

Working Paper

Ageing in China Potential of Silver Economy of China

by

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Introduction

China has completed demographic transition and entered the era of population ageing. The number of elderly persons will increase dramatically in the next two to three decades. As the decline of mortality in the 1950s-60s and the decline of fertility since the 1970s went ahead of China's economic development, the current challenges resulting from demographic changes are also going ahead of economic development, and will have stronger impacts. The impact of population ageing will relate to all aspects in society and all persons in the society, therefore it is not only issues of elderly care and about elderly people. The government of China addressed ageing issues with a fully awareness on the challenges China has never had before. However the whole society is not fully prepared for the challenge, including civil society and private sectors, regarding social service and market.

This working paper is one of the background reports for the project "Population ageing in China: causes, consequences, and response strategies" carried out in the Institute of Population and Labor Economics. As a result of desk review of existing statistics and research publications, this paper describes current situation and future trend of population ageing in China, exams possible economic consequences of population ageing in the society, and reviews government responses in policy and practice; it also discusses the potential of silver economy in the near future.

1 A profile and trend of population ageing in China

Completed demographic transition in the turning of the century, China has been advancing to an ageing society. The proportion of elderly persons aged 65 or above increased from 6.9percent in 2000 to 8.9percent in 2010¹, and will reach 25.9percent in 2050. The number of elderly persons in China will grow fast in the next two to three decades, from nearly 130 million in 2012 to more than 200 million in 2025-2030, and reach 300 million during 2035-2040².

As the consequence of mortality decline began in 1950s and fertility decline two decades later (see Figure 1), population ageing is inevitable in

¹ Calculated from: NBS. Tabulation on the 2010 Population Census of China. Beijing, China Statistics Press, 2012. Most of demographic data for 2010 are from the same source, if not specified.

² Median scenario by UN projection. Source: United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision, CD-ROM Edition.

China. China experienced a high fertility in the 1950-60s, about 6 children per couple in average. The dramatic fertility decline in 1970s brought down total fertility to near the replacement level, and it further declined to below replacement level in early 1990s, then stay at 1.5-1.6 or even lower in the 21st century.

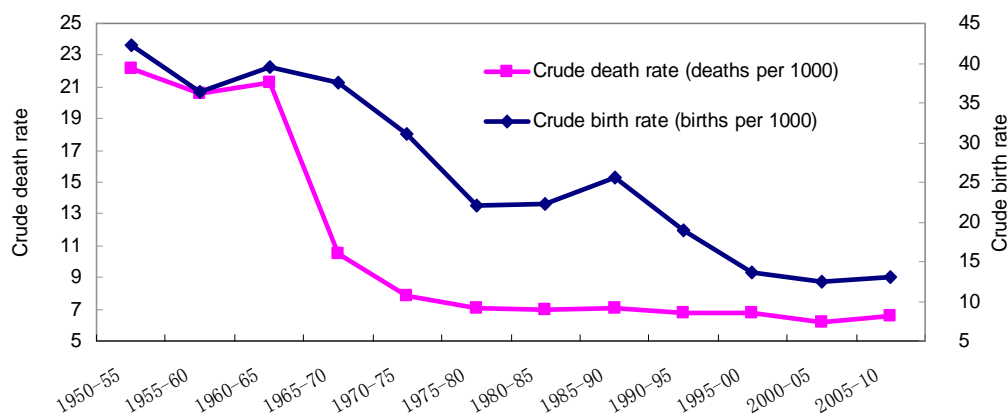


Figure 1 Changes of birth and death rates over time, 1950-2010

Source: United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision, CD-ROM Edition

Fertility drop was mainly contributed by universal family planning service and strong promotion for later marriage, longer spacing, and smaller family (*wan xi shao*) in the 1970s, then birth control policies promoting one child per couple later. However, evidences show that further fertility decline in the 1990s have been the mixed result of social-economic development, cost of childbearing and childrearing (economic, time, and opportunity cost), rising expectation and rising cost of children's education. With the improvement of women's education attainment and non-agricultural labor participation, women delayed their age at marriage and childbearing significantly. The average age at first marriage of Chinese women increased from 19.6 in 1960 to 24.9 in 2010, and the average age giving first birth rose from 22.0 in 1960 to 25.9 in 2010.

