country's economic base and primary city, where industrial and other economic activities were heavily concentrated. Other urban areas were not able to attract as many rural-to-urban migrants to balance growth and development among the country's regions. Bangkok faced acute problems of urban congestion, a poor social environment, and inadequate housing and social services. Urban unemployment, crime, and drug addiction had become especially serious in its slums.

In the rural areas, rapid population growth had increased the number of farm households, reducing the size of their landholdings. The number of landless farmers and tenants had risen. Population pressures and uncontrolled human settlements contributed to an encroachment on forests, converting them into farm land of lower productivity. Excessive exploitation of natural resources, particularly forest and water resources, led to environmental degradation. Among the consequences of these developments were an increase in underemployment and

**Table 6.1.** Total fertility rate (TFR), by source: Thailand, 1964–91

Period or year	TFR	Source
1964–65	6.29	SPC1 [Survey of Population Change], (GOT NSO 1969, table A)
1970	4.69	1970 Census (GOT NSO 1973, table 6)
1970–74	4.85	SOFT [Survey of Fertility in Thailand], (GOT NSO and IPS 1977, table 22)
1974–76	4.90	SPC2 [Survey of Population Change], (GOT NSO 1978, table 5)
1978–79	3.77	CPS1 [Contraceptive Prevalence Survey], (Suvanajata and Kamnuansilpa 1980, table 3)
1980	3.84	1980 Census (GOT NSO 1983, table 7)
1981	3.68	CPS3 [Third Contraceptive Prevalence Survey], (IPSR, Research Center of NIDA, and NFPP (1985, table 3.11)
1984	3.47	CPS3 [Third Contraceptive Prevalence Survey], (IPSR, Research Center of NIDA, and NFPP (1985, table 3.11)
1985–86	2.73	SPC3 [Survey of Population Change], (GOT NSO (1987, table 6)
1989	2.41	SPC4 [Survey of Population Change], (GOT NSO (1989, table 6)
1991	2.17	SPC5 [Survey of Population Change], (GOT NSO (1991, table 6)

seasonal unemployment, and an increase in migration from predominantly rural agricultural areas to urban centers.

Given these population-related problems, the Fourth and subsequent plans have called for continued slowing of population growth through fertility reduction. In addition, the government adopted policies to reduce migration and divert the flow of in-migrants from Bangkok and other major urban areas to regional urban centers that were to be developed.

#### FACTORS IN THE DECLINE OF FERTILITY AND POPULATION GROWTH

The rate of natural increase of Thailand's population in the early 1970s averaged more than 3 percent per year. It began to decline after the government introduced the National Family Planning Program in 1972 as an integral part of the Five-Year National Economic and Social Development Plan. The population growth rate decreased to 2.5 percent by 1976 and to 1.3 percent by 1991, a 56 percent decline in only 19 years. This was one of the most significant fertility declines ever observed in any developing country. It resulted from a decline in the total fertility rate from about 5.4 children per woman in 1972 to 2.17 in 1991, or a 60 percent decline over the same period (Table 6.1).

The latest Survey of Population Change conducted by the National Statistical Office has shown that the National Family Planning Program has been successful in providing services to both rural and urban couples. The rate of

**Table 6.2.** Percentage of married women aged 15–44 currently practicing contraception, by method: Thailand, 1969–95

Year	Survey	Pill	IUD	Sterilization			Condom	Others	All methods
				Male	Female	Injection			
1969–70	LS1 <sup>a</sup>	3.8	2.2	2.1	5.5	0.4	0.0	0.7	14.8
1972–73	LS2 <sup>a</sup>	10.6	4.7	2.8	6.8	0.9	0.1	0.5	26.4
1975	SOFT	15.2	6.5	2.2	7.5	2.1	0.5	2.8	36.7
1978–79	CPS1 <sup>b</sup>	21.9	4.0	3.5	13.0	4.7	2.2	4.2	53.4
1981	CPS2	20.2	4.2	4.2	18.7	7.1	1.9	2.7	59.0
1984	CPS3	19.8	4.9	4.4	23.5	7.6	1.8	2.6	64.6
1987	TDHS	20.0	7.2	5.5	22.4	9.2	1.2	2.0	67.5
1991	SPC5	24.0	4.7	2.8	23.5	12.3	u	1.9	69.2
1995	SPC6	28.4	3.5	1.9	23.9	14.3	0.5	2.7	75.2

Sources: Data for 1969–70 through 1981: Knodel et al. (1982, table 36). Data for 1984: Kamnuansilpa and Chamratrithrong (1985, table 5.8).

Note: Rounding errors, minor coding discrepancies, and users of unspecified methods account for the small differences between the sum of the percentages practicing individual methods and the percentages for all methods. u—data are unavailable.

<sup>a</sup> Results for LS1 and LS2 were derived by combining separate rural and urban surveys taken one year apart and weighting the results to reflect the different sampling fractions used.

<sup>b</sup> Excluding provincial urban women.

contraceptive prevalence among married women of reproductive age has risen from 14.8 percent in 1969–70 to 75.2 percent in 1995 (Table 6.2).

The increase in contraceptive prevalence levels has occurred in all reproductive age groups since 1969–70 (Table 6.3). For example, among women 15–19 years old, the level of contraceptive practice increased from less than 4 percent in 1969 to about 40 percent in 1984, and among women of ages 40–44 it increased from 13 percent to 64 percent during the same 15-year period. Table 6.3 indicates the existence of a strong correlation between women's ages and the level of contraceptive use. In 1984, for example, 54 percent of women aged 20–24 were practicing contraception, whereas about 74 percent of women aged 35–39 were doing so. Moreover, the increase in contraceptive prevalence rates in all age groups was more rapid during 1981 and 1984 than in earlier periods. It is unlikely that such rapid changes can be sustained in the future, particularly among women who have passed the middle of their reproductive period, for the contraceptive prevalence rates among these groups of women are already high. A further increase in the level of contraceptive use will require new strategies and program designs.

### Contraceptive Practice

Several analyses of the factors responsible for Thailand's fertility decline, conducted independently at different times, have arrived at similar conclusions—that

**Table 6.3.** Percentage of currently married women aged 15–44 currently practicing contraception, by age group: Thailand, 1969–84

Year	Survey	Age group						All age groups
		15–19	20–24	25–29	30–34	35–39	40–44	
1969–70	LS1	3.8	6.9	14.4	22.0	18.0	13.1	14.8
1972–73	LS2	6.0	20.1	28.6	31.4	35.6	19.4	26.3
1975	SOFT	16.1	30.9	41.0	44.0	42.3	30.5	36.7
1978–79	CPS1 <sup>a</sup>	31.3	44.2	54.4	61.1	62.8	49.5	48.5
1979	NS	19.5	32.9	52.7	61.1	59.5	44.2	49.3
1979	AFPH <sup>b</sup>	21.4	34.5	49.6	60.9	57.5	47.1	48.1
1981	CPS2	29.0	47.5	60.4	67.7	68.6	56.4	59.0
1984	CPS3	39.5	54.4	63.4	71.9	73.8	64.2	64.6

Sources: Data for 1969–70 through 1981: Knodel et al. (1982, table 34). Data for 1984: Kamnuansilpa and Chamratrithrong (1985, table 5.10).

LS1 and LS2: Rounds 1 and 2 of the National Longitudinal Study of Social, Economic, and Demographic Change.

SOFT: Survey of Fertility in Thailand.

CPS1, CPS2, and CPS3: First, Second, and Third Contraceptive Prevalence Surveys.

NS: National Study of Family Planning Practice, Fertility, and Mortality.

AFPH: Accelerated Family Planning and Health Project Baseline Survey.

<sup>a</sup> Excluding provincial urban women.

