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### CHINA'S POPULATION AGING AND OLD-AGE SECURITY IN THE PAST 40 YEARS OF REFORM AND OPENING-UP

**Abstract:** 40 years of reform and opening-up in China have witnessed the country making historic achievements in economic and social development, and also its demographic structure shifting from an adult-type to an aged type. Population aging in China is brought forth by not only the natural demographic structural shift, but also policy conditioning. Hence aging in China is characterized by getting old before getting rich, large size and fast speed and regional imbalance, etc. International comparisons reveal that population aging in China is much higher than that of other developing countries in emerging economies of the world. In order to cope with the aging challenge, the Chinese government has continuously established and improved its institutional, policy and regulation arrangements on old-age security, and made remarkable achievements accordingly.

**Keywords:** 40 years of reform and opening-up, aging, old-age security

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### СТАРІННЯ НАСЕЛЕННЯ КИТАЮ І БЕЗПЕКА В СТАРОСТІ ЗА ОСТАННІ 40 РОКІВ РЕФОРМ І ВІДКРИТТІВ

**Анотація.** Старіння є глобальним явищем і неминучим продуктом економічного і соціального розвитку на певному етапі. Соціально-економічний розвиток, а отже і кращий рівень життя, підвищена поінформованість громадськості про здоров'я, значно нижчий рівень смертності внаслідок покращення медичних послуг і широко використовуваних технологій медичного лікування, а також тривала тривалість життя призвели до поширених тенденцій до старіння.

40 років реформ і відкриття в Китаї стали свідченням історичних досягнень країни в економічному і соціальному розвитку, а також демографічній структурі, що переходить від дорослого типу до безвікового типу. Старіння населення в Китаї спричинене не лише природною демографічною структурою, а й формуванням політики. Отже, старіння в Китаї характеризується старінням до набуття багатства, великим розміром, високою швидкістю і регіональним дисбалансом тощо. Міжнародні порівняння показують, що старіння населення в Китаї набагато вище, ніж в інших країнах.

Для того, щоб впоратися із викликами старіння, китайський уряд постійно встановлював та вдосконалював свої інституційні, політичні та регуляторні механізми щодо забезпечення прав, і відповідно зробив значні досягнення.

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Для того, щоб мати макророзуміння ситуації старіння населення Китаю, в цій статті порівнюється ситуацію Китаю з іншими азіатськими країнами, десятьма найбільш густонаселеними країнами світу та країнами.

Через міжнародне порівняння можна виявити, що старіння населення Китаю характеризується великими масштабами, високою швидкістю, але не найглибшою мірою. Тільки десять країн Азії старіють більше, ніж Китай, але в усьому світі більшість з них є розвиненими країнами.

На ринках, що розвиваються, таких як країни БРІКС, рівень старіння в Китаї значно вищий, ніж у інших країнах, що розвиваються. У порівнянні з високими коливаннями рівня старіння, представленим Росією, та повільним зростанням старіння населення, яке представляє Індія, старіння населення Китаю є швидким і стійким.

Ця стаття коротко розгляне процес старіння населення Китаю з часу реформування та відкриття, а також проаналізувати характеристики старіння Китаю з відповідними даними та дослідженнями, а також характеристики порівняно з іншими країнами. Також в цій статті здійснений огляд досягнень старого соціального забезпечення Китаю у відповідь на ці зміни. Нарешті, у статті розглядаються поточні виклики, з якими стикається китайська безпека, і висуваються перспективи майбутнього старого суспільства Китаю.

**Ключові слова:** 40 років реформ і відкритості, старіння, забезпечення старіння.

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## СТАРЕНИЕ НАСЕЛЕНИЯ КИТАЯ И БЕЗОПАСНОСТЬ В СТАРОСТИ ЗА ПОСЛЕДНИЕ 40 ЛЕТ РЕФОРМ И ОТКРЫТИЙ

**Аннотация.** Старение является глобальным явлением и неизбежным продуктом экономического и социального развития на определенном этапе. Социально-экономическое развитие, а значит и лучший уровень жизни, повышенная осведомленность общественности о здоровье, значительно более низкий уровень смертности в результате улучшения медицинских услуг и широко используемых техно-логий медицинского лечения, а также длительная продолжительность жизни привели к распространенным тенденциям к старению.

40 лет реформ и открытия в Китае стали свидетельством исторических достижений страны в экономическом и социальном развитии, а также демографической структуре, переходит от взрослого типа до безвозрастного типа. Старение населения в Китае вызвано не только естественной демографической структурой, но и формированием политики. Итак, старение в Китае характеризуется старением до вступления богатства, большим размером, высокой скоростью и региональным дисбалансом и т.д. Международные сравнения показывают, что старение населения в Китае гораздо выше, чем в других странах. Для того, чтобы справиться с вызовами старения, китайское правительство постоянно устанавливает

ливалось і совершенствовало свої інституціональні, політичні і регуляторні механізми по забезпеченню прав, і відповідально зробив значительні досягнення.

Для того, чтобы иметь макроразумение ситуации старения населения Китая, в этой статье сравнивается ситуацию Китая с другими азиатскими странами, десятью наиболее густонаселенными странами мира и странами.

Через міжнародні порівняння можна виявити, що старіння населення Китаю характеризується великими масштабами, високою швидкістю, але не глибокою ступенню. Тільки десять країн Азії старіють більше, ніж Китай, але в усьому світі більшість з них є розвинутими країнами. На розвиваючихся ринках, таких як країни БРИКС, рівень старіння в Китаї значно вище, ніж в інших розвиваючихся країнах. Порівняно з високими коливаннями рівня старіння, представлених Росією, і повільним зростанням старіння населення, представлених Індією, старіння населення Китаю є швидким і стійким.

В цій статті коротко розглянуто процес старіння населення Китаю з моменту реформування і відкриття, а також проаналізовані характеристики старіння Китаю з даними і дослідженнями, а також характеристики порівняно з іншими країнами. Також в цій статті здійснено огляд досягнень старого соціального забезпечення Китаю в відповідь на ці зміни. Нарешті, в статті розглядаються поточні виклики, з якими стикається китайська безпека, і висунуто перспективи майбутнього старого суспільства Китаю.

**Ключевые слова:** 40 лет реформ и открытости, старение, безопасность по старости.

**Problem statement.** Aging is a global phenomenon and an inevitable product of economic and social development in a certain stage. Socio-economic development, and consequently better living standards, heightened public awareness of health, much lower mortality rate as a result of improved healthcare services and widely used medical treatment technologies, and also extended life expectancy have led to prevalent aging trends. The United Nations defines that a country/region is aged when the proportion of its population aged over 65 reaches at least 7 % of the total or when the proportion of its population aged over 60 exceeds 10 % of the total. France became the first aged country in 1851 (Li Zhongsheng, 2006).

