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Comparative Study of Active Ageing in China and the EU Countries

Qian Xiong and Arkadiusz Wiśniowski

17.1 Introduction

Due to the dramatic decline in fertility rates and rapid increase in life expectancy, Chinese population is estimated to age much faster than in any other developed region in the world in next decades. By 2013, China has the largest size of population aged 60 or more in the world (193 million persons), which amounts to approximately 13.8% of total population (ranking the 67th in the world in terms of percentage). This proportion is predicted to increase to 28.1% by 2040, while the older population in more developed regions will only increase by 8.8% (United Nations 2013). Moreover, in 2013, the life expectancy (LE) at birth in China was 75 years, which was close to the level of developed countries (Population Reference Bureau 2013). Data analysis of 2010 census

Q. Xiong (✉)
Lancaster University, Lancaster, UK

A. Wiśniowski
The University of Manchester, Manchester, UK

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indicated that 83.15% of Chinese older people aged over 60 or more reported to have generally good health, with the general health status of males being better than that of females (Du 2013).

In the Second United Nations (UN) World Assembly on Ageing held in April 2002, World Health Organization (WHO) provided a policy framework promoting healthy and active ageing (WHO 2002). This active ageing agenda highlights older population's self-independence, contribution to society and assistance to younger generations (Kalache and Gatti 2003). This framework shed light on the active ageing policy in China, as the policy for ageing in China has been designed for enabling the old people to teach, learn, contribute and enjoy their ageing life (China State Council 2006; Mu 2002).

The study of active ageing population is vital for every family in China. The traditional familial care for elderly members is likely to be challenged by the fertility transition brought by the birth control policy and social and economic development since the late 1970s. Chinese philosopher Mencius (372–289 BC) emphasized that in an ideal society everyone should "honor the old people as their own aged parents, and care others' children as their own children". In 1989, the Chongyang Festival[1] was designated as the official Senior's Day; in 2012, China's National People's Congress (NPC) passed the revised *Law on Protection of Rights and Interests of Seniors* to enforce legitimate care and respect for the older population. All the efforts by the individuals and authorities in China have consistently eulogized the social norm of filial piety, that is, the culture of respecting and caring for the older people. The older family members are expected to receive very good care from younger generations. However, the familial care for the elderly members might be weakened since the family structure in China (particularly in cities) has transited from a multi-generation to a "four-two-one" family model. It means that young couples possibly have to take care of four parents (and grandparents) and their own child, so that they are known as "the sandwich generation". Additionally, more and more young people who migrated to new places for jobs cannot fully assume the responsibility of caring for the older (Zhang and Goza 2006). Especially in rural areas, the household support system seems to be more vulnerable due to the small family

size led by the fertility transition, the low levels of income and weak social security system.

In this chapter, we explore the potential of the older population in China by means of a recent methodology created by European experts. In particular, we apply the Active Ageing Index (AAI) to examine the lifestyles of the older population, since one of the goals of the AAI is to measure their potential in society by exploring their participation in employment, social life, independent living and capacity and enabling environment for active ageing (Zaidi et al. 2013). Additionally, we investigate a new large-scale survey on the older population in China, the China Health and Retirement Longitudinal Study (CHARLS). We compute the indicators for four domains and obtain the AAI composite score. To permit international comparisons, we select measures as similar as possible to the European datasets, but with some innovations, depending on the data availability. Eventually, we highlight policy implications based on the evidence from the most recent data.

17.2 Data: China Health and Retirement Longitudinal Study

The China Health and Retirement Longitudinal Study (CHARLS) is a biennial multistage longitudinal survey of the mid-aged and older population. Figure 17.1 presents 150 counties and districts and 450 villages and urban communities from 28 provincial-level divisions where the survey was conducted. The overall response rate was 80.51% (94.15% in rural and 68.63% in urban communities). The CHARLS has a similar questionnaire design to other surveys on ageing population, such as the Health and Retirement Study in the USA, English Longitudinal Study of Ageing and the Survey of Health, Ageing and Retirement in Europe (Zhao et al. 2013).

