16 China's Demography in Perspective

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The evidence presented here shows that China has been going through a profound demographic revolution. Because of the great improvements in mortality the life span of the Chinese, even those living in many poor and remote areas, has doubled in half a century. Their fertility, driven by the government directed family planning program, fell dramatically in the last 30 years of the twentieth century and the current total fertility rate (TFR) is extremely low by international standards. As in many other parts of the world, rapid population ageing has already begun. After several decades of strict control of population movements, the regulation of migration has finally been relaxed. China now has more than 140 million temporary migrants living and working outside their home counties. Urbanization has also accelerated and the urban population has shown extraordinary growth in recent years. Promoted by the national family planning campaign, age at marriage has risen steadily since the early 1980s and contraception has been used widely by couples of reproductive ages. These changes have been accompanied by a marked increase in premarital sex, divorce, abortion, and sex ratio at birth. China now has the most skewed child sex ratio in the world. It is noteworthy that, while mainland China has had very different political and economic systems since 1950, its demographic changes in many respects are similar to those recorded in its capitalist counterparts, Hong Kong and Taiwan. It is equally worth noting that similar demographic trends have been observed both in the Han population and many of China's ethnic minority groups. Because of these significant changes, China's current demographic regime is completely different from that of 30 years ago. This concluding chapter further examines this great transformation and its consequences from a broader and international perspective.

16.1 HISTORICAL POPULATION CHANGES IN CHINA AND THE WORLD

China is, and always has been, a major element in the world demography. Human (Homo sapiens) settlement there goes back more than 100,000 years. China constituted one of the earliest civilizations. According to available records, China's population was already close to 60 million in the year 2 AD. For the whole of the first millennium, there were notable fluctuations in the size of Chinese population. While there are marked variations in estimated population size for the world, many scholars believe that the Chinese population probably comprised a quarter or more of the world population during that period (McEvedy and Jones 1978; Grigg 1980; Maddison 2003). By the eleventh century, China's population had already reached 100 million (Zhao and Xie 1984). Although there were some oscillations, this upward trend continued over the next half millennium and the Chinese population grew to 150 million in the late sixteenth or the early seventeenth century (Ho 1959).
By this time, European travellers to the East were remarking on the dense and large populations of both China and India and comparing them with that of Europe. They concluded, quite correctly, that these three areas were the home of most of the human race, and if the number of their inhabitants could be estimated, some idea of the size of the world's population could be ascertained. Indeed, modern estimates of the population of the world in 1700 put the global figure at about 600 million (one-tenth of the population living today), with China, India, and Europe each the home of about one-quarter (Maddison 2003). While population records had long been collected and kept in China, a major source of information on seventeenth century China for the outside world was Martino Martini, the Jesuit priest who travelled to China and wrote for the Vatican the important and contentious memorial on the significance of ancestral rites. In 1655 he published his Novus Atlas Sinensis ([1655] 2000), exhibiting a feeling that the Chinese population was, if not greater than that of India, more noteworthy because of the striking appearance of its towns.

China's population has been such a large part of that of the world that differences in estimating it could significantly alter global estimates. Two major figures in the twentieth century reconstructions of its mid-seventeenth century population, Willcox (1931) and Carr-Saunders (1936), arrived at populations of 70 and 150 million respectively, the latter being 114 per cent above the former and raising the global figure by one-sixth. As indicated earlier, this was not due to the fact that there were no Chinese population records for the time, but with regard to which ones were more representative, different interpretations were possible. While scholars made different estimates of China's population size in the early seventeenth century, most of them have accepted that the Chinese population had reached about 300 million by the year 1800 and 430 million by 1850. During the next 100 years, population growth became slower. According to the 1953 census, the Chinese population was around 550 million in the mid-twentieth century (Zhao and Xie 1984; Yao and Yin 1994).