<sup>b</sup> Results refer to a universe of 20 provinces; the urban sample refers to provincial women only.

family planning services or contraceptive practice by married women contributed most to the decline. Estimates of the number of births averted and the extent to which these factors contributed to the decline vary, in some cases quite widely, because of differences in the methodology, data bases, and assumptions used. For example, one study (Abel et al. 1982) estimates that the number of births averted by users of oral contraceptives (“pills”), IUDs, and sterilization was about 217,500 in 1975, and that of those averted births, 85 percent were averted with the assistance of the National Family Planning Program. An unpublished estimate, by the Ministry of Public Health, of births averted in 1975 by users of those three methods yielded a similar result: 199,700 births averted. According to Abel et al. (1982), 47 percent of the 1.66 child decline in the total fertility rate between 1968–69 and 1975 was due to the program. Using Bongaarts’s (1982) model of approximate determinants of fertility, Abel and his colleagues estimated that contraceptive practice accounted for about 90 percent of the decline in the total fertility rate between 1968 and 1978. Another study (Kiranandana T., Kiranandana S., and Surasiengsung 1984) used an econometric model specifying that the total fertility rate was a function of income level and public and private family planning program efforts. Their study estimated that of the one-point decline in total fertility between 1970 and 1981, 97 percent was due to the

**Table 6.4.** Number of children preferred by currently married women (percentage distributions and means) as stated in national surveys: Thailand, 1966–70 to 1993

Preferred number	IPS surveys				NSO surveys	
	1966/70	1975	1979	1987	1988	1993
Married women, 15–49 (% distribution)						
0	1	0	0	1	1	0
1	4	3	2	5	6	5
2	19	21	29	44	50	64
3	22	25	22	28	24	20
4+	55	52	46	23	20	12
Total	100	100	100	100	100	100
Mean number	3.9	3.7	3.4	2.8	2.7	2.4
Married women, 15–29 (% distribution)						
0	1	0	0	1	1	0
1	6	4	3	6	7	6
2	23	28	41	58	64	74
3	24	29	23	23	20	15
4+	46	38	32	12	8	5
Total	100	100	100	100	100	100
Mean number	3.5	3.2	2.9	2.4	2.3	2.2

Sources: GOT NSO (1990, 1994), Attitudes towards Children Survey.

Note: Nonnumerical responses are excluded from calculations of the mean and, except for the response “as many as possible,” which is included in the category 4+, from the calculations of the percentage distributions.

national program. Thus, a consensus has emerged that the program has contributed substantially to the decline in Thailand’s fertility level.

### Changes in Desired Family Size and Reductions in Unwanted Fertility

From early in the transition from high to low fertility in Thailand, numerous national surveys have monitored the situation. Many of those surveys included questions about respondents’ family-size preferences. Although the exact wording differed, most of the questions asked married women (and, in some cases, men) how many children they would like to have if they could have just the number they wanted. Either implicitly or explicitly, the questions were intended to measure fertility preferences independent of the number of children that respondents actually had—that is, how many children they would want if they were to start their families again. Although such questions cannot capture underlying complexities of respondents’ attitudes, they do provide a crude measure of family-size preferences (Knodel et al. 1996).

Table 6.4 summarizes the means and distributions of the preferred number of children obtained from a series of surveys conducted by the Institute of

Population Studies at Chulalongkorn University and from two surveys conducted by the National Statistical Office. Responses are shown both for all currently married women in the reproductive ages and for married women under age 30. The purpose of restricting consideration to younger married women was to reduce the likelihood of respondents' rationalizing their actual number of children when giving their responses. Younger married women would be at a less advanced stage of their reproductive careers and thus less likely than older women to have already exceeded the number of children they would prefer under ideal circumstances. Moreover, their responses should represent a more up-to-date reflection of family-size preferences than the responses of all women in the reproductive age span and thus be more predictive of emerging fertility trends.

As expected, in all the surveys, women under 30, on average, expressed a preference for a smaller number of children than did women of all reproductive ages. For both groups, the results portray a steady decline in the preferred number of children during the period of slightly more than two decades covered by the surveys. The results of the two National Statistical Office surveys appear quite consistent with those from the earlier series, the 1988 survey indicating a preferred number of children just one-tenth of a child lower than the 1987 survey taken by the Institute of Population Studies, and the 1993 results representing a continuation of the trend established by the earlier surveys.

The most interesting feature of the results shown in Table 6.4 for assessing the likely future of Thai fertility is the shift in the distribution of responses. Each successive survey shows a marked increase in the share of respondents stating a preference for two children, rising from only 19 percent of married women of reproductive age in 1969-70 to 64 percent in 1993. The increase is even more dramatic for women under 30, rising from 23 percent to 74 percent in a little more than two decades. This movement toward a predominant preference for two children is accompanied by steady and striking reductions in the percentages of women preferring four or more children. The percentage preferring three children also declines, but not as steadily and far more modestly.

The surveys provide no evidence, however, of a shift in preference to a family size of fewer than two children. In no survey did more than 1 percent of married women express a preference to be childless, and the small percentage wishing only one child in 1993 was almost identical to that found in the first survey. Even among younger married women, no more than 8 percent expressed a preference for fewer than two children. Moreover, the percentage preferring fewer than two decreased slightly between 1988 and 1993, the years of the two most recent surveys.

**Table 6.5.** Desired number of children and actual fertility (TFR): Thailand, 1966–93

Year	Desired no. of children	TFR	Difference
1966–70	3.9	6.1	+2.2
1975	3.7	4.9	+1.2
1979	3.4	3.8	+0.4
1987	2.8	2.7	–0.1
1988	2.7	2.5	–0.2
1993	2.4	2.1	–0.3

Sources: Preferred number of children: Based on national surveys given as sources for Table 6.4. Total fertility rate: Same sources as in Table 6.1.

The average preferred number of children among married women of ages 15–49 decreased from 3.9 in 1966–70 to 2.4 in 1993 (Table 6.5). A comparison of these numbers with the total fertility rate indicates that during the early stage of the National Family Planning Program (between 1966–70 and 1979) there was a substantial amount of unwanted fertility. After 1979 the program expanded rapidly and the differences between actual fertility and the preferred number of children became negligible. This suggests that the National Family Planning Program was successful in assisting Thai couples to achieve their preferred family size.

### Socioeconomic Development

Another important factor in the decline has been Thailand's rapid socioeconomic development, fostered by the government's five-year plans. For example, Chalamwong and Sussangkarn's (1989) study of the determinants of the number of surviving children in Thailand indicates that a one-year increase in a woman's education decreased the number of surviving children by 0.13 child and that the wealth-elasticities of demand for surviving children was 0.03. This means that if a couple's wealth (or real housing expense and property income) increased by 100 percent, the number of surviving children would decrease by 0.3 percent. Of course this does not mean that better-educated or wealthier parents had higher child mortality than other parents; rather, it means that they had fewer children.

### COSTS OF THE NATIONAL FAMILY PLANNING PROGRAM

The Thai government provides free family planning services to all population groups. From the outset, the national program has integrated its family planning activities into existing health services, using facilities and personnel of the

**Table 6.6.** Expenditures on the National Family Planning Program: Thailand, 1970–96

National Development Plan and year	Total family planning expenditure (in million baht)	As % of total government expenditure
Second		
1970	33.9	0.22
1971	35.2	0.21
Third		
1972	39.5	0.22
1973	72.2	0.34
1974	85.6	0.33
1975	77.7	0.25
1976	135.3	0.36
Fourth		
1977	159.5	0.38
1978	174.5	0.33
1979	213.9	0.32
1980	235.8	0.29
1981	202.4	0.21
Fifth		
1982	308.2	0.28
1983	334.3	0.28
1984	368.7	0.28
1985	415.8	0.29
1986	470.1	0.32
Sixth		
1987	475.2	0.32
1988	479.5	0.31
1989	481.3	0.27
1990	490.9	0.24
1991	498.7	0.22
Seventh		
1992	519.9	0.19
1993	558.3	0.18
1994	543.7	0.15
1995	628.9	0.13
1996	610.9	0.10

Sources: 1970–71: Abel et al. (1982). 1982–96: Thailand Ministry of Public Health, Department of Health, Family Health Division, internal documents.