In 2011–2012, the survey covered 17,708 individuals and 10,257 non-institutional households with members aged 45 or above. Due to the specific focus on older population, for our analysis we selected a

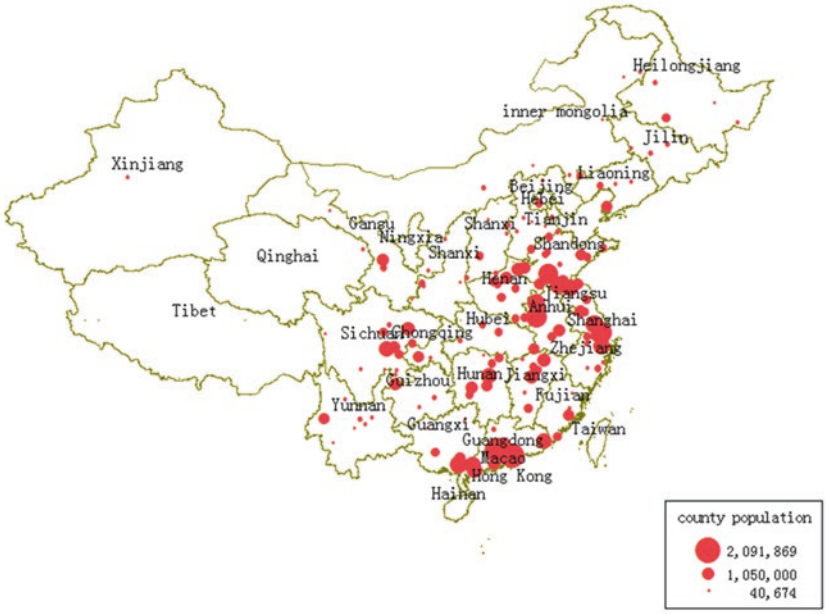

Fig. 17.1 CHARLS—distribution of sampled counties and districts (Zhao et al. 2013, p. 16)

subsample of persons aged 55+ (the same as for the EU) from the CHARLS 2011–2012, that is 11,198 respondents (5583 males and 5615 females) with the average age of 64.9 and the highest age of 101.

We measure the quality of data in two ways. First, Whipple's Index is used to measure the extent to which the reported ages are concentrated at digits ending in 0 or 5. The reported age in CHARLS ranges from 22 to 101 and the Whipple's Index is 95.6. If the index is smaller than 105, it indicates highly accurate data (Swanson et al. 2004). Second, we compare the age and sex structure of all CHARLS samples to 2010 Chinese Census. The distribution is almost identical for population aged 70 and more, but the age group 55–70 is over-represented, whereas 45–55 is generally under-represented (Fig. 17.2). Thus, the overall quality of age reporting in CHARLS data is reasonable, but the younger group of the older population (45–70) are slightly overrepresented comparing with the overall older population in China.

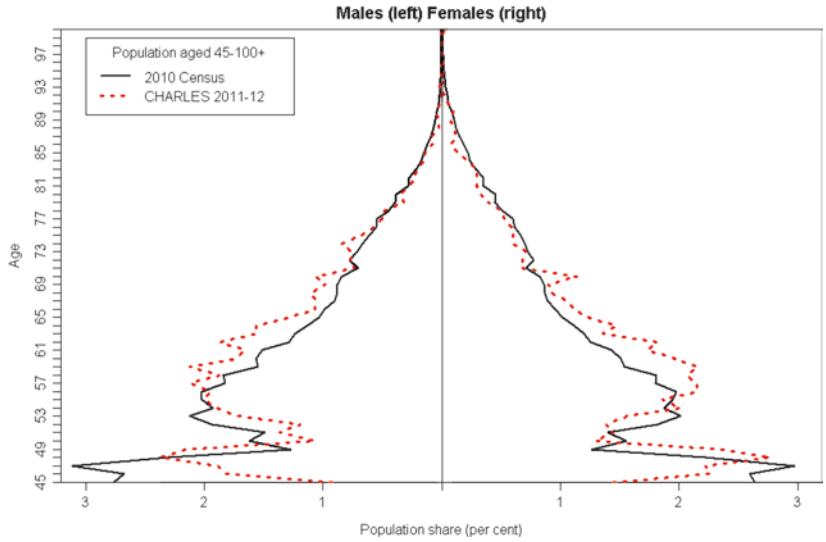

Fig. 17.2 Population pyramids of 2010 census and CHARLS (2011–2012)

17.3 AAI and Four Domains in China

The AAI score for China is much lower than the average 2010 AAI in the EU (Table 17.1), reaching for the total population (55+) 26.7, the average for the EU being 33.8. If considered in the ranking together with the EU countries, China would be last, slightly behind Poland.