Because of its large population and relatively advanced economy, China also played a major part in the world economy over most of the last two millennia. Maddison estimated that in 1500 China, India, and Europe each contributed about one-quarter of the world's GDP (gross domestic product). By 1820, China and Europe each accounted for one-third of the world's production, and the three regions together for 81 per cent. Thereafter, European emigration to establish productive overseas lands and the Industrial Revolution in the west changed the economic situation dramatically. China's share of global GDP fell to 4.5 per cent by 1950, only to rise to 12.3 per cent by 2001. For the same dates India's share fell to 4.3 per cent and then slowly rose to 5.4 per cent in 2001, while Europe's share climbed to 39 per cent before declining to 26 per cent as its population, although becoming richer on a per capita basis, grew in numbers ever more slowly. In less than two centuries from 1820 to 2001 the aggregate production of the three regions fell from 81 per cent to 44 per cent of the world total, partly because of the rise of the United States (Maddison 2003).

One conclusion to be drawn from this discussion and recent historical investigation is that population growth was rather slow in China before 1500. Since then, it has accelerated and China's population multiplied about five-fold in the 450 years from 1500 to 1950.
Accordingly, population in China during this period was not in Malthusian equilibrium. Indeed, its growth was not much less than the population growth recorded in Europe. During the period between 1700 and 1850, when China experienced its most rapid population growth before 1950, the average annual population growth was close to ten per 1,000 and similar to that observed in European countries (Zhao 1997a). It is particularly notable that this rapid population growth took place without an early Industrial Revolution. The major explanation was, as in Europe, capital investment, but in China it was less in factories than in canals and terraces, the marks of Wittfogel's hydraulic civilization. This was also likely to have been related to the introduction of new and high yield crops, extensive application of fertilizer, and increasing multiple cropping. Intensification was especially great in Southern China, propelled by mass population movements from the north.

Another conclusion derived from recent studies of population history is about China's past demographic regime. Available data have shown that mortality was high in China in the last 300–400 years and nationwide long term mortality decline did not take place until the mid-twentieth century. In contrast to the popular belief that fertility was very high in China in the past, marital fertility in most historical Chinese populations examined to date was only moderate and considerably lower than in some historical European populations. Chinese women married at young ages and almost universally, but a considerable proportion of men married at rather old ages or did not marry at all (Zhao 1997a). It was also noticeable that, although contraception and abortion were apparently practiced on a limited scale in the past, there was a significant level of infanticide well into the twentieth century. This is one of the factors explaining the relatively low net reproduction rate and population growth in Chinese history. Infanticides often took place in the time of famines and other economically difficult circumstances, and the victims were largely girl babies. While scholars hold different views regarding the cause and nature of infanticide, there is evidence suggesting that it was used as a means of controlling family size (Zhao 2006). Moreover, in certain situations, for example the subdivision of already critically small peasant farm holdings, male babies were also killed (Lee et al. 1992; Lee et al. 1994). The Chinese situation was not unique; rather it was similar to that found in most of the old agrarian societies of Asia: Japan, Korea, and some castes in India (Caldwell and Caldwell 2005), where attitudes were very different from those found in the Judaeo-Christian tradition. Usually infanticide was regarded as unfortunate, but understandable in the circumstances. It was not seen as sinful and was often not punished by law.

16.2 CHINA'S DEMOGRAPHIC TRANSITION IN THE CONTEXT OF WORLD DEMOGRAPHIC CHANGES

Great historical events often initiate marked demographic changes. The French Revolution led to declines in both fertility and child mortality. The Russian Revolution had a significant impact on mortality (Caldwell 2004). The end of World War II saw unprecedented mortality declines throughout much of the developing world where life expectancy at birth showed a sharp increase in the post war decade. After a brief surge in childbearing, fertility decline also commenced in many less developed countries.
The establishment of the Peoples’ Republic in 1949 not only began a new era in Chinese history, but also signified the start of China’s demographic transition. This transition was a major component of world demographic changes that became more prominent and more widespread after World War II. It also bore many similarities to demographic changes taking place in other countries.