As 1950-60s birth cohort approaching their sixties, China will experiencing very fast ageing in the next few decades; as their next generation reach age 60 and move beyond, another wave of fast ageing will come around 2050. If there is no significant fertility increase, proportion of youth will continue to decrease, which would result population structure with more elderly persons as shown in

Figure 2. It implies an ever decreasing labor force, an ageing society, and a long lasting negative population growth (until the end of 21st century, by projection of UN).

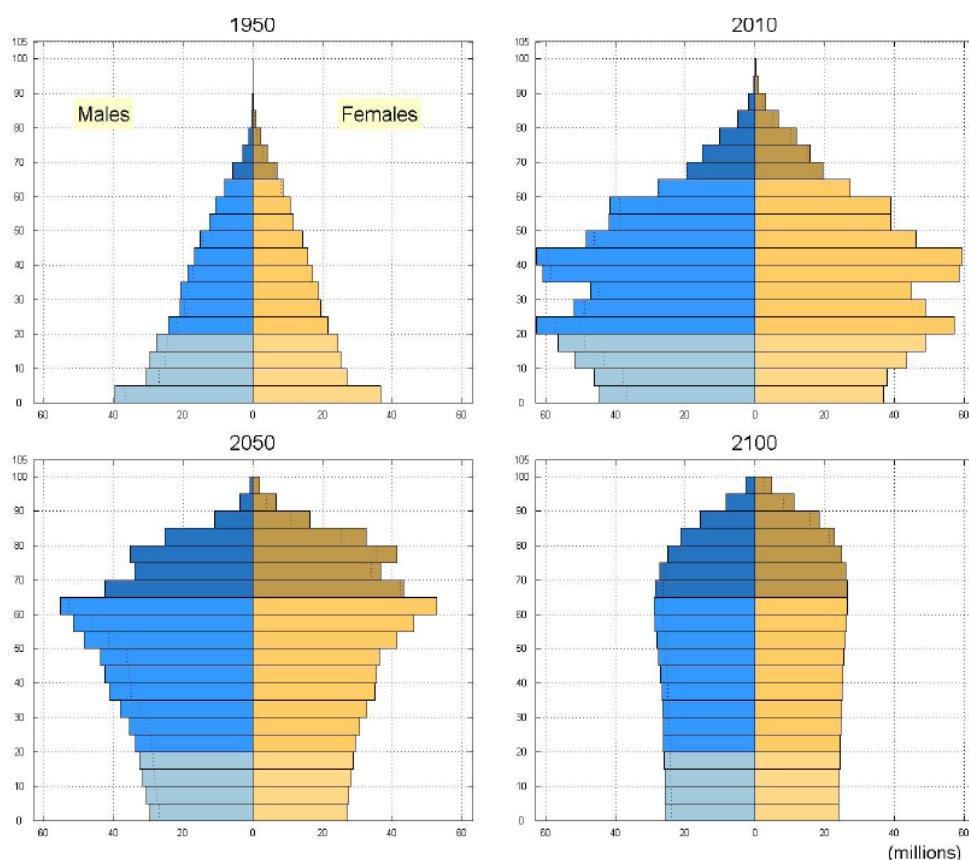


Figure 2 Population structure change and trend, 1950 to 2100

Source: same as Figure 1

The elderly population also ages as total population ageing. The proportion of oldest old (aged 80 or above) increased from one percent in 2000 to 1.6 percent in 2010, and will reach nearly seven percent in 2050. With an average life expectancy at birth 74.8 in 2010, a 3.4 year increase from 2000, a further increase is expected for the next decade. According to 2010 National Population Census, there are 35,934 centenarians (aged 100 or above) in China, the number was 17,877 in 2000. Labor force population is also ageing, as shown in Figure 2, the middle segment from age 20 to 65 in the pyramid.

Population ageing process differs between urban and rural areas. Although fertility of urban population has been much lower than most rural areas, ageing process is faster in rural than urban because of labor migration. Migrants in China was 221 million in 2010, most of them are young or middle age, and 63 percent of them were from rural, mostly migrate to cities for work.

While the rural migrants make contribution to the fast economic growth, they also changed age distribution of rural and urban significantly. Rural areas (labeled as “county”) is more advanced in ageing than urban (city and town) shown in Table 1, as young labor force migrated out and leave elderly left behind.

Table 1 Ageing in rural and urban, 2010 (percent)

Age structure \ Region	50+	60+	65+	80+
National total	25.3	13.3	8.9	1.6
City	22.9	11.5	7.7	1.3
Town	23.1	12.0	8.0	1.4
County	27.4	15.0	10.1	1.8

Source: NBS, 2012.

