

Population Ageing and Sustainability in China: Comparisons with Australia

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Abstract

The Chinese economy has been growing at an average rate of 9.4% per annum since 1978 when economic reform program was initiated. There is however ample evidence about recent deterioration of the physical environment, which means that the decreasing share of young economically active people will have the responsibility to look after both an ageing population and increasing environmental problems. China's social security and health system is not well prepared to cater for the ageing population. This burden will automatically be transferred to China's society and economy. Who will ensure the financial security of the elderly in China, as China's labour force growth slows? Many developed countries, such as Australia, have been experiencing ageing population and have undertaken health reform in recent years. Australia is a typical ageing country in the western world. This paper analyses population ageing and sustainability in China with a reference to Australia in the purpose of providing some valuable knowledge and lessons for achieving China's sustainability.

Key words: China, population ageing, environment, economic growth and sustainability

1. Introduction

China is currently the most populous country on earth. Although the rate of its population growth is close to being arrested, the population growth momentum continues contributing to the overall global population increase. Accounting for one sixth of the world's population, China welcomed its 1.3 billionth baby at the beginning of the year 2005, while Australia celebrated its record of 20 million Australians on 4 December 2003 (ABS, 2004a) which is just above the population size of any of China's biggest cities – 3 million more than Shanghai (population of Shanghai was 17.11 million in 2003) and 6 million more Beijing (population in Beijing was 14.56 million in 2003) (National Bureau of Statistics of China, 2004).

China has been important as a source of regional migration to Australia and the impact of Chinese migration has been felt particularly strongly in most recent years. According to the 2001 Australian Census, there are 142,780 China-born living in Australia and they make up 3.5 percent of the overseas-born population in Australia.

Although there are large differences between the two countries, they both are facing problems related to population ageing. Because of the one-child policy which had been in place for more than 25 years, China's population is ageing faster than those of developed countries. Australia, on the other hand has been relying on migration to foster its population growth. Migration however does not necessarily delay population ageing for Australia because of the natural desire of migrants to reunite with their families, particularly when parents become older.

This paper provides a demographic comparison between Australia and China and poses the following questions: Do the size differences translate into differences in other demographic indicators? How is population ageing affecting issues of sustainable development in both countries? How are population numbers affecting economic development and other environmental factors? These questions are explored in the sections to follow. Firstly, the paper explores the population characteristics and demographic changes in the last 50 years. Then it frames the discussion in relation to sustainability issues and concludes with some policy implications.

2. Demographic Comparison between Australia and China

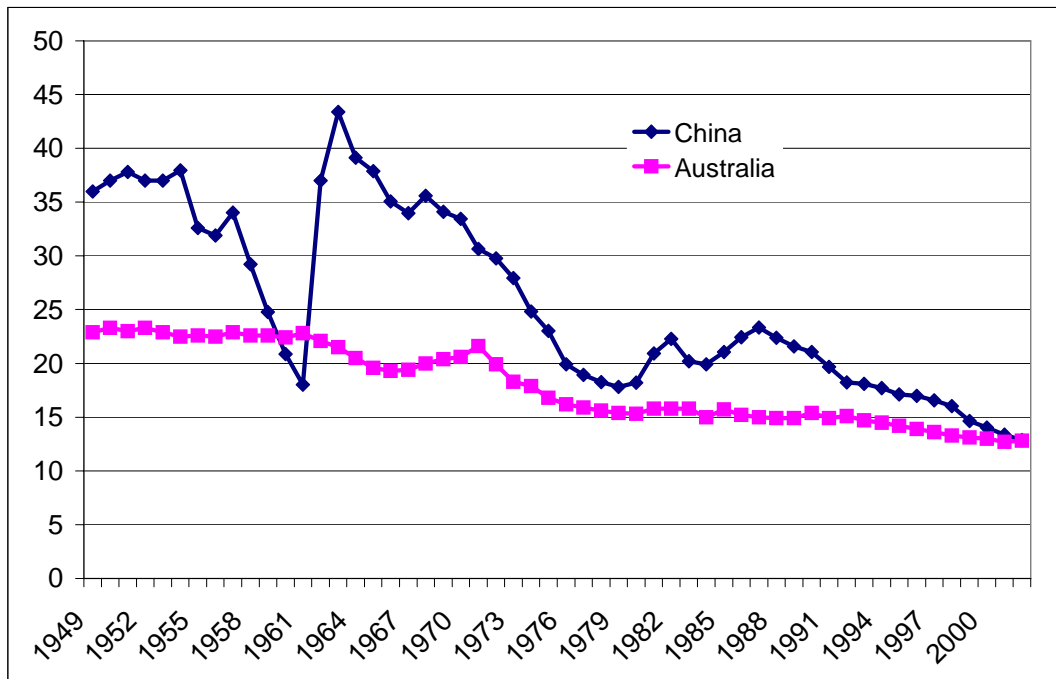
Figures 1 and 2 compare the crude birth and death rates in China and Australia for the past 53 years, namely since 1949 when the People's Republic of China was founded. Starting from very different points, both countries have ended with very similar level of these indicators in recent years. Over the past fifty years, China's birth and death rates have experienced dramatic up and down periods. Compared with China, Australia's birth and death rates have been declining steadily to reach the same levels as those in China. The history of population policies has also been very different. China chose policies that are direct and enforced while Australia controls population indicators indirectly through its migration policies.