The Chinese Revolution heralded a steep fall in mortality, with a rise in life expectancy from around 35 years in 1949 to 50 years in 1957. There were probably a range of reasons for this spectacular mortality decline, as suggested in this book and elsewhere (Caldwell 1986; Banister 1987; Chapter 1, this volume). China’s experience of lowering mortality is by no means unique, but rather similar to that observed in the former USSR, Cuba, and Vietnam. One clue for such similarity is provided by the rapid mortality decline in the Soviet Union’s first dozen years after the 1917 Revolution. This tends to be forgotten now because of the difficulty experienced during the late twentieth century by the USSR (Russia since 1990) in improving its life expectancy much beyond 65 years. But, at higher mortality levels, the system had been very successful (Sigerist 1939; Lorimer 1946: 120–1). Part of the success in the former USSR, China, Cuba, and Vietnam was explained by an emphasis in the budget on health, and the recruitment of health workers. Part was due to rises in education levels, and part to a ‘leveling up’ of the extremely poor. But it seems plausible that a significant element was a more intrusive society. No longer could sickly children threatened with death be hidden away by poverty stricken families from detection by local level government and party officials. An intrusive society can improve health by suggesting or insisting on better ways of treatment or overcoming problems of accessing available treatments. The establishment of communes reinforced such interventions. These factors together with those operating in other populations such as improvements in health infrastructure and the use of new insecticides, vaccines and antibiotics contributed to the rapid mortality reduction in the early years of the People’s Republic.

China’s life expectancy was already about 65 years when economic reform began in the late 1970s. At this stage of the epidemiological transition, mortality had been reduced by victory over most infectious diseases, a process assisted by extensive use of immunization and other forms of disease prevention. But such success has also meant that most deaths are now caused by circulatory diseases and cancer, complaints with which most of the Chinese system is not very well equipped to cope. China’s market economy has resulted in rapid income growth, and once high per capita incomes are achieved it will permit the spread of ‘high-tech’ medicine which alone can lead to infant mortality rates under ten per 1,000 births, or life expectancies of 80 years. But at income levels of the kind that China still exhibits a fully market based health system is not as efficient as socialized medicine. The deterioration of China’s health care systems, especially the Cooperative Medical System in rural areas, has made it difficult to lower mortality further in poor areas and disadvantaged sub-population groups. These factors partly explain China’s relatively slow improvement in mortality in the last quarter of a century. Given its real per capita income (measured by parity purchasing power) China’s current mortality levels are no longer conspicuously better than other countries with similar living standards (Philippines, Sri Lanka, Lebanon, Ukraine, Jamaica, and Peru), but increasingly converge to a general pattern experienced by many populations (UN 2005).
China's 1949 Revolution was not at first accompanied by greater control of fertility. The reasons were a lack of contraceptive services or advice, an ideological stance that a socialist society did not need to reduce population growth rates, a light economic burden from children imposed by a socialist economy, especially in rural areas, a limited market in luxury goods, and free education and health services. In urban areas, however, children increasingly imposed expenses on parents and accommodation was scarce and usually very limited in size. Even when birth control was still ideologically disapproved, fertility began to fall in some larger cities (Lavely and Freedman 1990).

China's fertility as a whole remained high during most of the 1950s and 1960s. There was a drastic and temporary fertility reduction in the 1959–61 famine when some 20 million anticipated births failed to occur, which has not yet been fully explained. China's TFR was about six children per woman in the second half of the 1960s when few countries outside Sub-Saharan Africa still had such levels. Because of the rapid mortality decline, fertility of this magnitude inevitably led to a population explosion and China's population reached more than 800 million by the end of the 1960s (Yao and Yin 1994). Facing such increasing pressure, a national population policy was announced in 1971 and a family planning program began to be erected. Although popular demand for family planning did exist, the policy was largely an outcome of an administrative and academic debate about high rates of population growth hindering economic growth and about whether China could adequately cater for a population apparently heading for two billion in the early decades of the twenty-first century.

This debate was not solely due to the Chinese situation. The global mortality decline after World War II had led to increasingly high population growth rates across the developing world. Debate about whether governments should encourage and assist fertility control raged during the 1950s and 1960s. One example of influential publications to emerge from such discussion was, in 1958, *Population Growth and Development in Low-Income Countries* by Ansley Coale and Edgar Hoover, a book promising a large economic dividend, especially in terms of per capita incomes, from curbing population growth. It is particularly interesting to note that this was almost at the same time as Ma Yinchu proposed his well known New Population Theory in China. Although the suggestions made by Coale and Hoover were broadly similar to those proposed by Ma, their fates were radically different. From the late 1960s the United Nations organization was advocating fertility control and assisting countries to organize family planning programs. In the west many university population programs were instituted or expanded during the 1960s and 1970s, thus giving an intellectual respectability and perspective to the issue. It is not irrelevant that after the People's Republic occupied the United Nations China seat from 1971, it began sending representatives to many United Nations' population workshops and conferences and students to western universities for demographic training.

