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Demographic Dividend in China

The Challenge Ahead

Teshu Singh



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Institute of Peace and Conflict Studies

B-7/3, Safdarjung Enclave

New Delhi 110029

91-11-4100 1900

www.ipcs.org



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Address:

B 7/3 Lower Ground Floor
Safdarjung Enclave
New Delhi 110029
INDIA

Tel: 91-11-4100 1900, 4165 2556,
4165 2557,
4165 2558, 4165 2559

Fax: (91-11) 4165 2560
Email: officemail@ipcs.org
Web: www.ipcs.org

About the Author



Teshu Singh

Teshu Singh is a Research Officer with the China Research Programme (CRP) at IPCS. She is also a Doctoral candidate at the Department of East Asian Studies, University of Delhi, New Delhi. She completed her M.Phil from Department of East Asian Studies, University of Delhi, New Delhi, M.A. in Political Science from University of Delhi, New Delhi, B.A (H) Political Science from Miranda House, University of Delhi, New Delhi.

Her primary research areas include economic issues in China; and Chinese Foreign Policy and Maritime Security.

About "Inside China" Series

The China Research Program (CRP) within the Institute, as a part of its activities, undertake research and organise events under "Inside China," aimed at exploring issues and challenges in contemporary China covering economic aspects of China's growth, political development and emerging social tensions and fault lines. This essay was a part of the first annual conference in 2011.

Demographic Dividend in China

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The effect of age structure on economic growth has always remained a topic of discussion. An increase in the young working age group is beneficial for the economic growth of any country. However, age structure does not remain constant. Individual's economic behaviour varies at different stage of life; changes in country's age structure can have profound effect on its economic performance. This phenomenon can be explained in terms of Demographic Dividend. It refers to gains or losses in per capita income brought about by changes in a population's age structure. It is expressed as the commonly used "dependency ratio" which is the ratio of the dependent age population (such as 0-14 years and 60 and above) to the productive – age population (such as 15-59 or 20-59). This particular phenomenon is clearly visible in Chinese economic growth.

Today China has transformed from the phase of high fertility, high mortality and low natural growth to a phase of low fertility. In fact it has entered into 'post transition society' where life expectancy has reached new heights, fertility has declined to low level and a rapid aging population is on the horizon. The median age of youth in China is 35.5 years and the dependency ratio is 37 percent. Within less than forty years China has exhausted its first demographic transition and is now entering in to an aging society. Perhaps the process is the fastest in the world and can slow its economic

development.

As China enters an unfamiliar demographic era, it is important to question whether Chinese economy will be able to sustain the same rate of growth in the coming years. The paper makes an attempt to study two related issues; the trends and issues of China's demographic history and what are the challenges and opportunities that lie ahead for Chinese Economy vis-a-vis its negative demographic dividend/ demographic debt.

I TRENDS AND ISSUES

China's fertility rate remained high during most of the 1950s and 1960s. The population began to grow rapidly, and the age structure saw a surge in the younger population during that period. Incidentally, there was a tragic famine during 1959-1961 which brought down the fertility rate. It brought about as many as 20,000,000 deaths due to a break down in agricultural production and resulting food shortages. On an average, in China the Total Fertility Rate (TFR) during this period was 6 children per woman in the first half of the 1960s.

Unavoidably, the TFR of this magnitude led to a population explosion and the population reached to more than 800 million by the end of 1960s (Yao 1994). China's population has experienced two 'baby booms' (Baby Boom:

A baby boom is any period marked by a greatly increased birth rate) one following the Liberation War and the second after the 1960s after the Great Leap Forward. This demographic phenomenon is usually ascribed within certain geographical limits along with the number of annual births exceeding 2 per 100 women (or approximately 1 percent of the total population size).

Alarmed, by this speedy surge and being aware of the difficulties of keeping with the pace of food supply growing at least as fast as the population and facing such increasing pressure, a national population policy was announced in 1971. Also a family planning programme was instituted in both urban and rural areas (Caldwell and Zhongwei) in the same year. Against this background, the One Child Policy was introduced in 1978 and it came into effect in the year 1979. It was introduced under Deng Xiaoping as an endeavour to control the increasing population. The policy was implemented in the early 1980s with forced abortions, infanticide and strict penalties for those who did not follow it. The authorities assert that the policy has prevented 250 to 300 million births since its commencement until 2000 and around 400 million births from 1979 to 2011.