2 Macroeconomic effects of population ageing

Population ageing is believed having impact on macro economics by either age structure change or by behavior change. An aged population will significantly differs from a younger population regarding labor supply and labor participation, and there maybe also an impact on productivity. The care needs of elderly will also affect time arrangement and employment of family members, specifically impact on labor participation of middle age women. There are also studies about impact of ageing on saving, consumption, and price of housing. Although different opinions and research results show double effects of population ageing on economics, challenge, pressure, or even burden from this demographic change is inevitable.

2.1 Impact of population ageing on health expenditure

Health expenditure

The health expenditure of China in 2011 is only 5.1 percent of total GDP according to statistics from World Bank¹ and Center for Health Statistics and Information of Ministry of Health (2012), which is much lower than world average (10.1percent). The expenditure is expected to increase with increasing input to public health, rising cost of health care, as well as population ageing. On 17 August 2012, the Ministry of Health published

¹ <http://apps.who.int/nha/database>

*Healthy China 2020: A Strategic Research Report*¹, indicating that the healthcare expenditures would be increased, taking up 6.5 percent to 7 percent of GDP in the year of 2020.

Population ageing in China will obviously bring a direct impact on health expenditure, as observed in other countries. Figure 3 shows the “J” shape relationship between age and two week prevalence as well as hospitalization rate. The relationship between health expenditure and age is the same “J” shape. Health expenditure is not only increase by age, but also increase faster for elderly when there is an increase in cost of health service. Health expenditure in China differs significantly from rural to urban, urban residents’ health expenditure has been estimated as twice as rural residents’.

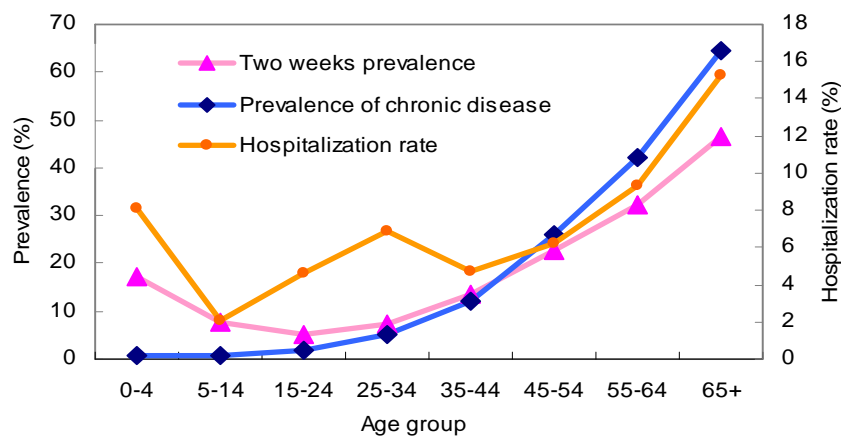


Figure 3 Health and service use from a national survey, 2008

Source: Center for Health Statistics and Information, Ministry of Health, 2009.

The latest national survey on health service in 2008 found that prevalence of chronic disease (self reported) is much higher among elderly persons (see Figure 3), about 64.5percent among respondents aged 65 or above, while 85.2percent urban elderly reported a chronic disease². The same survey also found that there has been a significant increase in prevalence of chronic disease as well as hospitalization rate since the last survey in 2003, which maybe the contribution from both population ageing and improved health service accessibility.

¹ Zhu Chen, *Healthy China 2020: A Strategic Research Report*, Edition 1, People’s Medical Publishing House, 1 Aug 2013, Beijing

² Center for Health Statistics and Information, Ministry of Health, 2009.

Social medical insurance

There are currently three major social medical insurance programs in China: social medical insurance for urban workers; basic medical insurance for urban residents (not working), and new cooperative medical scheme (NCMS) for rural residents. The three programs covered more than 95 percent of total population, and a basic safety net for health care of 1.3 billion people have established¹. From a national sampling survey, 2010 Survey of the Aged Population in China, health insurance coverage (of all types) for elderly aged 60 or above was 95.3percent in urban and 98.3percent in rural (China Research Center on Aging, 2012).

