DEVELOPMENT OF OLD-AGE SERVICES AND LONG-TERM CARE SYSTEM

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1. Development of Old-Age Services and Long-Term Care System in China

Assessment Report

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00 Being an independent Chinese expert, the author writes this paper as a background report of the research topic "Development of Old-Age Services and Long-Term Care System in China" for the EU-China SPRP. The paper includes six sections:

1. Ageing: Trends and Influences
2. Basic Concept of Old-Age Service and Long-Term Care
3. International Experience of Old-Age Service and LTC.
4. Statistical Data related to LTC policy.
5. Current Situation and Problems of Old-Age Services in China
6. Prospect for China's Old-age Services and Long-Term Care Policy

1 Ageing: Trends and Influences

1.1 The Chinese Aging process: Past and Present

01 Almost exactly at the time we entered the 21st century, China crossed the threshold of aging. According to the 5th National Population Census, in 2000 the people aged 65 or more were 88.1 million, accounting for 7 % of the total population. In the following years the aging process accelerated and in 2010 the people over 64 were 119 million, accounting for 8.9 % (6th National Census). In the following 5 years, the speed of aging continued to increase and in 2015 the people over 64 were 144 million (10.5% of the total population).[1]

02 It should however be noted that the P.R.C. *Law on the Protection of Senior Citizen Rights,* article 2, states: "The term "senior citizen" adopted in the present law refers to citizens who are over 60 years old".[2] Following this definition, in 2000, the people aged 61 or older were 130 million (10.5 %);[3] in 2010, 178 million (13.2 %)[4] and in 2015, 222 million, accounting (16.1 %)[5].

Therefore, between 2000 and 2015, the number of older people(60 and over) had increased by 92 million (70.8%) at an average rate of 6.13 million per year (4.7%), while their share grew by 57.7 %, at an average rate of 3.9 cent.

03 It is worth noticing that after 2013 the process of aging in China had accelerated further: ln 2013 the people over 60 were 202 million (14.9 %); in 2014 212 million (15.4 %); in 2015, 222 million (16.2 %); and in 2016, the number was 231 million (16.8 %). Therefore, in the last 3 years, the annual increase of "senior citizens" has been of about 10 million, and the average rate of growth 0.61% per year.

1.2 The Aging Trend

[1] 《中国统计年鉴（2016)》，北京，中国统计出版社 2016 年版第 35 页。
[2] 《中华人民共和国老年人权益保障法》，民政部网站 http://www.mca.gov.cn/article/yw/shflhcssy/fgwj/201507/20150700850275.shtml）。
[3] 《中国 2000 年人口普查资料》，国家统计局网站（http://www.stats.gov.cn/tjsj/pcsj/rkpc/5rp/）。
[4] 《2010 年第六次全国人口普查主要数据公报（第 1 号)》，国家统计局网站（http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/201104/t20110428_30327.html）。
[5] 《2015 年全国 1%人口抽样调查主要数据公报》，中国网，（http://www.china.com.cn/news/txt/2016-04/20/content_38288171.htm）。

04 At the beginning of the 21st century, when China entered the club of aging countries, both the Chinese government and the academic circles started to pay much attention to this phenomenon that would profoundly impact on China's social structure. After the release of the results of the 5th National Population Census, forecasts on the aging process have become a very hot social topic.

In 2006 the Office of National Committee on Aging released the *Forecast of Aging of Chinese Population*. According to it, at the end of 2004 people over 60 years old were 143 million, in 2014 they were 200 million; by 2026 they are expected to be 300 million; in 2037 the number will be 400 million and in 2051 it will reach the maximum value.[6]

In another version of the same report, the aging process is divided into 3 phases: The 1st is from 2001 to 2020; in this period the aging goes at the highest speed, and in 2020 old people will be 248 million, accounting for 17.17% of the whole population. The 2nd is from 2021 to 2050, during which the aging process will be accelerated, and in 2050 old people will be over 400 million, accounting for more than 30% of the whole population. The 3rd phase is from 2051 to 2100, during which the number of the elderly remains high but gets stable, accounting for around 31% of the whole population.[7]

05 Before release of this report, the 100-Year Forecast on Chinese Population Aging, written by Du Peng, Zhai Zhenwu and Chen Wei, indicated that, according to their forecast, as of 2014 Chinese people over 60 years old will be over 200 million; as of 2026 the number will be over 300 million; as of 2041, it will be 400 million; and as of 2053 the number will reach the peak of about 430 million. The period from 2041 to 2064 can be called the Aging Peak of Chinese population, since the number of old people will always be over 400 million. After this period, old people will start to decrease. In 2100, there will still be 350 million old people, which means that China will be the country with the largest aged population in the world for a long period.

The share of older people in China was expected to be 12.7% in 2010, after which the aging process will accelerate. As of 2032, share of old people will be over 25%, 2 times of that in 2010. As of 2050, the share of old people will be 31%. The increase of old people after 2050 will result in a share of 34% in 2100.[8]

10 years after the publication of this book, thanks to the 6th National Census on Population in 2010 and the National Sampling Survey on 1% Population in 2015, new data are available.

Meanwhile, China's policy on family plan has been changed significantly: in 2014 the state introduced the universal two-child policy. Therefore, in 2016 Zhai Zhenwu and his colleagues revised their forecast: In 2015, the people over 60 years old were about 220 million. The forecast shows that as of 2026 the old people will be 310 million, in 2036 the number will be 410 million and around 2050 the number will peak at 470 million. Therefore, while in 2015 China's elderly population aged 60 and above accounted for 16.1%, by 2024 it will exceed 20%, and after 2041 it will be 30%; by the middle of the 21st century it will reach 34%[9].

[6] 全国老龄工作委员会办公室编撰,《中国人口老龄化发展趋势预测研究报告》, 北京,《中国社会报》2006 年 2 月 27 日第 6 版。
[7] 全国老龄工作委员会办公室编撰,《中国人口老龄化发展趋势预测研究报告》, 北京,《中国妇运》2007 年第 2 期第 16 页。
[8] 杜鹏、翟振武和陈卫著,《中国人口老龄化百年发展趋势》, 北京,《人口研究》2005 年第 6 期第 90—91 页。
[9] 翟振武、陈佳鞠和李龙著,《中国人口老龄化的大趋势、新特点及相应养老政策》, 济南,《山东大学学报（哲学社会科学版）》2016 年第 3 期第 27—28 页。

06 The World Health Organization has also made forecast on Chinese aging process. In the latest China National Assessment Report on Aging and Health, it is indicated that Chinese aging process goes much faster than that of many low- and high-income countries." In 25 years, in China the share of people over 60 years old is expected to be two times of the current value, increasing from 12.4% (168 million) in 2010 to 28% (402 million) in 2040.[10]

1.3. Impact of Aging on Chinese Society

07 In recent years, the aging process has been so fast that it creates panic in the Chinese society. In particular, the media often describe Chinese aging as “the most serious in the world”, which is not true and misleading.

It is no doubt that China has the world's largest elderly population, but this is due to the fact that China has the largest population in the world. Before overcoming the threshold of population aging, China's elderly population was also the largest in the world. For example, in 1990, China's elderly population accounted for only 8.4% of the total population, but the absolute value was 96.97 million, which was already the largest in the world. So, we can say that China cannot avoid "the most serious aging in world" as it is a destiny to this country.

Secondly, in terms of degree, the aging process of the Chinese population is not “the most serious in the world”. Even when the percentage of the elderly will peak, old people will account for only 30-35%, which is equal to the world’s average level. Zhai Zhenwu has forecasted that in 2050 the share of Japanese elderly population will be 42.5%, and that of Korean will be 41.5%. These values are about 8-10 points higher than that of China[11]. This confirms again that the argument that Chinese aging process is “the most serious in the world” is not true.

08 The old people dependency ratio is usually adopted in Chinese official statistics as an important aging indicator. Defining the old people as those 65 years old and more and the WAP between 15-64 years, from 2006 to 2015, the dependency ratio of Chinese old people has increased from 11.0 % to 14 %.[12] According to the 2026 forecast of the Office of National Committee on Aging, from 2030 to 2050 the dependency ratio will remain around 40-50%, which indicates that this period sees the most serious aging.

The research of Zhai Zhenwu has also forecasted on the dependency ratio of old people, which shows a more serious situation: Around 2023, the dependency ratio will be over 30%;, the ratio will be over 40% in around 2019, over 50% in around 2036, over 60% in around 2047; and finally in the middle of the 21st century, it will be as high as 66.2%. It should be noticed that according to the logic of the context the concept of “old people” in the research of Zhai Zhenwu should be those over 60 years old.

09 In discussing aging issue, dependency ratio is certainly an important indicator, but it is not the decisive one to describe the future socioeconomic trends, since China has a special situation.

[10] 世界卫生组织编撰，《中国老龄化与健康国家评估报告》，世界卫生组织 2016 年版。
[11] 翟振武、陈佳鞠和李龙著，《中国人口老龄化的大趋势、新特点及相应养老政策》，济南，《山东大学学报（哲学社会科学版）》2016 年第 3 期第 28 页。
[12] 《人口结构与抚养比》，国家统计局网站（http://data.stats.gov.cn/easyquery.htm?cn=C01）。

The first specialty is the lack of labor force as a consequence of aging. However, in a country where the population is over 1 billion, the result of aging might be totally different from that of other countries, since its population is indeed too huge. Even accepting the pessimistic forecast and not considering the new Two-Child policy, even in the peak period of population aging there will still be 600 to 700 million people in working age. If we only consider the dependency ratio, 1:1.5, the situation is really pessimistic. However, when thinking about the economic scale that a country with 1.5 billion people needs and that it can create, a labor force of 600-700 million is not small. Following the third wave of high-tech and digitalization, it is predicable that the future economy will not necessarily rely on a large population. Taking market economy as the pre-condition, increasing old people will produce an increase in demand. Why not regard such huge consumer market created by aging population as the opportunity for Chinese economic growth and employment? At the same time, China is changing its mode of economic growth and its industrial structure. The result of changes is reduction of human labor. Thus, in the past, at present and in the future of China, the primary obstacle to socioeconomic development is unemployment instead of population aging. Faced with this, China should not lose its way.

Secondly, the Chinese tax system is different from those of other countries. In developed countries, direct taxation is prevalent. In particular, personal income tax is dominant in the fiscal revenue. For example, from 2010 to 2014 average personal income tax in OECD countries is 23.6% of fiscal revenues. Denmark, Australia and US are the top 3 countries with the largest revenue from personal income tax, respectively 53.0%, 39.4% and 38.5%. From 2010 to 2015, the fiscal revenue from personal income tax has been increasing. The increase in Denmark is 2.6%, in Australia it is 2.7% and in US it is 5.9%. On the contrary, in China fiscal revenues mainly come from indirect tax, and especially from commodity turnover tax. In 2015 the revenue from personal income tax was only 5,7% of the fiscal revenue. In the near future, it can be expected that Chinese taxation will not change fundamentally. This comparison tells us when the proportion of personal income tax in the fiscal revenue is larger, the impact of number and proportion of working people, who function as the tax base, on the fiscal revenue is larger and more direct.

10 In conclusion, the aging process in China is irreversible. However the negative consequences of this process are not as terrible as reported by Chinese media or some foreign researchers.

In mid 1980s, Wu Cangping said, *China is a developing country, yet it is poor. By the end of this century, the Chinese population will be aged*; and *there are some people saying that China is a poor country that suffers from demographic disease of rich countries.*[13] From then on, people have a new saying: China is a country *Being Aged before Getting Rich*.

However, 30 years after China's Reform and Open, Chinese GDP reached 10.42 trillion USD, and China was the second largest economy in the world. The per capita GDP has reached 8,016 USD, which implies that China has become a member of the middle-income countries. If the growth rate will remain around 6%, it is possible for China to be a member of high-income country by 2025, when the per capita GDP will be 12,000 USD. In this sense, the term *Being Aged before Getting Rich* is old-fashioned for China, and then the real problem for this country is *Being Aged without Preparation.*

[13] 邬沧萍著，《漫谈人口老化》，沈阳，辽宁人民出版社 1986 年版第 26—27 页。

2. Basic Concept of Old-Age Service and Long-Term Care

2.1 WHO's Definition of Health and Its Origin

11 The basic concept of old-age service can be traced back to the definition of health made by the World Health Organization (WHO). According to Su Jingjing, and Zhang Daqing, between 1947-1948, the birth of WHO brought about a new definition of health：*Health is a state of complete physical， mental and social well-being and not merely the absence of disease or infirmity*." According to Su Wen, the Chinese translation on the official website, Chinese version, of WHO is "健康不仅为疾病或羸弱之消除，而系体格、精神与社会之完全健全状态."[14]

In simpler words, the definition can be interpreted as "健康不仅是不生病或不衰弱，而且还是身体的、精神的和社会的完好状态".(Health means not only being without disease or without weakness, but also being physically, mentally and socially well.) With this definition, there are three indicators of health, namely being without disease, possessing physical and mental health, and being socially happy.

12 The new definition born after WWII is not groundless. The research of Su Jingjing and Zhang Daqing indicates that since 1700, following the development of public health and medical science, people believe life can be extended through improved medical cure, public hygiene and health, as well as personal behavior. Especially after WWII, invention and spread of anti-biotic, vaccine and DDT etc. have fundamentally changed the approach in controlling infectious diseases. This brought the medical scientists to an over-optimistic view of medical science, and they believe the diseases around the world could be solved one by one in a short period.[15] Such idealistic thought is called *Medicinism (medicine-centered thought)* by later generations.

As a matter of fact, history did not develop as people expected. Since the mid-20th century, the health of human beings left "the era of acute infectious diseases" but entered "the era of chronic diseases". In the first era, the primary killers were infectious diseases such as plague, malaria, cholera and myalgia. In the mid-20th century, the invention and spread of anti-biotic, vaccine and DDT helped controlling these diseases. However, human beings did not enter a world without diseases. Instead, they entered a world of chronic diseases, in which the primary killers are cardiovascular diseases (hypertension, stroke and CAD), cancer, diabetes mellitus, and chronic respiratory diseases.

It is obvious that compared to acute infectious diseases, chronic diseases have two characteristics: first, the causes of chronic disease are mainly environment and lifestyle; second, the medical treatment of chronic diseases can only control the gravity, but cannot cancel the disease. For these reasons, the *medicinism*, which was born in the first half of the 20th century and regards medical cure as the center of health, does not correspond to the reality of the modern society, whose primary threat actually comes from chronic diseases.[16]

[14] 苏静静、张大庆著，《世界卫生组织健康定义的历史源流探究》，北京，《中国科技史杂志》2016 年第 4 期第 494 页。
[15] 苏静静、张大庆著，《世界卫生组织健康定义的历史源流探究》，北京，《中国科技史杂志》2016 年第 4 期第 486—487 页。
[16] 唐钧著，《关于健康社会政策的理论思考》，南京，《江苏社会科学》2008 年第 4 期第 68 页。

13 In the 2014 annual conference of China Association for Science and Technology (CAST), academician Han Qide made a revolutionary comment on medical sciences and medical services, which had provoked great discussion. One of his revolutionary ideas is that the *medical treatment can affect only 8% of human's the health*.[17]

Afterward, a "discovery" by the WHO became famous in China: among the health-affecting factors, biological factors account for 15%, environmental factors for 17%, and behavior and lifestyle for 60%, while medical services only account for 8%.[18] This discovery seems related to the Victoria Declaration on Heart Disease of 1992 of the WHO. This kind of new understanding (it is new in the Chinese society) is in line with the definition of health mentioned above.

2.2 Healthy and Active Aging

14 Health issue of aged people is always attracting our attention. The information I collect shows that the WHO's definition of health and other new concepts are better realized in strategies and social policies that many governments make to cope with ageing.

Today, three words represent the new definition of health for aging people: successful aging, healthy aging and active aging. Some scholars view these three concepts as three depths in which the international community understands the aging.

15 In 1987, the US scholars John Rowe and Robert Kahn put forward the concept of successful aging, describing it as *not letting old people's functions decrease a lot through positive influence of external psychological and social factors on the aging process, keeping them in psycho-physical balance, vitalizing their energy and letting them realize themselves through social participation"*. [19]

However, there are also researchers such as Muriel Gillick who have expressed their worries about the concept of successful aging. In an interview talking about successful aging, which refers to healthy and energetic old-age life, Gillick said that everybody wants to keep active and healthy when getting old; however, it would not be fair to criticize those who fail in reaching this goal and to define them as unsuccessful or even guilty for being disabled.[20]

16 Therefore, another concept, healthy aging, was born. In 1990, the Copenhagen Conference of WHO adopted the strategy for healthy aging. This strategy emphasizes that old people should keep their physical, mental and intelligent wellbeing as long as possible.

The latest World Report on Aging and Health says: *Healthy Aging doesn't only mean to be without disease. For most aged persons, maintenance of functioning is the most important.*[21] Being aged doesn't necessarily mean worse state of health. Problems that aged people face are usually related to chronic disease, especially those non-infectious. Most of these diseases can be prevented or postponed through healthy actions. Moreover, if discovered as early as possible, can be effectively controlled. Even for old people whose ability decreases, good supporting environment can ensure a

[17] 韩启德著,《我对"健康"概念的几点认识》, 北京,《中国医院院长》2014 年第 10 期第 6 页。
[18] 王东进著,《全民医保在健康中国战略中的制度性功能和基础性作用（下）》北京,《中国医疗保险》2016 年第 12 期第 10 页。
[19] 张旭升、林卡著,《"成功老龄化"理念及其政策含义》, 长春,《社会科学战线》2015 年第 2 期·
[20] 穆里尔著,《照护年老体衰、呆傻迷糊和生命垂危的人》, 世界卫生组织网站（http://www.who.int/bulletin/volumes/88/9/10-030910/zh/）。
[21] 世界卫生组织,《关于老龄化和健康的全球报告》, 世界卫生组织 2016 年版第 VII 页。

life of dignity and personal development.[22]

17 In 2002, the UN adopted the Political Declaration and Madrid International Plan of Action on Ageing. Among the suggestions, the document put forward three priorities: *Aged Persons and Development; Promotion of Aging Health and Benefit; Ensuring that Aged Persons can benefit from advantageous and supporting environment.*

In the same year, the WHO issued the Active Ageing Policy Framework, in which the concept of Active Aging is defined as "the process of optimizing health, opportunities for social participation and social security for old people to improve quality of their life." This definition emphasizes the need of multi-partnership, whose objective is to ensure that old people can benefit from the resources of their families, communities and economies. The policy framework of WHO identifies six decisive factors for active aging: economy, behavior, individual, society, medical and social service, and physical environment.[23]

2.3 Towards an International Consensus on Policy for Long-Term Care of the Ageing

18 The report more related to the topic of this paper is the 2000 WHO report, *Towards an International Consensus on Policy for Long-Term Care of the Ageing*. In this report there is the following definition of long-term care: *it is a system of actions provided by informal caregivers (families, friends or neighbors) and professional staff (medical social or other) for ensuring those not self-sufficient to keep their life quality in line as much as possible with their priorities and enjoy independence, autonomy, participation and individual realization and human dignity to the largest extent.*

The report also indicates eight key issues of LTC: 1. Personal and public value and understanding; 2. Roles and responsibilities of private and public sectors; 3. Public education; 4. Role, responsibility and right of caregiver; 5. Infrastructure: a LTC system that provides social and medical services; 6. Income guarantee and financing for LTC system and services; 7. Current and future technology; 8. Data collection for research and strategy analysis. It is obvious that WHO hopes to collet an international consensus on these 8 points.[24]

It is worthy noticing that in the Chinese version of the 2000 report, the term Long-term Care was translated as 长期照顾 (care for long term), while in the 2016 report, the term has been translated as 长期照护(care and protection for long term). In the context of Chinese language, the change is significant.

3. International Experience of Old-Age Service and LTC

3.1 LTC system for old people driven by the aging process

19 In the modern world, the countries that have entered into the aging societies before China does are mainly developed countries that have accumulated a great amount of experience in establishing

[22] 世界卫生组织，《关于老龄化和健康的全球报告概要》第 5—6 页。
[23] 世界卫生组织，《关于老龄化和健康的全球报告》，世界卫生组织 2016 年版第 5 页。
[24] 世界卫生组织，《建立老年人长期照顾政策的国际共识》，世界卫生组织 2000 年版第 6 页。

LTC insurance system today.

Starting from the end of 19th century, the medical service systems have been faced by an unprecedented pressure, since elderly people are not the only ones to suffer from diseases, especially chronic diseases.[25]

Researches in this area have shown that fast increasing medical costs and disadvantages brought about by the modern society have produced huge challenges to our health in the aging era. Therefore, the reform of the medical system has become a central economic and political issue in many countries.

The huge increase in medical costs registered by the US, Japan and some European countries has been determined, besides the additional costs due to the development of medical technology, mainly to population aging. [26]

20 A popular Chinese saying states that normally 70% of medical cost in our life is spent during the last several months or even the last month of the life. However, researches have shown that temporary and urgent medical costs before death have dramatically increased not because of the cost of medicines, but of care. A report by Yang Yansui and Yu Miao, *Population Ageing's Impact on Medical Insurance Fund*, recalls that according to Brenda Spillmann and James Libitz[27]the medical costs before death are not influenced by the increase in life duration; as a matter of fact the costs do not change no matter one dies in the year of 70, 80 or 90. Even the costs before death increases dramatically, the reason for the increase is the fees for care instead of the fees for medicine.[28]

The experiences of developed countries show that though the systems of pension insurance and medical insurance get better and better, care for old people remains an unsolved problem. The lack of LTC can even cause serious crisis on the two systems, which further impact on the overall social security system.[29]

21 Since the 1960s, developed countries have moved their attention in designing and implementing on long-term care policies. Early efforts and attempt were made by the EU countries that were the earliest to enter aging process. They firstly covered LTC into medical services and then arranged independent LTC.

We can see after separating basic life care, non-medical care and rehabilitation from general medical care, LTC service becomes an independent social service system, which can therefore reduce the pressure of increasing medical costs caused by aging. Since 1960s, this approach has been adopted by many countries in the world, especially those faced with increasing population aging.

[25] 穆光宗著，《人口生态重建》，北京，中国科学技术出版社 2016 年版。
[26] 崔玄、李玲和陈秋霖著，《老龄化对医疗卫生体系的挑战》，北京，《中国市场》2011 年第 16 期。
[27] The study is based on a se sample of 80,000 old people who died over 65 year of age.
[28] 杨燕绥和于淼著，《人口老龄化对医疗保险基金的影响分析》，北京，《中国社会保险》2014 年第 10 期。
[29] 施巍巍，《国内外老年人长期照护制度研究综述》，哈尔滨，《哈尔滨工业大学学报（社会科学版）》2009 年第 4 期。

3.2 Long-Term Care Systems in Western Culture

22 The concept of LTC is related to the English word "care". Normally, care is specifically used in social services (welfare). The term LTC in many Chinese researches is derived from the concept Community Care, promoted by Mrs. Thatcher in her Welfare Reform in 1980s.[30]

At the end of the 20th century, the general trend in the public policies of developed countries was to reduce expenditure by political efforts in the atmosphere of economic rationalism. In such context, the role played by informal care in the provision of normal assistance and care for weak old people was appreciated.[31] This was also an important direction of the social reform introduces by Mrs. Thatcher that transformed the formal care policy into an informal care policy. As a consequence small private welfare service institutions operating at the community level took the place of large government-run social welfare agencies.

Around the world, medical services are usually viewed as high-threshold technological profession and therefore all services related to medicine are expected to have a high cost. In the 1990s A Japanese investigation showed in fact that for the same care service, the ratio of the price under social service to that under medical service is 1:7.

23 It must be underlined that historically the choice of LTC *services in different countries implies profound significance: 1st, life of an old person must be complete; 2nd, ability of an old person should be exercised; and 3rd, the decision of old people must be respected.*[32]

In China, some researchers summarized these principles in three words "continuity, self-decision, and autonomy".[33] The principle of complete life or continuity mainly refers to *Aging in Place*, which is frequently discussed in this field. Aging in Place emphasizes the humanistic environment of aging, hoping that old people can enjoy their aging life in the house or community where they have been living for long time. The principle of using ability or autonomy emphasizes protecting and maintaining the autonomy of old people. Therefore, rehabilitation is a major task of LTC service. The principle of respecting the decision of aged persons is the principle of self-decision. It emphasizes the kind of services, the givers of services and the place for receiving the services should be chosen and decided by the user. These three principles are in accordance with the concepts promoted by the UN: Active Aging and Healthy Aging. All these principles and concepts should be included in the design of a LTC system.

3.3. LTC in East Asia

24 In Japan, to show the difference from clinical nursing activity, LTC is called "介護（かいご） kaigo, simplified Chinese "介护 jiehu", which specifically means elderly care. *The Japanese concept, on the one hand, means daily life assistance, including dressing, eating, living and travelling, and, on the other hand, it includes medical care, nursing and rehabilitation.*[34] Japanese

[30] 如尹尚菁所著的《发达国家长期照护服务体系比较》，施巍巍所著的《国内外老年人长期照护制度研究综述》。
[31] 霍普金斯等主编，《21 世纪初的社会保障》，侯宝琴译，中国劳动社会保障出版社 2004 年版。
[32] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版。
[33] 茆长保著，《丹麦的老年福利和养老服务及其对中国的启示》，北京，中国社会报 2014 年 3 月 3 日。
[34] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版。

policy on elderly care has been developed in this way: In early period, clinical nursing activity and basic care for daily living were subtracted from medical service. Later some portion of non-medical care and rehabilitation was also subtracted from medical service. The so-called non-medical care and rehabilitation service is not aimed to completely cancel the disease but rather to slow down the development of chronic diseases and keep physical ability and mental health for old people. These two branches of service are combined into the Japanese LTC service.

In Chinese-prevailed countries and regions (Singapore, Mainland China, Hong Kong, Macau and Taiwan), a new word, "照护 zhaohu" (care and protecting), has been created to integrate daily care and medical care, which shares same connotation with the Japanese concept. In this paper, the Chinese word "Long Term Zhaohu" (Care and Protection) is adopted. As shown above, the Chinese translation of WHO also adopts this term.

25 The experience of East Asia has in turn influenced some developed and developing countries. More and more countries include the LTC services into the social services. This has two implications. The first way for this is providing LTC services from old-age service agency, which is in the field of social services, instead of medical agency. The second way is separating the profession of LTC services from that of medical services, making it an independent occupation. The separation is also practiced in educational field. Therefore, the caregiver of daily service to elderly people should be professionalized, as in the international experience where a professional LTC team is composed of doctors (general practitioner), nurses (registered), social workers, dietitians, rehabilitation therapists and psychological consultants, or as in Japanese experience where the caregivers are called 介护师 and 介护士 (care professional).

3.4 Birth of LTC Insurance

26 For promoting LTC service, there is a need of financial guarantee. For this, LTC insurance was born. According to the information found on Chinese websites, commercial LTC insurances in the US were launched in 1970s. Israel established the first social LTC insurance in 1980s, Germany established social LTC insurance in 1990s, and Japan established it in the first decade of the 21st Century.

27 The earliest systems similar to LTC were all derived from welfare system, and most of them were "care insurance". For example, the Netherlands promulgated the *Act on Special Medical Expenditure* in 1960s, which is originally part of the legislation on medical insurance and is in favor of institutional service. Later, the coverage of service extended from clinical nursing to daily life care and the concept evolved from nursing to care. The generous insurance benefit allowed 10% of old and disabled persons in Netherland to live in caregiving institution.[35] In 1980s, as the aging process accelerated, this system made the costs on medical insurance increase. Then, reform became necessary.

28 The reform had two key elements. The first was that care receiver could choose the way of care. Caregivers could be a family member, a neighbor, a friend or a member of the same community. On this basis, small service institutions rooted in community developed. The second was that the insurance benefits could be paid to the informal sector. Money was provided to pay for the costs of the services that care receiver had chosen. This reform was successful in Scandinavian countries and UK. Today it is a widespread system that the state provides subsidies or a social salary to

[35] 裴晓梅、房莉杰主编,《老年长期照护导论》, 北京, 社会科学文献出版社 2010 年版。

directly pay family members, other persons or institutions, which bear the responsibility of caregiving for old people.

3.5. Different Models of LTC Insurance

29 Over several decades, many models of LTC have been established in different countries. For instance the LTC systems of Japan, Germany, Denmark and the US can be classified into two models: insurance models and welfare models, according to different sources of financing. The welfare system is administered by the state or local governments and is financed by taxes; insurance systems are financed by the insurance premiums paid by insured persons.

Denmark has a LTC welfare system funded by tax and managed by the public administration. LTC in the US is financed by commercial insurances, funded by premiums and operated by insurance companies. LTC in Germany is social insurance, funded by social contribution and run by the state. In Japan, having compared the advantages and shortcomings of different models, LTC has a new model, which can be called insurance-welfare model, because the financial source is both insurance contribution and tax, and the administration is done by local government (prefecture, city, street and village). In the book *Japanese Elderly Care Insurance* (by Japanese Elderly Care Insititute), comments on the four models are as follows: *In Netherland and Germany, the LTC systems are supplementary to medical insurance, while in US, there is no universal medical insurance. In North Europe, elderly care is a part of social welfare. Today, only in Japan a real and complete elderly care system is established*.

30 The US LTC insurance system is famous for its commercial model. This is related to the fact that medical insurance in the US is mainly based on commercial insurance. However, there have been two systems established in US in 1965. One is the *Medicare* system for old people and another is *Medicaid* for low-income group. These two systems both bear the responsibility of protecting the minimum livelihood and providing long-term care. The *Medicare* is funded by salary tax, which is equivalent to pension contribution in China. In recent years, PACE (Program of All-inclusive Care for Elderly) has become a new fashion. In this program, the core is usually represented by registered nurses, around which are social workers, dietitians, rehabilitation therapists and caregivers. They compose a professional team that provides LTC service to old people at home, and the costs are paid by Medicare and Medicaid programs.[36]

31 In Germany, the LTC insurance is an independent social insurance. Employer must pay 0.975% of the salary as contribution, so does the employee. The contributions are deposited in a specific bank for running medical insurance funds, and medical insurance agencies are responsible for the administrative and financial aspects. When claiming for benefits, applicant must wait for several months of verification for getting approval. The benefit can only be delivered when it is verified that the applicant really needs care. Eligibility check is entrusted to agencies of medical insurance. Doctors, nurses and LTC workers are responsible for the checking. This system covers not only old people. Everyone who is verified as needing care can get the services, no matter how old he or she is.[37] Today, in Germany LTC service are mainly provided by private social service agency, the provision includes in-home and institutional services.

36 何玉东：孙浸溪著，《美国长期护理保障制度改革及其对我国的启示》，北京，《保险研究》2011 年第 10 期。

37 郝君富、李心愉著，《德国长期护理保险：制度设计、经济影响与启示》，长春，《人口学刊》2014 年第 2 期。

32 The Japanese elderly care insurance has the following characteristics: 1) the insurance covers only old people, which means other members of the society cannot receive service from the program even if they need them; 2) The funding comes from insurance and welfare, which means that half of the expenditure is covered by public finance, while the other half is covered by collected insurance premium, which citizen contributes from the year of 40; 3) Insurance can directly pay for the service that citizen needs and service recipient can choose to pay for it, in which case the payment is only 50% of the full amount; 4)The LTC service is mainly provided by NPO, a private agency, and the service includes home and institutional services.

It should be recalled that one of the reasons why Japan adopted an insurance-welfare model is that the government wanted to see the effect of the new policy immediately after its introduction. In the German case, the program is based on a social insurance, so the collection of contribution started about half year before the official launch of the program. In the legislative phase of the Japanese program, the Japanese parliament observed that *before really receiving service, there is no hope to collect premium from the people*. In practice, the collection of premium started half year after the official launch of the program, and the services provided before this moment were paid by the welfare system.[38]

Actually, the most important aspect of the Japanese case is that this country studied the experiences of other countries for 10 years before introducing its system. As the book "Japanese Elderly Care Insurance" says: "*When developing the new system, Japan can conduct case study on other countries, and then establish an elderly care insurance that fits into Japanese context on the basis of advantages of the foreign programs."*[39]

3.5. Theoretical reason of LTC system

33 Different countries adopt different models of LTC as a consequence of their different socio-economic developments and historical and cultural traditions. Among all the factors, there are two that can be viewed as the catalyst agents that promote the institution of LTC services and insurance.

The first is the change in social structure: fertility rates below replacement level plus population aging negatively affect the demographic structure of the population. The second is a social system problem: commercialization of medical services and fragility of medical insurance require a new system. Therefore, for establishing LTC insurance system, it is necessary to research these two factors. For China, it is important to emphasize the independence of the LTC system, to learn from experience of developed countries and to find theoretical reasons to support a LTC system fitting into Chinese context.

34 One of the reasons is that LTC services and insurance are needed for solving the problem of medical service and medical insurance connected to population aging. As mentioned above, in the modern society, medical services are usually considered professional and high-thresholded. The costs of any service related to medicine can increase. This makes the accessibility of medical services a problem. Therefore, in many countries, LTC has been moved to social service to reduce the economic and opportunity cost. To China, this is very important.

[38] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版。
[39] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版。

For solving the negative problem resulted from accelerated aging and relieving the pressure on medical insurance, the LTC insurance is necessary but it must be separated from medical insurance. In China the LTC insurance should be an independent social insurance program.

35 The second thing to emphasize is that the LTC system should cover both daily life needs and rehabilitation. If LTC is only viewed as health care, or only clinical care, it would not comply with its original purpose. WHO says that old people's need of LTC is influenced by the reduction of physical, mental and/or cognitive abilities[40]. This means that LTC needs do not come only from diseases, but also from the reduction of psychological, social and functional abilities. At the same time to view LTC only as care for daily life, it is also not correct. According to WHO statistics, in developed countries, more than 60% of people over 60 are healthy, while in China the proportion is only 43%.[41] Therefore, LTC system must covers health care.

In the LTC system, life care and health care should be balanced, but sometimes the former should receive more attention. The most typical case in China is that life care and rehabilitation are not covered by the Chinese medical insurance system. Chinese hospitals usually assign the task of life care to the family members of the patient. When family members are not available, a care worker is employed, and the costs are covered by the patient or his/her family. At the same time, rehabilitation is excluded from medical services. Medical insurance does not pay for this part. He or she who needs this service should pay for it. The LTC system should provide life care and rehabilitation to elderly people, to demonstrate the spirit of "care".

36 The third thing to emphasize is that LTC system should start from covering disabled old people. What disabled old people need the most includes life care, LTC, mental care. They should be the major recipients of old-age service institutions. In many developed countries, care for disabled old people has been researched as an important public policy, and the care has been realized through technology, policy, institutions and the market. In the first decade of the 21st century, economically developed countries have established LTC services and LTC insurance for the needs of old people.[42]

In EU and OECD member states, the LTC system covers everybody. In China, in the beginning stage it is advisable to firstly cover the disabled old people, because the conditions exist to realize this proposal.

For a social insurance system, predictability is very important. Life expectancy of disabled old people is predictable, and the needs for the final stage of old people are stable and limited. Only with data regarding these issues is it possible to conduct actuarial calculation for LTC insurance. The situation of disabled persons before old age is not stable, and China doesn't have enough data in this regard. Therefore, taking the easier step first, the coverage of LTC policy should first focus on disabled old people, and then the coverage can be gradually extended. Seriously disabled old people and disabled old people do generally overlap. Therefore, with a policy covering the disabled old people, over 60% of disabled persons would also be covered.

37 In conclusion, learning from the international experience presented above, the LTC system

[40] 《建立老年人长期照顾政策的国际共识》，世界卫生组织网站（http://www.who.int/publications/list/WHO_HSC_AHE_00_1/zh/）。
[41] 《中国 60 岁以上老人身体健康比例仅 43%左右》，人民网（http://society.people.com.cn/n/2013/0926/c1008-23043812.html）。
[42] 潘金洪、帅友良等著，《中国老年人口失能率及失能规模分析》，南京，《南京人口管理干部学院学报》2012 年第 4 期。

should be theoretically based on three points. First, independence: the LTC insurance should be an independent social insurance program. Second, dual objectives: LTC should cover both life care and rehabilitation. Third, targeting: the LTC system should initially take as target group the disabled old people.

Of course, studying other countries experiences doesn't mean just copying them. The Chinese LTC system must be established according to Chinese context.

4. Statistical Data related to LTC policy

4.1 The LTC policy of Beijing

38 In 2016 Beijing Old-Age Association entrusted the Beijing Yide Center to conduct a research in theme of Establishment of the Beijing's LTC Insurance System[43]. The research was expected to cover the background of Beijing's LTC Insurance system and analyse local old people's needs and propensity to get a LTC insurance.

4.1.1 The Background of the Beijing's LTC Insurance System

39 Establishing LTC insurance in Beijing involves the relation between the LTC insurance system and the aging process and all the problem connected, mainly those related to health insurance and old-age services.

40 Since the launch of the 15th FYP[44] Beijing had achieved good results in the field of old-age issues. In 2015, the average life expectancy of Beijing citizens was of 81.9 years, a value in line with that of developed countries. However, the acceleration of aging has impacted on the socioeconomic development of Beijing.

According to the Statistical Communication on the Economic and Social Development of Beijing, in 2015, among the 21.705 million people living in Beijing, there were 2.4 million people 60+ (15.7%)[45]. The percentage was 23.4% if computed considering only those with Beijing citizenship (Hukou)[46]. These data show that in Beijing the percentage of elderly was 0.8% lower than the national average, but when computed for residents it was 6.9 percentage points higher than the national level.

The old people 80+ were 562,000 that represented 17.8% of those 60+ and 2.6% of Beijing citizens. During the 12th FYP, the population 60+ increased from 2.35 million in 2010 to 3.134 in 2015 (+784,000 equal to an increase of 33.4%). In the same period those 80+ increased by 211,000 (60.1%)[47]. Therefore, those aged 80+ increased about two times faster than those 60+.

[43] 此课题由唐钧主持，北京义德社会工作发展中心负责实施。
[44] 即“国民经济和社会发展第十二个五年计划”，时间为 2011—2015 年。
[45] 《北京市 2015 年暨“十二五”时期国民经济和社会发展统计公报》，中国经济网（http://district.ce.cn/newarea/roll/201602/15/t20160215_8853650.shtml）。
[46] 《北京老龄化程度高 平均每天多 500 名花甲老人》，北京，《新京报》2016 年 5 月 5 日。
[47] 《老年人口信息和老龄事业发展状况报告》（2010—2015），“首都之窗”网站（http:// zhengwu.beijing.gov.cn/

It should be noticed that in 2015 among the Beijing old-age residents, 94% were people with Beijing citizenship. The difference between the number of old-age residents and that of old-age citizens is mainly influenced by the population of those aged 15-59 years. During the 12th FYP, the growth rate of Beijing residents was equal to 10.7%, while that of the citizens was 6.6%, in spite of the fact that the municipality made great effort to limit migrants which reduced the increase of 15-59 people. For these, the aging in Beijing will accelerate again.

We should now pay attention to medical insurance and old-age services.

41 The coverage of Beijing's medical insurance is large. Each of the three programs (the Basic Medical Insurance for Urban Employees, the Basic Insurance for Urban Residents and the New-Type Cooperative Medical Insurance for Rural Area) covers over 97% of the population. In 2015, old-age participants in the BMI for Urban Employees were 2.695 million; those in the BMI for Urban Residents 198,000; and old-age participants in the New-Type Cooperative Medical Insurance for Rural Area were 616,000. The first group accounted for 77%, while the latter two groups accounted for 23%[48]. The increase of medical expenditure in Beijing was high: in 2011 it was 97.726 billion RMB, but it 2014 it reached 159.464 billion [49], with a growth of 63.2% during the 4-year period, 17.3 percentage point more than the national level[50].

Therefore, pressure on the medical insurance fund of Beijing is heavy. There are three reasons for this: 1) the benefits of the three medical insurance programs are the highest in China; 2) a special policy for individual account (money in the individual account of medical insurance can be spent by the owner at any time) had been adopted, making the accumulation of fund not large enough; and 3) the BMI for Urban Employees is funded by contributions of employer and employee (employer contributes 9% of total salary of all the employees, while employee contributes 2% of the salary of the previous month).

Therefore, the Beijing medical insurance funds are weak. They have reported deficits. This happened in 2012, when the BMI for Urban Employees run a deficit, and in 2013, when the other two programs registered a deficit [51]. The second fact is that the accumulated balance of the medical insurance funds is very low. In 2015, the revenue of the basic medical insurance fund was equal to 78.9 billion RMB, while the expenditure was equal to 71.9 billion RMB, which implies a negative the balance of 6.7 billion RMB, and the accumulated balance 29.4 billion RMB[52]. The regulation of the Ministry of Human Resources and Social Security takes the accumulated balance as key indicator of risk. The accumulated balance should not match or exceed the average expenditure of 6 or 9 months on benefits. Taking 6 months for calculation, the accumulated balance of Beijing's basic medical insurance fund should be 36 billion RMB. This means that the current deficit of the fund is 6.57 billion RMB.

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48 《国家数据 / 城镇基本医疗保险》（http://data.stats.gov.cn/easyquery.htm?cn=E0103）和《国家数据 / 新型农村合作医疗》（http://data.stats.gov.cn/easyquery.htm?cn=E0103）。

49 《北京市卫生事业发展统计公报》（2011—2014 年），“首都之窗”网站（http://zhengwu.beijing.gov.cn/tjxx/tjgb/）。

50 《我国卫生和计划生育事业发展统计公报》（2011—2014 年），卫计委网站，（http://www.nhfpc.gov.cn/zwgkzt/gongb/）。

51 《国家数据 / 城镇基本医疗保险》（http://data.stats.gov.cn/easyquery.htm?cn=E0103）和《国家数据 / 新型农村合作医疗》（http://data.stats.gov.cn/easyquery.htm?cn=E0103）。

52 《北京市卫生事业发展统计公报》（2015 年），“首都之窗”网站（http://zhengwu.beijing.gov.cn/tjxx/tjgb/）。

These data tell us that to solve the problem due to accelerated aging and relieving the pressure on the medical insurance, it is necessary to establish a social insurance system independent from the medical insurance programs.

42 During the 12th FYP, the number of old-age service agencies in Beijing changed little. From 2011 to 2014 it is increased by 9 (+2.2%). However, the growth of the number of old-age service beds is significant. From 2011 to 2014, there had been 39,634 new beds (+56.8%), with an average annual growth of 18.9%. Especially from 2012 to 2014, the increase was 33,207 beds, an increase of 43.6%, and the average annual growth was 21.8%. Among them, the number of beds in government-run institutions had increased by 12,979, with an growth rate of 43.8%; and those in non-government institutions had increased by 20,228, with an growth rate of 43.5%. One can see that in the past two years the three increases had been almost synchronous.

However, studies have shown that only 40% of beds in old-age service institutions are occupied, which is not an ideal situation[53], According to media, in 2015, the Beijing government-run old-age service institutions had 28,504 beds, and 12,488 elderly people living there; thus the occupancy rate was 43.8%.

Researchers had also investigated 362 old-age service institutions in Beijing, and they concluded that: the median rate of occupied beds in government-run old-age service institutions was 52.1%, and that of private old-age service institutions was 51.0% and concluded that: "There is no statistically significant difference in bed usage between public and private old-age service institutions" [54]. Thus, one can see that in recent years the supply side of old-age services in Beijing has been on a vicious circle: on the one hand, official report claims that the old-age service beds are still insufficient; one the other hand, the number of beds has increased during the 12th FYP, but half of them remain unoccupied.

Some studies showed that 2/3 of Beijing elderly population lived in the six urban districts, but only 1/3 of government-run old-age service beds were in these districts; at the same time 1/3 of the elderly population lived in the suburbs, but 2/3 of government-run old-age service beds were in these districts, resulting in a large number of useless beds.[55]

Data released by the Beijing Municipal Bureau of Statistics show that the average monthly fee of old-age service institutions in the six urban districts was 3,300 RMB and therefore much higher than that of suburban beds which was equal to 1,800 RMB. It also showed that the government-run old-age service institutions charged an average fee of 2,200 RMB per month, while the private ones charged on the 2,700 RMB per month[56]. However, in the year that the survey was conducted (2013), Beijing's pension insurance for urban employees was only an average 2,773 RMB per month. As a result, 43.5% of the respondents thought that the cost of old-age service institution was high[57] Therefore, lack of effective demand had become a bottleneck for further development of old-age service.

[53] 《近八成养老机构建在五环外》，北京，《北京日报》2015 年 5 月 27 日。
[54] 《北京市养老机构床位使用率现状调查》，北京，《中国护理管理》2015 第 7 期。
[55] 《北京部分公办养老院入住仅 1%》，北京，《北京商报》2016 年 2 月 1 日。
[56] 《北京养老机构整体入住率超六成，仅三成设在城区》，首都之窗（http://zhengwu.beijing.gov.cn/tjxx/tjfx/t1336926.htm）。
[57] 《北京超 8 成老人不能承受养老机构收费》，北京，《北京晚报》2013 年 12 月 24 日。

43 To sum up, the process of aging in Beijing is irreversible. The number of elderly citizens of Beijing, especially the very old people, who are the main objective of public policy, is growing faster and faster. This trend has increased the burden of health insurance and old-age services and therefore a reform is needed, which means the establishment of LTC systems, including the establishment and improvement of funding systems and service systems related to LTC for the disabled elderly. Appropriate arrangement is expected. The policy objectives are: reducing the stress on medical insurance and balancing the supply and demand sides of old-age services.

4.1.2 LTC Demand of Old People in Beijing

44 Data obtained from the 2015 Sampling Survey on Livelihood of Beijing Urban Old People (Hereinafter referred to as the 2015 Survey) and the 2016 Survey on LTC Needs of Beijing Old People (hereinafter referred to as the 2016 Survey) allow to analyse LTC needs and intention of the elderly. Background information and relevant data are used to make comparison and necessary supplement. This can be viewed as an indicator of the public's opinion on the establishment of Beijing's LTC insurance system.

The statistical analysis is divided into two parts: 1) the basic living conditions and health status of the respondents; 2) analysis on the respondents' LTC needs and intentions.

45 The 2015 survey showed that 9.4% of the respondents lived alone, while according to the 2016 survey the majority of the households (61.9%) were one-child family, multi-child family accounted for 37.3% and family without children accounted for 0.8%.

In the 2016 survey to the question "Are you willing to live with your children for a long time?", the Yes accounted for 41.4%, the No for 24.6% and It depends for 21.6%. When asked "Do you think your child demonstrates filial piety to you?", the large majority (84.8%) answered "yes".

Therefore, although a considerable number of respondents expressed willingness to live with their children, and felt that their children had filial piety, it was evident in Beijing the family miniaturization coexisted with population aging.

46 According to the 2015 survey the average income of the respondents was 2,435 RMB; while according to the 2016 survey it was 3,266 RMB. The difference is explained by the difference in the age structure of the respondents. In 2015 survey, the youngest respondent was 60 years old, while in 2016 survey the youngest was 50 years old.

In the 2016 survey, there was a multiple-choice question concerning the main source of income for the elderly: 87.3% of the respondents answered that their main source of income was their pension, 22.0% chose wage income and 10.3% said their income came from their children. Those who relied on social assistance accounted for 10.3% and those who relied on relatives and friends accounted for 0.4 %.

In the 2015 survey, the average income of the surveyed households was 7,450 RMB, and the average total expenditure 4,750 RMB (64.0% of income). In the 2016 survey the situation was similar, the average income of the surveyed households being 6,708 RMB and their average total expenditure 4,552 RMB (67.9% of income).

The 2015 survey made a detailed analysis on the daily expenses of the respondents: 1,366 RMB is spent on daily life, of which 678RMB is spent on food, accounting for 50.0%, while 350 RMB is spent on medical costs, accounting for 26.0%. The expenditure on home services and care was on the average 22 RMB, accounting for only 1.6%.

In terms of evaluation on their family economy, in the 2015 survey 89.4% of the respondents answered "relatively well-off" and "generally enough". In the 2016 survey, 91.0% of the respondents answered "Better", "Moderate" and "Moderate but Not Good". The respondents' personal income was on the average about 2500-3500 RMB per month, and their household income was about 6000-7000RMB per month. Therefore, most of the respondents considered the family economic situation "moderate".

47 The health of the respondents was not very good. Only a little more than 10% considered themselves healthy. Nearly half of the respondents were suffering from various chronic diseases, the most common being hypertension. About 30%-40% were suffering from bone and joint disease and cardiovascular and cerebral-vascular diseases; more than 20% from cataract and diabetes; more than 10% from respiratory and digestive diseases. As a result, 17.1% of the respondents of the 2015 survey had been hospitalized in 2014, and nearly 20% of the respondents of 2016 survey had been hospitalized in 2015; 13.1% once; 4.17% twice; 2.18% for three or more times.

The 2015 survey shows that 14.6% of the respondents had been ill during the two weeks before the survey: 75.8% had gone to see a doctor, 20.3% had chosen self-treatment, and 3.9% had ignored the disease. Among those who chose to see a doctor, 77.2% thought the main problem was the long time for queuing; 41.5% cumbersome procedures, and 33.7% that the costs were too high. Among those who chose self-treatment, over 80% bought medicine by themselves.

The above data show that the health of the elderly is not too good and the elderly encountered more difficulties in getting medical services.

48 Fortunately, most of the respondents were covered by medical insurance. In the 2015 survey, 99.7% and in the 2016 97.2%. However, part of the medical expenses had to be paid by patients. The 2016 survey shows that 88.7% of the respondents payed medical expenses by themselves, and the average payment was 4,457 RMB. The 2015 survey show that the medical expenses of 41.5% of the respondents were 500-3000 RMB, and of 0.9% 20,000 RMB. In the 2016 survey asked about the burden of medical expenses. 24.6% of the respondents answered that there had been a certain degree of burden, and 20.2% answered that the burden had been heavy and 6.2% answered that the burden had been unbearable.

Although the coverage of medical insurance in Beijing has reached more than 90%, the medical expenses and the self-paid part of the cost were still high. The average burden is equivalent to one and a half months of income. As a result, nearly half of the respondents still felt that the cost of medical care had been a serious burden.

49 In the 2016 survey, there was a multiple-choice question about what were the issues that the respondents worried the most in their personal lives. "Being sick" was selected by 74.6% and "no money" by 50.4%; and "no one to give care when autonomy is lost", 46.6%.

In the 2015 survey, there was a question about “whether there is an elderly person in your family that is in need of care and 15.4% of the respondents answered "yes". In the 2016 survey there was a

question about “whether in your family there is a person over 60 that was unable to take care of him- or herself in the past three months”; 7.9% answered "yes". The reason for the difference between the two surveys might be the time setting in the 2016 survey.

About 3.0-8.0% of the respondents thought that they needed LTC services; more specifically 8.0% needed "psychological comfort" and 8.0% "care for chronic disease". Only 3.0% of them needed "long-term care due to lying on bed". However, fewer respondents had received services, while most had received livelihood care. Among those in need, 52.0% had received some services. Among those in need of "long-term care due to lying on bed", only 7.0% got some services.

These statistical results further illustrate the widespread concern in an aging society: sickness, poverty and lack of caregiver. Today, these problems are already present in the Chinese society.

50 Family members, i.e. the spouse and children, are still those that mainly provide LTC. In the 2015 survey, 75.7% of the respondents were supported by their families; and in the 2016 survey the percentage was as high as 91.5%. Interestingly, the gap between the two surveys (16.2%) was basically filled by domestic services (15.9%). In the 2016 survey, family members were preferred by 76.0% of the respondents as givers of long-term care.

To the multi-choice question: "What are the troubles brought about by the care of old people without autonomy?", 60.3% of the respondents answered “insufficient hands to do the job”; 58.5% chose "sudden economically bad situation"; and 55.8% chose "heavy mental stress". These three problems involving about 60% of the respondents concerns respectively labour costs, economic costs and spiritual costs.

The previous data show that LTC is now mainly borne by the family, but that family care brings great difficulties to family members.

51 In the 2015 survey, respondents were asked to choose whether they wanted to receive LTC services at home, in communities or institutions. The vast majority (60.8%) chose home, 8.8% and 5.8%. institutional services and community services respectively and 24.6% chose “it depends”. The 2016 survey contained three separate questions concerning the same three options. To the home option the yes were 56.4%; to the community services option 50.0%, and to the option institutional services 55.6%.

The previous data show that if not asked to choose one of the three options, respondents didn't show a strong preference for one; the yes were around 50% for all three options. Moreover, many respondents had no clear idea what to choose: the “I don’t know answers” for home, community, institutions were respectively 29.8%, 17.3% and 23.8%.

In the 2016 survey, when asked about the reason for not choosing institutional services, 71.2% of the respondents answered "I don’t want to leave my home" and 44.2% "the cost of old-age service institution is too high. To the question "what is the main reason for not accepting home care", 60.0% answered "I worry that the price might be too high" and 34.3% "I worry about security".

In the 2016 survey, the respondents who were willing to receive institutional services were asked "what are your criteria for selecting a service organization"; 80.0% chose “the quality of the services"; 72.9% “the price"; 50.4% "the distance of the institution from home"; and 40.0% "the

facilities for old-age services". This shows that respondents mainly cared about the quality and price, while facilities and equipment ranked last.

When asked how much they could afford if the payment for LTC services was not paid by the government and society, more than 50% of the respondents chose from 1,000 to 2,999 RMB. This might be related to the fact that the income of respondents was on average about 3,000 RMB per month.

Therefore, although home service is still preferred, more and more people are becoming aware of institutional services and can accept it, and more than half of the respondents were willing to pay an amount not so low for the services. People are getting more and more realistic.

52 When asked a multi-choice question about the source of payment of LTC fees, 77.4% chose "government", 32.9% “oneself”, 19.1% “the employer”, and 13.7% “the major supporter. It seems therefore that the majority of this generation has the traditional opinion that the government should pay for LTC. However, there are many elderly people willing to bear the burden themselves. For what relates to employer and children, the expectations were already not as high as in the past.

The following question was in which way the government should provide financial support: 40.3% of the respondents chose social allowance, 37.7% social insurance, and 22.0% social assistance. The proportion of those choosing social benefits and social insurance was similar.

The previous data show that the government was still largely expected to finance LTC. However, about 40% of respondents chose social insurance as the source of financing.

53 When asked if they were willing to pay social insurance premiums, 42.9% of them answered with "yes"; 29.4% of them answers "no"; and 27.8% of them answered with“not clear”. In short, there were really many people willing to pay for the social insurance.

For the question about what should be the specific standard of contribution. Among those who are willing to pay, 43.0% chose “300 RMB and below” and 43.0% chose 901 RMB and below, showing a clear division. Those not willing to pay the contribution were asked about what is the reason, and 69.6% of them answered that it was "economically unbearable".

The data above tell us that those willing to pay the contribution to social insurance were about 40%, which is not a small proportion. However, they had great disagreement on the amount of contribution: about 40% supported ＜300RMB, while about 40% supported <900 RMB.

54 The last two questions were about respondent’s attitude toward "commercial insurance". When asked: "are you willing to participate in LTC insurance provided by commercial agency", 30.4% of the respondents answered with “yes”; 38.1% answered with “no”; and 31.6% answered with "not clear". Compared to social insurance, commercial insurance was less supported. For the reasons why they don’t want to participate in commercial insurance, the answer of 53.7% of those not willing to was "economically unaffordable", and 46.4% of them said they "do not trust commercial insurance".

The data above show that the acceptance of commercial insurance was lower than that of social insurance, whose supporters are by 10% higher than supporters of the former, and economic affordability and trust on commercial agency are the major reason.

55 In summary, in terms of health and medical insurance, Beijing's policy is leading in the China. However, in terms of needs and willingness of old people, there are still many deficiencies. The aspects in need of improvement are the accessibility of medical services, the equality of medical insurance, and the affordability of medical expenses. The establishment of long-term care system cannot only rely on the fragile health insurance fund. Instead, it is in need of institutional innovation to achieve the desired goal.

The LTC needs of old people in Beijing, who cannot take care of themselves, are prominently obvious, but old people still tend to solve the problem within the family. Most of them accept institutional services. However, most of them have no conception of community services. Elderly people are very sensitive to the price of services, and most people hope that the government can provide subsidies. Toward LTC insurance, a considerable part of elderly people has a positive attitude, but they are cautious of the contribution. The elderly are not optimistic about the commercial insurance because of economic affordability and credibility of the insurance company.

4.2 How many "disabled old people" are there in China

56 In 2016, the China Medical Insurance Research Institute commissioned to the Beijing Yide Center an Investigation on Chinese Old People's LCT Needs,[58] and one of the tasks was to estimate the percentage of disabled old people.

After a cross-analysis of 2,767 respondents aged 60 and over, two results were obtained: the first was that the proportion of disabled old people calculated on the basis of all the 14 indicators of the Lawton-Brody index; the second was the proportion of disabled old people calculated on the basis of all the 6 indicators of the Katz scale.

4.2.1 Results of Beijing Yide Centre's research

57 (BADL) The Lawton-Brody index consists of two sections, including 14 indicators. In the first section there are the 6 basic activities of daily living (BADL): bathing, dressing, toileting, eating, going to bed and moving about in room (not out-door). The second section contains the 8 instrumental activities of daily living (IADL): food preparation, laundry, housekeeping, responsibility for own medications, shopping, ability to use phone, and ability to handle money. These indicators was used to assess the ADL of 2,767 people aged 60+. If he or she needs help for one or more of the items/indicators, it is viewed as disabled.