The AAI for males and females are 28.9 and 24.4, respectively. The employment of males contributes more than twice than that of females, but females generally perform better in the other domains. This difference, together with the explicit weight of 35% of employment, leads to a large difference in the AAI between two sexes. The marginal gender difference is also present in the EU (Zaidi et al. 2013, pp. 20–21), particularly in Southern Europe.

In terms of the implicit weights of domains to the AAI in China (Fig. 17.3), the fourth domain, capacity and enabling environment for active ageing, contributes 39%, followed by the independent, healthy and secure living (25%), the participation in employment (19%) and the participation in society (17%).

Table 17.1 Results of AAI in China comparing to EU countries

		China			The average of EU countries		
		Both	Male	Female	Both	Male	Female
AAI	Index	26.7	28.9	24.4	33.8	35.9	32
	Rank	28	28	28			
Employment	1.1 Employment rate 55–59	27.3	40.9	14.1	60.7	68.7	52.9
	1.2 Employment rate 60–64	15.1	22.7	7.4	30.4	37.8	23.6
	1.3 Employment rate 65–69	9.4	12.7	6	11.2	14.7	8.2
	1.4 Employment rate 70–74	5.2	6.7	3.4	6.1	8.3	4.3
	Index	14.2	20.7	7.7	27.1	32.4	22.2
	Rank	28	28	27			
Participation in society	2.1 Voluntary activities	1	1.2	0.9	14.9	16	14
	2.2 Care to children, grandchildren	43.6	42.5	44.8	32.4	30.5	33.9
	2.3 Care to older adults	4.8	5.1	4.5	12.8	11.8	13.6
	2.4 Political participation	1.4	1.5	1.3	12.1	15.5	9.2
	Index	12.9	12.7	13	18.1	18.3	17.9
	Rank	27	22	28			
Independent, healthy and secure living	3.1 Physical exercise	83.6	81.7	85.4	11	10.7	11.3
	3.2 No unmet needs of health and dental care	67.1	70.9	63.5	89.6	91.9	91.1
	3.3 Independent living arrangement	78.8	79.5	78.3	84.3	84.4	84.2
	3.4 Relative median income	72.4	76.4	67.7	84	88	82.1
	3.5 No poverty risk	88.8	88.9	88.7	92.5	94.1	91.3
	3.6 No material deprivation				90.8	92.2	90
	3.7 Physical safety				79	82.9	75.9
	3.8 Lifelong learning	0.2	0.3	0.1	4.7	3.7	5.6
	Index	67.0	68.4	65.7	71.7	72.8	71.1
	Rank	24	24	25			

(*continued*)

Table 17.1 (continued)

		China			The average of EU countries		
		Both	Male	Female	Both	Male	Female
Capacity and enabling environment for active ageing	4.1 RLE achievement of 50 years at age 55	48	46	50	53.4	48.3	57.8
	4.2 Share of healthy life years in the RLE at age 55	86.0	85.6	86.5	53.4	57.4	50.5
	4.3 Mental well-being	17.1	16	18.2	63.9	67.6	60.9
	4.4 Use of ICT	1.4	1.7	1	38.3	42.6	34.3
	4.5 Social connectedness	30.2	27.5	33	51.5	50.8	52.2
	4.6 Educational attainment	9.2	12.7	5.6	58.6	63.5	54.1
	Index	52.5	51.9	53.0	54.2	54.6	54.1
	Rank	16	18	15			