Family Health Division of the Department of Health. Nonetheless, it is possible to estimate the size of program expenditures borne by the Health Division's budgets. As Table 6.6 indicates, expenditures on the program rose from 33.9 million baht in 1970, just after the government adopted its voluntary family planning policy, to 610.9 million baht in 1996, the end of the Seventh National Development

Plan. In comparison with the government's total budget, however, family planning expenditures have been very small. In 1977, the first year of the Fourth Five-Year Plan, when the expenditure was proportionately the highest, it represented only 0.38 percent of total expenditures. By 1996 it had declined to 0.10 percent.

During the early stage of the program (1970–80), most of its funds came from foreign sources. Those sources were the U.S. Agency for International Development, the Population Council, the United Nations Children's Fund, the United Nations Fund for Population Activities, and the International Planned Parenthood Federation. That trend was reversed during 1981–89, when the Thai government allocated more than half of the total program expenditure. Since 1989 almost 100 percent of the total budget for family planning has come from the government.

An empirical study (Kiranandana T., Kiranandana S., and Surasiengsung 1984) demonstrates the tremendous burden that Thailand's rapidly growing population placed on the government and the potential savings that were projected to be gained during 1986–2011 from government spending on social services for a more slowly growing population. The study concludes that a national family planning program is indeed an effective means of lowering the population growth rate and was a financially sound investment in the case of Thailand.

Although the national program has provided family planning services without charge to couples, the increasing income and urbanization of the population has facilitated a shift from almost total reliance on public sources of family planning services to greater reliance on private sources, especially private clinics and hospitals. Today about 20 percent of users buy their contraceptives from private sources (Sussangkarn 1992). The private sector accounts for an increasing share of pills, injectables, and female sterilization used by couples.

Table 6.7, which compares the average cost to the government of contraceptives provided by the National Family Planning Program and the average price of those contraceptives within the private sector, indicates that all methods except condoms are more expensive within the public sector. It would therefore make sense, from an economic standpoint, for the private sector to assume the major role in providing contraceptives to Thai couples. This is likely to be true even for condoms. Although the average price per condom charged by private drugstores and clinics is higher than the average price charged by the public sector, the difference is small. The condoms sold by many private outlets are of higher quality and include higher-priced brands than the generic kind provided by the public sector. If the private outlets were to sell the generic type, which customers can purchase in bulk, their market price would likely be less than the public

**Table 6.7.** Average public cost and average private price of contraceptives (in baht), by method: Thailand, 1990

Method	Average cost in public sector	Average price in private sector	
		Drugstore	Private Clinic
Female sterilization	1,253	na	942
Male sterilization	1,177	na	391
Pills	28	21	31
IUDs	474	na	222
Injectables	85	na	64
Condoms	5	9	7

Source: IPSR and HRSDP (1991, table 24).

Note: Cost or price is per one item or service.

na—not applicable.

price. As for pills, private drugstores should be encouraged to market more pills to the target groups because the average price they charge per cycle is much lower than that of both private clinics and the public sector. The data also show that the number of drugstores in the sample provinces is twice as high as the number of clinics and that drugstores are more popular among users of temporary and nonclinical methods.

According to the study on which these findings are based (IPSR and HRSDP 1991), the average fees charged by private clinics for their services are far below the corresponding fees charged by the public sector. For instance, the average fee for male sterilization in the private sector is only one-third of that charged by the National Family Planning Program. For IUD insertions the fees charged by the private sector are 47 percent lower, and for female sterilization and injectables the private fees are 75 percent lower. Privatization of these methods is therefore justified on the grounds of efficiency and should be encouraged.

## CONCLUSION

From 1970 to 1999, the Thai government's population policy has had two major goals, to reduce fertility through the National Family Planning Program and to redistribute population away from the primate city of Bangkok. Thailand has been successful in curbing its population growth rate during the last two and a half decades. The rate was projected to decline to 1.0 percent per year by the end of 1998. The country's rapid fertility decline has resulted largely from socio-economic development and the effectiveness of the National Family Planning Program in providing subsidized contraceptive services.

Nonetheless, Thailand's population of 61 million in 1998 will continue to grow for some time even if fertility remains below the replacement level. That is because of the momentum built into the population's structure as a result of earlier high levels of fertility. About the lowest level at which the population is likely to level off is 70 million, and it could well reach 80 million or higher (Guest and Jones 1996). According to population projections used in the Eighth Plan (1997–2001), the number of women of reproductive age will peak in 2010, after having already peaked as a proportion of the total population in the late 1990s. But the proportion of those women who are married will probably fall throughout the period as a result of a growing tendency for women to delay marriage into their late 20s and 30s or not to marry at all, and also because of an increasing rate of divorce and desertion. In the future, therefore, although most couples will have two children, many women will not marry until it is too late to have children; and this will tend to maintain total fertility below the replacement level. The earlier policy goal of reducing birth rates, though still appropriate for the Seventh Plan period, is no longer needed during the current Eighth Plan, which places emphasis instead on the quality of family planning and reproductive health services.

Recently the spread of the human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) epidemic has caused alarming health and social problems in Thailand. The epidemic is spreading rapidly among various population groups, including adolescents, pregnant women, and their children. AIDS is expected to become the country's leading cause of death in the near future, especially among infants and children. Its high mortality rate will have far-reaching social, economic, and demographic ramifications. The government must therefore make education about AIDS and other sexually transmitted diseases an important element of family planning services.

Other issues affecting Thailand's long-term population and development outlook also need to be addressed. One is the migration of people from areas of little economic opportunity to areas of greater opportunity. This has been occurring for a long time, for example in frontier settlements and seasonally from the Northeast to Bangkok. If regional income disparities continue to widen, such migration is likely to increase. Indeed, international migration, most of it illegal, has been increasing from neighboring Myanmar, the Lao People's Democratic Republic, and Cambodia as those countries fall further behind Thailand economically and, in several cases, continue to repress their citizens. The major locus of economic opportunity is Thailand's cities, and migration will contribute to their rising share of the nation's population. Another important element of the government's population strategy is the aim of raising the quality of human

resources. Here improvements in education and health levels are crucial. As the population becomes more urban and urban environmental issues become more acute, new health problems are an increasing risk.

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## Population Policy and Programs in Indonesia

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Indonesia, the fourth most populous country in the world, encompasses about 17,000 islands spread across the Malay Archipelago. Comprising more than 1.9 million square kilometers, the archipelago is located in a strategic region and one of the most rapidly growing regions of the world economy until the middle of 1997, when an economic, political, and social crisis began. The five major islands of Indonesia are Jawa, Sumatera, Kalimantan, Sulawesi, and Irian Jaya.

Indonesia is a culturally rich country whose people speak more than 300 languages and local dialects. Their motto, *Bhinneka Tunggal Ika* (Unity in Diversity), is no exaggeration, for although Indonesians are diversified geographically and by race, religion, and culture, they are unified by a strong sense of nationhood. Unifying elements have been in place throughout its history. Bahasa Indonesia, the national language, is spoken by roughly 95 percent of the population. Although 80 percent to 85 percent of the population is Moslem and religion has a strong influence on people's daily lives, Indonesia does not regard itself as an Islamic country. It recognizes four major religions besides Islam—Protestantism, Catholicism, Buddhism, and Hinduism.

Indonesia declared its independence from the Japanese in August 1945. Earlier it had been under Dutch colonization for more than three centuries (1600s to 1942). Since independence, the republic has had only three presidents, President Soekarno (1945–66), President Soeharto (1966–98), and President B.J. Habibie (1998–99) until 1999. Soekarno played a paramount role in the country's struggle for economic self-reliance. His famous statement addressed to the West, "Go to hell with your aid," expressed his determination to maintain Indonesia's independence as a nonaligned nation.

In the 1960s, however, Indonesia was one of the least developed countries in the world, with annual per capita income at about US\$50. Its economic growth during 1960–65 was only 2 percent per year (ROI CBS 1995). Agriculture and natural resource extraction accounted for almost 60 percent of production (Table 7.1). The employment structure during the 1960s and early 1970s reflected the production structure, with more than 60 percent of the work force employed in agriculture (Table 7.2).