Overall, China's birth and death rates over the past 50 years have declined dramatically due to the implementation of revolutionary and controversial policies for the purpose of improving health and controlling population. In 1958, the Chinese government launched the Great Leap Forward policy in order to rapidly increase agricultural and industrial production. It is well known that this policy has caused the highest death rate due to the largest famine in human history. As a result, the mortality rate increased from 11.9 per thousand in 1958 to the unbelievable 25.4 per thousand in 1960. Due to the strict family planning policy, especially the one-child policy in the past 25 years, the country's fertility rate has decreased dramatically (Riley, 2004). China's socio-economic, political and family planning policy changes over the past 50 years have strongly influenced this country's population growth rate.

China's slow population growth, but rapid economic growth has drawn a lot of attention in the world. The one-child policy is one of the important factors that helped China to achieve a rate of population growth of 1.06 percent for more than two decades. The birth rate of China in 2002 was 12.9 per thousand, the death rate was 6.4 per thousand, and the natural growth rate was 6.5 per thousand (National Bureau of Statistics of China, 2003). The births in the same year were 16,519,56 (or 16 million persons), and the net increase in population was 8,285,219 (or 8 million persons).

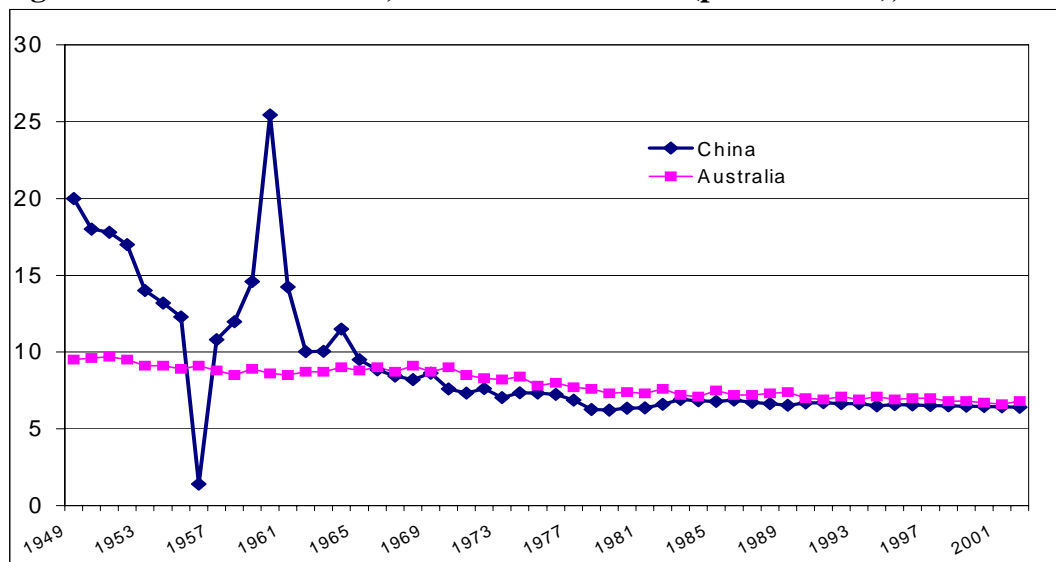
China's one-child policy has helped to slow down the nation's population growth rate, but it has also brought about a lot of challenges to China. One of them is reflected in the fact that population ageing grew fast with the rapid decline of fertility. China's overly large population is an unfavorable factor for achieving China's social and economic sustainable prosperity and its current development is causing negative impact on its natural environment. Hence, the issue of population remains a key factor for China's sustainable development in the 21st century.

Figure 1 Crude Birth Rates, China and Australia (per thousand), 1949 – 2002



Sources: Chinese data for 1949-1998 are drawn from National Bureau of Statistics of China (1999) and those for 1999-2002 are from National Bureau of Statistics of China (2003). Australian data are drawn from ABS (2004b).