However, with a relative short history, social medical insurance programs are not satisfactory, especially not catching up the dramatic demographic change. With an increasing in proportion of elderly and decreasing in labor force, the “pay as you go” system will have serious deficit in the near future. There are some other problems could be worse with more elderly in the system, such as over prescription and over provision of profitable services. Further health system reform has to take the factor of population ageing into count.

Old-age care service

Ministry of Civil Affairs published 2012 Social Service Development Statistics² which show that the number of old age care institutions nationwide is 44304, with 4.2 million beds (including 198,000 community day-care beds) for old-age care, and the institutional beds available per thousand elderly is 21.5, a 7.5 percent increase from year of 2011. The service institutions accommodated 2.94 million seniors by the end of year 2012, an increase of 12.7 percent from previous year.

The *Plan of Social Service System on Elderly Care (2011-15)* by the State Council requests to double day-care and institution care during the Twelfth Five Year, to remold 30 percent of existing facilities by the national standard³. The target is 30 beds per thousand elderly in 2015.

Since more elderly need help in their daily activity, and the demand for help increases significantly as a person ages, the number and proportion of

¹ http://news.xinhuanet.com/politics/2013-08/07/c_116837861.htm

² http://www.gov.cn/gzdt/2013-06/19/content_2428923.htm

³ http://www.china.com.cn/policy/txt/2011-12/28/content_24266535.htm

elderly persons who have need for long term care will increase as population ageing in China, implies a higher health service cost and a higher care burden to the family. Some efforts explore to include long term care into the scope of health insurance to address the challenge. The pilot practices could provide experiences for a sustainable and affordable long term care insurance scheme.

Pursuant to *The State Council's Several Opinions on Accelerating the Development of Services for the Elderly* published September 2013¹, the country would encourage foreign investment in elderly care services industry and apply preferential policies including tax incentives equally to domestic and foreign investors in the industry.

The main reasons for few foreign investors in elderly care service are likely that the ageing population generally does not full knowledgeable about and fell less trustworthy to non-public service providers. On the other hand, most foreign companies are aiming at mid- and high-end markets while the majority of the elderly can only afford relatively low price, which results in structural dislocation.

2.2 Impact of population ageing on social security expenditures

There is a common awareness on the impact of population ageing to social welfare expenditures. Pension system would be mostly affected other than social medical insurance discussed earlier.

Current pension system in China has been divided into four parts: (1) the retirement system for governmental and institutional staffs; (2) the Urban Basic Old-age Insurance covering labors in urban area; (3) the New Rural Old-age Insurance covering all rural residents over 16 years old; and (4) the Urban Residential Old-age Insurance covering all urban residents over 16 years old without joining in the Urban Basic Old-age Insurance. By the end of 2012, there are 304.27 million persons covered by the Urban Basic Old-age Insurance, and 483.70 million persons covered by the New Rural Old-age Insurance and Urban Residential Old-age Insurance together.

Except the retirement system for the governmental and institutional staffs which is supported by the public finance, other systems (UBOI, NROI and UROI) all require participators to contribute to the system. The funds of these

¹ http://www.gov.cn/zwqk/2013-09/13/content_2487704.htm

systems are combined with two parts: social pooling and individual account. Their pensions are combined with basic pension and individual pension. Presently, the payments of NROI and UROI are quite low, and the average payment of UBOI is about 44percent of average wage of urban workers in 2012.

As population ageing, the population who makes contribution to the system will decrease while a growing elder population benefited from the system. There have been intensive debates on the possible risk in deficit brought by population ageing in recent years, along with debate on delay retirement age and pension system reform. Although there is not an agreement on the exact impact, it is commonly recognized the urgency of reform the system to response to further population ageing.

2.3 Impact of population ageing on economic growth and labor supply

The dependency ratio recorded a trajectory of age structure change in the last sixty years, after enjoyed “demographic bonus” for almost four decades. However, as Figure 4 shows, the dependency ratio starts to increase after the demographic dividend reached its peak in China, mainly due to the contribution of fast ageing while fertility kept much lower than replacement for a long period. The NBS announced a 3.45 million decrease in labor force (population aged 15-59) in the year of 2012 from that of in 2011, China will experience labor force decrease in the next several decades as the annual number of newborns will decrease significantly. The 65+ dependency ratio will surpass dependency ratio of children around 2030 in the process of accelerated population ageing.