**Table 7.1.** Structure of production by industry (percentage distribution): Indonesia, 1960, 1973, 1980, and 1994

Industry	1960	1973	1980	1994
Agriculture, forestry, hunting, fishing	53.9	40.1	30.7	16.7
Mining and quarrying	3.7	12.3	9.3	9.4
Manufacturing	8.4	9.6	15.3	23.3
Electricity, gas, water	0.3	0.5	0.7	1.0
Construction	2.0	3.9	5.7	7.3
Trade, restaurants, hotels	14.3	16.6	16.6	16.7
Transport, storage, communication	3.7	3.8	5.4	7.1
Finance, insurance, real estate, business services	3.0	3.3	4.9	8.7
Community, social, business services	10.7	9.9	11.5	9.7
All main industries	100.0	100.0	100.0	100.0

Source: ROI BPS (1995).

Notes: Percentages for 1980 and 1994 are based on constant prices in 1983 and 1993, respectively. Percentages may not sum exactly to 100.0 because of rounding.

**Table 7.2.** Employment by main industry (percentage distribution): Indonesia, 1971, 1980, and 1994

Main industry	1971	1980	1994
Agriculture, forestry, hunting, fishing	66.3	55.9	46.1
Mining and quarrying	0.2	0.7	0.9
Manufacturing	6.8	9.1	13.2
Electricity, gas, water	0.1	0.1	0.2
Construction	1.7	3.2	4.3
Trade, restaurants, hotels	10.8	13.0	17.0
Transport, storage, communication	2.4	2.8	4.1
Finance, insurance, real estate, business services	0.2	0.6	0.7
Community, social, business services	10.3	13.9	13.1
Other	1.1	0.0	0.1
All industries	100.0	100.0	100.0

Sources: ROI BPS (1974, 1982, 1995).

Note: Percentages may not sum exactly to 100.0 because of rounding.

Under Soeharto's leadership, the economy assumed primacy in Indonesia's development efforts. Soeharto sent his ministers to developed countries, trying to gain the understanding and cooperation of their leaders and to open Indonesia's economy to the world. By the late 1960s the economy was growing at about 7 per cent per year, and in the 1970s the annual growth rate increased to more than 7 percent. One reason for the rapid growth was the oil boom of the 1970s. As an oil-exporting country and a member of the Organization of Petroleum Exporting Countries (OPEC), Indonesia benefited from the high price of oil.

**Table 7.3.** Population of Indonesia and the islands of Jawa, Madura, and Bali: 1961, 1971, 1980, and 1990

Country/islands	Population (millions or percentage)			
	1961	1971	1980	1990
Indonesia (millions)	97.0	119.2	147.4	179.3
Jawa, Madura, and Bali (millions)	66.6	82.7	94.2	116.9
Jawa, Madura, and Bali (%)	68.7	69.4	63.9	65.2

Source: Achmad (1995).

When the international price of oil fell in the early 1980s, Indonesia felt the effect. Although initially the economy continued to grow at more than 6 percent per year, the growth rate was declining, and this caused the government to change its strategy. In the latter part of the 1980s, it introduced deregulation policies to make the economy more efficient and supported an export-oriented policy. As a result, the economy resumed a healthy growth rate averaging 6.5 percent per year.

#### EARLY POPULATION POLICY INITIATIVES

The 1971 census enumerated a population of 119 million, more than two-thirds of whom lived on the islands of Jawa, Madura, and Bali (Table 7.3). Jawa, with the lion's share of the country's inhabitants, comprises only 7 percent of the total land area. Recognizing that rapid population growth was a deterrent to economic development, in 1970 the government made a commitment to cut the total fertility rate of 5.8 children per woman in half by 2005. Between 1970 and 1980, the population grew at an average annual rate of 2.34 percent, a rate at which the population would double in 29.6 years. By 1994 the total fertility rate had fallen to around 2.86 children per woman (ROI CBS et al. 1995), and the average annual growth rate had declined to about 1.66 percent.

The government was also concerned about the unbalanced distribution of population. Historical evidence indicates that the concentration of inhabitants in Jawa, Madura, and Bali is not a recent phenomenon. Jawa has long been considered a "market island," attracting both Indonesian and foreign investors. Since 1968, most of Indonesia's economic activities have been concentrated there. Its rapid economic development has not only attracted further investment but also induced outer islanders to migrate to Jawa in search of jobs. This trend is likely to continue unless other islands, such as Sumatera, Kalimantan, Sulawesi, Maluku, Irian Jaya, and Nusa Tenggara, become more attractive to investors and migrants.

**Table 7.4.** Numbers of transmigrant families and individuals: Indonesia, 1969–94

Period	Families	Individuals
Pelita I (1969–74)	39,436	180,728
Pelita II (1974–79)	82,000	362,904
Pelita III (1979–84)	339,251	1,353,971
Pelita IV (1984–89)	750,150	2,255,255
Pelita V (1989–94)	265,259	u

Source: Achmad (1995).

u—data are unavailable.

Concern about the maldistribution of population and economic opportunities led the government to establish a Transmigration Office in 1950, shortly after independence. Its purpose was to encourage people to move from Jawa, Bali, and Madura to less densely populated islands. The origin of this strategy can be traced to the beginning of the century, when the Dutch administration moved laborers from several villages in Jawa to plantations in Lampung on the island of Sumatera. In 1965 the Transmigration Office was integrated into several related departments, including the Department of Manpower and the Department of Cooperatives, and in 1984 it became an independent department. By 1989 the program had successfully relocated more than 2 million people (Table 7.4). The government paid the cost of moving (usually by military aircraft) and provided everything that the transmigrants needed in the recipient islands, including land, housing, and minimal public utilities.

Nevertheless, the government could not fund the entire program forever. In the mid-1980s it began to promote voluntary transmigration. The emphasis was also changed to focus specifically on resettlement outside Jawa, especially in eastern Indonesia. Currently the government develops infrastructure in an area and encourages people to move there. The Department of Transmigration recently introduced the Build, Operate, and Transfer (BOT) system, which provides economic incentives to private firms to establish agribusinesses outside Jawa. The firms create and operate the businesses, and after several years of operation the government transfers ownership of the land to the workers. With this arrangement, the firms absorb and possibly export all the outputs produced, enjoying any profits. Despite the large number of Indonesians who have resettled outside the three major islands, however, the effect of the transmigration program on the total population has been negligible. Between 1969 and 1984, only about 1.85 percent of the combined population of Jawa, Madura, and Bali, or about 1.15 percent of the total Indonesian population, had moved to other islands.

**Table 7.5.** Married women's knowledge and use of contraceptives: Indonesia, 1994

Type of method	Knowledge		Ever used method	Currently using method
	Of method	Of source		
Any method	96.3	95.0	75.7	54.7
Any modern method	96.1	95.0	73.6	52.1
Any traditional method	30.6	u	6.3	1.9
Folkloric method	9.8	u	3.1	0.8
Traditional and folkloric method	34.6	u	8.8	2.7

Source: ROI BPS et al. (1995).

u—data are unavailable.

## A QUARTER-CENTURY OF DEMOGRAPHIC SUCCESS

Indonesia exemplifies the successful incorporation of population policies and services within the totality of its socioeconomic development. At the macrolevel, the creation of the State Ministry on Population and the establishment of the *Badan Koordinasi Keluarga Berencana Nasional*, or National Family Planning Coordinating Board (commonly known as BKKBN), reflect the government's increasing emphasis on broad socioeconomic issues. At the microlevel, the government has integrated population issues into sectoral development through a service center and by working with the business community. These efforts indicate the importance that the government has placed on the rapid diffusion of family planning and a small-family norm among the populace. They have paid off in numerous achievements since 1970, including widespread awareness and knowledge of contraceptives among married women, a much higher prevalence of contraceptive use, lower fertility rates, lower infant and child mortality, and a slower rate of population growth.