The result shows that 0.7% of the respondents need help for all the 14 items; 0.2% for 13 items; 0.2% for 12 items; 0.1% for 11 items; 0.3% for 10 items; 0.4% for 9 items; 0.2% for 8 items; 0.4% for 7 items; 0.6% for 6 items; 0.8% for 5 items; 0.9% for 4 items; 1.5% for 3 items; 1.9% for 2 items; and 2.9% for 1 item.

Therefore 11% of the 2,767 respondents are the "disabled elderly". The reduced functions include losses of physical and instrumental activities.

59 The 6 indicators of Katz scale, toileting, feeding, dressing, moving in and out of bed, moving in room and bathing, are also used for questionnaires to 2767 people aged 60+. If he or she needs help for one or more of the items/indicators, it is viewed as disabled.

[58] 此课题由唐钧主持，北京义德社会工作发展中心负责实施。

The result shows that 0.76% of the respondents need help for all the 6 items; 0.36% of them need help for 5 items; 0.33% of them need help for 4 items; 0.22% of them need help for 3 items; 1.81% of them need help for 2 items; and 0.36% of them need help for 1 item.

Summing the numbers, we know that: about 3.79% of the 2767 respondents are the "physically disabled elderly", including those with partially and fully functional reduction.

Using general method, those who need help for 2 items of the 6 BADL (toileting, feeding, dressing, moving in and out of bed, moving in room and bathing) are viewed as fully disabled. Thus about 2.00% of the respondents belong to this group.

60 Thinking from another perspective, disable to bath and walk in room is not the worst situation in respect with laying on bed with illness. For old people in some part of China, bathing is not the daily need when it is not hot. Disability to walk in room can be solved by using crutch or wheelchair. Therefore, the rest 4 indicators, feeding, dressing, toileting and moving in and out of bed, can be used to construct a new ADL assessment. If so, the result is as follows:

0.76% of them need help for 4 items; 0.40% of them need help for 3 items; 0.36% of them need help for 2 items; and 0.54% of them need help for 1 item.

Summing up the numbers we know that: about 2.69% of the 2767 respondents are fully disabled, who loss at least one ability of the four.

61 In another study on the "Beijing LCT Insurance System, also conducted by Beijing Yide Center in 2016, which is statistical analysis on the basis of the 2015 Survey on Beijing's Urban and Rural Old People, the result shows that 4.78% of old people in Beijing are physically disabled, including 2.48% of full function reduction and 2.30% of partial function reduction. The results of the survey and the analysis are similar.

4.2.2 Comparison with other similar researches

62 In recent years, there have been many research reports on disabled old people, and a consensus on the scale of this group is emerging. Thus, we can compare the previous results with those of similar research.

In the article"How Many Disabled Old People Are There in China?, the authors Zhang Wenjuan and Wei Meng have used **three** sets of data from the China Urban and Rural Old People Survey, the China Old People Longevity-Influencing Factor Survey, the China Health and Old-Age Survey, the Second National Sampling Survey on People with Disability, the Fourth National Survey on Health Service and the Sixth National Population Census, after multi-source comparison. These surveys provide us with data related to the scale and proportion of disabled old people. The result is that 10.5%-13.3% of Chinese old people, living in urban and rural areas, are disabled.[59]

Feng Hui, from the Nursing College at Central South University, and her research team have built the " Index System for Screening and Evaluating Elderly Ability" on the basis on the hierarchical theory of functional integration proposed by Reuben. With this system the team has conducted a census of 60+ people of the Chenzhou City. The result was that 14.3% of the 60+ people were

[59] 张文娟、魏蒙著，《中国老年人的失能水平到底有多高？》，北京，《人口研究》2015 年第 3 期。

disabled (the confidence interval was 12.9-15.7%). The research also shows that 3.8%, of the 60+ people in Chenzhou are middle-level disabled, with the confidence interval as 3.05-4.55%. 60 The concept of "middle-level disability" can be used in a sense similar to the above-mentioned "physiological disability".

The research of Zhang Wenjuan, Wei Meng and Feng Hui are rigorous and highly credible, and their conclusion on the overall size of the functionally disabled old people are similar to the findings mentioned above.

4.3 Investigation on LCT Needs of Chinese Old People

63 Beside what described above, in the Investigation on Chinese Old Peoples LCT Needs conducted by the Yide Center, there are also the following 10 items.

4.3.1. Family support is not compatible with the changing family structure

64 The survey found that, in terms of family structure and living pattern, the family miniaturization has become a prominent feature of Chinese society. In fact, among the people 60+, 49.4% were living in families without children or with only child, while 47.9% were living in single-person, two-person and three-person families. This situation may be explained by the fact that 24.42% of the elderly were widowed, divorced and unmarried.

The survey shows that 50% of the elderly wanted to continue to stay with their children, but 31.9% of them clearly refused to do so. Interestingly, in terms of giving help to children in their lives, 47.2% of the elderly prefer "doing nothing". To the question whether they receive support from children, which is a traditional way, 90.48% of the elderly gave negative answer. 13.4% of the elderly lived in their original provinces. 65% of children visited their parents 2-3 times a year, while 10.87% of the children even didn’t visit their parents once a year. However, even if the family structure and family relations have undergone such a huge change, 86% of the elderly still believed that their children loved them and showed traditional filial piety. This means that family support to the elderly is not the decisive criteria for evaluating children.

The survey also shows 42.9% of the elderly believed that family important matter should be discussed by all the family members, while nearly 37.6% of the elderly insisted to take decision themselves. The difference might be related to whether the elderly were living with their children.

Previous data show that labour force migration, miniaturization of family, and changing conception of family and old-age support are making the traditional way of family support to the elderly more and more unrealistic.

4.3.2 Personal and Family Incomes of the Elderly are Middle or Low

65 Among the elderly respondents, 54.6% are retirees of governmental organs, institutions and state-own enterprises, 21.8% are from non-public enterprises and 23.6% jobless.

For 83.1% of the elderly, the main income source is pension; 10.3% receive funding from their children. For them, the average personal income is 2,567 RMB, and the median is 2,400 RMB. The

[60] 以上数据资料由冯辉提供。

average per capita income of household is 1,648 RMB, and the median is 1,500 RMB; the average per capita expenditure of household is 1,004 RMB, and the median is 1,000 RMB. Therefore, the ratio of average household expenditure to the average household income was 60.9%, and the ratio of median household expenditure to the median household income was 66.7%.

As for the economic situation of their family, 57.3% of the elderly believed that their family income and expenditure were balanced; 23.1% that they were relatively rich and had some surplus; 16.2% that the family income was insufficient. At the same time, 29.9% believed that their families belonged to middle-low class, 52.1% that their families belonged to the middle class; 8.9% that their families belonged to middle-high class. Only 0.80% believed that their families were rich and 8.3 % that their families were poor. Therefore, 38.9% of the elderly were worried about money for their future life.

Because most elderly are low-income, and their purchasing power is limited, their old-age service demand is only potential, not effective.

4.3.3. The elderly feel that the financial burden from medical services is heavy.

66 The survey shows that the physical condition of the elderly is worrying: 99.4% of the interviewed were suffering from chronic diseases. The top five were: hypertension, 36.6%; cardiovascular and cerebrovascular diseases 23.7%; bone and joint diseases, 22.5%; diabetes, 12.8%; and cataract, 10.4%. Besides, 28.6% had been hospitalized in the previous year.

Fortunately, the coverage of the medical insurance system is large: 96.7% of the elderly are insured. Among them, the majority (44.3%,) participated in the medical insurance for urban employees, while 46.3% participated in the medical insurance for urban and rural residents; 7.9% were still enjoying public-funded medical treatment. Only 2.1% had purchased a commercial insurance.

However, in the previous year, 81.5% of the elderly had paid for medicine (including the ticket to be paid according to the regulation of medical insurance). The average amount was 4,438 RMB, and the median value 2,000 RMB. For 38.8% of the elderly the cost was between 500 and 3000 RMB; for 25.3% of them it was 3,000-10,000 RMB, and for 7.1% them it was 10,000 and more.

As a result, 76.1% of the elderly thought that their medical expenses represented a heavy burden, 23.4% that it had been a certain burden, and 25.9% that it had been affordable. 21.24% of the elderly thought that it had been heavy burden and 5.66% of them believed that it had been unbearable. Therefore, for the future life, 70.9% of the elderly were worried about getting "disease".

Although the coverage of medical insurance is considerably large, the level of protection is not high. Therefore, the share of medical expenses supported by the elderly is felt as a heavy burden.

4.3.4 LTC of elderly people who are impaired

67 59.1% of the elderly were cared at home mainly by the spouse; 38.5% took care of themselves; and 34.2% were cared by their children. In addition, 48.9% wanted to be cared by their children at home, while 41.6% hoped to be cared by the spouse.

According to 60.1% of the elderly the greatest impact of LTC on the family is represented by the economic cost. In addition, 49.7% were concerned with labor costs, and 47.7 with spiritual costs.

Those who cared about the impact on lifestyle accounted for 30.5%, and those who cared about the impact on work accounted for 14.6%. It is for this reason that 29.1% of the elderly were worried about absence of care when they get disabled.

There were two options in the questionnaire. One is "I need LTC and I have received services", and another is "I need the LTC but I don't receive services". The result shows that 4.10% of them had received care for daily living; 1.99% had received psychological consolation; 1.94% had received care for chronic diseases; 1.65% had received rehabilitation service; only 0.83% had received long-tern care for illness and lying on bed. For the second options, 18.48% said they needed care for living but they didn't receive the care. In contrast, 8.03% said they needed care for illness and lying on bed but they didn't receive the care. 10.53% needed psychological consolation but didn't receive it; 11.50% needed care for chronic diseases but didn't receive it; and 10.36% needed rehabilitation service but didn't receive it.

Today, most elderly still rely on spouse or children for care. As mentioned above, the family in the modern society is changing. Therefore, this way of care-giving might be more and more unrealistic.

4.3.5 The elderly recognizes the value of socialized LTC.

68 The survey showed that 52.5% of the elderly intended to go to care institutions when they would have difficulty in taking care of themselves, and 28.4% didn't intend to go, while 19.1% hadn't considered going to the care institutions. Among those willing to go, 69.7% expressed concern about the quality of the services, 65% cared about the price, 31.3% about the distance of the institutions, and 30.1% about the facilities. Among those who didn't want to go to institutions, 60.6% didn't want to leave their homes, 33.6% were afraid that the price might be too high, 9.5% were afraid that their family would be faced with social criticisms and 13.1% were afraid of the bad reputation of the institutions, and 13.8% didn't know enough to express an opinion.

The majority of the elderly (52.9%) wanted to receive care at home if they got disabled, about 24.6% didn't want, and 22.5% hadn't considered this issue yet; 46.6% of those who didn't want to receive care at home were worried about the price, which might be higher than expected, 23.5% worried about the quality of services and 22 % were worried about security. Finally, 19.8% worried that their children might not accept the home care.

According to the result of the survey, the majority of the elderly (50.4%) wanted to go to daily-care centres, 25.1% didn't want to go, while 24.5% said they hadn't thought about this issue.

In conclusion, the elderly didn't show a strong preference to any of the three alternatives: home care, community care and institutional care. Around 50% of the elderly had the intention to choose every of the options for the question, while about 25% of them had no that intention.

4.3.6 The elderly accepts to pay for long-term care services.

69 The survey shows that 45.7% of the elderly would accept to pay the cost of LTC service, while 54.3% wouldn't. The average payment those willing to pay would accept was 1,734 RMB, and the median payment 1,500 RMB. More specifically, 14.3% would accept to pay between 2,001 and 3,000 RMB; 36.8% would accept between 1,001 and 2,000 RMB, 29.1% between 501 and 1,000 RMB, and 13.1% would accept to pay up to 500 RMB. Those who would accept to pay 3,000 RMB and more accounted for only 6.8%.

Between those who were not willing to pay those that thought that the government should take the responsibility accounted for 75%, 41.1% thought they should take the responsibility themselves, while 20.1% believed that the legally major supporter should take the responsibility. Finally those who expected the employer to take the responsibility were the smallest group accounting for 9.9%.

As for the way the government should adopt to pay, 28.5% chose social assistance, 32.3% social welfare, and 39.3% social insurance.

Generally speaking, major part of the elderly could accept paying for the LTC costs, but they expected the government to take the responsibility of the payment.

4.3.7 The elderly accepts to contribute to LTC insurance.

70 The study shows that 44.4% of the elderly were willing to participate in and pay for the LTC social insurance, while 35.7% were unwilling and 19.9% didn't know.

For those willing to participate in the LTC insurance plan, the average premium they could accept was 864 RMB, and the median premium 500 RMB. To be concrete, 41.7% of them could accept a contribution up to 300 RMB, 16.7% between 301-800, 23.4% between 901 and 1500 RMB, and 17.6% 1500 RMB and more. Generally, those who could accept 0-300 RMB and those who could accept 901RMB and more were at the two extremities, both accounting for more than 25%.

Among those who didn't want to participate in the LTC insurance, 55.1% worried about the costs; 26.2% still relied on children; and 29.4% were not aware of relevant policies.

Finally, 31.7% said they would choose LTC a commercial insurance, 48.8% they would not choose such solution and 19.5% didn't know.

Among those who wouldn't choose the LTC commercial insurance, 45.1% said they didn't believe in commercial insurance companies, 42.1% that they couldn't afford the cost, while 17.4% said they had children to support them, and 5.9% that they had saving for their later life.

4.3.8 Disability Older people account for 11% of the total but must be subdivided

71 As mentioned earlier, all surveys and analyses show that the disabled elderly account for about 11% of the elderly population. Moreover, according to the degree of disability, the elderly can be divided into two categories: physically disabled and socially disabled. The first group accounts for about 5% and the second for about 6%. Finally, among the physically disabled elderly, we can distinguish two sub-categories: partially disabled, accounting for about 2.5% and fully disabled, also accounting for about 2.5%.

As mentioned earlier, these data are supported by many other similar studies conducted in China and corresponds also to Japan and Taiwan situation.

4.3.9 The features of disabled old people and their families are different from the features of the whole elderly population.

72 Now, the group of disabled old people are separated for analysis. In terms of gender, 34.2% of the disabled elderly were male, while 65.79% were female. The comparison was 1:2. In terms of

age, those aged 60-69 accounted for 17.11%; those aged 70-79 accounted for 30.26%; and those aged 80 and over accounted for 52.63%.

In terms of the family structure of the disabled elderly, 76.97% of their families had several children; 18.42% of them had only one child; and 4.61% of them had no child. Meanwhile, 60.86% of the disabled elderly were living in single-person, two-person and three-person families; and 39.14% were living in four-person families.

Among the disabled elderly, 49.34% were participants of the Medical Insurance for Urban Employees; 42.11% of them were participants the Medical Insurance for Urban and Rural Employees; and 4.93% were not participants of any insurance scheme. In terms of the self-pay part of medical expenses, 15.32% of the disabled elderly had paid 0-500RMB; 36.94% had paid 501-3000RMB; 32.43% had paid 3001-10,000RMB; and 15.32% had paid 10,001 RMB and more.

The average number of personal income of the disabled elderly was 2638 RMB, and the median value of it was 2700RMB. The average number of the self-pay for medical costs was 9079 RMB, accounting for 17.05% of their annual income; and the median value of the self-pay was 3000 RMB, accounting for 12.5% of the annual income.

To sum up, the personal and family features of the disabled elderly are different from those of the whole elderly population. The differences of demographic and social features were even larger. The reason for this is that the age of the disabled elderly was relatively higher.

4.3.10 The willingness of disabled elderly to participate in LTC insurance scheme is similar to that s of the whole elderly population.

73 The survey shows that, among the disabled elderly, 43.7% were willing to participate to LTC insurance scheme, 33.9% were not willing to do that, and 22.4% were not clear about this issue.

Among those willing to participate in LTC insurance, 36.2% would accept ≤300RMB as contribution; 17.0% would accept 300≤900RMB; 25.5% would accept 900≤1500RMB; 21.3% of them would accept 1,500RMB and more.

Among those not willing to participate in the LTC insurance, 48.5% could not afford the economic costs; 28.2% were expecting their children to take care of them; and 28.2% were not aware of relevant policies.

Among the disabled elderly, 35.2% were willing to buy LTC commercial insurance; 42.1% were not willing to buy it; and 22.7% were not clear about this issue.

Among those who didn't want to buy LTC commercial insurance, 49.2% didn't believe in commercial insurance; 43.7% could not afford the economic costs; 19.5% were expecting to be cared for by their children; and 3.9% said that they had personal savings.

74 To sum up, in terms of needs and awareness of participation in LTC insurance, over half of the elderly and the disabled elderly were positive to this issue. What should be paid attention to is: what the researchers could tell the respondents in the survey was only the concept of LTC insurance, instead of detailed plan or policy arrangement of the scheme; and the answers were given under such such background. We can imagine the response would change if the government had already a

clear plan for LTC insurance.

5. Current Situation and Problems of Old-Age Services in China

5.1 Achievements of Old-Age Service during the 12th Five-Year Plan Period

75 There is no doubt that during the 12th Five-Year Plan, the assistance of old-age people registered a great progress. Four points deserve to be underlined:

5.1.1 The policy support was unprecedented

76 The unprecedented policy support to Old-Age services emerges very clearly from a simple inspection of the website of the Ministry of Civil Affairs[61], which shows that 41 policies and regulations related to old-age services provision have been issued by the State Council or its departments during the 12th FYP (see Appendix 1)

These policies and regulations present three characteristics:

1. The first is the high frequency of the legislative activity: in 2013 and 2014, 10 policies and regulations were issued each year: 4 were issued between January and April 2015, while in the last 2 years they were issued on the average once a month.
2. The second is that their coverage is large. The issuing authorities include the State Council, the Ministry of Civil Affairs, the Office of National Aging Committee, the National Development and Reform Commission, the Ministry of Finance, the Ministry of Human Resources and Social Security, the National Commission on Health and Family Plan, the Ministry of Education, the Ministry of Industry and IT the Ministry of Land Resources, the Ministry of Housing and Development, the Ministry of Commerce, the State Administration of Taxation, the State Administration of Sport, the People's Bank, the China Bank Regulatory Commission, the China Insurance Regulatory Commission, the National Standard Commission, the State Administration of Quality Control, the National Development Bank, etc. Their policies cover large areas.
3. The third is that the inter-authority cooperation is strong. Among the 41 policies and regulations, 15 were jointly issued by 2 or more authorities; and one of the policies was jointly issued by 10 authorities.

5.1.2 Investment from the State and the Society was of Large Scale

77 In 2012, introducing the section on old-age service system of the 12th Five-Year Plan, an official from MOCA said, "we are going to invest more than 250 billion RMB"[62]. Thus, the average yearly investment should have been equal to 50 billion RMB. As a matter of fact, during the FYP, 250 billion RMB were not invested by the government, but also by non-government forces (social forces).

In 2014, the former Minister of Civil Affairs told journalists that only the Ministry of Civil Affairs and the Ministry of Finance had utilized the public finance and the income of public-interest lottery

[61] 民政部网站：http://www.mca.gov.cn/article/zwgk/fvfg/shflhshsw。
[62] 雁冰，《"十二五"全国养老事业需投入2500亿》，北京，《21世纪经济报道》2012年10月18日

to invest in developing the old-age service infrastructures, which was 25 billion RMB[63].

According to the media, the social investment had been all related to real estate and the major investors were real estate and insurance companies. By the middle of 2014, there had been 200 billion RMB planned to be invested in old-age real estate by the insurance companies[64]. By the end of 2014, there had been 80 real estate companies entering the old-age real estate industry, and the overall investment had been over 80 billion RMB. Some media also commented that the real investment would be less than what had been planned.[65]

In addition, in 2011 the Ministry of Civil Affairs proposed to utilize 50% of the income from public interest lottery for investment in old-age services[66]. Recently, the National Development and Reform Commission, the Ministry of Civil Affairs, and the National Aging Committee had jointly emphasized that the government should ensure that over 50% of the income from the public interest lottery is used for old-age service[67]. According to the recently published Report on Utilization of Income of the Public Interest Lottery, in 2011 258 million were used for old-age service; in 2012 110.3 million; and in 2013, 127.9 million[68].

5.1.3 The number of service agencies and beds grew rapidly

78 During the 12th FYP, the number of old-age service agencies and beds grew rapidly. According to the Statistical Report on Development of Social Service, in 2010, that is before the 12th FYP, there were 39,904 agencies, and 3.149 million beds and at the end of 2010, 2.426 million old people were living in the agencies. In 2013, the number of agencies had increased to 42,475, and the number of beds to 4.937 million, while at the end of the same year 3.074 old people were living in the agencies. (See table 2) Therefore, the rate of growth of old-age service agencies was equal to 6.4%; that of beds to 56.9% and that of old people living in the agencies to 26.7%. According to the Statistical Report on the National Economy and Social Development, by the National Bureau of Statistics, in 2014, the number of beds in the agencies had increased to 5.514 million[69], + 75.1% with respect to 2010.

5.1.4 Consensus on Old-age service system

79 The Chinese government, the enterprises, the social organizations and the academic circle have reached a consensus on developing an old-age service system based on home care, supported by community care and supplemented by institutional care. This consensus is influenced by the international experience and fits into the Chinese reality. It is reasonable and fore-sighted, and it can be viewed as the biggest achievement of old-age service system during the 12th FYP.

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63 《去年 250 亿投向养老服务设施》，新华网（http://news.xinhuanet.com/politics/2015-03/14/ c_127579418.htm）。

64 《千亿险资抢“啃”养老地产，饕餮盛宴尚待文火细烹》，新华网（http://news.xinhuanet.com/ fortune/2014-05/09/c_126479928.htm）。

65 《开发商实际投入低于计划额度，养老地产投资雷声大雨点小》，新华网（http://news.xinhuanet.com/ fortune/2015-01/22/c_127409576.htm）。

66 《每年福彩公益金 50%以上用于养老》，昆明，《云南经济报》2011 年 11 月 4 日。

67 《三部联合发文要求：50%以上福彩公益金须用于养老产业》，中国网（http://news.china.com.cn/ live/2015-04/28/content_32475838.htm）。

68 《民政系统福利彩票公益金用于老年福利类项目的情况》，中国福彩网（http://www.cwl.gov.cn/ gyj/syqk/mzb/389818.shtml?_u=Y3VycmVudFVzZXJJZD1hOTdjMmViMS1hYTg4LTQ2YzYtOTU4OS02ZGFmYTYyY2RiNjU%253D）。

69 《2014 年国民经济和社会发展统计公报》，国家统计局网站（http://www.stats.gov.cn/tjsj/zxfb/201502/t20150226_685799.html）。

5.2 The Inadequacy of the Old-age Service Industry during the 12th FYP

80 While recognizing the achievements, we need to be aware of the shortcomings of the old-age service during the 12th FYP. For example, although the investments from real estate and insurance companies were large, they were mainly in real estate. Some media labeled 2013 as the Genesis of Old-Age Real Estate Market, and the 2014 was tagged as the Hot Year of Old-Age Real Estate.[70] Such media report had misled the government and the market.

In general, there are mainly two results due to the misleading: first, though policies were many, there wasn't common standard to develop the old-age service; second, though the investment was large, there was any great result. The reason for these mainly includes three aspects:

5.2.1 Attention has been paid to increasing the number of beds but not to their effective use

81 During the 12th FYP, the increase in the number of old-age services represents an important indicator to assess government performance. According to the plan, there should be 30 beds for every 1,000 persons and therefore there should be 6.36 million beds across the country[71]. According to the National Bureau of Statistics, as of 2014, 86.7% of the planned beds had been provided.

However, while the number of beds was increasing, their use was decreasing. As mentioned before, in 2010, the beds were 3.149 billion, while the old people using the beds were 2.426 million. Therefore, the rate of utilization was equal to 67%. In 2013, the beds were 4.937 million, and 3.074 old people did use them. The utilization rate had therefore declined to 62.3%. In 2014, the beds were 5.514 million, and 2.887 old people were using them[72]. Thus, the utilization rate was down to 52.4%.

5.2.2 Attention has been paid to potential demand, but not to effective demand

82 Investors saw the commercial opportunities brought by the aging population and during the 12th FYP, the old-age service industry had been a hot spot. Then, some “experts” used this trend to promote their own opinions, using the examples and experience of US, Europe and Japan to mislead the public. However, a fundamental fact was ignored: the aging generation is the generation born after WWII. In capitalist developed countries, this generation is rich, because they it experienced the golden age of capitalist society, while in China, the same generation experienced the Plan Economy, which makes them be middle or low-income class.

We must fully recognize the fact that there are 20 million people retired from enterprises, whose pension continuously increased for 11 years and as of 2015 was about 2,200 RMB[73]. The high-end old-age service institution or community charge more than 10,000 RMB per month and require several million RMB as the deposit, which is not affordable to this class. Even the middle-end old-age institutions that charge 3000-5000 RMB per month are not suitable for this class.

[70] 秦玥,《养老地产之殇：部分房企以养老为名圈地》，北京,《中国经营报》2014 年 11 月 1 日。
[71] 《明年我国每千名老人拥有 30 张养老床位》，北京,《北京青年报》2014 年 9 月 21 日。
[72] 《2014 年国民经济和社会发展统计公报》，国家统计局网站（http://www.stats.gov.cn/tjsj/zxfb/201502/t20150226_685799.html）。
[73] 《企业退休人员基本养老金“十一连涨”》，北京，《工人日报》2015 年 1 月 17 日。

The effective demand is the demand that is economically attainable, while the demand that is not supported by sufficient purchasing power is only a potential demand. If we take the potential demand as the basis of a market plan, good wishes will remain only wishes. Therefore, using developed countries for the comparison is not correct. It doesn't mean that the experience of these countries is not worth learning. The issue is what to learn and how to learn. It doesn't mean that the high-end institutions should not be developed. The issue is that it should depend on the market, not on the government.

5.2.3 The policies were exhaustive, but some key points were missing.

83 As mentioned above, many policies and regulations were issued during the 12th FYP. They seem exhaustive, but they do not get some of the key issues. Among the 200 million Chinese old people, the group with the biggest difficulty is that of the people with function-reduction, and especially with total function-reduction. It is easy to understand the feeling when an old person cannot take care of him- or herself. In the case of fully disabled person, not only he or she, but also the family will have many difficulties. In this sense, solving the problem for disabled person, especially fully disabled person, should be the first key point in developing an old-age service system.

In the hierarchy of the old-age service system based on home care, supported by community care and supplemented by institutional care, the home care should be aimed to serving healthy or slightly disabled elderly, and can be better described as home care supported by social and community services; the community care should be aimed to serving partially disabled elderly, with focus on day-time care center; and the institutional care should be aimed to serving fully disabled elderly, providing this group with 24-hour, all-aspect and professional LTC service. However, in reality, there is misunderstanding of the hierarchy of old-age service. Some people might even think that rich old people can enjoy the high-end old-age institutions, while middle and low-income old people can only stay home for the last period of their life.

In conclusion, if we don't abandon this misunderstanding, we will enter a vicious circle: old people in need of LTC but without purchasing power cannot receive institutional service; so many beds of the institutions are empty and the institutions cannot make profit; the development of old-age institutions become a factor that slow down the development of social welfare; and underdeveloped social welfare generates more social problem.

6 Prospect for China's Old-age Services and Long-Term Care Policy

6.1 Xi Jinping has proposed a new concept of long-term care as a part of the security system

84 Since the start of the Twelfth FYP and especially after 2013 as China's aging process has been accelerating, the problem of providing services to old people has attracted the attention of the leaders of the party and of the state. On May 27, 2016, the Political Bureau of the CPC Central Committee held the thirty-second collective study on the situation of population aging and on the countermeasures to be adopted. Xi Jinping proposed to "implement policies to support the

development of old-age services" and establish “a long-term care system that articulates relevant insurance, welfare and social assistance schemes.”[74]

85 The "long-term care system" proposed by Xi is undoubtedly a new concept, which may involve social insurance, commercial insurance, social welfare, and social assistance. It is a concept that reflects the Chinese reality and characteristics.

First of all, it should be noted that Xi Jinping has defined the nature of the LTC system. The system should be “articulation of relevant insurance, welfare and social assistance schemes”. There could be two ways to interpret this idea. The first is that insurance, welfare and social assistance schemes are three ways of social protection. Insurance and social assistance schemes are mainly for funding the LTC system, while welfare schemes focus on the services. This means that LTC must balance financing and providing services. Thus, it is a grand social security system, a concept usually discussed by Chinese researchers.

The second interpretation is that insurance, welfare and social assistance schemes are all for funding LTC, in which the insurance can be either social insurance or commercial insurance. Since social welfare scheme is also for funding LTC, it should be a scheme of social allowance. Therefore, in the practice, the various ways are mixed to fund LTC.

Secondly, according to the analysis mentioned above, and learning from the lessons and experiences of the old-age service implemented since the beginning of the 12th Five-Year Plan period, LTC is supposed to be a grand security system. Firstly, LTC system should adopt the term “security”, which helps the system to articulate insurance and allowance for funding the system, with services of care, nursing and rehabilitation; Secondly, social insurance, commercial insurance, government subsidy, social assistance, and charity should all be involved to fund the system, which forms a new and mixed model that can provide funding sources to social groups of different income levels; thirdly, old-age service agencies should be directed to integrate institutional, community and home cares and provide community and households with professional and quality services based on small, appropriate and middle-class facilities; Fourthly, there should be organizational arrangement to guarantee the implementation of the grand security of LTC, which requires government agencies, including the ministry of finance, ministry of human resources and social security, ministry of civil affairs and the national commission of health and family plan to thoroughly cooperate with each other, and therefore gain benefit for every partner.

6.2 Service Model of LCT System

86 In recent years, there has been a misconception of the old-age service system, which holds that institutional service should be separated from community and home services. In fact, all the ways to provide services should be integrated. When the integration is good, there will be the effect of 1＋1＞2.

For sustainability, community and home services should be financially independent. However, about 60-70% of Chinese old people have limited income. Their needs represent therefore a potential demand, which is difficult to transform into effective demand. Community and home services cannot obtain a profit from them. Even for non-profit social organizations, it would be

[74] 《习近平：推动老龄事业全面协调可持续发展》，新华网（http://www.huaxia.com/zk/sszk/wz/2016/06/4873368.html）。

difficult to maintain an economic balance. Therefore, they would have to rely on the purchase of services by the government. This would not be satisfactory for the old people.

In the second half of 20th Century, developed countries had been promoting the development of large-scale old-age service institutions. But the efficiency and impact were not good. Therefore, after 1990s, home care became the foundation of old-age services, and Aging in Place became an international consensus. This concept means that, when possible, old people should live in the family and community they have been used to. If it is not necessary, old people should not leave their social and humanity environments. However, living old-age life at home is equal to living old-age life in the family. To be complete, the old age life at home is supposed to be supported by social and community services.

However, when old people get weaker and weaker and need long-time care or even 24-hour care, going to old-age service institutions it is a reasonable solution, especially for the urban families that are mainly supported by single children. In large-scale old-age service institutions, old people can receive professional and safe LTC. However, it is generally believed that old-age service institutions should not be located in suburban area. They should be near resident communities, and the their scale should not be too large. Usually, an institution should accommodate from 50 to 400 people. In this way, old people can receive both professional care and company from the families, which realizes the concept of a community service institution.

In developed countries, there is another solution to provide community old-age service: the day-time centers. In China, similar institutions are usually called Tuo-Lao Suo, institution for caring old people, or elderly-care center, which mainly provides service to disabled old people. The service in such institutions is half institutional and half at-home. During the day time, while family members go out for work, old people go to the institution. When the evening comes, they go back home living with their families. Community service center can also provide temporary service. When family members are absent for business trip or tourism, old people can receive service in the center for a short time.

87 A person is not definitely viewed as elderly when he or she gets 60 but does not need special help from the society and the government. The reason that old people need help is that they get diseases, loose physical and mental functions, and the ability to take care of themselves. Usually, there is a function-reducing process in the life of old people: from losing social function to losing physical function, and from losing physical function to losing all the functions. Therefore, for old people with different level of functional reduction, or in different stage of function losing, there should be different services. Roughly speaking, about 3% of old people have lost their functions completely. To them, old-age service institutions should provide 24-hour assistance. If they don't want to leave their homes, institutions should provide supporting services at home, and the costs should be covered by mandated social insurance funded by municipal governments. 3 % of old people have partially lost their functions. To them, supporting services and rehabilitation services should be provided at home, or by community care center. The costs of the service should be partially paid by the social insurance system, while the rest could be paid in a market way or in a quasi-market way, in which the services are provided by social organizations. To healthy or slightly disabled old people, social services or community services should be provided at home. These services should be provided in market, quasi-market or voluntary ways. As assistant approach, commercial way can also be adopted.

88 From the perspective of LTC service providers, all kinds of services should be put in a single

framework. For example, in areas where the population is over a certain level, there should be a flagship and professional old-age service institution, with 200-400 beds for old people totally disabled. Then, the services of the institution could be be extended to the community, establishing community centres providing partially disabled old people with day-time care or temporary care. Furthermore, the services could be extended to households, providing home care for old people.

To old-age service providers, such a comprehensive and extended business could be profitable. In a certain sense, old-age service business is neighbourhood economy. If starting from home services, old people and their families living in the communities near the institution can be potential clients. With long-term and gradual service supply, all the old people in the area can be the potential clients. At the same time, this way of dealing with the problem can avoid the high costs generated from community and home services separated from institutional services, and therefore create a win-win situation for the elderly and the service institution.

6.3 Funding Model for LTC System

89 Clearly, a LTC service system needs funding. But one fact must be noted: despite the old people in the rural area, which is vast, in 2016, the average income of the elderly retiring from enterprises was only 2500 RMB per month. Generally speaking, in China, the income distribution is very skewed with more than 2/3 of the people having an income below the average. Due to the costs of human resources and other factors, currently in China old-age service institutions charge 3000-5000 RMB per month. This is why the demand of service for old-age cannot be easily converted into market demand.

90 For society, the biggest negative impact of aging is the increase of medical costs. If the costs for the LTC to disabled elderly were included in social medical insurance, the burden on the insurance scheme would be too heavy to bear. For this reason, medical insurance must exclude from the coverage the care for daily living and non-medical rehabilitation, which are the most needed by the disabled elderly. In Beijing, this is fairly obvious. However, as the population aging goes on, the weak medical insurance scheme will still suffer from financial crisis. Therefore, the international experience tells us that there should be an independent LTC system, including the LTC insurance, which collects the money to fund the LTC services.

In accordance to the direction of Xi Jinping, social insurance will be definitely the funding model for LTC system. The funding source of social subsidy and assistance is only the government and is usually used to some minority groups. To over 2/3 of the old people, who are in need of LTC, social subsidy or assistance might not be sufficient. Social insurance can collect the large-number resources of the society for serving the small-number old people. This can be called the Law of Large Numbers.

91 Learning from the investigations and statistics, disabled old people can be classified into three groups. The core group is composed of totally disabled people that have to stay in bed, or even don’t recognize their families. They need to be accompanied for 24 hours. Their proportion is about 2.5% of the elderly population. The second group consists of the partially disabled old people, who cannot bath or move outdoor. They need periodical service, and their proportion is also about 2.5%. The third group is composed by socially disabled elderly, who cannot travel by bus, go shopping, and cook etc. They also need some sorts of service, and their proportion is 6%, which means they are the majority of the disabled elderly.

Considering 231 million old people, we can therefore estimate that 11 % of them, that is 25.4 million, have some function-reduction. Among them around 5.8 million are totally disabled, another 5.8 million have some form of physical disability, while 13.8 million, are socially disabled. However, for policy designing, it is better to consider 13% as the proportion of disabled old people that is 30 million. This gives evaluation for the 3 previous categories of 6.9, 6.9 and 16,2 million.

92 Designing a social insurance system for disabled old people without classification is not feasible. It is practical to firstly cover the 2.5%, fully disabled old people, and then extend the coverage over the other 2.5%, partially disabled old people. At the same time, the policy maker should be keep in mind that the insurance coverage should be limited to 5% of the elderly population, and this can ensure the sustainability of the insurance system. The Japanese and German LTC insurance have experienced financial crisis, because the coverage of beneficiary and service was too broad.

In 2016, the fully disabled elderly were 6.9 million. If we set the insurance benefit at 3,000 RMB per month per person to be paid in a lump sum the total amount needed is 20.8 billion RMB. If each old people would contribute 100 RMB per month, then 231 million old people would accumulate 21.3 billion RMB. Thus, the prospect is optimistic.

93 It needs to be noted that the contributions should not necessarily be paid by every old person. A "cock-tail financing" could be adopted, which means financing can be diversified. Firstly, the elderly should pay the contribution. For example, urban residents should pay 20 RMB per month per person, which means 240 RMB per year; while rural residents should pay 10 RMB per month per person, which means 120 RMB per year. This is acceptable to most old people. The beneficiaries of Dibao, Chinese Minimum Livelihood Guarantee scheme, can pay the contribution through social assistance and poverty reduction programs. Secondly, the contribution from employer, which is usually required by social insurance schemes, can be temporarily excluded, since the economy in recent years has slowed down. Thirdly, other financing channels include pension insurance (annual surplus), medical insurance (the part saved from reduction of old-age medical service), housing allowance (accumulation by retirement), benefit for people with disability (over 50% of people from this group are old people), and income of the public interest lottery (50% of which is to be used for old-age services), etc. The final goal of adopting these channels is to pay 80 RMB per month per person for urban old people and 90 RMB per month per person for rural old people.

94 A mixed system consisting of social and commercial insurances can be adopted. The government is responsible for planning, contribution collecting and supervising, while commercial insurance companies are responsible for managing the contribution and delivering benefits. Generally speaking, the fully disabled old people should enter old-age service institutions, and the insurance companies sign contracts with these institutions and pay 3000 RMB per month as the benefit directly to them. In case that old people choose to live home, after he or she has chosen a qualified service provider, insurance company can pay the provider. But a part of money, for example 500 RMB, should be pre-saved for purchasing social services.

95 In conclusion, there are three levels in the financing model of LTC system, and these three levels have different importance and focus. The first level is the most important. It should be implemented in the first step.

From the perspective of life development of old people, the three levels are respectively corresponding to the different stages of function losing, and meeting different needs. Therefore, the three levels should also be integrated as a whole system.

6.4 Establishing Internet of Cares for Old-Age Service

96 Contemporary China is already in the *Internet Plus* era. On the basis of articulation of social insurance financing and market services, and plus the Internet, which provides us with big data service, establishing an Internet of cares in China, which could be an Alibaba of old-age service, is prospective and attractive.

However, the Internet of Care for old people is different from the online shopping provided by Alibaba. The online shops of Alibaba are goods provider, and Alipay plays the role of online payer. But at the end of the sale chain there are delivery staffs. When they give the goods to the buyers, the transaction is finished. On the contrary, in the Internet of Cares, when the service provider open the doors of an old person, it is just the beginning of the service.

Today, the Internet of Cares for old people is only a concept. What should be done now is to build the infrastructure and lay down the foundation for realizing this concept. The core to this is the services: human-to-human and heart-to-heart services.

97 In practice, the consensus reached during the 12th Five-Year Plan that the LTC system should be based on home care, supported by the community and supplemented by institutions should now be realized.

The first problem to be solved is: who is the service provider? Conventional thinking is that government and community (street office or resident committee) should take this responsibility. But this might be the reason why the consensus will not be realized.

In the government, there is a special way of working. In the public administration, lower levels are responsible to the higher levels, and the objective of their work is to satisfy the higher levels. Therefore, local governments and grassroots community usually focus on how to create some “typical example”, to be shown to higher-level inspectors. For this, local government use a lot of money. But this might result in a useless administrative “bonsai”, which can be understood from reviewing the development of community service since 1980s.

In that period, the community aimed to provide services to facilitate the people. But this objective was reached by Alibaba, which has done better than what was expected from the government and the society. This suggests that government should not use administrative authority to do the things that should be done by the market. Today, although the government is interested in “purchasing services”, the services should be provided by the market. If all things are run by the government, there would not be good prospect.

98 In fact, during the 12th Five-Year Plan period, besides the hot industry of old-age real estate, there were investors engaged in developing real old-age service. In Beijing, Shanghai, Chongqing and Changsha, as well as some middle-level cities, there were a number of old-age service institutions without decorative propaganda, but really providing old-age services. They are the real force to develop the old-age service market. What the government should do is to plan, to guide, to evaluate and to supervise the process, and help these institutions to develop. Today, when talking

about old-age service, a listener would be reminded of getting money and land from the government. This is actually misconception or even deception. Policy and money of the government should not be used to buy land or real estate for the providers but should be used to help old people to obtain services, while other things should be developed by the market.

Today, there are many new concepts about old-age services, for example, health management, smart old-age telemedicine functional rehabilitation, and diet therapy etc. But today these concepts cannot be realized, because old-age services are essentially human-to-human services. No matter how advanced the machines are, human resources are required for realizing the services. For example, for treating the Alzheimer's disease there is an electronic tool that can be worn by patient and thus locate his or her position through GPS or the Beidou Navigation Satellite System. The accuracy of location can be within 10 meters from the position of the patient. However, before family member arrives, safety of the lost elderly cannot be guaranteed. If there is the Internet of Cares, an old-age service institution or community centres can be found online, and family member can entrust them to take care of the patient until he or she arrives. In conclusion, in the era of Internet Plus, the Internet of Cares might by an infrastructure for solving many social issues related to population aging. It is really worth considering and practicing this idea.

99 Finally, there is still a serious issue to be discussed: How to provide LTC for rural old people? Young people from rural areas have moved to cities, while the old people were left in their hometowns. When the old people loss their functions, who will take care of them? Understanding this, it is reasonable to say that the negative consequence of population aging will take place in rural China, and the biggest difficulty is how to provide the services in rural areas.

In rural area, it is possible to employ middle-aged people or younger old people to take care of elder old people. For this, the government can provide subsidies. The initial step is to let people of the same family take care of the old people, and then they can be encouraged to take care of other old people. To the government, this is a way that would cost the least. Today This is also the trend in the world.

Professional old-age service institutions should be encouraged to provide service to rural areas. Their work is to provide technical education to the family members who are responsible for taking care of the old people and conduct evaluation of service providers. Of course, when an old person gets totally disable, it is better to bring him to an institution, and the money should be provided through government subsidies.

2. Long-term care in Europe
A review and synthesis of the most recent evidence

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1 Document Scope

This report provides an overview of the Long-Term Care (LTC) regimes in place in Europe. By taking a comparative perspective, Section 2 highlights past and future trends in the demand for care and support for older people in Europe. It provides a quantitative framework of the demographic changes and the prevalence of disability. It also discusses the main issues around the supply of informal and formal LTC services. The framework helps in setting the scene for the subsequent review of the main features of the EU-LTC regimes.

Fully aware of the vast differences between the Member States of the European Union (EU)[75], Section 3 examines the coverage of publicly funded LTC, its intensity and the range of options adopted by EU member states in the financing, management and organization of their LTC programmes. The final part is devoted in summing up all the differences by defining five different clusters of EU countries. Section 4 outlines the main challenges that the European LTC systems face, recent reforms implemented and the current policy debate in a broad range of EU member states.

The main aims of this report is:

- to provide an overview of the system of care and support for older people in Europe;
- to stress on the relevance of social protection against the risk of LTC needs in modern societies;
- to identify existing practices in place in Europe, their level of sustainability and of adequacy;
- to draw policy messages that could be relevant also for China.

It is important to clarify also the boundaries of this report. Clearly, it cannot claim to provide a systematic description of the EU-LTC systems. This is beyond its scope, but it also would be pointless to describe in detail the current institutional arrangements in each LTC country because they are changing too quickly. This report, however, contains relevant references to official reports and the academic literature that the interested reader might find relevant.

Hopefully, this report will lead to a good discussion within the members of the EU-China Social Protection Reform Project and will be a source of inspiration to stimulate further cooperation for research in the LTC field.

[75] We include England in the analysis

2 Introduction

Population aging- the increase of the share of older individuals in a society- is posing major challenges to the foundation of the welfare systems around the globe. Europeans, in particular those born immediately after the end of the second war world (the so-called "*baby boom generation*"), are benefiting from tremendous improvement in their life expectancy. However, because chronic and degenerative diseases are more common at older age, the growing number of the very elderly people increases the demand for health and social care and the associated costs.

2.1 Long-term care: what it means?

Long-Term Care (LTC) is generally defined as a range of services required by persons with reduced degree of functional (physical or cognitive) capacity that need help to meet their basic personal needs. LTC is not medical care: it is care for chronic illness/disability instead of treatment of acute illness. Caring for chronic illness lasts as long as the recipient is alive: it involves -in most of the case- the consumption of an end-of-life product for a highly uncertain period. LTC is therefore sensitive to changes in life-expectancy, especially if gains in life-expectancy are in bad health. Moreover, most LTC is assistance with the basic personal tasks of everyday life (bathing, eating, taking medication, etc.) of people that cannot perform such tasks independently. LTC involves a certain level of medical treatments, especially for highly disabled persons, but it is generally lower than that required for the treatment of acute illness. The level of assistance required is at low-skills level but, depending on the severity of the functional limitations, can be required round-the-clock.

2.2 Who need LTC?

The risk of dependency increases as age increase and it is particularly high when people became frail and develop multi-morbidity conditions. The majority of LTC user in Europe have some form of cognitive impairment. Alzheimer's and dementia, for example, are degenerative diseases with many stages and symptoms beyond memory loss that determine LTC needs. It has been estimated[76] that EU citizens aged 65 could expect less than half of their remaining years to be free from conditions affecting their ability to manage daily living activities. The risk of becoming dependent on LTC rises steeply from the age of 80. Population ageing, resulting from rising life expectancy and the ageing of large cohorts of baby-boomers, will greatly expand the number and proportion of people at risk of LTC services over the coming decades in Europe.

2.3 Who provide LTC?

Three are the institutions involved in the delivery of LTC services: the family, the market and the State. In most of EU countries LTC needs are met with a complex system of different services provided by a mix of responsibilities shared among these three institutions.

[76] Social Protection Committee-European Commission (2014).

Relatives and friends provide the first and more relevant form of support. Informal (unpaid) care is important in all EU countries but is more common in some than in others. Many disabled people make use formal care services, provided in their own home or in institutions (residential and nursing homes) by professional staff. The role of the public in financing, administering, regulating and providing formal LTC services varies considerably among EU Member States. The level of public coverage of LTC needs varies considerably at both the intensive and extensive margins. State intervention in the LTC sector is inherently linked to different cultural values, institutional setting and traditional welfare regimes in place in each Country.

Broadly speaking, many EU states opted for (a different mix of) two main models: a *competitive model* according to which the State provides cash-benefits that can be used for buying care services in the market; and a *direct provision model* according to which the State provides formal services to individuals in needs. The public cost share - the part of LTC costs financed by the public social protection system- varies considerably from little users' co-payments to about the totality of LTC services financed via out-of-pocket payments by the users and/or their relatives.

3 Care and support for older people in Europe

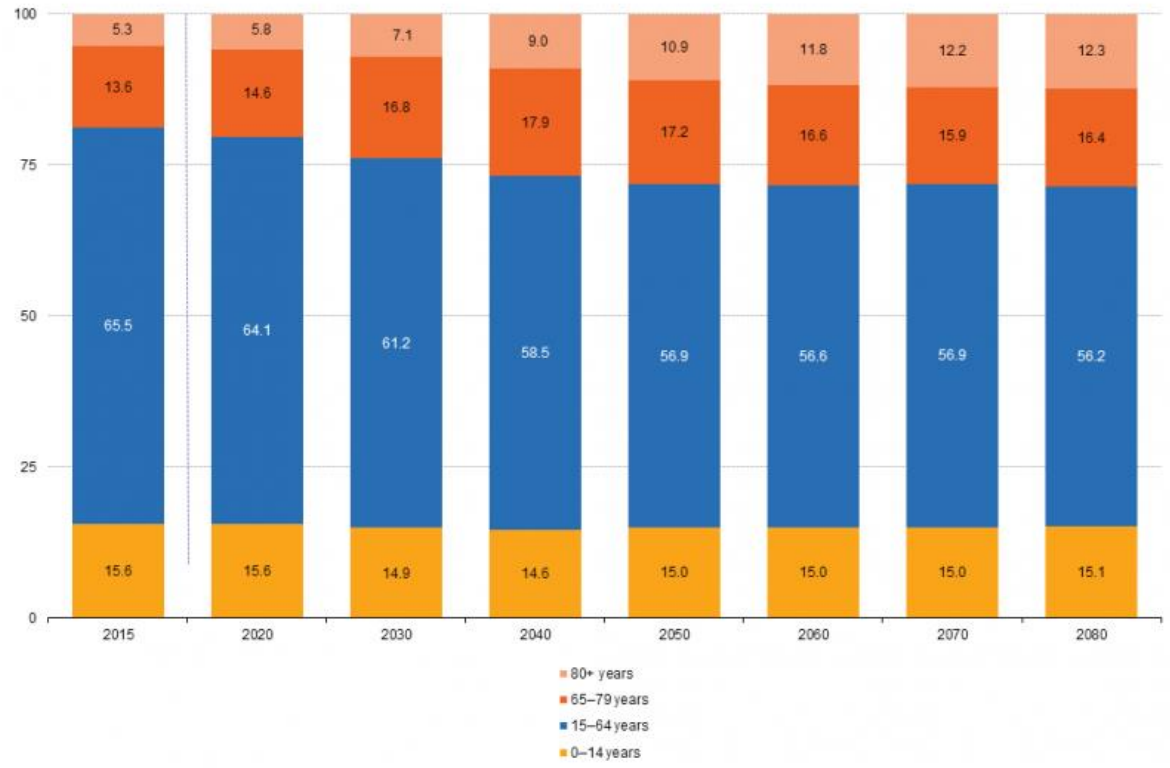
3.1 Who need LTC? Factor influencing the demand for care

This section considers the drivers of demand for LTC in Europe. It concentrates especially on the demographic, epidemiological and socio-economic trends that affect the demand for LTC. Understanding such drivers is of paramount importance for policy evaluation. Projections of likely future demand are key ingredients to ensure policy planning based on evidence.

3.1.1 Demographic pressures

Population ageing, resulting from rising life expectancy and the ageing of large cohorts of baby-boomers, increases the number and proportion of people at risk of LTC. Older people are heavy users of LTC services and the increase in their number is likely to affect the future demand of LTC programmes and the associated costs.

Figure 1. Population structure by major age groups, EU-28, 2015–80 (% of total population)



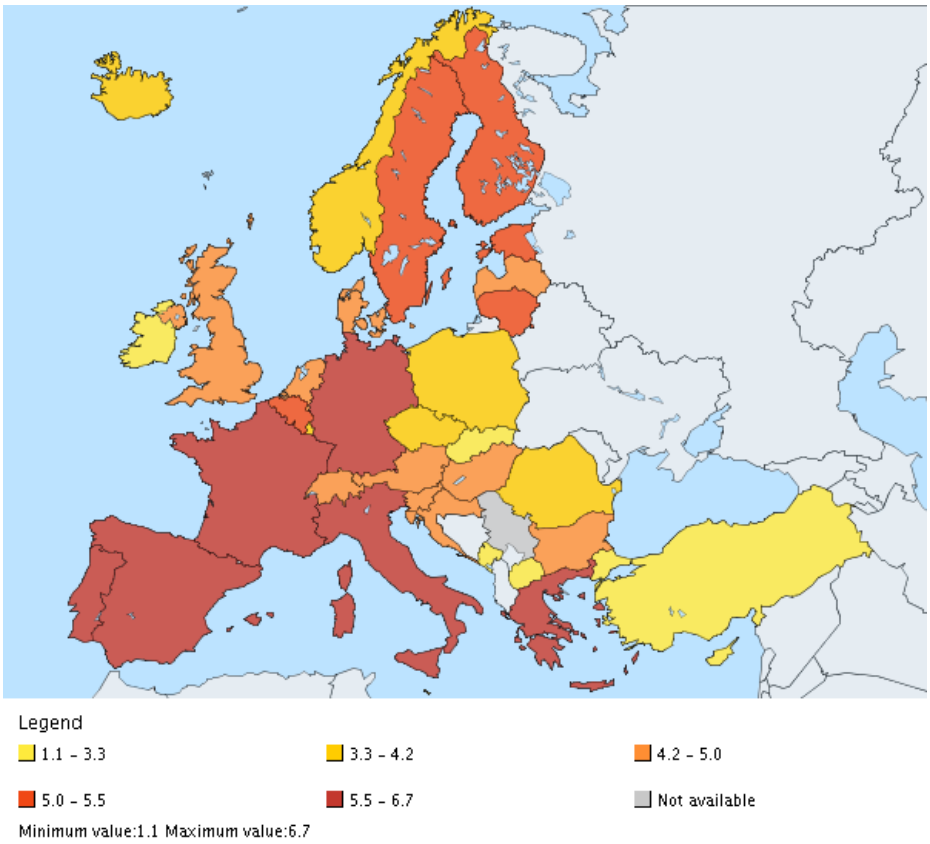
Source: Eurostat

In Europe, about 20% of the population is aged 65+. The past half-century has seen enormous changes in the demographic make-up of Europe. The transformation is reflected in an increasing share of older persons coupled with a declining share of working-age persons in the total population. In cities, the emerging "4-2-1" family structure (four grandparents; two parents, neither of whom

has siblings; and one child) is emblematic of the demographic transition process, especially evident in Mediterranean countries such as Italy and Spain. In the 1950s, the share of the population aged over 65 years was about 9%. It has doubled in 2015 and it is expected to reach about 30% in the next four decades.

The risk of becoming dependent on LTC rises steeply from the age of 80. In Europe, about five people over 100 are now aged 80+, with significant differences between countries (Figure 2). According to official population projections, the share of 80+ in Europe is expected to increase rapidly, to exceed 10% by 2050 and to almost tripling, from 2 million observed in 2010 to more than 60 million projected in 2060.

Figure 2. Share of population aged 80 years and more in EU-28 countries, 2016



Source: Eurostat

3.1.2 Epidemiological pressure

Although the size of the older population influences LTC demand and cost, it is the difficulties in undertaking basic activities for self-care that are the major drivers of the need for support. Europeans are living longer and healthier lives. Life expectancy is increasing at the rate of 2-3 months every year, although large differences remain between different social groups, countries, regions and between rural and urban areas.

It has been estimated[77] that EU citizens aged 65 could expect less than half of their remaining years to be free from conditions affecting their ability to manage daily living activities (Table 1). Lengthening lives is very good but with the further ageing of the big generations of baby-boomers a major challenge will be to meet the needs of a fast-growing number of older people at risk of suffering from frailty and physical and mental disability. A crucial question is therefore whether projected gains in longevity will be accompanied by an expansion or a contraction in disability-free life expectancy and hence in the number of disabled older people and the demand for care services[78].

Table 1. Life expectancy and healthy life expectancy at 65 in the EU-27, by gender

	Total years life expectancy at 65, men	Healthy years life expectancy at 65, men	Percentage of healthy years life expectancy at 65, men	Total years life expectancy at 65, women	Healthy years life expectancy at 65, women	Percentage of healthy years life expectancy at 65, women
EU-27	16.5	8.4	51.0%	20.1	8.6	42.7%

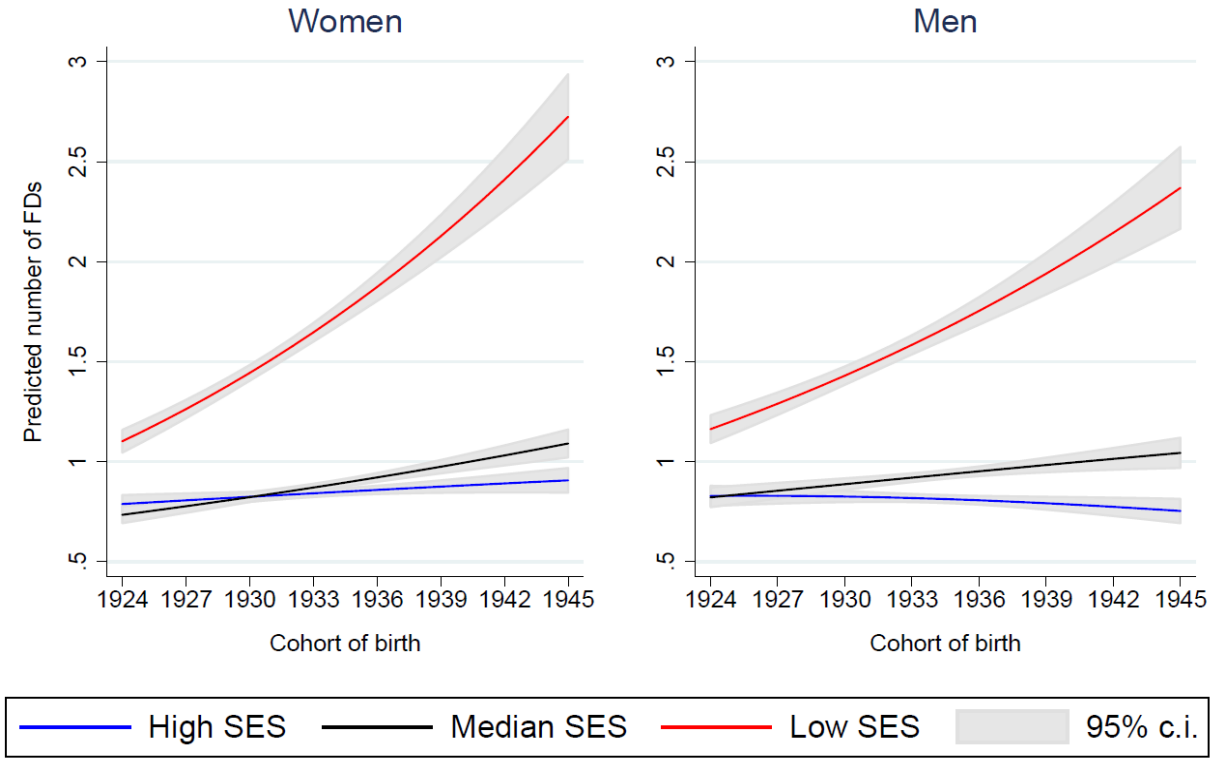
Source: Table 1 (p.11) in Social Protection Committee-European Commission (2014). Year 2009.