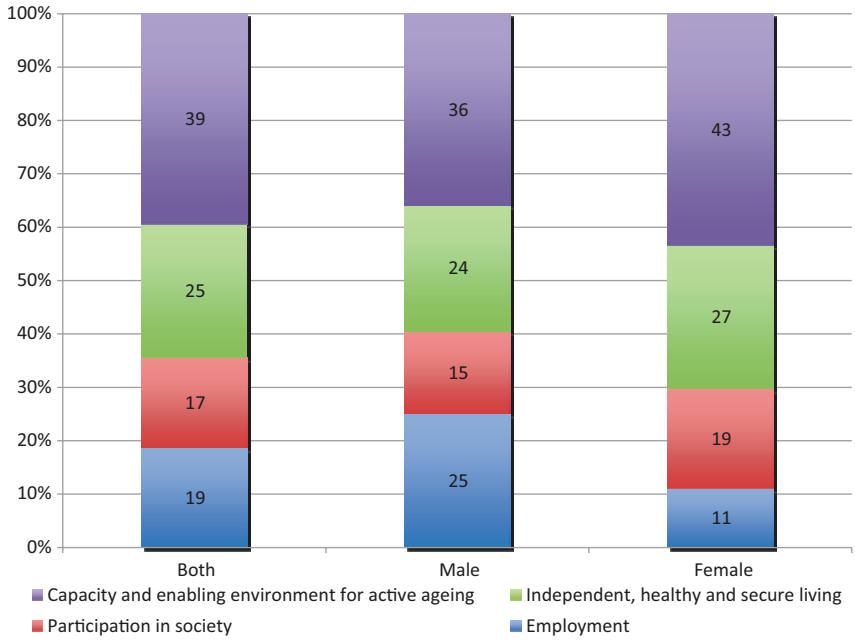

Fig. 17.3 Contribution of domains to the overall Active Ageing Index, China

17.3.1 Employment

The CHARLS data permit us to apply the same definition of employment in China as in Zaidi et al. (2013). The employment rate decreases with age from 27.3% for age group 55–59 to 5.2% for 70–84. Moreover, males always have higher employment rates than females for every age group, but the disparity decreases with age (Table 17.1). The contribution of employment by the youngest group 55–59 is the largest in the first domain (Fig. 17.4).

Comparing to the EU average employment rate, Chinese rate is merely half, but the differences narrow with age. Additionally, large gender disparity regarding the employment rates is similar to the EU results (Table 17.1).

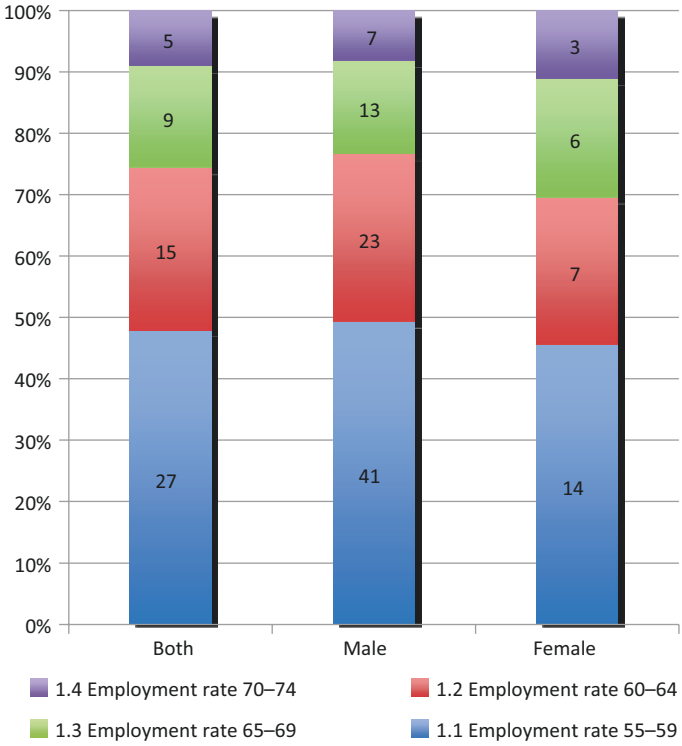

Fig. 17.4 Contribution of indicators to employment, China

17.3.2 Participation in Society

Measures in this domain are the same as in Zaidi et al. (2013), except for the percentage of the older population providing care to their grandchildren and to the other elderly relatives for at least eight weeks last year (Zaidi et al. use "at least once a week in the last year").

The most prominent contribution of the older population to society is through caretaking of grandchildren: 85%, similarly for males and females (Fig. 17.5). The participation in voluntary activities is very low in China, only 1%. Almost half of the older people are care providers to their grandchildren (43.6% for total, 42.5% for males and 44.8% for females), but only 4.8% of them (5.1% males, 4.5% females) provide care to other older adults. The rate of participation in community-related activities is only 1.4% (Table 17.1). Older Europeans, on average, are much more likely to participate in voluntary and political activities, and care for other elderly, while Chinese to provide care to grandchildren (only Cyprus reports a higher percentage).