Since then, this aging demographic trend has continued relentlessly.

Over 40 years of reform and opening-up, China has made historic achievements in economic and social development, significantly improved people's living standards, enhanced medical and health care, and greatly extended the life expectancy. At the same time, as the family planning policy was set as a basic state policy and constitutionalized in 1982, birth rate began a continuous fall, down from 18,25 % in 1978 to 11,90 % in 2010. Although later adjustments in birth policies helped the birth rate rebound slightly, they are hard to rock the population structure in a short time. Under the compounded impact of these factors, China's population

shifts from an adult structure to an aged one. According to *China Population Aging Development Trend Forecast Report*, entering an aged society in 1999, China currently has the largest aged population in the world. The sixth population census in 2010 also showed that the population aged 60 and over accounted for 13,26 % of the total population, among which the population aged 65 and over accounted for 8,87 %. By the end of 2016, population aged 65 and over in China had reached 150 million, accounting for 10,8 % of the total population. It is inarguable that aging in China has accelerated, and has become China's biggest challenge to development in the 21st century.

**Tasks of research.** This paper will briefly review the aging process of China's population structure since the reform and opening up, and analyze the characteristics of China's aging with relevant data and research, as well as the characteristics compared with other countries. Then, this paper combs the achievements of China's old-age social security in response to these changes. Finally, the article combs the current challenges faced by China's old-age security, and puts forward prospects for the future of China's aging society.

## THE BASIC MATERIAL OF RESEARCH

### 1. The Aging of Population Structure in the Past 40 Years

In the early decades since the founding of New China, China's population structure has become younger. According to the results of the first and second censuses, the proportion of children aged 0-14 has increased from

36,3 % in 1953 to 40,7 % in 1964. Since the late 1970s, with the steady decline of the birth rate and the significant increase of life expectancy, the changing trend of China's population structure has been a continuous aging. From the perspective of the changing process of population structure, the trend of reform and opening up in the past 40 years can be roughly divided into three stages.

The first stage is from the early 1980s to 1990, characterized by a steady proportion of the elderly population and a rapid decline in the proportion of children. According to the data of the third and fourth censuses, from 1982 to 1990, the population of the elderly over 65 years old in China increased from 49,91 million to 63,68 million, an increase of 13,77 million, and the proportion of the total population only rose from 4,9 % to 5,6 %, an increase of 0,7 percentage points. But at the same time, as China began to implement strict family planning policy in the late 1970s, the family planning policy in 1982 was written into the Constitution, which resulted in a steady decline in the birth rate of the population and a clear trend of fewer children. In less than 10 years, the proportion of children aged 0-14 in the total population has dropped from 33,6 % to 27,7 %, a sharp drop of nearly 6 percentage points (see Figure 1).

The second stage is from 1991 to 2010, which is characterized by a rapid increase in the proportion of the elderly population and a continuous decline in the proportion of children. Comparing the data of the fifth and sixth censuses, it can be found that the proportion of the elderly over 65 years of age is increasing rapidly, increasing by 1,4 percentage points in the ten years from 1991 to 2000 and 1,9 percentage

points in the ten years from 2001 to 2010. In addition to the growth of the elderly population itself, the aging of this population structure is also related to the rapid decline of the birth rate of the population. Over the past two decades, the proportion of children aged 0-14 has further decreased from 27,7 % to 16,6 % (see figure 1). As the proportion of children and adolescents continues to decline, the development potential of China's population has been greatly weakened, resulting in China's unique «only child aging» phenomenon (Mu Guangzong, Zhang Tuan, 2011). By 2002, a large number of families were single-child families, with a population of 158 million children aged 0-30, accounting for 29,3 % of the population of the same age (Mu Guangzong, 2002a:74). The characteristics of this demographic structure will further increase the risk of old people's lack of support. Because the children population is at the bottom of the population age pyramid, the shrinkage at the bottom of the pyramid caused by the sharp decrease of birth population is also summarized by Hu Cangping et al. (2004) as the «bottom aging» feature of population aging in China.

The third stage is since 2011, characterized by an accelerated increase in the proportion of the elderly population and a steady increase in the proportion of children. According to the estimated data of the annual population sampling survey of the National Bureau of Statistics, from 2010 to 2016, the proportion of the population over 65 years old in the total population of China rose from 8,9 % to 10,8 %, up by 1,9 percentage points, and the rising rate in only six years was the same as that in the previous 10 years (see Figure 1). At

the same time, the government began to change its population policy because it was aware of the problems that might arise from the rapid decline in the birth rate. In 2011, the «two-child policy» was fully implemented throughout the country, and in 2013, the «two-child policy» was implemented until 2015. Encouraged by these policies, the population of children aged 0-14 began to rebound gradually after reaching the lowest level of 222.31 million in 2011, resulting in a slow increase in the proportion of children in the total population.

There are two main forces leading to ageing: the decline of birth level and the decline of mortality in the elderly. China's ageing is also the result of these two forces (Mu Guangzong, Zhang Tuan, 2011). Generally speaking, since the reform and opening up, on the one hand, along with the natural decline of fertility desire brought about by economic and social development and the decline of fertility under policy control, the birth rate of our population has continued to decline rapidly. On the other hand, economic and social progress has led to an increase in the average life expectancy of the elderly. With the rapid development of economy and society, medical and health services at the national level have been significantly improved. The awareness of medical and health care at the individual level and related expenditures have increased year by year, which has led to the gradual improvement of life expectancy in China. The average life expectancy of urban and rural residents has increased from 68,55 years in 1990 to 76,34 years in 2015. Therefore, since 1999, China has officially entered an old-age society.