Trends in disability in Europe are not always clear. Available estimates (Lafortune & Balestat, 2007; Robine *et al.*, 2004) in expected life free of disability in Europe have shown the presence of two clear clusters of countries that have significant divergent trends. For some countries, increasing life expectancy was mainly in good health: countries like Italy, Denmark, the Netherlands and Finland showed a decline in disability rates among older people. For other countries, however, the increase in life expectancy is linked to improving conditions for people with disabilities. In countries like Belgium and Sweden, there are clear evidence of rising disability rates. If observed trends of increasing life-expectancy in bad health will continue in the future, the consequences for the cost associated with the LTC may be even worse than today's expected by following a merely demographic approach.

[77] See Social Protection Committee-European Commission (2014)

[78] Three different trends in old age disability in a scenario of rising life expectancy have been considered in the economic literature: Grunenberg (1977) proposed a scenario of "expansion of morbidity" where the share of life spent in bad health increases as life expectancy increases. Fries (1980), putted forward a scenario called "compression of morbidity" whereby increasing longevity will be linked to a shorted period of morbidity at the end of life. Between this two scenarios, Manton (1982) proposed a "dynamic equilibrium scenario" where longevity gains would be linked to an expansion of moderate disability, but with a reduction of severe disability and morbidity.

Figure 3. Birth-cohort trends in older-age functional disability and their relationship with socio-economic status in the United Kingdom



Source: Morciano *et al.* (2015b).

The chance of living a healthy life is profoundly unequal not only across EU countries: within the same country, in fact, it is likely to find diverging trends between rural areas and cities but also between different layers of the population. A study conducted for the UK population (Morciano *et al.*, 2015b), suggested that the overall slightly increasing birth-cohort trend in increasing functional difficulties observed among current cohorts of older people hides a diverging gap between the socioeconomically advantaged (high SES) and disadvantaged (low SES) people in later life. (see Figure 3). Similar evidence were reported for many other European countries (WHO, 2014).

3.2 Who provide LTC? Factor influencing the supply of care

Three different institutions mainly provide LTC services: the family, the market and the state. The family (and friends) generally provide unpaid (or informal) care. It involves no direct cost to the recipient whereas the carer might have a psychological return of giving back something to the loved person in needs or a (postponed) economic compensation in terms of bequests. Private LTC services clearly require a payment from the care recipients or their family on their behalf. The private market insurance plays a very limited role given its failure to provide coverage at affordable

price (Comas-Herrera *et al.*, 2012). As we will see later, depending to the LTC system in force, public support may involve no cost to the recipient when LTC services are provided free at point of use, or may require co-payments and user contributions. Of course, the cost meet by the state needs to be covered by the society, through general taxation, and/or by past contribution in (compulsory) insurance-based public schemes.

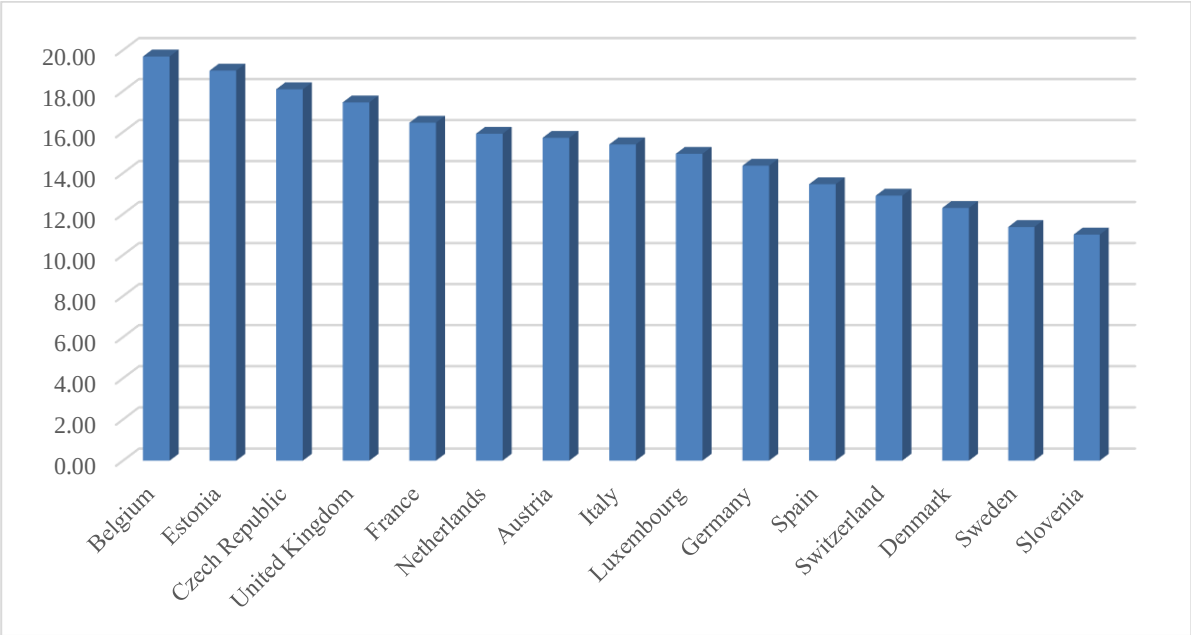
Formal and informal care can be substitutes or complements, depending on the type of care and needs. The relationship between them clearly depends on Member Countries' policies on eligibility for public support and the level of development of the private LTC market. As we will see later, some EU Member States report little public formal care. On the other hand, some others report very little informal care. In the vast majority of Countries, however, a mix of formal/informal care is provided to the persons in LTC needs.

3.2.1 The provision of informal care

Relatives and friends provide the first and more relevant form of support. Informal (unpaid) care is important in all EU countries, but is more common in some than in others. Figure 4 shows the percentage of the over-50 population providing informal care to relatives and friends in 15 EU countries. This proportion varies considerably between countries. According the most recent OECD estimates, Belgium has the highest percentage of informal carers aged 50+, followed by Estonia and Czech Republic. The lowest percentage of informal carers is found in Slovenia, Sweden (the country with the most paid carers) and Denmark. On average, the majority of informal carers provide daily care, the rest weekly care, with a wide cross-country variation in the intensity of caregiving. In countries where there is a strong tradition of family caring, like Italy, Spain and Poland informal carers report more often caring on a daily basis. In countries where LTC is institutionalised, like Sweden and Denmark, the proportion of informal carers providing daily care is much lower. Women are more likely than men to provide informal care for elderly family members. Informal carers are more likely to reduce their working hours in the formal economy. Recent estimates[79] suggest that the economic value of unpaid informal care, expressed as a percentage of the overall cost of LTC, in EU Member States ranges from 50 % to 90 %.

[79] Draft Joint Employment Report accompanying the Communication from the Commission on Annual Growth Survey 2014 http://ec.europa.eu/europe2020/pdf/2014/jer2014_en.pdf

Figure 4. Population aged 50 and over reporting to be informal carers, 2013

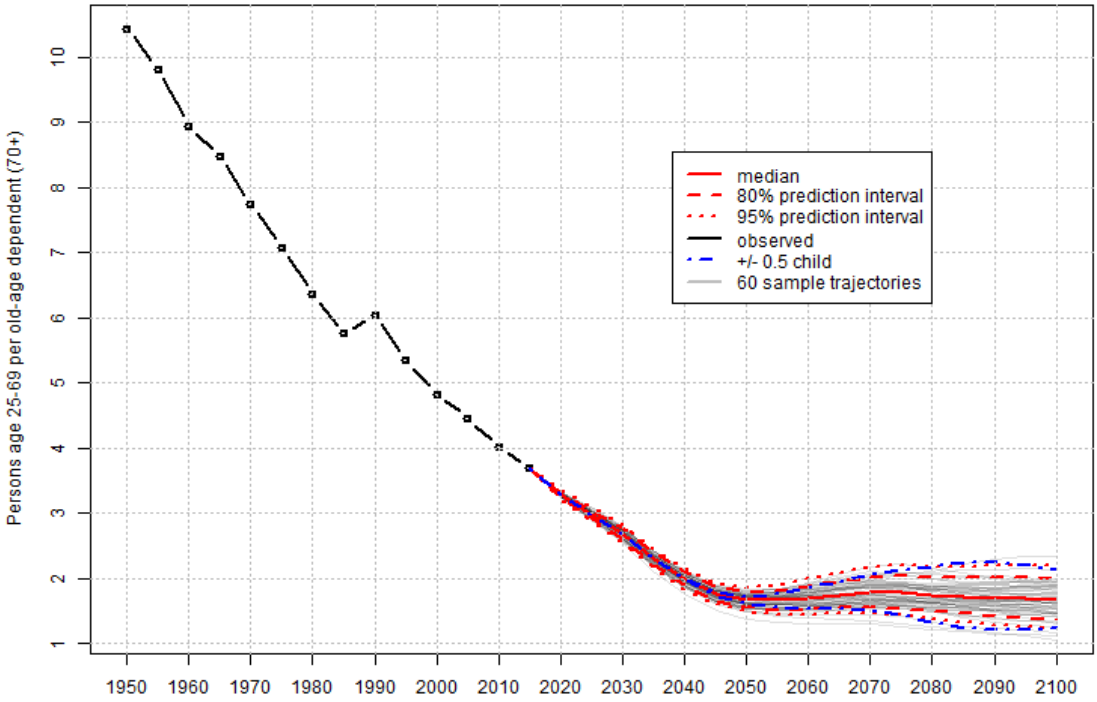


Source: OECD health Statistics, http://dx.doi.org/10.1787/health-data-en.

The future sustainability of a model based on the provision of informal support to people in need of LTC faces the following fundamental question: will future cohort of people in needs of LTC be as likely to have a spouse or children that provide care for them?

The observed low fertility rate and changes in the family structures of the European society is creating important challenges: the strong decline in fertility rates means that in the following decades the elderly will be able to rely on a falling number of children for their care. Rising shares of singles and divorce rates will produce an increase in the number of elderly living alone. The increasing labour force participation rates of women will have a positive impact on the sustainability of public finances and on the family budget, but at the same time, will reduce the availability of adult women willing to provide care for their old parents. Any decline in informal care is likely to be associated with increasing pressures in the demand for formal LTC service (public and private), with an expected increase in LTC expenditures.

Figure 5. Potential Support Ratio in Italy [(Age 25−69)/(Age 70+)]

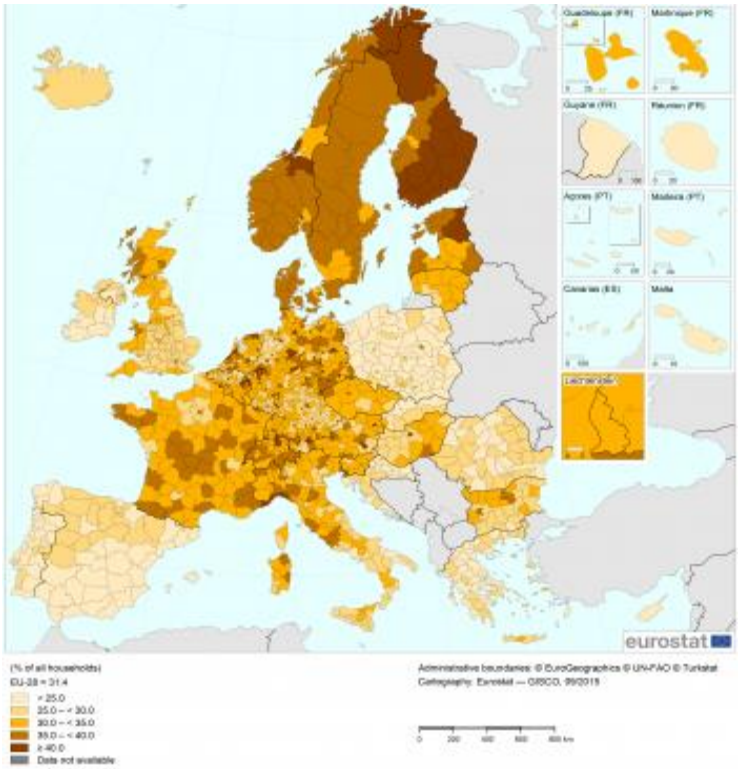


Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision

The old-age dependency ratio—the number of people ages 65 and older per 100 working-age people ages 20–64—is projected to soar, from 13 dependents per 100 working-age people in 2010 to 45 per 100 by 2050. The ranks of the "oldest old," those ages eighty and older, is swelling even faster, from roughly eighteen million in 2010 to a projected ninety-eight million by 2050. Looking at the past, the rate of support for the elderly, measured as the ratio between the population of potential caregivers of the age range 25-69 and the 70+ population, has been considerably reduced since 1950 to today. In Italy, a country with a traditional family-based approach to the care of disabled, in 1950 there were at least 10 potential caregivers for every 70-year-old. Today they have less than four. Looking ahead, it is likely to assist to a further reduction of up to two potential caregivers for every 70-year-old.

The progressive "individualization" of European societies is a clear indication of potential lack in informal caregivers. Already today, the percentage of families made up of a single individual is particularly high, particularly in the Nordic countries. Forecasts show a clear tendency towards a dramatic increase of the number of elderly people living alone in the years to come.

Figure 6. Share of single-person households in 2011 (% of all households)



Source: Eurostat (Census hub HC419)

3.2.2 The provision of formal care

Long-term care (LTC) is a labour-intensive service. The number of care workers is therefore a good proxy of the size of the formal LTC sector. According to the most recent OECD estimates, the LTC workers represented about 3.6% of the total working-age population in Sweden and 2.9% in Norway and Denmark but only 0.3% in the Czech and Slovak Republic (Triantafillou *et al.*, 2010). Formal LTC providers are mainly women, often middle-aged, working part-time. About three over 10 formal LTC workers are nurses, while the other seven are personal care workers. Nurses in Europe generally have at least three years of training. However, some EU countries do not have minimum skill requirements for personal carers, though some organise training programmes. Foreign-born workers often play an important role in the provision of paid care. This is because wages in the LTC sector are generally low and working conditions not particularly attractive for natives. The case of Italy is emblematic: formal LTC services are provided mainly by hiring private (and mainly from the black-market) low-skill foreign workers (the so called "*badanti*"), mainly paid out-of-pocket by the disabled person or the relatives to provide assistance at home. According some estimates, they make up some 70% of LTC workers in Italy.

In Europe, the demand for LTC workers is strong and growing but at a different rate by countries. According the most recent OECD figures, LTC employment in Germany has outstripped the growth in total employment since 2001. In contrast, countries already with a comprehensive LTC systems and high employment in the LTC sector (e.g. Sweden and the Netherlands), LTC employment has roughly followed trends in overall employment (OECD, 2015).

Looking ahead, increasing demand for LTC services and the likely decline in informal care mean that demand for LTC workers is likely to rise. Given the labour-intensive feature of this market, a clear parameter of interest is the wages of care staff. Advocating an increase in the quality of LTC services means also improving the pay and work conditions of the LTC staff (Colombo, 2009; Colombo *et al.*, 2011). However, this is likely to put pressure on the future sustainability and affordability of LTC services.

4 LTC regimes in Europe

In Europe there is no a single LTC regime. Instead, we have a multitude of LTC models inherently linked with different cultural values, institutional settings and traditional welfare regimes in place in each Member State. More often than not, the LTC system we observe today is the result of accumulated -and often un-coordinated- reforms aiming at facing emerged socio-demographic, economic and political pressures. As a result, the picture of existing LTC systems in Member States presented below is far from complete. It is drawn from previous work by the European Commission, OECD and published academic literature. An interested reader will find further details in the references provided. In the following, we attempt to document the great diversity in Member States' arrangements for LTC according nine different dimensions:

- ✓ *The financing mode*
- ✓ *The level of spending*
- ✓ *The definition of needs*
- ✓ *The public/private mix*
- ✓ *The mix between cash-benefits and services*
- ✓ *The freedom to choose the LTC providers*
- ✓ *The balance between public and private providers*
- ✓ *The quality assurance*
- ✓ *The level of integration and coordination of care among different LTC institutions.*

4.1 The financing mode

The financing mechanism for LTC services is a good starting point of analysis. From this perspective, we can distinguish LTC systems predominantly funded by social insurance (Bismarkian models) and those mainly funded by taxes (Beveridgean models).[80] Practically, however, EU member States generally adopt mixed strategies (see Figure 8). Countries like Sweden, Denmark, and Latvia have LTC financed almost exclusively from the general government budget,

[80] Further extensions to this classification might include the Beveridge-oriented Nordic vs. a Bismarck-oriented Mediterranean model or even finer classifications according to the presence of means-tested user charges.

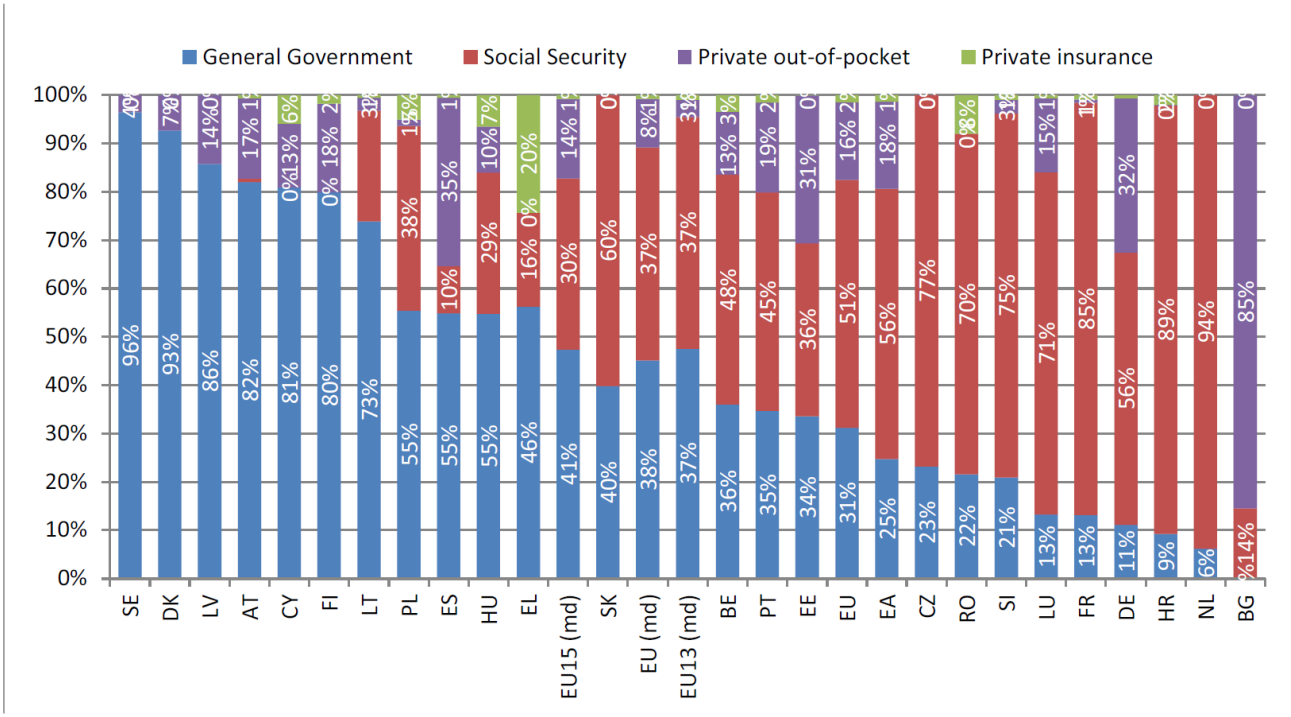
through taxes. To ensure a clear and solid long-term financing base for LTC, several member States established a dedicated universal social insurance scheme (the Netherlands, Luxemburg). Among others, Belgium, Slovenia and Germany finance about half of their LTC expenditure by means of an insurance-based system. These countries, with a tradition on social insurance model, general revenues are also used. They are used to provide a safety-net for those disabled in need with limited income/assets and for the non-insured (non-employed) population. It is worth mentioning the case of Austria and France: they are countries with traditional insurance-based health systems but they attribute only a small (France) or no (Austria) financial role to social insurance for financing LTC.

Mandatory social (state-sponsored) insurance models provide broad risk-pooling and predictable financing. Expenditures are covered by earmarked social security taxes and therefore entitlements may be more clearly defined and easier to enforce. The drawback is the usual tax distortions on employment associated with contribution-based systems. Also, contributions are levied on a narrower tax base than general revenue. A rising LTC demand therefore is likely to require an increase in the level of contribution, further increasing the cost of labour. LTC systems financed via general taxation face feasibility and fairness problems: for many EU countries, projections of future public spending and taxation revenue suggest the unsustainability of current paths without significant cuts to other areas of public spending. Moreover, the largest sources of government revenue in many EU countries (income tax, national insurance contributions and goods and services taxes) come from the working-age population. This raises the question of inter-generational equity when imposing additional tax burdens on current younger cohorts to finance LTC services largely directed to current older people.

In the EU, there is a general agreement that a social insurance or tax-based LTC system is more efficient than one left entirely to the private initiative.[81] Pre-funded LTC private insurance pays out a lump sum or a stream of income to individuals who have experienced a certified level of disability (e.g. the inability to carry out one or more ADL). As Figure 8 suggests, no EU country has a fully developed private insurance market, given significant supply- and demand-side barriers. The only country with a significant coverage of LTC cost by private insurance is Greece, by financing about 20% of its total LTC spending.

[81] Several member States, however, are considering ways with which the public could support the expansion of an equitable and sustainable private LTC insurance market (Comas-Herrera *et al.*, 2012).

Figure 7. Long-term care expenditures by sources of funding



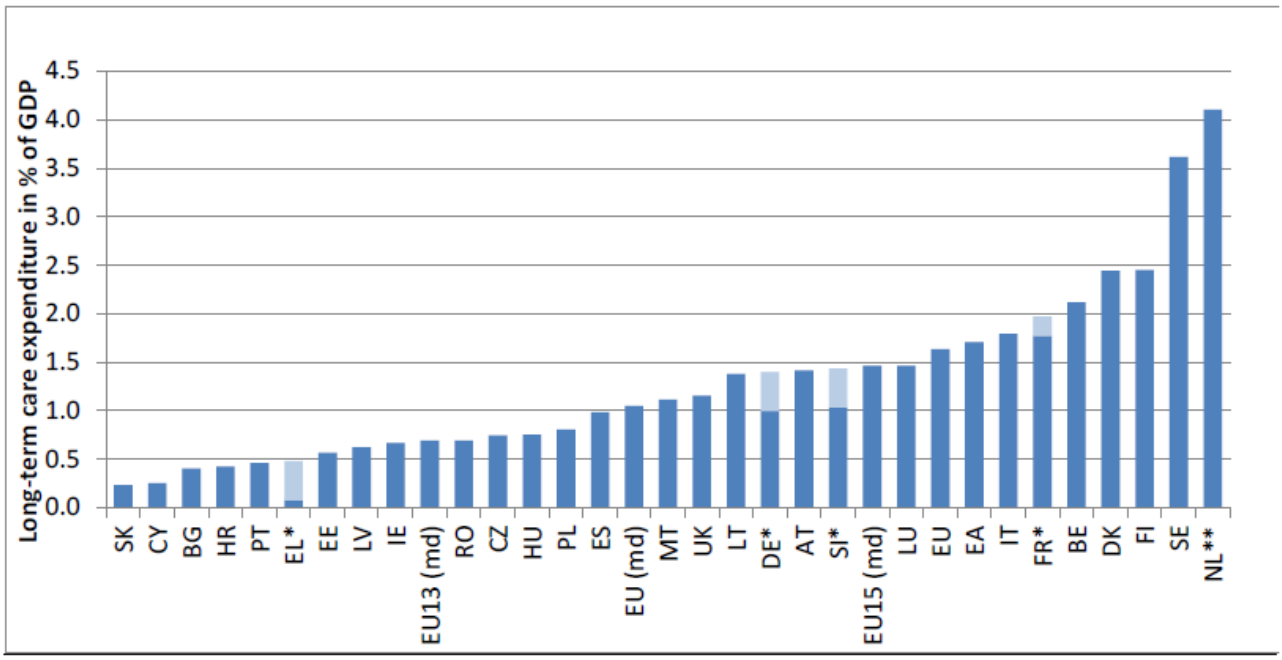
Source: European Commission (EU) (2016). Graph 5.4.1 based on 2013 (or latest) DG-ECFIN data. *Notes:* Member States of the European Union (EU) have been assigned a two-letter country code. See the table in Appendix 1 for details.

4.2 The level of spending

As seen from Figure 7, public expenditures are the most important source of financing for LTC services in almost all EU countries. The level of public spending on LTC (as a percentage of GDP) can be considered a proxy of the generosity of the public system in place: more a country spends on LTC the higher is assumed to be either the coverage (the system's capacity to meet the needs of the disabled population) and/or the quality of the services provided.

On average, EU spends about 1.6% of its GDP on providing public LTC services, with great difference across Member States (Figure 8). The Netherlands spends by far the most on LTC (4.1% of GDP). Slovakia and Cyprus spend only about 0.3%. Overall, public expenditure on LTC is significantly lower in the New EU Member States (the ones that accessed the EU after 2004). Such countries rely heavily on the informal provision of LTC and private out-of-pocket payments. Apart from the Netherlands, notably Sweden, Finland, Denmark and Belgium are also big spenders (the percentage of GDP spent on LTC is above 2%). The majority of countries, however, spend between 1 and 2% of GDP.

Figure 8. Public expenditure on long-term care as percentage of GDP

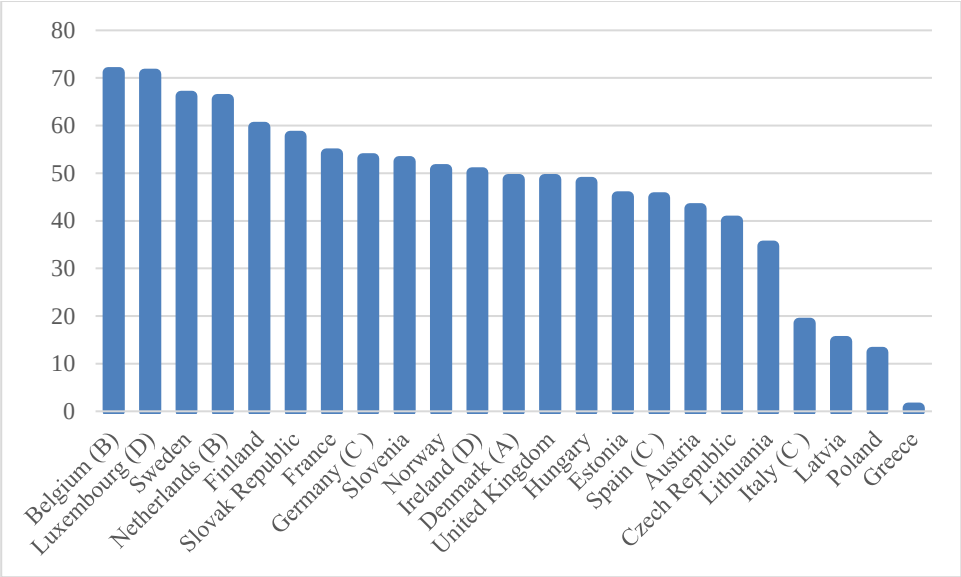


(1) Based on data from Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).
*Due to agreements taken with the Member States delegates in the AWG-EPC, definition of LTC expenditure may deviate from expenditure levels as reported in other publications. Specifically, cash benefits include period economic integration of handicapped from ESSPROS disability function, and are projected with age specific probability. Expenditure on this item amounts to 0.2% of GDP for France, 0.4% of GDP for Germany, Greece and Slovenia. The level of expenditures in 2013 is the first year of projected expenditure based on latest available data.
** As documented in the 2015 Ageing Report, the impact of the reform of the long-term care system in the Netherlands on the (projected) level of expenditure has been taken into account.
Source: Commission services (DG ECFIN).

Notes: Member States of the European Union (EU) have been assigned a two-letter country code, heavily used in this report. See appendix 1 for details.

High levels of spending are generally positively associated with the type of service provided and the number of LTC care workers employed. Figure 9 shows the country capacity plans for institutional care based on the ratio of beds per population over age 65. This indicator provides an idea on the extent to which the LTC arrangement in place is more in favour of providing LTC in institutions or at home. The number of beds in institutional settings is generally higher in the member States with highest level of expenditure.

Figure 9. Beds in nursing and residential care (expressed as the '000 population aged 65+)



Notes: Data refers to 2014 or latest year available (A): 2011; (B): 2012; (C): 2013; (D): 2016.
Source: Own elaboration on OECD data.

The positive relationship between level of spending and the number of LTC care workers employed is not surprising given that LTC is a labour-intensive sector with limited opportunities to improve productivity. Table 2, extracted from a report of the Social Protection Committee-European Commission (2014), shows paid LTC workers as a proportion of the over-65s in 15 EU countries. Sweden, the Netherlands and Denmark make the most use of LTC formal carers. In the Netherlands and Denmark, these carers work mainly in institutions, where more intensive support is generally provided. In institutions, the number of nurses is generally higher than the number of low-skilled workers. So that the associated costs. Publicly financed LTC in Sweden is often provided in people's homes from workers, with relatively high level of qualifications.

It is also important to notice that the unit cost of LTC services is significantly higher in the wealthier EU countries. As recently estimated by Muir (2017), the cost of one hour of care in Sweden is ten time higher than in the Czech Republic. Wage differentials may be reflected in higher quality care so that the differentials in unit costs can be considered a good -but imperfect- indicator of quality.

Cross-country variation in the level of spending is also related to the level of private cost-sharing for LTC services. Users' co-payments and means-testing systems in place are reviewed later in this report.

Table 2. LTC workers as share of population aged 65 and over, 2011 (or nearest year)

Member States	Institutions	Home	Total
Sweden[1]	12.2		12.2
Netherlands	6.5	4.4	10.9
Denmark	6.4 (2008)	2.9 (2009)	9.3
Estonia	0.6	5.9	6.5
Spain[1]	4.3		4.3
Germany	2.7	1.3	4.0
Ireland	1.5	1.7	3.2
Finland	3.0 (2005)		3.0
Austria	2.8 (2006)		2.8
Slovenia	2.5		2.5
Czech Republic	1.6 (2009)	0.8 (2009)	2.4
Hungary	1.4	1.0	2.4
France	1.6 (2007)		1.6
Slovak Republic[1]	1.6		1.6
Italy	1.1 (2005)		1.1

Source: OECD Health Statistics 2013,http://dx.doi.org/10.1787/health-data-en.
Note: [1]It is not possible to distinguish between LTC workers in institutions and at home.

4.3 The definition of needs

Establishing a meaningful concept of "disability" is difficult and there is no single agreed definition which suits all purposes (Altman, 2001; Haveman & Wolfe, 2000; WHO, 2002). A medical approach would define disability in terms of deviations from medical norms (e.g., presence of diagnosed conditions). In many countries determination of eligibility for public LTC programmes and the need for care services follows a functional approach that focuses on individuals' performance: a commission assesses claimants' ability to perform "normal" tasks and roles by measuring for example, their "functional limitations", "difficulties in performing everyday activities", or restrictions on "activities of daily living". Note that the functional approach is also linked more directly to the sociological concepts of social independence and social functioning than are definitions of disability based on the presence/absence of medical conditions. Additionally, it is seen as the latest stage of the disablement process as formalised among gerontologists (see, among others, Johnson & Wolinsky, 1993; Verbrugge & Jette, 1994). According to it, damages at the cellular level, eventually influence functioning at the level of organs, which ultimately restricts the individual's capacity to perform tasks and social roles.[82] A great deal of attention has been devoted in the literature to developing (a vast range of) measures with satisfactory properties in terms of

[82] The functionning approach accommodate also a definition of disability more closely related to the International Classification of Functioning, Disability and Health, which sees disability resulting from activity limitations and restrictions placed upon participation that emerge from the interaction between functional limitations and an unaccommodating environment (WHO, 2002).

dimensionality, reliability and validity. The ADL (Katz *et al.*, 1963) and IADL (Lawton & Brody, 1969) are perhaps the most successful examples which are commonly used to supplement the more classical medical approach in determining the eligibility for public LTC programmes.

Receipt of LTC programmes is determined according to the eligibility rules in force but it is also influenced by unobservable factors that influence the take-up and administrative errors. For cash disability-related programme in the U.K., Pudney (2009) has shown that "hassle" or "stigma" costs seriously affect the take-up. Non take-up may occur because of imperfect information of the eligible population, lack of literacy or numeracy to claim, fear of stigmatization, or informational and claim costs as academic work on older people's benefit claim behaviours has suggested (see e.g., Duclos, 1995). The subjective judgement that the administrators of disability benefits face in determining disability-related eligibility might introduce further heterogeneity (see e.g., McVicar, 2008). For example, two different assessors may reach two different conclusions over the eligibility of the same claimant. For this reason, a standardised procedure of assessment is generally preferred. In Italy, for example, the receipt of the main cash-benefit available for disabled people, the *indennita' di accompagnamento (IdA)*, rose of about 75.5% in the period 2000 to 2015, from about 1.2 million to about 2.2 million in 2015. From 2000 to 2009, the roll of IdA and the respective public spending increased significantly, following a stable path thereafter. The stabilization of the trend in the inflows of the IdA occurred after a reform that has provided a more direct control of the medical assessment process for IdA to the same body (Italian national institute for social security (INPS)) that disburses the benefit.[83]

4.4 Means-tested access and co-payments

One main decision that have to be made when regulating access to LTC programmes is on whether access should take account of a person's financial means in determining the level of public support that could receive. In other words, should state support be focussed on those least able to afford LTC costs, or should the need for LTC alone determine eligibility for publicly funded support?

In general, access to publicly-financed LTC services is relatively high in most European LTC systems. However, in many European countries, private households not only provide informal care but also substantial financial means for LTC provided in institutions and at home. The highest possible level of accessibility (no means-tested access) can be found in Northern countries, such as the Netherlands and Sweden: it has been recently estimated (Muir, 2017) that a median income earner living in these countries has about 90% of the cost publicly covered at all levels of needs. On the other hand, a median income earner in Croatia would have less than 10% of the LTC cost covered by the State.

[83] See Chapter II "Dynamics and inertia in the long-term care policies for older people in Italy" in the Italian National Institute for Social Security (INPS) annual report 2016. Available at: https://www.inps.it/docallegati/DatiEBilanci/rapportiannualiinps/Documents/INPS_rapporto_2016.pdf

The private contribution to LTC is generally higher for the care received in institutions. In other words, private spending plays a more important role for funding LTC provided in institutions than at home. For the great majority of countries, beneficiaries in care homes contribute with a share of their income (mainly pensions) to fund LTC or the accommodation and food costs associated with it. That share depends on the financial circumstances of the disabled, so that poorer disabled get more public support in meeting their LTC needs.

Means testing and the level of user contributions to the cost of care can take into account income and assets. The differences between countries relate to the extent to which cost-sharing depends on an asset-test. In many cases, the level of public support is determined as a function of the income of the recipient, without considering assets, especially for LTC support at home. At one extreme, England has a fully-means-tested safety net system: even for those is severe LTC needs, there is no entitlement to publicly funded social care if total financial assets are above an upper threshold of at least £23,250. If eligible, the disabled older people need to meet the costs of their care up to the point where the disposable income would fall below a certain remaining amount for (minimal) personal expenses. There is no entitlement to publicly funded social care if income is above this level plus the cost of care required (Hancock *et al.*, 2017). In France, for example, the assessment of assets is applied only for the cost attributed to food and accommodation in care homes. Often, relatives have the responsibility to contribute to the payment of care of their older relatives (e.g., France, Slovenia, Austria, Belgium, Czech Republic and Germany).

Evidences shows that receipt of LTC services is follows a socio-economic gradient: poor people are more likely to be disabled (Hancock *et al.*, 2015; Morciano *et al.*, 2015a). On the other hand, Disability brings with it additional living costs, which can be very large and further exacerbate the poverty condition. Receipt of LTC services declines significantly by socio-economic status (SES) through a direct effect, due to take-up behaviours, and an indirect effect due to the SES-gradient with disability. Thus, reforms that include means-testing for new claimants (see for example options of reforms in England, Commission on the Future of Health and Social Care in England (2014)), while increasing administrative costs and stigma-related target inefficiencies, might have little impact on the financial sustainability of the system. Moreover, means test might create cliff-edge effects, so that public subsidies change markedly following small differences in the user's economic circumstances. For those not eligible, it would generate the exhaustion of personal-assets before receiving support or significant unmet needs. Additionally, it could incentivise sub-optimal saving to avoid being above the threshold when in needs.

Some countries (e.g. the Netherlands and Sweden) established caps on the amount of co-payments required from users. Co-payments are in place to ensure enough incentive to discourage over-consumption of LTC services. Some countries engaged with reforms aiming at capping LTC-related out-of-pocket costs. The Dilnot reform in England, for example, introduced a lifetime cap on care costs: the local authority (LA) responsible for providing LTC care keep track of the cumulative amount of LTC costs through the person's Care Account.[84] Until their Care Account reaches the cap, the LA will apply the current means test to determine how much the person must pay towards the cost of their care. Once the cap is reached, the state will meet the cost of their eligible care

[84] Neither the daily living cost nor any excess of the care home fee above the amount the LA is willing to meet counts towards the cap.

needs without a means test.[85] The lifetime cap was expected to be £72,000 if implemented in 2016 but the reform has been postponed.[86]

4.5 Availability of cash-for-care benefits

In many EU countries, LTC is delivered using a dual system that provides services in kind and cash-benefits. The existence of cash benefits supports the possibility for individual freedom and choice as improve the opportunity to choose among different settings of care (e.g. either to buy formal care services or to support informal caregivers).

Broadly speaking, countries with high public spending on formal care (in-kind services) and low private spending on formal care, offer only very modest cash-benefits. On the other hand, cash-for-care payments were extended to older people, mostly in the '90s in EU countries where the public formal intervention is limited and the role of informal care is higher. In many countries, cash-for-care payments have a very prominent role, as the case for countries like Italy, the United Kingdom and western countries.

Cash benefits are generally in the form of non-contributory, non-means-tested and tax-free contributions towards the disability-related extra costs. In only few countries, however, cash benefits are means-tested (e.g. Spain). But introducing means-test is a growing suggested policy option for configuring older people's universal entitlements to cash-benefits in the light of rising sustainability issues.

In some EU countries there are cash-benefits available for the informal carers. They are meant to "compensate" for the time that the carers spend providing care. In general, they account for the loss of potential earnings and they are available only to those that provide intensive care and have limited economic resources. For example, in the United Kingdom, people that provide at least 35 hours a week of care to a disabled person and do not earn more than £110 per week are entitled to the (taxable) Carer's Allowance. Carer's Allowance is paid at £62.10 a week to 0.65 million recipients in England (2016). About 73% of recipients are women.

[85] However, daily living costs will continue to be means-tested even after the cap has been reached.

[86] For a more detailed description, see reports from the Care and State Pension Reforms (CASPeR) project. E.g.,

http://www.pensionspolicyinstitute.org.uk/uploaded/documents/CASPeR/20161207%20CASPER%20Technical%20Report.pdf.

4.6 Choice of provider

Free choice of provider is widespread in European LTC systems. The underlying idea is that enabling the care recipients to choose among alternative providers empower them and strengthen their role in the care process. The main aim is to give consumer choice over care decisions, enabling a "personalisation" of the care provided, towards a more tailored provision that matches people's attitudes and perceptions towards what they need. Additionally, a consumer choice oriented vision for LTC can also support the development of care markets.

Three main types of LTC programme are used in Europe to enable users' freedom of choice:

- Cash for care payments to the LTC user;
- Payments to informal caregivers as an income support;
- Personal budgets and consumer-directed employment of care assistants.

Additionally, countries with insurance-based models (e.g., Germany) have open markets for LTC with competition and market regulation that ensure a plurality of (public and private) providers. The Nordic models have public entities that are the predominant providers of formal LTC services. Cash-for-care schemes have been introduced recently.[87] Consequently, the share of private caregiving (both institutional and home-based care) has increased considerably in the recent years. Finland offers very limited choice of the provider. In England, the LTC users have a personal budget. Users can choose to use this budget as they wish for services provided by public providers. They can also can opt for a direct payment so they can arrange their own care (purchased privately), or they can ask to place the budget with a third-party provider[88].

4.7 The mix of public/private providers

An important and related issue is on how much LTC should be provided by the public sector, how much should be contracted to private providers and how much freedom the user can have in deciding among different providers. Increased reliance on market mechanisms is observed in many EU countries. This shift in the paradigm is advocated in enhancing user's empowerment but it is also linked to efficiency considerations.

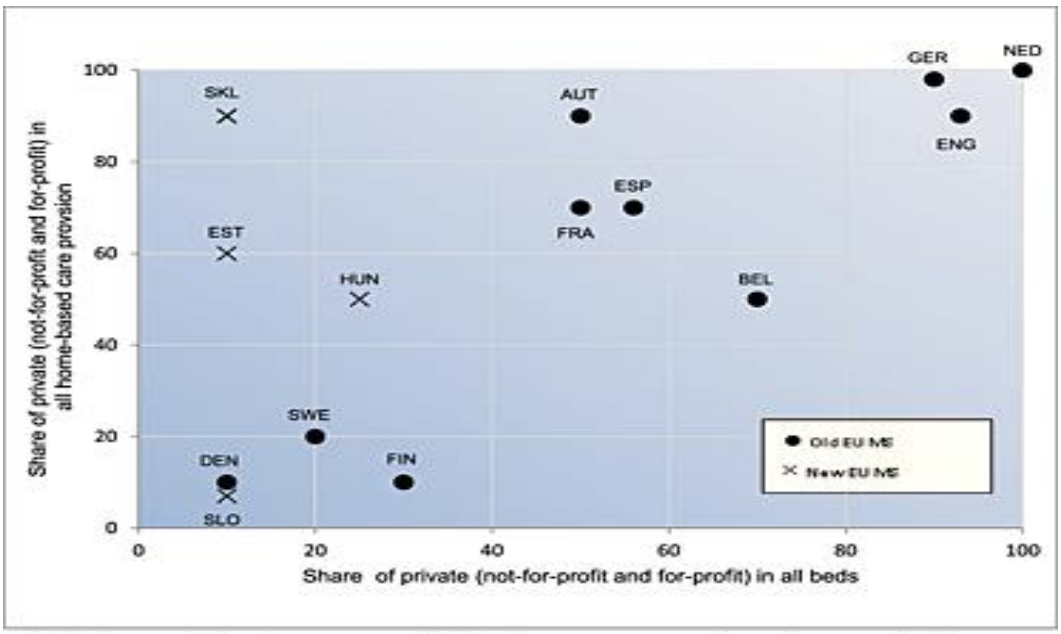
Broadly speaking, the EU LTC systems follow two main models: a "competitive model", according to which the State provides monetary benefits that can be used for buying care services in the market; and the "direct provision model" according to which the State directly provides in kind benefits to individuals in need. As documented before, many countries opted for a combination of these two approaches but there are some extreme cases. On the one hand, Scandinavian countries prefer a direct provision model, with little involvement of private providers. On the other hand,

[87] See for example the *Personal budget for care and nursing* in the Netherlands, the *Care wage* in Norway and the *Attendance Allowance* in Sweden.

[88] For details, see http://www.local.gov.uk/sites/default/files/documents/personal-budgets-essentia-edc.pdf.

there is the Netherlands case where all LTC services are provided by private organizations: residential care is supplied by private not-for-profit facilities, and home-based care is offered by both private for-profit and not-for-profit providers. In the case of markets dominated by for-profit facilities that face excess demand (and thus with little incentive to improve quality of care to remain competitive) the control from the public authority is commonly in force.

Figure 10. Estimated share of public versus private provision of formal LTC services and institutional care versus home-based care



Note: if no precise data were available, the country reports' authors provided an approximate estimate (0–20%, 21–40%, 41–60%, 61–80% or 81–100%). In the figure, the mean of the respective interval was then used (e.g. 10% rather than 0–20%). Note, however, that no information on public/private shares could be obtained for seven countries.

Source: Riedel *et al.* (2016). *Notes:* Member States of the European Union (EU) have been assigned a two-letter country code, heavily used in this report. See appendix 1 for details.

4.8 Quality assurance

Quality assurance is one of the most challenging issues in many EU countries. The policy debate on LTC has been dominated by discussions on how to improve the ability to deliver LTC services that match the rising expectations of the populations. Quality deficits are a matter of public concern also in the light of financial austerity that has affected many EU countries. There have been several reports describing inadequacies in institutional care, insufficient care provided or even abuses and humiliations[89].

[89] See for instance reports produced by OECD available at http://www.oecd.org/els/health-systems/long-termcareforolderpeopleoecdstudy2001-2004.htm#Relevant OECD documentation.

It is important to notice the specificities of the quality assurance in the LTC sector. LTC recipients (and their families) are (intrinsically) inhibited from engaging in the selection and the quality assessment of the LTC services receiving. This is particularly relevant when LTC services are needed due to cognitive frailty, for example due to Alzheimer or some form of dementia of the users. Dis-engagement partially reflects the fundamental characteristics of the service (in particular the need for care may be urgent, and residents and families may be distressed) but it also results from the actions of (private) providers that often provide obfuscate information, reducing the ability of the disabled people (and their families) to make informed choices. Unfair contract terms and commercial practices impose material and psychological costs on residents and their families. In many cases the private providers impose exit fees, minimum stays or "cancellation" fees. Therefore, even if the quality of the LTC service provided does not match the user's expectation, user's exit (or switch to another provider) may not feasible without paying very high –and almost prohibitively so- switching costs.

In general, the vast majority of the European LTC systems have introduced mandatory quality assurance in institutional care and home-based care.[90] The supply of nursing homes in Europe is partially restricted by certificate-of-need regulation that requires the state authorization for all new care homes or expansion of pre-existing ones. Further quality assurance tests are in place. In England, for example, where the role of private providers is relevant, quality of care is both defined by and monitored by the Care Quality Commission (CQC).[91] The CQC sets a number of fundamental standards which a care home must never fall below. Importantly, they provide quality ratings of the care home and one of the fundamental requirements is that the care home must display their CQC rating in places where relevant people can see it, including on their website. CQC's ratings is across 5 aspects of quality – for each there is a 1 – 3 score (green, yellow and red) and this is combined in an overall score. The 5 categories are: safe, effective, caring, responsive and well-led.[92]

4.9 Integration/coordination of care

LTC capacity planning may occur at three different levels (Riedel *et al.*, 2016). In practice, in the majority of EU countries, authorities at the central and regional and/or municipal levels share planning responsibilities. A fully centralised LTC system is in place only in Hungary, whereas many countries (e.g. England, Italy, Denmark, Sweden) exclusively delegate this task to non-central authorities. The underlying idea is that LTC services administrered at local level are more likely to

[90] The Czech Republic and Hungary have mandatory quality assurance only in home-based care, while Latvia has it only in institutional care. In Austria, Finland and Slovenia, mandatory quality assurance does not exist in any setting of care (Kraus *et al.*, 2010).

[91] http://www.cqc.org.uk/content/fundamental-standards.

[92] Information on the quality of LTC providers, including inspection reports, are publicly available. Additionally, Local Authorities are obliged by the law to provide advice in supporting the (rather stressful) choice of LTC services. Information services are also provided by consumer organisations, charities and care home review websites.

address quickly and efficently the needs of the population. Contries where LTC services are organised at local level, however, have the overall LTC regulation set at national levels, to avoid dramatic local differences in the way LTC needs are defined.

LTC services can be integrated either fully or partly with the health system. In the face of increased demand for care and constrained finances, there is a renewed interest in the integration of the funding, commissioning and provision of health and social care services in many EU countries. The separation of the system between health and social care in force in many EU countries has suggested to some commentators that there are potential administrative savings when integrating, either when the systems are locally or nationally administered. However, evidences are still patchy (Robertson, 2011) and depending on the models of integration in place. Where a single budget exists, the dominance of the medical model of care (and the medical profession) could act as a potential barrier in the definition of those in needs and the type of support they would require. In other cases, a single source of funding, used to deliver integrated care according to a care programme approach, has been found to be efficient. The structural integrations occurred in Norrtälje, Sweden (Øvretveit *et al.*, 2010) or in Northern Ireland for example have revealed areas of duplication and unintended overlapping between the two systems, enabling cost savings. However, one point that has been generally neglected in policy discussions in that the availability of two separate sources of support may be an advantage in increasing the reach of the system (reducing under-coverage), since potential claimants may miss one entry point to the system but still be able to get support via another (Hancock *et al.*, 2016). In England, for example, integration of health and social care has been on the political agenda for many years and the partnership working has been consistent feature of recent Government policy[93].

No LTC system claims to have a very high level of integration between LTC and other services. Cash-benefits are often administered in complete independence with formal LTC services (see e.g., the cases of Italy and England). A good level of integration and coordination is generally observed in the LTC support provided in nursing settings. Because most of the nursing residents experienced previous admissions in hospital, when choosing a nursing home, potential residents may obtain help from hospital discharge planners. In many cases, nursing care generally falls below the public health system umbrella (with financing that is often part of the public health insurance package) whereas domestic care (cleaning, cooking, etc.) falls under the independent umbrella of social care. Important exceptions, apart from countries that offer comprehensive LTC, such as the Netherlands and Sweden are Austria, Belgium, Denmark, Finland and Latvia where the degree of integration between LTC and other services it is considered rather good, while in all other countries is poor or very poor (Kraus *et al.*, 2010).

[93] See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/607754/Integration_and_BCF_policy_framework_2017-19.pdf
It is important to notice that the involvement of local authorities in England is growing but still limited in the design and development of integrated systems, with significant local variability. This challenges considerably the likelihood of success for integration plans.

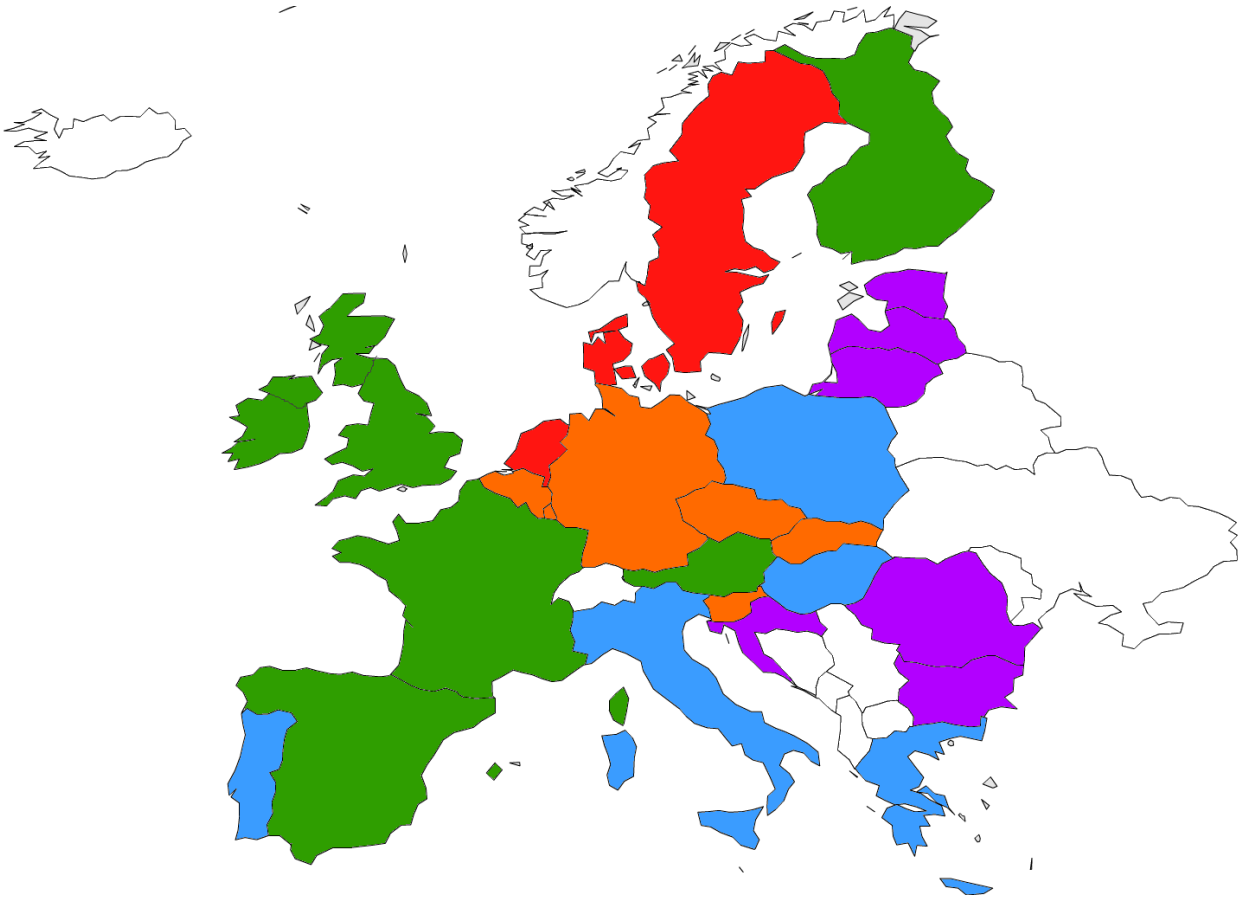
5 Five broad typology of LTC regimes in Europe

To sum-up, this section attempts the classification of EU countries based on the different dimensions explored above, to reveal patterns of LTC systems. The classification provided does not offer clear quantitative boundaries but helps in providing a summary of this report in just a single figure (Figure 11).

To sum up:

- Countries like Denmark, The Netherlands and Sweden (in red) finance public provision of LTC by general revenue allocations to local authorities, have high public spending on formal care (FC) and low private spending on FC, offer modest cash-benefits and have low informal care (IC) use and high IC support.
- Countries like Belgium, the Czech Republic, Germany, Slovakia and Luxembourg (in yellow) provide for an obligatory social insurance against LTC risks financed from contributions. Their system is characterised by medium public FC spending and low private FC spending, high IC use and high IC support, and modest cash-benefits.
- Countries like Austria, England, Finland, France, Slovenia, Spain and Ireland (in green) have medium public coverage against LTC risks financed from contributions or general revenue. They are medium spenders in terms of public and private FC financing, have a high use and support for informal care, and high to moderate cash-benefits.
- Countries like Hungary, Italy, Greece, Poland and Portugal (in blue) provide modest social insurance against LTC risks. They are low spenders in terms of public FC financing and high spenders in terms of private FC financing. The use of IC is high, while support for IC relatively low, as is the use of cash-benefits.
- Finally, countries like Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Malta, Romania and Croatia (in purple) have little social insurance against LTC risks and correspondingly low public spending on FC. The use of IC is high and there is little to no IC support. Additionally, cash-benefits are modest/low.

Figure 11. Typology of LTC regimes in Europe



Formal-care (FC) oriented provision; generous, accessible and affordable

- Financed from general revenue allocations to Local Authorities (LA)
- High public and low private spending on FC
- Low Informal care (IC) use, high IC support
- Modest cash-benefits.

FC of medium accessibility; some IC orientation in provision

- Obligatory social insurance financed from contributions
- Medium public and low private FC spending
- High IC use, high IC support
- Modest cash-benefits.

FC of medium accessibility; medium IC orientation in provision

- Medium coverage financed from contributions/general revenue
- Medium public and private FC spending
- High IC use, high IC support
- High cash-benefits.

Low FC accessibility; strong IC orientation in provision

- Modest social insurance against LTC risks
- Low public and high private FC financing
- High IC use, low IC support
- High cash-benefits.

Very low FC accessibility; (almost) exclusive IC orientation

- Little social insurance against LTC risks
- Very low public FC spending
- Very high IC use, little to no IC support
- Modest/low cash-benefits.

Source: Own elaboration from data published in European Commission (EU) (2016) and Kraus *et al.* (2010).

6 The current policy debate on LTC in Europe

The policy debate on LTC systems in Europe has been dominated in recent decades by concerns about sustainability and the ability to deliver services and goods that match the rising expectations of the populations.