### Increased Knowledge and Awareness

By 1994 nearly all (96 percent) married women in the reproductive age span knew of at least one contraceptive method and where to obtain it (Table 7.5). Moreover, roughly the same percentage of women knew about modern methods and their sources, whereas far fewer women knew about traditional or folkloric methods (35 percent). Exposure of targeted groups to information about contraceptive methods and sources is of course essential to the success of any population and family planning program. But widespread knowledge does not guarantee the success of a family planning program unless it is accompanied by acceptance and continued use of effective methods.

**Table 7.6.** Age-specific fertility rates and total fertility rate (TFR): Indonesia, 1971, 1980, 1991, and 1994

Age group	Age-specific fertility rate (births per 1000 women)			
	1971	1980	1991	1994
15–19	155	116	67	61
20–24	286	248	162	148
25–29	273	232	157	150
30–34	211	177	117	109
35–39	124	104	73	68
40–44	55	46	23	31
45–49	17	13	7	3
TFR	5605	4680	3022	2856

Sources: ROI BPS (1974, 1982); ROI BPS, et al. (1992, 1995).

### Increased Contraceptive Prevalence

As Table 7.5 indicates, three-quarters of the married women at risk of pregnancy in 1994 had used contraception, and nearly three-quarters of them had used a modern method. The tendency of couples to use modern contraceptives is highly encouraging, for such methods have been proven to be effective, thus increasing the likelihood of a successful family planning program. Only slightly more than one-half, however, were currently using contraception; most of those were using a modern method. Thus, about one-quarter of the women who had ever used a modern method were no longer doing so, and about one-quarter of the women who knew about modern contraceptives had never used them. Among the third of women who knew about traditional or folkloric methods, only 9 percent had ever used them, and fewer than 3 percent were current users.

### Declining Fertility

During the 1970s there was much discussion of the government's goal of reducing fertility by one-half by the turn of the twenty-first century. At the time the goal seemed unrealistic. As Table 7.6 indicates, however, the targeted reduction was achieved by 1994. Between 1971 and 1994, a period of only 23 years, the total fertility rate fell from 5.61 to 2.86 births per woman, or by 49 percent. In other words, fertility declined exponentially at the rate of 2.93 percent annually for almost a quarter of a century.

Table 7.6 also shows sharp declines in the age-specific fertility rates of the 15–19 and 20–24 age groups, which resulted from delays in marriage as well as from smaller numbers of live births within marriage. Moreover, the age-specific

**Table 7.7.** Population growth rates, actual and projected: Indonesia, 1961–2020

Period	Annual growth rate (%)
1961–71	2.1
1971–80	2.3
1980–85	2.2
1985–90	1.89
1990–95	1.66
1995–2000	1.46
2000–05	1.23
2005–10	1.07
2010–15	0.88
2015–20	0.68

Source: Ananta and Anwar (1995).

rates reveal a gradual structural change in the timing of highest fertility. In 1971 fertility peaked in the 20–24 age group, but by 1980 it was peaking in the 25–29 age group. This shift was due largely to delays in the timing of first births.

What is even more impressive from a programmatic standpoint is that fertility declined in all of the 27 provinces of Indonesia. Not only did the more developed provinces of East Java and Bali achieve replacement-level fertility (2.1 children per woman), but also some of the outer island provinces, where the family planning services were not yet as advanced as those in East Java and Bali.

### Slower Population Growth

During the period of 1961–71, Indonesia's population was growing at an average annual rate of 2.1 percent (Table 7.7). The growth rate increased to 2.3 percent between 1971 and 1980, demonstrating that declines in growth rates lag behind declines in fertility. Although the family planning program was established in 1970 and fertility began to decline soon afterward, it was not until the 1980s that the growth rate started to decrease. It fell to 2.2 percent between 1980 and 1985, to 1.89 percent between 1985 and 1990, and to 1.66 percent between 1990 and 1995. The proactive family planning program was responsible for the rapid decline, along with those factors that are unconnected directly to the program, such as female education and economic development.

The growth rate is projected to continue to decline over the next several decades, reaching 0.68 percent by 2020. At an annual growth rate of 1.66 percent, the average rate prevailing during the first half of the 1990s, a population doubles

in approximately 42 years. At the rate of 0.68 percent, it doubles in 102 years. By the year 2020, the Indonesian economy will have entered into a completely liberalized era of Asia Pacific Economic Cooperation (APEC).

## POLITICAL COMMITMENT AND INSTITUTIONAL DEVELOPMENT

The process of successful demographic development can be generated by various events. It can result from strong political commitment. It can emerge from the introduction of new contraceptive methods and new sources of supply in response to innovative efforts. It can be the result of reaching new target groups. Or it can arise from changes in policies and program management. In Indonesia's case a crucial factor has been the government's strong commitment to economic and political stability, upon which all population policy and program efforts have relied. Without such stability the family planning program would be subject to uncertainties and risk, which could inhibit its success. The most recent political turmoil in Indonesia has affected economic factors by causing significantly higher prices of almost all commodities and increasing unemployment; thus, it has brought about lower real income of the population at large. As a consequence, the sustainability of the government's population policies and programs, particularly those dependent on households' real income, is in doubt.

### Evolution of the Family Planning Program

During the period of rapid population growth and sluggish economic growth, government officials and opinion leaders were concerned mainly about the implications of rapid population growth for the health status and welfare of the people, especially those of women and children (ROI BKKBN 1994; Suyono 1995). In the 1950s birth rates and mortality rates, especially infant and maternal mortality rates, were so high that some physicians and women activists began promoting the idea of family planning as a means of improving survival rates. These groups were especially active in the cities of Yogyakarta and Jakarta.

In September 1952 a foundation called Yayasan Keluarga Sejahtera (Family Welfare Foundation) established the first family planning program. Five years later a small number of concerned community leaders established the Indonesian Planned Parenthood Association (ROI BKKBN 1994). Until the late 1960s, however, there was virtually no public support for any effort to reduce fertility. The idea was not popular with religious or community leaders. Local traditions encouraged large families with such proverbs as "more children bring more good fortune."

In a traditional society, where most people are tied to the land and farming relies on manual labor, children are an economic asset and large families are desirable for the sharing of labor. As the number of family members increases, however, their numbers put strong pressure on the available land. Output per family member declines as each member receives her or his own smaller and smaller share of production. The pressure on the given land becomes obvious when we look at the marketing side of productive activities, such as food production for own consumption and commercial purposes, in a traditional society. The market for products is limited and local. The only way to expand it is to open isolated areas or intensify production. A smaller number of children per family will increase the average product available to each family member, and intensifying the productive effort will further raise the family's welfare.

In the early 1960s the Indonesian Planned Parenthood Association took the lead in disseminating family planning information and services through its health clinics for mothers and children. At that time the Ministry of Health was not allowed to provide family planning services, such as dispensing contraceptives, and therefore the association played a key role during that stage of Indonesia's development.

When Soeharto became president in 1967, the government began to modify its position on family planning, acknowledging that the country's population problems could not be separated from its development problems. That idea had the support of some economists at the University of Indonesia, such as Professor Widjojo Nitisastro, Nathanael Iskandar, and Emil Salim. Several of them became members of the development cabinet (Hull 1995). That same year Soeharto joined 29 other world leaders in signing the World Leaders' Statement on Population, sponsored by the United Nations. His doing so was widely considered to indicate that Indonesia had officially committed itself to dealing with the problems of development originating from rapid population growth. It set the stage for the establishment of Indonesia's family planning program.

The sudden change in policy raises two questions. Why was Soeharto so supportive of family planning? Did external forces, such as international conferences, World Bank missions, and the U.S. Agency for International Development, play a role? There is no simple answer to those questions. Widjojo, who was not only a prominent scholar but also Soeharto's closest confidant, has said that Soeharto himself recognized the importance of family planning even before he became president. Moreover, when he became president, the international political situation was conducive to the idea. International donor agencies offered Indonesia aid to help it establish a family planning program. Nonetheless,

Soeharto proceeded carefully, appointing an ad hoc commission to assess the feasibility of such a program. The commission supported the idea, and on the basis of its report, he instructed the minister of health to establish and coordinate the program.