Figure 2 Crude Death Rates, China and Australia (per thousand), 1949 - 2002



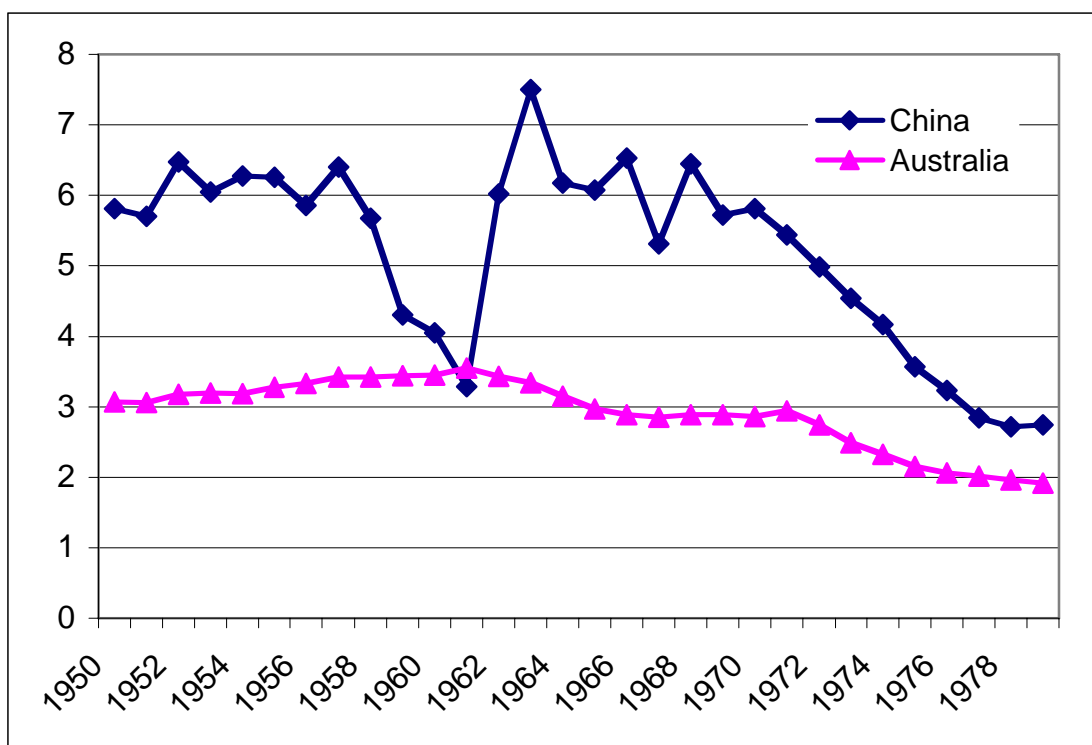
Sources: Chinese data for 1949-1998 are drawn from National Bureau of Statistics of China (1999) and those for 1999-2002 are from National Bureau of Statistics of China (2003). Australian data are drawn from ABS (2004b).

By comparison, the demographic changes in Australia have been much more subtle. The crude birth rate dropped from around 23 to 13 per thousand (see Figure 1) while the crude

death rate had gradually decreased from just below 10 to around 6 per thousand (see Figure 2). As already emphasised, by 2001 the two countries have reached amazingly similar rates.

Figure 3 compares the total fertility rates of Australia and China from 1950 to 1979 when China initiated its one-child policy. China's fertility levels have fluctuated dramatically while Australia's fertility rate has been declining more steadily. The drop in the Australian total fertility rate in the 1960s and early 1970s was the result of falls in fertility at nearly all ages (Kippen, 2003, p. 2). In contrast, the fertility rates in China in the same period, just before the one-child policy, were very high for all ages and the total fertility rate reached as high as 7.5 in 1964. By 1979 China's fertility was still relatively high at 2.9 children per woman while Australia's fertility was already below replacement level.

Figure 3 Total Fertility Rates of China and Australia, 1950-1979



Source: Chinese data are drawn from Research Institute of All China Women's Federation and Research Office of Shaanxi Provincial Women's Federation (1991), Australian Data are from ABS (2004b).

In 2003 the Australian total fertility rate was 1.75 births per woman, and rates between 1.73 and 1.76 births per woman have been recorded since 1998 (ABS, 2004e, p.1). Although China's total fertility rate in 2005 is 1.7 births per woman which is a little bit lower than that for Australia (1.8 births per woman according to United Nations, 2005), the major urban areas such as Shanghai and Beijing amazingly have rates of 0.74 and 0.73, respectively, which are almost a third of the population replacement level.

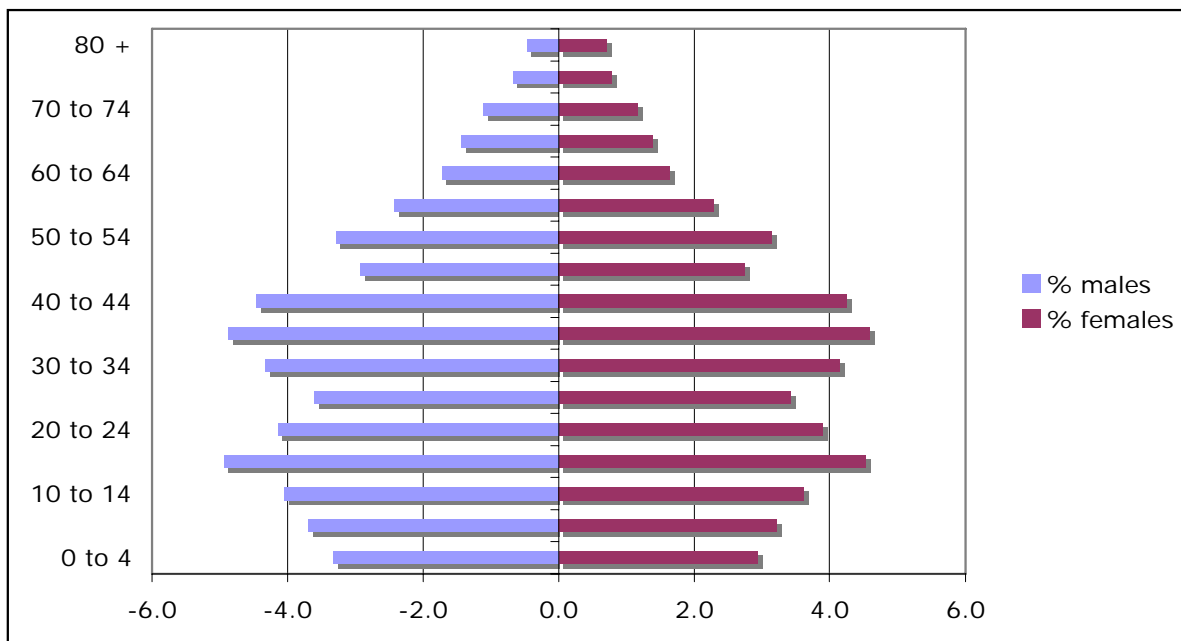
In addition to the one-child policy, the dramatic fall in fertility in China is associated with socio-economic factors, such as women's higher levels of education, family size and income, marriage and childbearing patterns, women's labour force participation and their roles in the