Many EU countries saw significant growth in spending on LTC over the last years. Mainly driven by demand factors, real terms annual growth was of about 4.8% on average. Countries with a starting low base, like Portugal, Estonia and the Czech Republic experienced a growth far above the average but also spending in Belgium and Poland grew more than the EU average. At the other end of the scale, Hungary's spending shrank by about 1% annually in real terms, and annual growth in Sweden, Germany, Denmark and the Netherlands ranged from 2-3%, albeit these countries already had a high base of departure in 2000s.

The 2009 economic crisis that have afflicted many EU countries have added to concerns on the system's sustainability, pushing the system under financial stress. LTC (and health) expenditures in many countries have been growing continually at a faster rate than the economy, accounting for an increasing percentage of GDP. In the long-run, demographic and epidemiological pressures, as well as the increasing costs of the labour intensive LTC sector are likely to exacerbate the current situation. Besides, public debt stocks cumulated over the long term and during the crisis years, have pushed the financial sustainability concerns very high in the policy agenda.

Consequently, containing costs has become a major priority for most LTC regimes. The 2009 economic crisis was followed by a period of budgetary adjustment associated with the need to reduce government deficits and keep public debt under control and public finances on a sustainable path. Typically, European policy-makers have sought to find a balanced combination of different strategies acting on both the supply and demand sides of LTC services. In some countries, budget adjustments may have improved efficiency; in many others, they were made at the cost of reducing the fairness of the system, for example by reducing the provision and quality of LTC services.

Formal care services have significant financial costs. Countries with universal coverage and high formal care provision have relatively high public LTC expenditure and are currently engaged with the challenge of reducing the costs while maintaining a good standard. European Countries with low public LTC expenditure relies heavily on out-of-pocket payments (which creates problems of unaffordability, sub-optimal consumption, catastrophic costs) and informal care (which creates effects on the labor market participation of the carer). Growing living standards change people's attitude towards their own health and raise their expectations of living a longer and healthier life with better LTC services. The convergence in citizens' economic well-being and the mobility of populations might also rise the expectations of benefiting from "similar" basket of services across countries, which might push expenditures even further. These countries are therefore facing the different challenges of modernizing the system by expanding and improving formal care services in response to the present and future demographic, epidemiological and socio-economic pressures.

Innovations can generate important efficiency gains and thus be cost-saving in a sector, the LTC one, which is labour intensive, at least in comparison with the hospital industry. The market of formal care is generally dominated by for-profit facilities that face excess demand, and thus with little incentive to improve quality of care to remain competitive. One possible channel for increasing productivity in the LTC sector is by boosting the level of competition among care providers, even if evidence on the effect of competition on price and quantity of formal LTC

remains mixed (Forder & Allan, 2014). In many European countries, there are barring regulation of entry in place that are likely to reduce access and thus competition in the market. Some countries face relevant structural changes of the care home market, for example towards a "branding" process (care homes that affiliates with a specific brand/provider). This may introduce economies of scale in a sector that is generally dominated by a multitude of care homes with limited number of beds. On the other hand, the branding process might increase the level of concentration of the market, with important economic welfare implications for the consumers.

Regulations might set budgetary constraints but can also define the extent of the public coverage. It might also set homogeneous rules and incentives for providers aimed at being cost-saving while monitoring the quality of outcomes. Many countries are also attempting at improving the governance by boosting the coordination and co-operation between different agents/authorities involved in the delivery of formal/informal care as well as between EU countries with similar LTC systems. Countries with LTC provision highly decentralized generally lack of clarity and transparency in the eligibility criteria applied at local levels. While delocalization might have a beneficial effect on quality and targeting, it might increase fragmentation because of the division of responsibilities in financing/delivering the service.

Several Member States experience difficulties in recruiting LTC workers. The World Bank has suggested tackling the problem by setting up global training partnerships to increase the availability and quality of health care workers. Germany and England, for example, are trying to implement some of these strategies to increase the number of LTC staff, to partially compress wage growth in the sector and to improve social diversity.

EU Member States have agreed common objectives at European level in the framework of the open method of coordination in the field of social inclusion and social protection[94]. This is very encouraging and useful for highlighting few recommendations that might be relevant for non-EU countries too.

An efficient LTC system can help in moving away from the traditional hospital-centric model. It could therefore be cost-effective and reduce subsequent associated costs. The State should support the deliver of LTC services at home rather than in institutional setting (when appropriate). This is because it costs less and older people have a preference to remain at home. Also it would be cost-effective support care recipient to remain independent as well as support informal carers in providing the care. In that respect, cash-benefits should be designed to cover the cost of disability at its earlier stage and aiming at postponing institutionalization. Informal carers should also receive adequate public monetary and psychological support. In terms of fairness, a well-designed LTC system should avoid the "unequal treatment of equals" and the "equal treatment of unequals": a clear assessment procedure of LTC needs is therefore a key factor for avoiding targeting errors (leakage and under-coverage) and for improving solidarity and equity between and within generations and different stratum of the society.

[94] Many EU countries share the idea that a systematic monitoring is key to improving the sector's performance. Policy reforms are often assessed and evaluated *ex-ante* and *ex-post* in a systematic and formalised way based on evidence. So that evidence from ongoing «natural experiments» can be used in the process of designing of an efficient, equitable and sustainable LTC system.

In terms of the process of implementing LTC reforms, many member states make an effort in building consensus on the role of individuals and State. This is important because of the relevance of finding consensus on the risk sharing. Consultation processes is a way of raising awareness and improve the operationalization of the reforms. Campaign aiming at raising awareness enables people to make more informed decisions on how to deal in time with the likely but unpredictable effects of the onset of disability. LTC users and their relatives need adequate information in order to choose a suitable LTC provider and the State should avoid the problems associated with asymmetry of information: it is therefore important to provide clear and accessible information on the type of LTC support available. It is also important to promote a transparent and comprehensible funding mechanism: complex systems generally require high administrative costs which may undermine public confidence in the institutions.

Appendix

Throughout the report, a two-letter country code has been assigned to each EU Member States. See the table below for details.

Belgium	(BE)	Greece	(EL)	Lithuania	(LT)	Portugal	(PT)
Bulgaria	(BG)	Spain	(ES)	Luxembourg	(LU)	Romania	(RO)
Czech Republic	(CZ)	France	(FR)	Hungary	(HU)	Slovenia	(SI)
Denmark	(DK)	Croatia	(HR)	Malta	(MT)	Slovakia	(SK)
Germany	(DE)	Italy	(IT)	Netherlands	(NL)	Finland	(FI)
Estonia	(EE)	Cyprus	(CY)	Austria	(AT)	Sweden	(SE)
Ireland	(IE)	Latvia	(LV)	Poland	(PL)	United Kingdom	(UK)

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3. Organization, financing and delivery of LTC in Italy

In search of a common policy

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1. Definition and measurement of LTC in Italy and in European countries[95]

The issue of LTC organization and expenditure has been widely examined at the European level. In Europe, common objectives for social protection, including LTC, have been developed by the Social Protection Committee, which monitors social conditions in the EU and promotes the development of social protection measures in member countries.[96]

LTC has been defined as a wide range of services provided over a prolonged period of time, due to chronic conditions and/or disabilities (Scheil-Adlung, 2012). Although LTC services are delivered to both elderly people and younger disabled groups, the vast majority of beneficiaries are over 65 years of age.[97] Several reports carried out in the last decades have been outlining how the growing number of elderly dependent people in many countries will lead to consequences for LTC (EC (2014), Ministero dell'Economia (2015).

However, not all the resources for LTC are directed to the elderly, given that it covers also people who present a condition of dependency; to this extent, LTC costs related to severe disability are relatively independent of age and cannot be easily predicted. In spite of many studies carried out for Europe, that have been focusing on describing aggregate data related to the overall amount of resources spent to finance LTC, a clear distinction between LTC expenditure and elderly care expenditure has not been attempted so far. Given the growing rates of population ageing in Europe, this issue becomes of great interest for policy considerations.

A formal way of disentangling this question consists in analyzing all the expenditure items included in LTC and focusing on the services explicitly devoted to the elderly. To this extent, a common classification system for the European countries is the System of Health Accounts (SHA), implemented by OECD in 2000 and lastly reviewed in 2011.[98] SHA data is currently used to develop common EU indicators on health and LTC expenditure, as well as to monitor various EU policy objectives, such as the goals of social inclusion and social protection, which encompass health care. The first topic to be addressed is the separation between LTC health services (designed as HC3) and LTC social services (designed as HCR1). The first category includes residential care, daily care and home-based care, while social LTC services in themselves are not considered part of health care because they encompass assistance services, i.e. formal care that enable a person to live independently by her residence (laundry, cooking, administrative tasks, etc.), and also cash benefits. All these services, although mainly used by the elderly, are directed also to other subjects, such as physically disabled people, mental health and substance abuse patients. Based on the SHA

[95] This section heavily drawn from Brenna and Gitto (2016).

[96] For an overview of the activities of the Social Protection Committee see http://ec.europa.eu/social/main.jsp?catId=758

[97] Among all LTC recipients, around 60% are women because of their higher life expectancy, combined with a higher prevalence of disabilities and functional limitations in old age.

[98] This obligation is due to the Regulation (EC) No. 1338/2008 of the European Parliament and of the Council of 16 December 2008 on Community statistics on public health and health and safety at work. Italy has just released the data for the period 2011-2015.

classification, the Italian Ministry of Finance suggests that almost 2/3 of the whole LTC spending are destined to the elderly (Ministero dell'Economia, 2015).[99]

It is possible that similar studies have been carried out in other European member states, the results depending on organizational and demographic variables. However, there is still no agreement on a common indicator to define the share of LTC elderly expenditure on the total amount; and international Reports persist with the erroneous interpretation which overlaps the two concepts of LTC and elderly care expenditure.

[99] This approximation is obtained based on LTC services consumption by population over 65, but neither the estimation method nor data on service consumption are represented in this Report.

2. Financing LTC and elderly care in Italy [100]

The Italian LTC financing is managed through three institutional levels: central, regional and community based.

The Central Government, through Social Security, administers the so called "indemnities for caring", cash benefits amounting to € 507 per capita provided to invalid people, 80% of whom are elderly. Checks are granted in relation to the health condition of the recipient and independently from his/her economic position. Although there are no restrictions on their use, they are thought to cover formal care expenditure. Indemnities for caring represent almost 50% of the whole elderly care financing. Still, the size of specific flows that transit through the Regions and are ultimately devoted to community care, are set at the central level. Some examples are the National Fund for LTC (Fondo Nazionale per la Non Autosufficienza - FNA) or the National Fund for Social Policies (Fondo Nazionale Politiche Sociali - FNPS). These resources are designed as "*committed resources*", since regions are obliged to transfer them to the community care, without directly using them.

Regions are responsible for LTC services: they manage and allocate resources devoted to LTC. The source of funding is the Regional Health Fund, autonomously administered by each region. Almost all financing resources devoted to LTC is retained by the regions, except for a small share, which is devoted to the municipalities in order to run the community based services.[101] These funds are called "*autonomous resources*" because they are set yearly accordingly to the regional budget and they have to be distinguished from the *committed resources* coming from the central government. *Committed* and *autonomous* resources contribute only a small percentage (from 9% to 13%, depending on the region) to the financing of the community services managed by the municipalities, the main share being provided by communities' direct taxation.

3. Public expenditure for LTC in Italy

The aim of this section is to obtain estimates of the LTC expenditure in Italy and to present the institutional actors involved and the impact on welfare. LTC expenditures include all health care or care interventions in favor of elderly or disabled people who are not self-sufficient, i.e. unable to perform, on regular basis, any activity of daily living (ADL) without an external help.
The difficulty of this exercise is that assistance to self-reliant people goes through a multitude of different services and channels, normally relevant to social and health services, which should be exercised in a coordinated and unified way to ensure the appropriateness and the effectiveness of the cures, but also their efficiency. In particular, for Italy, the performance to be considered crosses transversally the three pillars of Italian welfare: health, social security and social assistance. It is therefore necessary to identify, isolate and consider them in a joint framework to have an adequate estimate of LTC expenditure resources.

[100] This section heavily drawn from Brenna and Gitto (2016).

[101] In case of Lombardy it amounts to 4%.

3.1 Public expenditure for LTC: services, costs and role on welfare.

To estimate public spending on LTC, a convenient and authoritative starting point is the annual State General Accounting (RGS) estimate. The aggregate of expenditure considered is that agreed in the EPC-WGA field, in line with the methodological guidelines set out by the OECD.[102]

3.1.1 The performance involved

Public spending on LTCs includes three different types of benefits: *i)* health care for those who are not self-sufficient, i.e. those who, due to chronic illness, age, and mental limitations, need continued assistance, *ii)* accompanying allowances and, finally, *iii)* the socio-assistance benefits provided by local authorities, in particular municipalities, for the benefit of the disabled, elderly people who are not self-sufficient and people dependent on alcohol and drugs.

As far as healthcare services are concerned, they can simply be aggregated into three main categories, based on the type of recipient and their modes of delivery:

i) residential care for the elderly and disabled;
ii) non-residential care (semi-residential and home care facilities) for the same category of subjects;
iii) assistance, in whatever form, to dependents (alcoholics and drug addicts) or psychiatric disorders.

These benefits are all "in-kind" and are provided by NHS entities independently.

Accompanying allowances are specific monetary benefits foreseen in the case of so-called “civil disability”, that is, invalidity which does not arise from causes of service, war or labor. It is the benefit of civilian invalids (civilian blinds and deaf people), who can access them without any minimum payment of social security contributions and regardless of their income. Indemnities are paid directly to the beneficiaries, irrespective of their actual use in the purchase of goods and services useful for improving their living conditions (the delivery is not subject to the certification of the purchase of the benefit).

The third component of public expenditure for LTC is represented by social welfare benefits for the elderly who are not self-sufficient, disabled, with psychic disorders and to persons with alcohol and drug-related problems. These benefits differ from one another, are predominantly "in nature", means tested and provided by the local authorities, mainly by the municipalities.

[102] The EPC-EGA is the working group of the financial effects of demographic ageing within the Economic Policy Committee - Working Group on Ageing, EPC-WGA.

3.1.2 The LTC expenditure.

According to the latest available estimate, in 2013 overall LTC spending represents 1.9% of GDP. More in detail (see Table 4.1), for the health component, expenditure is 0.87% of GDP and 45.8% of the total expenditure for LTC. Accompanying allowance costs are in turn equal to 0.84% of GDP, and 44.2% of total LTC expenditure. Finally, social assistance benefits represent 0.19% of GDP (10% of total expenditure).

Table 4.1 – Public expenditure for LTC in 2013

	Expend. (% GDP) (1)	Expend. (mln. ∈) (2)	%	Exp. 65+ (%) (3)
Healthcare services	0,87	13.572,2	45,8	59,8
Accompanying allowances	0,84	13.060,1	44,2	77,4
Social assistance benefits	0,19	2.964,0	10,0	78,9
Total	**1,90**	**29.596,4**	**100,0**	**69,5**

(1) For health and welfare expenditure, Farmafactoring Foundation elaborations on RGS data (2014); For indemnity expenditure: source is INPS (2014); (3) Source: RGS (2014)

While for "Accompanying allowances", the expenditure in absolute terms should correspond to that published in the INPS budget, which is € 13.1 billion (0.84% of the GDP as reported by the RGS), for "Social assistance services", the expenditure is derived from the relevant accounting documents, by appropriate estimation exercises.[103] In particular, for healthcare services, the estimate is obtained using a suitable linkage matrix, called "cost-performance", which allows, for the part of expenditure directly managed by public institutions, to move from the distribution of expenditure by type of costs to the one by type of service.[104]

For "Social assistance benefits", RGS estimates are based on a specific survey by National Institute of Statistics (ISTAT), which provides annually and on a census base, analytical guidance

[103] In particular, the items considered are in the section dedicated to the ″Management for the provision of pensions, allowances and allowances for civilian invalids. Art. 130 of D.L. 31 March 1998, no. 112 ″. This estimate is obtained from the expense of € 13.4 billion, to which we deducted a correction of about € 0.3 billion for recovery of unduly paid benefits.

[104] Cfr. RGS (2011), pp. 91-92. The matrix coefficients, which express the distribution of cost performance for each cost factor, are estimated on the basis of the information provided by the Economic Accounts (CE model) and the Levels of Assistance (LA model) of Local Health Authorities in 2008, which shows for each region the distribution of cost factors by type of performance. See also RGS (2004), pp. 89-91.

on public spending, the number of beneficiaries and the number of interventions for all social-welfare benefits provided locally, whose most recent data refer to 2011.[105]

Turning more in detail, about two-thirds of health spending is made up of elderly and disabled care, divided equally between residential and semi-residential care, which also includes home care (RGS, 2014, p.114). While spending for the elderly and the disabled is, as it is expected, age-related, dependency and psychiatric patients present higher consumption among the younger than the elderly (RGS, 2014, p.114). The same characteristics, with reference to age-related spending, are found for Social assistance benefits (RGS, 2014, p.119).

Likewise, both in the case of civil disability allowances covering almost all of the total allowance and for the allowances for the blind, the incidence of the beneficiaries on the resident population of the same age and sex remains essentially stable in the ages of up to 65 years, then climbing quickly in later age groups. On the other hand, the relationship with the age of the deaf-mute is largely absent (RGS, 2014, p.116-7).

3.1.3 The incidence of LTC public expenditure on welfare in Italy.

In line with the definition adopted at European level, public and private bodies are involved in the field of social protection, whose aim is to support people and families from the consequences of well-defined risks or needs without having on the beneficiary side an equivalent and simultaneous counterpart and/or the stipulation of insurance policies.[106]

Estimates of social protection expenditure are contained in the so-called social protection accounts, which collect in a single accounting structure the national accounts flows corresponding to social protection interventions and their funding.[107]

Expenditure on social protection benefits totaled € 461.850 million in 2013, of which 92.8%, amounting to € 428.7 billion, supported by the public administration (PA). Private sector spending (i.e., that incurred by non-profit organizations, pension funds and insurance companies for interventions in the management of social insurance schemes and firms in their role as employers,

[105] In 2013, this expenditure was made for 62% by non-residential assistance, 26% by residential assistance and 12% by money transfers. See RGS (2014) p. 118.

[106] See ISTAT, 2014a, pp. 123-4. The risks and needs considered are: illness, invalidity, family and children, old age, survivorship, unemployment, housing and social exclusion not elsewhere classified.

[107] As such the accounts represent a summary of the public and private interventions carried out in the field of social protection both on the expenditure side and on the financing. The methodology used is provided by the European System of Integrated Social Protection Statistics SESPROS (Community Regulation 458/2007), in line with the accounting rules laid down in the European System of Accounts Sec95 (Community Regulation 2223/96).

for the sole intervention in favor of their employees) amounts to 33.2 billion, divided between social security spending (27.1 billion of euros) and welfare (6.1 billion of euros).

Table 4.2 – Expenditure for Welfare and LTC in Italy (2013)

	Welfare expenditure		Share for LTC
	Million of Euros	%	%
Healthcare	101,269	23.6	13.4
Pension	294,832	68.8	4.4
Social assistance	32,559	7.6	9.1
Total	**428,660**	**100.0**	**6.9**

Source: estimates by Fondazione Farmafactoring on ISTAT data (2014b), RGS (2014) and INPS (2014a)

With regard to public spending, Social security expenditure (pensions) represents 68,8% of total expenditure (see Table 4.2), while Healthcare expenditure is 23.6% of the total expense and Social assistance the residual 7.6%. Based on the estimates presented in Table 4.1, LTC expenditure represents less than 7% of the total public welfare expenditure, with the individual components weighting 13.4% (health), 4.4% (allowances), and 9.1% (social assistance), respectively.[108]

3.2. The expenditure for LTC and civil invalidity in 2013.

In the previous paragraph, following the definition of LTC adopted by the RGS, the public expenditure reserved for civil disability was limited to the part included in the "Accompanying allowance" section. It may be then useful to widen the vision and to consider also the part outside that section.[109]

In addition to the accompanying allowances, individuals affected by civil invalidity can receive other benefits, which may differ by type and entity, depending on the severity of the disability and other specific conditions. In particular, we refer to the disability pension and the monthly allowance

[108] Note that for healthcare expenditure this percentage differs from that indicated by RGS (12.5%). This may depend on the fact that in our estimates we consider the costs of healthcare alone and not the other costs of the sector (various contributions, administrative services and other outlays). Taking these into account, our estimated percentage would fall to 12.4%, in line with that indicated by the RGS.

[109] However, public expenditure on those disability benefits and accidents or occupational illnesses is excluded, whose payment requires the minimum payment of social security contributions by the beneficiary. More precisely, this is the expenditure for the ordinary disability allowance and the disability pension, which in 2013 was 15.1 billion euros, and that for the allowance, which was about 4.5 billion euros.

paid to citizens in the age class 18-65, who have been recognized suffering from a total or partial labor disability (not less than 74%).[110]

Table 4.3 – Public expenditure for LTC and civil invalidity in 2013

	Expenditure (%Pil) (1)	Expenditure (mln. euros) (2)	Distribution (% of total)
Healthcare	0,87	13.572,2	40,8
Pension	1,07	15.716,8	50,3
Social assistance	0,19	2.964,0	8,9
Total	2,13	33.253,1	100,0

(1) For healthcare and social welfare benefits, see RGS (2014); for civil disability, see INPS (2014a)
(2) For health and welfare expenditure, Farmafactoring Foundation elaborations on RGS data (2014); For civil disability, cf. INPS (2014a)

These are benefits whose access, unlike the accompanying allowances, depends on the income conditions of the beneficiary or family member of the family. Expenditures for these benefits amounted to € 3.7 billion in 2013 and bring the incurred expenses for civil disability to € 16.7 billion and the total for LTC and disability to € 33.3 billion (Table 4.3). Therefore, the weight of monetary transfers to civilian invalids represents over half of the aggregate spending considered. Expenditures in the aggregate account for 7.8% of the total for social benefits, while the one for civil disability compared to the reference sector rose to 5.7% (Table 4.4).

Table 4.4 - Public expenditure on welfare, LTC and civil invalidity in 2013.

Welfare expenditure			Share for LTC and civil invalidity expenditure
	Mil. di euro	% totale	%
Healthcare	101.269	23,6	13,4
Pension	294.832	68,8	5,7
Social assistance	32.559	7,6	9,1
Total	**428.660**	**100,0**	**7,8**

Source: Farmafactoring Foundation elaborations on Istat (2014b), RGS (2014) and INPS (2014a)

[110] For citizens under the age of 18, this expenditure should also include the "attendance allowance", with the aim of providing support to households whose annual income is below a certain threshold who bare the cost of attending a school or a specialized center for therapies or rehabilitation.

3.3 A further analysis on LTC services

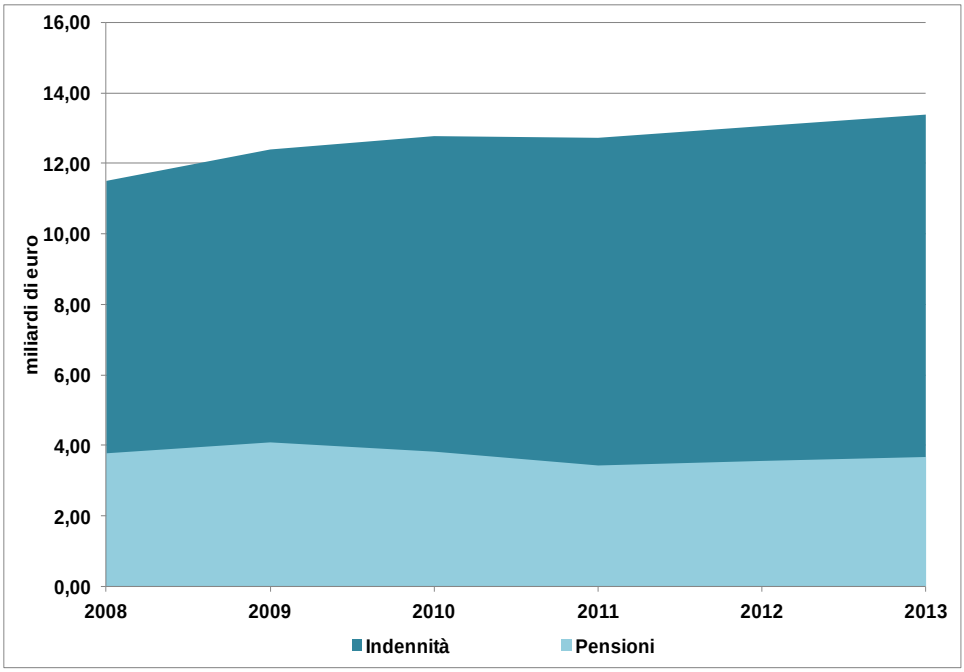
In this section, we provide more information on the main features of LTC expenditures and its components, such as payees, age, sex, and territorial distribution. The same analysis has not been possible for the healthcare component, for which the Levels of Basic Assistance (Livelli Essenziali di Assistenza) (LEA), are not currently available.

3.3.1 The civil invalidity benefits.

Additional information on civil disability spending can be obtained by using two specific sources of data. The first is represented by the Social Financial Statements of INPS, which provide not only the institution's expense, but also some relevant features of the benefits' beneficiaries. The second is a specific ISTAT publication, which presents the expenditure of various types of pension treatments from 2008 to 2012, disaggregated also by some modalities like, for example, territory, sex and age.

In Figure 4.1, we reported the civil disability expenditure divided between pensions and accompanying allowances. Overall, spending rose from € 15.3 billion in 2008 to € 17 billion in 2013 with an average annual increase of 2.2%. In particular, pension expenditure since 2009 is experiencing a contraction that continues until 2012, from which it shows a tendency to rise, but not to reach the beginning value of the year (-0.6% per annum is the reduction rate experienced by that component over the period considered). Over the same period, accompanying allowance expenditure increases by 3.1% on average per year. Specifically, spending increases by 2010, falling slightly in 2011, then returning to grow and reach 13 billion euros in 2013.

Figure 4.1 – Civil Invalidity Expenditure in 2008-2012. (Bln euro)



Source: Farmafactoring Foundation elaborations on Istat (2014b), RGS (2014) and INPS (2014a)

Table 4.5 - Civil disability benefits in 2013: average number and average monthly amount by sex

	Men	Women	Total
	Number (thousand)		
Civil invalid benefits	1.116,8	1.721,9	2.838,7
- Pensions	402,9	468,4	871,3
- Indemnities	713,9	1.253,5	1.967,4
	average monthly amount (euros)		
Civil invalid benefits	397,0	425,6	414,4
- Pensions	270,3	272,9	271,7
- Indemnities	468,5	482,7	477,6

Source: INPS (2014b)

In Table 4.5, we reported the total number and the average monthly amount of the benefits paid in 2013, distinguished by the beneficiary's gender. Accompanying allowances are the most popular form of assistance, reaching 69.3% of total benefits in 2013. Women receive 60.6% of the total benefits. In particular, women benefit significantly from the accompanying allowances (63.7% of the total), whereas pensions are more equitably distributed (53.7% of which women benefit). In addition, data show how the average monthly amount associated with the benefits is 75% higher than the one for pensions. Women also benefit from a slightly higher average amount of about 7.2% of the males. The difference is relatively higher for accompanying allowances.

Table 4.6 - Civil disability benefits paid in 2013: average number and average monthly amount by sex

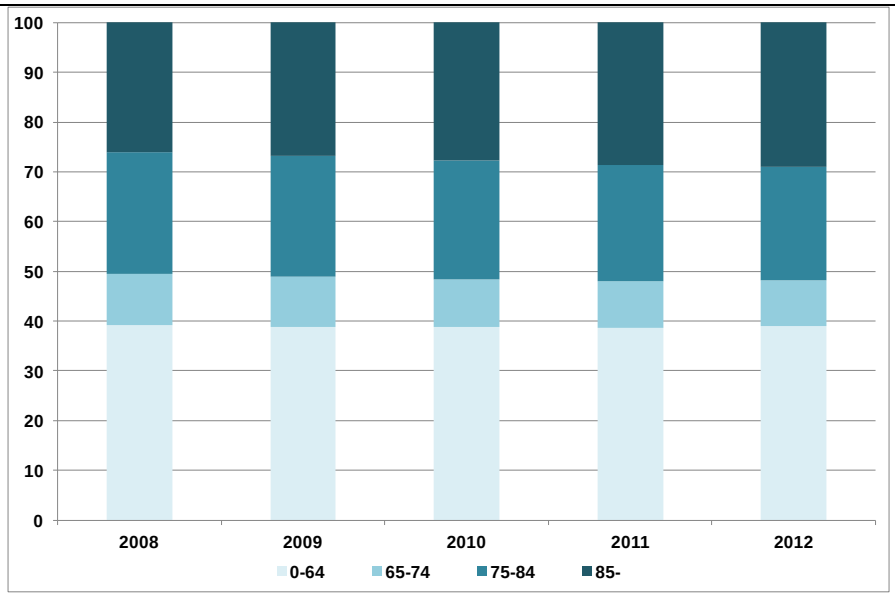
	Men	Women	Total
	Number (thousands)		
Civil invalid benefits	200,4	272,3	472,7
- Pensions	48,3	60,1	108,4
- Indemnities	152,1	212,2	364,3
	Average monthly amount (euros)		
Civil invalid benefits	416,4	435,1	427,1
- Pensions	254,4	270,1	263,1
- Indemnities	467,9	481,7	476,0

Source: INPS (2014b)

Table 4.6 shows the new disability benefits granted in 2013, which amount to over 472,000. Of these, more than 77% consist of accompanying allowance, while 57.6% are intended for women. Even for the new benefits granted in 2013, women enjoy a monthly average benefit greater than men, both in term of complexity and type of benefit considered.

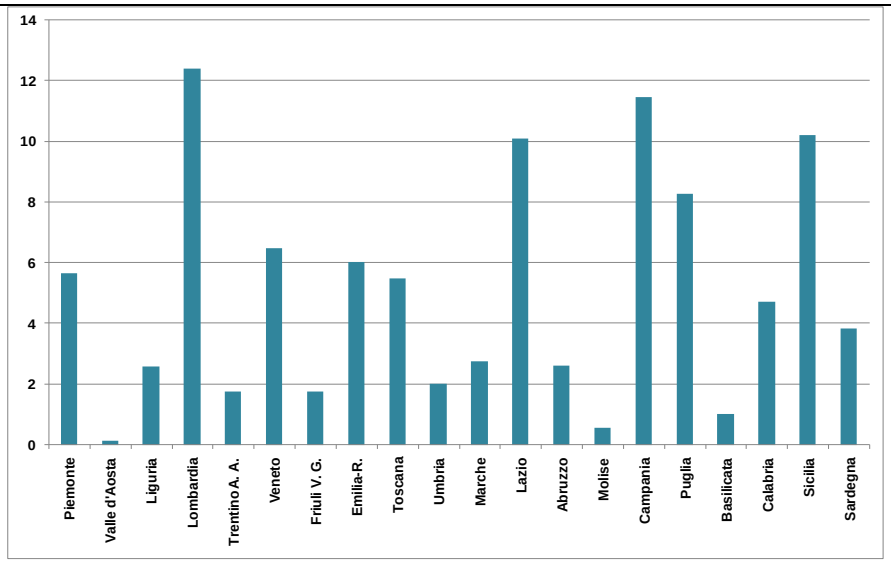
Most of the expenditure covers beneficiaries over the age of 65: the corresponding share in 2012 reached 60.9% of the total, an increase over the time period of just 1 tenth of a point (see Figure 4.2). This invariance corresponds to an increase of 2.8 percentage points of expenditure for "over 85" over the whole period, with a reduction of the one for the two immediately preceding classes, respectively 1.1 percentage points for the class of 65 and 74 years of age and 1.6 points for those between the ages of 75 and 84 years. Stationary the spending for beneficiaries under the age of 65, who recorded only a tenth point reduction.

Figure 4.2 –Distribution of Invalidity Expenses by age (2008-2012)



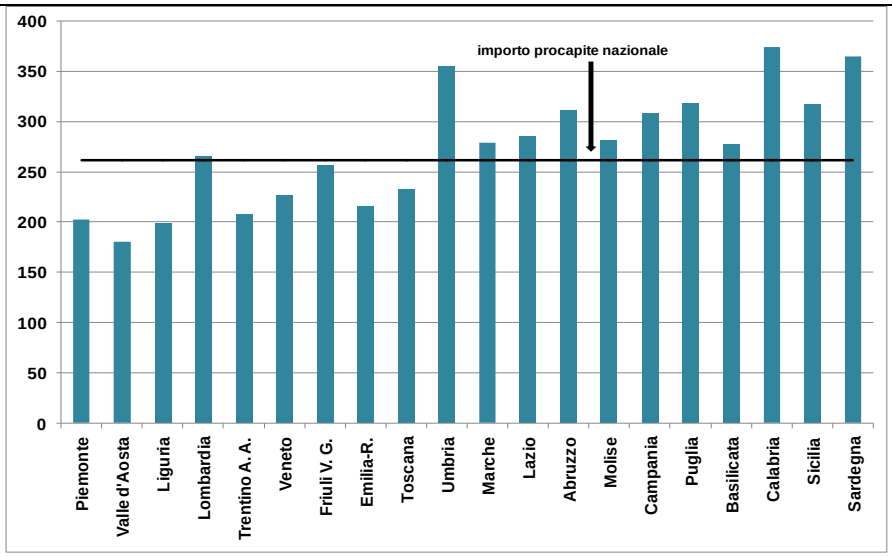
Source: Farmafactoring Foundation estimates on ISTAT data (2014d)

Figure 4.3 – Civil disability expenditure by region in 2012 (in% of total)



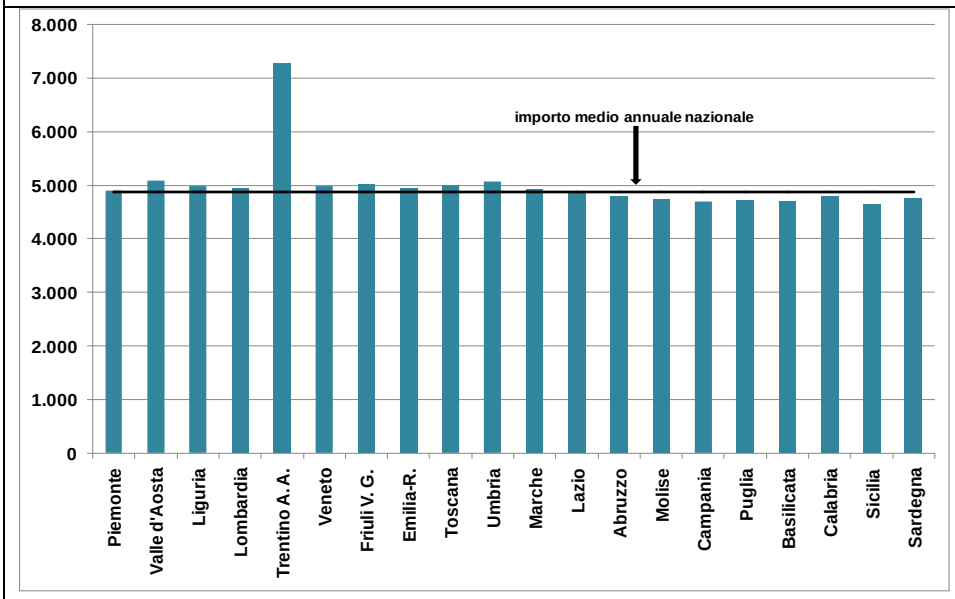
Fonte: Farmafactoring Foundation estimates on ISTAT data (2014d))

Figure 4.4 – Per capita regional civil disability expenditure (2012)



Fonte: Farmafactoring Foundation estimates on ISTAT data (2014d)

Figure 4.5 – Civil disability benefits: average annual gross amount in 2012



Source: Farmafactoring Foundation estimates on ISTAT data (2014d))

Turning to the territorial distribution, Lombardy, Campania, Sicily and Lazio are the regions where the relatively higher share of total spending is concentrated, with shares of 10% or more of the total (figure 4.3).

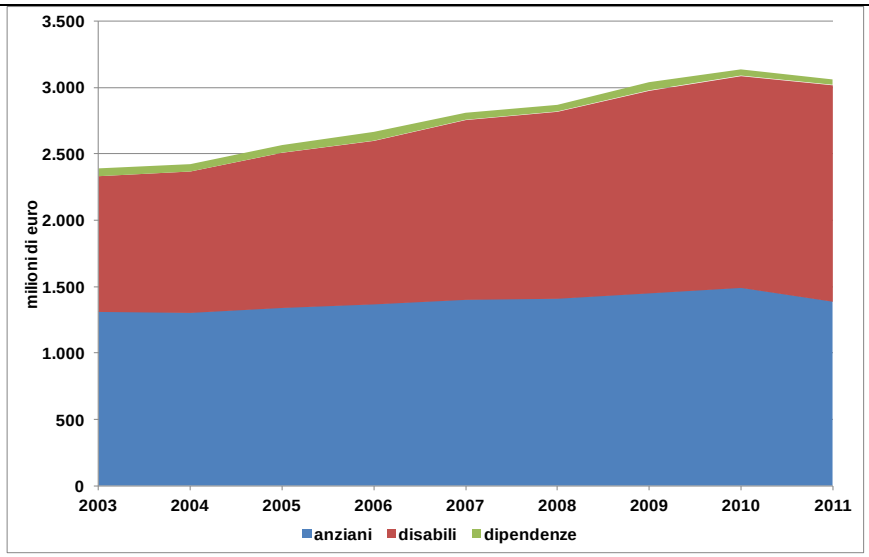
About 42.7% of the total expenditure is concentrated in the Southern Regions, 39.1% in the North and the remaining 20.4% is in the Center. Even after normalising by the resident population, it appears that the Regions from the South and the Center are those who benefit most, with the exception of Tuscany, in terms of per-capita amount (Figure 4.4).

However, if we consider the average monthly amount paid, the territorial distribution is much more homogeneous (Figure 4.5), reflecting the fact that the allowance measure is defined at national level. With the exception of Trentino, where the amount of pension exceeds 7 thousand Euros per year, in the other Regions the amount is very similar and not far from the national average: however, it is still slightly lower than the national average in all regions of the North.

3.3.2 The social services expenditure for LTC.

Additional information on social welfare expenditure can be obtained from the ISTAT publication "Investigation of social interventions and social services of the single and associated municipalities", which covers a period from 2003 to 2011. The information collected relates to the services activated, the expenditure incurred in the reference year and the number of users. Incurred expenditure is divided into 7 intervention areas or categories of users of services, of which those relevant to our purposes are those related to "disabled", "dependents" and "elderly".

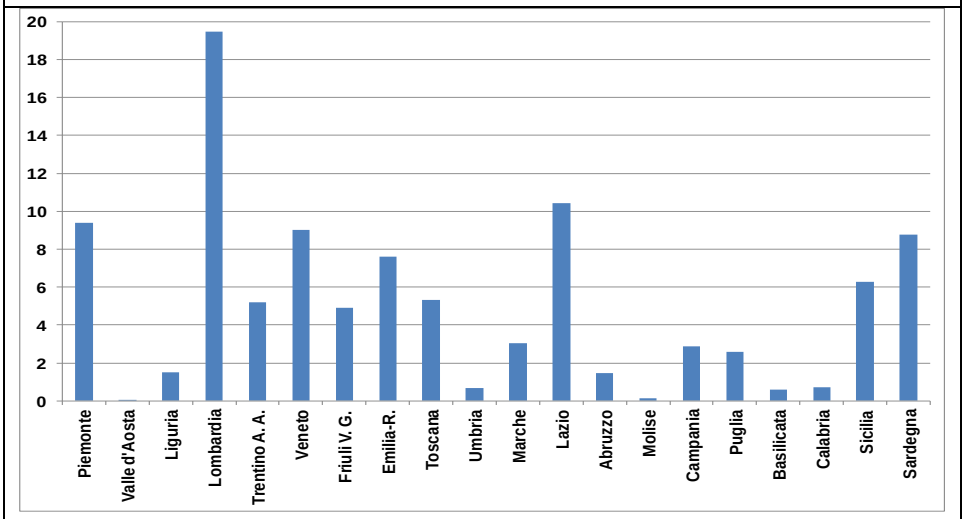
Figure 4.6 – The social services expenditure for LTC (2003-2011)



Source: Farmafactoring Foundation estimates on ISTAT data (2014d)

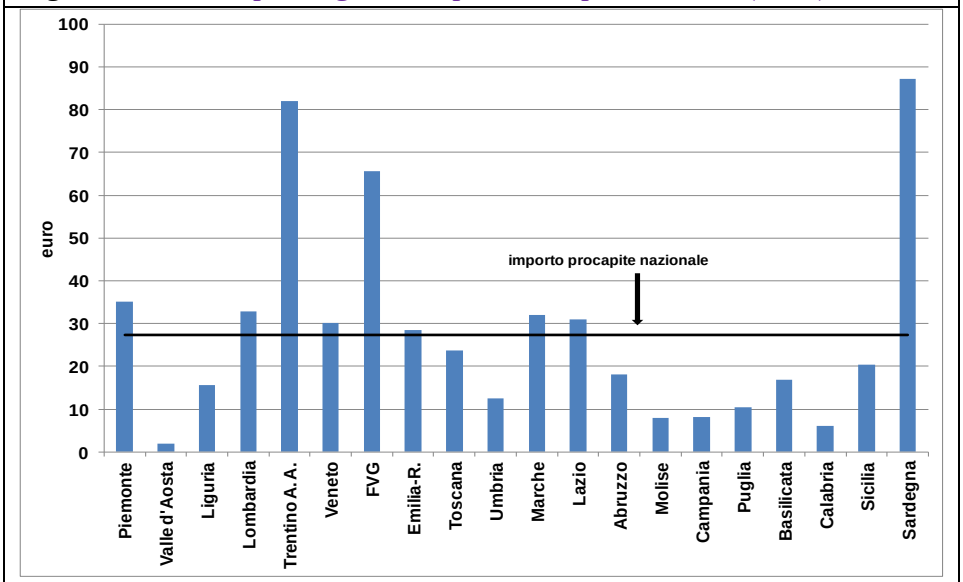
In Figure 4.6 we show the evolution of the expenditure of each area over the period of interest. Overall, spending rose from 2.4 billion euros in 2003 to 3.1 billion in 2011, an average annual increase of 3.1%. It is possible to note a recomposition of the total aggregate, showing that the proportion of "disabled" expenditure increases by 10.6 percentage points to 53.3%, to the detriment of the others (the share of spending for seniors it is reduced by 9.4 percentage points and that for dependencies decreases to 1.3% of the total). In fact, while spending for the disabled grows at an average annual rate of 6%, the one for the elderly remains almost stable (+0.7%) and that for dependency decreases by 4.7%.

Figure 4.7 – Regional distribution of disability spending (in %)



Source: Farmafactoring Foundation estimates on ISTAT data (2014d)

Figure 4.8 –Per capita regional expenditure per disabled (Euro)



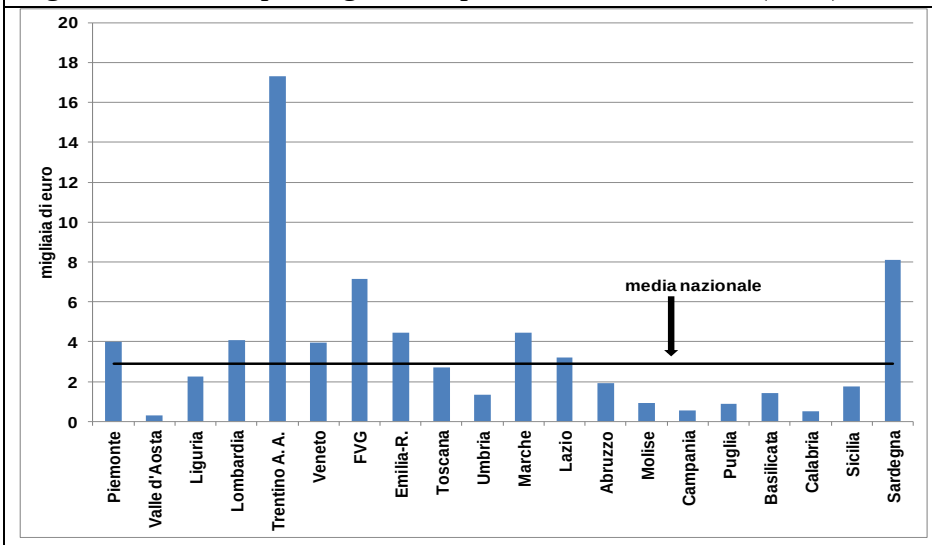
Source: Farmafactoring Foundation estimates on ISTAT data (2014e)

Table 4.7 - Social service expenditure for LTC (2011): total and average spending per user and number of users.

	Expenditure (mln. euros)	Users (thousands)	Expenditure per user (euros)
Disabled	1.630,0	564,8	2.886,0
Dependencies	39,7	39.737,3	1,0
Elderly	1.388,0	12.392,9	112,0
Total LTC	3.057,8	52.695,1	58,0
Total LTC without dependencies	3.018,0	12.957,7	232,9

Source: Farmafactoring Foundation estimates on ISTAT data (2014e)

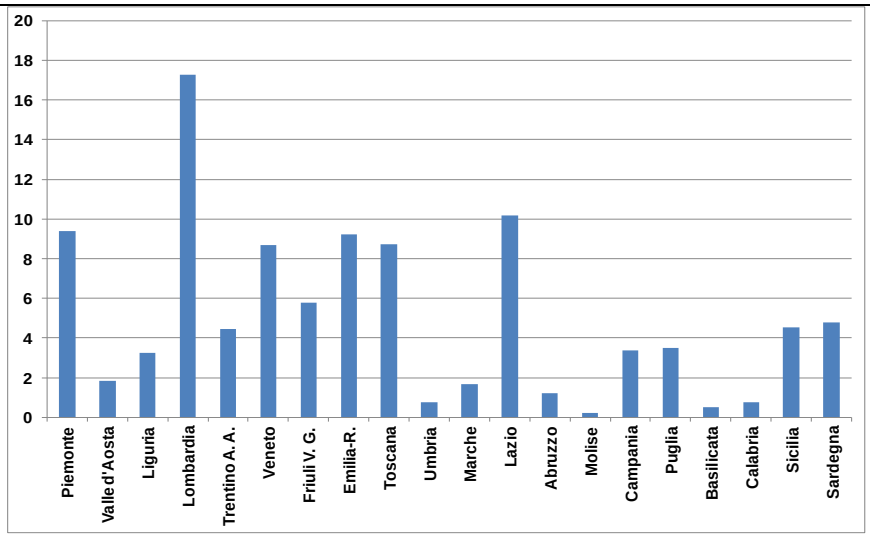
Figure 4.9 – Per capita regional expenditure for disabled. (2011)



Source: Farmafactoring Foundation estimates on ISTAT data (2014e)

Table 4.7 shows the total expenditure incurred in 2011 for each region, the number of "users" (estimated from the annual expense and per user provided by the Istat Survey) and the average annual amount per user. The "disabled" expenditure is the one that sees the highest outlay per user, equal to about 2,900 euros, followed closely by the "elderly" area, whose spending per user is only 112 euros. Overall, by neglecting the "dependencies" area, whose data does not allow very accurate estimates, the amount of expenditure per LTC per user, assuming there are no "overlaps" between users in the two areas, is equal to 232.9 euros.

Figure 4.10 –Regional distribution of old-age spending (in%)



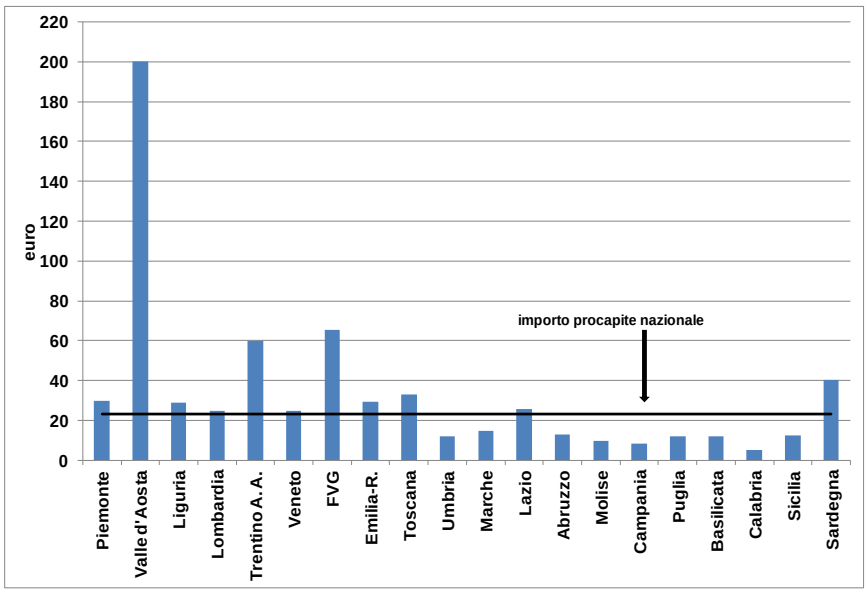
Source: Farmafactoring Foundation estimates on ISTAT data (2014e)

In line with what has been done for social service benefits, we can now analyse, at least in terms of spending for the disabled and the elderly, which are the most important user areas and the territorial features (the regional distribution of total expenditure, the impact on the resident population and the amount actually received by the users). In terms of spending for the disabled, total spending is concentrated for 57.1% in the North, with Lombardy alone absorbing 19.5% (Figure 4.7). The Center accounts for 19.5% of spending, of which Lazio absorbs more than half, and the remaining 23.4% goes to the South.

In terms of resident population, all regions of the Mezzogiorno have a per capita spending below the national average (Figure 4.8). The exception is Sardinia, which, in fact, holds the highest per capita spending. Among the Regions in the Center, only Lazio and the Marche record a per capita spending higher than the national average. In the North, only Valle d'Aosta and Liguria have lower per capita spending than the national average, while all others show in line or higher spending, particularly Trentino and Friuli.

Lastly, considering the expense per user, Table 4.9 shows that the highest value is recorded in Trentino (just over 17 thousand euros), in Sardinia (just over 8 thousand euros) and in Friuli VG (just over 7 thousand euros). In all these regions, the expense per user is well above the national average (2.9 thousand euros).

Figure 4.11 - Per capita old-age regional expenditure in 2011 (euro)



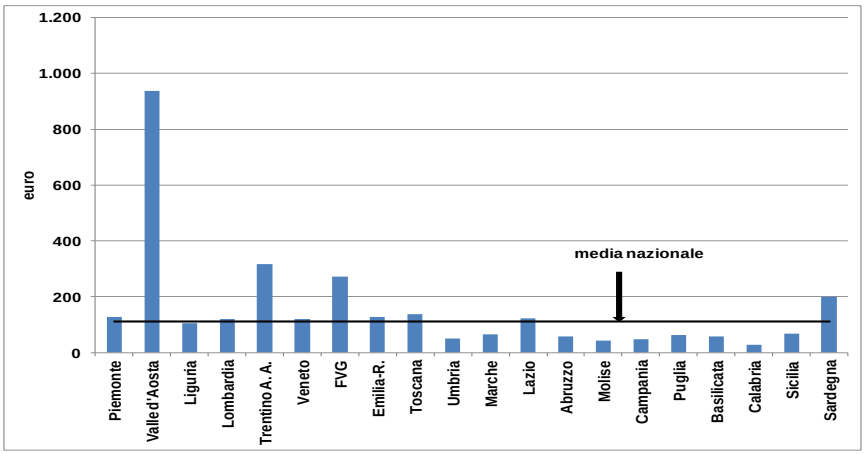
Source: Farmafactoring Foundation estimates on ISTAT data (2014e)

Regarding old-age spending, Figure 4.10 shows the regional distribution. Almost 60% of the total expenditure is concentrated in the Northern Regions. Just over 21% is in the Center, while in the Mezzogiorno less than 19%.

If we look at regional spending per resident, again all Southern regions, with the exception of Sardinia, have lower spending than the national average (Figure 4.11). Likewise, just two of the

Regions in the Center, Lazio and Tuscany, record a per capita spending higher than the national one. Finally, all Northern regions record a per-capita spending in line or higher than the national one. The Valle d'Aosta expenditure is about 10 times higher than the national average.

Figure 4.12 – Regional Spending for old-age per user (2011)



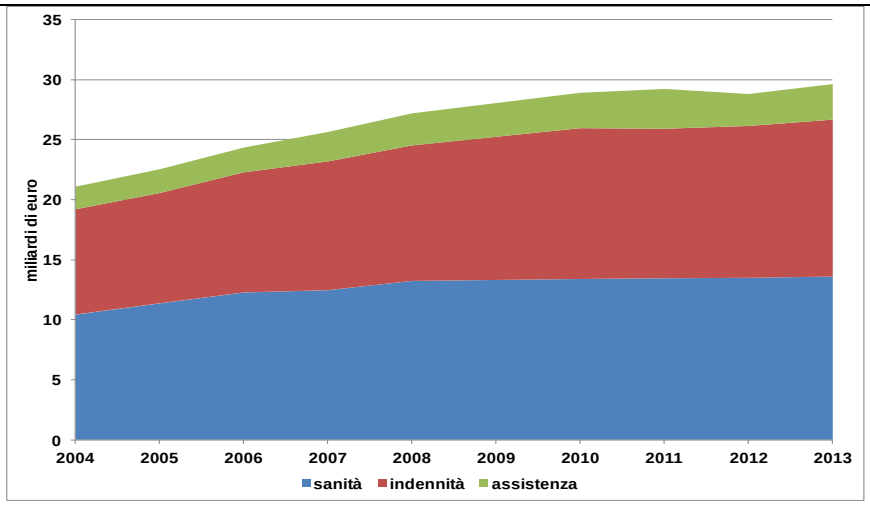
Source: Farmafactoring Foundation estimates on ISTAT data (2014e)

As in the case of the disabled area, even in this case, the highest user spending is recorded in Regions with automy (Special Status). In particular, as we can see from Figure 4.12, the highest level is recorded in Valle d'Aosta, followed by Trentino, Friuli and Sardinia, all with a per-user spending well above the national average (112 euros), but relatively lower than that of Valle D'Aosta. Lastly, even in this case, spending remains below the national level in all South regions.

3.3 The trend in public expenditure LTC: building new estimates.

Reconstruction of public expenditure dynamics for LTC is particularly complex. The attempt was made, in fact, starting from the estimates of expenditure in percentage of GDP provided over the years by the RGS. This is mainly due to the fact that, unlike the indemnities and social assistance benefits, there are no alternative sources for the healthcare component, such as those presented in the previous paragraph.

Figure 4.13 – The dynamics of public spending for LTC: an attempt to obtain new estimate (2004-2013)



(*) For 2009, in the absence of data, a linear interpolation has been used.
Source: Farmafactoring Foundation estimates on RGS data (various years) Ministry of Tresury official documents (various years).

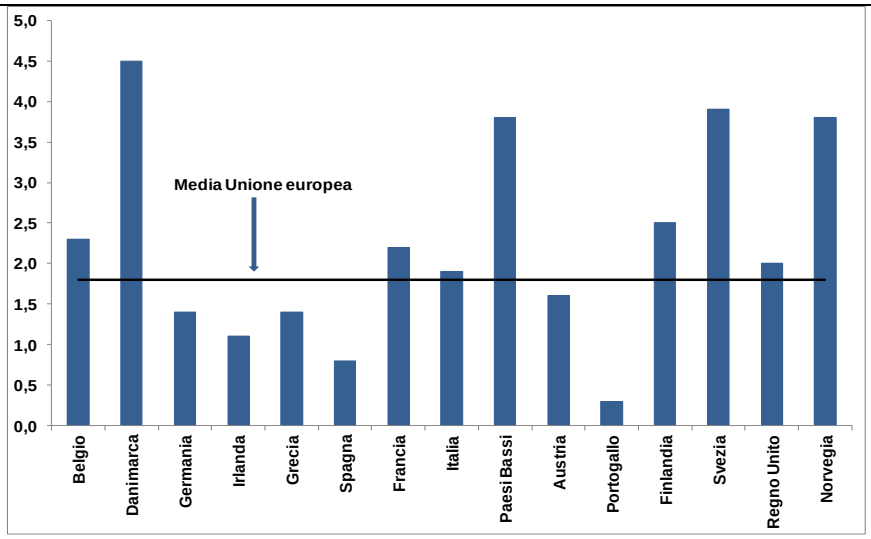
The new estimates are based on a methodology that uses the percentages of the GDP reported in the RGS annual reports to obtain an absolute value. Beyond the approximation, this attempt suffers from an obvious weakness: inevitably ends in ignoring - given the lack of references to revisions to annual estimates - any adjustments caused by reviewsmade by the RGS.

According to this estimate, public spending on LTC would have gone from 21.1 billion euros in 2004 to 29.6 billion in 2013, with an average annual increase of 3.9% (see Figure 4.13). Accompanying and social welfare benefits in particular have experienced a growth higher than the aggregated one, 4.5% and 5.1% respectively.