Despite opposition from a large segment of the population, the government's commitment was so strong that in 1968 it created a pilot project in Jakarta to assess the public's attitude toward family planning and to explore alternative approaches to providing services. In October 1968 the Ministry of People's Welfare announced the establishment of a National Family Planning Institute. The organization was unique in being sponsored by both the government and several private groups. In 1969 the government incorporated family planning into its First Five-Year Development Plan, or Repelita. Historical evidence suggests that when a policy or program is included in the plan, government officers charged with implementing it tend to give it priority.

Only two years after creating the pilot project in Jakarta, the government established by presidential decree the BKKBN. The head of the organization is appointed by the president and reports directly to him. Although its name suggests that the board is a coordinating agency, it is actually an executing agency. That the head is directly responsible to the president ensures the effective execution of its policy and program.

The BKKBN was given the mandate to coordinate all family planning activities performed by both the government and nongovernmental organizations. Its mission is to provide social and economic welfare to the Indonesian people through population planning and family planning assistance (Suyono 1977). The government uses the term "family welfare" both to describe that mission and as a synonym for family planning assistance. The BKKBN's specific objectives are, first, to reduce the fertility rate directly by offering married couples contraceptive information and services and, second, to reduce it indirectly by institutionalizing the idea of family planning. Given the country's fragmented geography, many local languages and dialects, and cultural diversity, a major challenge for the program was reaching the majority of rural inhabitants throughout the archipelago. To meet that challenge, the BKKBN created a program called the Village Family Planning Program in 1977. The program was aimed at providing family planning services to the population at large.

### **Economic Growth and Political Stability**

The two greatest challenges facing Indonesia immediately after independence were economic backwardness and political instability. In such a situation it is

almost impossible to pursue economic development without sacrificing some degree of community welfare. It is remarkable that a nation of such diversity as Indonesia managed to achieve political unity. Without it, Indonesia would have disintegrated into numerous independent states. Today, many Indonesians, particularly those who were alive at the time of independence, believe that the diversity in unity that characterizes Indonesian society today is the single most important achievement of Soekarno.

Unification was of course only the beginning. It was a necessary precondition for proactive economic development. Since Repelita I three decades ago, the government has consistently pursued a three-pronged development strategy emphasizing stability, growth, and equitable distribution of resources. It is in essence a political pledge. The government managed to reduce the annual rate of inflation from 650 percent to less than 10 percent until Indonesia's recent economic downturn. It created a workable political system, reducing the hundreds of political parties to just three—the Working Group Party, or GOLKAR, which ruled Indonesia until 1999; the United Development Party, or PPP, which is predominantly Islamic; and the Indonesian Democratic Party, or PDI, which comprises nationalists and other groups. Since May 1998 the government's new leadership has reinstated the multiparty system as part of its political reformation. However, it remains to be seen whether this change contributes to political and social stability.

There is no doubt that the success of Indonesia's population policy and programs has been due, at least in part, to the country's past political stability and economic development. It is no less true, however, that the success of the population programs has contributed to the improvement in living standards experienced by the population at large.

### **Strategic Program Efforts**

Repelita I (1969–74) focused on providing family planning services through health clinics in six provinces on the islands of Jawa and Bali. Repelita II (1974–79) expanded the program to 10 provinces in the outer islands, and Repelita III (1979–84) expanded it to the remaining provinces. Besides giving initial priority to the most populous islands of Jawa and Bali, the program attempted to reach couples in all types of communities, including remote areas, new resettlements, transmigration and coastal areas, and urban slums. In rural areas the government established village and subvillage contraceptive distribution centers. As the program expanded, it focused primarily on newly eligible couples, who were made aware of available methods and encouraged to practice contraception. While

taking into consideration the social, cultural, and religious values of the populace, the program emphasized free choice and responsibility.

The expansion of the family planning program on Jawa and Bali from urban clinics to villages was an endeavor to institutionalize contraceptive use in the rural communities. Although the program made it easier for villagers to obtain contraceptive supplies, it respected the sensitivities of Indonesia's many subcultures in the provinces, where the manner of approaching eligible couples was left to local leaders. Active community participation is the most powerful means of making family planning services effective and sustainable. For Indonesia's program to be successful, village communities had to become involved in it. Local managers therefore worked with community members, encouraging them to commit their own resources to the program. To help build a consensus about the acceptability of family planning, religious leaders were asked to include family planning messages in their weekly services. The widespread use of Bahasa Indonesia, the national language, also facilitated efforts to communicate program messages.

Even with the sensitivity shown toward local cultures, the government found that offering family planning services through its clinics was not sufficient to create a small-family norm. Since Repelita V (1989–94), therefore, the family planning program has focused on integrating family planning into a broader developmental effort to improve the welfare of mothers and children. Hence, the recent change in the program's name to emphasize family welfare.

Today the program no longer broadly targets married women of reproductive age but instead has specific objectives for various demographic and institutional segments of the society (ROI BKKBN 1994). For women between the ages of 20 and 29, the objective is to encourage them to have no more than two children, whereas for those 30 years old and older, the objective is to persuade them to have no more children. For youth, the program aims to have them become active motivators in family development and eventually to become responsible parents. And finally, for parents, the program's objective is to have them instill in their children values that support the family's development.

### **Innovative and Integrated Programs**

Population policies and programs can change in two ways. The first is through small, incremental steps. The second involves major new directions. In a dynamic world, policies and programs must change to meet new conditions. One feature of Indonesia's family planning policies and program is that they have been among the most innovative in the world, responding flexibly to new circumstances and

needs. In addition, the program has received not only strong political support from the government but also adequate resources for its activities.

Indonesian policymakers since Soeharto have realized that family planning could not be separated from other aspects of development, such as social and economic development, health, nutrition, religion, and culture. As part of its integrated planning, the government has launched numerous programs related to family planning. They include the following:

- Family Nutrition Improvement Program, started in 1978 (during Repelita II). Because nutrition affects mortality rates, especially those of children under 5 years of age, the government reasoned that with a decline in mortality due to improved nutrition, a larger number of children could be expected to survive. The BKKBN therefore offered nutrition supplements to the children of family planning acceptors.
- Income-Generating Program, started in Repelita II (1974–79). The government granted financial support to family planning acceptors involved in the business sector. Its purpose was to increase acceptors' family incomes.
- Corporate Family Planning Program, ratified in Repelita II. This program provides information to employers and employees about the benefits of family planning to their companies, in particular how it increases productivity. In this program the BKKBN collaborates with other government agencies, such as the Ministry of Manpower, and with workers' unions.
- Integrated Health and Family Planning Program, introduced in 1978. The program established integrated-service posts in subvillages. Local communities supervise these cadres, who are mostly mothers and women volunteers.
- Children-under-Five and Family Program, started in Repelita III (1979–84). This program attempted to increase the knowledge and capabilities of parents, especially mothers, in caring for their children. It was hoped that well-treated toddlers would eventually become healthy and productive adults. In Repelita V (1989–94), the program was developed further and renamed the Guidance Movement for Families and Children under Five.
- Family Planning and Health Program, started in Repelita IV (1984–89). This program created many positions whose function it is to provide integrated family planning, immunization, and nutrition services.
- Coconut Hybrid–Family Planning Program, begun in Repelita IV. To improve family planning acceptors' incomes, the program gives them a coconut hybrid so that they can generate additional income and improve their own welfare.