family, the changing nature of relationships and greater availability of effective fertility methods (Riley, 2004; Jain and McDonald 1997 cited in Kippen, 2003, p.7). According to Riley, “China’s strong family planning program has tempered some of those socio-economic influences” and “China’s experience gives demographers a unique opportunity to evaluate the effects of tough policies and birth planning in addition to socio-economic influences on fertility” (Riley, 2004, p. 14). The merge of fertility rates between Australia and China in recent years has been triggered by different policies and Australia has not been influenced as much as China’s by family planning policies in particular.

For many years China has been mainly a source of international migrants. Australia on the other hand is continuously accepting more and more migrants who come from countries with a variety of fertility levels. Kippen (2003) notes that fertility in Australia by country of birth indicates that many women who were born overseas appear to adopt a similar fertility level as those who were born in Australia. In other words, they do not necessarily keep the same level of fertility as the women in their country of birth. For example, it was observed that most Chinese families from the People’s Republic of China have on average 2 children. As they are no longer subjected to the restrictive family policies of China, their fertility patterns become similar to those of Australians.

Reductions in fertility and mortality rates in both Australia and China are producing a fundamental change in the age structure of their populations which is most evident in the population pyramids (see Figures 4 and 5). China’s population is still younger than Australian but will age faster within 20 years or so.

Figure 4 Population Pyramid of China, 2006



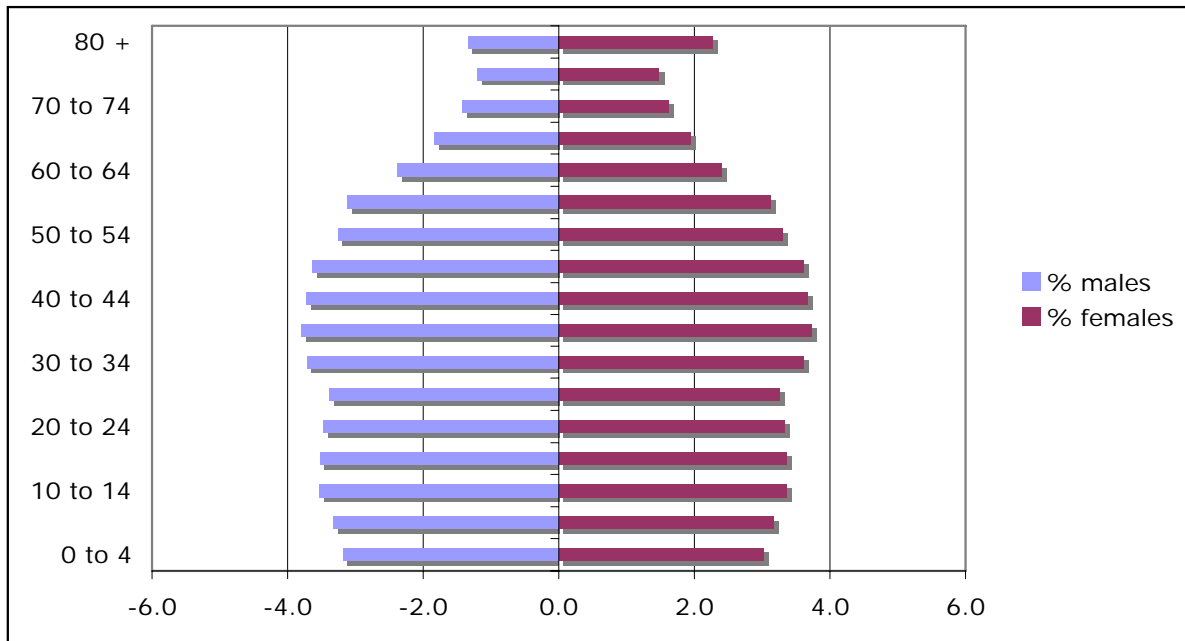
Compiled from US Census Bureau (2006)

3. Population Ageing in China and Australia

According to McDonald and Kippen (1999, p. 31), “as fertility and mortality rates fall, populations age.” Australia and China both face the problem of population ageing. However,

the fertility in China has only been falling for about 25 years, while in Australia it had been falling for more than a century (McDonald and Kippen, 1999). China has been controlling its population growth since the late 1970s and only recently has reverted its one-child policy. In contrast, Australia recently started attempts to encourage more births in families. Australia and China are both facing an ageing crisis. In addition, a number of Chinese elderly (as well as elderly from other ethnic groups) have migrated to Australia, making the ageing issues in this country even more complex.