The fertility rate dropped to half in less than a decade, population growth was reduced to a more manageable level. However it also led to the beginning of the process of ageing of China's population structure. Today children constitute a much smaller share of the population, comparatively smaller birth cohorts have entered the working ages. The population has a bulge and older working age group is growing in absolute size in proportion to the population (Banister 2010). The bulge in the population signifies that those who were 35 in 2009 were born in

1974 a couple of years before the one child policy was enforced in 1979. It is this group that will form the core of China's elderly population in the next generation.

II DETERMINANT FACTORS

China's population profile contains some unique characteristics. These characteristics are a result of social and demographic changes of the past. Two special characteristics of China which are of particular importance are; the drastic fertility decline within a relatively short time period which is rarely seen elsewhere in the world, and, a sharp increase in mortality along with a plunge in fertility caused by the Great Leap Forward famine of 1959-1961. The famine resulted in an estimated 30 million premature deaths and 33 million lost or postponed birth. It was also followed by a sharp rebound in the birth rate that lasted for several years in the 1960s.

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TOTAL FERTILITY RATE (TFR)

Changes in total fertility rate capture the adjustment of population reproduction. The TFR fell from around 6 in 1950 -1955 to 2 in 1990-1995. The decline, was especially rapid between 1970 and 1980, when China launched the “later, longer, fewer” campaign (late marriage and age at first birth, longer inter birth intervals, and fewer births), which was followed by the formal introduction of the one child policy in 1979. In fact a large portion of decline took place by 1975-1980. As a result of this the elderly population of China increased, and those aged 60 and above formed a large portion of the population.

According to the sixth national population census, the TFR is now less than 1.5 children per couple from 2000-2010. This is lower than, those of developed countries like the US, France and Spain. In the same period, China added about 40 million people aged 60 years and above. The ratio of senior citizens to the population has also risen due to the low birth rate. According to Wang Fang, a population expert, this census result should be a wakeup call for the policy makers.

DECLINING MORTALITY is another determinant of demographic transition. With the improvement of health and medical conditions, life expectancy has significantly increased in China. This has resulted in the problem of aging population. Despite concerns over the collapse of the collective rural public health care system in the 1980 and increasing incidents and reports of air pollution, food poisoning, and public health crises (such as SARS epidemic in 2003), the Chinese population’s overall health has continued to improve with the spread of affluence. The latest numbers based on nationally representative surveys put life expectancy at birth as 74.5 years for females and 70.7 for males (levels that approach those of the world’s more developed

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countries). The ratio of aging population was 7.69per cent in 2005 and the ageing will only accelerate over the next thirty years. Longer life expectancy means more old people in the population leading to an increasing demand for services and expenditures related to health care (Wang 2010).

Ma Jiantang, Director of the NBS, after interpreting the result of 2010 and 2000 census came to the conclusion that the urbanization rate in China had risen rapidly. The population of eastern coastal areas also continued to swell, indicating the flow of migrants has much to do with the development levels of different regions. Population experts said that the sixth population census revealed five major changes in China’s population- higher education level, greater mobility, faster aging process, uneven distribution and improved gender ratio. Ma Guangzong, a professor at the Institute of Population Research of Peking University, said that the core of China’s population issue has shifted from quantity to its structure. “China has entered a stage of stable low fertility and

low increase, and the fuse of the population explosion has been extinguished. More attention should be given to the low birth rate and age structure instead of huge aggregate number” (Jing 2011).

Related issues with this demographic history are that China has the largest urban population of any country in the world. They have traditionally large families, particularly in the countryside; compliance with the policy has always been a problem. Since 1952 there has been a steady increase in supplies and also an increase in the percentage of Chinese living in the urban areas. With the increase in population, China’s agriculture, energy, supplies, urban infrastructure, education and housing all have come under increasing stress. Chronic air and water pollution problem are now apparent in rural and urban areas throughout the country.

III

DEMOGRAPHIC DIVIDEND: EFFECT ON ECONOMIC GROWTH AND SOCIETY

There are different models to examine the relationship between population growth and economic growth. The “demographic dividend” is delivered in tangible practical terms into society through a number of mechanisms. The most important being the labour supply, savings and human capital (Bloom 2003).