- Family Planning Program in Resettlement Areas, started in Repelita IV. It is implemented in the resettlement areas, with the aim of serving family planning acceptors in those areas.
- Urban Family Planning Program, launched in Repelita V. This program distributes family planning manuals to physicians and midwives in private practice and established a self-reliant family planning campaign, in which acceptors are encouraged to bear the cost of their contraception. With the assistance of this campaign, professional organizations such as the Indonesian Medical Doctors Association and the Indonesian Midwives Association could assume more active roles as service providers in the self-reliant family planning movement.
- Forestry Family Planning Program, introduced in Repelita V. The program is a cooperative effort between the Ministry of Forestation and BKKBN, having as its major goal to integrate family planning with development in the forestry sector. The program attempts to increase the awareness of and participation in family planning of people living in forest areas.
- Insurance Program for Family Planning Acceptors, started in Repelita V. Acceptors are covered by health insurance. The BKKBN collaborates with private insurance companies.
- National Safe-Motherhood Movement, initiated in 1990. This grass-roots campaign aims to reduce Indonesia's maternal mortality rate, which is considered to be high in relation to its level of development in general.
- Development of Population and Family Welfare, enacted into law in 1992. The emphasis is on the family as the core social unit.
- Development of Urban Families' Welfare in Rural Areas, created in 1994. The program attempts to attract urban residents to make frequent visits to surrounding developed rural communities.
- Family Welfare Saving Scheme and Family Welfare Business Loans, begun in 1995. These programs, which receive support from Indonesian conglomerates, teach people how to save money and run their own businesses.
- Family Resilience against HIV/AIDS, initiated in 1995. The program takes a holistic rather than an epidemiological approach to the prevention of the human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS).

Although these family planning programs are innovative and integrated with related programs, a remaining issue is the continuity or sustainability of their services. Care must be taken in devising future policies, strategies, and pro-

grams to ensure that the services meet users' needs. For the programs to be successful over the long term, acceptors must recognize the benefits of using contraceptives and eventually be able to pay for the services delivered.

Indonesia's economic growth rate of 7 percent per year between 1967 and the early 1980s (Sundrum 1986; Pasay 1990), combined with a declining population growth rate averaging 1.9 percent annually, raised per capita income at an average rate of 5 percent per year—one of the highest in the developing world. This meant that increasing numbers of couples were able to afford family planning services and to demand better-quality services. In response to these developments, the BKKBN introduced a Social Marketing and Fee-for-Service Program in 1985. The program highlighted an emerging division of roles between the government and the private sector, whereby the government generates demand for contraceptives and services, while the private sector produces and sells them. The increasing ability of the population to pay for family planning products and services is expected to continue this trend, in which the interests of couples seeking services, the government, and the private sector converge.

#### COSTS OF FAMILY PLANNING

Indonesia's oil and gas revenues have been declining in recent years, and it is even projected that Indonesia will become a net importer of oil by 2004. Other sources of revenue have yet to be explored and developed. Indeed, a reorientation of development strategy toward export-promoting industries has been taking place for about a decade now. The government has been forced to take austerity measures, and the social-development sector, including the BKKBN's family planning programs, has not escaped from the belt-tightening.

Similarly, support for family planning from foreign donors has declined dramatically in recent years. This is particularly true for Indonesia, which is considered to have one of the most successful family planning programs in the world. Most foreign donors have shifted their resources to other countries in the region.

However, the proportion of the Indonesian government's total budget spent on family planning doubled between fiscal years 1975/76 and 1994/95 and has declined only slightly since then (Table 7.8). In 1975/76 the percentage was 0.33. It increased gradually to 0.60 percent in 1986/87, declined to 0.48 percent in 1987/88, rose again to 0.65 percent in 1994/95, and leveled off at 0.61 percent (or approximately Rp.555 billion) in 1996/97. It is likely that the budget for the family planning program will remain at approximately 0.60 percent of the total government budget during the next few years.

**Table 7.8.** Family planning as a percentage of the government's budget and allocation of the family planning budget: Indonesia, fiscal years 1975/76 to 1996/97

Fiscal year	Family planning (FP) as percentage of government budget	Allocation of FP budget (% distribution)		
		Development	Project assistance	Routine
1975/76	0.33	62.3	30.2	7.5
1976/77	0.27	68.7	25.8	5.5
1977/78	0.23	88.0	6.4	5.6
1978/79	0.36	62.5	33.6	3.9
1979/80	0.39	58.8	35.3	5.8
1980/81	0.42	58.5	30.6	10.8
1981/82	0.42	62.5	25.9	11.5
1982/83	0.49	65.5	21.9	12.6
1983/84	0.52	57.7	29.2	13.1
1984/85	0.55	48.5	37.0	14.5
1985/86	0.54	47.0	34.1	19.0
1986/87	0.60	45.1	28.6	26.3
1987/88	0.48	45.9	22.0	32.0
1988/89	0.51	45.8	26.2	28.0
1989/90	0.57	47.9	28.8	23.3
1990/91	0.57	57.0	18.2	24.9
1991/92	0.56	61.9	13.5	24.6
1992/93	0.58	65.4	6.3	28.3
1993/94	0.58	66.3	2.4	31.3
1994/95	0.65	53.7	10.0	36.3
1995/96	0.63	51.2	9.7	39.1
1996/97	0.61	50.1	9.0	40.9

Source: Calculated from ROI MOF (various years).

Note: In the columns showing the allocation of the family planning budget, percentages may not sum exactly to 100.0 because of rounding.

Table 7.8 also shows the three major components of the family planning budget in percentage terms. In 1975/76, nearly two-thirds of the budget was allocated to developing an infrastructure for the program. Slightly less than one-third was earmarked for project assistance, and only 7 percent was for such recurring expenditures as salary and consumption expenditures. By 1996/97, only about one-half of the budget was for development, only 9 percent was for project assistance, and 41 percent was for recurring expenditures. Thus, over time the need for development and project assistance decreased significantly as program's services became established.

The annual cost per current user has ranged from a low of US\$3.62 in 1987/88 to as high as US\$10.47 in 1981/82. It is expected to decrease as acceptors begin to bear a portion of the cost of the program's services. As a percentage of

**Table 7.9.** Annual cost of family planning per current user: Indonesia, fiscal years 1975/76 to 1990/91

Fiscal year	Cost per user (US dollars)
1975/76	6.72
1976/77	6.10
1977/78	5.01
1978/79	7.64
1979/80	6.69
1980/81	9.04
1981/82	10.47
1982/83	8.51
1983/84	6.60
1984/85	7.05
1985/86	7.33
1986/87	6.01
1987/88	3.62
1988/89	4.70
1989/90	6.33
1990/91	7.07

Source: ROI MOF (various years).

Note: Includes users of government services only.

the gross domestic product, the cost of the program is very small, only about 0.1 percent to 0.2 percent in most years (Table 7.10).

## FUTURE POLICY AND PROGRAM ORIENTATION

Enhancement of family welfare and a further decline in the total fertility rate are integral features of Indonesian development strategy and policies for the Second Long-term Development Plan (1994–2019). The plan is designed to improve the quality of human resources and of the Indonesian society at large. Although Indonesia has achieved remarkable results from its population policies and programs in the past quarter-century, much remains to be done to improve the welfare of families.

Reduced fertility has not diminished Indonesians' attachment to family life. They are still committed to maintaining the family as the core social institution. The government's support for this view bodes well for future policies and programs.

In contrast to conventional population policies and programs, which focus on individuals, mostly women, Indonesia's future population policies and programs

**Table 7.10.** Gross domestic product (GDP), cost of government family planning (FP) services, and FP services as a percentage of the GDP: Indonesia, fiscal years 1975/76 to 1994/95

Fiscal year	GDP (billion rupiahs)	FP services (billion rupiahs)	Cost of FP as % of GDP
1975/76	7,808	8	0.11
1976/77	8,396	9	0.12
1977/78	9,073	9	0.11
1978/79	9,705	17	0.18
1979/80	10,502	27	0.26
1980/81	11,467	44	0.39
1981/82	12,148	58	0.48
1982/83	34,092	76	0.22
1983/84	79,450	86	0.11
1984/85	83,743	113	0.14
1985/86	86,773	123	0.14
1986/87	91,586	128	0.14
1987/88	96,367	108	0.11
1988/89	102,496	148	0.14
1989/90	110,062	207	0.19
1990/91	117,920	244	0.21
1991/92	125,915	281	0.22
1992/93	197,414	326	0.17
1993/94	337,939	360	0.11
1994/95	236,100	455	0.19

Source: Calculated from ROI MOF (various years).

should acknowledge the importance of the family as a unit whose members share responsibility for the welfare of its members. Such families will not regard the mother as the sole person who takes care of its members.