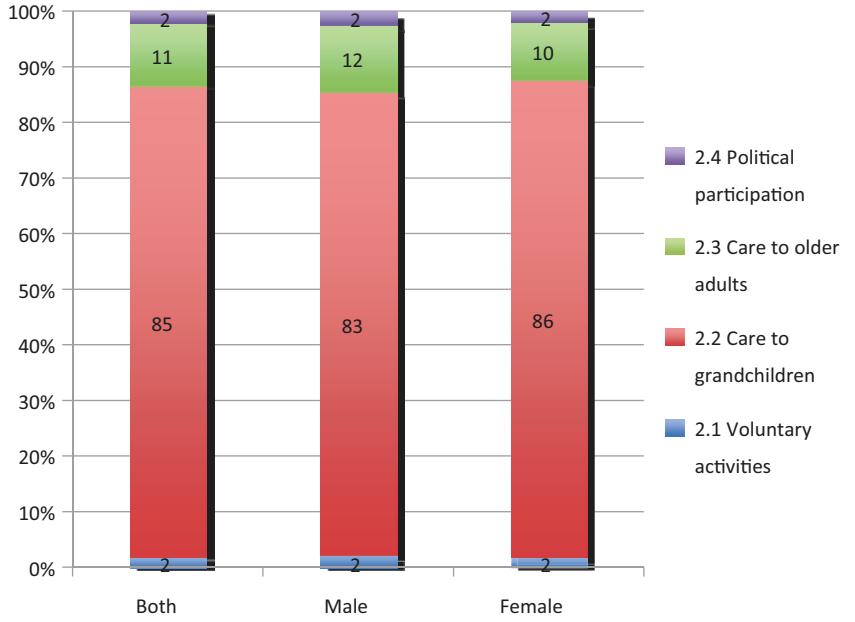

Fig. 17.5 Contribution of indicators to participation in society, China

17.3.3 Independent, Healthy and Secure Living

The first indicator of this domain is the percentage of the older population performing various moderate physical activities (similar to Zaidi et al. 2013). About 83.6% of Chinese older population (81.7% for males and 85.4% for females) reported physical exercise (Table 17.1).

The second indicator in this domain is the percentage of the older population who reported seeking and finding medical treatment while they were ill last month (comparing to 12 months in Zaidi et al. 2013). According to this definition, 67.1% of Chinese older population (70.93% of males and 63.5% of females) reported no unmet medical treatment last month.

The third indicator, living independently (i.e. aged 55+ and without children) was reported by 78.8% (79.5% males and 78.3% females). The fourth indicator relates to the relative median expenditure, which amounts to 72.4% (76.4% males and 67.7% females). These two indicators are measured in the same way as in Zaidi et al. (2013).

The lack of poverty risk in China is measured by the percentage of the older population not receiving the *Wubaohu* or *Tekunhu* subsidy from the government. These are the living allowances provided by the government to support the older people who have lost the ability to work, have no source of income and no legal guardians whatsoever to support them, or whose legal guardians do not have the ability to support them. About 88.8% of the older population is at no risk of poverty by this measurement. However, this measure may be biased due to some population living under the poverty line and in need, but not receiving any subsidies.

The last indicator is the lifelong learning, measured in the CHARLS by attending an educational or training course last month. Here the percentage is very low: only 0.2%.

Since the data on material deprivation and physical safety are not available in the CHARLS, we redistribute the weights of this domain uniformly. After weighting, the independent living arrangement constitutes 28% of this domain, followed by the relative fulfilled needs of healthcare, physical exercise, median income and no risk of poverty (Fig. 17.6).