3.4 An international comparison.

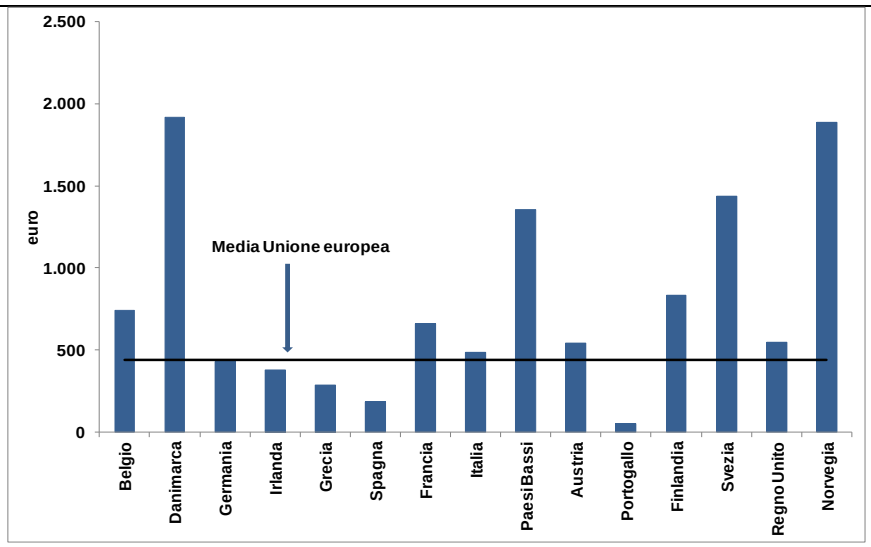
How is the Italian LTC spending compared to that existing in other countries? Such a comparison is a complex exercise that requires specific attention to the organisational characteristics of the different welfare systems considered as well as to the different LTC spending definitions adopted in the different countries.

Figure 4.14 –LTC Expenditure in Europe in 2010 (% of GDP)



Source: European Commission (2012)

Figure 4.15 – LTC per capita expenditure in Europe in 2010 (Euro)

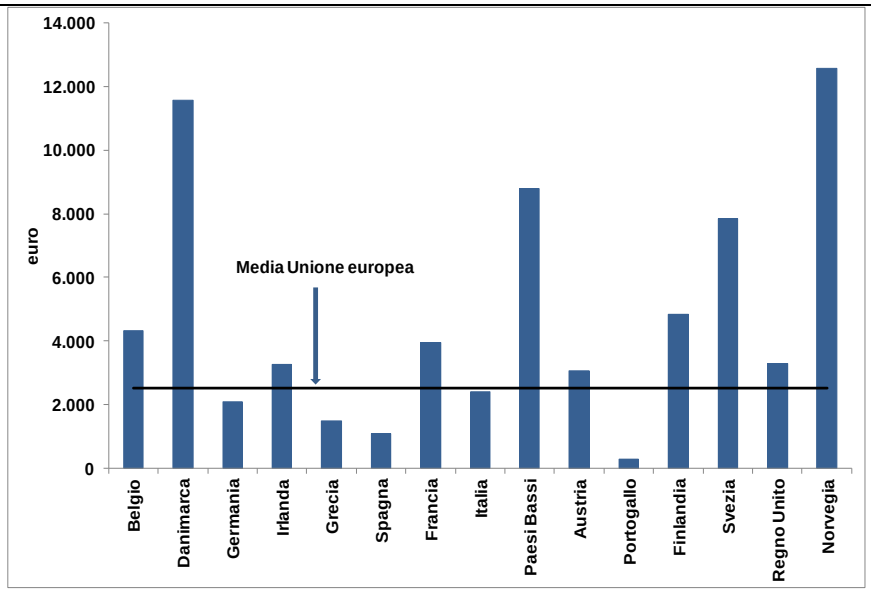


Source: Farmafactoring Foundation estimates on European Commission data (European Commission, 2012)

In order to obtain useful and reliable information, we start from the estimates contained in a specific publication of the European Commission (European Commission, 2012). In Figure 4.14 we report public spending for LTC in 2010 in the major European economies in terms of GDP (the horizontal

line represents the EU average, equal to 1.8% of GDP in the area). The highest expenditure is recorded in Denmark, Sweden, the Netherlands and Norway, reaching respectively 4.5, 3.9 and 3.8% of their GDP. On the contrary, the lowest expenditure is recorded in Spain and Portugal, with a low 0.8% and 0.3% respectively. The Italian expenditure, equal to 1.9% of GDP, is slightly above the European average, but higher than that of Germany (1.4% of GDP).

Figure 4.16 – LTC expenditure per old-age person in Europe. 2010 (euros)



Source: Farmafactoring Foundation elaborations on European Commission data (European Commission, 2012)

In Figure 4.15, we report public spending per LTC in per capita terms. The EU average is around 440 euros per inhabitant. In line with the results seen above, the highest per capita spending is recorded in Denmark and Norway, respectively slightly above and just below 1,900 euro per inhabitant. Significant is also the level recorded in Sweden, just over 1,440 euros per inhabitant, and in the Netherlands, about 1,350 euros per capita. Per capita spending in Italy, about 486 euros per inhabitant, it is far lower but remains above the European average. It is noted that Austria's per capita spending surpasses the Italian one, although it is lower in terms of GDP: similarly, Germany's per capita spending is much closer to the Italian one.

Lastly, we have also estimated the LTC expenditure in terms of the elderly population, which, as we have seen for the Italian case, is the most important part of the beneficiaries of this type of assistance. In terms of the elderly population, the highest expenditure is recorded for Norway and Denmark, which is just over 12,500 and 11,500 euros per adult (see Figure 4.16). Following are the Netherlands and Sweden (about 8,800 and 7,800 euros respectively). In Italy the expenditure for the elderly is about 2,400 euros, below the European average. It is to be noted that because of the low incidence of the elderly population in Ireland, Irish senior expenditure is higher than in Italy, although in terms of per capita income it was less.

4. Regional differences in eligibility rules for LTC in Italy [111]

4.1 Introduction

Long Term Care (LTC) policies aim to cover the greatest risk of vulnerability particularly affecting the elderly population when precarious health conditions can become prevalent. LTC is defined as a range of services required by people with reduced functional, physical or cognitive abilities that depend on helping others to carry out elementary activities of daily life and maintain an acceptable level of quality of life. Although a discussion of the concept of quality of life is out of the scope of our analysis, this chapter looks at how the different Italian regional laws on LTC measure and define the non-self-sufficiency condition corresponding to a non-acceptable level of life to justify public intervention. The aim of the chapter is therefore to highlight the consequences that these choices have on access to care services.

LTC regional programs can be put into practice using “in kind” services or money transfers such as " Buoni/voucher sociali " or " Assegni di cura ". In general, these programs, which integrate the only existing national program, the Accompanying indemnity, focus on:

1. activating or strengthening the taking over of the non self-sufficient person through personalized health and socio-assistance plans;

2. strengthening support for the non self-sufficient person and his/her family through the increase of home care, even in terms of hours of assistance and personal care;

3. supporting the person who is not self-sufficient in the purchase of home care and health care services;

4. to support the family (or another informal *care giver*) who directly provides care.

The access to any of these forms of LTC requires a certain degree of interaction between the applicant and the provider institution. A common approach describes this interaction in three ways: i) the availability of the service, ii) its accessibility, and iii) its use (i.e., access realized) by the applicant. The assessment of the availability concerns the existence of a LTC supply in the fragile elderly residential area; accessibility refers to the circumstances (typically, health conditions and socio-economic status) that determine whether or not an individual can benefit from a nursing program; finally, the use refers to the extent to which an individual can benefit from a program, as access has been granted. In this chapter, we will look at the first two perspectives above, namely the availability and accessibility of LTC programs in Italy, which also represent the necessary conditions for accessing services.

The access regulation generally includes at least two sequential and compulsory phases that have been implemented after the individual (or whoever is doing it) has inquired the institution responsible for the care program (health district, municipal social services, Single Access Points): *i)* the elderly social-health profile is evaluated by a Multidisciplinary Assessment Unit (assessment of needs); and *ii)* is assessed (following criteria defined at regional, municipal or healthcare level) as "at risk" and, therefore, he/she is eligible for assistance. Therefore, the notion of eligibility

[111] This chapter of the report has been written jointly with Ludovico Carrino.

incorporates two implications: the extensive margin discriminates between those who have access to the care system or not, while the intensive margin determines the amount of benefits (or services) the individual has the right.

Establishing when a vulnerability occurs is, of course, a medical and philosophical issue, often linked to the concept of human dignity. From an empirical point of view, although vulnerability is an undesirable condition, it is essentially a phenomenon that cannot be directly observed. Hence it emerges the need to develop models and methods that are able to provide a thorough estimate of the severity of the phenomenon, with the aim of putting countermeasures that can slow them down, delay or prevent them from worsening. Medical literature has produced a rich and extensive debate on the nature of fragility, but despite numerous single- and multi-dimensional indices being proposed in recent years (Markle-Reid & Browne (2003)), it cannot be asserted that today there is an evaluation methodology which is universally recognized (see Pel-Littel et al. (2009) and De Vries et al. (2011)).

Against this background, it is quite evident that the absence of a standardized definition may result into a broad heterogeneity in the definitions (and consequently the assessment methods) of vulnerabilities adopted by regional lawmakers in care program regulations. The resulting generation of "non-self-sufficiency" concepts, in turn, implies eligibility criteria and coverage rates that are potentially very different from program to program.

Recent economic literature has highlighted the need to include information on the institutional features of health systems in empirical analysis of service utilization. However, although many studies offer an overview of the organizational and legislative structure of LTC systems in Europe (Verbeek-Oudijk et al. (2014), OECD (2013b), Ranci & Pavolini (2012), Riedel & Kraus (2011), Genet Et al. (2011) and Da Roit & Le Bihan (2010)), issues related to defining the target population (ie, vulnerable populations) have not been examined in a exhaustive way. Only recent recent contributions (Carrino & Orso 2014, Bakx et al. (2014), Eleftheriades & Wittenberg (2013), Jiménez-Martín & Prieto (2010)) highlighted some important consequences on potential coverage of LTC systems in Europe generated by different approaches to the vulnerability theme.

This chapter hopes to offer the reader a vision, although partial perfectible, of the Italian framework, which in itself is even more complex than the European one, being made up of 20 "regional states", which have the freedom to legislate on the programs of care available in their own territory, and to organize them with a high degree of autonomy.

In fact, the organizational structure of the Italian LTC emphasizes the risk of fragmentation of the legislative frameworks. It is subdivided into three levels of government, which define its components:

1. the central level (social security institutions), which is responsible for managing and providing the accompanying indemnity;
2. the regional level (in turn split into Sanitary Districts) to which socio-sanitary programs are delegated;

3. the level of local communities that are responsible for organizing social-welfare functions. [112]

This type of arrangement means that the non-self-sufficient definition criteria for all programs different from the accompanying indemninities are very heterogeneous across regions in the absence of national legislative guidelines. In addition, within each region, regional norms often leave the setting of the parameters used to measure vulnerability to Integrated Assessment Units, which are multi-professional groups composed by professionals assigned to evaluate in a multidimensional way the health care needs of each subject and his/her level of self-sufficiency and to elaborate an individualized care program. It is therefore rather common to see that the same care program can have different eligibility requirements, which depend on the Local Health Authority (ASL) or the municipality that supplies them, not only with regard to the definition of non-self-sufficiency but also to an income threshold (levels of ISEE income).[113]

In other words, in the absence of procedural integration between the two sub-national levels (integration between regional program regulations and municipal programs) and/or integration within each level (between LHA and municipal regulations) there is a real "multiplication" of laws and regulations that, as we will see in the next paragraph, is also concerned with the definition of non-self-sufficiency. It is for this reason that some regions have started to experiment forms of social and health integration with the establishment of an Integrated Assessment Unit, to respond to any type of need (healthcare, social and welfare need).[114] Likewise, there are regions where there is a unique legislation on regional or municipal programs (e.g., care checks), characterized by guidelines that each LHA or municipal social department must adhere to. In other cases, flexibility in regional legislation translates, as already mentioned, in different access rules (and vulnerability definitions) for each LHA or municipality.

In addition to the organizational structure, the definition of the population interested by care programs is also conditioned by financing constraints. The national fund for non-self-sufficiency, allocated to the regions by the central government, is the main component of regional expenditure on LTC, but its use is free of constraints: for example, Regions agreed to use a quota not less than 40% for direct and indirect home care interventions in favor of serious disabilities (individuals who need 24-hour continuous care), with a ban on different uses. The remaining 60% can be freely allocated.

[112] On these topics, see Tediosi & Gabriele (2010) Ranci and Pavolini (2012) and Gori (2013).

[113] ISEE is an indicator, in force since 1998, that assesses and compares the economic situation of family units so as to regulate access to social services (for example, school refectory, enrolment in playschools, etc.) and social-health services provided by bodies on the basis of specific competences. Generally speaking, ISEE is used in order to implement differentiated tariffs depending on the applicant's economic conditions or to set thresholds beyond which access to the service is not allowed.

[114] Usually this is done by establishing single points of access, where the patient receives all forms of care ("presa in carico") and evaluation.

4.2 Methodological choices for the evaluation of vulnerability.

Medical literature defines vulnerability (or non-self-sufficiency) as an intrinsically multidimensional phenomenon (De Vries et al., 2011; Markle-Reid & Browne, 2003; Pel-Littel et al., 2009) which requires, to be measured, of a methodological approach not focused on the identification of individual diseases, but on the evaluation of interrelationships between diseases and functional limitations, while at the same time considering the environmental, psychological and social status characterizing the patient (Tinetti & Fried, 2004).
As far as functional evaluation is concerned, the most simple and most used tools for assessing self-sufficiency are the Katz scale, focused on the activities of LDS (Activities of Daily Living) Daily) and developed by Katz et al. (1970), Barthel's scale (always based on the ADL, see Mahoney and Barthel (1965)) and Lawton-iADL scale (instrumental ADL) developed by Lawton & Brody (1969). These tools consist of a list of daily life activities such as washing, cooking, doing housework, leaving home; each corresponds to a score related to the degree of self-sufficiency of the individual in carrying out that activity. The sum of the scores summarizes the functional condition of the elder. These scales are frequently used in the medical field as early warning measures of a potential (or already present) vulnerability condition and are the focus of many assessment methods adopted in Europe and Italy to evaluate access to LTC programs (Carrino & Orso (2014)). Although the symptoms of fragility are numerous and varied, the most prevalent ones relate to loss of autonomy in ADL and iADL, along with motor disability, and deterioration in nutritional and cognitive status.
The alternatives to evaluations based solely on Barthel, Katz and Lawton scales include, for example, information on cognitive and behavioral status, on specific medical conditions (surgery, suffered illnesses) and on housing. Finally, important differentiation involves whether or not to include, in the assessment, information on availability and support of informal care givers (children, relatives, friends). A scale that does not include this type of information is called “carer-blind”. In alternative, if it is included, it is called “carer-sighted”.
The second fundamental property of an assessment scale is the methodological approach to the synthesis process. Any procedure that would lead to functional and cognitive decline to a single number faces serious conceptual obstacles, frequently discussed (without unanimous solutions) in specialized literature, including:

i. the weight to be assigned to the individual deficits that make up the index;
ii. the possibility that some limitations may have synergic effects on vulnerability;
iii. the possibility that some deficits are sufficient and/or necessary for the emergence of non-self-sufficiency;
iv. the possibility that certain limitations may be reversible or not; from which it derives the possibility that not all deficit combinations will produce the same level of vulnerability;
v. finally, a fitht difficulty is represented by choosing a threshold level that separates socio-health profiles at risk (vulnerable, eligible and idoneous) from profiles not at risk (non-vulnerable, non-eligible, non-idoneous).

These difficulties sometimes lead to "no choice", i.e. to avoid the establishment of a synthetic vulnerability index. This can be done in two ways: a) the evaluation scale remains intact in its dashboard form, and aggregation is made across the different dimensions; or (b) a synthetic index is produced, but without defining any threshold level. In both cases, the ultimate assessment of the individual's vulnerability lies entirely with the assessment team, which thus enjoys a high degree of flexibility and autonomy in the decision.

4.3 A preliminary classification of Italian LTC programs.

The issues mentioned in the previous paragraph exist, inevitably, not only in the assessment scales in a clinical setting, but also in those selected to determine access to public care programs. The heterogeneity in the choice of the dimensions to be considered, in the methodology of synthesis of the indicators and in the choice of the threshold level for non-self-sufficiency represent the final outcome of distinct visions of the vunerability concept (see also Eleftheriades & Wittenberg (2013)).

As a preliminary approach, we propose a simple classification of some of the most important LTC programs offered and regulated by Italian regions, following two main criteria: *i)* whether or not a threshold level is explicitly defined in the regulations to define non-self-sufficiency (and therefore the eligibility of the program); and *ii)* the presence or not of the informal aid received (or potentially receivable by the individuals), among the dimensions to be assessed. The second criterion, which discriminates between *carer-blind* evaluations and *carer-sighted* evaluations, has important consequences from a equitable point of view, and in particular with reference to the concepts of "horizontal equity" and "vertical equity". If the reference dimension is individual functional and cognitive status, a carer-blind assessment would ensure horizontal equity: individuals in the same conditions would be considered equally idoneous or not; carer-sighted assessment, on the other hand, could evaluate two individuals with the same functional status as idoneous or not if, for example, the first does not have a proper family network, while the second received sufficient care from informal care-givers. It is interesting to note that most of the eligibility rules for LTC programs activated in continental Europe are carer-blind (Austria, Belgium, Czech Republic, France, Germany, Spain), with the exceptions of Denmark, Holland and Sweden (Carrino and Bear (2014)).

After retrieving the information on the two criteria just described in the regional laws, we can represent them in a two-dimensional matrix, thus obtaining the classification given in Table 5.1. At the moment, the programs included in this analysis are 10, all of which are monetary, and refer to Campania, Emilia-Romagna, Friuli Venezia Giulia, Liguria, Lombardy, Piedmont, Sicily, Tuscany, Veneto and the Autonomous Province of Bolzano. Next to the name of the care programs there is the name of the assessment scale adopted.

Table 5.1 - Preliminary classification – Program and assessment scale names.

	Social netwok: NO (*Carer blind*)		**Social netwok: YES (*Carer sighted*)**	
Treshold: Defined	Bolzano	Assegno di cura (*VITA*)	Emilia Romagna	Assegno di Cura /Assistenza domiciliare (*BINA*)
	Friuli-Venezia Giulia	Contributo per l'Aiuto Familiare (*KATZ*)	Piemonte	Assegno di cura, bonus famiglia (*cartella geriatrica*)
	Tuscany	Progetto per l'Assistenza Continua (*MDS-HC*)		
Treshold: Not-defined	Liguria	Assegno di cura (*AGED PLUS*)	Campania	Assegno di cura (*SVaMA*)
			Lombardia	Misura B2 (*Triage + ADL + iADL*)

			Sicilia	Buono sociosanitario (*SVaMA*)
			Veneto	Impegnativa di Cura Domiciliare (*SVaMA*)

Of the ten programs considered, five require a self-sufficiency assessment scale with an explicit minimum threshold that identifies the vulnerability and gives access to the monetary contribution. Among these, three adopt carer-blind assessment methods (Bolzano, Friuli-Venezia Giulia and Tuscany), while two are carer-sighted (in Emilia-Romagna and Piedmont).

The remaining five programs are characterized by legislation that does not indicate a specific threshold for defining non-self-sufficiency, even if they include general guidelines on the scale to be used and the socio-sanitary profile of the individuals to whom it is intended the benefit. Consequently, the eligibility rules for these care interventions are flexible and may vary for each Assessment Unit (at LHA level, whether the program is of a health type or at the municipal level if the program is of a social-welfare type). Assessment scales can be defined by law (such as in Campania, Sicily and Veneto) or can be selected from individual LHAs and individual municipalities (such as in Lombardy, where they are working to arrive to a standardized method of rating). It is important to observe how some evaluation scales, such as SVaMA, do not provide, for construction, the presence of a specific score threshold beyond which an individual is to be considered non-self-sufficient. Consequently, when such a scale is chosen at the regional level as the vulnerability assessment method, it is natural to expect that, in the absence of specific indications from the regional government, the eligibility threshold is entirely defined by each evaluation group (this is the case in Veneto). Four of these five programs are carer-sighted (Campania, Lombardy, Sicily and Veneto).

Finally, it should be noted that, as will be explained in the next section, to determine the access and the amount of benefit to receive, many laws use both information on the economic status of the elderly and information on its social and health profile.

4.4 Eligibility rules for LTC in the Italian regions.[115]

In this section, we address more closely the regional choices in assessing non-self-sufficiency and determining a minimum level of vulnerability that gives access to LTC programs.

[115] All of the features reported are the result of direct analysis of the latest legislation (April 2015) issued by the regional and municipal assembly declarations, the LHA regulations and the disciplines issued by the Territorial Areas. If the legislation was not sufficiently clear with respect to some criteria of interest, an interview with the regional social policy director was organized, which is often followed by an interview with other professionals working in the LTC public provider (geriatricians, healthcare providers, social welfare workers).

Table 5.2 shows the dimensions included in the evaluation of non-self-sufficiency, and consequently in eligibility rules, for the 10 regions included in this analysis. The last two columns provide extremely simplified information on how is defined the minimum cut-off limit (if any) that grants access to the benefits.[116]

It has already been noted that five of the ten laws considered set an explicit threshold level to define non-self-sufficiency. Despite this, the risk-fragility measurements are extremely heterogeneous, which makes it very difficult to compare the "generosity" or potential coverage of the programs offered:

- For the “Assegno di cura” in the Autonomous Province of Bolzano, vulnerability is expressed in hours of need: the assessment scale (LIFE, Integrated Evaluation of Time of Assistance - V*alutazione Integrata dei Tempi Assistenziali*) assigns to the individual a daily amount of assistance for each possible limitations in ADLs and iADLs, and non-self-sufficiency arises for anyone who needs more than 60 hours of total assistance per month. The relative weight of the deficits considered is, however, definitely unbalanced in ADLs, which must result in at least 56 hours of need, otherwise there is no access to the benefit.
- In Emilia-Romagna the rating for admission to the “Assegno di Cura” is carried out with the BINA (Short Self-Sufficiency Index - *Breve Indice di Non Autosufficienza*) scale, which includes 10 dimensions, including ADL difficulty (although some are aggregated in complex items), particular pathologies or post-surgical conditions, behavioral and communication disorders, sensory deficits, living and environmental factors. Lastly, eligibility takes into account the availability of family care-givers, assigning lesser score to the elderly who can rely on an adequate social network, and is therefore carer-sighted. Each dimension is equipped with 4 ordered modes and a score, indicating the severity of the loss of autonomy. The eligibility rule assumes that the value of the index, corresponding to the total score in the 10 items, is equal to or greater than 230 points out of 1000 to signal an "objective vulnerability" status.
- Eligibility rules and assessment of care needs are relatively simpler in Friuli-Venezia Giulia, to access the “Contributo per l’Assistenza Familiare” program and its twuin program “Assegno per l’Autonomia”. Legislation provides that non-self-sufficiency is measured through the Katz-ADL scale and that eligibility is granted for health profiles with at least 2 limitations out of 6. Elderly with severe sensory or cognitive deficits (with a score higher than 3 in the Clinical Dementia Rating scale) are likewise considered eligible for the monetary contribution. [117]
- In Piedmont vulnerability status assessment is carried out by the Geriatric Evaluation Unit using the "Geriatric record" (*Cartella geriatrica*). This tool analyzes the health conditions of the elderly with a score from 0 to 14, considering ADL, iADL and cognitive disorders, and its social condition (still from 0 to 14), through parameters related to housing, economic, family status and availability of informal care (carer-sighted). To determine non-self-sufficiency, and therefore the possibility to access care programs, only health conditions play a key role, where a score of at least 4 is required. For those who meet this requirement, social evaluation contributes to the overall score for the ranking position.
- The Continuing Assistance Project (*Progetto per l’Assistenza Continua*) in Tuscany, organized at LHA level, requires a multidimensional evaluation (operated by a Multidisciplinary Evaluation Unit) that groups individuals into five categories of vulnerabilities. The assessment

[116] A more detailed information is available in the regional profiles in Appendix 1.

[117] See Morris (1993) for more details.

consists of an evaluation of functional decay (ADL limitations), cognitive decay (via the Short Portable Mental Status) and behavioral and mood disorders (MDS-HC scale). Access to care programs is only possible for those in the third category of vulnerabilities or higher, which is, by simplifying, a socio-sanitary profile that shows at least "moderate" limitations in all three dimensions.

Table 5.2 - Le componenti delle regole di eligibilità per regione – 2014/14.

Region	Program	ISEE	ADL	iADL	Diseases	Cognitive	Behaviour	Social, family	Cut-off	Limit of eligibility
P.A. Bolzano	*Assegno di cura (VITA)*		✓	✓					✓	2h die ADL
Campania	*Assegno di cura (SVaMA)*	parz.	✓		✓	✓	✓	Parz.		Barthel 80
Emilia Rom.	*Assegno di Cura/(BINA)*	✓	✓		parz.	✓	✓	✓	✓	230 points
F.V.G.	*CAF / APA (KATZ)*	✓	✓			✓			✓	2 ADL, CGN
Liguria	*ADC (AGED PLUS)*	✓	✓	Parz.		✓	✓			Inval. +3 ADL, CGN & CMP
Lombardy	*Misura B2 (Triage + ADL + iADL)*	✓	✓	✓				✓		Inval., 3 points "triage", 3 ADL, 4 iADL
Piedmont	*Assegno di cura, bonus famiglia (cartella geriatrica)*	parz.	✓	✓		✓	✓	✓	✓	5 points out of 24
Sicily	*Buono sociosanitario (SVaMA)*	✓	✓	Parz	✓			✓		Fam co-habiting with elderly + invalid
Tuscany	*PAC (MDS-HC)*	✓	✓			✓	✓		✓	2 ADL & CGN & CMP
Veneto	*ICD (SVaMA)*	✓	✓		✓	✓	✓	✓		

Parz. = partial; Inval. = 100% invalid and then Indemnity of allowance; CGN = cognitive disorders; CMP = behaviouarl disorders;

The remaining five regions (Campania, Liguria, Lombardy, Sicily and Veneto) do not consider an explicit vulnerability threshold that gives access to aid programs. In particular, regulations often refer to Evaluation Units defined at LHA or municipality level, who act as autonomous entities whose decision on eligibility is final. Often these entities receive from the region only few general guidelines on the socio-sanitary profile to be considered as a priority. In some cases, such as in Liguria, Lombardy and Sicily, some implied minimum requirements are provided through the condition that the elderly applicant has already acquired 100% disability status and is thus eligible for the accompanying indemnity.

However, this requirement does not allow for a clear definition of the minimum required eligibility profile for at least two reasons: *i)* the requirements needed to obtain the accompanying indemnity are not clearly standardized and clearly defined in current legislation; and *ii)* the regional regulations provide in each case an evaluation step (by the Evaluation Units) identifying the eligible population within the one already receiving the accompanying indemnity. In order to obtain some more precise information on the criteria used in these regions, intense interviews (telephone or videoconferencing) were required with regional policy-makers, municipal administrators and LHA officials. As a result of these talks, it was possible to retrieve laws and disciplines issued at LHA level or lower, which could provide a representative example of the regional trend in assessing non-self-sufficiency.[118]

Here below is the list of the evidence collected:

- Campania promotes a “assegno di cura” (care allowance) based on a multidimensional assessment of the need for care provided by the SVaMA method by the Integrated Assessment Unit at the healthcare district level. Regional legislation specifies how the benefit is aimed at "severe not self-sufficient" individuals. The SVaMA method provides a very complete and detailed picture of the patient's socio-health status, starting from motor and functional decay ("Barthel's index"), behavioral and cognitive disorders, support from the social network, economic and housing conditions . This method, by definition, does not provide a scoring cut-off that uniquely identifies a vulnerability profile. Consequently, this identification is the responsibility of each Evaluation Unit. To reduce the heterogeneity of assessments and introduce a minimum standardization of eligibility rules, many Social Territorial Areas have been self-regulated by providing explicit requirements. The Avellino province, for example, states that in order to receive the benefit, within the limits of available resources, individuals need to receive a score in the Barthel index (contained in the SvaMA) equal to or above 80.
- The “assegno di cura” (care allowance) in Liguria is managed by the LHA and by the Committee of Majors belonging to the of Socio-sanitary District. The regulation provides that it is granted, on the basis of a rank of severity, to people with severe permanent disabilities who are unable to carry out the functions of daily life and those dedicated to the care of the person, with difficulties in human and social relations, in instrumental activities, in mobility and in use of the media, and already beneficiaries of the accompanying indemnity. Apart from this generic definition, the law specifies that the LHA Evaluation Units will produce a multidimensional evaluation of the elder through the use of the AGED PLUS method, which collects information on functional and motor autonomy, cognitive difficulties, behavioral disorders, and social characteristics. As the

[118] It is interesting to note that, in many cases, respondents (including top regional executives) expressed concern and dissatisfaction with the lack of standardization in evaluation procedures and eligibility rules, often pointing to ongoing internal in place aimed at changing the *status quo* in the coming years.

AGED PLUS method does not provide an explicit cut-off for non-self-sufficiency, they rely on guidelines outlined in DGR 219/2008 which identifies as a minimum limit for eligibility the loss of at least 3 ADL, the presence of behavioral disorders and of co-morbidities.

- The first degree of access to social services for non-self-sufficiency in Lombardy is represented by the so-called "Measure B2", a social voucher "for people with severe disabilities or in any condition of non-self-reliance" (DGR 2883, 12 / 12/2014) who already benefit from the accompanying indemnity as 100% disabled.[119] Aside from the assessment of the necessary condition for the accompanying indemnity, the vulnerability assessment is done in several phases: first, an assessment of the social vulnerability index by social service professionals at municipality level using a uniformly identified scale of social vulnerability which is homogeneous at LHA level (the Triage Card). This card is divided into 8 dimensions each assigned a score of 0 to 3 according to the level of severity manifested. Eligibility is determined from the last two questions, who focus on social aspects: whether the elderly lives alone or with someone, and if he or she receives adequate carer-sighted care. In case these two questions reveal a risk condition (total score of 2 or higher), the remaining six dimensions of morbidity, ADL and mental / behavioral status are evaluated. If at this stage, the patient gets a minimum score of 3 out of the total 8 dimensions, the second phase is activated: a multidimensional evaluation carried out in an integrated way between the LHA and the Municipalities with a scale not defined at regional level, which will result in the final decision for the benefit eligibility. From the interviews, the understanding is that it is predominant at this stage to use an ADL scale *à la* Katz and an iADL scale *à la* Lawton (for example in all areas covered by ASL MI1, see Appendix 2). Eligibility requires difficulty in performing at least 3 ADLs (6) and 4 iADLs (8) (as defined, for example, in the municipality of Desio).
- Siciliy provides social and health benefits to families who welcome and take care of an elderly recognized 100% disabled, provided that those persons are cohabiting and affiliated with the kinship, parenting, adoption, or affiliation with the family seeking the benefit. In this case, the beneficiary is the family (which is the requesting subject), while the non-self-sufficient assumes more a prerequisite for the delivery of the benefit. Multidimensional evaluation of vulnerability status is performed through the aforementioned SVaMA method, but no further specification is contained in the minimum functional or cognitive requirements for access to the benefit other than those required for the eligibility of the accompanying indemnity (invalidity 100%).

The "ISEE" column informs whether or not information on individual economic status is included among the eligibility criteria considered. Indeed, most of the laws considered contain a limit on income (corresponding to an ISEE threshold) over which no benefits are granted.[120] In Campania and Piedmont, the regulations for the “Assegni di cura” (care allowances) do not mention any discrimination based on the ISEE income of the elderly, but it should be noted that, in both regions, the assessment of non-self-sufficiency is done using scales that also require income information (the SVaMA method in Campania, the Geriatric records in Piedmont). Eligibility rules, therefore,

[119] The most generous monetary (in cash) program (and with minor dissemination) is the so-called ″Measure B1 for most serious disabilities under life risk″ (DGR 2655 14/11/2014).

[120] It is noteworthy that the maximum ISEE threshold in the regions where it is envisaged is not necessarily unique in the territory, but may vary at municipal level (or aggregation of municipalities or LHAs).

implicitly take into account the income profile of individuals by assigning a higher rating to those with lower incomes, equal to other conditions, even though the law does not provide for an explicit ISEE threshold. In general, the lower ISEE threshold is that fixed by the Sicily Region (€ 9000), followed by Liguria (€ 12,000), Emilia-Romagna (€ 22,300), Tuscany (€ 25,000) and Friuli-Venezia Giulia (€ 30,000). In Lombardy, the ISEE threshold is at the discretion of individual municipalities (for example Desio sets a maximum ISEE income of € 16,000 euro).

Concerning the anagraphic *target* to access to LTC programs, most regions have set a minimum age of 65 (Emilia-Romagna, Friuli-Venezia Giulia, Liguria, Piedmont, Tuscany) except Sicily (69 years old) and Bolzano, Campania, Lombardy and Veneto who did not have age limits for the programs described here.

Finally, in order to offer a comparison with a non-Italian LTC program and based on completely different eligibility rules, we will compare the newly introduced legislation with that of the home care program delivered by the National Health Service of Belgium (Institut National d'Assurance Maladie -Invalidit / Rijksinstituut voor Zieke en Invaliditeitsverzekering - INAMI / RIZIV). As described in Sermeus et al. (2010), the Belgian system evaluates non-self-sufficiency by a very similar scale *à la* Katz-ADL, which adds a dimension to cognitive deterioration. Eligibility rules provide that the minimum level of vulnerability that gives access to home care matches healthcare profiles with a severe deficit in "dressing" and "washing" activities or those profiles with significant cognitive deficits.

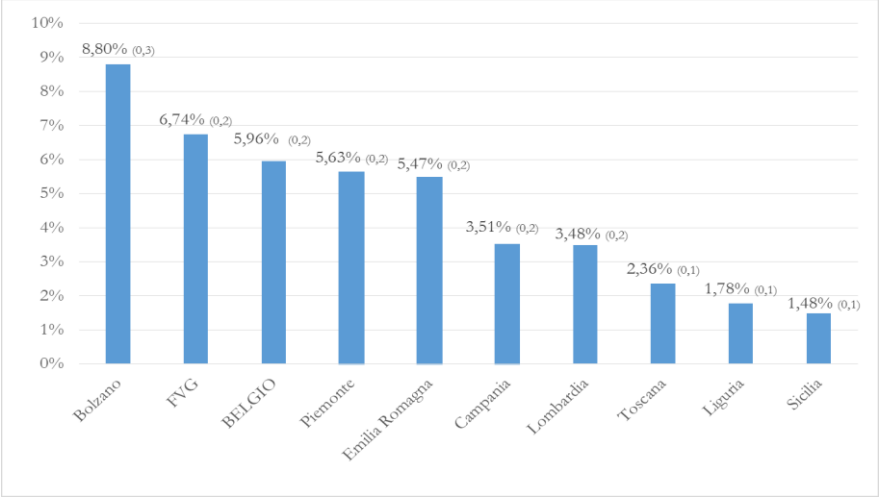
4.5 A comparison of the potential coverage of LTC programs.

The analysis in the previous paragraph confirms how difficult it is to compare the LTC programs implemented by the Italian regions from the point of view of their potential coverage, or their relative severity, in defining the minimum vulnerability that gives access to benefits. Not only does each program differ from the unit of measurement used to define LTC risk (e.g., hours of need for the Province of Bolzano, score in the BINA scale in Emilia-Romagna): they differ, in fact, also for the set of the non-self-sufficiency dimensions included in the evaluation, the relative weights assigned to the above dimensions within each scale, the eligibility rules, and the definition of the minimum thresholds.

The goal of this paragraph is therefore to overcome these difficulties and provide the reader with information on how different vulnerability definitions affect the potential coverage of care programs (Colombo & Mercier, 2012; Eleftheriades & Wittenberg, 2013). To do this, following the methodologies already tested by Jiménez-Martín & Prieto (2010) and Carrino & Orso (2014), we intend to simulate the adoption of the eligibility rules summarized in the previous paragraph (and described in the regional profiles in Appendix 2) on microdata from the Multiscope Household Survey 2013 - Health Conditions and Health Services collected by ISTAT. This reach dataset includes a number of self-declared information on 119,073 individuals resident in Italy (representative sample at regional level) that allows us to build a socio-sanitary profile that is simpler but comparable to the requirements defined in regional laws for LTC programs. Through a meticulous comparison between the institutional eligibility rules and profiles of individuals in the Multiscopo survey, we are able to generate an individual dichotomous variable, "Eligibility to program j", which assumes value 1 if the socio-health profile of the individual satisfies the minimum requirements for accessing the j program (of the j-th region), and 0 otherwise. Applying each of the regional regulations on the same standard population (the ultra-sixties Italian Multiscopo population) we will obtain standardized and comparable eligibility coefficients between

different programs, which will represent the respective coverage rates for each legislation. The possibility of using micro-regional data allows us to take into account, in our simulation, the possible heterogeneity between the morbidity of functional and cognitive deficits and that the possibility that some of these morbidity are geo-referenced. Through a methodology better described in Carrino (2014) we are able to obtain 10 standard coverage rates shown graphically in Figure 5.1.

Figura 5.1 – Potential coverage for LTC benefits (Italian regions +Belgium), on a standardized population.



Standardized coverage rates, calculated on 34,900 individuals aged 60+, of all Italian regions. Standard deviations in brackets.
Source: Our Calculations on ISTAT Data, Multiscope Survey on Italian Health Conditions, 2013.

Before passing on commenting these results, some caveats are required. First of all, our analysis at this stage does not have the ambition to compare the coverage of the regional welfare system, but rather focuses on the inherent differences between the non-self-sufficient population definitions in each territorial legislation. Secondly, the rate of coverage refers to the share of population that would be eligible to enter the list to receive at least the minimum level of monetary aid: we are, therefore, observing an estimate of the extensive margin of coverage and not of its intensive margin. Thirdly, we are well aware that regional and municipal legislation includes other channels through which LTC can be delivered to the elderly, especially through community and proximity services (perhaps in kind) that are not part of the programs included here (all monetary). Finally, it should be kept in mind that, as already pointed out in the previous paragraph, regional laws, even where they lay down a single guideline for assessing non-self-sufficiency and determining the suitability, necessarily leave the field to some degree of flexibility to the Territorial Assessment Unit that carries out the assessment.

Figure 5.1 shows a clear heterogeneity in the coverage of LTC programs: the population considered at least to the lowest level of non-self-sufficiency is 8.8% of the standard population according to the definition of the Autonomous Province of Bolzano, and this is the highest percentage among those estimated. Conversely, the lower relative coverage corresponds to the Liguria and Sicily rules

(both below 1.8%). In general, we can see a gap between Bolzano (8.8%), Friuli-Venezia Giulia (5.74%), Piedmont (4.63%) and Emilia-Romagna (4.47%) programs and those of Campania (3.51%), Lombardy (3.48%), Tuscany (2.36%), Liguria (1.78%) and Sicily (1.48%).

The first reason for this difference lies in the fact that the latter group adopts a very "strict" definition of non-self-sufficiency, that is, it involves monetary interventions in favor of "serious disabilities". It is also interesting to note that three of these five programs require 100% disability status as a requirement for access to benefit. Conversely, the first four Italian programs do not meet the requirements of accountability and do not necessarily turn to the most serious disabilities, placing more "generous" requirements in terms of the number of ADL limitations and cumulative co-morbidity. For example, access in Friuli Venezia Giulia is granted for 2 or more ADL restrictions while in Liguria it requires at least 3 limitations of the same type and the presence of cognitive and behavioral deterioration coupled with 100% disability. In Lombardy, the individual must be considered at risk both in the social and health component of the triage evaluation and then be evaluated with a threshold of 3 ADL limitations and 4 iADL limitations. We also note how this simulation method allows to compare non-self-sufficiency definitions based on very different units of measurement (in particular, the Bolzano system is the only one to use minute-to-need as a measure of vulnerability).

At the same time, substantially different programs in terms of assessment, such as those in Piedmont and Emilia-Romagna, show two very similar coverage rates. As already mentioned, however, a greater/lower/similar "generosity" of access to rankings does not necessarily mean that it is likely to receive a real contribution in a shorter period of time, nor does it result in the probability of receiving a more substantial monetary contribution. For example, during the preparation of this report, the concerns of the leaders of the Piedmont have emerged, where the eligibility limit was set in 2008, very different from a point of view of the state of the regional public accounts, and is now no longer sustainable: waiting lists in Piedmont have been subject to heated discussions (see Resolution of the Regional Council of June 25, 2013, No. 14-5999) and recently definitions of explicit waiting times have been taken, differentiated by priority classes (which depend on the score obtained in the Geriatric records).

A second reason for distinguishing between the groups is the ISEE thresholds for access to the monetary benefit. In Friuli-Venezia Giulia the maximum level is € 30,000 per year, in Piedmont there is no explicit threshold specified, in Emilia-Romagna it is defined as € 22,500 per year. All eligibility rules obtaining lower coverage percentages provide lower income thresholds, up to € 9,000 per year in Sicily. The exception is Tuscany where the limit is € 24,000 per year, but in this case the requirements of functional and cognitive status make the standardized rate relatively low.

Lastly, it is interesting to note that the Belgian program has a relatively high coverage compared to all of the regional Italian programs. On the one hand, this may be surprising if we remember that the eligibility rules for nursing care provide that deficiencies in "washing" and "dressing up" are necessary conditions for access (subject to mental illness) while, for example, Friuli-Venezia Giulia establishes that any ADL deficit pair is eligible for benefit. In addition, an attentive look at ADL's "dressing" and "washing" returns important information: in the Multiscope ISTAT-Health 2013, the most frequent ADL deficiencies are just "washing" (8.6% of the ultra-60-year-old population) and "dress up" (5.5%). This shows how to use micro-data information to compare scales is very important, as it allows to take into account the heterogeneity of the morbidity and co-morbidity actually present in the population. If, as in this case, eligibility rules assign very different weights to

discernible deficits, such heterogeneity may prove to be very important in explaining the potential coverage rate of the nursing program.

4.6 Discussion

The main goals of this report were two: the method that determines how the status of non-self-sufficiency of the elderly is assessed and the definition of a minimum level of fragility (an "objective" vulnerability level according to the law) needed to obtain the access to home care programs (and which, more generally, provides access to the waiting list for home care programs).

The analysis included nine regions (Autonomous Province of Bolzano, Campania, Emilia-Romagna, Friuli-Venezia Giulia, Liguria, Lombardy, Piedmont, Sicily, Tuscany), and focused on major monetary LTC programs (cash-benefits) offered at regional level with the aim of strengthening domiciliarity and reducing the use of institutionalization. The theme of defining "objective" non-self-sufficiency is of great importance to health economics literature, being strongly linked to the topic of access to care services.

This is a problem that has been scarcely analyzed by recent literature but with an important information content for empirical analyses used to study individual choices regarding the consumption of Long-Term Care (both public and private). Access to public home care programs is usually done through two compulsory stages - namely, the assessment of non-self-sufficiency and the decision on eligibility - and for this reason it is of great importance to know whether these assessments and decisions follow the same criteria when moving from one country to another or, in the case of Italy, from one region to another.

The report attempted to illustrate how the absence of a unique definition of the multidimensional phenomenon of vulnerability in medical literature translates into a very heterogeneous legislative multiplication of regional laws. Such multiplication is often emphasized by the organizational structure of the regional LTC programmes: this is typically the case when evaluation and eligibility guidelines are not "imposed" at regional level but left to the discretion of individual ASLs or individual municipalities.

Our review has shown that, although much of the legislation expects to assess non-self-sufficiency by analyzing ADL, iADL and cognitive limitations, there are no two regulations that include these results to the same extent and in the same form. For example, less severe signs of fragility (such as iADLs) are often given lower relative weights in eligibility rules, and even cognitive difficulties sometimes play the role of "sufficient" difficulties to make a healthcare profile fit for benefit, and sometimes a role similar to functional deficits. Housing or social networking assessments are also sometimes excluded and sometimes included in vulnerability scales; even in the latter case, however, they are seen to have very different weights from region to region (also the example of Belgium, where two deficits, "washing" and "dressing" are necessary conditions for access). Furthermore, individual socio-economic status is sometimes considered (through the ISEE income thresholds) and sometimes ignored. Even if it is included in eligibility rules, however, ISEE thresholds may vary widely between territorial units, thus creating a further source of heterogeneity in accessing services.

This institutional framework allows two individuals with the same socio-health profile and economic status to be "eligible" or "non-eligible", depending on the region (or, sometimes, the municipality or LHA area) in which they reside. The heterogeneity of the potential cover of the Italian regional LTC finds a confirmation when attempting to carry out a prudent simulation of Italian legislation on micro data (in our case, ISTAT Multiscope-Salute 2013). By adopting the direct-adjustment technique, it is possible to produce standardized, and therefore comparable, rates of regional-induced coverage on a standard population of 60+. The Italian framework is very heterogeneous and covers almost 9% of the Bolzano program, with much lower coverage from programs focusing on serious disabilities, and therefore require much more important vulnerabilities to access benefits. All this merely confirms the need to include information on the institutional framework in economic analyzes of the present and future uses and expenditures of home care services, as they represent an important source of heterogeneity within the same socio-sanitary-economic and for similar individual preferences.

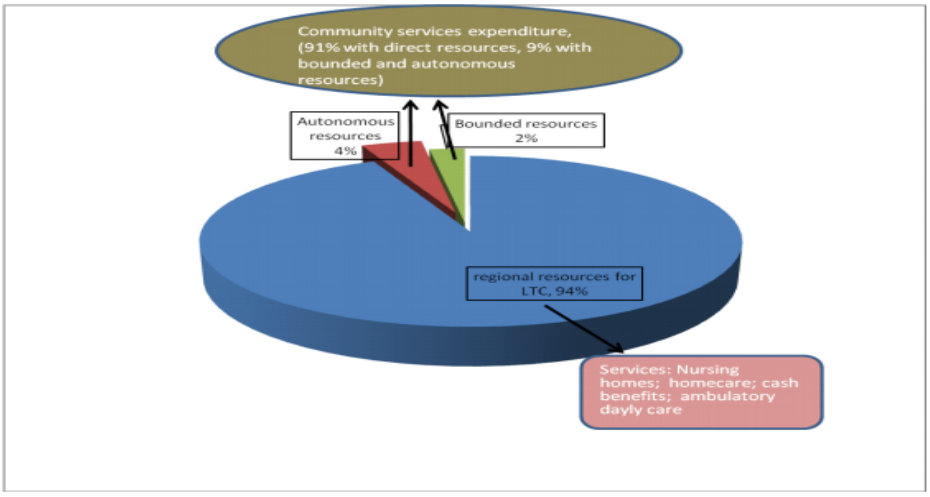
Appendix 1

A.1 - The Lombardy welfare system: a more detailed example.

Lombardy is located in the Northwest of Italy and it is the biggest Italian region, with a population of nearly 10 million people, which is 1/6 of national population and very close to Austria, Sweden and Belgium's population. People over 65 represent 21.5% of the resident population (data of 2014). The age distribution is not very dissimilar from the national one, with the exception of the extremes - the youngest and the oldest categories - both slightly lower than the national average. For ageing people, considering the relatively high presence of people over 65 and the value in absolute terms, the demand of formal care requires an appropriate services' supply. However, both community and primary care are not yet sufficiently developed to accomplish the increasing need of care (Longo et Al, 2012).

Figure 1 gives a representation of the regional budget for LTC in Lombardy. As it has been said in the main text, only a small share goes to municipalities, which run autonomously community care and contribute with 91% of their own resources. Funds coming from INPS – the Italian National Social Security office are not included in the regional LTC budget because they follow a different financial channel and are provided directly to the recipients after a medical and clinical test.

Fig. 1 Regional budget for LTC in Lombardy



Source: Brenna and Gitto (2016) - Data elaboration from Lombardy regional balance.

The Lombardy system is important as it provides some insights for a comparison with other European countries presenting similarities with the Lombardy region. In terms of population Lombardy could be easily compared to many European countries, such as Austria, Belgium, Switzerland or Sweden.[121] Another common indicator is the percentage of public expenditure on health care, which is 76% for Austria, 77% for Belgium and Italy, and 84% for Sweden (OECD, 2015).

Largely debated is the issue of the integration between hospitals and community: the new regional directives focus on the need to increase the territorial network, in order to avoid long staying admissions for patients affected by chronic diseases.

As for elderly care, until 2015 Lombardy was characterized by the shared competence of two Authorities (respectively Health and Welfare).[122] The flows financing elderly care, as well as the institutional levels governing it, are well represented in Figure 2. The Regional Health Fund transfers resources (almost 8,9% of its total amount) to the Welfare Fund in order to finance the regional services for LTC, such as nursing homes, homecare, etc. These services refer to the Welfare area, whose commitment is regional, to be distinguished from the community-based services area, directly run by the municipalities. There are specific administrative departments (referred as Dep. ASSI in Figure 2) within each Local Health Authority, that manage LTC services at the regional level. Funding for community services comes mainly from community taxation but, as reported in the previous section, there is also a little share (almost 9% of their total amount) originating, respectively, from bounded resources (Funds established at the central or European level) or ad hoc amounts set yearly by the region to be devoted to social services (autonomous resources).

A.2 - Financing elderly care in Lombardy: the regional sources

This section focuses on the financing of elderly care from 2009 to 2014. This temporal lag is prejudiced by both the economic recession, with public expenditure cuts, and a succession of two different political parties at the regional government. Table 1 reports our data elaboration on the welfare budget from 2009 to 2014: the financing of LTC services (panel (a) in Table 1), has been kept separate from the funding of community-based care (panel (b)).

For LTC care, a new source of funding, the Household Fund, was implemented in 2012 by the new regional government. This Fund was specifically set in order to help families with frailties, such as minors with disabilities, minors temporarily committed to social services, adults with addictions' problems, and also elderly. The Regional Welfare Fund collects its resources from the Regional Health Fund and it is the main source of funding for LTC. For community-based care, we kept separate the amounts of, respectively, committed and autonomous resources. It is possible to observe that, while LTC financing exhibits a rise during the five year interval considered in the analysis (+13%), the community care decreases by 15%. This is the result of a regional policy that increasingly tried to drive resources from community to regional level (Brenna, 2015). However, the whole amount increased over this period by 10%.

Data on elderly care funding is not provided by the actual regional government, so we had to compute it in two separate steps. We first computed the share of elderly funding over LTC in the previous legislature (years 2005-2009), which is an accessible information, and then we applied the same percentage on the new total funding.[123]

In the previous legislature, elderly care required on average 60% of the whole LTC financing, so we applied this share to the total welfare budget (see Table 1: a) + b)). As a result, the LTC financing for the elderly in Lombardy region amounted to € 1,120.2 mln in 2014, which corresponds to € 522 per resident over 64.

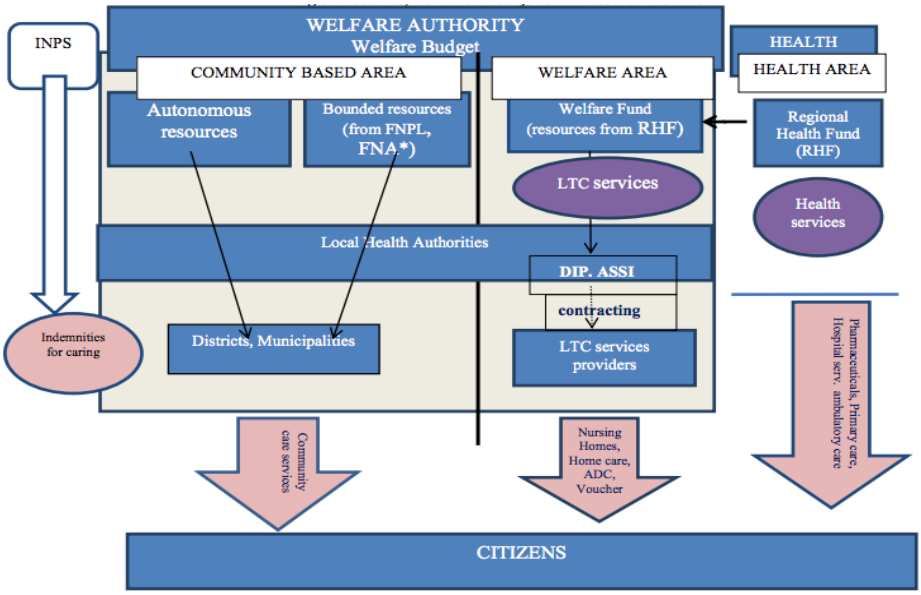
Fig. 2 The welfare model in Lombardy: regional sources, institutional subjects and

[121] In 2015, residents in Lombardy region were 10,002,615. In the same year, in Belgium and Sweden were 11,258,434 and 9,747,355 respectively, while in Austria there were 8,576,261 residents (INPS, 2015 and Eurostat, 2015).

[122] A reform has recently been implemented (regional law no.23/2015) with the aim of joining the two regional Authorities under a unique Department. In such a way, the same array of services could be provided at a lower cost, therefore reducing the fiscal burden for tax-payers.

[123] Notice that this share refers to the whole LTC funding, which comprises also the regional funding for community based care (a + b) in Table 1.

resource allocation.



*FNPL = National Fund Social Policies, FNA = National Fund for disability.

Source: Brenna and Gitto (2016)

Table 1: Budget for LTC (million € 2010-2014)

	2010	2011	2012	2013	2014	% change
a) Regional sources for LTC	1,500	1,597	1,650	1,652	1,702	13%
From Household Fund			*30.0*	*20.0*	*70.0**	
From Regional Welfare Fund			*1,620.0*	*1,632.0*	*1,632.0*	
b) regional sources for community care	195.0	110.0	73.0	153.9	165.3	-15%
Autonomous resources	85.0	70.0	70,0	70.0	70.0**	-18%
Bounded resources	110.0	40.0	3.0	83.9	95.3	-13%
a)+b) Total regional budget for LTC	1,695.0	1,707.0	1,723.0	1,805.9	1,867.3	10%
Elderly care funding (estimation)***	1,017	1,024.2	1,033.8	1,083.6	1,120.2	10%

Source: elaboration of data reported in http://www.lombardiasociale.it/

* originally it was 80 million, but 10 million were encompassed into autonomous resources for community care.

** originally was 60 but 10 million were collected from the Household Fund.

*** we computed 60% of total welfare budget.

Appendix 2

This appendix presents summary profile for ten Long-Term Care Regional Programs for which we have been able to obtain precise information. The regions involved are Bolzano (Autonomous Province), Campania, Emilia Romagna, Friuli-Venezia Giulia, Liguria, Lombardy, Piedmont, Sicily and Tuscany.

In addition to the details of each profile, we present a comparison between the regional assessment scales and the information contained in Multiscopo Istat's health condition data (2013). The vast majority of key dimensions for Eligibility rules find a close correspondence in ISTAT data, and yet, as will be shown, some adjustments and some simplification hypotheses were needed. The goal of this exercise is certainly not to replace the work and experience of socio-sanitary professionals conducting assessments of field care needs. What we are aiming for is to "simulate" the adoption of statutory constraints on our dataset, following a prudent and accurate approach, to identify a population of "eligible individuals" from the total sample.

At least three elements of caution should be mentioned, when comparing criteria currently in force with information from micro-data. First, as mentioned above, the correspondence between each evaluation scale and the information contained in the data is not perfect: some features required are not available in the data, some definitions and some medical terms may be expressed in a non-coincident manner. Secondly, a (strongly minor) part of the functional and cognitive difficulty assessments present in the ISTAT data has a dichotomic character (ie, a deficit can occur or not, but there is no measure of intensity). Although this is consistent with the original design of ADL and iADL scales, some comparability issues may arise with those laws that adopt a multi-level self-assessment of individual items. Thirdly, the information gathered in the Multiscope is self-declared, although the detectors are able to report unacceptable responses. Individual subjectivity is thus a potential disorder that can also relate to information on functional status, mobility restrictions, and other dimensions involved in assessing vulnerability.[124]

[124] The accuracy of self-declared health information is discussed, for example, by Bound (1991), Baker *et al.* (2004), Dwyer & Mitchell (1999), LaPlante (2010).

B.1 - Bolzano

Program: Care allowance (Assegno di cura)
Legislative reference: Delibera 28 gennaio 2014, n. 73, legge provinciale 12 ottobre 2007, n. 9

The non-self-sufficiency allowance is intended solely for the payment of *i)* care and care benefits; *ii)* to partial coverage of the costs for the pension funds of dependent relatives; *iii)* to enable the implementation of measures for "independent life"; *iv)* to the co-payment of home care fees at accredited services and the use of semi-residential and residential facilities. The contribution is paid regardless of the income and the assets of the non-self-sufficient person. Anyone who needs help from third parties to deal with daily life in care and care, to a maximum of two hours a day on a weekly basis for at least six months, is considered not self-sufficient and may submit a request for the care allowance (Assegno di cura) to the territorial district.

The assessment is based on the concept of "need for help" (fabbisogno di aiuto) by third parties in carrying out a series of activities of daily life. The need for help in everyday life activities is measured in units of time (hours and minutes). Care and assistance is recognized as a time when other activities cannot be performed simultaneously, and is determined within a time band (minimum amount of time - maximum amount of time) defined by law for each activity. If, for a given activity, the actual assistance required is less than the minimum level of the specific band, the assistance requirement is not recognized. If the maximum level of the default band is exceeded, however, the maximum level is recognized.