Although India and Pakistan had instituted national family planning programs as early as 1951 and the late 1950s respectively, the real growth in such initiatives began in the 1960s when either government programs, or government assisted programs, started in Hong Kong, Singapore, South Korea, Taiwan, Thailand, Malaysia, Sri Lanka, Egypt, Chile,
Honduras, and Mauritius. This upsurge was partly permitted by scientific breakthroughs that in the 1960s led to oral contraception, injectables, IUDs (intra-uterine contraceptive devices), better sterilization techniques, and safer abortions (including the suction abortion invented in China). These methods of fertility control became the engines of the new successful family planning programs. They were undertaken in all countries outside China with significant Chinese populations. In most Asian programs governments provided not only information and services but also added a moral dimension, arguing that fertility control was good for the family and necessary for the country. There was a degree of pressure to accept contraception in both Indonesia and India, such pressure being overt in India during the emergency of 1975–77.

China started its strong centrally directed nationwide family planning program in the early 1970s and advocated later marriage and having only one or two children. Penalties were introduced and imposed—sometimes haphazardly—for exceeding family size targets. By the late 1970s the famous one-child family policy was promulgated, and the family planning program was further strengthened in the two following decades (Chapter 2, this volume). The above discussion shows not how unique China's family planning program was, but rather how it was linked into the world system. The arguments and demographic models employed in China by influential academic researchers in the early stage of the family planning program were precisely those in favor of fertility control which had driven the assistance given to other developing country programs. The timing of the Chinese program's establishment occurred within a few years of the first of the other Asian programs (except India and Pakistan) being set up, and just as it was known that fertility decline was occurring in some of these countries.

Despite its enormous effort, the Chinese family planning program has met with some difficulties and sometimes failed to achieve its specific fertility targets. The demographic surveys of the 1980s and 1990s showed many families outside the cities having two or more children. Nevertheless, declines in fertility have had a telling impact on world demography. China's TFR is no longer six, but currently may be as low as 1.5, or 30 per cent below the replacement level. More important still is the fact that fertility has been low now for more than three decades (Chapter 4, this volume). Thus, there is now a two generational depressive effect on fertility. Today's mothers are themselves the daughters of a generation of women already restricted in numbers of their children. This would ensure the continuity of low population growth even if the TFR were to rise moderately. Despite this situation, population momentum (inertia in the change of age structure) means that zero population growth is not likely to be achieved before 2030 when the population will be about 1.45 billion (UN 2005: Medium Projection). At that date it will be similar to India's total, and the population of each of the two countries will have fallen from its ancient quarter of the world's population to under one-fifth.

16.3 THE NEW DEMOGRAPHIC EXPERIENCE AND DEMOGRAPHIC TRANSITION THEORY

What have China and other developing countries' new experiences added to our knowledge of historic demographic change and to theories of demographic transition? In western
Europe and English speaking countries of overseas European settlement, fertility began to fall in the late nineteenth century and continued falling until World War II. This was in the context of preceding or accompanying mortality decline both generally and, more importantly among children. A major cause was that children in modernizing, largely nonagricultural societies were no longer productive. Indeed, most were undertaking full time education and incurring greater expenses of all kinds. In contrast to the situation in the late twentieth century, governments and social leaders opposed the use of contraception on moral grounds. Contraceptives were admittedly primitive and difficult to access. Nevertheless, once people began to desire fewer children there came into existence ideologies and organized groups justifying birth control and, especially between the two world wars, voluntary birth control clinics offering advice and services. They were an essential forerunner to the massive birth control programs in the developing world of the latter decades of the twentieth century.

