

## DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY IN CHINA

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### Summary

China's population policies are comprehensive in scope and unique in thrust. The great majority of Chinese population has benefited from the economic development. China's demographic realities are at variance with the country's population planning goals, and China's age structure would prevent meeting the original population ceiling even if fertility fell further. The global significance of China's population changes is enormous, today and tomorrow. China's first national population census was conducted in 1953, which indicated that the total population was about 600 million. China conducted her fifth national census on October 1, 2000 to ascertain its population size, including the migrant population. China has adopted and has developed an administrative and service system to manage population growth. With falling death rates, continued high fertility caused the population in China to boom. China's population aging has special characteristics. The population aging in China is not in line with the economic development. Population aging develops irregularly and progressively. The irregularities in the age structure of China's population will bring many problems such as surplus labor, abnormal high sex ratios at birth, and skewed low sex ratios in elderly age groups.

The population aging shows uneven balance across different regions. China is very active in setting up a social support insurance system for the aged population. The percentage of population aged 60-70 accounts for 50% of the total elderly population. China has to improve the family support system, which is still important in old age security in China. China has 55 ethnic minorities, and 56 ethnic groups in total. China's minority population had a young age structure in 1990, big marriage cohorts, more births, and a persistent baby boom in 1990s. There are no problems such as population

aging and abnormally high sex ratio at birth in minority populations. The minority population has political significance. The population of minorities, living scattered has increased in 1990s. With the increase of population, the numbers of both married and divorced people have increased. Marriage in China is remarkably stable. The size of family households tends to get smaller in China. Population growth in China retards economic development. The impact of population growth on economic development in China is financially huge. Population growth in China prevents the full utilization of human resources. China's large population size means that it has abundant human resources. Population growth in China has an adverse impact on the increase of per capita economic development level. The momentum of population growth in China will be very strong until about year 2050. China is a country with a large population but small resources, based on per capita indicators. The relation between population control and population aging is the focus. The total population must be controlled through family planning, while the development of population aging should be appropriate and gradually regulated.

Urbanization level in China is an important index of socioeconomic development. The majority of China's population still live in the rural areas. China vigorously develops its labor-intensive industries. China is changing the household registration system from an enforcing regulation of population movement into a genuine system of population registration. According to history, economy, ecology, and population, China's population density can be classified into eight geographical regions. China's age structure is still young. This has implications for future development of population, providing important information for government to stipulate various population-related policies. The population is increasing, and there is the dormant threat of rapid population aging in the twenty-first century. Besides the strong influence of family planning policy on the aggregate age structure, the age structure of China's population varies greatly with rural-urban residence, and regions of different economic and cultural developments. This reflects the complexity and multiplicity of the Chinese population.

The intent of all the population policies is to prevent the population from exceeding much beyond 1.2 billion. It would be foolhardy to do more than conjecture about the size of the Chinese population half way into the twenty first century. Nor would it be prudent to venture an opinion on when the Chinese population will stop growing and changing. The great majority of the Chinese population has benefited from the economic development. Surely, development and modernization alone will not lower fertility, but nor is it likely that government policies alone can slow or stop the growth of the Chinese population. Below or near replacement fertility now have new demographic meaning. Fertility preferences and behavior at the individual level grew out of rapid changes in socioeconomic conditions; in geographic and social mobility; in attitudes toward sex, marriage, and the family; and in beliefs about gender equality. The ideas of having only one or no children gained ascendancy in an urban-industrial-ideological milieu that bears little resemblance to the backdrop of the previous demographic history. China's demographic realities are at variance with the country's population planning goals, and the age structure will prevent meeting the original population ceiling even if fertility falls further. Ironically, the present fear in population numbers is expressed in ways that acknowledge the finite availability and relative scarcity of land and resources. More hands mean greater accomplishments.

Simultaneously and implicitly, more mouths entail greater consumption and other difficulties. The global significance of China's population changes is enormous, today and tomorrow.

## **1. Past Population Activities and Censuses**

China's population of about 1.3 billion in 2000 is more than three times the 400 million total in 1949. China has more than one fifth of the world's population but only about 7% of the world's arable land.

After the founding of the People's Republic in 1949, China has had four national population censuses, in 1953, 1964, 1982, and 1990. The first population census conducted in 1953, indicated that the total population was 600 million. Due to the influence of the various figures in this census, China in 1954 imposed a strict household registration system controlling the movement of people from rural to urban areas and even between cities. The absence of the supplementary document such as the form filling explanation and various detailed rules resulted in serious errors in schedule contents and comprehension. For example, the first census asked people to give their age but the guidance notes did not state what the age referred to. Most rural Chinese people used to remember the lunar year rather than the calendar year for counting their age, but there is a one or two year difference between the lunar and calendar years. China learned many lessons from that first census.