Figure 5 Population Pyramid of Australia, 2006



Compiled from US Census Bureau (2006)

Table 1 gives a comparison of life expectancies between Australia and China. China’s life expectancy at birth has increased from 35 years in 1949 to 71 years in 2000 (with male life expectancy at 69.63 and female at 73.33). Compared with 1990’s life expectancy, the 2000 life expectancy for China increased by 2.85 years, which demonstrates that with the fast development of its economic and health systems, the quality of people’s life has also improved significantly. With the improvement of medical conditions, the mortality rates of elderly people have also been falling. Even though China’s life expectancy is 5 years higher than the world’s average level of 66 years in 2000 (National Bureau of Statistics of China, 2002, p. 281), it is 10 years lower than that for Australia. Shanghai’s life expectancy as an example of urbanised population highlights a positive picture with its life expectancy being very close to Australia’s – the gap is reduced to only three years. The general patterns between the two countries are also similar (see Table 1). With continuing economic development, China’s life expectancy is expected to increase even further, which is good but will also challenge China’s forthcoming ageing crisis.

Changes in life expectancies in Australia have not been so dramatic. Nevertheless, with a closing gap between males and females and total expectancy at 81 years, the country is one of the world’s leaders. Lower fertility and mortality and longer life expectancy make both Australian and Chinese populations age sooner. Australia, as one of the developed countries in the world, is already concerned with the ageing population situation (Australian

Government, 2006). For China, a developing country, it can be imagined what this situation will bring in the near future with life expectancy increasing, but average age of retirement falling (Siegel, 2002).

Table 1 Life Expectancy in China and Australia, 1990 and 2000

	<i>1990</i>			<i>2000</i>		
	Total	Male	Female	Total	Male	Female
China	68.55	66.84	70.47	71.40	69.63	73.33
Shanghai	74.90	72.77	77.02	78.14	76.22	80.04
Australia	75.25	73.90	76.60	81.05	80.10	82.00

Source: compiled from National Bureau of Statistics of China (2003), ABS (2004b)

Table 2 presents three population projection scenarios for China. According to Hu and Wu (1997), the low scenario assumes a total fertility rate of 1.6, the medium scenario is projected according to the total fertility rate of 1.9 and the high scenario projection uses total fertility of 2.2 (equal to the total fertility rate at the end of 1980). It is projected that China's population with the medium scenario will grow from 1.365 billion in 2010 to 1.421 billion by 2050. This figure is already very high, but the high scenario shows that the population will rise to the unbelievable 1.703 billion by 2050.

Table 2 China's Population Projections, 2010-2050 (billion persons)

<i>scenarios</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
high	1.428	1.547	1.635	1.682	1.703
medium	1.365	1.443	1.476	1.468	1.421
low	1.326	1.377	1.371	1.325	1.234

Source: Hu and Wu (1997)

Australia's estimated resident population at June 2002 of 19.7 million is projected to grow to between 23.0 million and 31.4 million by 2051, and to between 18.9 million and 37.7 million by 2101 (see Table 3). As Table 3 shows these Australian population projections are based on three different sets of assumptions about life expectancy, fertility rates and levels of net overseas migration (ABS, 2003c and DIMIA, 2004). It is interesting to note that the total fertility rates used for the Australian projections are similar but lower than those for China (eg the medium level for Australia corresponds to the low level for China).

Unlike China, immigration is a major contributor to the growth of Australia's population. Chinese immigration is an important part of Australia's overseas migration. So long as China's door is open to Australia and Australia's immigration policy keeps Australia open to

China, immigration from China to Australia will continue and Chinese in Australia will continue to contribute towards that country's population growth.

China's population is projected to grow continuously and combined with social, economic and environmental pressures that the country experiences, migration to Australia should be more active than ever, and its impact on Australia will be significant. In the coming 50 years for Australia, it is predicted that ageing will be the most dramatic change of all changes in Australia's population (ABS, 2003c, p. 6).

Table 3 Population Projections, Australia

	Total Fertility Rate (from 2011)	Net Overseas Migration (from 2005-06)	Life expectancy at birth (Years from 2050-51)		2051	2101
	Babies per woman	persons	Males	Females	million	million
Series A	1.8	125,000	92.2	95.0	31.4	37.7
Series B	1.6	100,000	84.2	87.7	26.4	26.4
Series C	1.4	70,000	84.2	87.7	23.0	18.9

Source: DIMIA (2004, p.1)

Population is a major component of the current sustainability debate which reassesses the current concepts of economic growth, social justice and natural resource management. A holistic approach that allows to deal with all these three areas simultaneously and provide long-term positive benefits for current and future generations is something that most countries are aspiring to achieve. The study of sustainability can help decision-makers, service providers, business people and policy makers to address a number of challenges posed by the projected population ageing crisis.

4. Sustainability in China: Lessons from Australia

Sustainability is a highly contested term which history has travelled a long way since the 1972 UN Conference on the Human Environment in Stockholm. It requires increased understanding of the complexities and interrelationships between social, cultural, environmental, economic, political and technical aspects of reality but also increased respect for the diversity of voices from different religious, ethnic groups, geographic locations, current and future generations (Wheeler and Byrne, 2003). As a practical philosophy, sustainability is framed along principles that engage "multi-levels, places and cultures in a systemic approach towards better environmental and social health whilst simultaneously allowing the economic improvement and technological development that this may require" (Marinova and McGrath, 2005, p. 277). An outstanding example of attempts to move towards a more sustainable society is the adoption of the Western Australian State Sustainability in 2003. The definition of sustainability endorsed in the Strategy is: "Sustainability is meeting the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity" (Government of Western Australia, 2003, p. 24; Newman, 2005, pp. 273-274).