The assessment procedure (*VITA method*, V*alutazione Integrata dei Tempi Assistenziali* - IAE scale, Integrated Assistance Evaluation) considers first five basic assistance dimensions. If the individual requires only 2 hours of average service per day for these activities, the assessment is extended to a number of domestic-related instrumental activities.

The baseline valuation is described in the following table, where we only include aggregate values for significant size (or sub-dimension) for reasons of brevity and clarity

Table A.1 – VITA Method, Province of Bolzano

Limitation	*Min-max minutes per day*	*Description*
Food	51-150	Partial or total hel to eat (including cutting food)
Bathing and Showering	10-45	Help to wash one or more parts of the body, getting in and out of bath and shower
Personal hygiene	7-38	Help to wash hands, face and teeths and to shave
Dressing	5-34	Partial or total help to dress
Continence	16-110	Being partially or totally incontinent
Moving from bed to chair	6-72	Help for moving from sitting to standingor moving in the bed
Mobility	2-50	Able to use walk-in aids for 50 meters
Psyco-social	30-300 10-120*	Needing surveillance and/or control, help for communication and social relationships, and to organize the day

Legislation stipulates that are eligible all individuals who, presenting at least 120 minutes of need per day (on average) for the top 5 activities, reach a total of 128 minutes (including instrumental activities).

B.2 - Campania

Program: Care allowance (Assegno di cura)
Legislative references: Decreto Dirigenziale regionale n. 884/2014; Disciplinare degli Ambiti Territoriali Sociali Avellino sul programma di erogazione di assegni di cura 2013-2014.

The Campania Region care allowances are a support to the non-self-sufficient person and his/her family and are aimed at covering the costs of social care. The care allowance is intended for the family caregiver or, in the case of home-aided patients and without the necessary family support, to the private caregiver identified by the family.

The target of the care allowance is defined as people who are not self-sufficient, i.e., pursuant to art. 3 of the Decree of March 20, 2013 of the Ministry of Labor and Social Policies, "people with life-risk dependency who need domiciliary of continuous care in the 24 hours".

Care allowances are provided through personalized socio-sanitary care projects of "Home Care" defined by the Integrated Assessment Unit at healthcare districts, based on a multidimensional assessment of the need for care provided through the SVaMA method. The latter provides a very comprehensive and detailed picture of the patient's socio-health status, starting with motor and functional decay ("Barthel's Index"), behavioral and cognitive disorders, support from the social network, economic and housing conditions . In particular, cognitive, mobility, functional and health assessments are summarized in 17 profiles of autonomy, but do not provide a critical threshold that uniquely identifies non-self-sufficiency (Pilotto et al., 2013). This evaluation is the responsibility of each Evaluation Unit, which has, among other things, the task of integrating the profiles of autonomy with the assessment of the social condition (which is not considered in the creation of profiles).

To reduce the heterogeneity of assessments and to introduce a minimum standardization of eligibility rules, many Social Territorial Areas have been self-regulated by providing explicit requirements. For example, the province of Avellino states that for the economic benefit of the care allowance, within the limits of available resources, those who have a Barthel index - contained in the SVaMA method - equal to or above 80 can have access to the benefit.

Legislation does not include age limits or maximum age limits ISEE income. The Barthel index of the SVaMA method is defined as follows:

Table B.1 - Barthel index in the SVaMA method

Limitation	*Value*	*Description*
Eating	0,2,5,8,10	Partial or total hel to eat (including cutting food).
Bathing/showering	0,1,2,4,5	Help to wash one or more parts of the body, getting in and out of bath and shower.
Personal hygiene	0,1,2,4,5	Help to wash hands, face and teeths and to shave.
Dressing	0,2,5,8,10	Partial or total help to dress
Intestinal continence	0,2,5,8,10	Suffering from intestinal incontinence
Urinary continence	0,2,5,8,10	Suffering from urinary incontinence
Use of toilet	0,2,5,8,10	Help for moving in the bathroom and to be able to wash and to dress
Moving from chair to bed	0,3,7,12,15	Help for moving from sitting to standingor moving in the bed
Ambulate	0,3,7,10	Able to use walk-in aids for 50 meters
Stairs	0,2,5,8,10	Climb up and down a stairway with safety, without help or supervision

B.3 - Emilia-Romagna

Program: Care allowance/Domiviliary assistance (Assegno di Cura/Assistenza domiciliare).
Legislative references: Legge Regionale 5/94; DGR 509/2007, DGR 1206/07, determinazione della Direzione Generale Sanità e Politiche Sociali della Regione E. R. n.490 del 21/01/2011; deliberazione n.113/2006 del USL Bologna.

The Social Fund for non-self-sufficiency in Emilia-Romagna finances non-substitute health and social services and social services and health services for non-self-sufficient people for whom a co-payment is due. The care allowance is intended to promote home care through support to families who maintain the elderly in particular circumstances of non-self-sufficiency, avoiding or postponing their admission to residential social services and limiting also inappropriate hospital admissions.

Il contributo monetario viene erogato nell'ambito di un complessivo programma di assistenza domiciliare integrata programmato dall'Unità di Valutazione Geriatrica/Unità di Valutazione Multidimensionale, che certifica la non autosufficienza utilizzando il Breve Indice di Non Autosufficienza, versione domiciliare (BINA-*Home*), riassunto nella tabella che segue.

The monetary contribution is provided under a comprehensive integrated home care program programmed by the Geriatric Evaluation Unit / Multidimensional Evaluation Unit, which certifies non-self-sufficiency using the BINA-Home Short Self-Sufficiency Index, summarized in the table below.

Table A.3 – The BINA method

Limitation	*Value*	*Description*
Medication	10,30, 60,100	Not necessary; for ulcerations; for catherer; for wounds
Health care services	10,30, 70,100	Good health; planned necessary; domiciliary necessary; continuous
Sphynteric check	10,30, 70,100	Episodic incontinence, permanent, total;
Behavioural disorders	10,50, 80,100	Mood or cognitive disorders;
Comunication	10,40, 70,100	Understanding and able to express its own thoughts;
Sensorial deficit	10,20, 80,100	Hearing and visual impairments
Mobility	10,30, 80,100	Autonomy in mobility;
ADL	10,20, 70,100	Autonomy in personal hyginie, in dressing, in eating;
Social network	10,30, 60,100	Can count on family network
Housing and environmental factors	10,20, 70,100	Adequate housing with minimum set of services

Eligibility conditions concern the age of at least 65 years of age, family income (less than € 22300) and health status (230 points per 1000 in the BINA scale).

Table A.4 – Eligibility ruels for care allowance in in Emilia-Romagna

Individual characteristics	*Eligibility requirements*
Age	≥ 65 years
Economic conditions	Household income < €22,300 per year
Helath status	BINA score ≥ 161

B.4 - Friuli-Venezia Giulia

Programs: Allowance for Family Aid (Contributo per l'aiuto familiare - CAF) and Allowance for autonomy (Assegno per l'Autonomia - APA), both referred to the Regional Fund for Non-slef-sufficiency
Legislative references: L.R. 6/2006, ultima modifica B.U.R 21/01/2015 n.3

The primary home care program covered by the fund is the CAF, Contribution to Family Aid: this is a monetary contribution intended to fund (in part) domestic assistance received by private personal nurses (nursing or social care) and regulated by a working contract of at least 20 hours a month. The APA (Allowance for Autonomy), which is reflected in a cash benefit (of a lower amount than CAF for a similar level of fragility), aims to "make possible and sustainable the home-care of non-self-reliant by family members".

The assessment of the non-self-sufficiency status of Long-Term Care programs is conducted at the level of health districts by the Multiprofessional Assessment Unit (UVM), therefore under the control of the Regional Health Service, and consists of services provided by social, medical and nursing personnel. Functional fragility is verified through a card consisting of a list of activities of daily life, corresponding to the ADL-Katz classification. Each activity provides a dichotomous choice (yes/no): a limitation may, alternatively, be presented or not. Cognitive fragility is measured by the Clinical Dementia Rating scale. The following table summarizes the estimated dimensions.

Table A.5 - Evaluation of health and social needs in Friuli-Venezia Giulia, (CAF and APA programs)

Limitation	*Value*	*Description*
Bathing	Yes / No	Help to wash one or more parts of the body, getting in and out of bath and shower.
Dressing	Yes / No	Partial or total help to dress
Use of toilet	Yes / No	Help for moving in the bathroom and to be able to wash and to dress
Moving from chair to bed	Yes / No	Help for moving from sitting to standingor moving in the bed
Continenza	Yes / No	Suffering from partial or total incontinence (urinary and/or fecal)
Eating	Yes / No	Partial or total hel to eat (including cutting food).
Cognitive problems	Yes / No	Suffering of dementia with major sensorial impairments (Clinical Dementia Rating >3)
Note: the risk of cognitive decaying is considered severe for those individuals with a *Mental Health Index* and a *Mental health Composite Score* below the median (32 for MH and 30 for MCS) of the value of the sole population already at risk (MH≤52, MCS≤42).		

The following table sets out the conditions for access to CAF and APA: the applicant must be at least 65 years of age, must live in a household with an income of less than € 30,000, must have at least two limitations in daily life activities or sensory deficits or severe cognitive disorders.

Table A.6 – Eligibility ruels for CAF and APA programs

Individual characteristics	*Eligibility requirements*
Age	≥ 65 years
Economic conditions	Household income < €30,000 per year
Helath status	Loss of at least 2 ADL or severe cognitive deficit deficit (CDR>=3)

B.5 - Liguria

Program: Care allowance for non-self-sufficient elederly.
Legislative references: deliberazione 941/2014 del Servizio Pianificazione e Programmazione Regionale delle Politiche Sociali; DGR 1106/2006, 219/2008, 166/2011; Legge regionale 12/2005.

The care allowance is one of the measures included in the Regional Fund for Non-Self-Sufficiency and represents an integral supplementary measure of the Accompanying Allowance, which is intended to facilitate the stay at home of non-self-sufficient persons. It sis granted on the basis of a severity ranking updated periodically, until the Fund's limit has been reached. The recipients of the fund, managed by the LHAs and by the Committees of Majors of the Social District (Comitati dei sindaci di Distretto sociosanitario), are people with severe permanent disability who are unable to perform the functions of daily life and those dedicated to the care of the person with difficulties in human and social relations, in instrumental activities, in the mobility and use of the media. Each Social District Department is expected to have an Integrated Desk (Sportello integrato) as single access point for applicants and a Multidisciplinary Assessment Unit that evaluates and draws up an Individual Support Plan for all those with at least three lost ADLs and the need for at least 5 hours of assistance in 24 hours.

The legislation guarantees that the vulnerability assessment is carried out through the AGED PLUS (Assessment of Geriatric Disability) card, which allows the measurement of non-self-sufficiency by examining the following dimensions: functional autonomy, mobility, cognitive area, behavioral disorders and social characteristics. These dimensions are borrowed from the parameters of the SVaMA card. The legislation, however, does not provide a cutoff defined to uniquely identify the AGED profiles that could benefit from the benefit, thus leaving decision-making flexibility at LHA level. However, from Regional DGR 219/2008 it is possible to derive a regional-level guide: "The non-self-sufficiency profile, namely loss of at least 3 ADLs, behavioral disorders and comorbidity, is defined as: Person who: *i)* does not eat alone and needs to be fed; *ii)* is not able to dress and wash; *iii)* needs help to move inside and outside the home; *iv)* has severe cognitive and behavioral disorders that alter relational relationships with family members and with the outside world; *v)* it is a carrier of comorbidity that is represented by more than two disabling diseases, with necessary repetitive or urgent pharmacological treatments, with evolutionary prognosis."

The requirements for access to the care allowance are related to the age of at least 65 years, the economic conditions (ISEE threshold of less than € 12000), the entitlement of an accompanying age allowance, the state of non-self-sufficiency.

Table A.7 – Eligibility ruels for Liguria

Individual characteristics	*Eligibility requirements*
Age	≥ 65 years
Economic conditions	Household income < €12,000 per year
Helath status	100% invalidity, profile of non sel-sufficiency GGR219/08

B.6 - Lombardy

Program: Measure B2, Regional Operative Program for severe disabilities and non-self-sufficiency"
Legislative references: DGR 2883 12/12/2014

DGR 2883/2014 allocates resources to the Lombardy Territorial Areas in order to promote strong interventions for socio-sanitary integration in favor of people with severe disabilities or, in any case, in a state of self-sufficiency. The measure consists of actions that sustain and support the person and his/her family (social bonus and social vouchers) to ensure that he/she is able to remain permanently at home and in his/her life context. Access to benefit is guaranteed after a multidimensional assessment of social needs by LHAs, and is used to prepare a personalised Assistance Project signed by the beneficiary, the Municipality and the LHA.

The recipients of measure B2 are individuals of all ages, with 100% disability, with severe functional capacity constraints that significantly compromise their self-sufficiency and personal autonomy in everyday life, relationships and social activities.

The vulnerability assessment is done in two phases. Firstly, the social vulnerability index is assessed by social community assistants using a homogeneous scale at LHA level (Orientation card – TRIAGE), which is based on three dimensions: morbidity, nutrition, vomiting and diuresis, mobility, personal hygiene, mental state (behavioral disorders), family ties, and direct assistance (caregiver). If the score for the socio-medical condition found in the last two domains (relating to care issues) is less than 2, the person is not eligible for the benefit. In practical terms, this selects people who live alone or those who receive inadequate care (or can not receive assistance) from informal caregivers. For people who meet these requirements and who also have at least one of the conditions in the first 6 dimensions of the Triage Card, integrated multi-dimensional evaluation is activated. It is implemented in an integrated way between LHA and municipalities using ADL and IADL scales, defined homogeneously at LHA level.

From the interviews conducted with regional leaders of social policies, geriatricians and operators of various LHAs in Lombardy, it turns out that the most commonly used scales are Katz-ADL and Lawton iADL. As far as cutoffs are concerned, it is common to set a threshold level of at least 3 ADL limitations. Desio's municipality, for example, sets a threshold of 3 ADL deficits and 4 iADL deficits. ISEE thresholds are defined at LHA level. Eligibility conditions can thus be summarized as follows:

Tabella A.8 - Eligibility ruels for Lombardy

Individual characteristics	*Eligibility requirements*
Economic conditions	ISEE threshold defined by the Desio Municipality (< €16,000)
Health status	100% invalidity, *TRIAGE* score ≥3 (with score ≥ for scial items), evaluation ADL & iADL ≥3 deficit ADL e ≥4 iADL (Decio Municipality)

B.7 - Piedmont

Program: Aids for domiciliary care
Legislative references : Deliberazione n.42 10 marzo 2008, Deliberazione della Giunta Regionale n. 14-5999 25 giugno 2013, Deliberazione n. 17-7284 del 24 marzo 2014

The Piedmont region provides services to the elderly who are not self-sufficient through social and health projects, privileging the elderly to stay as long as possible at home through economic interventions in support of domiciliarity and home care services in long-term care.

Access to the services is through the Single Socio-Healthcare Desk (Sportello Unico socio-sanitario), from which the individual is referred to the Geriatric Assessment Unit that monitors the applicant's vulnerability conditions. In particular, the evaluation of non-self-sufficiency rankings is carried out using the "Geriatric record" (CG), a tool that analyzes the health condition of the elderly (ADL, iADL, cognitive and behavioral disorders) and its social condition (housing, economic, family and welfare status). In the overall score of the GC, the health component and the social component have the same weight, to the extent that each of them can assume a value from 0 to 14. However, it is important to note that for the minimum definition of self-sufficiency (and not already for defining the ranking) it evaluates only the health component, which must have a value equal to or greater than 5 points out of 14. Therefore, to analyze the minimum requirements for access the services the main focus is on the health assessment.

The health card is made up of six dimensions. Each dimension is evaluated through a specific scale, and the score obtained with each scale is returned in a range from 0 to 3 or 0 to 2 (standardized values of the CG). The sum of the standardized values corresponds to the CG-health final score. The health card can be summarized as follows:

Table A.9 – Geriatric records

Dimensions	*Score*	*Standardized value CG*
Functional autonomy	0-14	0
(Barthel ADL)	15-49	2
	50-60	3
Mobility	0-14	0
(Barthel Mobilità)	15-29	2
	30-40	3
iADL	10-14	0
	5-9	1
	0-4	2
SPMSQ (mental dacaying)	0-4	0
	5-7	1
	8-10	2
Behavioural disorders	absent	0
	light	1
	severe	2
DMI (dependency due to health reason)	no	0
	partial	1
	severe	2

The minimum conditions for eligibility can be summarized as follows:

Table A.10 – Eligibility conditions in Piedmont

Individual characteristics	*Eligibility requirements*
Age	≥ 65 years
Economic conditions	No ISEE requirement, but economic conditions are examined in the Geriatric records
Helath status	Geriatric records: Health evaluation ≥ 5

B.8 - Sicily

Program: Socio-sanitary voucher (Buono socio-sanitario)
Legislative references: Legge regionale 10/2003; decreto presidenziale 6 marzo 2008; DGR n.386/2014

The Socio-sanitary voucher (Buono socio-sanitario), to be paid to families in relation to the severity of the condition of non-self-sufficiency of the elderly, is distinguished by: “Social voucher” (economic allowance to support family income, to help family "in caring" their own family members), and a “Service voucher” (for the purchase of specific home-care services that can be spent at the facilities in the social health district).

Beneficiaries of the Socio-sanitary voucher are households resident in the regional territory who maintain or receive the elderly (not less than 69 years and 1 day) in a non-self-sufficient condition, with 100% invalidity allowance, provided they are cohabiting and bound by Family ties (filiation, adoption, affinity) to which they directly or through the use of other non-family members provide personal assistance.

Apart from the requirement of 100% invalidity (Accompanying Benefit), the assessment of non-self-sufficiency for the rating list is carried out by the Evaluation Units via the SVaMA card. No explicit criterion is mentioned in the regional regulations, how to interpret and identify the non-self-sufficiency profiles produced by the evaluation card. The decision and the judgment criteria are therefore subject to flexibility at the level of LHAs.

The ISEE income threshold for accessing the voucher is € 9,000 per year, but can be changed at municipality or territorial areas. Eligibility conditions can be summarized as follows:

Table A.11 – Eligibility rules in Sicily

caratteristiche individuali	*requisiti per l’eligibilità*
Age	≥ 69 years
Economic conditions	ISEE threshold € 9,000
Helath status	100% invalidity Non-self-sufficiency evaluated with SVaMA method
Family conditions	Elderly patient cohabiting and bound by family ties (filiation, adoption, affinity).

B.9 - Tuscany

Program: Project for the continous assistance to non-self-sufficient persons (PAC), which is funded by the Regional Fund for Non-Self-Sufficiency (Fondo Regionale per la Non Autosufficienza)
Legislative references: D.G.R. n.370/2010; USL 8 Casentino Regolamento di accesso ai servizi socio-assistenziali e socio-sanitari integrati per le persone non autosufficienti, Disposizioni attuative anno 2013

Project for the continous assistance to non-self-sufficient persons (PAC) includes both monetary and in-kind contributions for adults aged 65 or over with the aim of extending as much as possible their functional and cognitive autonomy and enabling them to live in their home and family environment in a dignified manner, delaying entry into institutions. The CAP is means-tested and includes family income as a criterion for eligibility and for defining the amount of money or care to which the non-self-sufficient person is entitled (AGENAS (2014), Profili et al. (2009)).

The PAC is organized and managed at the level of health districts, each appointing a Multidisciplinary Assessment Unit (UVM) consisting of a physician, a nurse and a social worker. The UVMs are responsible for assessing the fragility of applicants and the definition of a Personalized Assistance Project (PAP) that regulates the amount of non-self-sufficient assistance services. To facilitate access to the CAP, the Region has set up an information service, the "Together Points" (Punti Insieme), which should assist elderly people and their families in properly preparing for assistance.

The UMV assessment groups individuals into 5 iso-categories, which represent five levels of vulnerability.[125] The overall vulnerability assessment is the aggregation of three specific evaluations related to *i)* autonomy in carrying out basic daily life activities (BADL), *ii)* cognitive status, and *iii)* behavioral problems. The BADL scale is a tool to evaluate functional autonomy, based on the Katz et al. (1970) proposal, and is part of the MDS-HC (Minimum Data Set for Home Care) evaluation board (Morris et al., 1997). The scale consists of seven elements, while the original Katz scale has six. The size of mobility includes, in addition to the common "transfer" activity, the ability to "change position from lying in bed" and "move around the apartment/house". Each element gets a score of 0 (no limitation) to 4 (need for full-time care to perform the activity), based on the patient's attendance load displayed in the seven days prior to the assessment, as detailed in the following table.[126]

From the BADL card, the UVM obtains summary information about the loss of functional autonomy of the elder, which can take three levels (light, moderate, heavy) depending on the sum of the scores obtained from the BADL evaluation, according to the chart of the following table.

Table A.12 – Functional evaluation BADL

Limitations	*Description*	*Value*
Bathing	Help to wash one or more parts of the body, getting in and out of bath and shower.	0 - 4
Dressing	Partial or total help to dress	0 - 4
Use of toilet	Help for moving in the bathroom and to be able to wash and to dress	0 - 4
Mobility	AHelp to walk and move at home even if using walk-in aids	0 - 4
Moving from bed to chair	Help for moving from sitting to standing or moving in the bed	0 - 4
Moving in bed	Help for moving in the bed	0 - 4

[125] This approach reminds the multicriteria evaluation of the French Fragility Scale (AGGIR - echelle), which identifies five levels of loss of autonomy and need for assistance (Groups Iso-Resources).

[126] Adapted by Profili et al. (2009). *Supervision* corresponds to a need for care at least three times a week; *mild assistance* corresponds to a need for three or more weekly physical lightweight interventions; *heavy assistance* refers to a need for heavy physical aid three or more times a week; *full assistance* corresponds to a continued need for assistance.

Eating	Partial or total hel to eat (including cutting food).	0 - 4

Evaluation: 0 – Independence; 1 – only supervision; 2 – light assistance; 3 – heavy assistance; 4 – full assistance

Cognitive status is verified by using the Short Portable Mental Status questionnaire (Pfeiffer, 1975), which allows a classification between "limited" and "non-limited" individuals, "moderately limited" individuals, and "heavily limited" individuals. The questionnaire includes short and long term memory evaluations, an orientation test and an expression fluidity (Profili et al., 2009).

The last component of VSM's fragility assessment is the presence of behavioral and mood disorders, verified through the use of MDS-HC approach guidelines. Depending on the number of mood disorders and behaviors, the individual is assigned the status of "light disturbances", "moderate disturbances" and "large disturbances".

Table A.13 – Definition of dependency in the BADL scale

Dipendence	*Description*	*BADL scale*
Light	Total dependency in 2 BADL *or* light/severe in 3 BADL	≥ 8
Moderate	Total dependency in 3 BADL *or* light/severe in 4+ BADL	≥ 15
Severe	Total dependency in 3+ BADL *or* light/severe in 4+ BADL	≥ 22

The information collected in the three functional stages (BADL), cognitive (*Short Portable Mental Status*) and behavioral (MDS-HC) combines in a summary of the state of fragility, which is articulated in the five iso-categories, already mentioned, numbered by 1 to 5, where a higher value corresponds to a worse vulnerability level. Category 5 groups individuals with severe functional deficits, severe cognitive disorders and/or severe behavioral disorders. Category 1, on the other hand, represents cases with slight difficulties in BADL, mild cognitive and/or behavioral disorders. The following table gives details of how iso-categories are defined from the three areas of functional, cognitive and behavioral assessment (see Profili et al. (2009) and Visca et al. (2012)).

Table A.14 - ISO-categories of vulnerability for the PAC program in Tuscany

ISO-categories	BADL limitations								
	L			*M*			*S*		
	Behavioural disorders			Behavioural disorders			Behavioural disorders		
Cognitive Disorders	*L*	*M*	*S*	*L*	*M*	*S*	*L*	*M*	*S*
L	1	2	3	2	3	4	4	4	5
M	2	2	3	3	3	4	4	4	5
S	3	3	4	3	4	5	4	5	5

L=light; M = moderate; S = severe

Eligibility for the programs provided for by the CAP requires a minimum age of 65, while the minimum level of vulnerability should generally correspond to Category 3. The NRC may, in each case and autonomously, decide to allow access to the services of the CAP also to individuals with a lower degree of vulnerability. Eligibility is then assigned to those over 65, with a BADL score of 8 or more and one of the two cognitive conditions just mentioned.[127]

Table A.6 – Eligibility ruels for PAC program in Tuscany

Individual characteristics	*Eligibility requirements*
Age	≥ 65 years
Economic conditions	Household income < €25,000 per year

[127] D.G.R. n.370, annex A.

Helath status	ISO-category ≥3

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4. Long term care in France

In search for a balanced policy

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Contents

Executive Summary

Demographic projections anticipate a strong increase in the number of dependents from 2025 to 2060, linked to the aging of the baby boom generation. Expenses related to dependency cover a broad perimeter and are financed mainly by public funds (expenditure related to dependency is estimated at € 26-34 billion in 2010) which will increase dramatically .

The look at aging and dependence must change in order to adapt public policies and develop in favor of "Well Aging" because aging and dependence are still the subject of very negative social representations. A particular attention should be paid to the rights of the elderly. A multidimensional tool could be put in place to better assess dependent persons and provide them with more effective assistance. Co-ordination of care for dependence is a key factor to allow a pathway that will meet the evolution of the person. Institutional accommodation must be diversified and the organization and quality of services at home must be improved especially by addressing the needs of the caregivers.

Taking aging into account in public policy will make it possible to improve the management of dependency

(Prevention, urban planning, adaptation of housing, development of geronto technologies).

Introduction

France has struggled to implement a comprehensive social protection system. The health sector (about 12% of the gross domestic product) with a high level of spending but rather efficient was the main provider of services for elderlies. It has offset during a long time the emergence of new needs and new responses. With the introduction of a new benefit aiming to better address the question of dependency, large progresses have been done. For the Chinese experts this presentation does not want to show the French experience as a completed system but rather as a work in progress which even challenges the principles of our welfare organization. To deal with LTC means also to develop a cross sector approach, a multilevel coordination to which our public policies are not used. Prevention which is usually the poor relation in our policies could be a major innovation for our policy related to aging.

1. Presentation of the context: a recent emerging of the LTC as a multi dimension concern

1.1 Overview of the system

Traditionally in France, hospital-type organizations appeared with the spread of Christianity. Hospices were found along the major pilgrimage trails from the mid-8th century onwards: in addition to welcoming travelers, these sanctuaries regularly provided shelter to the poor and sick in the area. The hospitals were run by nursing monastic orders. At a time when medicine had not really developed, these institutions were intended to provide shelter for destitute patients and so keep individuals who were dying or marginalized away from the rest of the population. Hospitals retained this social function for a long time before becoming places where patients were cared for. Even with the gradual secularization of hospitals they kept a major role to intern beggars and troublemakers. If a multitude of organizations flourished: hospitals, hostels, charitable houses, asylums, etc., and hospitals saw their medical capacity increase they kept pivotal as the main multirole institution for health and welfare policies.

In France, strengthening the welfare system resulted in an increase in the number of beneficiaries and of the risks covered. In 1945, the introduction of the general social security scheme included a health insurance branch for all employees in the private commercial and industrial sectors. Originally, that branch was meant to become the single model for all professions, but standardization never happened. Since 1945, there has been a succession of laws aimed at extending the welfare system to cover the maximum number of people, especially for the benefit of the poorest members of society. The French social protection system ranks among the most comprehensive systems in the world in terms of results.

The modern French social protection system is also inextricably linked to the social security system, and more specifically to the health insurance system. In reality, the healthcare system began to develop in 1945 and has expanded more rapidly since the 1960s, thanks to the enactment of a number of major reforms. Today, the very close bond between the health system and the welfare system enables almost everyone in France to enjoy access to quality local healthcare services. One of the main characteristics of the French health system is the fact that it has expanded while preserving the freedom of choice enjoyed by patients and the different parties involved. As a result, healthcare facilities include public hospitals and private clinics. Patients are free to choose their

general practitioner and their healthcare facility. Likewise, private doctors are free to set up their practice wherever they want, are paid on a per appointment basis and are free to prescribe what they see fit. The relationship between the health insurance system and healthcare professionals is regulated by conventions. The pragmatism of the French system - which combines social security coverage with a liberal approach of the providers - has enabled it to adapt to the changes that have occurred over the past few decades and to acquire a good level of expertise. Anyway the long term care challenges the health system, which is currently bracing itself to meet new challenges financial and organizational ones. New resources are needed which go beyond the health system. The sanitary approach does not meet all the needs and expectations of the aging population although the care system was traditionally bound with the administrative, financial organization of the health sector. It is a major historical evolution which occurred after World War II in France and which is ongoing. Long term care, which requires not only medical competences but also social services, challenges the public policy.

1.1 A country still young but aging

France will have 73.6 million inhabitants in 2060, an increase of 11.8 million in comparison with today. The share of the population aged 60 or more will increase until 2035, from 21.7% to 31%. After 2035, a more moderate pace is expected. There are 15 million people aged 60 and over today. They will be 20 million in 2030 and nearly 24 million in 2060. Over the age of 75 years, 5.2 million in 2007 (8.9% of the population) will be 11.9 million in 2060 (16.2% of the population) and 85 and over will increase from 1.3 to 5.4 million. Between now and 2030, the number of people aged over 75 will be multiplied by two and the number of people aged over 85 by four. (annex)

Today life expectancy is 78.4 years for men, 84.8 years for women. The National Institute for Statistics INSEE projects a sustained increase in life expectancy by 2060. In that year, it should be 86 years for men and 91.1 years for women. This is due, from the 1970s onwards, to the decline in mortality at the advanced ages, and not as before due to the decline in infant mortality. France now ranks among the leading countries in low-mortality at high ages, with Japan, Canada, Australia and Switzerland.

So, despite France's dynamic demographics (still one of the highest birth rates in Europe, along with Ireland), the unavoidable aging of the population and the continual increase in life expectancy have made dependency a major challenge for the coming years. In addition to the need for suitable social and medico-social care, this aging process also raises public health issues. The rapid increase in Alzheimer's disease is a case in point. The dependence however is not due exclusively to the appearance of diseases but also to other factors (hospitalization, widowhood, precariousness, isolation).

The majority of elderly people are aging in good conditions. Only 8% of those over 60 are dependent. At 80 years just 20% are dependent even if with 95 years it is about 63%. The average age of loss of autonomy is 83 years. One indicator is the number of recipients of the benefit which is granted to people dependent (APA allocation personnalisée d'autonomie personalized autonomy benefit). There are about 1.2 million beneficiaries of the APA (2013), 60% at home and 40% in institutions.

• 5% of APA beneficiaries are under 70 years of age

• 75% over 79 years

• 50% over 85 years

• 25% over 89.5 years

Following the various forecasts, they will be between 185000 and 2700000 in 2060. They would be in 2060 still mostly female (74 % today, 71 % in 2060) and older, 88 years.

The growing number of dependent people represents an increasing challenge for both the families and the country. 4.3 million people regularly help one of their elders. Of these, 2.8 million provide assistance for daily living to an elderly person living at home. 62% of family caregivers are women. Altogether it could be said that “in France one lives old, but relatively bad" because we have not designed a comprehensive and sustainable organization to tackle the changes in the population. Certain social inequalities in mortality are greater in France than in other European countries. Over the period 1990-2000, France thus presents social inequalities for alcohol-related mortality twice as high among women as compared to those observed in the majority of countries in Western Europe.

So the acknowledgment of the long term care was relatively slow if progressive during the last 20 years. The proactive and permanent policy is illustrated by a series of laws with last the law of adaptation of the society to the aging of 28/12/2015 with two main axes:

- coordinated management of autonomy policies associating notably local and regional authorities, health, medico-social and social support actors

-development of the territory, adaptation of housing, fight against social isolation, reflections on mobility issues.

1.2 A cross sector policy with a growing importance of the regional management

The public organization for LTC

The State designed the overall policy by law. The law (code of social action and family code de l'action sociale et de la famille) contains all the main regulations about LTC. The Ministry for social affairs (including most of the times health) is leader regarding LTC regulation.

At the regional level (13 regions for the metropolitan France) the ARS regional health agency "Agence régionale de santé" coordinates the State policy with the departmental councils (101 elected bodies), which have a general competence on the management of welfare policies (family, disabled people, aging people, etc.).

At the local level town councils, which are also elected bodies (more than 35000), have no special competences in LTC but provide social services and are responsible for policies e.g. town planning, local transportation, which are relevant for the well-being of aging people.

In addition, social security schemes, especially pension schemes and health schemes, have a major place in the funding and the implementation of services dedicated to pensioners.

As a body for institutional coordination, the Departmental Conference of Funders is responsible for defining a coordinated program for financing individual and collective prevention actions, in addition to legal or regulatory services. To this end, it establishes a diagnosis of the needs of people aged 60 and over residing in the departmental council area and identifies local initiatives. The funders' conference is chaired by the president of the departmental council. The director general of the regional health agency or his representative shall act as vice-chairman. Representatives of the basic pension insurance and health insurance schemes, the National Housing Agency (ANAH), through its local delegations, federations of institutions for supplementary pensions and regulated bodies by the Mutuality Code. Furthermore, the composition of the conference can be extended, depending on local partnerships, to any other natural or legal person concerned by policies to prevent the loss of autonomy.

It brings together actors in the sector on shared actions and strategies to help build more readable and coherent responses for people. The program defined by the conference, which is aimed at people aged 60 years and over, deals with:

Improved access to equipment and individual technical aids;

The granting of a self-sufficiency package awarded through a multi-annual contract for objectives and resources (CPOM) by the departmental council for autonomous residences;

Coordination and support of preventive measures implemented by home support and assistance services (SAAD) and multi-purpose home care and support services (SPASAD);

Support for caregivers;

The development of other collective prevention actions.

The National Solidarity Fund for Autonomy (CNSA caisse nationale de solidarité pour l' autonomie) pays each departmental council a contribution, starting in 2016, and is responsible for organizing conferences of funders.

The law of the 31 July 1991 was a turning point in French healthcare planning: since 1996, the healthcare system has been managed and organized at the regional level under the governance of Regional Health Agencies (ARS). The Regional public planning of the healthcare services and facilities (SROSMS schemas regionaux de l'organisation sanitaire et medico-sociale) has become the sole regional planning tool and the regulatory framework which includes also the planning for medico-social sector (the sector which address mostly the question of disability and aging) defines "health territories". Each regional agency defines these territories according to specific public health, demographic and political factors. The regional health agencies which are now responsible for granting authorizations for certain facilities or services, manage actually the healthcare plans within their regions. Finally, the law n° 2009-879 of 21st July 2009 on the reform of the hospital and relating to patients, health and territories focuses on four sectors:

- hospitals,
- distribution of doctors and access to healthcare in towns,
- public health and preventive measures,
- regional coordination

The planning includes the medico-social sector, even if health services are not a major provider of the delivered services, and its coordinates the State policy with the policies managed by the local authorities which are in charge of welfare policies.

The pregnancy of the health dimension in the protection system explains why the introduction of Long Term Care has taken such a time to be identified within the welfare system and its management suffers from the comparison of the sums at stakes between the medical sector and the LTC sector which is still considerably smaller.

The system for handling Long-Term Conditions (LTCs), which was put in place in 1945, had been during a long time the only way to address chronic pathologies. It enables people suffering from a long-term and costly medical condition to be fully reimbursed for all the expenses relating to the illness in question. Around 400 illnesses, divided into 30 conditions, entitle patients to avail themselves of this system. The system also includes the "31st illness", a category that corresponds to other illnesses - outside the list of the 30 illnesses defined by decree - which result in a debilitating condition and require treatment for a period longer than six months. France has around 8 million people with long-term conditions (14% of the population) and their number has increased by 5% per year during the past ten years. Long-term conditions account for around 60% of health insurance spending. Their amount increases with age (a high proportion of LTCs is linked to aging or gets worse with age). The Law of August 13th, 2004, reforming health insurance, introduced significant changes, primarily by entrusting responsibility to the National Health Authority (HAS) for issuing an opinion on the list of LTCs, and recommendations on the procedures and treatment provision required to cover LTCs, as well as the medical criteria that justify admitting patients under this system. The work performed by the HAS has already highlighted significant

discrepancies on that last point, as well as inconsistencies in the LTC list (type-2 diabetes with no complications is classified as an LTC, although it is not particularly expensive to treat, while other illnesses, which are markedly more expensive, are not classified as LTCs). The LTC reform will therefore represents one of the French healthcare system's main projects and must contribute to a better response of the actual need of the aging population.

Another factor of a late acknowledgment of Long term Care was that traditionally in France the question of aging people was a question of poverty of retirees and of their financial autonomy. Due to the implementation of a "pay as you go system" for retirement benefits after 1945, a large part of the pensioners could not claim for a full career. So, the most important action of poverty reduction policy was targeted to pensions to provide a decent income through the pension scheme or through retirement minimum support income paid by the State. Nowadays the policy is to empower aging people in their choices:

- retirement à la carte
- private pension saving

This policy was rather successful because in average the people who have already been pensioned enjoy a better average income than working people and the major challenge moves to the question of dependency. The average amount of the pension reaches 1,306 euros monthly. The median income was € 1,563 for pensioners. (The median income in France is estimated at 1,712 euros and more than two-thirds of the pensioners are owners of their dwelling).

2. The French policy under budgetary stress

2.1 The terms of debate

Until a recent period, the structuring of the sector took place around institutions, hospitals and nonprofit institutions with many weaknesses. The role of religious congregations plummeted, and the evolution of the hospitals lead to focus the activity of these institutions to intensive care. There were a narrow scope of institutions, medical ones or housings ones, with almost no institutions to address the needs of intermediate people and most of the supply was still public.

It was obvious that the emergence of a new kind of ageing population with dependency implies:

- to improve the living conditions of aging people;
- to improve the housing facilities of aging people;
- to take account of the new role of the hospital;
- to facilitate the home care services.

The objective concerning the creation of a fifth social security branch beside the existing ones (pension, health/maternity, invalidity, occupational diseases and accident at work), aiming at

covering the loss of autonomy for the disabled and the elderly was postponed in reason of the worsening situation of public finances and the principle of a "mixed public-private financing", combining a "high base level of solidarity" with (non-compulsory) private insurance involved in a complementary manner.

There was thus a clear re-orientation of the debate away from the idea of setting up a fifth social insurance branch, the government having highlighted the difficulty in financing in the present context of important public deficits. A national debate was launched in February 2011[128], involving a six months consultation process with political parties, trade unions, associations, representatives from religious groups, etc.

In 2013, the government introduced a new Additional Solidarity Contribution for Autonomy (CASA). This takes the form of an extra 0.15% tax that is levied on the income of pensioners who pay income-tax, on top of the 0.15% tax they already paid. However, CASA has not been allocated to LTC, but was instead channeled to the Old Age Solidarity Fund, which contributes to the minimum support income for retirees. Amongst the main issues that have been at the forefront of public debate, the issue of the costs that users have to meet themselves for the care they receive, especially in institutions, has been particularly central. Despite the APA benefit, the remaining cost that users have to meet themselves remains high – between 2200 and 2900 euros a month for institutional care, and 1400 euros on average for home care.

The governance of the system as described above is complicated even if the departmental councils are leaders in the implementation of LTC. There are a great number of actors involved in the financing and organization of long-term care which makes the system very difficult to understand and to make good use for the dependent elderly and their relatives, and also creates many inequalities between beneficiaries.

Another issue has to do with the strong socio-economic differences that prevail in France with regard to the risk of dependency or rather with regard to healthy life expectancy. This is a reflection both of the strong inequalities that prevail in access to healthcare throughout the life-course, but also of the LTC system since the costs of LTC services remain excessively high for those on low incomes. The geographic dimension matters. The ways to cope with aging problem s are note the same in relation with the global evolution of the local population.

Model of demographic evolution for territories

	Aging Increase % 65+ in the total population of the territory	rejuvenation Decrease% 65+ in the total population of the territory
Increase of the number of elderly in the total population of the territory	Aging territories	Problem of aging people but with a dynamic environment
Decrease of the number of elderly in the total population of the territory	Balanced situation	Rejuvenating territories

[128] http://www.fesp.fr/sites/default/files/attachments/synthese_du_debat_national_sur_la_dependance_-_juin_2011.pdf

The transition of individuals from autonomy to the various levels of dependence and ultimately to death is also modulated, based on individual characteristics: sex, age, number of children, relative education level (compared to the cohort's average). Results indicate that the length of time spent receiving the APA benefit would increase from 4 years today to 6 years in 2040. The proportion of people having experienced a state of dependence before their death would also increase, from 25% today to 32% in 2020 and 36% in 2040.

The proportion of dependent elderly receiving informal care from family members is likely to decline. This is particularly due to the baby-boom generation become very old. Today, 80% of dependent elderly above the age of 60 living at home receive regular help from a relative. For the generation which is the one of today potential care-givers, when they will reach the age of 80, their children will be fewer, more will be still professionally active (not least women) and thus less available, and also the children will be older due to increases in life expectancy and possibly less healthy or even deceased. All these factors are likely to lead to deterioration in the ratio between the dependent elderly and potential informal care-givers.

This analysis also indicates a stronger progression of the number of dependent elderly in institutions compared to home care. The average increase in the number of dependent elderly in institution would be 2.2% per year compared to 1.9% for those living at home. Between 2010 and 2040, the proportion of dependent elderly in institutions would increase from 35% to 37%.

The build-up of LTC has happened in several stages. Initially, the legislator created specific types of provision. This is how the Personalized Independence Allocation (Allocation Personnalisée d'Autonomie, or APA) was introduced in 2002. That benefit is now paid to 1.2 million beneficiaries. It enables elderly dependent people to benefit from a cash payment, which is calculated according to their loss of independence and their resources, and which can represent up to 1,200 euros per month. This assistance enables them either to fund services that help them stay in their own home, or to pay the "dependency rate" in retirement homes. The personalized independence benefit is mainly funded by the departmental councils, with help from the State. In 2006, a similar benefit was introduced for the disabled: the Disability-Offset Benefit (Prestation de Compensation du Handicap, or PCH).

As a second step, the Law of June 30th 2004 on social solidarity for the benefit of the elderly and the disabled founded the National Solidarity Fund for Autonomy (CNSA caisse nationale de solidarité pour l' autonomie). Now, this organization plays a central role in funding dependency coverage.

The National Solidarity Fund for Autonomy

(CNSA caisse nationale de solidarité pour l'autonomie)

The CNSA was founded by the Law of June 30th 2004 on social solidarity to help the elderly and the disabled to remain independent, and became operational on January 1st 2006. The Fund plays the role of a welfare fund (funding initiatives and benefits) as well as the role of a specialist support agency for all questions regarding dependency. It is primarily responsible for:

- Funding assistance for elderly dependent people and the disabled (in particular, it helps departments fund the APA - Personalized Independence Allocation - and the PCH - Disability Offset Benefit);

- Allocating health insurance credits intended to fund medico-social institutions and services for the elderly or the disabled between departments;

- Guaranteeing equality of treatment throughout France and for all disabilities;

- Circulating an expert information to monitor the quality of service provided to individuals.

The CNSA's budget amounted 25,475 billion in 2017 It is funded from three main sources. The first two sources are the contributions paid by the health insurance system and the allocation of a portion of the General Social Security Contribution (CSG which is a tax dedicated to health expenditures). The third is more unusual. In fact, it consists of the Social Solidarity Independence Contribution (Contribution de Solidarité Autonomie, or CSA). This contribution is paid by employers (companies and public authorities), in exchange for employees relinquishing one day of their paid holiday.

But until now LTC had not reached the same statute in the coverage as social security schemes. The major recent step was the law about aging which improves the existing system. This coverage combines social solidarity benefits (like the other welfare spending) and a more or less significant contribution from the recipient. In order to encourage the working age population to take out coverage against the risk of dependency, the State introduced tax incentives to encourage people to purchase dependency insurance policies.

Public spending on self-sufficiency was estimated at € 24 billion in 2010, of which € 14 billion was for healthcare financing, € 5.3 billion for the personalized autonomy allocation (APA) and € 2 billion, for housing. Social security funds are by far the main contributors with an expenditure of approximately € 15 billion (62% of expenditure). Local authorities appear as the second contributor of the expense. The other funders, the National Solidarity Fund For autonomy (CNSA) and the State, account for 15% of the expenditure. (annex 2)

Beside the measures targeting old people, some funding addresses problems mostly frequent with aging:

-the 2008-2012 Alzheimer's Plan brought together 44 specific measures (15 of which were dedicated to research) in three major axes covering the social, medical and research aspects.

This Plan was accompanied by a massive public investment of € 1.6 billion over five years, divided into:

€ 1.2 billion for the social component, € 200 million for the medical component and € 200 million for the research component.

-the Neurodegenerative Diseases Plan 2014-2019 including Alzheimer's disease, encompasses three main priorities:

- Improving the diagnosis and care of patients;

- Ensure quality of life for patients and their caregivers;

- Develop and coordinate research.

2.2 Current long-term care provisions

2.2.1 Safeguarding the will of the person

The main feature of the French policy is to safeguard as much as possible the capacity of choice of the elderly.

To enable elderly people to exercise their choice in all circumstances, the legal provisions allows to express their will in advance or to delegate for the future this power to a third party, terms of reference for future protection or designation of a person of trust. Mediation solutions organized by the departmental councils are in charge to help resolving conflicts of choice between the person and his entourage.

In addition, in medical or social care establishments or home services collegial procedures must put in place to correct situations where the free choice of the person is not fully respected due to other constraints (e.g. refusal to seek treatment expressed by the elderly).

Legal protection measures were adapted by the law of 5 March 2007 to relax the constraints on the aging person protection through tutorship or curatorship for persons suffering from an alteration of their personal faculties.

The guardianship judge must now verify that the person suffers from an impairment of his or her mental or bodily faculties of such importance that it prevents the expression of his / her will, and that no other means of protection (power of attorney, rules on marriage or a mandate for future protection) is sufficient. Family empowerment allows a family member (descendant, ascendant, brother or sister, cohabitant ...) to seek the authorization of the judge to represent a person who cannot manifest his /her will which lighter than curatorship or guardianship.

The safeguard justice is a short-term legal protection measure that allows a person of full age to be represented to perform certain acts. This measure may avoid the imposition of more restrictive tutorship or curatorship. A person of full age retains the right to exercise his or her rights, except in cases of divorce or special acts for which a substitute decision-maker has been appointed by the judge.

There are two types of measures of judicial accompaniment. Curatorship is a judicial measure designed to protect a person of full age who, without being unable to act him/herself, needs to be counseled or supervised in certain acts of civil life. Curatorship is only pronounced if it is established that the safeguard measure would be an insufficient protection. There are several degrees of curatorship. The guardianship judge shall designate one or more curators. Guardianship is a judicial measure designed to protect a person of full age and/or all or part of his or her patrimony if he is no longer able to protect his own interests. A guardian represents her or him in the acts of civil life. The judge may enumerate, at any time, the acts that the person can do alone or not, on a case-by-case basis.

For persons in socio-economic difficulties having no alteration of their mental faculties, they can no longer be placed under guardianship or under curatorship. They must now be covered by contractual measures implemented by the social services of the departmental council. In the event of the public prosecutor may ask to the guardianship judge to order a social accompaniment

(Personalized social support Masp) LTC provisions try to embody this general assumption into daily life.

2.2.2 Personalized Autonomy Benefit – Allocation Personnalisée d'Autonomie (APA) as the core of the LTC

French public provision for the LTC needs of the dependent elderly and the disabled relies on a two-pronged system. On the one hand, the health insurance scheme covers the cost of health care provided in an institutional setting to the dependent elderly or to disabled patients. It also finances LTC units in hospitals, as well as nursing care provided in the patient's home or in facilities. Such health care costs are paid directly by the health insurance scheme, i.e. patients do not need to advance the money themselves in most of the cases.

On the other hand, some of the cost of care that is not covered by health insurance, whether that care is provided to the dependent elderly and to the disabled in institutions or in at home essentially financed by the State and by local authorities.

For the disabled, the new benefit came into force in January 2006, called the Prestation de Compensation du Handicap – PCH − (disability compensation benefit) which aims to cover the needs of the disabled whatever the causes of the disability and the age or life-style of the person. This benefit is intended to help cover the needs of the disabled person (professional insertion, home adaptation, human and technical aids, etc. In 2012, 223000 people were receiving the PCH, average spending per beneficiary was EUR 775 euros per month in 2013.

The dependent elderly can receive the Allocation Personnalisée d'Autonomie – APA (Personalized Autonomy Benefit), which is a universal benefit for people over 60 that came into force in 2002. This benefit is based on an "aid plan" designed for each individual, on the basis of the assessment of the person's needs.

For home interventions this may include hours of help or care at home (day or night) by a third party, temporary accommodation expenses, meal service, remote alarm, adaptations of the accommodation, a laundry service at home, transport service, respite leave and various small jobs.

For technical aids It may be a wheelchair, walking sticks, a walker, a medical bed, disposable incontinence equipment (for the share of these expenses not covered by the health insurance). Depending on the needs of the applicant, the aid plan may contain only technical aids.

These lists are not exhaustive: other aids or services adapted to the situation and the environment of the beneficiary may be proposed.

In the case of a person housed in a foster family, the assistance plan drawn up by the medico-social team may provide for the payment of aids and allowances paid directly to the host family As well as the payment of the intervention of a third person for assistance to the beneficiary of the APA.

The APA benefit is intended to cover part of the cost of the "aid plan", the rest (about one quarter of the total amount on average) is paid by the beneficiary through user fees which increase

proportionally to the elderly's income. Elderly people with an income below € 689.50 per month do not pay user fees. The benefit amount thus varies both according to the person's level of dependency (established by a medico-social team, using a nation-wide unified grid – the AGGIR grid – which identifies 6 levels of dependency, with only the first 4 levels being taken into account for the granting of the APA benefit) and according to the elderly's financial resources.

The grid AGGIR: Evaluate the loss of autonomy

The assessment of autonomy takes place when the person asks to benefit from different legal aids such as the Personalized Allowance of Independence (APA) or optional ones such as the personalized action plans financed by one pension scheme .

The evaluation is based on the use of the grid “autonomy, gerontology and iso-resource groups” (AGGIR). This grid makes it possible to measure the degree of physical and / or psychic dependence of an elderly person in the accomplishment of his essential and daily actions.

The assessment grid for loss of autonomy and dependency is based on 17 variables. Ten "discriminant" variables relate to the loss of physical and psychic autonomy (coherence, toileting, feeding, displacement.) and are taken into account in the calculation of GIR (Groupe Iso Ressource). The seven "illustrative" variables do not form part of the GIR calculation, but help to guide the resulting assistance plan by providing additional information (budget management, cooking, household, leisure activities, etc.).

Physical and mental activities (discriminating)

Communicate verbally and / or non-verbally, act and behave logically and sensibly in relation to the standards accepted by society

Find yourself in space and time,

To make his toilet,

Dressing, undressing,

To serve and eat,

To ensure the hygiene of the urinary and fecal elimination,

Getting up, going to bed, sitting down, going from one of these 3 positions to another,

Moving inside the place of life,

Move outside the place of life,

Use a means of remote communication (telephone, alarm, bell, etc.) in order to alert if necessary.

Domestic and social activities (illustrative)

Manage business, budget and assets, recognize monetary value of coins and notes, use money and know the value of things, complete administrative procedures, complete forms,

Prepare meals and pack them so they can be served,

Perform all routine housework,

Using voluntary means of collective or individual transport,

Buying property voluntarily,

Respect the prescription of the doctor and manage his own treatment,

Perform voluntarily, alone or in a group, various leisure activities

For each variable, the observer assigns a note:

A: done alone, totally, usually and correctly

B: done partially, or not usually, or not correctly

C: does not do

From the results, the Gir of the person can be determined.

Six levels of dependency: Iso-Resource Groups (GIR)

There are 6 GIR determined according to the degree of dependence of the person:

GIR 1: seniors who are confined to the bed or chair, whose mental functions are severely impaired and require an indispensable and continuous presence of caregivers.

GIR 2: the elderly confined to the bed or in the chair, whose intellectual functions are not completely altered and whose condition requires care for most everyday activities. Elderly people whose mental functions are impaired but have retained their ability to move.

GIR 3: seniors who have retained their mental autonomy, partly their locomotor autonomy, but who need daily and several times a day to be assisted.

GIR 4: Older people do not assume their own transfers but, when they are lifted, can move inside their dwelling. Sometimes they have to be helped in dressing and dressing. The elderly do not have locomotor problems but have to be helped for body activities and meals.

GIR 5: Seniors requiring only one-time help for the toilet, meal preparation and housework.

GIR 6: Older people have not lost their autonomy for the essential acts of everyday life.

The GIR and APA

Only GIRs from 1 to 4 are eligible for the APA and allow the establishment of a personalized assistance plan. When the evaluation results in the determination of an GIR 5 or 6, the person may also request other optional support aids, for example the action plans formerly called the household aid provided by the pension schemes. The revision of the aid may also be requested at any time in the event of deterioration in the health of the elderly person.

For people in facilities the assessment of the loss of autonomy and of the person's needs is carried out, on the basis of the AGGIR grid, under the responsibility of the coordinating physician of the structure or, failing that, of a contracted doctor. The person concerned is then classified into one of the six iso-resource groups (GIR) of the AGIRR grid. This classification determines the tariff which is applied to him and therefore the amount of the allowance that will be paid to him according to his resources, after deduction of his participation. The evaluation is transmitted for validation to a doctor of the departmental council and to a doctor of the regional health agency designated for this purpose. This transmission is covered by medical confidentiality. In the event of disagreement, a regional medical coordination committee decides on the final classification of the person concerned

Among the 1,200 billion people above the age of 60 who receive the APA dependency benefit. 60% of APA beneficiaries live at home and 40% in special accommodation for the elderly. The average amount of the aid plan for people receiving domiciliary care was EUR 487 per month (of which around 20% are covered through user-fees), and 517 euros for institutional care (of which around 33% are covered through user-fees).

The fast increase (partly unforeseen) in the number of APA recipients since it came into force in 2002 has put a strain on public finances, especially for the departmental councils who finance over two thirds (72%) of the cost of the APA, the rest being covered by the National Solidarity Fund for Autonomy – CNSA.

The part of the APA in the aid plan has increased tremendously. Between 2008 and 2013, the number of beneficiaries increased by 11%. Similarly, gross expenditure increased by 10% (+ 4% in constant euros). The increase was strong for APA in residential institutions (+ 27%, i.e. + 19% in constant euros), in contrast with APA at home (+ 2% or 4% in constant euros). In addition, spending on institutional APAs increased almost twice as fast as the number of beneficiaries, reflecting a sharp increase in average spending per beneficiary. With 4,400 euros, this average annual expenditure per beneficiary of the APA in establishments joins, in 2013, that of the home APA.

The last reform of the APA is structured around three axes:

A better understanding of the needs and expectations of beneficiaries

Recognition and support of caregivers cf infra

Optimizing the management of the APA

1 A better taking account of the needs and expectations of the beneficiaries in their environment and the respect of their life project.

The law strengthens a multidimensional assessment of the situation and needs of the applicant and of his / her caregivers in their physical and human environment. This evaluation should enable the department's medical and social team to diversify the contents of the APA's aids (temporary help, technical aids, etc.) and to identify other useful aids for the beneficiary and his / her caregiver.

With the new regulation almost all of the APA beneficiaries at home (600,000 people) will benefit from a substantial decrease in their remaining costs The law also provides for a revaluation of the

national ceilings of the aid plans and a reform of the scale of financial participation of beneficiaries, aimed at lightening the rest on those whose aid plan is higher than € 350 per month. These measures will make it possible to better respond quantitatively to people with significant assistance needs and to reinforce the acceptance and effective use of the aids recommended. For example, for a person in GIR 1 with 1,500 euros of monthly income, the remaining cost will decrease from 400 to 250 euros, saving 1,800 euros per year. For people with reduced loss of autonomy it will give one hour of extra help per week and for the most dependent people with a current ceiling support plan it will one hour of additional home help per day.

GIR	Maximum monthly benefit euros
GIR 1	1713,08
GIR 2	1375,54
GIR 3	993,88
GIR 4	662,95

2 An optimization of the management of the APA

The law simplifies the allocation of the APA by removing the obligation for the departmental council to hold conciliation commission. In particular, this measure is intended to streamline procedures and reduce the time taken to award the benefit.

It simplifies the payment of the APA by easing the possibility of direct payment of the benefit to persons or bodies that provide accommodation, technical aids or temporary accommodation and respite at home, the beneficiary's prior agreement for direct payment, and extending the use of the universal service voucher (CESU) to family care.

Finally, the law clarifies the modalities for upgrading the ceilings and discounting the participation, which now take place each year on 1 January, in line with the evolution of the constant aid for a third party (MTP) increase.

The law also strengthens the information requirement of applicants and their caregivers. The department's medical and social team must guarantee the free choice of the beneficiary by presenting exhaustively all the devices of assistance at home in the territory concerned.

2.3 Promoting the quality of the providers

2.3.1 The providers of services and facilities

The public policy is now oriented to the emergent needs of the population through the development of home-based services, the promotion of services for elderly dependents, the development of information for people and those around them, local information and coordination center and for medical establishments and services to the reform of their tariffs to meet the evolution of the provided services .