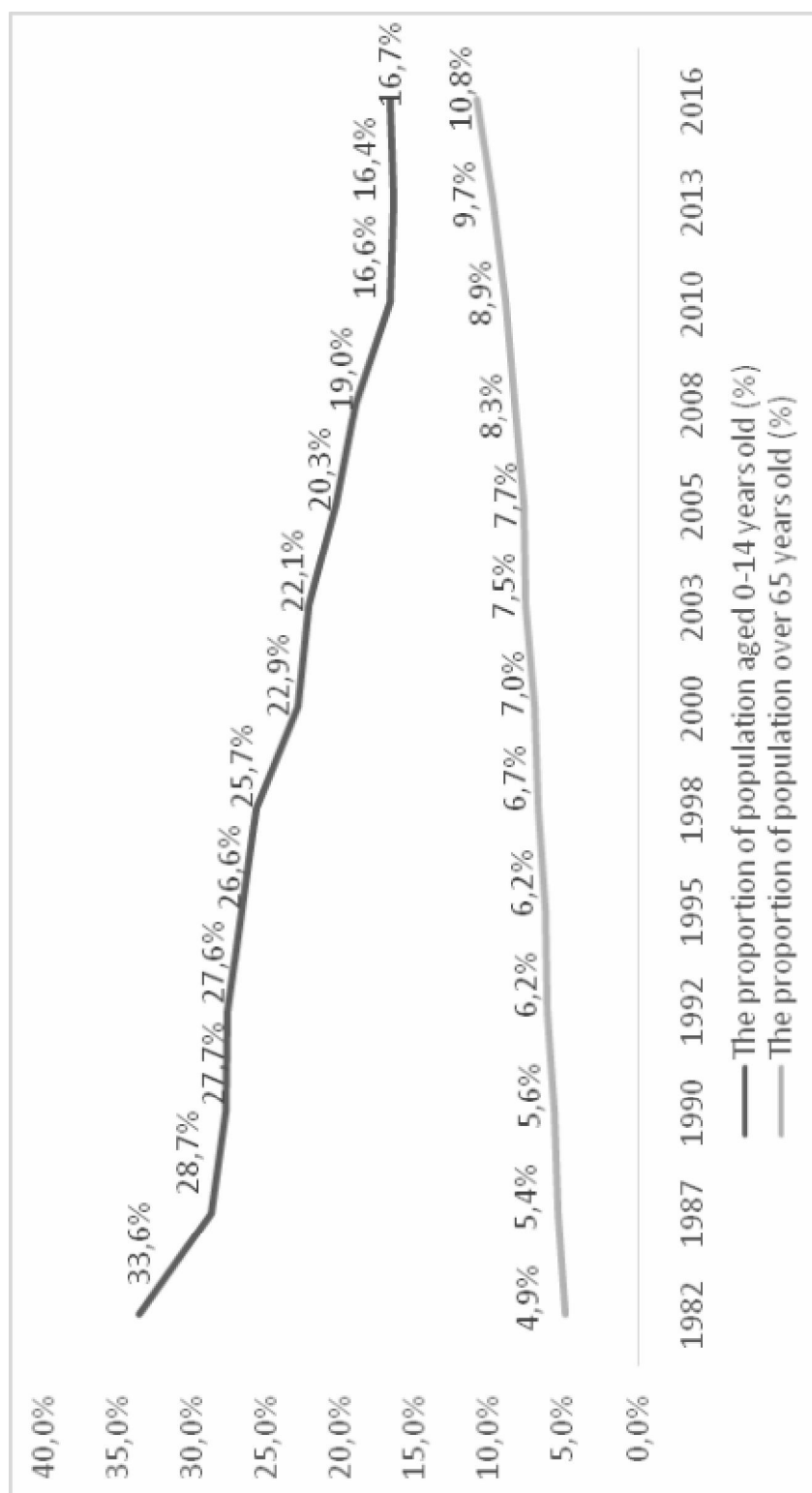


Fig. 1. Proportion of the Population of Old and Young in China from 1982 to 2016

Source: National Bureau of Statistics

At present, not only the size of the elderly population is increasing, but also the proportion of the elderly population is expanding.

## 2. The Characteristics of China's Population Aging

Generally speaking, China's aging is characterized by its early emergence, rapid growth, large population size, and unbalanced distribution between urban and rural areas.

The first is the early onset. China's society became aged before it became modernized, widely known as «getting old before getting rich». After the data of 1982 population census were released, Wu Cangping raised this observation many times in academic conferences and papers (Wu Cangping, 2007). When developed countries become an aged society, their per capita GDP generally reaches more than USD 5,000-10,000, while when China began to age, its per capita GDP just exceeded USD 1,000 (Mu Guangzong, Zhang Tuan, 2011). Later, a number of other scholars conducted systematic demonstration and calculation in this regard. For example, Mo Long (2009) calculated from the Ageing and Economic Coordination Index and concluded that compared with other countries, the aging of China's population from 1980 to 2007 was significantly ahead of the level of economic development. Getting old before getting rich leads to a systemic ill-preparedness for aging in terms of human, physical and financial resources: incomplete old-age security system, lagging elderly care services system and weak elderly care market at national level, and insufficiency of pension or old-age insurance at personal level.

Second, it has a fast growth rate and a large population. The international community generally measures the speed of population aging by doubling the proportion of the elderly population (7 % over 65 years old and 10 % over 60 years old) (Hu Cangping, Du Peng, 2006:43-44). According to United Nations data (2008), it takes 55 years on average for developed countries to increase the proportion of people over 65 years old from 10 % to 21 % of the total population, while China will complete it from 2016 to 2038. The process only takes 22 years. According to the data of the China Statistical Yearbook (2017), since the reform and opening up, the proportion of the population over 65 has been growing rapidly and continuously, from 4,9 % in 1982 to 10,8 % in 2016, and it took only 34 years to double it (see Figure 2). It is well known that China has the largest population in the world, so rapid aging also means a significant increase in the absolute number of the elderly population. From Figure 2, we can also find that the absolute number of the elderly population over 65 years old in China has increased from nearly 50 million in 1982 to 150 million in 2016, even exceeding the population of Russia.

Thirdly, there are great regional differences. China is a vast country with significant regional differences in the level of economic and social development. There are also obvious regional differences in the characteristics of population structure and the degree of aging. Moreover, the process of population aging in different regions is more complex, not only affected by natural