As a family comprises members from several generations, microeconomic policies and programs ought to take into consideration the fact that each member has his or her own income and consumption profile as well as his or her own life cycle. This is also true at the aggregate level, and welfare policies and programs need to consider the demographic makeup of the society's members. During the life cycle some family members are too young to be producers or their consumption is greater than their income; thus, dissaving occurs among younger members. For them the resources to finance their consumption must come either from within their own families (insourcing) or from outsiders (outsourcing). As they reach adulthood they produce more than they consume, and this enables them to save what they do not consume for their later years. As they grow old, they draw upon their earlier savings.

**Table 7.11.** Average monthly income, by age group: Indonesia, 1990

Age group	Monthly income (rupiahs)
15–19	53,721
20–24	88,452
25–29	119,884
30–34	132,223
35–39	155,631
40–44	155,630
45–49	147,893
50–54	163,899
55–59	157,306
60–64	123,035
65+	87,475

Source: ROI BPS (1993).

Cross-sectional data from 1990 on the average monthly wage per worker provide a synthetic profile of the Indonesian worker's income over the economically active period of the life cycle (Table 7.11). From ages 15–19, when the typical worker enters the labor force, earnings rise rapidly, reaching a peak at ages 37–40, and subsequently decline. It thus requires 22 to 25 years for his or her earnings to reach their highest level.

During most of the economically active period, increased age generally leads to greater knowledge and skills acquired in the course of work (Pasay and Prasvita 1995; Pasay 1996). Besides age, other factors can bring about a sizable upward shift in a worker's income curve. They include the growth of the economy, structural changes, technical progress, and costs associated with production. Although some of those changes are only gradual, taken together they can deliver yearly increases in income.

If instead of observing the cross-sectional pattern of income over the life cycle, one were to follow a single cohort of workers over their working lives, then the increase in income during their early years would be steeper. In other words, income rises higher for a real cohort of workers over their life cycle than it does for a synthetic cohort. This fact highlights the importance for policymakers of assuming a long-term perspective when considering the ability of family members—both those who are currently employed and those who will eventually enter the labor market—to pay for such services as family planning and reproductive care. Many people who at present cannot purchase private services will have the ability to pay in the near future. If, for example, we assume that the

growth rate of the Indonesian economy will be around 5 percent to 8 percent a year in real terms, the inflation rate around 5 percent to 10 percent a year, and the labor force growth rate 3 percent a year, the nominal income per employee will rise by around 7 percent to 15 percent each year. At this rate, the average income per worker will double in 5 to 10 years—that is, in only one or two *Repelitas*.<sup>1</sup>

By the same token, the expectation that natural fertility will increase as economic development improves the welfare of families at large does not necessarily imply that total fertility will rise. In most societies fertility tends to decline as development occurs. The question, then, is whether Indonesian couples will adjust their fertility to a level reflecting a desire for smaller families or allow it to rise to the natural level. From a policy perspective, there is a need to increase not only the availability, accessibility, and acceptability of effective contraceptives, but also their sustained use to ensure the eventual stabilization of the Indonesian population. Although contraceptive availability can be increased through public policy fairly easily, acceptability, accessibility, and sustained use require further action.

Acceptability requires behavioral changes and active involvement on the part of clients. Leaving the family planning decision to couples in a *laissez-faire* fashion would probably lower fertility over the long term but would take a long time. Innovative public policies and programs are needed to encourage behavioral change. An incentive system would be one way to make the benefits of family planning more visible to families and community members.

Indonesian law prohibits discrimination against individuals on the grounds of race, religion, sex, or other social and cultural attributes. However, it does not guarantee the accessibility of social services. The period and cohort income profiles discussed above suggest that although individuals may have equal opportunities, they may not have equal access to social services such as family planning, health care, nutrition, and education. Nondiscrimination must be accompanied by more equal access. Providing equal access requires a long-term, comprehensive policy perspective.

To be innovative, policies and programs ought to take into consideration partnerships between the central government and local communities in population and family planning services. Such partnerships can provide local-level inputs for policymakers. Strategically placed community-development agents can motivate and empower families to become co-responsible for meeting the needs of their family members.

For several years the government has encouraged a movement to decentralize power in decision making and create greater local autonomy. Pilot projects

have been undertaken in 26 districts of the country. Such efforts to strengthen local autonomy will surely enhance the ability of the State Ministry of Population and the BKKBN at all levels—beginning at the provincial level and proceeding to district and subdistrict levels—to plan, coordinate, and implement population and family planning-related activities. Moreover, programs must place greater emphasis on the quality of their service delivery if they are to respond to the needs of families and achieve sustained acceptance. To optimize and integrate social services involves placing emphasis on social marketing, information dissemination, self-sourcing by families, and the sharing of responsibility between programs and clients.

#### SUMMARY

With a population exceeding 200 million, Indonesia is the fourth most populous country in the world. Most economic activities as well as most of its inhabitants are concentrated on the island of Jawa, which contains only about 7 percent of the total land area. As the major commercial center, it has attracted migrants and investors from other islands of the Indonesian archipelago. This trend is likely to continue unless other islands become more attractive to prospective migrants and investors. Thus far, the government's transmigration program has had an insignificant effect on the country's unbalanced population distribution.

Indonesia has wisely incorporated population planning and services into its planning for socioeconomic development. The State Ministry of Population and the BKKBN address broad socioeconomic issues from the perspective of population and family planning-related services. Population and family planning services have been integrated into sectoral development processes and even into the business community. These developments indicate the importance that the government places on the rapid diffusion of a small-family norm.

Exposure of couples to information about contraceptive methods and sources is of course essential to the success of any family planning program, but by itself it does not guarantee success. Couples must adopt and continue to use effective methods. By 1994, knowledge of modern contraceptive methods was nearly universal among married Indonesian women of reproductive age, and three-quarters of them had used contraception. Slightly more than one-half of them were currently practicing contraception, and most of them were using modern (that is, effective) methods.

Between 1971 and 1994 Indonesia's total fertility rate declined from 5.6 to 2.9 children per woman. Sharp declines in the fertility rates of younger women

were due to both delays in marriage and smaller numbers of live births. The highest level of age-specific fertility shifted from the 20–24 age group to the 25–29 age group, indicating that women were delaying their first childbirth.

The transition from high to low fertility can be prompted by various events. It can result from strong political commitment to a family planning program, the introduction of new birth control methods and new sources of supply, innovative efforts to reach populations at risk of unwanted births, the targeting of new groups, and improvements in policies and programs. No less important is a strong commitment to economic and political stability, without which programs face major risks and uncertain outcomes.

Within the Indonesian program the funds allocated for development and project assistance have decreased significantly in recent years as family planning services have become routine. Although the annual cost per current user, which the government bore, was only about US\$7.07 in fiscal year 1990/91, it is expected to decrease when users begin to share the cost. As family incomes rise, more couples will be able to pay for their family planning services.

A remaining challenge is the continuity of the services rendered by providers and sustained use by clients. Future population policies and programs must aim to internalize the demand for contraceptive services. Success will depend upon the extent to which clients enjoy the benefits of using contraceptives and upon their increasing ability to pay for the services delivered.

A rise in Indonesian fertility is possible because natural fertility tends to increase with development, whereas desired fertility tends to decline with development. Therefore, Indonesia must continue to have a proactive population policy and family planning program if it is to achieve the goal of replacement-level fertility in the near term.

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## ENDNOTES

1 The reverse is true of the present economic crisis in Indonesia. At present the economy is declining and the inflation rate is skyrocketing, causing real income per employee to

decrease. Workers are less able to pay for their own family planning services, health services, better nutrition and education.

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