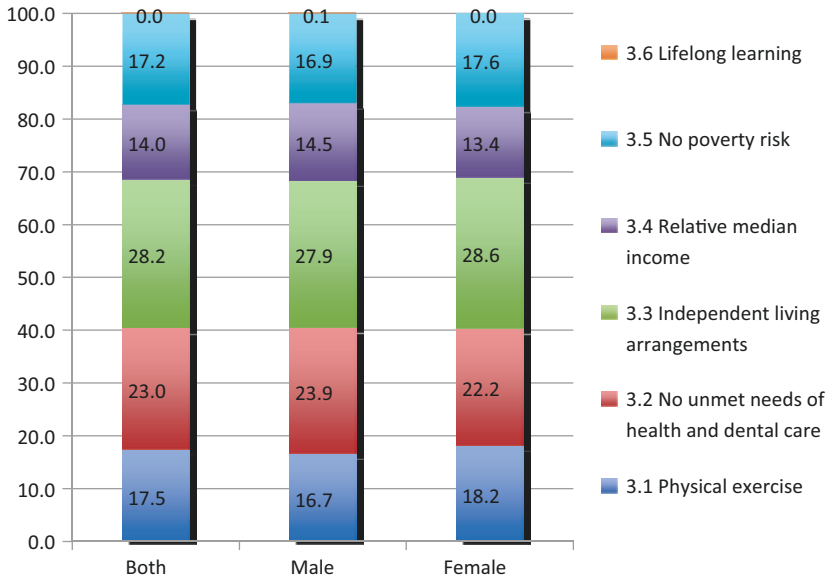

Fig. 17.6 Contribution of indicators to independent, healthy and secure living

Compared to the EU average (Table 17.1), Chinese older people are much more active physically, but they are at larger risk of poverty and have lower income. They are also less likely to live independently (though the value of this indicator is higher than in, e.g. Poland, Slovakia or Spain) and receive almost no training or education (similar to Greece and Hungary).

17.3.4 Capacity and Enabling Environment for Active Ageing

The first indicator of this domain is remaining life expectancy (RLE) at age 55. It is 24 years (23 for males and 25 for females), according to the data from the Global Health Observatory (WHO 2014). In addition, we apply a widely used Sullivan Method (Sullivan 1971) to estimate the healthy life expectancy (HLE). We combine activities of daily living and compute the disability rate as a summary measure of health status in the

population. The disability status is measured by whether the respondents have problems to accomplish at least one of the six basic activities of daily living (ADL) without help, that is, eating, dressing, functional mobility, bathing and showering, using the toilet and controlling urination and defecation. The life table by WHO (2014) for China is used as a basis for constructing the healthy life table. Our result of the HLE at ages 60–64 is similar to the estimation by Du and Li (2006). Although the LE in China increased from 40 years old in the 1950s to 75 in 2013, the health of Chinese older population improved much slowly (Du and Andrews 2003; Du and Li 2006). The extension in the LE is mainly due to the improvement in infant mortality; the remaining life expectancy for population aged 60 has increased only slightly (Jiang and Chen 2004).

Based on our calculation, the share of healthy life years in the RLE at age 55 is 86% (85.6% for males, 86.5% for females). The expected number of years free of disability is 20.6 for Chinese people aged 55–59 (19.7 for males and 21.6 for females) (Table 17.2).

Mental well-being is measured by 11 questions on mental health, asking the frequency of negative feelings or behaviours during the last week. Respondents indicate answers on the four-point scale. We use the total of the reversed scale scores (rescaled to 0–100), so that the higher the score, the better mental well-being. The average scores for all, males and females are 70, 72 and 68, respectively.

Social connectedness of Chinese is measured by whether the older population had interactions with friends, visited families or community clubs or

Table 17.2 Healthy life expectancy at age of 55 or over in China

	Healthy life expectancy			Life expectancy		
Age group	Both	Males	Females	Both	Males	Females
55–59	20.6	19.7	21.6	24	23	25
60–64	16.6	15.8	17.4	19	18	21
65–69	12.9	12.3	13.6	16	15	17
70–74	9.7	9.3	10.2	12	11	13
75–79	7.0	6.7	7.3	9	9	10
80–84	4.7	4.5	4.8	7	6	7
85–89	3.2	3.0	3.3	5	4	5
90–94	2.1	1.8	2.2	3	3	3
95–99	0.8	0.0	0.9	2	2	2
100+	0.8	0.0	0.8	2	2	2

Data source: World Health Organization 2014 and self-calculation

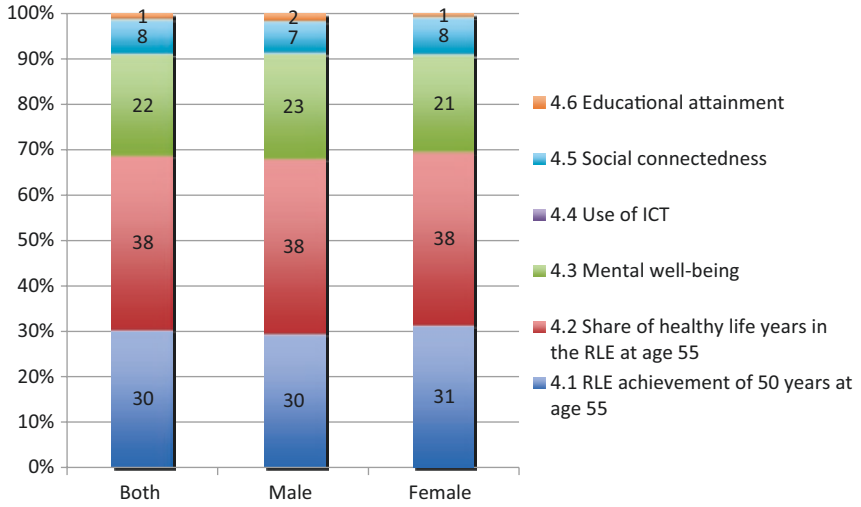

Fig. 17.7 Contribution of indicators to capacity and enabling environment for active ageing

played games (mahjong, chess or cards) in the last month. Only 30% of the older population in China reports social connection with others. In addition, the use of Internet by them is almost non-existent (less than 2%) and the educational attainment is very low (less than 10%).