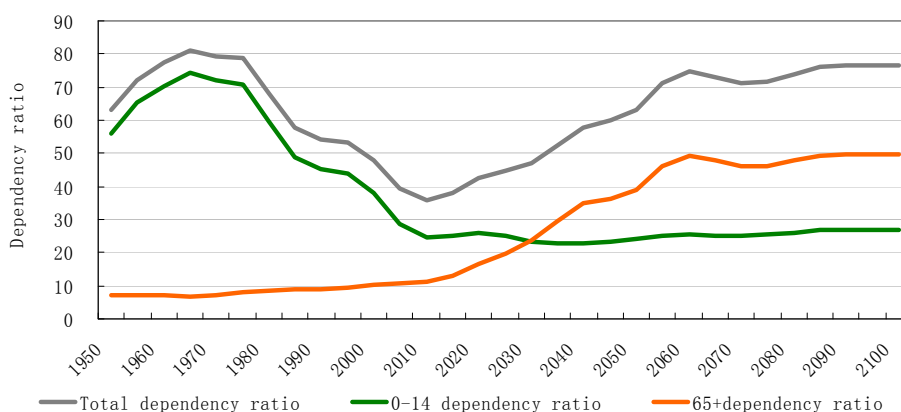


Figure 4 Dependency ratio of China's population, 1950 to 2100

Source: same as Figure 1

Although there are quite a few debates on possible economic consequences of population ageing, a common consensus is that changes in labor force age structure in macro and changes in care needs of elderly in family will both affect labor force participation. With a fully awareness of the situation in near future, discussions about favorable policy to facilitate human capital accumulation and increase labor productivity in response to the changes have been raised in recent years.

3 Economic status and income of elder persons in China

The elder age group population has obvious disadvantage in economic status. The major livelihood source of elder persons comes from family members (40.7 percent), according to the result of 2010 national population census. The other source is income of their own (29.1 percent) and the next is retirement pension or old age insurance (24.1 percent). Although the structure has not been changed during the first decade of 21st century (Jiang and Zheng, 2013), a slight decrease is observed on support from family members (it was 43.8 percent in 2000) and an increase in proportion of elderly who have pension or insurance (19.6 percent in 2000). The proportion of elderly depending on pension or insurance will increase even faster in the next decade or so, due to the reform of pension system and old age insurance schemes.

Findings from 2010 Survey of the Aged Population in China show a significant difference between urban and rural elderly on their economic status. Most urban elderly retired from a paid job (74.4percent), while 21.3percent never enrolled in formal employment (that for elder women is 23 percentage points higher than that of men). More than half rural elderly still work in agriculture (44.3percent) or other non-agriculture work (8.6percent). The urban elderly who have pension or social insurance (about 84.7percent) receiving 1527 Yuan monthly in average, while the coverage of rural scheme was about 34.6percent in 2010 (it was reported a nearly universal coverage in September 2012¹) with a monthly average 74 Yuan per person (China Research Center on Aging, 2012).

¹ Rural Welfare Department, Ministry of Human Resource and Social Welfare. News brief on “Promoting urban and rural old age insurance to a new stage”, published May 13, 2013.
http://www.mohrss.gov.cn/neshbxs/NCSHBXSgongzuodongtai/201305/t20130531_104217.htm

Annual income also differs significantly by age group, according to a sampling survey result (see Figure 5). Annual income decreases by age after reaches the peak in age 25-34. Although it is a sampling survey, the trend agrees with other survey results. The 2010 Survey of the Aged Population in China shows that annual income of the sampled elderly (age 60 or above) was 17,892 Yuan in urban and 4,756 Yuan in rural.

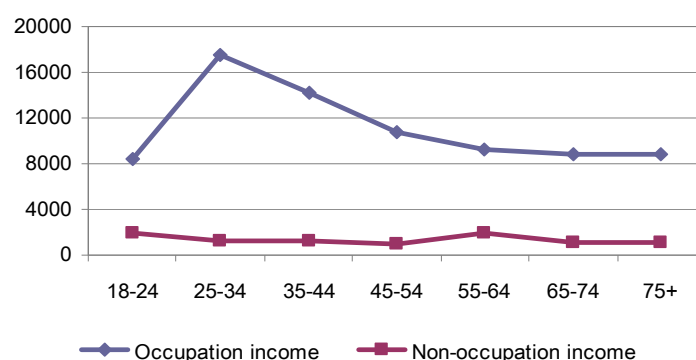


Figure 5 Annual income by age group (RMB Yuan)