After a brief post-war baby boom, fertility in many western countries began to fall again from the 1960s, reaching by the end of the century levels well below replacement. This time further falls in infant and child mortality were not a relevant factor in shaping fertility trends. Explanations include the massive entry of married women into the paid workforce and a growing individualism which gives priority to self-development over the bearing and raising of children (McDonald 2000). An enabling factor was the development in the 1960s of more effective and more easily used contraceptive methods, as noted above. Developed primarily to meet the needs of the Third World, they also met the needs of individuals in the First and Second World.

During the post-war period, new insecticides, vaccines, and antibiotics proved unexpectedly successful in reducing mortality in poor developing countries and led to rapid population growth so that by the early 1960s global population was expanding at over 2 per cent per annum (threatening to double every 35 years) and at more than 3 per cent in many developing countries. There was a growing international consensus that such rates threatened the earth's carrying capacity, frustrated economic growth, and imposed on women an unfair reproductive burden. In succession, western foundations and governments, and then international organizations, offered funding and technical assistance in setting up national family planning programs. Prime Minister Nehru had preceded most of this agitation, and indeed had given it direction, by announcing a family planning program for India in 1951, when learning that the census of that year had revealed faster population growth than had been expected. The Indian program was not very successful at first, having to rely almost solely on male sterilization, but its organizational nature and structure developed a pattern followed by many successive programs. National family planning programs became common in the 1960s, mostly dependent on the new birth control methods becoming available, and some, such as those in Taiwan, South Korea, and Singapore, evidencing success in reducing fertility by the end of the 1960s. China's adoption of a nationwide family planning program was slightly late, but the way in which the program has been implemented and the impact that the program has had on the reduction of fertility are unprecedented.

The twentieth century family planning programs, those in Asia and other developing
countries in particular, are often regarded as nonhistorical, as being a ‘technological fix’ at odds with the low level of economic development and the slow realization by the populations involved that industrial civilization was not easily compatible with rearing large families. This view is almost certainly wrong. Historically, it probably became inevitable that a growing desire to limit family size and attempts by some to do so would find champions to justify the new trend and to argue that contraception should be improved. To a large extent birth control became accepted in the west in the interwar years, especially during the economic depression of the 1930s. It was on this base that prophets from the late 1940s began to argue for a birth control crusade to restrain rapid Third World population growth. After all, this was an obvious message from Malthus (1888) no matter what interpretation was placed on the essay by the author. It was a solution that had been suggested for India by Indians and others during the whole first half of the twentieth century (Caldwell 1998). Nevertheless, Nehru’s announcement in 1951 of a national program startled outside observers (Notestein 1951).

The reason for the surprise was that Asia had been seen through western eyes on the basis of western experience. The state in the west had never been the unchallenged arbiter of morals, especially of sexual and reproductive morals. The Christian churches claimed this area as their own, and clung to the fifth century ad interpretation by St. Augustine of Hippo of the scriptural account of the experience of Onan. Until the early twentieth century the Protestant churches were as one with the Catholic Church in their rejection of birth control. Thus, far from leading their electorates into an era of family planning, governments and other institutions followed social and behavioral change. Most western governments still leave family planning education and contraceptive supplies very largely to the medical profession and to retailers and pharmacists. Many are still reluctant to give technical assistance in this field. Northern European governments devote less than 3 per cent of their technical aid budget to the population field, while the proportion for Southern Europe is under 1.5 per cent (Ethelston 2004: 44–55).

But the situation in many Asian countries proved to be different. There were no monolithic religions with firmly organized hierarchies and a tradition of receiving binding moral interpretations from a supreme leader. Indeed, when there were scriptures they failed to deal clearly with birth control. In any case, there were strong traditions of moral leadership by secular leaders, taught in Confucianist countries and assumed by the mostly Brahmin elites in Hindu ones. This was especially the case when addressing national issues. The pattern was reinforced by colonial rulers and adopted by independent governments, especially those with communist or army leadership. The nearest thing to religious opposition were the suspicions of local mullahs that family limitation showed less than full trust in Allah, and—by some of Gandhi’s adherents—that it was unnatural.