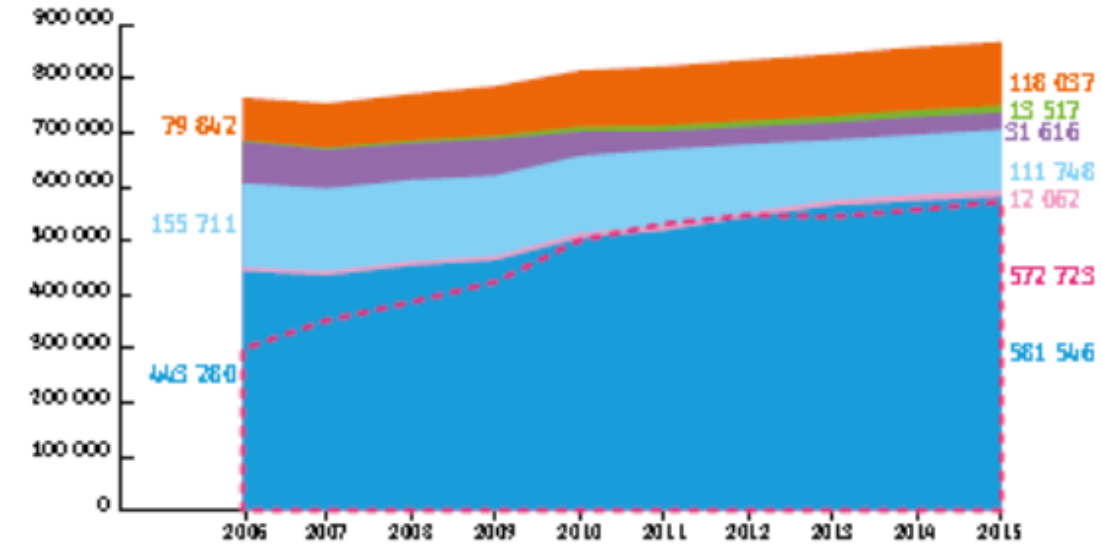
The institutional care capacity (number of beds) for inhabitants aged 75+ is 101 per thousand inhabitants, but this hides strong geographical disparities, for example the coverage is 31 per 1000 in Paris but 185 per thousand in the Lozère department (a small countryside department).

The chart shows that the most important variations in the offer:

- the development of home services and day care as well as independent housing with services or temporary shelters ;all these forms of services help keeping at home the elderly in way or in another ;

-the decrease of medical long term units which were in most of the cases subsidiaries of hospital;

-the transformation of former shelters into shelters for dependent people with medical staff. (dotted line).



Home services with social and nursing services

Day care center

Medical long term units

Independant housing

Temporary shelters

with home for dependent people

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In contrary to the French tradition, the orientation is to limit now the traditional sanitary approach to avoid avoidable and often deleterious hospitalizations in terms of autonomy and to shorten unnecessarily long hospitalizations by facilitating the return home as soon as it is recommended. The increase in the number of places does not prevent the rate of equipment from decreasing. From 166 per 1,000 people at the end of 1996, it decreased down to 122 in 2010. However; this development is consistent with the decline in the age at admission to development of home support and the evolution of family configurations. For the years to come, it is necessary to adapt the type of places according to the evolution of predictable needs.

With problems of funding the aim is to optimize the use of collectively available resources for a better matching of support and care to the needs and to adapt to the significant changes in the expectations of seniors even if problems related to the accompaniment of the elderly are strongly connoted "health" due to the risks of the morbidity linked to the age. The recent trend in favor of choice of domicile, due to the willingness of people to live at home and sometimes for economic reasons (tradeoff between the costs of elderly home and costs of staying at home) implies the association of local services capable of integrating a life project where the "care" dimension is never totally absent.

[129] http://drees.social-sante.gouv.fr/IMG/apps/statiss/default.htm

The autonomy package makes it possible to reinforce the mission of prevention of autonomous residences. The basic services expected in these structures will be fixed by decrees (restoration, laundry, prevention, etc.).

The autonomy package is intended to finance non-medical expenses to preserve the autonomy of residents through collective actions (relating to nutrition, memory, social ties, etc.). These actions may be offered to all seniors in the territory. It will make it possible to resort to professionals trained to accompany fragile audiences.

The offer is still dominated by the public sector with an impressive growth in the private sector. For example, for the facility for dependent persons 50% of the places are in public facilities, 22%in nonprofit private ones and 28% in profit organizations with the development of multinational companies.

Expand the supply of intermediate or clustered habitat

Investment aid for the modernization of autonomy residences

Significant rehabilitation work is required in some residences. Financial assistance may be provided by the National Solidarity Fund for Autonomy (CNSA), in conjunction with the general pension scheme (CNAV).

This subsidies will allow the residences to lower the amount of the loan and minimize the impact on the rent of the residents.

The creation of an "autonomy package" will contribute to finance prevention or animation activities in these residences

LTC must balance the tensions between life project and care project. National plans dealing with special topics (National heat wave Plan, Alzheimer's Plan, Plan for Palliative Care Development) are implemented to tackle specific points. That give the caregivers at home a special place.

2.3.2 Home caregivers: to a combination of professional and voluntary workers

A) professional caregivers

Historically supported by NGOs, the home care sector is progressively open to companies. The law Borloo of 26 July 2005 enshrines this development and makes home help for fragile population a special category of the broader sector of services to the person. Since 2005 there have been different types of registration for home help services:

- Declaration

All personal service activities may be subject to a declaration to the labor ministry. Obtaining a declaration allows organizations and their clients to benefit from a more favorable tax and social contributions system.[130]

Accreditation

In order to carry out certain personal services activities with fragile, the organization must obtain an authorization also issued by the local services of the labor ministry. To obtain this accreditation, the organization must comply with a specification.

- Authorization

Since the entry into force of the law 2015-1776 of 28 December 2015 on the adaptation of the society to aging, activities carried by providers out for elderly persons and persons with disabilities or chronically ill are governed by the authorization system issued by the departmental councils.

Direct employment, proxy or provider

For home services there are three possibilities:

-the senior is the direct employer of caregivers: he signs directly the contract and manage totally the labor relation with the employee

-proxy; the senior is still the employer of the caregiver, but all the paper work is devolved to a third party mostly (NGOs) which manages all the administrative work and receive fees from the employer

provider the senior has a contract with the service provider and no responsibility in the management of the workforce

direct employment 25%

proxy employers 22%

provider mode 55%

Complex and not very readable, not only for services, but also for users, the right of option mechanism is deemed largely unsatisfactory.

[130] these services are not dedicated only to people with dependency but they could provide various services (cleaning, meals, gardening)

B) Make the home care sector more attractive

Almost all workers in the sector are women. More than 60% of them have no qualifications and 70% work on a part time basis. These employees are low paid. Physical and psychological stress factors are far from being negligible and can quickly lead to situations of burnout. Some of the difficulties are due to the organization of the activity. The journeys are numerous and sometimes long. Though part time is frequent, staff is mobilized for long time slot. The very characteristics of the work may create certain risks. The interventions are solitary, frequently standing and sometimes burdensome. Deterioration in health status of accompanied persons, whether physical or psychological plays on the painful feelings of workers. Working conditions may also be difficult when the structures of services do not have the sufficient resources to ensure the correct application of the collective agreements.

Finally, home help staff suffers from a lack of social recognition of their work. Intervening with people often with increasingly severe diseases requires know-how in particular. Home-based providers could bring an essential contribution to the prevention of loss of autonomy and the detection of the signs of fragility in the people they accompany. However, home help remains too often considered as a form of improved housekeeping. This situation plagues the attractiveness of the sector and its ability s to retain its employees. Prospects for career development are limited, in particular because of the lack of gateways with other sectors. While the home care sector is often presented as an important source of non-DE localizable workplaces, the activity of the services is very largely dependent on the degree of solvency brought by the public authorities. However, the sector and improving the quality of interventions can also be considered only if the home help services have the sufficient financial resources to ensure satisfying career progression.

There are many structures that have committed themselves in the last few years to ambitious training policies beneficial for staff. Professionalization and access to diplomas in the medico-social sector are also essential to the quality of the care of persons whose levels of dependence are increasingly high.

However, implemented in isolation, these measures lead mechanically to an increase in the hourly cost of the intervention, sometimes difficult to integrate. Then a vicious circle begins: the service is put into difficulty if the cost of professionalization is not integrated into the hourly rate; When this is taken into account, the result remains a higher burden for the beneficiary, the number of hours can then decrease.

The estimate of home-based services potentially involves 719,000 beneficiaries of APA at home, the 500,000 people who use domestic help provided by the pension schemes and about 23,000 people in care at home by departmental council social assistance.

The professionalization of staff must be strengthened. To improve the quality of schools, it is necessary to develop even more evaluation and certification.

C) Voluntary caregivers a major challenge

Elderly helped by their partner	2540000
Elderly helped by their child	738000
Elderly helped by another relative	164000

According to survey data, there are about 3.5 million informal caregivers when counting care for people across all levels of dependency. It can be estimated that there are at least 300,000 informal caregivers tending to people with severe LTC needs. As much as 85% of informal caregivers are close relatives of the 'cared-for' old person. However, informal care giver also includes neighbors and friends (9%) in particular for single people living at home. Intergenerational relationships in the family remain important as elderly care by a descendant is based on the notion of giving and receiving at different periods in life. 50% of the main care-givers are spouses and 30% are children.

When the partner/spouse or children are the main care givers the informal care giver is typically a woman. Older men are mainly cared for by their wives, while older women, often widowed, are mainly cared for by a daughter. Due to female life expectancy, adults are likely to care for their mothers or mothers-in-law.

The highest likelihood that someone will become a family caregiver seems to be between 60 and 75 years of age. When the informal caregiver is the spouse, the average age is 70; when they are the child, the average age of the informal care giver is 51. Spouses typically provide LTC in relation to both ADL and IADL limitations. Children are more likely to handle only IADL tasks. 47% of the voluntary caregivers are employed or apprentices, 7% are unemployed, 33% are retired, 13% are non-working. Caregivers are on average 52 years old and two thirds are women.

Although the family is the main provider of care for the elderly, there is no real caregiver policy in France. But this does not mean there is no attempt to contribute some support to informal caregivers. Working caregivers can benefit from the right to leave their job for three months without losing retirement rights. Informal caregivers also have the possibility to have caring qualifications recognized. Three measures tend to increase the value of informal care: The creation in law of a specific status of informal caregiver; the creation of 'the informal caregivers' notebook' which gives information to the caregivers about their rights; and the possibility for informal caregivers to be paid, thanks to the APA allowance.

Their role and situation will have to be systematically taken into account during an APA request or review; their needs will have to be assessed if necessary in conjunction with the assessment of the needs of the elderly person in order to offer them help, advice, respite and relay arrangements to better ensure their role and prevent their exhaustion. The right to respite allows the possibility of exceeding the ceiling of the aid plan. It also provides, within the framework of the APA, the possibility of taking care of the person assisted when his / her caregiver is hospitalized and needs to be relayed by professional structures (use of one or more temporary facilities, or in a foster family, a home relay).

3. Improvement ways

3.1 The evaluation of the loss of autonomy could be improved

Current tools for assessing dependence are considered to be fairly reliable, with a need of better clarity for the assessment of "partial» or intermediate dependence (GIR 4).

The current grid of dependency assessment is considered as a solid tool shared by all the players in the sector. It serves both to assess the degree of dependence for the elderly in the accomplishment of the acts of daily life and the eligibility to the APA. The grid is marked by a sanitary and functional approach to the loss of autonomy and does not describe the human and material environment of people but generally it benefits from a rather good reproducibility even if differences are observed between departments. The reliability of the AGGIR grid for GIR 4 classification has been analyzed and since the share of beneficiaries of APA under GIR 4 [131] is on average 45% of the total number of beneficiaries, it shows huge differences among the departmental councils.

A multidimensional tool could be set up to assess better the needs of dependent persons and to provide them a more effective assistance. The AGGIR grid could be inserted into a multidimensional tool. The AGGIR grid does not describe the elements of the material and human environment of the person which, however, influence his ability to perform or not the activities of everyday life. Moreover, the use of the grid for the sole purpose of the ranking does not sufficiently document the evaluation of the need of the person. Some departments have introduced more comprehensive evaluation grids to develop aid plans. Even if in most of the cases the APA form is filled by the general practitioner it is always possible to bring in a multi competences team (social worker, nurse …) or to send a member of the team to the home of the beneficiary to have a better assessment of the human and material environment of the people, medical and paramedical needs, as well as those of housing. Mutual evaluations are conducted by the departmental councils and pension funds.

A referential was developed from the assessment guide for the elderly person with loss of autonomy (Annex 2-1 of the Code of Social Action and Families) and the multidimensional assessment tools already developed by the medico social teams of the departmental councils. It should enable these teams to collect relevant information to describe and assess the situation of the elderly and their caregivers, to identify compensation needs and the different criteria for access to rights and benefits. It should also promote the development of a common language among professionals.

The framework covers twelve dimensions:

Identity of the person;

Elements related to the organization of the evaluation;

Circumstances of the application;

Expression of the person;

Social environment;

Administrative and budgetary situation;

Current aid;

[131] GIR4 is the first degree of eligibility for the APA .GIR 1 is the highest degree of dependency

Physical environment;

Realization of the acts of everyday life: AGGIR grid and state of health;

Summary of the situation of the person assessed;

Situation and needs of the caregiver (s);

Development of the aid plan.

The medico-social teams of the departmental councils will use it during an assessment related to an APA application at home or during the revision or renewal of the service, with the aim of developing a plan of assistance for compensating the loss of autonomy of the person. They will analyze the different dimensions on the basis of direct observations, a home visit and information gathered from the elderly person, his / her caregivers or their partners (treating physician, LINC, MAIA case managers ...) to identify the needs of the person and their caregivers.

The twelve dimensions of the data repository have been translated into a form that professionals can use to carry out the evaluation in the homes of people. It is presented in a PDF version, can be edited online or printed. Departmental councils are free to use the form made available by the CNSA or to translate the repository into another form.

3.2 A more coordinated approach

The trend to a global, medical, psychological, social, but also environmental approach, based on the multidisciplinary nature of the actors and involving a cross ministerial approach taking into account the different fields concerned implies a diversification of the offer:

• facilities and services for the elderly, in particular residential accommodation for dependent and non-dependent elderly people (EHPAD, EHPA / shelter units ...) to have a comprehensive range of providers following the needs of the elderlies with especially different levels of health services

• services to help the recipients to stay at home; Home Nursing Services (NSIAD), Home Assistance and Accompaniment Services (SAAD), Multi-purpose Home Care and Assistance Services (SPASAD) which social services in relation with the daily life

• services implementing measures for the protection of adults ordered by the judicial authority, safeguarding of justice, curatorship, guardianship or judicial accompaniment to allow ageing people to keep their say on the decisions related to their life

• resource centers, information and coordination centers or community service providers, implementing screening, assistance, support, training or information, advice, expertise or coordination for the benefit of users or other institutions and services including local centers for information and coordination (CLIC LINC), which have a coordinating role in support for home care.

The public authorities try to diversify the offer by adding new categories of facilities and services. The list of the various services is not crystal clear for the user and for the public manager. That the reason the new service offerings take more and more the form of platforms bringing together several types of support and easing the mobilization of multiple funding to take account of the distribution of competences between the various institutional players and the constraint on public expenditure institutions.

To mobilize the useful aids for the person (doctor, nursing, aid to caregivers, services at home, etc.) and to follow up the proposed aid plans there is no coordinator of the aid. It is for this reason that, in special complex cases some coordination centers are set up as houses for the autonomy and integration (MAIA) for Alzheimer's patients or in the form of "case managers".. Since 1982 at least, the subject of territorial coordination has been stacked with initiatives (coordinators in 1982, gerontological networks in 1999, local information and coordination centers -CLIC - from 2000, then finally MAIA, experimented since 2009 within the framework of the Alzheimer plan and generalized in 2011 to all people with loss of autonomy). These different structures are not everywhere, and they operate very differently from one place to another, so that the landscape is illegible for dependent persons and their families. The other level of coordination is at the regional and national levels and to organize coordination at the "lower" levels. The necessary institutional coordination for the planning of preventive actions, sanitary and medical-social equipment and services is still flawed. Today, no actor or procedure really allows national coordination.

Even if the project to merge into a unique concept of dependency disability and ageing questions has failed there is a progressive convergence of certain issues of care for the elderly and the disabled. The rise of home-care services linked to the "life-project" approach already used by people with disabilities. Long-term care path of chronic elderly patients highlights similar situations, with disabled people and similar difficulties in the advanced ages.

If the funding ,the methodology ,the needs and the benefits are not the same ,this common approach is illustrated by the creation of maison départementale de l'autonomie (MDA), "Departmental House of Autonomy" one step shop for information, assessment and benefits granting for both categories without regard to the age limits .MDA implementation could pool the reception function, bring together evaluation teams (professional cultures but not merger of tools that are regulatory: GEVA for disabled and AGGIR grid).

3.3 New forms of public intervention

With life expectancy for men and women at age 65 projected to rise from 18.5/22.7 years in 2010 to 23.0/26.6 years in 2060, the situation of the user will undergo many changes. This dynamic approach leads to implement parcours de vie, life course which could be flexible enough with regard to the needs but also to availability of services in the direct environment of the person. The challenges are multilevel.

First the tariffs for establishments and services must be adapted to the needs of users, to the way structures are operated and adapted to the need of changes during the life of the elderly person. The relatively restricted and standardized nomenclature of facilities and services in the mode of care is an obstacle because it does not allow a flexible allocation of means to variable individual and collective needs. The relation between the providers and the public funders is more and more

managed through Multi-Year Contract for Objectives and Means (CPOM). This allows flexibility and room for maneuver within global envelopes while guaranteeing clarity on public spending.

Secondly it is important to improve the regional and departmental steering, in particular the link between the departmental councils and the regional health agencies and their territorial delegations, in order to promote coherent planning (regional schemes of medico-social organization and departmental social and medico-social organization), programming (PRIAC) and authorizations (calls for tenders).In relation with the regional planning the State promotes transversal tools for the knowledge of supply and forecasts of evolution of capacities with homogeneous information systems in order to have objective and shared observation.

Thirdly the structuration of the providers aimed to reach critical sizes for the organizations which manage facilities or services (EHPADs, SSIADs, elderly homes, etc.) to strengthen cooperation and improve the service provided, for example, by increasing skills for quality engineering.

Fourthly the law n° 2002-2 of January 2nd, 2002 establishes a common reference framework for the activities of institutions and services. The adaptation of the operational framework of support, in particular with soft guidelines allowing the services to adapt to the evolutions of the situation to introduce more flexible, administrative authorizations to adapt to people's personal life courses . More than 20% of deaths beyond the age of 85 occur in institutions. However, these structures have often a lot of trouble dealing with the end-of-life issue of their residents. The medical-social institutions should formalize a project of accompaniment of people at the end of their lives and that this dimension should be integrated into their activity. There is a reflection on the responsibility of managers of medico-social structures to take into account more open and shared modes of support.

4. Prevention, a major element of the LTC: to give a lift to individual and collective prevention

Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. It applies to both individuals and population groups following the definition of the WHO[132].

The loss of autonomy is due to a deficiency or a polypathology. But the environment human and material needs of the elderly person can reduce their dependency: social integration, technical aids or adaptation of habitat and the urban environment. ... Moreover, the aging of people with disabilities, the emergence of disabling diseases and Alzheimer's disease require the implementation of sanitary, social and medico-social responses.

To allow all pensioners an access to an individualized prevention system

The prevention actions that can be implemented thus present a very great diversity. Responsibility for these actions lies in a multiplicity of actors, both at national level and regional. The State, the

[132] Active aging allows people to realize their potential for physical, social, and mental well-being throughout the life course and to participate in society, while providing them with adequate protection, security and care when they need.

social security schemes (health and retirements), numerous stakeholders such as the Santé Publique France, the Health Authority (HAS), CNSA, ARS, departmental councils, town, health mutual and private insurances, all act in one way or another in favor of the prevention of dependence. This fragmentation poses many difficulties. The lack of national strategic axes and global vision condemns to the dispersion of the actors. On the other hand, the targeting of prevention policies to those most in need is inadequate. Fragmentation of expertise and low professionalization engineering limits the effectiveness of actions. According to a study (Santé Publique France) the elderly has difficulties in adhering to prevention messages because negative social representations of old age and dependence. Finally, the fragmentation of the care for the elderly between the departmental councils (persons GIR 1 to 4) and the pension schemes (GIR 5 and 6) reinforces the difficulties of coordinating prevention policy. To address these shortcomings, prevention of loss of autonomy must become a major concern of LTC policy. Most of the proposed actions were gathered in the plan Well aging 2007/2009[133].

4.1 Home

In 2005, 19 the High Authority of Health estimated that more than 9,000 deaths of elderly persons were caused directly or indirectly by a fall. And out of 450,000 falls observed each year, 62%, according to Santé Publique, intervene at home. To put this figure in perspective, it should be recalled that in 2011, road accidents caused the death of 3,900 people in total in France.

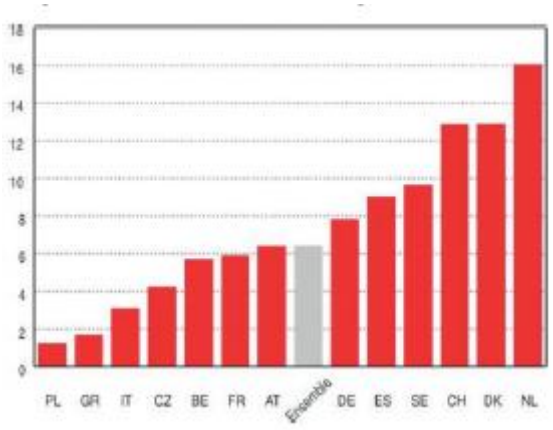
Indifference to the fate of elderly victims of falls resulting in death is incomprehensible. As said before most of the retired households currently own their home and wish to remain at home longer. These properties are mostly single-family houses. The adaptation of housing is however little practiced in France and but has a preventive dimension (preventing falls for example). According to a first approach, two million households would need, over the next few years, an adaptation of their housing. The number of households in this situation eligible for aid from the National agency for the improvement of the housing ANAH (i.e. modest households) is estimated at 830 000. Despite clearly identified needs, the APA is not much mobilized to finance these adaptations, particularly because the aid plan is often allocated to care workers. This kind of adaptation could be carried along an overall assessment and walking rehabilitation sessions by a physiotherapist and getting aging people to engage in regular physical activity or sports, preferably coached by specifically trained sports educator.[134]

More generally it the aim is bringing cities into the World Health Organization's "Age Friendly City" dynamic and defining "friendly neighborhoods for the elderly" (bringing together businesses, utilities, adapted housing, transportation and spatial planning) .

% of housings fits for disabled people

[133] http://travail-emploi.gouv.fr/IMG/pdf/presentation_plan-3.pdf

[134] Finalize the National Housing Adaptation Plan to the loss of autonomy. 80,000 private dwellings will be renovated by 2017 with the National Old Age Insurance Fund (CNAV) and the National Housing Agency (ANAH). As of 2015, € 20 million has been allocated to the ANAH as part of the national plan to adapt housing to the loss of autonomy. Microcredit: a system for those who do not have access to a conventional bank credit and whose cost of work is not fully covered by ANAH and CNAV.



Source SHARE survey [135]

4.2 Health

One of the main issues is to prevent diseases that could impair the life of ageing person. The transformation of lethal diseases into chronic diseases (cancer, chronic respiratory diseases, and diabetes) implies the prevention of pathologies must be promoted by identifying and managing the risk factors of the pathologies responsible for loss of autonomy. Some steps are valuable as opportunity to develop preventive policy.

As they go to retire, for pre-retirees and pensioners, occupational medicine and the mechanisms put in place by pension schemes play a fundamental role, particularly in the case of the socio-professional groups most exposed during their retirement to risk factors, including cardiovascular risk factors. These events have a prevalence that increases with age. They represent the most important factors in the decrease in the quality of life, dependence and mortality in old age. It's about smoking, hypertension, hypercholesterolemia, but also physical inactivity, overweight, isolation, and pathologies such as cancer, osteoporosis or depression to employees who are approaching the cessation of after retirement the identification of frail elderly people, the location of elderly people who are isolated or have a sense of loneliness or uselessness, or at risk of exclusion (medical, social, etc.) could be carried by pension schemes:

-after a disease: secondary prevention and appropriate management of pathologies regardless of age.

- in institutions: promoting tertiary prevention, pain, mental distress and depression, dementia (Alzheimer's disease and related diseases), behavior disorders, walking disorders, infectious risks ....

- promote well-treatment in residential care facilities for dependent elderly (EHPAD).

- at the end of life: access to palliative culture and accompanying end-of-life in EHPAD and services

[135] http://www.share-project.org/

-prevent denutrition and organize oral care: develop actions to conserve the pleasure of eating, generalize the monthly weighing of the residents and the daily oral toilet;

-preventing drug-induced iatrogenism: organize and generalize an alert procedure on neuroleptics in Alzheimer's patients; Identify inadequate prescriptions and accompany authors;

-deployment of the MobiQual program, a multi-professional training program for EHPADs, home care and support services, healthcare establishments and initial and continuing training organizations, with a view to harmonizing geriatric practices

--experimentation of a national health education program for the benefit of the elderly. This multi-thematic group program proposes a cycle of six workshops with the following themes: memory, depression, nutrition, physical activity, risk, bones, prevention of falls, organ of the senses, sexuality, sleep and drugs.

Health prevention program

-improve the management of deafness, taking into account technological and noise prevention campaigns.

-conduct a series of tests to evaluate visual function for early screening

- breast cancer screening already available to all women aged 50 to 74 years.

- screening for colorectal cancer; the test is offered to men and women aged 50 to 74 years every 2 years.

- free consultation of prevention to 60 years including a balance sheet, advice on the link between oral health and health, and awareness of the use of fluorides.

- Nutrition guide from age 55 within the framework of the National Nutrition Program (PNNS) (booklet for professionals and general public, TV spots on the themes of "drinking, eating and moving", poster campaign in pharmacies).

4.3 Social inclusion: raising awareness about the contribution of retirees and the elderly to economic, social and cultural life through intergenerational activities, and its local impact

One typical example is intergenerational housing experiences. Providing housing the elderly person receives in return voluntary help from the occupant of the dwelling and friendly relations and solidarity - in the project mode "a roof, two generations”.

A major effort is done to entice elderlies to sports activities (directory of sports associations and clubs offering activities for seniors and put online on a website; accompaniment of the sports

federations which will strengthen their offer in the framework of the medical objectives; consensus conference on the content of medical examinations prior to the practice of sport or the resumption of physical activity).

As for health, retirement looks like a critical step. Suicide is one of the three leading causes of death for the elderly, with cancer and cardiovascular disease. In 2009, there were 10,464 deaths per suicide, of which one third were among the over 60s, while only 22% of the French population. In the 85 years and over the prevalence of suicide is twice that of the 25-44-year olds. Suicides take place for 70% of them at home.

The government encourages the employers confederations and the associations of human resources managers to implement training sessions dealing with all the dimensions of the Well aging including information on behaviors that are conducive to aging and if the person so wishes, a speaking time to take stock of the events. The national program National Mobilization to Combat Elderly Isolation Monalisa is designed to preventing depression by identifying symptoms and developing national care with the deployment of volunteer citizen teams throughout the territory.

• Develop and disseminate in a structured way multidimensional assessment and monitoring tools;

• Have a common language and references scientifically validated, but above all "appropriable" by the actors of the first line, at all levels of intervention: general practitioners, professional coordinators and networks, social actors…

5. Silver economy as a support of LTC

As indicated supra the care of aging people could be an opportunity for private providers both at home or in facilities and an opportunity to create new product .The Silver economy (Silver economie in French) is a way to gather all the activities which contribute to a better aging in the regions, at national level and in export markets, in order to make France a world leader and create jobs (housing, home help, new technologies industry at the service of age ...).It is both an appeal to all consumers to enable them to express their expectations for goods and services and to develop an offer .

For example, there are less than 500000 detection devices in France against two billion in UK. 16% of GIR

5 and 6 persons only are equipped with at least one technical assistance, 73% for GIR 3 and 4 and 82% for GIR 1 and 2. So the concept of Silver economy tries to modify the perception of LTC as a part of a new economic sector which covers:

The explanatory factors are manifold. The definition of the list of reimbursable products and services, essentially aimed at hospital discharge[136].The standards for products intended to meet the needs of the elderly are not adapted (only about 7% would directly meet the needs of retirees).there

[136] Technical aids (code of social action and families): "Equipment or technical system adapted or specially designed to compensate for a limitation of activity encountered by a person on account of his handicap, acquired or leased by the person for his personal use"

is a lack of information for users. The use is to fulfill the need for "safety", e.g. rooms that are perceived as very accidental (such as the bathroom), to the detriment of a wider adaptation. The development of new diagnostic or therapeutic solutions adapted to retirees is still unexplored.

The response is to develop a comprehensive approach linking a better knowledge of the needs, a dissemination of information on existing solutions, funding of experimentation.

Tax credit for capital for self-sufficiency

• applied when installing or replacing equipment specially designed for the elderly or disabled.

• they can be integrated into new or old housing;

• the tax advantage can be collected without being an owner;

• The list of equipment is fixed by decree (washbasin, bathtub, handrails, installation of a lifting appliance;

signaling or warning control system; closing, opening devices or control systems for electrical installations, water, gas and heating).

The creation of gerontopoles cluster of companies will facilitate the transfer of research, from the development of technology to the care, medico-social and services provided to the elderly. They will be in line with the guidelines defined by the national health strategy and the research agenda "France - Europe 2020 The mission of the gerontopoles is to bring together and energize around the aging of the actors of research, associating companies, local authorities, funders (insurers, mutuals), academics and competitiveness clusters, professionals-users-unions and national federations.

The Ministry of the Economy, Finance, and Employment with the support of the Ministry of Health. encourage the development of an innovative industry and a high-quality economy in the field of technologies to support the Silver Economy, to support the professionalization of public buyers in this field and to pool innovative public procurement.

Conclusion

LTC raises quite a lot of questions. A better assessment of the needs and the of the expectations of the elderlies is necessary. For example, do they ask to live at home or in a home, a subtle nuance, which is illustrated by the success of all these new forms of housing, giving them access to customized social life and services. Who will be in charge to supply this new kind of services with a growing part allocated to the private sector? It is essential to reach the right balance and to avoid overloading these alternative services with a burden of norms.

Is silver economy a real chance for France? From a technical point of view, certain objects facilitate everyday life, but the whole remains expensive and the risk is aN essentially consumerist and segregative society. On the one hand, retirees who have money, culture and time. On the other hand, all those who do not have that chance.

And finally, is age an operative criterion for dependency policies. If aging policy includes more dimensions, LTC appear as a common element for both disability and aging.

There is no one size fit all answer it depends of the person, the territory, and the kind of solidarity the country is ready to afford.

Appendix1

Demographic situation

France (FR)															
Demography															
Elderly population as % of total population [1]	2013			2030			2045			2060			P.p. change (2013-2060)		
	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F
65+	17.6	15.3	19.7	23.1	20.8	25.4	25.2	22.5	27.7	24.8	22.3	27.3	7.2	7.0	7.6
80+	5.6	4.0	7.2	7.3	5.8	8.7	9.9	8.0	11.8	10.6	8.6	12.5	5.0	4.6	5.3
85+	2.8	1.8	3.8	3.5	2.5	4.4	5.6	4.2	7.0	6.6	5.1	8.2	3.8	3.3	4.4
80+/65+	32.1	26.3	36.3	31.7	28.2	34.4	39.5	35.4	42.7	42.6	38.6	45.8	10.5	12.3	9.5
85+ /65+	15.9	11.5	19.1	15.0	11.9	17.3	22.4	18.6	25.4	26.7	22.7	29.9	10.8	11.2	10.8
Elderly population as % of total population [1]	EU-28														
	2013			2030			2045			2060			P.p. change (2013-2060)		
	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F
65+	18.2	15.8	20.5	23.9	21.5	26.1	27.6	25.2	30.0	28.4	26.0	30.7	10.2	10.2	10.2
80+	5.1	3.6	6.4	7.1	5.6	8.5	10.0	8.2	11.7	11.8	9.8	13.7	6.7	6.2	7.3
85+	2.3	1.5	3.2	3.5	2.5	4.4	5.3	4.0	6.5	7.0	5.5	8.5	4.7	4.0	5.3
80+/65+	27.8	22.9	31.4	29.7	26.2	32.5	36.1	32.5	39.0	41.5	37.7	44.5	13.7	14.8	13.1
85+ /65+	12.9	9.3	15.5	14.5	11.8	16.7	19.2	16.0	21.8	24.6	21.1	27.6	11.7	11.8	12.1
Old-age dependency ratios, % [2]	France (FR)									EU-28					
	2013			2060			P.p. change			2013			2060			P.p. change		
	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F
20-64	30.4	26.0	34.7	47.6	41.6	53.9	17.3	15.6	19.3	29.9	25.4	34.4	55.3	49.2	61.6	25.3	23.7	27.2
20-69	20.2	16.4	23.8	34.7	29.6	40.1	14.6	13.2	16.3	19.9	16.2	23.5	39.9	34.7	45.2	19.9	18.5	21.6
Health status															
Life expectancy [3]	France (FR)									EU-27					
	2010			2060			Change (years)			2010			2060			Change (years)		
	M		F	M		F	M		F	M		F	M		F	M		F
years at birth	77.9		84.6	85.1		90.0	7.2		5.5	76.7		82.5	84.6		89.1	7.9		6.5
years at 65	18.5		22.7	23.0		26.6	4.5		3.9	17.2		20.7	22.4		25.6	5.2		4.9
Healthy life expectancy [4]	2005			2012			Change (years)			2005			2012 (EU-28)			Change (years)		
	M		F	M		F	M		F	M		F	M		F	M		F
years at 65	8.5		9.7	9.5		10.4	1.0		0.7	8.6		8.9	8.4		8.5	-0.2		-0.4
Healthy life expectancy as % of the life expectancy	2005			2011*			P.p. change			2005			2011 (EU-28)*			P.p. change		
	M		F	M		F	M		F	M		F	M		F	M		F
at 65 (%)	48.0%		44.1%	50.4%		41.8%	2.4		-2.3	52.1%		44.5%	48.3%		40.4%	-3.8		-4.1
Expenditure on long-term care															
Total public expenditure on long-term care as % of GDP [5]	2010			2060			P.p. change			2010			2060			P.p. change		
	2.2			4.4			2.3			1.8			3.6			1.7		

Notes:
M - Males; F - Females; : - not available; * - data for 2012 - not available
Sources:
1) Commission services. DG EMPL calculations based on data from EUROPOP2013, Population at 1st January by sex and single year age [proj_13npms]
2) Commission services. DG EMPL calculations based on data from EUROPOP2013, Population at 1st January by sex and single year age [proj_13npms]
Old-age dependency ratio (20-64) - the ratio between the total number of elderly persons aged 65 and over and the number of persons of age from 20 to 64.
Old-age dependency ratio (20-69) - the ratio between the total number of elderly persons aged 70 and over and the number of persons of age from 20 to 69.
3) Commission services, EPC. The 2012 Ageing Report
4) EUROSTAT, Healthy Life Years (from 2004 onwards) [hlth_hlye]
5) Commission services, EPC, The 2012 Ageing Report. Base case scenario

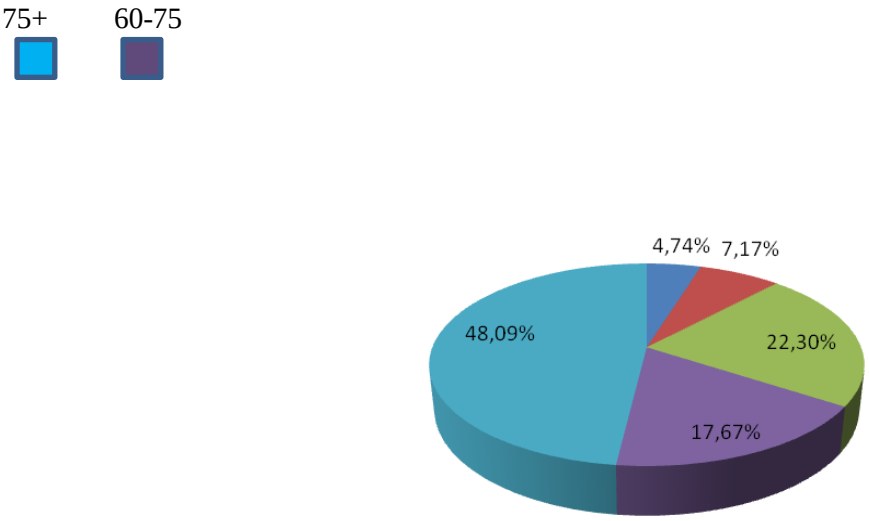
Appendix 2

Global expenditures for LTC(2011)

Expenses of care GIR 1 to 4	ONDAM medical-social GIR 1 to 4	6,807
	Financing CNSA of facility	912
	City Care	3,000
	USLD	990
	Hospital	2,000
	Total care GIR 1 to 4	13,709
Expenses Of dependence strictly speaking GIR 1 to 4	APA	5,297
	Financing of animation actions by CNSA	76
	Exemptions from social security contributions for home-based employment	996
	Exemption from tax on insurance agreements (TSCA)	36
	Income tax exemption from APA	90
	IR credit on special equipment for the disabled	27
	Tax credit for the employment of an employee at home	244
	Reduced rate of VAT on specific equipment	10
	Reduced VAT rate for personal services	10
	Total dependency GIR 1 to 4	6,786
Accommodation Expenses GIR 1 to 4	APL / ALS	335
	Reduced rate of VAT applicable to the construction of establishments Welcoming elderly or disabled persons	30
	ASH net	967
	Co-financing of investments by CNSA	390
	Tax rebate for dependency and shelter costs	150
	Total accommodation GIR 1 to 4	1,872
Total GIR 1 and 4		22 367
Spending GIR Care 5 and 6	ONDAM medical-social services for the elderly GIR 5 and 6	296
Expenses Of dependence GIR 5 and 6	Social action of the pension branch	660
	Social action of departments and communes	252
Expenses Accommodation GIRs 5 and 6	Tax rebate for dependency and shelter costs	25
	APL / ALS	70
	ASH net	233
Total GIR 5 and 6		1536
Total all GIR		23,903
Billions euros		

Appendix 3

Distribution of the various safeguard measures following the ages



Appendix 4

Data about APA

APA récipients 31.12.2013	**1 211 092**
APA recipients / 100 people 75 years and + %	**20,8**
APA récipients home 31.12.2013	**710 580**
APA récipients home GIR1 + GIR2 %	**19,1**

	Number of facilities	Number of places
residential accommodation for dependent elderly people	7394	572723
Shelter units	2330	111748
residential accommodation for non dependent elderly people	806	8823
Medical long term units	97	31616
Others	65	1110
TOTAL	10481	743 397

France (mainland)	At home	Facilities
Number	722047	478206
disribution		%
GIR 1	0.025	0.2
GIR 2	0.175	0.41
GIR 3	0.218	0.17
GIR 4	0.581	0.22

Equipement	France mainland
Rate of equipment in non-EHPAD facilities per 1,000 persons aged 75 and over (Places in retirement homes, housing units,Long term medical unit)	25,8
Rate of equipment in EHPAD facilities per 1,000 persons aged 75 and over	100,4
Rate of equipment in home care services for 1,000 people aged 75 and over (SSIAD + SPASAD)	19,8
Types	
Places in temporary accommodation	15 686
Places in day care	20 739
Sleeping places at night	80

Appendix 5

Law of 2 January 2002 on the renovation and modernization of social action

During the 1970s, the role of the disabled person in society began to evolve towards greater participation in community, social and civic life. This development was particularly marked by the 1975 law on disability, which for the first time addressed the issue of support for the disabled person and also highlighted the establishment by the competent authorities of plans intended to diagnose , to improve and to steer the policies carried out,.

The law of 2 January 2002 revived social action and clarified the function of regional schemes of social and medico-social organization (SROSMS).

It has set up individual projects for users of medical and social institutions, taking into account their expectations and needs.

It is based on 5 orientations:

- Affirming and promoting the rights of users
- Diversifying the missions and offers by adapting the structures to the needs.
- Controlling system : better articulation planning, programming, allocation of resources, evaluation.
- Establishing coordination among the different actors.
- Renovating the status of public institutions.

It has put in place seven tools within the framework of the first residential orientation:

- The information booklet
- The Charter of Rights and Freedoms
- The contract of residence
- A conciliator or mediator
- The rules of procedure the institution
- The service project
- The council of social life

It has promoted the creation of new types of facilities / services as well as experimental projects.

It has made mandatory self-assessment for institutions (with communication every 5 years) and external evaluation every 7 years by a consultancy

The creation of the National Agency for the Evaluation and Quality of Social and Medico-social services (ANESM) has thus made significant progress, thanks to the publication of good practice guides.

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5. Development of Old Age Services and Long-Term Care System in Germany

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Contents

Abbreviations

ADL	Activities of Daily Living
HI	Health Insurance
IADL	Instrumental Activities of Daily Living
LTC	Long Term Care
LTCI	Long Term Care Insurance
NGO	Non-Governmental Institution
OMC	Open Method of Coordination
SGB XI	Social Code Book XI

Tables

1. Executive Summary

The German Long-Term Care system came into force in 1995 through the fifth pillar embedded in the social insurance system. The Long-Term Care insurance follows the Bismarck system which is based primarily on social insurance contribution. Main reason for introducing this 5th pillar was the steadily increase of the elderly who were dependent from social care support and, in parallel rising expenditures of social welfare scheme, mainly, due to transfers to residential care facilities.

Long Term Care insurance system implementation implicated also the definition of dependency and subsequently entitlement to benefits. At that time, physical impairment was in the focus and the assessment result distinguished three grades of dependency linked to time required for care per day. The benefit package offered by the insurance consists of cash and/or kind options and aims at services related to ADL/IADL.

Service provider structure is grouped in NGOs, private and public entities. Against the background of the subsidiarity principle major role in provision of services play NGOs and private contractors, whereas, public providers are marginal represented. Regardless of the legal form, providers are bound by law to fulfil quality standards in order to enter the market and conclude agreements with the LTC funds.

The well-developed professional service provider system in LTC represents a big industry but does not represent majority in the care system. Since the beginning of LTC insurance about 2/3rd of all eligible persons and beneficiaries of service packages are living at home. This general tendency is unbowed and supported by the LTC benefit package as well as social security arrangements for informal carers.

Funding the system is managed by LTC compulsory insurances, either social or private institutions. Since the implementation of LTC insurance revenues and expenditures are balanced and even to be well stocked with reserves. Cost control and sustainability was accomplished by same level of benefit packages over a long period and incentives for home and informal care which keeps expenditures low. The capital stock accompanied by the method of internal financial equalization promoted to balance revenue and expenditure regardless of the increasing number of beneficiaries.

First reform of LTC was initialized in 2015 and second reform entered into force as from January 2017. New regulation on benefits and services systematically implement the aim of the new definition of LTC needs. The previous system was based on three categories of care linked to time needed per day has been replaced by five uniformly valid grades of care and takes into account physical, mental and psychological impairments. Updated benefit packages have increased in home care, cash and kind and, informal carers are eligible persons for social protection through contribution payment settled by LTC Insurance.

2. Philosophy: General risk and poverty reduction

Germany has introduced a fifth pillar in its compulsory insurance system in 1995, the Long Term Care insurance. On the basis of several facts the social policy was challenged to pay attention to the elderly. Their share in the population was growing rapidly associated by needs in terms of social as well as medical care. Since the health system was overburdened by elderly people demands through long term stay in hospitals, although their need was related to social and not medical care, and, the same period churches lost their prominent role in supporting elderly with services at home, a great deal of discussion was put on the social policy agenda; in terms of funding and of development a comprehensive service system which meets population needs. Social-political consensus was reached in terms of the general risk becoming dependent during life span.

The risk to lapse into poverty was high for the elderly. Due to low pensions, many could not afford to pay for social care services, especially not in residential care homes and social welfare schemes had to pay the difference in order to cover costs. Local authorities were overburdened paying for social care services.

Two years after the implementation of LTC insurance, in 1997, the social assistance cash benefits for being resided in a nursing home decreased by 58%. After 10 years insurance scheme the trend being supported by the social welfare scheme further downsized. Since then funding long term care services derived from welfare scheme amounts to 12%.

Social assistance for long term care beneficiaries could not be erased at all by reason of relative low pension, especially for women in West Germany. In addition, a different price scheme in nursing homes throughout Germany and due to the fact that Long Term Care insurance does not cover 100% of care costs. In 2013 in total 2, 5 million persons were eligible for LTC benefits and 444,000 beneficiaries were supported by social welfare scheme. [137]

3. The Need for LTC

137 Social Welfare Statistic 2013, Federal Office for Statistic Wiesbaden 2015

Table 1: Age groups and levels of care of LTC beneficiaries at December 31st, 2014

Age Groups	Home Care				Nursing Home Care				Total Number				
	Levels of Care			Total	Levels of Care			Total	Levels of Care			Total	in %
	Level I	Level II	Level III		Level I	Level II	Level III		Level I	Level II	Level III		
>15	40.765	22.287	10.500	73.552	1.136	227	240	1.603	41.901	22.514	10.740	75.155	2,9
15 >20	13.108	7.414	5.958	26.480	1.280	222	325	1.827	14.388	7.636	6.283	28.307	1,1
20 > 25	10.363	6.419	5.609	22.436	2.506	418	599	3.523	12.869	6.909	6.208	25.986	1
25 >30	9.275	7.139	5.562	21.966	3.320	579	806	4.705	12.595	7.718	6.358	26.671	1
30 > 35	7.997	6.741	4.692	19.430	3.552	567	809	4.928	11.549	7.308	5.501	24.358	0,9
35 > 40	7.821	6.722	3.592	18.135	3.943	577	765	5.285	11.764	7.299	4.357	23.420	0,9
40 > 45	10.506	7.691	3.610	21.807	5.537	908	1.115	7.500	16.043	8.599	4.725	29.367	1,1
45 > 50	17.634	11.270	4.513	33.417	9.113	1.887	1.992	12.992	26.747	13.157	6.505	46.409	1,8
50 >55	26.403	14.511	4.879	45.793	12.288	3.312	2.785	18.385	38.691	17.823	7.664	64.178	2,5
55 > 60	33.936	15.914	4.750	54.600	12.683	4.805	3.254	20.742	46.619	20.719	8.004	75.342	2,9
60 >65	46.959	20.847	5.509	73.315	13.294	6.933	3.999	24.226	60.253	27.780	9.508	97.541	3,8
65 >70	57.116	25.400	6.257	88.773	12.725	8.734	4.793	26.256	69.841	34.134	11.050	115.025	4,5
70 >75	102.831	45.599	10.739	159.169	20.053	18.418	10.060	48.531	122.884	64.017	20.799	207.700	8,1
75 >80	182.119	75.663	16.841	274.623	34.624	36.495	19.955	91.074	216.743	112.158	36.796	385.697	14,2
80 >85	223.550	87.209	19.040	329.799	49.194	51.519	26.575	127.288	272.744	138.728	45.615	457.087	17,8
85 >90	224.169	90.479	19.630	334.278	70.098	70.060	33.938	174.096	294.267	160.539	53.568	508.374	19,8
<90	131.406	70.841	18.205	220.462	65.869	75.072	36.926	177.867	197.275	145.913	55.131	398.319	15,5
Total	1.145.958	522.218	149.876	1.818.052	321.215	280733	148936	750.828	1.467.173	802.951	298.812	2.588.936	100%
Total in %	63%	28,70%	8,20%	100%	42,80%	37,40%	19,80%	100%	57,10%	31,30%	11,60%	100%	
Ministry of Health Germany													

The German social care system is compulsory, implemented through LTC insurance, and each citizen is covered and has the right for social care services once eligibility criteria are fulfilled. The biggest ratio of LTC expenditures is used for elderly people. Figures indicate rise of beneficiaries older than 70 years. In 2014, the total number of social care beneficiaries was 2, 589 Mio.

Most beneficiaries intend to stay at home as long as possible. The legislator was and is aware of this importance and organized the benefit package in a way that informal care is promoted and prioritized.

4. Entitlement

Who is entitled for long term care services and to what extent depends on the definition of the term "dependency on long term care" and the level of dependency that has been assessed.

The term "dependency on long term care" is linked to the incapability of an individual to perform the activities of daily life in a frequent manner for a certain period. During this period, in Germany six months, it should be taken into account that clients in the terminal phase of their life are in need of long term care as well and fulfill the eligibility criteria.

Incapability can be characterized as:

Loss of movement, loss of functions of inner organs and other sensual organs, loss of functions of the central nerve system, endogen psychosis, neurosis or another mental handicap.

In Germany, during first 20 years (1995 – 2015) the assessment was focused on physical incapability with the consequence those activities of (instrumental) daily living (ADL and IADL) could not be

further managed by a person. In 2015, the first reform[138] took persons suffering from mental constraints (dementia or Alzheimer etc.) into consideration and broadened the circle of potential LTC beneficiaries.

Since January 2017 a comprehensive reform has been implemented which implies, for instance, the new assessment instrument for LTC insurance eligibility? This new assessment tool is presented and discussed in this paper in chapter "LTC Policy".

Nevertheless, the previous needs assessment and eligibility items are worth to be presented because they were successfully applied for a period of 20 years and the approach might be of interest for the Chinese practice.

The assessment grid was a standardized tool throughout the country focused on all issues that cannot be performed in daily life due to physical incapability. The assessment for the level of dependency distinguished three degrees. These degrees lead to the entitlement of the services provided for social care, household support, rehabilitation, remedies. The grading was directly linked to the time of support needed.

Reassessment was and is conducted every six months. In Germany are critical voices and discussions about the composition of assessment team especially that medical doctors are in charge of the decisions regarding level of dependency. It is stressed that medical doctors do not have much interest in social care but in medical care.

Main focus of attention was the time needed for support. The three distinguished levels link dependency degree, service package and, for service providers, manpower to be taken.

Table 2: Definition of Dependency 1995 - 2016

Definition of dependency

	Level I	Level II	Level III
Need of care with basic ADLs	At least once a day with at least two ADLs	At least thrice a day at different times of the day	Help must be available around the clock
Need of care with instrumental ADLs	More than once a week	More than once a week	More than once a week
Required time for help in total	At least 1.5 hours a day, with at least 0.75 hours for ADLs	At least 3 hours a day with at least 2 hours for ADLs	At least 5 hours a day with at least 4 hours for ADLs

Source: §15 Social Code Book (Sozialgesetzbuch XI, SGB XI).

138 Erstes Pflegestärkungsgesetz PSG I

Beside the level of dependency, the assessment result indicates appropriate measures in order to improve the beneficiary's status or, at least to avoid further progress of dependency. Rehabilitation measures shall back the development. In case of improving the status, the client becomes either independent or, it might be the follow up assessment indicates dependency decrease with the consequence of reducing the benefit package.

5. Benefit Package

The benefit package is twofold: Benefits in kind and benefits in cash or a mix of both options.

Benefits in kind are solely provided for beneficiaries who are living in residential institutions whereas, benefits in cash can be chosen when a beneficiary is staying at home and the family or another person is engaged in informal care. Further, home care can be supported by benefits in kind and cash, when a person decides to hire for some care activities a professional provider plus cash benefit for the informal career.

Annual, short term care in special institutions is provided to offer informal careers timeout.

Table 3: Dependency degree and amount of benefits in cash/in kind per month in 2015

Degree and time per Day	Home Care in cash/contracted service proved	Benefit in kind day care / living in residential institution
Level I – 1,5 hours	244€ / 468 €	468 € / 1064 €
Level II – 3 hours	485€ / 1144 €	1144 € / 1330 €
Level III – 5 hours	728 € / 1612 €	1612 € / 1612 €

Benefits in kind in residential institutions are solely covering the care package. Accommodation, food, investment costs and education have to be paid out of pocket.

6. Scope of services

The services offered by the LTC insurance are based on activities of daily living (ADL and IADL) and consist of:

- Social Care
- Basic Medical Care
- Household support
- Rehabilitation
- Devices
- Palliative and terminal care

Social care comprises help to the client dressing, moving, getting out of bed and vice versa, helps the client to eat and drink and support hygiene. The clients also must have the opportunity to take part either in social life or to get assistance in social support via social workers who support and advise them e.g. in benefit requirements. Early and continuously rehabilitation measures are to be provided by speech-, physiotherapists and other professionals and, remedies like wheelchairs, special beds should be dispatched to the households of the clients'.

For informal carers the LTC funds offer specific training with the aim to handle daily challenges in that way that persons in need are safely supported but also the carer itself.

7. Provision of services

a. Human resources

Human resource requirements in terms of number of staff and qualifications are prerequisites for accreditation and licensing service providers. The level of employment is continuously growing in home care, which corresponds to the preference staying at home as long as possible; whereas, the manpower in institutional care varies slightly during last ten years.

Table 4: Employment in institutional and home care

Employment in institutional and home care[139]					
	2007	2009	2011	2013	2015
In Institutions	573 545	621 392	661 179	685 447	730 145
Manpower Fulltime	202 764	207 126	212 416	203 715	209 881
Home Care	236 162	268 891	290 714	320 077	355 613
Manpower Fulltime	62 405	71 964	79 755	85 866	96 701

b. Mix of public and private providers for social services

Whether a social care provider should be, in legal terms, a private or a public entrepreneur is not the pivotal question. Both types of service providers are part of the network of social care contractors. Among them are NGOs, foundations, none and for profit private entrepreneurs, as well as public providers.

All of them are legally bound to accreditation and licensing requirements in order to become part of the network of providers. This is the entry point for contracts with Long Term Care funds.

In Germany, the care providers constitute a big industry[140]. On the supply side the German market is dominated by private providers. In 2011, there were 12,354 nursing homes and 12,349 home care providers. 41% of all nursing homes were private-for-profit, 54% private-not-for-profit and 6% public.

139 Federal Office of Statistic, Wiesbaden 2014

In home care, even 63% of providers were private-for-profit, 36% private-not-for-profit and 1% public. Market shares (measured in number of care beneficiaries) are slightly lower than these figures for private-for-profit providers because they are smaller on average. Concerning investments, there seems to be a reduced interest in building new nursing homes. It is also the result of deinstitutionalization policy throughout EU countries.

Due to some overcapacities of nursing homes in recent years, there were no problems in providing social care. Waiting lists are unknown. However, providers already report difficulties in finding qualified personnel, which lead to an intensive public debate about the lack of qualified personnel and attractive working conditions (ASISP 2013).

8. Quality standards

Quality indicators consist of quality of structure, quality of process and outcome quality. This scheme builds the framework and represents an excellent instrument for measuring the overall care processes. All providers have to comply with quality requirements in order to become licensed and enter into an agreement with the LTC insurance.

Quality of structure[141]:

Quality of structure emphasizes and focus on providers' personnel available related to the clients' needs and management capacities, the time to be on duty and skilled staff. Necessary quality indicators are the professionalism of the manager who has to have a solid professional education and exam plus additional education in home care and specific management skills. The provider has to ensure qualified staff and further education, frequently, as well as internal supervision circles.

Services have to be offered and staff available 24/7. Providers have room for cooperation among each other in order to guarantee access at any time as well as provision of all types of services needed.

Quality of process:

Process quality is a cycle of planning, acting, evaluation and improvement.

The cycle consists of:

a) Anamnesis, defining the targets to be achieved, care measures and rehabilitation services. Either the client or family is actively involved in decision making.

b) The care plan has to be elaborated and documentation on care measures has to be individually recorded for all professionals who are part of the care process. One copy of the documentation has to be stored in the household and one at the services provider(s).

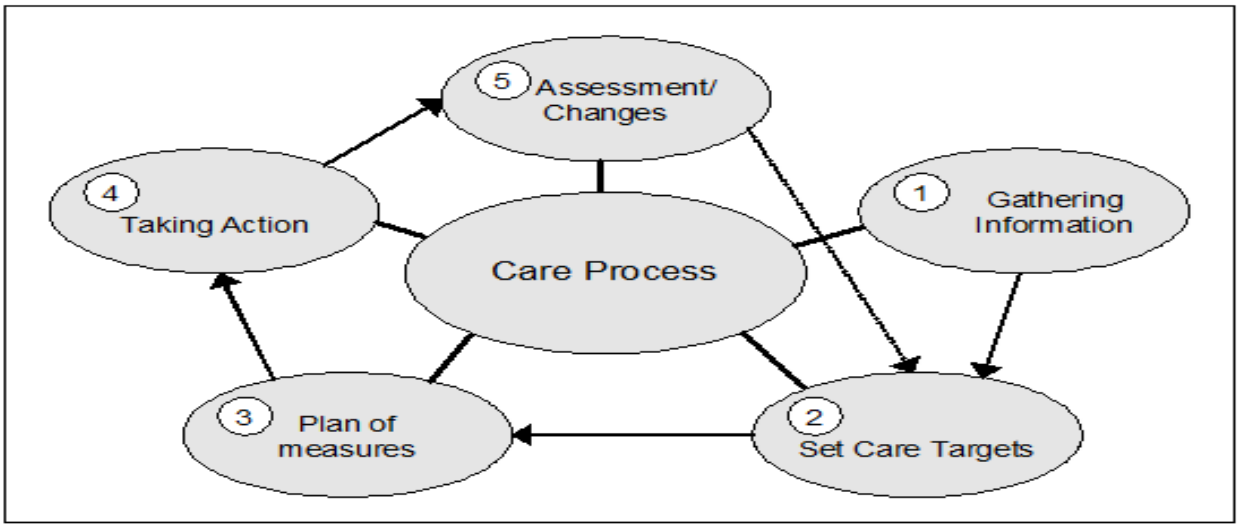
c) Care measures have to stimulate and promote capabilities of each individual client.