Source: China General Social Survey (CGSS), 2008 (<http://www.chinagss.org/>)

According to the China Health and Retirement Longitudinal Study (CHARLS) 2011-2012¹, the major source of the wealth of people aged 45 was residential holding 72.9% for those in the middle wealth per capita quintile, and the other sources include land (16.4%), consumer durables (5%), liquid assets (mainly for collection) (3.9%) and fixed production assets (1.8%). The median wealth per capita was 33,340 yuan, the median expenditure was 5,720 yuan and the median income was 8,680 yuan, and the three numbers also suggested a relatively low material living of middle or old aged people. Table 2 presented the medians of the above mentioned three indicators in different age groups (45-59 and 60+) and in different household registration types. After more than 30 years' development, the quasi-elderly Chinese (aged 45-59) have the cohort effect of higher wealth and the mixed effect of age and cohort on income and expenditure. Especially for the rural households who might have benefited from labor migration, their income and wealth were over 70% more than their older counterparts, which indicates they will be at a higher economic level in their 60+.

¹ <http://charls.ccer.edu.cn/en>

Table 2 Median Expenditure, Income and Wealth Per Capita by age group and household registration type (Age 45+), 2011-2012

	45-59		60+	
	Rural household register	Urban household register	Rural household register	Urban household register
Expenditure	5,317	9,930	4,005	8,690
Income	7,975	16,773	4,400	16,320
Wealth	30,379	82,500	18,395	70,760

Source: CHARLS, 2013

4 Impact of a growing elderly population on consumption

The role of population ageing in consumption has not been known clearly, different researches provided different opinions from different macro or micro data by different indicators and analytical methodologies (Li, 2013). A research using provincial statistics found that population ageing significantly reduces household consumption of urban residents while the effect in rural is not significant, furthermore the effect is stronger in east China than that in middle and western areas (Mao et al. 2013).

Survey result of 2008 CGSS shows there is a relationship between age and household expenditure per capita (figure 6). The expenditure reaches peak in 25-34 age group, then increases again after age 75. The expenditure peaks at younger age seems mainly a contribution of childbearing and childrearing, and the rise in older age should be mainly due to medical cost. A study shows that medical expenditure of urban residents increase dramatically after age 70 (Zeng, et al. 2010).

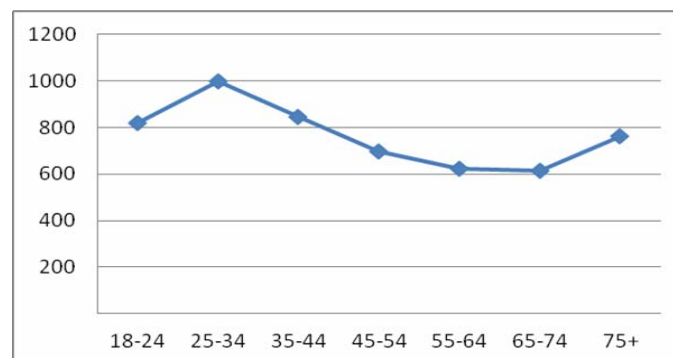


Figure 6 Household expenditure per capita by age (RMB Yuan per month)

Source: Estimated from CGSS 2008.

The burden of care for ever growing ageing population will generate the demand for healthcare services, including medical, nursing, elderly institutions and finance service for the aged. Accelerated expansion of the medical and health-related industry (such as the pharmaceutical industry and enterprises manufacturing elderly appliance) is expected.

5 Response to population ageing: government measures and policies

The Government of China has been addressing population ageing issues by legislation, development plans, and programmes or projects.

The *Law on the Protection of the Rights and Interests of Elderly People* was amended in 2012 from its first version of 1996, to address the emerging issues, such as emphasize the government's responsibility on budget related to work on ageing, health insurance and pension system reform, NCD prevention, policy support to family old age care, community capacity development, as well as promote social participation of elderly. The law clearly states government's support and encourage on mobilizing social resource for the development of service for seniors.

The *National Five-Year Plan for Development on Ageing (2011-15)* defines 11 major tasks to work on, including: social security, health care, support to family, elderly services, living environment, ageing industry, cultural activities, social management, legal rights, scientific research, as well as international exchanges and cooperation. The Five-Year Plan clearly promotes the development of ageing related industry by including the industry into national economic and social plan and into the list of government support sectors, by requiring develop and implement policies to guide and support loan and investment to ageing related industry, and by develop a market for consumption of seniors.¹

Another related government document, the *Plan on Construction of Social Support Service System for the Elderly (2011-2015)* defines tasks during the Twelfth Five-Year more specifically on: development of urban service facilities, service network to enable elderly living at home, construction of institutions,

¹ <http://www.chinanews.com/gn/2011/09-23/3349429.shtml>

services for rural elderly, ageing industry development, and medical care function of institutions.