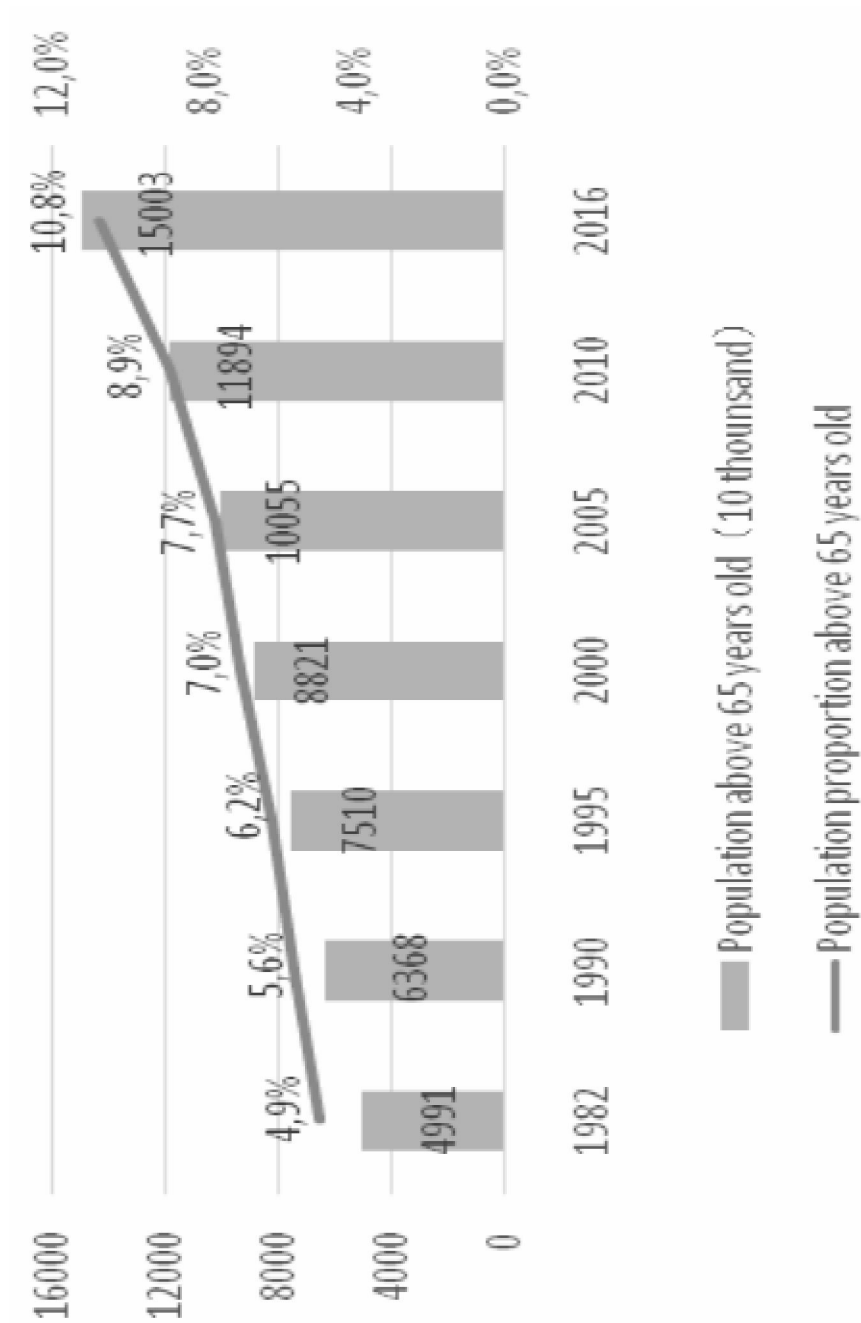


Fig. 2. Size and proportion of population over 65 years old in China, from 1982 to 2016

Source: China Statistical Yearbook 2017



changes such as birth and death levels, but also related to population migration and urbanization between regions. Generally speaking, the eastern region has the highest degree of aging, followed by the central region, and the western region has the lowest degree of aging, showing a gradient distribution trend. The gap will be further widened in the future (Liu Huajun, etc., 2014). According to the sample survey data of the National Bureau of Statistics in 2016, the top five provinces/municipalities directly under the Central Government with the highest proportion of the elderly over 65 years old are Chongqing (14,0 %), Sichuan (13,7 %), Jiangsu (13,5 %), Liaoning (13,2 %) and Shanghai (13,0 %), while the lowest five provinces mainly concentrate in the west, including Tibet (5,0 %) and Shanghai (13,0 %) except Guangdong (7 %) which has a large net population inflow. Qinghai (7,2 %), Xinjiang (7,2 %) and Ningxia (7,8 %) (National Bureau of Statistics, 2017).

Chen Minghua and HaoGuocai (2014) analyzed the aging coefficient and the age-to-child ratio, and found that the regional differences were also obvious, and bounded by 2004. Since then, the inter-provincial differences in the central and western regions have further expanded, while the inter-provincial differences in the eastern regions have converged.

At the same time, the regional differences of aging are also reflected between urban and rural areas. Although cities have a high level of economic development, the phenomenon of «urban-rural inversion of aging» with a high proportion of the elderly population in rural areas is common in Japan, the United States, Britain, Australia and other parts of the world, and China is no

exception (Du Peng, Wang Wulin, 2010). Although the fertility level of the urban population is low and the life expectancy is long, the aging of the rural population structure is very rapid because of the large-scale migration of young rural labor to the city. Spatially, the elderly population in rural areas mainly distributes in the eastern coast and the southern part of the country, and shows a continuous trend toward the central and western regions (Yuan Jun et al., 2007).

### **3. International comparison of the characteristics of ageing**

In order to have a more macroscopic understanding of China's current population aging situation, this paper compares China's situation with other Asian countries, the ten most populous countries in the world and the BRICS countries according to the demographic data released by the United Nations Population Division in 2017.

First, in Asia with the largest elderly population, bordered by Vietnam, 17 Asian countries have over 10 % of the population over 60 years old, and are in the ranks of aging countries. Among them, Japan has the highest degree of aging. The proportion of people over 60 years old is 32,8 %, which is much higher than that of Hong Kong, the second largest area in China, which is 21,8 %. The youngest Asian country with a population structure is Arabia, with only 2 % of the population over 60. The proportion of people over 60 in mainland China is 15,4 %, ranking 11th out of 51 Asian countries (United Nations Population Division, *World Population Prospects: The 2017 Revision*).

Secondly, among the ten countries with the largest population, China has a population of 215 million over 60 years old, ranking first in the world, with 15,4 % of the total population aged over 60 years old, ranking fourth. At the same time, India, the second largest country in population, has only 117 million people over the age of 60. Although it ranks second in size in the world, it is only 8,9 % of the population, ranking sixth. In addition, although the absolute number of people over 60 in Japan, the United States and Russia is far lower than that in China, the proportion of the elderly population is higher than that in China, reaching 32,8 %, 20,6 % and 20,1 % respectively; that is to say, the degree of population aging is higher than that in China. Other populous countries, such as Indonesia, Pakistan, Nigeria, Bangladesh and so on, although the total population ranks at the top of the world, but the elderly population is small, in fact, has not entered an aging society (see Figure 3). It can be seen that among the world's most populous countries, China's elderly population is the largest and the proportion is in the middle.