The Asian national family planning programs were strikingly similar. They all provided contraceptive services and advice. Most had some kind of outreach program whereby family planning workers, mostly female, contacted households, talking primarily to wives but also, if necessary, to husbands and parents-in-law. The program workers, backed by government information in the media, spread the message that limiting fertility was good for the family and the country. In nonMuslim countries there was a strong emphasis on
semi-permanent or permanent methods that simplified logistic problems, cut down greatly the number of contacts that had to be made with each client, and placed little responsibility on the client for the continuation of contraception. This approach gave an emphasis to IUDs and sterilization, backed up by abortions, and sometimes supplemented by injectables or implants. In some of the programs inducements, or ‘incentives,’ were employed to encourage family planning acceptance.

In most ways the Chinese program has been strikingly similar to other Asian programs. The difference has been the employment not only of incentives but of penalties, often harsh, and frequently coming into action at very low parities, typically after the first child. In the earlier stages of the program enforced abortions, even third trimester ones, were occasionally used (Chapter 6, this volume). The system, however, has not been as mechanical or ruthlessly efficient as has often been pictured. If it had been so, then the 1982 One per 1,000 Fertility Survey would have recorded a TFR about one (that is because in the early years of the program large numbers of couples would have had one or more children before its inception leaving perhaps only a minority of nulliparous couples to proceed to their first child) rather than 2.6 for the year 1981. Obviously large numbers of parents were proceeding to their second child or more children. The present much lower fertility level might be partly explained by effective penalties, but it seems likely that the major explanation is that the population has become increasingly accustomed to being restricted to very small families and that socio-economic change has made many parents relieved at having no more children.

The increasingly close compliance with the program raises questions about why the pressure has not produced strong popular resistance. Why has there not been the kind of protest that threw Indira Gandhi from office in India in 1977? There are a number of factors contributing to this nationwide conformity. First of all, as noted earlier, differing from governments in the west, historically the Chinese government and social elite, as in some other countries, often assumed the role of moral authorities and played a stronger part in influencing the social behavior and practice of the masses. This was usually accomplished through the hierarchical political establishment and kinship organizations, such as the lineage and large extended family. This long tradition helps to legitimize and consolidate the government's leading role in family planning.

Secondly, differing from many western countries where reproduction for centuries was largely an issue concerning only the couple themselves, such decision making was often a familial or community prerogative in historical China. In Chinese history, individuals not only often lived in extended families with hierarchic structure, they were also frequently taught and encouraged to make sacrifices for the state, their families, and future generations. People's marriage and reproduction, including adoption, were often strongly influenced by, or even entirely decided by, their seniors especially their parents according to the interests of the large family or lineage. The impact of household composition and the status of a person within the family on the chance of marrying, time of having children, adoption within and beyond the extended family, and even the likelihood of dying has been revealed by recent examination of historical demographic data (Zhao 1997b; Lee and Wang 1999). There is a notable difference between collective and individual reproductive
strategies as observed in China's on the one hand and in some European populations on the other. While it is very difficult for westerners to accept government intervention into their private life, for the Chinese ‘the current family planning program’ is to some extent, ‘merely an extension of familial mode of reproduction to the local community or beyond,’ as suggested by Lee and Wang (1999: 99). This difference once more demonstrates the importance of social institutions in influencing people's reproductive behavior and fertility changes, as pointed out by McNicoll (1980).

Thirdly, it is also important to note that there were popular demands for family planning even before China's national family campaign began. The ideas and practices of controlling family size were found in the past, over a period probably much longer than usually assumed (Zhao 1997b, 2006). This was one of the major reasons why China's fertility fell sharply in the 1970s. During the 1980s and 1990s, government family planning policies were tightened and further restrictions on the number of children that a couple could have were implemented. Some parents, especially those with a daughter and no son, solved the problem by sex selective abortion or even by sex selective infanticide. Some just ignored the regulations or avoided actions by the local family planning officials. During this period, however, people's reproductive desires and behavior also changed greatly (Zhang et al. 2006). The overwhelming majority of the population is now convinced that fertility should be regulated for the good of the country.

These factors and the great transformation brought about by the rapid socio-economic development of recent decades are all responsible for China's steep fertility decline and current low fertility. In addition to the theoretical contribution made by its fertility transition, China's efforts in lowering mortality, recent urbanization and migration have also added new experience to our knowledge on these issues. Since they have been addressed in Chapters 9, 10, 12, 13, and 14 of this book and elsewhere (Zhu 1999), these issues are not discussed further here.