For China, sustainability is still a new concept. The country's economy is booming but there is little evidence of policies encouraging simultaneous consideration of social and environmental concerns. Population ageing has implications for all three of them. For example, the social security and health systems need to provide for an increased demand on their services; employment opportunities should be provided for those who want to stay longer in the workforce; maintaining a healthy natural environment may become an economic burden or a deteriorating ecology can generally affect the weakest sections of society.

Australia has started to prepare for its ageing population while there seems to be a big fiscal and policy gap surrounding these issues in China. In order to ensure a more sustainable future for China, the ageing issues should be addressed by taking a more innovative and synergistic approach to policy formation in different areas. Policies relating to population ageing, human resource development, microeconomic and labour market reforms should be made interrelated. It is also important to incorporate environmental and resource concerns in building a future picture for China. More positive outcomes could be achieved for each policy area by developing a more nuanced appreciation of the complex ways in which each area impacts on the others and in searching for holistic solutions, so that China can become sustainable in the long run.

The following sections address the three sustainability facets, namely social, environmental and economic, within a Chinese context which will co-exist with population ageing in China.

4.1 Social Impact

The ageing populations in Australia and China have developed differently in demographic, economic, historical and cultural situations. The traditional value system had placed primary responsibility for the support of older people on families. However, the pressure of population ageing in China comes not only from within but also a consequence from its long lasting one-child policy. Solving China's ageing problems cannot depend on traditional support from family members and relatives. China's society and economy are struggling to cope with population ageing and most families cannot afford nursing homes run by private providers. There is a trend that many more Chinese will have to support their elderly parents at home due to the lack of adequate health care services in China. As a result, Chinese will have double pressure from looking after their own family and their elderly. The distribution of the elderly Chinese is important for policy makers and planners in the context of regional planning of the aged care. There are many opportunities for the provision of specific services, such as closer community networks, as many elderly Chinese face constant challenges meeting their social needs. At the same time, the Chinese government should reconsider and reform the current health care system.

The share of people aged 65 years and over in China is expected to be proportionately high in the future. This develops a comprehensive picture of the social conditions necessary to support a large ageing population. Most Chinese family members choose to look after their elderly relatives at home. However Australia has a long history of aged care. More than 20 years ago, various controls on funding and access were introduced and substitute care at home was developed. The Commonwealth and state governments established joint Multi-Purpose Services to enable these communities to combine a range of government funding to provide small-scale integrated services. There has been a main change in the proportion of

costs met by the out-of-pocket expenses of service users relative to the proportion provided by the government (Commonwealth of Australia, 2001). The Superannuation and Medicare systems in Australia are admired by Chinese citizens. Historically, there was not a proper health care system in China, which made Chinese government struggle to deal with the current ageing problems. Even though Chinese families keep their traditions of supporting their senior family members, young people have to face their own challenges of employment and looking after their own children. The care for the elderly members of society is not as easy as it can be imagined. In order to reduce the elderly's feeling of being a burden at home, more nurses should be trained and be sent to visit them regularly. It is crucial to make sure that the needs of the elderly now and in the future are effectively met.

With the rapidly increasing number of older Chinese in China, the following policy recommendations should be considered:

- Keeping socialising the elderly within the broader society is very important. Seniors' club activities and associations are major components of this and should be actively encouraged and assisted.
- Health policies should be adjusted earlier and better to accommodate the needs of the elderly. Care for elderly people should not be left entirely to family members. There is a need for links and cooperation between industry, government, local community, families and NGOs.
- Day care centres and day care arrangements appear to be much needed and valuable options for the elderly Chinese. They will combine the best of living at home with extended families and staying at a nursing home.

While the ageing of China's population is inevitable as in Australia, governments should have the capacity to change part of the equation in a range of areas such as introducing policies that encourage people to stay longer in the workforce and thereby add to the tax base (Bishop, 1999). There should be policies against forceful early retirement, unemployment or forced redundancy in China.

According to Hugo (1998), the growth of the older population implies an increased demand for a wide range of social services specific to the older population. This changing demand however is not only shaped by the number of older people but also by their changing characteristics. The ageing population will result in an increased demand for the home-based care for the disabled, frail and elderly. The Chinese tradition of looking after their aged parents at home will make them face more challenges of attempting to gain or maintain employment and looking after their children and their elderly relatives at home. This will create further challenges for aged care, financial support, social security and pension. The aggregate participation rate will fall with ageing and health care expenditure will escalate. Aged care needs will increase and fiscal pressure on local government for an ageing population and pressures on health care will be built. This scenario is not attractive for China's future and adequate counteracting policies as the ones suggested here, need to be put in place.

Australia's policy makers suggest that health care policies should balance programmes and services, which will be needed in the future. Even though population ageing is a slow

process, it raises major policy changes and there is a need for early action before the situation deteriorates and is conceived as a crisis (Productivity Commission, 2005, p. 339). Population ageing shares part of the economic cost which is used to look after the land and shifts the expenditure from environmental protection to health care and other social needs. As a result, the development of population ageing may cause more difficulties in achieving sustainability. Policy planners should balance and prepare for these costs. More awareness is needed about the social and economic needs of Chinese seniors as this would be useful in improving homecare services for the ageing population as well as have implications for industry production and health services.