China's second national census, carried out in 1964, revealed that the size of population topped 700 million. This census firstly enumerated occupation, which might have some impact on subsequent political decisions. Between the first and second censuses, China reported an increase of 22 million in the migrant population, largely as a result of mass relocation of heavy industries from the coastal areas to inland provinces. In addition, the Great Leap Forward, a radical movement launched by Chairman Mao Zedong, who was a pronatalist, in 1958, in a bid to catch up with western countries in industrial production, caused an exodus of population from rural to urban areas. In 1959 during the heyday of the movement, 20 million villagers flocked into cities to become steel workers. At the same time, a large number of villagers from populous provinces of Shangdong and Hebei were motivated to migrate to border areas for land reclamation. The disastrous outcome of the Great Leap Forward movement and erroneous critique of the Malthusian school in China, coupled with three years of economic difficulties and natural disasters between 1959 and 1962, resulted in a negative population growth. In 1960 the total population decreased by ten million from the previous year. According to official accounts, the number of abnormal deaths between 1959 and 1962 were over 25 million.

China's third national census was carried out in 1982, which showed that the population had reached one billion. This census was taken against a background of implementing the policies of initial reform and opening to the outside world, and successful family planning. The census integrated the needs of socio-economic development and population control within the data collection. Between the second and third censuses, China experienced many political changes, which greatly influenced the change in population. Firstly, due to food shortage in the early 1960s, China's cities could not

hold as many people as before, and the size of the migrant population dropped from 19 million in the early 1960s to 15 million in the mid 1960s. The 20 million workers recruited during the Great Leap Forward had to return to the villages. Secondly, as a result of the Cultural Revolution between 1966 and 1976, about 17 million urban educated youths and ten million government employees responded to Chairman Mao's call to go to the countryside for tempering themselves through manual labor and receiving ideological education from villagers. Between 1967 and 1969, the annual migrant population dropped to five million, the lowest level since 1949. After 1970, most educated youths and government employees who were sent to rural areas during the Cultural Revolution completed their education and returned in large numbers to urban areas. Between 1977 and 1984, the migrant population ranged from 14 to 23 million annually. Thirdly, thanks to the introduction of the family planning program in 1973, rapid population growth has effectively been curbed and, by official estimate, over 200 million births were averted.

The fourth national census carried out in 1990 revealed that the total size of the population reached 1.13 billion. The Statistical Law issued in 1986 required that China should have a population census every ten years, and a small-scale survey midway between the two censuses. The government announced that the fourth census year should be in 1990, in line with the UN recommendation for census years to end in '0'. The reason that China's first three censuses were not taken at equal intervals was mainly because they were conducted at times of economic prosperity and political stability. Most notably, between the third and fourth census, the strict population policy of one child per couple was introduced in the early 1980s. Migrant data showed that the percentage of the migrant population being hired in factories and building sites, or being engaged by small businesses, increased from 9% to 24% between 1987 and 1990.

China is set to conduct its fifth national census on October 1, 2000 to ascertain its population size, including the migrant population. Involving six million interviewers, the census will be the largest social survey ever undertaken in human history.

## **2. Rapid Demographic Transition and Implications**

Characteristically, in demographic transition, the mortality rates fall first as a result of improved hygiene and living standards, followed by a decline in fertility. After the foundation of the People's Republic, China's population is characterized by a pattern of high birth rate, high death rate, and high natural growth rate. For instance, in 1952, the birth rate was 37 per thousand, the death rate 17 per thousand, and natural growth rate therefore 20 per thousand. By 1993, all three rates had dropped to quite low levels: the birth rate was 18 per thousand, the death rate 7 per thousand, and natural growth rate 11 per thousand.

China's fertility rates have dropped from more than 5 children per woman in the 1940s to around 1.5 children per woman in the late 1990s (which is far below the replacement rate of 2.1 children per woman). In 1949 the average Chinese could expect to live less than 42 years, but this had increased to more than 73 years by the end of 1999. By world standards, China's life expectancy is high given its relatively low per capita income. Falling sharply over the past five decades, infant mortality levels now approach those of

developed countries. Nearly 200 of every 1000 babies died before age one in the early years of the People's Republic. By the early 1990s, many more newborn children were surviving to adulthood. The infant mortality rate has now fallen below 40 deaths per 1000 births. Infant mortality in Shanghai is lower than that in New York. The decreases are due to the beneficial effects of socio-economic development and efficient implementation of the family planning program.