LABOR SUPPLY

Economic growth relies on a number of factors such as capital, technology, market and labour. In case of China, the country’s economic boom relied on a young and productive labour force. This force played a crucial role in helping the Chinese economy to take off. Over the past decades, China enjoyed a productive population age structure, with working-age people making up a large part of its population while retired

China's economic boom relied on a young and productive labour force, which a crucial role in helping the economy to take off. Over the past decades, China enjoyed a productive population age structure, with working-age people making up a large part of its population while retired and pre-working –age people constituted a relatively small fraction.

and pre-working –age people constituted a relatively small fraction. As a result, the country enjoyed an endless supply of labour and also carried a comparatively light pension burden. Such a productive population age structure, characterized by abundant labour forces and high savings ratio, proved to be a dynamic source of economic growth. This took the country into a long “golden period” of economic and social development.

The number of young labourers aged 20-29 has already come down by 14per cent in the last ten years, and is projected to shrink further, by an additional 17per cent, in the next two decades. The shrinking workforce will initiate for the first time in Chinese history leading to successive shrinking cohorts of labour force entrants. This will have profound consequence for productivity because the youngest workers are the most recently educated and most innovative. It will have negative impact on some industries and will affect foreign trade enterprises. Japan is an appropriate example to cite here (Banister 2010, 26).

According to Wang Feng, “China’s economic boom has relied on another crucial factor, namely a young and productive labour force. This large labour force, a non repeatable historical product of the rapid demographic transition, was present fortuitously as the Chinese economy was about to take off... By now, China has largely exhausted its demographic dividend... ” Such that “as a result of China’s very low fertility in the last two decades, the era of abundant young and inexpensive labour will soon end.”

SAVINGS

The demographic transition also affects the savings which in turn affects the prospects for investments and growth. In an individual’s lifespan saving increases upon entering the workforce and decreases with retirement. In the next decade there will be rise in China’s elderly population which will eventually lead to decline in saving ratio. Nearly three out of 10 Chinese people will be

In China, a big increase in the retirement age is overdue. The retirement age currently is 60 for men and 55 for female civil servants and 50 for female workers. This has not been changed since 1951 when average life expectancy was 46 compared with that of 73

older than 60 by 2040. In China, a big increase in the retirement age is overdue. The retirement age currently is 60 for men and 55 for female civil servants and 50 for female workers. This has not been changed since 1951 when average life expectancy was 46 compared with that of 73. The increasing retiring population will further put pressure on the pension system. Every two taxpayers would have to pay the social security expenses of one retired person by 2035. In the present situation every 3.5 taxpayers pay for one retired person.

The central government has been trying to introduce a rural pension scheme that is due to cover the whole of the countryside by 2020. In rural areas the dependency ratio will rise far more steeply than in cities as young people move out and elderly stay behind. In cities decent pensions are rare except among workers in the privileged state sector. According to the official records in 2008 only seventeen percent of migrants in urban areas were enrolled in any pension scheme (Economist 2011).

Another related problem is that of employment. Many fear that it could make it even harder for university graduates to find jobs (last year 6.3 m students graduated from Chinese universities, up from 1m in 1999, so competition is fierce) (Economist 2011).

HUMAN CAPITAL

The demographic transition begins with changes in mortality that results in a population that lives longer and stays healthier. A longer life expectancy causes fundamental changes in the way that people live. Attitude to education, family, retirement, the role of women and work all tend to shift. A society which is experiencing a demographic dividend is certain to experience deep rooted changes in its

culture, as its people become more valuable assets. It is argued that China's rapid aging, combined with a shrinking labour force, will "fundamentally reshape the Chinese economy and society".

Now, that China's demographic dividend is getting over, a lot of schools have closed down. In 1995 Chinese primary school enrolment dropped from 25.3 m in 1995 to 16.7 m in 2008. Between 1990 and 2008, 60per cent of Chinese elementary schools were closed down, resulting from declining numbers and school reorganizations. Chinese couples have small families mainly because bringing up of children has become expensive.

The Sixth National Population Census has pointed out some major changes in the country's demographic trends that will eventually affect the economy. First, the annual growth rate of China's population has slowed remarkably in the past 10 years compared with the previous decade. It has grown less than 1per cent annually. Second, the percentage of both the working age

The percentage of both the working age population and the aged population have grown, while the proportion of children aged fewer than 14 has declined. Overall the population is getting older; people aged 60 years and above accounted for 13.26 percent of the population, an increase of 2.93 percent from 2000.

population and the aged population have grown, while the proportion of children aged fewer than 14 has declined. Overall the population is getting older; people aged 60 years and above accounted for 13.26 percent of the population, an increase of 2.93 percent from 2000. Third, average education level for Chinese citizen has been greatly raised. This has never been seen in Chinese history. Fourth, the urbanization process has been faster than expected, with almost 50per cent of the total population living in urban environments and an increase in the percentage of permanent residents in developed coastal provinces, while the population has fallen in the underdeveloped heartland provinces (Peng 2011). The overly dense population in coastal areas poses serious challenges to the resources, the environment, housing, transportation and the cost of labour.