It is also important to make available further education and training to people who will be providing care services to the elderly population. The development of appropriate health care activities can support social networks and contribute to environmental protection. Increased opportunities for network approaches offer the potential to satisfy sustainability criteria – the simultaneous and synergistic enhancement of economic, social and environmental factors.

4.2 Environmental Problems

Over the last twenty years, environmental deterioration has become serious in China. The Chinese government has concentrated on economic growth while environmental issues in the country have not attracted enough attention. China is facing a rapidly ageing population which makes it crucial to start resolving ecological problems. In addition, most importantly, the ageing population needs sound environment for health, such as fresh air, green grass and beautiful parks. According to McNicoll (2005, p. 1), sustainability refers to the preservation of human-valued resources to assure the well-being of future generations and problems of sustainability can arise at almost any scale of human activity that draws on natural resources.

Even though China's economy is growing fast, it is a developing country with a large population and some rural regions are among the poorest areas in the world. Any good quality land is more important for food production. However there is evidence that arable land in China is persistently lost not only to natural disasters but also to construction and urbanisation (Fischer et al., 1998). For example, cultivated land is abandoned due to construction by state-owned units, construction by rural communities and peasant housing. Such loss of cultivated land should be controlled and eventually prevented in order to achieve and maintain food self-sufficiency of the present population. Uncontrolled land degradation and air and water pollution can result in problems affecting the whole of China. There is also loss due to disasters (such as flooding, mud flow, gully erosion, landslides, etc.). In addition, there is also evidence of illegal land transactions. Therefore a strong legal framework needs to be applied including a clear definition of property rights (Sadownik and Jaccard, 2002). Attention should be paid to the condition of the reservoirs and rivers as they are the source of the tap water as water pollution and shortage are already a big problem in China.

With the rapid development of its economy in recent years, China is suffering from the degradation of its natural environment (serious water, land and air pollution) due to the increasing number of factories, cars, and people as a result of increasing affluence and a lack of enforcement of the environmental law (Kenworthy and Hu, 2002, pp. 4-13). Uncontrolled deforestation and improper land use practices caused soil erosion. Longer periods of low or no flow in China's major rivers are a frequent phenomenon due to waste and mismanagement of water.

Factors such as cultural attitudes, trade relationships, and the transfer of technical knowledge, determine the environmental outcomes associated with population ageing in China. There is concern about whether China can maintain economic growth and preserve its arable land, water and other limited natural resources. China's average population density is very high compared to the world standard, especially in the urban areas. In the future, China will have to face not only the problems of increasing pressure on the environment due to the large and growing population, but also environmental deterioration due to continuing industrialisation, urbanisation and land degradation. The ecological burden on the Chinese population is likely to further create more difficulties in dealing with the ageing crisis. Solving China's environmental problems, such as carbon emissions, land erosion and degradation, air, soil and water pollution will add more pressure on the population in China.

If China is to be able to successfully sustain its economy, China should establish a new system of land and resources development based on both government administration and market regulation. The government should strengthen the supervision of land and resources development and protection. The social and economic impact of an ageing population is widely discussed globally. However the environmental impact of the rapidly ageing population is easily ignored. In areas with a high concentration of elderly people there may be pressure on local government planning processes to provide sufficient land, general transport and infrastructure for aged care. Education, aged care and disability support pension costs influencing the environmental investment. In Australia, land and age adjusted health costs per capita have been projected to increase at a rate 0.6 percentage points above that for GDP per capita (Productivity Commission, 2005). China will be confronted with an even more complex situation. Australia's comparatively good environmental and climatic conditions are admired by many countries in the world.

Building environmental awareness is another positive example set by Australia. People in China have their own perspectives and attitudes towards the environment, which influence their skills, aspirations and practices. Chinese are less likely to be environmentally conscious than people in developed countries. Therefore, in order to protect the environment, educational programs may need to be put in place to encourage people in China to adapt environmental friendly behaviour. Every citizen has a responsibility to help protect the environment. The environmental problems created by countries of industrial development and the elimination of social disparities triggered by a globalised market driven economic order require a new approach to the use of technology. The emerging new sustainable technologies should not only have the required functionality, but also must be cleaner, environmentally friendly and socially acceptable. Their use should balance market profitability with environmental considerations and social accountability (Marinova, 2005).

Australia can help China improve Chinese people's environmental awareness through their booming industry cooperation between these two countries. This cooperation has been acknowledged and witnessed mostly in Western Australia. For example, the record-breaking A\$25 billion deal of shipping the super-cool, condensed fuel (LNG) from Australia to China's Guangdong Province for 25 years has implications for environmental protection, especially in China, being one of the largest developing countries. Freeman, Pierce and Dodd (2000, pp. 113-114) suggest that global warming and the greenhouse are highly charged labels for the most controversial environmental issues but global warming is a real phenomenon and could have dramatic consequences. Therefore, it is important to understand

how firms can be profitable and leave next generation with a living planet. The Western Australian State Sustainability Strategy (Government of Western Australia, 2003) emphasises that all of the major environmental issues must be seen in their global context as opportunities for innovations in environmental technology, clean production and environmental services.