**16.4 FUTURE CHALLENGES AND POLICY RESPONSES**

As has been shown by the United Nations' 2004 population projection (medium variants) and other chapters of this book, China's population will continue to grow in the next 25 years despite its TFR having fallen below the level of replacement for more than a decade and being likely to stay that low in the foreseeable future. Mortality will continue to decline and life expectancy at birth will further increase and perhaps reach 80 years or more by 2050. The Chinese population will become older and the proportion of the elderly, those very old in particular, will exhibit an extraordinary increase. Urbanization is mostly likely to become a major feature of future socio-economic development and demographic changes. By 2030, the urban population may reach 900 million and account for about 60 per cent of the national population. This will be partly the product of a further surge in the volume of rural–urban migration (UN 2005).

One of the most important policy decisions facing China is whether or when to remove the element of compulsion from its population program. Experiments are already being made to determine what would happen if pressure were to be released. It is possible to argue that
there would be little change. After all, populations in every comparable area—Japan, South Korea, Taiwan, Singapore, and the Chinese of the diaspora found in other Southeast Asian countries—all have reached, without pressure, lower fertility rates. On the other hand, they all exhibit higher per capita incomes and lower proportions of the workforce in agriculture. It can also be argued that China is now a market economy, and that there might be some parallel to the recent declines in fertility in European socialist countries making the transition to the market. The total fertility rate in Eastern Europe fell by 40 per cent from around 2.1 in the late 1980s to about 1.3 in the early twenty-first century, which is even lower than China's current level (UN 2005). Certainly, China has experienced a marked rise in urbanization and incomes, and has become accustomed to fertility control and perhaps very small families.

There are reasons for removing the penalties for reproduction. The penalties evoke disapproval in much of the outside world and detract from the impression of a country modernizing very successfully. There is probably also widespread dissatisfaction inside China, especially with the way penalties are implemented. These penalizing measures may not really be needed. Most seriously, the future burden of aged population threatens to be enormous. A glance at the United Nations' 2004 projections shows the importance of the issue. The low projection, characterized by a 2050 TFR of 1.35 (probably not far below the present level and just possibly no lower) yields a 2050 population of 1.2 billion with 28 per cent of the population over 65 years of age (compared with 7.6 per cent now). The medium projection, with a 2050 TFR of 1.85 (higher than the present level and perhaps where a nonpenalized fertility rate would settle) yields a 2050 population of 1.4 billion with 24 per cent over 65 years. The high projection, with a 2050 TFR of 2.35, yields a population of 1.6 billion with 20 per cent over 65 years. These aged figures can be compared with the proportions over 65 years at present in countries which began their fertility transitions over a century ago: United States, 12 per cent; United Kingdom, 16 per cent; France, 17 per cent; Germany, 19 per cent; Italy and Japan, 20 per cent (UN 2005).

Given China's current level of development and the long term impact of population momentum, most policy makers and researchers undoubtedly want to see demographic outcomes similar to those mapped by the medium projection. If the family planning program were to continue to offer services and advice, but there were no penalties, and if the continued growth of the economy persists, there is a possibility that China's TFR could be 1.35 in 2050. It is far from impossible that, in the not too distant future, China will be encouraging higher fertility, even as high as replacement level. Singapore and South Korea offer precedents.

Another of China's most obvious unfinished demographic concerns is the acceptance that enormous economic growth, especially in a market economy, will lead to urbanization on an unprecedented scale. China's urban population is already around 40 per cent, with its biggest cities more than ten million people. If economic growth continues at anything like the present pace, and if population stabilizes around 1.4 billion, then the latter part of the present century could easily witness an urban population of more than one billion and the emergence of many mega-cities. Much of the new urban population will be the product of rural–urban migration, necessarily so with urban natural increase being zero or negative.
As shown in this book, until now policy and planning have failed to cope adequately with this new situation. At first, rural–urban migrants were regarded as ‘floating population,’ officially still living in villages but transiently in urban areas. Their existence was primarily recorded in their own villages or home towns where associated births or deaths were registered. Periodically they had to return to these villages if only to sort out the problems of their official existence. The system has only changed reluctantly and slowly. Nevertheless, many rural–urban migrants still live in semi-legal shanty towns, often on the edges of cities. Their children have no firm rights to be educated in public schools, and neither migrants nor their children are covered by the medical system which is provided largely for permanent urban employees. Indeed, they have no guarantee of continued urban employment or even residence (Chapters 12–14 in the book). Clearly, the issue of permanent rural–urban migration must soon be faced. There will be no simple market solution without legal and regulatory changes, because it is official attitudes that have so weighted the scales against the newcomers to the cities having equality with those registered as living there.