Despite the improved picture with regard to demographic rates, the absolute size of China's population continues to increase rapidly because of population momentum, which occurs with a large base size of population and a relatively young age distribution. High fertility rates in the 1960s have produced a large birth cohort that began to reach reproductive age in the 1990s. The large cohort size of baby boomers fuels the momentum of population growth and reduces the influence of the success of family planning. The population momentum can be seen most clearly with some comparative data. For instance, in 1992, the number of births in China was 21.3 million, which would be like adding the entire population of Peru in one year to China's base of 1.2 billion people. The net increase is also very large at 14.5 million, which is close to the total population of The Netherlands.

The paradox of having a low birth rate but high net growth in population size will continue for a long time in China. With current family planning policy of one child per couple in urban areas and two children per couple in rural areas, China's population may very likely arrive at 1.6 billion before the population is stationary in the middle of the twenty first century. China has managed to shortcut the demographic transition that has occurred in already industrialized countries. Most industrialized countries underwent a fundamental shift from extremely high to low mortality and low fertility rates in the nineteenth and twentieth centuries, and many expect today's developing countries to experience the same sort and duration of demographic transition. Many countries took many years to move from a situation of high fertility and high mortality to one of low fertility and low mortality, e.g. more than a hundred years for France. China does not have this luxury of time. The western industrialized countries have gone through their demographic transitions over many decades.

When mortality levels dropped in the West due to public health measures, couples began to postpone marriage, practice celibacy, use abortion, or early methods of contraception, or simply to migrate. Millions of people migrated to USA, Canada, Australia or other colonial possessions. Empty territories absorbed the excess population. Today there are no empty spaces or migration opportunities for China or other developing countries. Trying to climb out of the high population and low income trap, the Chinese government has chosen a strong policy of population control as the only way of keeping its promise to its people of economic and social development. China has adopted and developed an administrative and service system to manage population growth. China has vigorously promoted the small family norm, and has extended contraceptive availability and use to keep population growth in balance with resources and development levels. The outcome of this administrative approach has been a significant drop in fertility rates. Without such a policy over about twenty years, China's population in 1999 would have been higher by 380 million people—more than the addition of double the population of USA and Canada.

China's demographic transition took place in a short period, a fraction of the time it took for European and other industrialized countries to achieve low fertility and mortality. The mortality transition began with the new government's success in improving health and living standards.

With peace restored within the country, and medical technology borrowed and introduced from foreign countries, the shift to lower mortality as the first component of China's demographic transition quickly followed. The mortality transition was almost completed by the end of the 1960s. With falling death rates, continued high fertility caused the population in China to boom. The growth of China's population continued almost unabated as the crude birth rate remained above 30 births per 1000 population between 1960 and 1970.

At the same time, new policies aimed at energizing China's economy, such as the Great Leap Forward and the People's Communes, failed to increase productivity and living standard. Because of the forceful practice of the family planning program, in just one decade after 1970, China's huge slowdown in child-bearing was achieved, far less than the 50-75 years most European countries took to accomplish their fertility transition. China's fertility decelerated, plummeting more than 50% between 1970 and 1980. What the Chinese should think about today is why this policy of population control succeeded, when other government directed policies such as the Great Leap Forward and People's Communes failed. Nevertheless, the fertility transition as well as the demographic transition was realized by the beginning of 1990. Today, China has the fastest demographic transition in history. In the 1990s, the post transition period, China's fertility fluctuated around 1.8 children per woman.

What deserves special attention is that several new problems are emerging due to the current rapid level of socio-economic development, and fertility and mortality declines. Population projections indicate that China will definitely have a serious problem with population aging and there will be a significant decline in the proportion of children in the population by the middle of the twenty-first century.

Population mobility has been gaining momentum recently in parallel with the economic development and the rising trend among young couples to have smaller size of families. The sex ratio at birth is rising. It has been found in other Asian countries when couples are encouraged to have fewer children, there are more male than female births.

Because of son preference, Chinese farmers are inclined to have sons who will be able to help them with heavy work on the farm and will continue the family line. The 14-20 million new births and children of each year will soon needs health care and schools, doctors and teachers, and finally jobs and opportunities. Regional differentials resulted from different speeds of demographic transition exist. In the high fertility regions such as in Guangxi, Hainan, Guizhou, Qinghai, Ningxia, Xinjiang, and Yunan eight remote or minority provinces, the number of children born per woman are still 2.5 children in 1995. The demographic transition in these regions may finish in the early 2000s, and the effort of family planning to control population growth is still crucial. The above-mentioned problems will in turn have an impact on socioeconomic development in China—a situation which has aroused concern among people from all walks of life.

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### **Biographical Sketch**

**Li Yong-Ping** was born in 1963, obtained his degrees of M.A. in Statistics and Ph.D. in Demography at the University of California at Berkeley in 1986 and 1990 respectively. He was once a visiting professor at the University of Chicago in 1994 and in Indiana University in 1997. He is now a professor in Peking University.