After applying the weights, the share of HLE (38%) and the RLE achievement (30%) represent the major components of the fourth domain (Fig. 17.7). Compared to the EU average (Table 17.1), Chinese older people have similar life expectancy, a much higher share of HLE (which results from using different measures than in Zaidi et al. 2013), but the use of Internet, social connectedness, higher educational attainment and mental well-being are substantially lower.

17.4 Policy Implications

Our findings have shown the unrealised potential of the older population in China by comparing them with the results for the EU. In this section, we discuss the current policies related to ageing in China, and suggest future directions for policymaking.

17.4.1 Employment of the Older Population in China

The low employment rate of Chinese older population is likely due to the earlier retiring age, lower educational attainment and the possible social exclusion in employment. The statutory retirement age is 55 for females and 60 for males (for some blue-collar female workers: 50 and male: 55). Actually, urban workers who could get secured pensions may decide to retire even earlier than the legal age (Du and Yang 2010). In comparison to China, most of the EU countries have statutory and effective retirement age equal or higher than 60 for both males and females. Introducing flexible retirement ages (e.g. in Finland and Sweden) created incentives for the older people to stay longer on the labour market (The European Commission and The Economic Policy Committee 2012).

The older population in China tends to have the capacity to support their family and community and possibly to participate in the formal workforce. Our results show that Chinese older people are physically active and report high shares of years in good health status after retirement. It is very popular that grandparents (especially females) provide care for grandchildren in China. In addition, the agricultural population still actively participates in the production even when getting old. Data from the 2009 Labour Force Survey show that people are more likely to engage in agricultural than nonagricultural activities. Moreover, they are more likely to be self-employed as they get older (NBSC 2014a). More than 80% of the employed older people (aged 60 or more) are self-employed. Around half of the employed older people are engaged in agricultural activities, comparing to less than 40% for the young.

Despite the agricultural labour force, the reemployment rate of the nonagricultural older people in China is very low and is highly concentrated. They are active in professions such as marketing, consulting, management, healthcare or teaching, which require higher education and skills (Wang and Yang 2005). The employed older people also have lower rate of higher educational attainments (less than 10%) than the young population (who has more than 15%) (NBSC 2010, Table 3.4). The lower educational attainment implies the need of providing continuing education for the older population, but they scarcely receive lifelong training or education and seldom use the Internet.

17.4.2 The Old-Age Security System in China

Until recently, there was very low welfare coverage of older people and an unequal distribution of pension schemes in China (China State Council 2006). Until the restructuring of state owned enterprises (SOEs) in the 1990s, China's pension system covered primarily the workers with SOEs or some large collective enterprises, or employees of government agencies and public institutions. The government reformed the old-age social security system in the 1990s. The new pension system is composed of individual accounts and social pooling, which means that both individuals and employers contribute to the pooling funds together (Du and Yang 2010; Dong and Wang 2014). From 1989 to 2013, the number of urban participants in the basic old-age insurance China increased from 57.10 million to 322.18 million, with the participation rate rising from 19.33% to 44.07% (NBSC 2014). Of those participants, the number of urban retirees increased from 8.93 million to 80.41 million, almost ninefold that of 1989 (NBSC 2014b). In addition, the employment opportunities in SOEs decreased due to restructuring, and more and more workers entered the informal economy (i.e. sector of economy that is not recognised or protected under the legal and regulatory frameworks). About one third of the urban workers together with all rural-to-urban migrant workers are employed by the informal economy. They are likely to face poverty when getting old, because the current law still does not require all workers or employers in informal economy to join the pension system (they can join the pension system voluntarily) (Du and Yang 2010; Dong and Wang 2014).