This book comes out at a critical time when China confronts many new demographic challenges. China has never been isolated from international thought and action in the population field. The present family planning program came into being as part of a general Asian forward movement to construct such programs. Similarly, China is becoming deeply aware of the issues in the present debate on the threatened burden of aged populations in countries with below replacement level fertility. It is very likely that China will move soon to stop fertility levels falling further and even to raise them to replacement level. This will require policy dexterity both to explain the change in direction and to prevent the national family planning program from overshooting its new target. The analysis of policy and administrative changes in the near future will almost certainly prove fascinating.

China's demography will continue to be of global importance. Its rapid mortality decline immediately after 1949 showed what could be achieved by organization and peace in spite of a severe shortage of medical supplies and equipment. Its high fertility until 1970 and the steep decline thereafter demonstrated the role in both circumstances of government population policy. It was this fertility decline that has been the central element in ensuring that the world's population will probably peak at around ten billion. Many outside observers who have deplored China's fertility control movement would, nevertheless, have been horrified by a China of two billion people, which would have been reached in 2015 if China's rapid fertility decline had not started in the early 1970s but two decades later. China's profound demographic transformation is not a thing of the past. The major demographic changes that have been detailed here and those that are now taking place in China will inevitably have their significant impact on population changes in the world. China, as recently suggested by Vaclav Smil, will continue to develop and become the world's largest economy some time between 2025 and 2040, ‘but its further rise will be checked by a multitude of internal limits and external complications.’ China's future development will face ‘uncommonly numerous’ constraints and challenges including many demographic ones such as those addressed in this book (Smil 2005: 632, 623). The Chinese population drama is by no means drawing to a close.
Endnotes

1. This was also true for the mid-twentieth century. The 1954 United Nations *Demographic Year Book* showed China's population as 463 million, but following the release of the 1953 Census results the 1955 Year Book raised the population by 26 per cent to 583 million, thereby increasing the figure for the world's population estimate by about 5 per cent (UN 1955, 1956).

2. The high population estimate for the early seventeenth century was 150 million and made by Ho (1959). The estimates made by Zhao and Xie (1984) and other scholars are lower.

3. A brief review of these changes can be found in Lee and Wang (1999).

4. Fei (1939) records this practice in his village study of the late 1930s. For a recent study see Li et al. (2004).

5. In the early 1950s, the provision of abortion and family planning services was largely due to the consideration of protecting mothers and children's health, although the issue of population control was discussed by both academics and policy makers.

6. The famine was at least partly due to the failure of government policies. During the famine period, China's fertility was much lower than the average of the 1950s and 1960s. This fertility reduction could be a result of people's intentional fertility control or due to the fact that a large number of people delayed their marriages. But it also arises from the fact that severe malnutrition and poor health could lead to temporary sterility or miscarriages. As far as we know, there have been no detailed investigations on how and to what extent had these factors (especially the first two) contributed to the fertility reduction during this time.

7. Because of the intervention of the political leadership, Ma was severely condemned and forced to resign from the post of the president of Peking University. He was only rehabilitated (at the age of 97) in 1979 when the Chinese government pushed for the one-child policy and a stricter (compared with that of the early 1970s) family planning program. See also Chapter 1, this volume.

8. This estimate is based on the following assumptions: during the 1970s and 1980s China's population growth rates were the same as the average between 1965 and 1969; the 1990 growth rate were the same as that recorded in 1970; the 1995 rate were the same as that observed in 1975; and so on. Under this scenario, China's total population in the year 2015 would be around two billion rather than the currently estimated 1.4 billion.
References