*The State Council's Several Opinions on Accelerating the Development of Services for the Elderly*¹ provided that [the country] should implement the existing preferential tax policies for elderly services industry, including the business tax exemption for elderly health care services provided by the old age care institutions. It also provided that no administrative fee shall be levied on the construction of non-profit old age care institutions, only 50% should be levied on the profitable old age care institutions, and administrative fee on elderly services provided by old age care institutions shall be appropriately relieved. Furthermore, the utilities fees for the old age care institutions shall be charged at residential prices. Foreign invested and local elderly institutions shall enjoy the same preferential tax policies. The country will develop and refine preferential tax policies to support private capital to invest in elderly services.

After more than three decades of reform and opening-up as well as fast economic growth, China is at the historical point of further reform. *The Decision on Major Issues Concerning Comprehensively Deepening Reforms* adopted by the Third Plenary Session of the 18th CPC Central Committee stated reforms related to ageing issues including (paragraph 45): establish a fairer and more sustainable social welfare system; stipulate policies for gradually suspending the retirement age of employees; the central government will take over the social pooling component of pensions for urban and rural residents; diversify investment vehicles for the national social security fund; further develop the elderly services industry and improve protection mechanisms for left-behind children, women and seniors². The reforms will be on track soon.

6 Reforms and pilots in response to the challenge of population ageing

Reforms in social security and social service

The Twelfth Five-Year Plan on Social Security by State Council encourages

¹ http://www.gov.cn/zwggk/2013-09/13/content_2487704.htm

² http://www.chinadaily.com.cn/m/shanghai/tujiazui/2013-11/16/content_17111754.htm#

local government to explore different approaches on social support for elderly as a complimentary to old age insurance system, including provide policy support to old age care by family, to provide stipend for elderly with one child, no children, or disabled for receiving help and care.

Old-age social support service system based on aging at home and supplemented by community service and supported by civil organizations is in construction in most urban and some rural areas. Some local initiated models have been scaled up, such as “virtual homes for seniors.”¹

Creating elderly friendly living environment to improve their quality of life

To provide elderly persons a friendly living environment is required in the *Law on the Protection of the Rights and Interests of Elderly People* amended in 2012 in a specific chapter, it defines responsibility of the state in promoting and supporting the development of elderly friendly housing and accessible public facilities for elderly and persons with disabilities, to guarantee the improvement of living environment for elderly to improve people's quality of life in an ageing society. China designated 13 pilot cities as “elderly friendly” city up to end of 2012, the city of Qiqihar, one of them, received UN award as international elderly friendly city (Wu, 2013).

Some local policies also intend to encourage non-government capitals invest in service for elderly. For example, Beijing provides favorable policies on land use and public facility price for non-profit old age care enterprise, Guangdong has special favorable policy for Hong Kong invested old age care institutions, three old age care institutions own by Hong Kong enterprise were opened up to the end of 2012 (Wu, 2013).

Some government supported non-profit enterprises or organizations have been started in recent years, aiming at development of social service for aging nationwide. For example, ZhongYi Ageing Development Center, established in 2012, is a non-profit organization with branches nationwide. The Center runs an IT service platform to provide information and remote diagnoses on health promotion and health care, elderly centers to provide service and assistance to elderly on health and daily activities, and project of elderly home chain in

¹ It is a new-old age service operation model based on aging at home, with the use of modern technologies and the IT platform, and having government funds purchase services and social service organizations provide the services (Zhang, 2010). The model, initiated in Canglang District of Suzhou, was recognized by the NDRC and the Ministry of Civil Affairs in 2007 and afterward extended to the whole country. (Source: Country Report of the People's Republic of China on Population and Development, September 2013)

several cities.

There have been more innovative practices mainly in cities with advanced ageing. However a large potential is there for a market of silver industry yet to explore. As population ageing will bring China more challenges as well as opportunities, a favorable policy environment would facilitate the booming of silver industry in China. Although it starts quite late, the speed of development could be unpredictably fast.

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