As many developed countries have found - especially Japan with its seriously aging population - a reduction of labour supply affects economic growth. The saving grace may be that China is somewhat different, adding uncertainty to the plotting of future economic growth trends. For example, the increasing level of urbanization is good for economic growth. It means that rural labour is migrating from agricultural areas of low productivity to modern manufacturing and service industry zones of higher productivity (Peng 2011).

EFFECT ON SOCIETY

Demography is just not always about economics, it has social effects also. Consequence of the demographic transition has now become apparent in Chinese society. Sex selection is hardly unique to China. It has led to gender imbalance in Chinese society. The sex ratio at birth has escalated from 108 in 1980 to 119 male births for every 100 female births in 2009. As the one child policy turn 30 this month,

China is dealing with the effects of a younger generation that is disproportionately male. This will lead to a dearth of women for millions of men who want to marry. It has been estimated that by 2020 almost 30 million Chinese men will be unable to find brides. Notably, Chinese men have started buying brides from Western China and Southeast Asian countries. The fact that large number of Chinese men will not be able to marry is a serious social concern. (Hvistendahl 2010, 248)

China's only child generation will assume the role of sole caretakers of their aging parents. Young urban couples, many of them without siblings, will find themselves with four parents to look after and will themselves have only one child (known as 4-2-1). The 4-2-1 family structure means that after a married couple who are both the only child of their respective family has a child, the family will consist of four seniors (each of their parents), one child and the couple themselves. If personal savings, pensions, or state welfare fails, senior citizen would be entirely dependent on their very small family.

As the young population declines, domestic demand for consumption may weaken well, since young people are also the most active consumers of everything from wedding banquets to new cars and housing units. And because China is a major player in the global economy, the impact of the country's demographic changes will not be limited to its borders (Wang 2010).

IV CHALLENGES AHEAD

Why should one worry about these demographics changes? The aging of China's population represents a crisis because its arrival is imminent and predictable and its ramifications will be massive and enduring.

China's only child generation will assume the role of sole caretakers of their aging parents. Young urban couples, many of them without siblings, will find themselves with four parents to look after and will themselves have only one child (known as 4-2-1).

Political legitimacy in China over the past decades has been built around its fast economic growth, which in turn has relied on a cheap and young labour force. An aging labour force will compel changes in this economic model and may make political rule more difficult. An aging population will force a national reallocation of resources and priorities as more funds flow to health care and pensions (Wang 2010).

China's working age population (15 to 64) has experienced steady growth over the past few decades. According to the projection by the Report of China's Population Development Strategy (2008), this figure increased to 968 million in 2010, constituting more than 71% of the total population. While China is currently enjoying the largest working-age population and the lowest dependency ratio, new trends have begun to emerge in the growth rate of the working-age population.

First, the average annual growth rate of the working-age population is beginning to slow down. The figure decreased from 1.39% during the 1990s to 1.28% between 2000 and 2005 and further to 0.81% between 2005 and 2010. The yearly increment of

working-age population dropped from 10.2 million in 2005 to 8.6 million in 2010. According to the 2008 Report of China's Population Development Strategy it will further drop to 2.36 million in 2015. The working-age population will stop increasing in 2017, when it reaches a peak of about 999.6 million, and will reduce gradually from then on. Second, the proportion of working-age population to total population will reach its peak in 2013 (72.14%) and then decline slowly while the population dependency ratio will begin to rise. Third, it showed significant year-on-year reduction of new labourers. The number of 18-year-old new labourers was 27.9 million in 2002, decreased to 22.5 million in 2010, and will further decrease to 16.6 million and 14.8 million respectively in 2015 and 2020. Fourth, trends regarding the aging workforce and the continual decrease of the proportion of young workers to the whole working-age population are emerging. The proportion of workers aged between 15 and 24 will decrease from its peak in 2006 (16.63%) to 12.84% in 2020; and the proportion of workers aged between 25 and 39 will decrease from 25.95% in 2005 down to 22.12% in 2020 (Jianmin 2011).