Thirdly, among the BRICS countries representing the emerging markets of the world, China ranks first in the size of the elderly population over 65 years old, while the proportion of the elderly population ranks second. Of the five BRICS countries, except South Africa, the other four are among the top ten in the world in terms of population size. From the starting point, Russia's aging level has been relatively high, more than 10 % in 1980; at this time, the proportion of the elderly over 65 in the

remaining four countries is less than 5 % and there is little difference, but in the subsequent 30 years of development, the gap gradually appears. The proportion of the elderly population in China and Brazil continues to rise rapidly, while that in India and South Africa is growing relatively slowly. By 2015, Russia, China and Brazil had entered into an ageing society (the proportion of the elderly over 65 was more than 7 %), while India and South Africa had maintained the proportion of the elderly over 65 at the level of less than 6 %, and were still in an adult society (see figure 4).

Through international comparison, we can find that China's aging population is characterized by large scale, fast speed but not the deepest degree. Ten countries in Asia alone are more ageing than China, but worldwide, most of them are developed countries. In emerging markets such as the BRICS countries, China's ageing level is much higher than that of other developing countries. Compared with the high fluctuation of the aging level represented by Russia and the slow growth of the aging population represented by India, China's aging population is rapid and sustained.

#### **4. Construction Achievements of China's Old-age Security since Reform and Opening-up**

Advancing aging and rapidly ballooning elderly population have rendered tremendous pressure on social security policies such as elderly care and medical care. In the process of coping with the aging challenge, China has established and improved its old-age security system and arrangements.

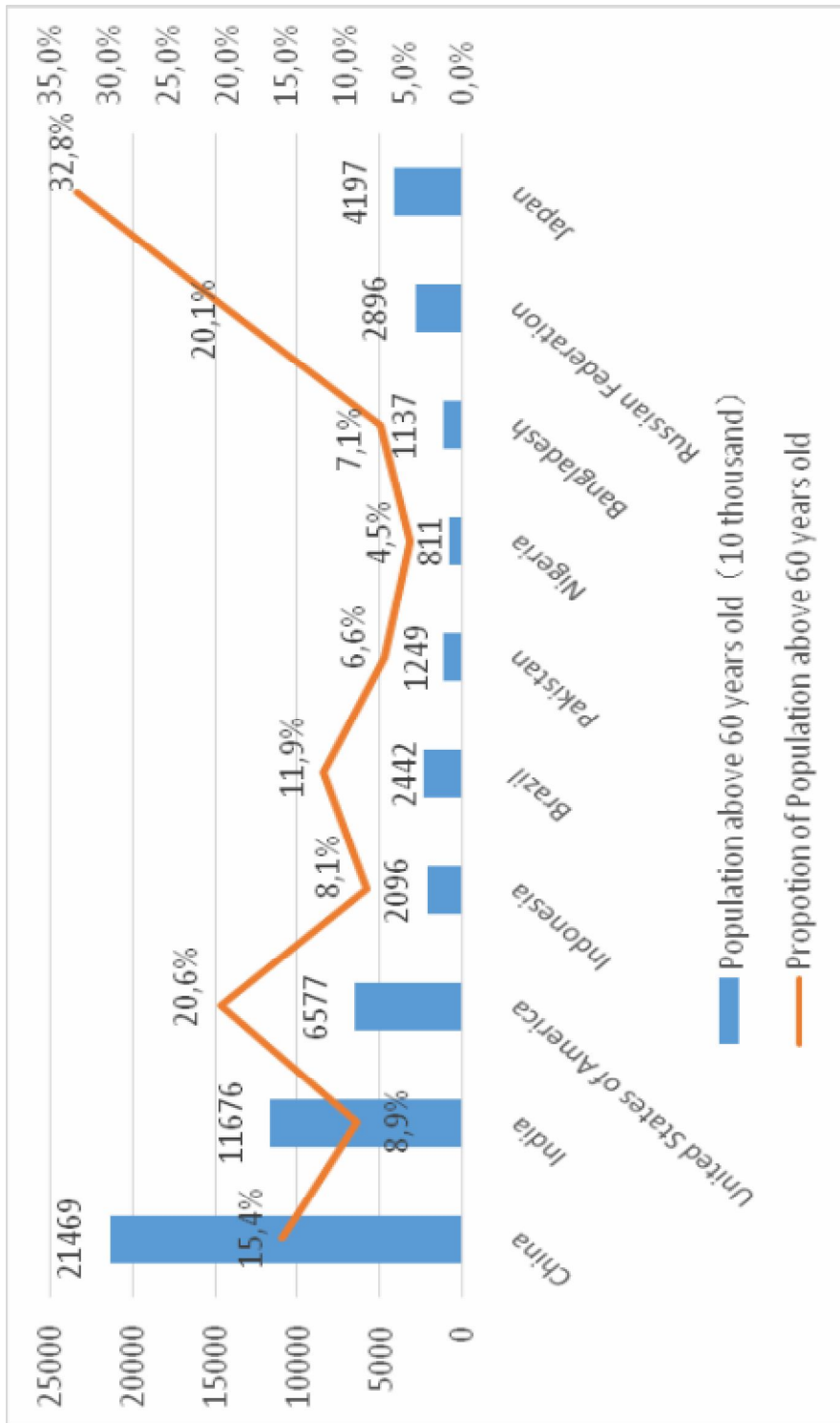


Fig. 3. Size and proportion of the elderly population in the world's top ten population countries in 2015

Sources: United Nations Population Division, *World Population Prospects: The 2017 Revision*