As for older residents in rural areas, they have been mainly depending on family support (Wang 2006). Only the childless and disabled older people (known as *Wubaohu* or *Five Guarantee persons*) have been provided with food, clothing, medical care, housing and coverage of their burial expenses. In recent years, China has built up the new rural old-age security systems, including an insurance system based on family support, healthcare and personal care services (China State Council 2006). The new rural cooperative medical system started in 2003, and the new old-age social insurance system in rural areas started in 2009. According to the Ministry of Human Resources and Social Security of China (MHRSS), 76.8% of the rural residents have

joined the old-age social insurance system, i.e. around 483.70 million by the year 2012 (Ministry of Human Resources and Social Security of China (MHRSS) 2013).

Furthermore, in addition to the social security system, the government has been developing civil services for the older population since 1980s, which may have contributed to their active ageing. The older people enjoy special discounts or receive free public services, such as transportation, museums and cultural and sport facilities. Community centres, including nursing homes and hospitals, have been established to provide supplemental care for the older people being cared for by family members (China State Council 2006).

17.4.3 Challenges and Policy Recommendations

Even though the social security system is improving in China, there are still many challenges for the government. Firstly, according to the official reports (MHRSS 2013), there are still half of the urban residents and one fourth of the rural residents not being covered by the old-age insurance system. Our findings confirm that Chinese older people are less secured than their European counterparts in terms of healthcare and income. Secondly, the government still explores ways to achieve a sustainable system to face the future of decreasing young labour population. Thirdly, discussion about the older population in China concentrates on healthcare and pension system reforms, but neglects the potentials of promoting independent living in older age, and inequality among regions and between the rural and urban residents.

Based on our findings, we conclude that it is important to provide and protect rights of the older population to work. Policies should aim at improving the voluntary participation in labour force, especially for women who retire earlier than men. To improve participation of the older population in the labour force, a more flexible retirement age should be introduced, taking into account health status, educational attainment and human capital. Also, training, education and networking opportunities should be facilitated for the older people who wish to be active and remain part of the workforce. The lifelong learning policy might help older people to maintain ties with the society, thus promoting healthy and active ageing.

Additionally, we find that the young generation continues to play a major role in supporting the older family members in the household. Also, the older family members provide support to younger generations by taking care of grandchildren. It can be suspected that both the older population and young families would face higher risks of poverty, if there were less intergenerational transfer. We suggest that programmes should be launched up at the local community level to support families who provide the familial care for the older population in need at home.

17.5 Conclusion and Future Work

In this chapter, we discussed briefly the quality of the CHARLS data, computed the AAI for China and compared it to the AAI in the EU. The overall score for the older population in China is slightly lower than that in Poland, which has the lowest AAI in the EU. Moreover, the labour force participation rate of the older population is lower in China, but older Chinese have similar high LE as Europeans; they are more physically active and report a much higher share of the HLE. Males are advantaged over females in active ageing, especially in the labour force participation. This complies with the findings for the EU.

Therefore, we suggest that social policies aim at enabling older people, with a special attention paid to females, to maintain quality of life and contribute to the family, economy and society. We suggest that active ageing of the older population can be improved by: (1) providing flexible retirement plans to improve the voluntary participation in the labour market and (2) promoting lifelong learning system and community care system for helping families to guarantee secure and healthy ageing for their elderly at home. Further analysis of the policy implications may require a detailed, international comparison of the retirement systems and their reforms (see, e.g. The European Commission (DG ECFIN) and The Economic Policy Committee (AWG) 2012). At last, we recommend that further research should concentrate on the social and economic determinants of active ageing, including reemployment, participation in social activities and lifelong learning in China, which can inform and support the effective policymaking for active ageing in the future.

Notes

1. Chongyang Festival (also known as Double Ninth Festival, on the ninth of the ninth month in the lunar calendar) is a holiday for the elderly. The festival has existed for around 2000 years. Family members gather to show respect to the elderly. Number "9" also symbolizes longevity in China due to the similar pronunciation ("*jiu*") in Mandarin to the word "eternality".

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Qian Xiong is a Lecturer in Ageing in the Centre for Ageing Research, Division of Health Research, Lancaster University. Her research aims to contribute to the understanding of population ageing and social, economic and health inequalities in later life through the lens of demographic and sociological theories and the life course perspective. Her research seeks evidence from both developing and developed countries to inform policy changes and promote the well-being of older people.

Arkadiusz Wiśniowski is a Lecturer in Social Statistics at the University of Manchester. His research interest is in developing statistical methods for combining various sources of data through Bayesian inference, especially in the area of measuring and forecasting populations and migration.