Increasing spending obligations created by the aging of the population will shift allocation of resources away from investment and production. Moreover; it will test the government's ability to meet rising demands for benefits and services. In combination, a declining labour supply and increased public-private spending obligations will result in an economic growth model and a society that has not been witnessed in China before. Japan's aging population which led to its economic stagnation is a clear example for the Chinese economy (Wang 2010).

Partly, due to the demographic transition, China's potential growth rate is likely to

decline below 8 per cent by 2020. Roubini Global Economics (RGE) projects that a shrinking labour force will push up the cost of labour in China which would further translate into a high inflationary trend. This in turn will push up the cost of capital. There will be gradual slowing of investment and a spontaneous rise in private consumption resulting from the demographic transition.

According to Mu of Peking University, the country still enjoys the "demographic bonus". Its working-age population increased after the family planning policy brought down the proportion of children in the population. Labour force is still relatively abundant because the aging population has not yet peaked. Further, the director NBS, Ma added, "We believe the total number in the labour force will peak in 2013, and labour supplies are still sufficient for now. But, after 2013, China's labour resource will gradually decline, a process that will accelerate after 2020". Some population experts have even predicted a twenty three percent decline in the working age population among people among 15-64 years in between 2015-2050. Yet another expert on the issue Zeng Yi reiterated, "If the current birth control policy stayed unchanged, China's labour forces would be reduced by 100 million per decade from 2030 when the population of people aged 65 years and above account for twenty eight percent of the total population (Jing 2011).

By 2013 China's demographic dividend growth rate will turn negative. That is the growth rate of net consumers will exceed the growth rate of net producers. Such a negative growth rate will reduce the country's economic growth rate by at least half a percentage point every year. Between 2013 and 2050, China will not fare demographically better than Japan or Taiwan, and will fare worse than the US and France.

This weakening demographic dividend has raised questions about the economic development mode. The transformation of the development mode has become an important part of the 12th Five year plan. The proposal of the Communist Party's Central Committee regarding the 12th Five year plan pointed out that China should insist on taking the strategic adjustment of economic structure as the main direction of accelerating the transformation of the economic developmental mode. Zheng Xinli, deputy executive director-general of China Centre for International Economic Exchange, said that the commitment on transformation from the "growth" mode to the "development" mode stressed in the 12th five year Plan needs to be translated into action.

As the population continues to age in the coming decades, China will need to establish a sustainable social system to safeguard its society and make some critical policy adjustments. "China is becoming old before it becomes rich." The government needs to undertake a variety of policy adjustments such as the transition from the pay system to a fully funded pension system and public education programs to make society better informed and prepared for an aging population. Creating more work opportunities in the labour market and raising the retirement age will reduce the dependency of older people on social pensions, by prolonging the number of years in the workforce. Including rural to urban migrant workforce in the pension system will also enhance the total premium and financially support the transformation of the pension system (Cai and Wang 2006).

V **CONCLUSION**

China has entered the time period of the first demographic dividend since 1964 which will

end in 2013. It can be inferred that the first demographic dividend is coming to almost an end. Consequently, it is a big challenge to deal with the rapidly expanding population of old people. Young people are a symbol of opportunity and reform, new beginnings and faster economic growth. If few young cohorts enter the economy it will definitely affect the economic growth. This will undermine country's low cost labour supply. Also the Chinese government will have to use its savings to take care of its aging population.

If an older population is a cause of concern for the future of Chinese economy; it would be prudent to identify, as soon as possible, measures that could serve to counteract any negative economic effects of the aging population. The alarming crisis will largely define China in the twenty-first century. The ramifications of these changes are massive and also long lasting. As a word of caution, today's demographic changes mark only the beginning of a crisis that will be increasingly difficult to mitigate if it is not taken care of soon. China needs to shift the focus on boosting employment for long term economic growth. Government should focus on a range of new policies including education, labour market, reforming the hukou (household registration) system, strengthening the social safety net and focusing more on the service sector.

Undoubtedly, there are numerous economic challenges to tackle. China is famed for its research and development activities. It pays great attention to its challenges and potential crisis. There may be some strategic adjustments of the economic structure in order to accelerate the development plan. Relaxation in one-child policy might be initiated to maintain a moderate fertility ratio. Thus it remains to be seen how the changes in social and economic policy will turn a period of old age dependency into one

of the positive opportunity.

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China Research Programme

Institute of Peace and Conflict Studies

B-7/3, Safdarjung Enclave

New Delhi 110029

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