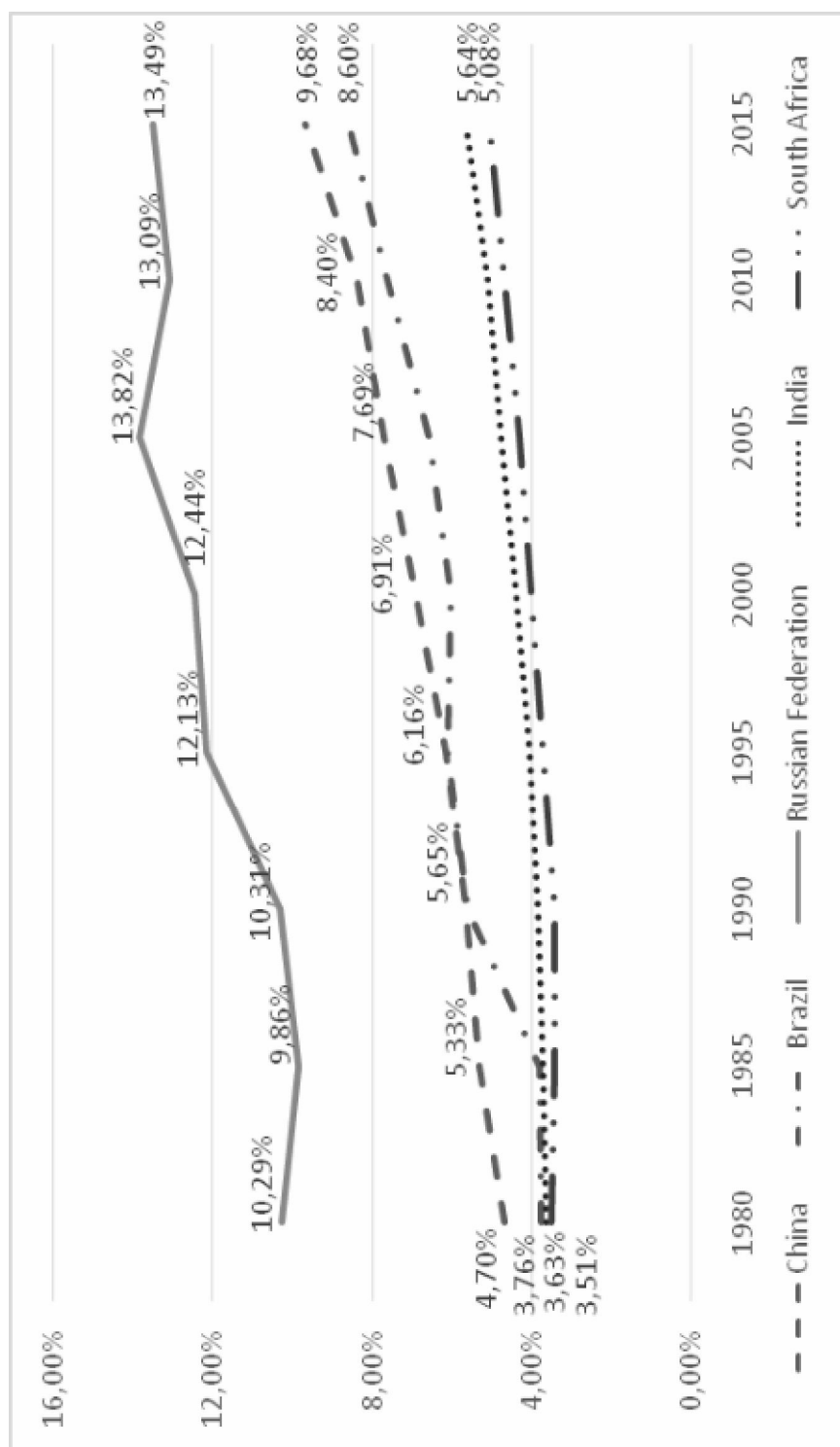


Fig. 4. Proportion of the elderly aged 65 and over in the BRICS countries from 1980 to 2015

Sources: United Nations Population Division, *World Population Prospects: The 2017*

To start with, China has put in place a basic urban-rural old-age insurance system with the largest coverage in the world. Although the old-age insurance system came into being when *Regulation on Labor Insurance of the People's Republic of China* was enacted in 1951, it was not until 1986 that pooling old-age insurance expenses at county-level (city-level) was carried out nationwide. According to the data of the National Bureau of Statistics, the total income and the expenditure of basic old-age insurance for urban workers in 1989

were 14,67 billion yuan and 11,88 billion yuan respectively, and the system covered only 57,103 million people, of whom 48,169 million were contributors and 8,934 million were pensioners.

By 2016, the total income and the expenditure of old-age insurance for urban workers had reached 3505,8 billion yuan and 3185,4 billion yuan respectively, and the system covered 380 million people, of whom 280 million were contributors and 100 million were pensioners (see Table 1).

Table 1

*Basic old-age insurance for urban workers during 1989-2016*

	1989	1995	2000	2005	2010	2016
Coverage (10,000 persons)	5710.3	10979.0	13617.4	17487.9	25707.3	37929.7
Contributors (10,000 persons)	4816.9	8737.8	10447.5	13120.4	19402.3	27826.3
Pensioners (10,000 persons)	893.4	2241.2	3169.9	4367.5	6305.0	10103.4
Total income (billion yuan)	14.67	95.01	227.85	509.33	1341.95	3505.75
Total expenditure (billion yuan)	11.88	84.76	211.55	404.03	1055.49	3185.38

Source: National Bureau of Statistics

Over the course of nearly 40 years, the number of urban workers covered by old-age insurance increased by 6,6 times, the number of pensioners increased by 11,3 times, and the total pension income expanded by 239,0 times. This shows that not only more people are covered by the basic old-age insurance, but also the insurance level has been continuously improved. In addition, for non-working urban residents who are not eligible for the basic old-age insurance for employees, China launched the pilot program of old-age insurance for urban residents in July 2011, hence realizing «basic insurance, wide coverage, flexibility and sustainability».

In addition, in rural areas, China began to explore rural endowment insurance in 1986, and began to reform the rural social endowment insurance sys-

tem in January 1992. At the end of 2009, a new type of rural social endowment insurance was introduced, which transformed the old-age rural insurance «paid by the whole individual» into a «new rural insurance» which combines «individual contribution, collective subsidy and government subsidy».

By the end of 2011, 1914 counties (cities, districts, banners) of 27 provinces and autonomous regions and some districts and counties of 4 municipalities directly under the Central Government had launched pilot projects of new rural social endowment insurance, with 326 million people participating in the insurance (Changfang et al., 2014). In 2014, in order to further solve the problems such as the difficulty of raising funds, the gap between treatment and urban areas, the lack of effective mana-

gement mechanism, the difficulty of fund operation and value preservation and appreciation, the State Council promulgated the Basic old-age Insurance System for Urban and Rural Residents (Guofa [2014] 8), merged the new rural social old-age insurance and urban social old-age insurance, and established the national unification. First, the basic old-age insurance system for urban and rural residents. According to the data of the National Bureau of Statistics, by the end of December 2017, the number of urban and rural residents participating in social endowment insurance reached 512 million. At present, China has built up the world's largest basic pension insurance system, but also the world's largest government project, covering a total of 89 million people in urban and rural areas (Zheng Bingwen, 2018).