Through doing business with Australia, China's environmental standards and certain rules and international standards could be strengthened. For example, when China imports Australian fuel, China should also adopt Australian methods of environmental management. If China uses the high efficiency technology cleverly, they can reduce green house gas emission which will in turn help the global environment. According to Hargroves and Smith (2005, p. 68), "the globalisation of firms, markets and regulation has meant that the countries of the world are more closely integrated economically and culturally than ever before. The rules of the game of global commerce are being written to create greater globalisation that will have profound effects for future generations." Whilst there is much we can do locally, action is also needed at the global level. The CSIRO FutureCorp Forum's findings concluded that "developed countries have a responsibility to ensure that developing nations have immediate access to the latest clean technologies and are not forced to go through earlier, heavily polluting and resource inefficient stages of industrialization" (Heij, 2002, p. 69).

Starkey and Welford (2001) believe that business plays a big role in moving society towards a sustainable future. In order to pursue sustainable development when doing business, it is necessary to commit to pursuing resource efficiency. In addition, the commitment to maintaining environmental quality is needed. Starkey and Welford (2001) suggest that "business must commit itself to a system of production that absolutely respects environmental limits. Living within environmental space means that there are limits to the quantity of raw materials that can be extracted from, and the amount of waste that can be released into, the environment and so the task of business is to use the technology to maximize the value that can be created within these limits" (p. 5). Business people in China need to adopt the sustainability ethics to ensure the prosperity of current and future generations.

Compared with Australia, the level of environmental awareness of people in China is not very active. When doing business with Australia, it is important for business traders in Australia and China to develop a model of business reality and to help integrate environmental considerations into strategic business decisions and operation. Seminars and training programs are suggested to be provided to business people through the cooperation between local governments, formal ethnic associations and non-government organizations (NGO). The good news is that China is trying to bring more interaction with Australia.

4.3 Economic Prosperity

Since the implementation of the one-child population policy and the open-door economic policy in 1979, China's population growth has been stable, however, the economic growth has been very rapid. Compared with Australia, China's ageing is faster with its comparatively poorer social and economic conditions. China is struggling to aim to achieve economic benefits as well as strengthening of the protection and rational use of ecosystems, posing severe challenges to achieve sustainability. The expected population ageing pressure makes China harder to attain sustainable development and makes it crucial to start resolving the

ecological problems and maintaining the economy growth. In China, the fundamental pension system does not cover peasants. Although there is a special pension system in the countryside, most of the aged living there cannot get a basic living fund from the society or the government. This is a potential threat for economic development and social stability in the future. In order to meet the needs of sustainability, China should prepare to balance its economic growth, ageing and environmental protection through introducing new information and communication technologies to boost long-term productivity. Current research proves that falling fertility rates create conditions for economic growth in East Asian countries. Effective family planning, for example, in China, has accelerated its demographic transition, potentially enhancing economic benefits and lifting this nation out of a cycle of poverty (Population Reference Bureau staff, 2004). In order to capitalize on its demographic dividend, China needs effective policies to achieve sustainability and facilitate the building and maintaining of economic prosperity.

Even though the Chinese economy has experienced spectacular growth since the economic reform and open-door policy were initiated more than two decades ago, China is still a developing country with a much lower gross domestic product (GDP) per capita than that in Australia and other western countries. For example, the GDP per capita (current price) in Australia in 2004 was US\$ 29,712, while that in China was US\$1227 only (IMF, 2005). In addition, Banks (2005) suggests that labour force participation declines strongly when people get older and believes that “the decline in participation (labour force) will pull down per capita income growth – outweighing the positive ageing impacts of a rising share of the population of working age (fewer young people)” (Banks, 2005, p. 5). Compared with Australia, China is facing a pension crisis due to the historical fiscal gap from the last decades and it is still long way to go to implement the strategy of developing expanding domestic demand, promoting sustained growth of the economy and coordinated economic development between the country’s various regions.

5. Conclusion

The ageing of China’s population will result in an increased demand for the home-based care for the disabled, frail and elderly. This will create further challenges for aged care, financial support, social security and pension. China’s economic growth has accelerated its industrialisation and urbanisation. Continuing population growth will put more pressure on the strictly limited capacity of the environment to meet the demand for its various services. Future economic prosperity and growth are not certain if there are risks to the natural environment.

This paper suggests that the development of appropriate policies can support China’s social networks and contribute to environmental protection. Economic activities should be also socially and ecologically sustainable practices. With the increase in the size of the elderly population, the Chinese government will have to get increasingly involved in the provision of social services, such as planning processes to provide sufficient land, general transport and infrastructure for aged care.

From a global perspective, China has to do a lot more to adopt a sustainability ethics to improve the level of environmental awareness, economic prosperity and social equity to ensure the prosperity of current and future generations so that the country can catch up with the world’s best practice for a transition to a sustainable development model.

In conclusion, the examination of population ageing trends in China and Australia carried out in this paper shows that the forthcoming crisis is expected to be aggravated under the current health and environmental policies. The Australian experience provides useful knowledge for China's policy planners. Proper health care and economic policies can provide valuable resources to counteract China's population ageing crisis and they will play a vital role in achieving sustainability.

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