Secondly, the working institutions for the elderly population should be established and improved. From July to August 1982, Vienna hosted the First World Assembly on Ageing. In order to attend the Conference, China established the «China Committee of the World Assembly on Ageing» in March 1982 and renamed it «China National Committee on Ageing» in October of the same year. So far, for the first time, China has a nationwide permanent organization specializing in the work of the elderly. At the same time, provincial, municipal, county and township ageing committees have been gradually established, gradually forming a network of ageing work from the central to the local level. In 1995, the National Committee on Ageing in China was renamed the «China Aging Association». In 1999, the National Committee on Ageing was established. In August 2005, the Chinese Association for Aging and the Office of the

National Committee on Ageing worked together. Up to now, the National Commission on Ageing has six subdivisions, five subordinate units, four ageing associations and 32 member units. It has become a specialized institution specializing in the research, formulation, coordination and promotion of the development plan for ageing undertakings and the protection of the rights and interests of the elderly.

Thirdly, the old-age security-related system has been introduced continuously, and the elderly care policy system has been gradually improved. With the establishment of a national special working committee, the system and development plan for ageing work have gradually been established. Table 2 lists the main policy documents on ageing promulgated by our government since the early 1980s. It can be seen from this that in the 1980s, we formulated short-term and irregular work plans based on international experience, aiming at the initial problems of aging. The 1990s were the period when important objectives, working systems and legal systems were put forward and perfected. In 1994, the promulgation of the Seven-Year Development Outline for China's Aging Work (1994-2000) for the first time systematically and completely put forward the goal of China's ageing work and incorporated it into the overall plan for national economic and social development, which fully reflects the importance of the Party and the government to the work of the elderly.

In 1996, the Law of the People's Republic of China on the Protection of the Rights and Interests of the Elderly guaranteed the rights and interests of the elderly and their protected status for the first time from the legal level. Since the

beginning of the 21st century, China's aging policy has embarked on a more detailed and comprehensive systematic construction path. The Decision of the Central Committee and the State Council of the CPC on Strengthening the Work on Ageing in 2000 is a programmatic document for the development of the cause of ageing in China. The overall goal of «providing for the aged, providing medical care for the aged, educating the aged, learning for the aged, doing for the aged and enjoying the aged» has been put forward. Thereafter, the regularity of the program for the development of the cause of the aged, which is synchronized with the outline for the development of the national economy, was put forward. At present, in addition to the overall development plan with clear objectives and clear tasks, there are also detailed policies and assessment indicators system on old-age services and care for the elderly.

##### **5. CHALLENGES FACED BY THE CURRENT OLD-AGE SECURITY SYSTEM**

With the establishment and expansion of the old-age insurance system, the establishment of a national permanent institution for the elderly and the introduction of relevant institutions and plans for the ageing cause, China has a clear grasp of the characteristics of the aging transition of the population structure, has formed targeted policies and development plans, and has brought a large number of people into the old-age security system on an unprecedented scale. It has played an important role in promoting the sustainable development of economy and society. However, be-

cause China has the largest elderly population in the world and is facing the problem of rapid aging before its economic development is highly developed, it still faces the challenges of transformation and adaptation of the existing old-age insurance model, imperfect level of old-age insurance and heavy financial burden of social security.

First of all, the old pension fund raising model is facing challenges. The mode of pension fund raising mainly depends on the age structure of the population. Pay-as-you-go system has a stable and low level, which is suitable for countries with a relatively light or stable population structure. This model was also adopted in the early stage of China, but with the deepening of the aging of the population, this model will bring huge burden to enterprises, workers and the state (Zhang Yungang, 2005).

Therefore, since 1993, China has set the reform goal of «combining social overall planning with personal accounts», and in 1997, it has defined the transition plan from pay-as-you-go system to «combining unified accounts» semi-accumulative system. However, this transition has not completely solved the problem. On the one hand, implicit social liabilities may occur, because the personal accounts of retired workers and employees who have worked for a certain period of time have not accumulated funds, and such implicit liabilities are difficult to digest through pension insurance contributions (Left Schools, 2001).

Table 2

*Policies and plans on aging since the reform and opening-up*

<b>Issue time</b>	<b>Title of documents</b>	<b>Key elements</b>
1983	<i>Key elements of the plan on aging and future activities</i>	Summing up the problems identified after participating in the Vienna World Assembly on Aging, and putting forward the plan for the work on aging in 1983-1985
1994	<i>The Seven-Year Development Outline on China's Work on Aging (1994-2000)</i>	Putting forward the general objectives of China's work on aging, establishing an aging work system with Chinese characteristics, and including aging undertakings into the overall plan for national economic and social development
1996	<i>The Law of Safeguarding Rights and Interests of the Elderly of the People's Republic of China</i>	The state being responsible for establishing the old-age insurance system, safeguarding the basic livelihoods of the elderly
2000	<i>The Decision of the CPC Central Committee and the State Council on Strengthening the Work on Aging</i>	Effectively safeguarding the legitimate rights and interests of the elderly, developing the service sector for the elderly, ensuring funding and infrastructure for undertakings on aging, and carrying out lively ideological and political work for the elderly
2001	<i>Outline on the Tenth Five-Year Plan for China's Work on Aging (2001-2005)</i>	Establishing an urban-rural old-age security system; establishing a community-based elderly management and service system; broadening the activities for the elderly to enrich and enjoy themselves; safeguarding their legitimate rights and interests; establishing a normal investment mechanism for the work on aging; improving the work system on aging
2006	<i>The Eleventh Five-Year Plan for China's Work on Aging (2006-2010)</i>	Establishing an elderly social security system that is compatible with the economy and the society and with other security systems; establishing a relatively complete system of policies and regulations on aging; improving the working system of aging that could reflect and adapt to the reality of aging in China; actively promoting the construction of elderly-friendly infrastructure.



2011	<i>The Twelfth Five-Year Plan for China's Work on Aging (2011-2015)</i>	Establishing the basic strategic framework of dealing with aging; improving the urban-rural social old-age security system; improving the basic medical care system for the elderly; enhancing home-based and community-based elderly care service networks; all-roundly promoting the planning and construction standards for elderly-friendly infrastructure in newly-built communities; increasing amenities for culture, education and fitness activities of the elderly
2017	<i>The Thirteenth Five-Year Plan for National Work on Aging and Elderly Care System Construction</i>	Improving the multi-pillar, inclusive, fairer and more sustainable social security system; improving the elderly care service system that is based on home care, community support, institution back-up and medical-nursing care integration; enabling an institutional system that allows full play of the government and the market; creating a social environment that is congenial to the work on aging and old-age care system
2017	<i>Opinions of the General Office of the State Council on the Formulation and Implementation of Elderly Care Service Projects</i>	Comprehensively establishing a subsidy system for financially strapped and incapacitated seniors; developing home-based old-age care services; enforcing the migration of household registration of the elderly who move to their children's place; promoting the construction elderly-friendly communities and cities; further expanding the coverage of legal aid; and increasing the integration of medical care and nursing care

On the other hand, in the actual operation process, personal account funds in many areas are borrowed to alleviate the pressure of insufficient co-ordination fund, which leads to the empty account operation of pension insurance personal account (Dong Ke, etc., 2016). In addition, the system of «unified accounting» still has the problems of «hitchhiking» in payment and «out of control» in payment, such as deliberate default, lack of motivation for supervision, early retirement, crowding out and misappropriation of social security funds, etc. (ZhengBingwen, 2003). In response to this problem, some scholars have proposed the reform of nominal account system, which is adapted to our national conditions and can better

solve the existing problems (Zheng Bingwen, 2003; Wanshu, Caixia, 2014), but some scholars believe that this system can only solve the short-term payment crisis (ShenShuguang, Meng Xing, 2014), will inhibit the motivation to participate in the maintenance (Han Keqing, 2014), and does not adapt to the maintenance of our country. Complex features of the old insurance system (Dong Ke et al., 2016). Therefore, in the future, how to further reform and improve the mode of pension fund raising in China is still in the process of exploration.

Secondly, a multi-pillar old-age insurance system is missing. In order to strengthen the sustainability of old-age insurance system, in 1994 the World

Bank identified three pillars of old-age insurance in its report – *Preventing the Crisis of Aging: Policies to Protect the Elderly and Promote Growth* – as follows: pension funds, defined-contribution accounts/plans and private funded accounts (Xian Qinghua, 2011). In 2005, in its report – *Old age income support in the 21st century: an international perspective on pension systems and reform* – the World Bank introduced two more pillars upon the original three – the non-pay Pillar 0, and financial or non-financial aids to the elderly from family members or between generations. China, however, still disproportionately relies on government-supported basic old-age insurance (the first pillar), which, as discussed in the preceding paragraph, is rife with burning problems that may only be resolved by continuous stages of reform actions (Gao Qingbo, 2016). At the same time, the second pillar, consisting of enterprise annuities and government occupational annuities in China, only came into being in 1991 and 2015 respectively, their coverage and beneficiaries being quite limited. It was not until 2017 when the State Council promulgated the *Opinions on Accelerating the Development of Commercial Old-Age Insurance*, that the third pillar of individual tax deferred commercial insurance was officially launched. However, in the absence of system design and tax incentives, these insurance products are just like another kind of wealth management products, so the third pillar is basically non-existent in China (Gao Qingbo, 2016). In addition, the non-pay universal national pension fund is incomplete, as can be seen from the «old-age subsidy» plans of differing standards introduced by local governments (Zheng Bingwen, 2018). Therefore, in general, a multi-

pillar old-age insurance system has not yet been established in China, and governments, enterprises and employees shoulder heavy financial burdens but receive inferior benefits.

Thirdly, the pressure of social security expenditure is enormous and the financial burden is aggravated. With the aggravation of population aging, on the one hand, the number of people who quit the labor market is obviously larger than the number who enter the labor market, and the ability of fiscal revenue decreases, which affects the labor output rate of the working population (Mu Guangzong, Zhang Tuan, 2011); on the other hand, the government needs to invest more funds in social security areas such as pension expenditure and medical treatment, and the financial burden increases (Zhang Pengfei). Su Chang, 2017. In addition, with the increase of the elderly population, the demand for welfare facilities for the elderly, such as nursing homes, elderly activity centers, community pension services, will increase, which also requires the government to invest in all or part of the development. According to the data of the National Bureau of Statistics, in the last 10 years alone, the expenditure on social security increased from 544,716 billion yuan in 2007 to 2159,150 billion yuan in 2016, accounting for 11,5 %.

**Conclusions.** Generally speaking, in the past 40 years of reform and opening up, China's population structure has shown the characteristics of sustained aging, which includes not only the natural factors of the demographic structure transformation caused by economic and social development, such as declining fertility desire, prolonging average life expectancy, but also the policy factors such as declining birth rate under

the control of population policy. From the perspective of future trends, according to the Predictive Research Report on the Trend of Population Ageing in China published by the National Office for Ageing in 2006 and the General Research Report on the National Strategy to Address Population Ageing, after 2022, China's population will enter the stage of rapid aging. First, the rapid growth of the size of the elderly population, the concentrated outbreak of aging problems, and then the negative growth of the total population and the trend of aging. Significantly, the burden of social support reached its highest level in history, and after 2053, a stable and heavily aging country was formed. It can be said that the aging of population will accompany the development of China in the 21st century. The characteristics of aging population in China, such as not getting rich before getting old, fast and large scale, and unbalanced regions, will bring serious challenges to the further economic and social development of our country. Fortunately, China has established the largest pension insurance system in the world, but at present this system is still facing various imperfections and pressures, which need to be further improved.

As the extension of life expectancy and the decline of fertility level are inevitable trends, and the effect of population policy adjustment will not appear until a period of time, so population aging is an irreversible inevitable trend. As PengXizhe (2011) said, «China has been in a normal social situation of population aging». This «new normal» of aging will affect the supply of labor

force, the labor output rate of the working population, and bring some pressure to the national finance. Population structure changes may be combined with economic and social trends such as globalization, urbanization, and global resource constraints, and have an impact on social stability. Population transformation and social transformation occur simultaneously, family size shrinks and function weakens, which impacts the traditional culture of providing for the aged and filial piety. Therefore, although aging is a kind of population phenomenon, it has penetrated into all aspects of social life, and is related to the fundamental interests of all members of society and the long-term stability of the country. The solution to its related problems is no longer a technical issue, but the need to upgrade the population aging strategy to the basic, overall and long-term strategy of national development, and to coordinate the roles of all social systems. Form resultant force. For the country, it is necessary to make full use of the factors of population ageing in all kinds of work, regard them as the basis and premise of economic decision-making, improve the working institutions and system of dealing with population ageing (Drafting Group of General Report, 2015); for the society, it is necessary to develop a set of professional medical care service system to provide a secure and dignified life for the elderly; Personally, it is also necessary to be physically, spiritually and physically prepared to achieve a healthy, dignified, joyful and valuable quality of aging (Mu Guangzong, 2002b).

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