140 See also next chapter with detailed description of provider structure

141 All three quality standards have to be fulfilled as a minimum in Germany

d) The process has to be reassessed frequently and, if the aim of the process has not been achieved than measures have to be revised.

Table 5: Scheme of the Care Process



Quality of care is subject of auditing. To this end, the so-called transparency reports for formal care have been introduced in Germany in 2009. Both, home care providers and nursing homes are yearly audited by the independent medical service of the social insurances. The assessment consists of standardized items in five dimensions: (i) care and medicine, (ii) interaction with people with dementia, (iii) social assistance, (iv) board and lodging, (v) interviews of the people in need of care.

However, only few items refer to outcome quality while most of them are about structural and process quality. Generally, transparency reports have room for improvement, because equal weighting of all items makes it possible to compensate "bad quality" in care by "good quality" in other services, e.g. board and lodging.

Within EU member states the open method of coordination (OMC), a "soft" law and intergovernmental policy making round table without binding character has organized three peer reviews so far, one of them in the area of LTC, held in Germany, in October 2010, on quality in residential care facilities. This topic is a concern in all EU member states and at the EU level.

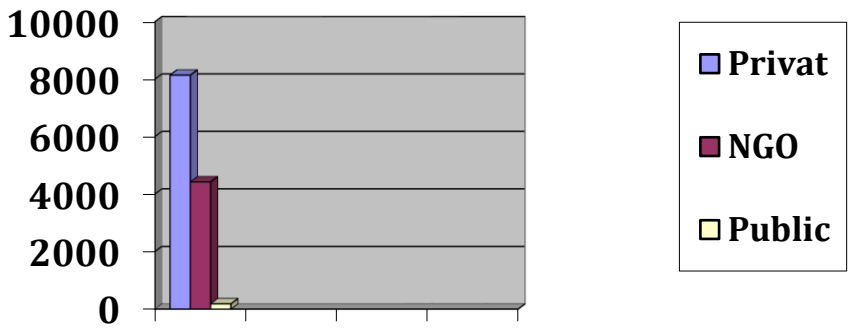
Due to frequent assessment cycles, described above, German experience stimulated the debate at the round table and participants concluded: minimum standards are needed for long-term residential care and compliance should be monitored. External quality management systems involve internal quality management systems. The introduction of such systems requires participative leadership, human resource management, training and lifelong learning.

9. Available LTC Services

a. Provider Structure

In Germany the care providers constitute a big industry. On the supply side the German market is dominated by private providers. In 2013, there were 12,745 providers for home care services. The composition was 63% (8.140) private-for-profit, 36% private-not-for-profit (4.422) and 1% public (183).

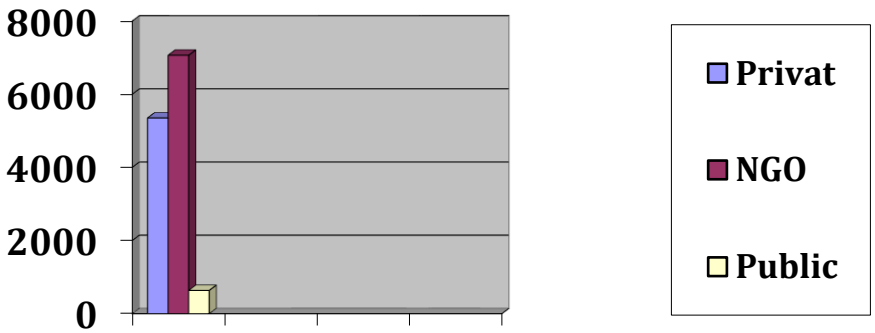
Table 6: Number of home care providers and organizing institution (2013)



In residential care the situation is slightly different regarding organizing institution. The total number was 13,030 in 2013. Most providers are NGOs, 7063 = 54%, followed by private providers with 5349 = 41 %. And, public providers hold a market share of 5% = 635.

About 70% of all employees (in 2015 total number 1,085,758) are working in residential care. Number of personnel in relation to residents and their individual need differs from federal state to another. There are no standards on the National State level and the indicative value is out of date because it was discussed about 20 years ago. In average a care taker in residential institutions is on duty with 12 clients during day and 60 during night.

Table 7: Number of residential care providers and organizing institution in (2013)



The official statistic does not indicate the specific number of residential care institutions. The quantity of 13,030 also includes day and night care institutions.

The excess supply of private providers and NGO's occurs due to the regulation of the principle of subsidiarity. The main principle is that private and nonprofit NGO providers as well as churches have the right to cover public duties and, are eligible to claim subsidies. Even more they have absolute priority in taking up the objectives. In contrast public institutions, mainly communities, have to withdraw from making provider services available, unless specifically authorized. This would occur in

case private providers and NGOs cannot serve the demand side. The aim is to promote competition at the social care market which has to tackle with pros and cons.

The competition at the care market has put pressure on pricing with the result of hiring staff from low-wage countries within the European Union. It concerns mainly staff from new EU member states (Poland, Romania, Bulgaria, and Czech Republic) but also from Asia.

Covering large geographic areas and guarantee of access for beneficiaries and potential clients require flexibility and sufficient number of providers; especially providers covering small number of clients even in remote areas.

Accessibility is as important for location decision and regional development as it is for the individual life situation of citizens. Availability of social care services according to SGB XI has been tested with focus on regional distribution of home care providers. A raster-based GIS accessibility analysis focused on the regional distribution of social care services in rural areas. One result was, that in Germany a social care service provider needs on average 5.8 minutes at an average speed of 50 km/h to reach its customers. In rural areas the distances to be reached are slightly longer than in urban areas. According to the test 94 % of the people can be reached by a social care service provider within 10 minutes driving time at an average speed of 50 km/h and it corresponds with approximately 95 % of the people in need of social care services.

The LTC insurance is legally obligated to serve the population with sufficient number of social care providers. Therefore, serving also small number of beneficiaries and their equal distribution (urban and rural areas) has to be ensured and is mainly covered by private contractors.

Table 8: Number of home service provider, legal status and number of clients (December 2013)[142]

No Clients	Private	NGO	Public
> 10	875	147	10
11 to 15	824	127	8
16 to 20	894	189	10
21 to 25	820	217	12
26 to 35	1406	503	32
36 to 50	1434	754	36
51 to 70	986	896	27
71 to 100	572	804	25
101 to 150	260	501	15
150 +	69	284	8

[142] Federal Office of Statistic, Wiesbaden 2014

Total	**8140**	**4422**	**183**

b. Federal Association of Non-Statutory Welfare

The Federal Association of Non-Statutory Welfare (BAGFW)[143] is the collective voice of the six non-statutory welfare umbrella organizations in Germany and they are traditionally the main players in social welfare. The Arbeiterwohlfahrt, the Deutsche Caritasverband, the Deutsche Rote Kreuz, the Deutsche Paritätische Wohlfahrtsverband, the Diakonische Werk der Evangelischen Kirche in Deutschland and the Zentralwohlfahrtsstelle der Juden in Deutschland are all based on different religions and beliefs.

They all belong to the „third sector „and have to be seen as an open and polymorphic area between state, market and family.

The central organizations have a federal structure; their bodies at the local and national level and the member organizations usually form their own legal entity.

Their significance in the social welfare system becomes clear in terms of number of members and employers working in social welfare sector[144].

Workers` Welfare Service (AWO)

- 430.000 members, 100.000 volunteers, 146.000 employees in 14.000 social services and establishments.
- 29 associations on regional and state level, 480 associations on district level and 3800 local clubs.

German Caritas Association

The organization comprises 27 Caritas associations, 6 regional associations, 18 professional associations and 8 specialized Catholic charity organizations.

- 24.939 establishments offering more than a million places.
- 520.186 employees (full- or part-time), 500.000 volunteers.

German Red Cross

- Part of the International Red Cross and Red Crescent Movement.
- 116.211 employees, approximately 400.000 volunteers.

Welfare service of the Protestant Church in Germany

[143] Bundesarbeitsgemeinschaft der freien Wohlfahrtspflege

- Members are the social welfare organizations maintained by the 24 United Protestant, Reformed and Lutheran state churches, members of the Protestant Church in Germany, 9 free churches with their social welfare facilities and a variety of some 90 professional associations.
- Together they represent 27.300 independent establishments with more than 1 million places.
- 452.200 employees (full- or part-time).

Association of Non-affiliated Charities

- This organization is grouping independent organizations, establishments and bodies active in social work. It supports and represents 10.000 member organizations in 15 regional associations and over 280 district offices.
- 169.900 employees are working in 24.000 establishments.

Central Welfare Agency of the Jews in Germany

100.000 members in 17 Jewish regional associations, 6 independent Jewish local congregations with 100 Jewish communities (2008: appr. 108.000 members) and the Jewish

Drawing a comparison of numbers of employees of the central voluntary welfare associations with numbers of employees of other economic groups shows the relevance of this sector[145].

- German Mail: 456,716 employees
- Siemens Germany: 428,00 employees
- Daimler Germany: 273,216 employees
- German Caritas Association: 520,186 employees[146]
- Welfare service of the Protestant Church in Germany: 452,200 employees
- Workers' Welfare Association: 146,000 employees
- Association of Non-affiliated Charities: 169,000 employees
- German Red Cross: 116,000 employees

The central associations are cooperating closely since 1924. Their common objective is the safeguarding and development of social work through community initiatives and socio-political activities. To implement these objectives, the BAGFW maintains an office in Berlin, a representative office in Brussels and the Charity Stamps Department in Cologne. The central associations themselves have a federal structure, i.e. in most instances their sub-divisions at municipal and federal-state level respectively, as well as their member organizations, are legally independent.

c. Informal Care

The well-developed professional service provider system in LTC represents a big industry but does not represent majority in the care system. Since the beginning of LTC insurance system about 2/3 of all eligible persons and beneficiaries of service packages are living at home. This general tendency is unbowed and supported by the LTC benefit package.

[145] Figures 2009

[146] The Churches (Catholic/Caritas and Protestants) are the biggest employers in Germany's social system

Beneficiaries staying at home can opt for benefits in cash and/or kind. Out of about 1, 6 million persons cared at home about 1, 1 million opted solely for benefits in cash while the rest requested professional services.

Informal care has priority in the German system and is supported by the German LTC Fund in terms of cash allowance assessed per level of dependency, respite care, social security contribution for informal care givers at least engaged for 14 hours per week.

The first reform 2015 intended to strengthen the informal care sector not just through provision of benefit in cash and social security but also through available infrastructure. More money was available for respite care, day and night care and, if a family member is employed, in necessary circumstances it is possible 10 days off can be claimed. All in all long term care has to rely on informal care even in future.

10. Funding, Expenditure and Sustainability

The Long Term Care insurance scheme, similar in nature to other social insurance systems in Germany (pension, employment and health insurance), was introduced in Germany 1995. It is an independent branche of the social protection framework.

Due to the general risk of dependency in higher age groups the insurance is compulsory and all employees earning less than the social security earnings ceiling for the German social insurance system are members of this system. Persons who are not covered by the social insurance system (i.e. civil-servants, self-employed etc.) are enrolled at private insurance companies.

All members of the social Health Insurance scheme are automatically covered by social Long Term Care insurance. The responsible Long Term Care insurance funds are affiliated to the corresponding Health Insurance funds. The same applies for persons who are covered by private Health Insurance companies. About 90 %, approximately 70 million of the German population, are consequently covered by the social LTC insurance scheme and about 10 %, 9, 5 million persons, are covered through private LTC insurance.

The social LTC insurance is implemented by the LTC funds, 145 branches, which in organizational terms are attached to the Health Insurance funds. Administration is given to the Health Insurance but financial planning is strictly separated. Contrary to the Health Insurance fund, which are authorized to determine their contribution rate, the LTC insurance contribution rate is determined by the Ministry of Health.

11.Institutions

The Federal States are responsible for ensuring that an efficient and cost-effective long term care infrastructure is provided, for guaranteeing that the scale of services on offer is adequate, and for the quality and efficiency of social service providers. It is the task of the authorities (the Federal Government, governments of the states, local authorities) to avoid disparities in provision and to ensure a regular supply of long term care in every region in Germany. This includes carrying the investment costs of all local, state-owned, and non-profit-making care institutions.

The remit of the Long Term Care funds is to ensure the supply of permanent care for their insured and to eliminate shortcomings in quality. They consequently control the quality of the care delivered. Nevertheless, their ability to ensure the supply of care is limited by the fact that they have no appropriate influence on the creation, promotion or maintenance of the infrastructure. This task is assigned to the government of the states. In practice investment cost is shifted to residents and is part of out of pocket payment in residential institutions.

Long Term care providers are in legal terms public, non-profit or private for-profit organizations. A supply contract is concluded between these provider organizations and the Long Term Care insurance. This contract is essential for ongoing social service provision at beneficiaries' home or in residential institutions and the contract qualifies this form of support for the recognized long term care market. The supply contract regulates the type, contents, and extent of the general social care benefits. It also defines the care package which social care providers must guarantee in terms of human resources, dignified, and stimulating support, and must respect human rights. Qualifying care providers must contribute to quality assurance procedures.

12. Cost Control and Sustainability

Covering LTC services is divided between the insurance, beneficiary itself, his/her family and, if applicable, social assistance agency. Funding from the LTC insurance side is capped due to maximum benefit package in terms of amount for home and residential care per assessed level of care. Thus, the LTC insurance can keep control over expenditures. In real terms the funds balanced revenues and expenditures since their introduction.

This practice is accompanied by internal, countrywide, revenue equalization in order to prevent funds from overspending.

For the beneficiary the situation was different. There was little adjustment in the benefit package since 1995. Three reforms in 2008, 2012 and 2015 increased the package marginally.

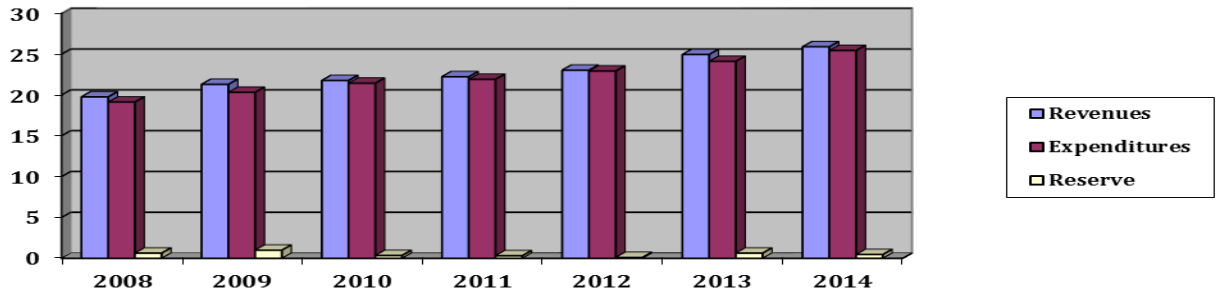
Furthermore, LTC funds pay the same fixed benefit packages according to the level of care but irrespective of the price for the actual goods and services. Thus, the person in need of care has to bear the difference. If recipients cannot pay the difference out of their income or other assets, or with the support of their close relatives, social assistance has to step in and cover the costs.

Between 1996 and 2007 there was no change in the nominal amount of the benefits. Hence, due to general price inflation the nominal amount has gradually lost its real value. Monthly benefits have been increased for the first time 2008, with higher increases for home care and care allowance to strengthen both types of arrangements in comparison to residential care ("care at home prior residential care"). From 2014 onwards benefits will be assessed every three years and possibly adjusted to keep up with the general price inflation. But it will certainly not decrease the average 30% copayment for services from beneficiaries, their close relatives or, if applicable, social assistance agencies.

The financial crisis has not had an impact on financing LTC in Germany; neither does the current euro crisis. The German economy is expected to remain growing; negative effects on social LTC insurance in the short term are not estimated. The value of accumulated capital in the private LTC insurances has grown significantly in 2011 and social LTC insurances gained a surplus of 100 million Euros raising its capital reserves to 5.5 billion Euros.

In 2011 2.5 million people received benefits from social or private LTC insurances, thereof 1.18 million received benefits in cash, 0.58 - home care in kind and 0.74 - residential care. The number has risen considerably by 24% or by 1.8% per year between 1999 and 2011. At the same time total expenditures of the social LTC insurance have grown from 16.3 to 22.0 billion €, i.e. by 35% in total. The 2014 statistic indicates income/ revenues 25.83 billion € and expenditures 25.45 billion € with the result of a reserve of 0.46 billion € in the social compulsory insurance.

Table 9: Progress of revenues, expenditures and reserve 2008 – 2014



On the revenue side the contribution rate to the social LTC Insurance was stable at 1.7% of wage income until 2008. In the immediate years after the introduction of the social LTC insurance, contributions exceeded expenditures and capital was accumulated up to 5 billion € until 1998. Given rising expenditures, from 2003 on, its capital stock was reduced. With the first reform in 2008 the contribution rate increased to 1.95% in general and to 2.20% for insured without children. Employers and employees pay half of the premium; pensioners pay the full premium themselves. Therefore, from 2008 on, capital stock has been growing again. Revenues have been increased to 2, 35% in general and for insured without children to 2, and 6 % in September 2015. And, the recent reform, January 2017, increased the the contribution rate, again.

Sustainability was accomplished by same level of benefit packages over a long period, the incentives for home care which promoted informal care and keeps expenditures low; the capital stock accompanied by the method of revenue equalization promoted to balance revenue and expenditure regardless of increasing number of beneficiaries.

13.LTC Policies

a. Recent Reforms

Already in August 2015, the Federal Cabinet passed the Second Bill to Strengthen Long Term Care which entered into force January 1st, 2017. The Act introduced a new definition of long term care needs to the day-to-day, ADL and IADL setting. One accompanying measure was the development of new assessment procedure and the changes in the benefit amounts available to beneficiaries in the Long Term Care insurance.

The First Act to Strengthen Long Term Care (2015) significantly expanded support for persons in need of long term care and their relatives The Second Act to Strengthen Long-Term Care (2017) closed gaps concerning beneficiary groups and the benefit package has been changed as well. In total, starting in 2017, an additional 5 billion euros will be available annually for Long Term Care in order to cover the estimated 500,000 new beneficiaries.

These new regulations on benefits and services systematically implement the aims of the new definition of long term care needs – providing assistance in maintaining independence and making the most of a person's remaining abilities. The system previously in force that was based on three categories of care and time needed for care activities, has been replaced by five uniformly valid grades of care applicable to all persons in need of long term care without taking time consumption into consideration.

5.1.1. New assessment tool: Physical and mental shortcomings

As from now physical, mental and psychological impairments are rated equally in the recording and assessment process. Instead of looking at time needed for care activities (see section 5) the new assessment tool[147] serves to measure the degree of a person's independence in six different areas that are – on the basis of different weightings – subsequently combined to form an overall assessment. This furnishes the basis for assigning the person to a specific grade of care.

Table 10: NBA Modules

Module	No. of items	Items
Mobility	5	Change of position, keeping stable sitting position, rising up from sitting position, moving along in dwelling place, climbing stairs
Cognitive and communication abilities	11	Recognition of significant others, spatial and temporal orientation, memory, decision-making in everday life, understanding of facts and information, detection of risks and dangers, conveyance of basic needs, understanding of requests and participation in conversations
Behaviour and mental health	13	Agitation, nocturnal restlessness, self-endangering and auto-assaultive behaviour, verbal and other aggression, delusions/illusions, anxiety, refusal of supportive actions, vocal deviant utterances
Self-care	12	Items related to personal hygiene, dressing/undressing, eating, drinking, toiletting
Ability to deal with illness-/therapy-related demands and burden	15	Medication, s.c./i.m./i.v. applications, taking and interpreting body parameters, dressing/woundcare, therapeutic measures in the home (e.g. exercises), visits to physicians/therapeutic facilities
Managing everyday life and social contacts	6	Shaping daily routine, resting and sleeping, occupying oneself, making plans for the future, interacting with people in direct social contact, contacting people outside the direct surroundings
Activities outside the house	7	Movements outside of the home, participation in various activities
Household maintenance	7	Grocery shopping, preparing basic meals, tidying and cleaning, use of services, regulating financial matters and administrative measures

Support is available much earlier because persons who are assigned to care grade 1 are those who do not yet require any considerable support but, for example, require Long Term Care counselling, some adaptation of their living environment or benefits in the area of general care. This will considerably widen the circle of persons who will be receiving Long Term Care benefits for the first time. In the coming years, an additional 500,000 claimants are expected as a result of the new assessment approach.

5.1.2. Benefit Package and Funding

Compared to the benefit package implemented in 2015 (see section 5) the new package has been increased in terms of home care support.

In the case of institutional care, what is important for those affected are not the benefit amounts, but rather the size of the co-payment that is required to pay out of pocket. Till 2017, this co-payment was linked to the level of grading. The higher the grading the higher was the co-payment. Now, the care-related co-payment will no longer increase with an increased grading. This will be a source of relief for many persons in need of Long Term care. All persons in residential care homes who are in need of Long Term Care and are assigned to care grades 2 to 5 are paying the same care-related out of pocket

[147] Neues Begutachtungsinstrument NBA (New Assessment Tool)

contribution. However, the specific amount will differ from one nursing home to another due to different price schemes.

Table 11: Benefit package 2017

Benefits in cash and kind in 2017

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Home Care Cash Benefits	125 €	316 €	545 €	728 €	901 €
Home Care Benefits in Kind		689 €	1298 €	1612 €	1995 €
Residential Care		770 €	1262 €	1775 €	2005 €

The increase of benefit package was accompanied by increase of contribution payment for the Long Term Care insurance. In 2016 contribution rate for social LTC insurance was 2, 35% in total (1,175% for employers and employees). Insured persons without children are paying higher rates, 1,425%, and the total rate is 2, 6%. Pensioners have to pay full contribution rate since 2004. Private insurances offer basic tariffs and step like arrangements. In 2017, the rate increased to 2, 55% (1,275% for employers and employees and full rate for pensioners). Insured without children pay a higher rate 1,525% and the total rate is 2, 8% of their wages.

5.1.3. Linked new regulations

In residential Long-Term Care facilities, every insured person is entitled to additional care opportunities which mainly refer to social activities. The facilities are obliged to conclude agreements with the Long Term Care funds and to employ additional staff for this purpose.

The Second Act to Strengthen Long Term Care reinforces the principle of 'rehabilitation prior long-term care'. The granting of rehabilitation benefits serves to avoid, or at least delay, the onset of the need for long term care. Recommendation of rehabilitation measures are reflected in the new assessment tool.

Informal care givers are now better secured within the pension and unemployment insurance. The long term care insurance is paying pension contributions for all careers who provide at least 10 hours of care per week, spread over at least two days for a person in need of care in the care grades 2 to 5. Pension contributions also increased in case the need for long-term care rises. Any person who takes care of a relative who has an extraordinarily high need for assistance (care grade 5) receives 25% more in pension contributions than was previously the case. Furthermore, more people will be receiving support. A relative who take care of a person in need of long-term care who is suffering exclusively from dementia is covered by the pension insurance. Coverage in the unemployment insurance has also been improved. From now on, the Long Term Care insurance is also paying the unemployment insurance contributions for informal carers who leave their workplace to be able to take care of relatives in need of long term care, for the entire duration of the caregiving period. As a result, careers are entitled to receive

unemployment benefits, as well as the benefits provided by active employment promotion, if they do not succeed in making a seamless transition to employment after their period of caregiving. The same applies to persons who interrupt the receipt of benefits from the unemployment insurance in order to provide care. All these measures boost informal care and empower LTC beneficiaries to stay at home as long as possible.

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6. Long-term Care: Conceptual Framework, Research Findings and Policy Recommendations.

Policy Recommendation Report

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In accordance with Xi Jinping's instructions on establishing a long-term care system, and by means of the investigation and study of the subject "long-term care security requirements in China", ten research findings were obtained: viewed from all of demographic, economic and social characteristics of the urban elderly and their families, could not meet the demands of long-term care when they will be disability. As a result, more and more the urban elderly have accepted the long-term care services and insurance for socialization. At the same time, based on the above survey results, this paper puts forward some policy suggestions related to long-term care services and financing.

As early as in 2016, the first year for the 13th Five-Year Plan, President Xi Jinping said, effective response to aging is important to China's development and to the welfare of Chinese people, and this must be put on agenda; during the 13th Five Year, there must be deployment and implementation for it. [148] In the policy for supporting old-age industry to develop, which President Xi requires the government to carry out, it is emphasized that the state should establish LTC security system that articulates relevant insurances, welfare and social assistance.[149]

Faced with ageing that is getting more and more serious, LTC or LTC insurance becomes two popular and important concepts around the world. However, what President Xi says is the LTC security system. So, how to comprehend this concept? More importantly, what is the way to implement President Xi's instruction? In this paper, the authors try to analyze international definitions on LTC and relevant experiences in this field. A quantitative analysis is also carried out on the basis of data provided by the research program of "China's LTC Needs".

1. International Definitions and Experiences of LTC

The LTC security system proposed by President Xi is definitely a Chinese concept. In order to further discuss how to set up this system, it is necessary to understand the connotation and denotation of the concept.

1.1 Definition of Old-Age Service and LTC

Two aspects should be noted when talk about the definition of old-age service and LTC.

[148] 《习近平对加强老龄工作作出重要指示强调：加强顶层设计完善重大政策制度 及时科学综合应对人口老龄化》，北京，《人民日报》2016 年 2 月 24 日。

[149] 《习近平：推动老龄事业全面协调可持续发展》，北京，《人民日报》2016 年 5 月 29 日。

1.1.1 LTC Security System is A New Chinese Concept

The concept of LTC security system, proposed by President Xi, is no doubt a new concept. It should be noticed that Xi has added a long attributive to this concept, making it a LTC security system that articulates relevant insurances, welfare and social assistances. This could be understood in this way: Insurance, welfare and social assistance are three instruments for the LTC security. Insurance and social assistance are mainly used for financing, while welfare mainly means providing services. This is to say, LTC security system should keep balance of financing and service providing, and it is pertinent to the concept of Grand Social Security, which is created and discussed by Chinese scholars.

To be concrete, there could be 4 levels of LTC security: First, instruments for financing, such as insurance and social assistance, and social services should be perfectly articulated and integrated in one framework. Second, financing should be diversified and include social insurances, government subsidies, social assistances, charities and commercial insurances, etc. The objective of financing diversification is to cover all the social groups through diverse ways. Third, for social services, it is proposed to provide "middle-level facilities that are small and economic, and with high-quality professional services", and the services should be "localized in communities and accessible at home". Meanwhile, services provided in institution, community and home should be integrated. And finally, authorities like MOF, MOHRSS, MOCA and Commission of Health should work together to establish a win-win system of Grand Security.

1.1.2 Making LTC Policy Becomes International Consensus

In China, there are too many concepts related to services provided to old people or disabled old people. For the former, the concepts are " Old Age Service", "Service for Old Age Life", "Service for Peaceful Old-Age", and "Service for Old Age", and for the later, there are concepts of LTC (Service), Long-Term Nursing (Service) and Long-Term Medical Care (Service), etc.

However, only two of them could be corresponding to international concepts: old-age service and LTC. In China, there are five kind of services provided to old people, which are corresponding to the five concepts indicated in the Law on Protecting Rights of Old People: old-age life, old age medical care, old-age activation, old-age study and old-age recreation. [150] LTC, in the other hand, is those provided to disabled old people by government or the society, which includes policy design and institutional arrangement.

The concept of LTC as international consensus is for the first time adopted by WHO in the report of Towards An International Consensus on Policy for LTC of The Ageing, which proposes that LTC is a system of activities of both informal caregivers(families, friends and/or neighbors) and professional caregivers, which is to ensure dependent individual to choose and keep quality of life according his or her priority as much as possible, and to enjoy independence, autonomy, participation, self-fulfillment and human dignity to the most possible extent. [151]

[150] 《老年人权益保护法》, 民政部网站（http://www.mca.gov.cn/article/gk/fg/ shflhcssy/201507/20150700848507.shtml)。

[151] 《建立老年人长期照顾政策的国际共识》, 世界卫生组织网站（http://www.who.int/publications/list/ WHO_HSC_AHE_00_1/zh/)。

It is worthy noticing that in 2000, the Chinese version of WHO report had translated the concept of Long-Term Care as Changqi Zhaogu, while after 16 years, in the 2016 Chinese version of WHO reports, World report on ageing and health, and China country assessment report on ageing and health， the translation of LTC had been changed to Changqi Zhaohu. [152] From the perspective of Chinese language, this change is significant.

1.2 International Experience of LTC

In terms of international experience of LTC, there are four aspects to be understood:

1.2.1 LTC system is derived from population ageing.

After mid-20th century, developed countries entered ageing one by one, with medical insurance and services faced with unprecedented pressure. It is reported that in addition to development of medical technology, the reason of increased medical costs is mainly population ageing.[153] Some international researches found that the medical costs before death had increased dramatically, and the main increase is in the costs of care.[154]

Therefore, since 1980s, developed countries started to focus their policies on LTC in a specific way. The approach is as concrete as this: Firstly, the work originally conducted by medical nurse, basic care, or daily care, was subtracted from medical services. The so-called “non-medical care and rehabilitation service” is not for curing a person, but for slowing down the development of disease for old people and make them maintain their physical functions and psychological health most possibly. The two services are combined as an independent profession, both academically and occupationally, which is LTC.

1.2.2 Japanese experiences of LTC is worthy learning.

Japanese LTC is important for us to learn. In Japan, LTC is called Kaigo (介护), which means both accompanying and care. On one hand, it refers to care for daily activities like dressing, eating, living and walking; and on the other hand, it refers to aid for medical cure, nursing and rehabilitation etc. [155] What should be emphasized is: Kaigo is based on care for daily life and it is provided as an aid/assistance to people with difficulty in autonomy. It means aid for autonomy, realization of normal

[152] 《关于老龄化与健康的全球报告》，世界卫生组织网站（http://apps.who.int/iris/bitstream/10665/186463/9/9789245565048_chi.pdf?ua=1)。《中国老龄化与健康国家评估报告》世界卫生组织网站（http://apps.who.int/ iris/bitstream/10665/194271/5/9789245509318-chi.pdf)。

[153] 崔玄、李玲和陈秋霖著，《老龄化对医疗卫生体系的挑战》，北京，《中国市场》2011 年第 16 期第 56 页。

[154] 杨燕绥和于淼著，《人口老龄化对医疗保险基金的影响分析》，北京，《中国社会保险》2014 年第 10 期第 12 页。

[155] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版第 212 页。

life, and respect to human dignity and right. The reason for this is: old age disability is not always resulted from disease, while physiological and cognitive obstacles can also impact on old people's daily life activities.

1.2.3 LTC is social service

According to international convention, LTC is usually categorized as social service. It has two meanings: First, LTC is provided by old-age service institutions in the field of social service; Second, LTC, as a profession, should be separated from medical service and even medical nursing in hospital, and should become an independent one. In the international experiences, professional LTC team is composed of nurse, social worker, dietitian, rehabilitation trainer and psychological consultant. Those who provide daily care to old people are professional service givers, such as the Kaigo-ists (介护师、介护士) in Japan.

The reason for including LTC into social service is clear: to reduce costs. Medical service is usually regarded as a high-threshold profession. Thus, any service related to medicine in the world would be costly.

1.2.4 Principles for establishing LTC system

It is historically significant that different countries choose LTC as a system, and this contains deep implication. In early 1980s, Denmark proposed three principles for establishing old-age health and welfare services: First, the life of an old person from its beginning to its end should be complete; Second, residual ability of old people should be used; and third, self-decision made by old people should be respected. [156] Chinese scholars conclude these principles as three words: continuity, autonomy and independence. [157] They correspond to each of the three principles. Continuity correspond to the completeness of a life from beginning to end, which mainly means Ageing in Place： Old people spend their late lives in the residence or community that they used to live for long period. In this regard, what should be emphasized is the social and humanistic environments of old age life. Autonomy corresponds to employment of old people's residual ability, which emphasizes protection, maintenance and employment of old people's ability to live in autonomy. Independence corresponds to the respect paid to the old people's self-decision, which emphasized that choices and decisions made by old people them should should be prioritized, especially in terms of what kind of service is needed, who should be chosen to provide the service, and where should be the place to receive the service, etc. UN proposes the world to have active ageing and healthy ageing, and these are in accordance with the three principles. In designing LTC and LTC insurances, these principles should be attached to.

1.3 International experience of LTC financing

International experiences of LTC financing contains four aspects, as follows:

[156] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版第 5 页。

[157] 茆长保著，《丹麦的老年福利和养老服务及其对中国的启示》，北京，中国社会报 2014 年 3 月 3 日。

1.3.1 Financing models of LTC

Funds are needed to provide LTC to disabled old people. After several decades, different financing models for LTC insurance had been form in different countries. Some researches use Denmark, US, Germany and Japan to be examples of different models of LTC system. Depending on funding sources, LTC financing is classified as insurance-based and welfare-based. Among these four countries, Denmark makes its LTC system a welfare-based one, of which funding source is tax revenue and services are provided by government agencies. In US, LTC is based on commercial insurance and funded by premium, with operation of insurance businesses. In Germany, LTC is social insurance funded by contribution, and social institutions authorized by government operate the schemes.

Japanese model is the one to which we should pay more attention. After comparing advantages and disadvantages of different models, Japan invented a new model, called insurance-welfare system, which is funded by both contribution and tax revenue, and the administration is conducted by local or grassroots government (township, street and village). By now, only Japan has established an independent LTC system, while LTC systems of other three countries are deeply characterized by medical insurance. The German way of LTC insurance is basically a supplement to medical insurance, the Danish LTC is a part to health service system, and the US medical insurance is always commercial, which influences the model of LTC.[158]

1.3.2 Target Groups of LTC

Some researches have analyzed LTC target groups and care model, for which a matrix is created to show the difference. In the horizontal line of the matrix, there are three care indicators: care for life, care for health, and care for both; and there are two target indicators on the vertical line: only for old people, and for the whole population. Then, 6 models could be obtained. Learning from Japanese experiences and looking at Chinese reality, the Chinese LTC should be designed only for old people and provides care for both life and health. [159]

1.3.3 We should learn from Japanese LTC

In conclusion, for China, Japanese LTC is most worthy learning. The first reason for this is that the target group of Japanese LTC is clearly defined as old people, while people in other age groups are excluded even they are in need of care. The second reason is that the financing model of Japanese LTC is that of Insurance + Welfare, which means the spending is partially covered by the government's tax revenue and partially covered by social contribution. Citizens start contributing to LTC when they get 40 years old. And the third reason is that in Japanese LTC benefit of services are old people qualified after assessment and cash are paid to service providers. In case of in-home care, cash could also be paid to informal caregivers as subsidy, which is much lower than that paid to institutional providers. The residual part of the payment is given to professional institutions providing social services. The fourth reason is that the LTC services in Japan are mainly provided by NGO, including in-home and institutional services.

[158] 日本介护工作研究所编写，《日本介护保险》，张天民、刘序坤和吉见弘译，北京，中国劳动社会保障出版社 2009 年版第 171—172 页。

[159] 唐钧著，《长期照护保险：国际经验和模式选择》，北京，2016 年第 5 期第 46—47 页。

2. Findings from The Research on LTC Needs of Disabled Old Persons

In 2016, after President Xi made instruction on establishing a LTC security system, MOHRSS issued its Guiding Opinion on Conduction of LTC Insurance Pilot Programs. In the beginning of the same year, Beijing Yide Social Work Development Center had been entrusted by China Medical Insurance Research Association to conduct the investigation and research on LTC Needs in China, a sub-topic of the research on Chinese LTC System. In mid-2016, the research team had chosen Beijing, Guangzhou, Ningbo, Qingdao, Changchun, Chongqing and Lanzhou as sampled cities, from which 3513 old persons from 21 districts, 42 streets and 168 communities had responded to questionnaire in their homes. Then, the team had analyzed the data collected, using software, and obtained 10 findings on the basis of quantitative analysis, as follows:

2.1 Old Age in Family is not compatible with the changed family structure

The investigation found that small family as a structure and living pattern had been a prominent trait in urban China. In fact, among the 60+ people, the total of single-person families, two-person families and three-person families accounted for about 60%, while no-child families and single-child families totally accounted for 50%. This would be related to marriage status of the old persons, since 1/4 of them had lost their spouses (death), divorced from their spouses or had never been married.

It is also found that about 50% of the old persons still had the will to live with their children for long period. However, 1/3 of them did not. Interestingly, 1/2 of them would do nothing if their children were in need of help. The traditional support pattern that different children take turn to care parents was objected by more than 90% of the investigated persons. Children of more than 10% of these old persons were living in a different province. About 65% of those children could go back home to visit their parents 2-3 times per year, while 10% of them could not even visit their parents once a year.

The result of the investigation shows that for important family affairs, more than 40% of the old persons would make decision with all their family members, while there were also another 40% would make it by themselves. This would be relevant to whether they were living with their children.

However large was the change in family structure and relationship, there were still 80% of the old people think that their children were loving them. This shows that parents' comments on their children had been not so relevant to whether the children carry out concrete care of them, and it would be less and less relevant.

All these information tell us that the move of labor, diminishing of family and conceptual change in family and old age support had made old age in family, which is traditional, more and more unrealistic.

2.2 Individual and family incomes of the old persons were still at middle or low level.

The investigation shows that in today's urban China more than 50% of old people were retirees of public sector (government and institutions), while more than 20% of them were retirees of non-public sector or those without job. Pension was the major economic resources of more than 80% of the old persons, while more than 10% of them got support from their children. The average of their individual income was 2567 RMB and the medium value was 2400 RMB.

The average of their family income was 1648 RMB and the medium value was 1500 RMB. The average family spending was 1004 RMB and the medium value was 1000 RMB. The average and the medium value of their family spending were about 2/3 of the average and medium value of their family income.

About 60% of the old persons believed their families had economic balance between income and spending. More than 20% of them believed their families were relatively rich, and about 15% of them believed their family couldn't afford their spending. More than 50% of them believed their families were at the middle level in the context of local economy, while less than 10% believed their families were rich. In addition, 10% of them believed their families were at upper-middle level of local economy and 30% of them believed their families were at lower-middle level. Those believed their families were poor accounted for about 10%. Therefore, 40% of the old persons were worried about poverty in the future.

These data show that the majority of the old persons had low income, and their purchase power were limited, which makes their demands on old-age services only potential ones instead of effective ones.

2.3 Old people felt the medical services were costly.

The investigation shows us poor situation of old people's health. Among them, 99% were suffering different chronic diseases. The major disease was hypertension, which more than 30% of them were suffering. More than 20% of them were suffering cardiovascular or arthritic diseases. More than 10% of them were suffering diabetes and cataract. 30% of them had been stay in hospital for medical cure during the previous year.

Fortunately, China's medical insurance coverage as many as 97% of old people. 40% of the old people were participants of the Medical Insurance for Urban Employees, while 45% of them were participants of the Medical Insurance for Urban and Rural Residents. Those could receive public reimbursement for medical services accounted for more than 7%, while those bought commercial insurance only accounted for 2%.

Anyway, in the previous year, 80% of the old persons in the investigation had partially or fully paid the medical costs by themselves. The average of both fully and partially medical payment of these old people was 4438 RMB, and the medium value was 2000 RMB. Among them, those whose payment were 500-3000 RMB accounted for about 40%, those whose payment were 3000-10000 accounted for more than 20% and those whose payment were over 10000 accounted for 7%.

Therefore, about 80% of the old persons believed that both partially and fully self-payments for medical services constituted burden on them. 20%-25% of them believed the burden had been relatively heavy but bearable, while 5% of them believed the burden had been too heavy to bear. Therefore, among them, those who were worried about disease in the future accounted for more than 70%.

These data show that thought the coverage of medical insurance was relatively large, the level of protection was still low, constituting obvious pressure on most old persons, especially from the part that they must fully or partially pay by themselves.

2.4 LTC is needed by old persons with moving ability damaged

In terms of physiological daily life activies, the investigation shows that 1% of the old persons could not take bath themselves; 0.3-0.5% of them could not use toilet, or wear clothes, or move in and out of bed, or move indoor by themselves; and 0.2% of them could not eat by themselves.

In terms of instrumental daily life activities, 2% of the old persons could not take bus by themselves, and those could not go shopping, wash clothes, cook, clean room, manage finance, or make phone call respectively accounted for more than 1%. 0.5% of them could not take medicine themselves.

Today, care for old persons are still carried out by their spouses. This case accounted for 60% of those responded to the investigation. 40% of them took care of themselves, and about 35% of them got care from their children. About 50% of the old persons had the will to receive care from their children, while more than 40% of them preferred care by their spouses.

60% of the old persons believed the greatest impact of LTC for old persons on family was the economic costs. About 50% of them worried bout human and spiritual costs, which is not a small number. 30% of them thought the greatest impact of LTC had been on lifestyle of their families and 15% of them believed it had been on work of family members. This is why we see that 30% of the old persons worried about lack of caregiver when they are in need.

The investigation shows 4% of the old persons responded with “Yes” when being asked about whether they had received care in daily life when they needed it. Less then 1.5% - 2% of them were in need of psychological consolation, care against chronic disease and care for rehabilitation and they had received them. Less then 1% of them needed LTC out of staying in hospital for medical cure. About 20% of them responded with “No” when being asked about whether they had received care in daily life when they needed it. Less then 1% of them needed LTC out of staying in hospital but didn’t receive it. For the needs of psychological consolation, care against chronic disease and care for rehabilitation, respectively more than 1% of the old persons had received the cares.

These data tell us, today, in most families, care for old person is still given by spouses and children. However, considering the changes in modern family, this pattern of care would be more and more unrealistic.

2.5 Old persons recognize the value of socialized LTC.

The investigation shows that more than 50% of the old persons were willing to receive institutional services when they loss autonomy in daily life, while about 30% of them didn’t want to enter old-age service institutions, and 20% of them had never thought about this issue. Among those willing to enter institutions, about 70% cared about quality of services, 65% cared about price, and 30% cared about the

distance between their homes and the institutions. Among those without intention to enter institutions, more than 60% didn't want to leave their homes, and about 35% were afraid of high price. Those who were afraid of social critics on their families, worried about bad reputation of old-age service institution and had no knowledge about the institutions respectively accounted for about 10%.

The investigation shows many old persons were willing to accept in-home services when they loss autonomy in daily life. Those who didn't accept in-home services and hadn't thought about it respectively accounted for more than 20%. 45% of those who didn't accept in-home services were afraid of the possible high price. More than 20% worried about quality of services, and also more than 20% worried about safety issue. Near but less then 20% of them worried that their children would not agree on buying in-home services.

It shows that more than 50% of the old persons were willing to receive daily care from daytime center in their communities when they loss autonomy in daily life, while 20% said they would not accept that services. Another 20%, instead, had never thought about that issue.

These data show that to the three services, in-home, community-based and institutional, old persons didn't show preference. Those who had the will to enjoy the services were all about 50% or a bit more, while those who hadn't the will were all about 25%.

2.6 Old persons can accept paying for LTC services.

The investigation shows that about 45% of the old persons accepted to pay for LTC services, while 55% of them didn't. For those who accepted to pay, the expected price averaged at 1734 RMB and the expected medium price was 1500 RMB. To be detailed, more than 35% of them chose to pay 1001-2000 RMB, and near but less than 30% chose to pay 501-1000 RMB. Less than 15% of them chose to pay less than 500 RMB, and also less than 15% of them chose to pay 2001-3000 RMB. Only 5% of them chose to pay more than 3000 RMB.

For the question who should pay for LTC services: government, employer, legally major supporter or oneself, 3/4 of the old persons hoped the government could pay for that. More than 40% of them chose to pay by themselves, and 20% of them preferred their major supporter to pay the services, while less than 10% of them believed their employers could pay for LTC.

Which should be the way that government pays for LTC services: social assistance, social subsidy or social insurance? 30% of the old persons chose the first, 30% chose the second and 40% chose the third.

This shows that most old persons had psychological preparation for paying LTC services, but they wanted the government to help them in critical moment.

2.7 Old people accept LTC insurance and its contribution.

The research shows that 45% of the old persons accepted to participate in and pay contribution to social LTC insurance, 35% of them didn't accept the system and 20% of them didn't know about the system.

For those accepting to pay for LTC insurance, 864 RMB per year was the average value that they would like to pay as contribution, and 500 RMB per year was the medium value. To be detailed, about 40% of them accepted to pay contribution of less then 300 RMB per year, 20% of them accepted to pay 301-800 RMB per year, 25% of them accepted to pay 901-1500 RMB per year, and 15% of them accepted to pay over 1500 RMB per year. In general, the two extremities, those who chose less than 300 RMB per year and more than 901 RMB a year, both accounted for more than 40%.

The major reason why some old persons didn't want participate in LTC insurance scheme is they could not bear the economic burden, and this group of old persons accounted for more than 50%. 25% of old persons still preferred their children to take care of them, and about 30% of them said they hadn't been aware of relevant policies.

There were more than 30% of old persons willing to buy commercial LTC insurance, while about 50% were those didn't. 20% of old persons were not aware of bout commercial LTC insurances.

The real reasons for this are, firstly, 45% of old persons didn't trust in commercial insurances, more than 40% of them could not afford to the contribution, more than 15% of them were supported by their children, and 5% of them could live with their own savings.

This shows that if insurance were chosen as the way for LTC system in China, most old people would choose social insurance instead of commercial insurance.

2.8 11% of old people were disabled, and they need to be classified by more detailed standard.

According to the investigation and analysis, there must be about 11% of old people were disabled.

The research shows that according to the degree of disability, disabled old persons can be classified as those physiologically disabled and those socially disabled. The first group contains about 5% of old people while the second contains about 6%.

The research shows that under the group of physiological disabled old persons there were two sub-group: those partially disabled and those fully disabled. About 2.5% of old persons were in the former, and also about 2.5% of them were in the second.

If we calculate the number on the basis of 231 million, the total number of old people in China, according to public statistics in 2016, the rate of 11% means 25.41 million old persons were disabled. Further, 6% were those instrumentally disabled, which were 13.86 million, 5% were those disabled, 11.55 million. 2.5%, as the rate of partially or fully disabled old persons, means 5.77 million.

For designing policy, it is suggested to assume 13% (30 million) as the rate of disabled old persons in China, which would be more prudent. Then, 7% (16.17 million) could be assumed as the rate of instrumentally disabled old persons, and 6% (13.86 million) could be assumed as the rate of physiologically disabled old person. Further 3% (6.93 million) could be assumed as the number of partially or fully disabled old persons.

The data mean that disabled old persons were actually not as many as what people had been saying. It was only 11%, and among the disabled old persons, only those fully disabled, accounting for only 3%, were those we should pay more attention to.

2.9 Traits of disabled old persons and their families were different from the general traits of all old persons and their families.

Further analysis on the disabled group, the ratio of male to female was 1:2. In detail, 15% of them were aged 60-69 years, 30% of them were aged 70-79 years old, and those over 80 years old accounted for more than 50%.

Of families of disabled old persons, more than 75% were those with several children, less than 20% were those with single child, and only 5% were without child. Meanwhile, 60% of the families were single-person, two-person and three-person families, while 40% were families with four or more persons.

Among the disabled old persons, near but less than 50% were participants of Medical Insurance for Urban Employees, while more than 40% were participants of Medical Insurance for Urban and Rural Residents. Those who could enjoy public reimbursement of medical costs accounted for about 5%, which was also the rate of those not insured. For partially or fully self-payment for medical costs, more than 30% spent 501-300 RMB per year, and another 30% spent 3001-10000 RMB per year. Those spent less than 500 RMB per year and those spent over 10000 RMB per years both accounted for more than 10%.

In terms of individual income of the disabled old persons, the average was 2638 RMB per month, while the medium value was 2700 RMB per month. The average value of the partially or fully medical payment was 9079 RMB per year, accounting for 17.05% of their yearly individual income; and the medium value was 3000 RMB per year, accounting for 12.50% of their yearly individual income.

These data show that the traits of disabled old persons and their families are different from those of all old persons and their families. Differences in demographic and sociological features were even larger. The reason for this is the high age of the disabled old persons, which also constitute a different life for them in the history.

2.10 The willingness of disabled old persons for LTC insurance was similar to that of all old people.

The investigation shows that about 45% of disabled old persons were willing to participate in social LTC insurance, while those were not willing to do so accounted for near 35%. Those who were not clear about this issue accounted for more than 25%.

Among those willing to participate in LTC insurance, 1/3 were able to pay less than 300 RMB per year, 1/4 were able to pay 901-1500 RMB per year, 20% were able to pay 301-900 RMB per year, and 15% were able to pay 1500 RMB per year.

Among those not willing to participate LTC insurance, about 50% were not able to pay the contribution, about 30% were expecting receiving care from children and also about 30% were not aware of relevant policies.

Among disabled old persons, 35% were willing to buy commercial LTC insurance, more than 40% were not, and more than 20% were not aware of this kind of insurance.

Among those not willing to buy commercial LTC insurance, near 50% didn't trust in commercial insurance, 40% were not able to pay premium, 20% were supported by their children, and 4% could live by their own savings.

These data show that disabled old persons' choice of social and commercial LTC insurances were not quite different from the choice of other old persons.

3. Conclusion of The Research

From the 10 findings we draw two conclusions, which would be useful:

3.1 Urban old age families' capacity is not sufficient to meet their LTC needs.

Theoretically, there are generally three factors result in loss of autonomy: First, chronic disease; second, physical vulnerability; and third, cognitive decline. These factors make the LTC for disabled old persons living in the urban areas a very urgent need. This was well explored in the finding 3, 4 and 8.

However, following the industrialization, urbanization and modernization of Chinese society, the rapid change of urban old age families and new traits resulted, including those demographic (findings 1 and 9), sociological (finding 2, 3 and 9), all show us a trend that the LTC needs could not be satisfied in a good way, and this situation would not be easily changed in a short period.

Therefore, we see that the LTC needs of old persons are more and more urgent, while the traditional way of family support are being weakened due to the change of modern family structure. Thus the tension between the LTC needs and the capacity of urban old age family gets stronger.

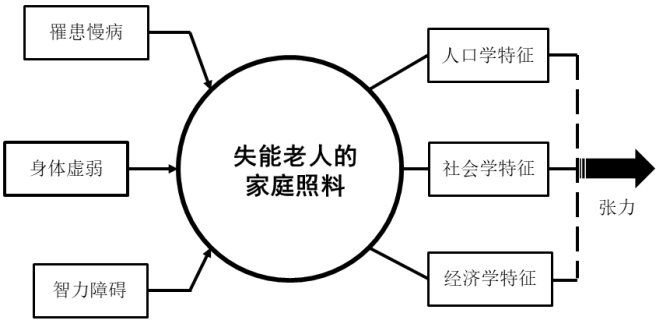

Fig 1: Tension between Needs and Capacity

For releasing or even eliminating such social tension, the only feasible way is to adopt a socialized way or approach in LTC for old people's daily life, which is following the socialization of production and life pattern. This means, the LTC should go the quasi-market way, which operates the system in model of social services.

3.2 People voting for, voting against and having no idea about LTC contribution/payment are equally distributed.

Social services are also called social welfare services. In Chinese society, when you talk about welfare, some public officials and scholars would get allergic. Actually, the modern conception of welfare is far different from the understanding in 1950s, which meant free lunch or free pie. The quasi-market social services/ welfare services are the right connotation of the concept in today's context.

What does "quasi-market" mean? It means price competition is weakened and quality competition is strengthened. A pure market way usually cannot fully cover every member of the society. In a large consumer market like China, a product or service that receive recognition from just 1/3 or 1/2 of the consumers can earn huge profits. If market coverage were extended, the distribution of profit would be smaller. Therefore, it is usually not a rational market choice to cover all social members. However, social services are different from normal products or services, because in the fields of medicine, education, housing and old age service, the needs are rigid, and no way to retreat. In order to meet needs of every social member, government is necessary to intervene. Therefore, a quasi-market would be formed.

There are six traits for quasi-market: (1) It is based on the market; (2) Prices in a quasi-market are limited or monitored by government or the society; (3) Competition in a quasi market is on quality of services; (4) On the basis of reasonable price, government subsidize social members not capable of purchasing services in need; (5) Subsidy/allowance is delivered directly to service provider; and (6) Service providers earn reasonable profit with high quality that wins users.

This theory or value orientation was incorporated in the investigation, which asked about values of old persons and their idea about the quasi-market. On the basis of the statistics we find that in terms of the socialized LTC services (finding 5), payment for socialized LTC services (finding 6) and LTC insurance, including attitude toward social or commercial ways, the number of old people that vote for, vote against and have no idea about it are equally distributed into three groups.

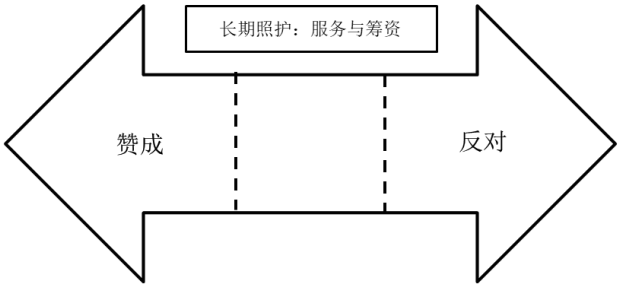

Fig 2, Attitude towards LTC payment

The investigation was conducted in mid-2016, when some experiments of LTC for disabled old persons were being implemented in some regions, but without systematic services and the public didn't know much about the programs. At the same time, LTC insurance was waiting for its birth, because in that period, the general office of MOHRSS had issued the Guiding Opinion on LTC Insurance Pilot Programs. [160] However, since the programs were just put in practice, the public could not fully understand every aspect of the system.

Therefore, we should understand that when being asked about the LTC or LTC insurance, which was merely a concept without any clear policy design or institutional arrangement, the old persons who responded to the investigation were making their answers without good knowledge about the issue. Imagine that after a while when government had a fixed institutional arrangement and practical program for LTC, urban old people, including disabled old person, would hold a more positive attitude towards it.

4 Policy Suggestion on LTC System for Disabled Old People

With analysis on definitions and international experiences of LTC, and data collected from investigation, we try to provide our policy suggestions to LTC for disabled old people. Following are our suggestions for service provision and financing model of LTC in China:

4. 1 Model of LTC services

According to the conclusion of the investigation and the analysis on LTC definitions, there should be 6 aspects contained in LTC service provision.

4.1.1 In-home, community and institutional services are an organism.

[160] 《关于开展长期护理保险制度试点的指导意见》, 中国政府网（http://www.gov.cn/xinwen/2016-07/08/content_5089283.htm）

The Law on Protecting Old People's Rights states that the state should establish and perfect an social old-age service system on the basis of in-home services, supported by community services and supplemented by institutional services. [161] In LTC services, and according to international experiences, in-home, community and institutional services should be coupling with each other in terms of functions. Only this way can we have an integrated effect larger than that of 1+1.

Currently, in real work, there is a misunderstanding idea that makes institutional services un-naturally separated from community and in-home services. In a restrict sense, there are only two ways of LTC services: in-home and institutional. Community services are semi-home and semi-institutional ones, which combines institutional services provided by daytime center and evening services at home. Theoretically, the first meaning of in-home care is ageing in place, which is an international consensus. The implication is that old people should live their final period of their life in families and communities that they had been accustomed to and they should not be forced to leave the social and humanistic environments with which they are familiar. The second meaning of in-home service is that the services should be supported by social and community services, while the expression of in-home service by itself is not complete. Social supports to in-home services are not possible to be subtracted.

4.1.2 The best choice for fully disabled old peoples is institutional services.

When old people lost their functional ability seriously or fully, the rational choice is receiving service in institutions. As mentioned above, residents in cities where single-child families, no-child families, and single-person families dominate should choose this way. In institutions where services are provided in an organized way, old people can receive more professional and safe LTC services. However, it should be emphasized that old-age service institution must not concentrate in suburban areas. Instead, they should be built near urban centers or communities where residents live together. Experiences show us that small and medium institutions with 50-400 beds are better choices. This way, old people can receive professional care while live with their families. This is the idea of basing institutional services in community.

4.1.3 Formal and informal cares should be balanced in in-home services.

In classification made by WHO, LTC for old people includes those formal and informal. Some seriously or fully disabled old people who don't want to enter old-age service insurance become recipients of in-home services. However, they need long-period or even 24-hour accompaniment by specific person. Therefore, for their in-home service, there should be a specified informal caregiver, e.g. his or her family member, friends or volunteer from social or community organizations. In addition, there should also be professional caregiver to provide supporting services. There are two aspects included in supporting services: First, professional training provided to informal caregivers, which helps them to manage basic care skills for old people; and second, technical care and rehabilitation that informal caregivers cannot provide, and cooperation with informal caregivers in health management for old people. The in-home services that we usually see today are actually only focused on a part of the ideal way, missing the later two aspects. The policy makers should consider it carefully: Why there are only several services provided to disabled old people every week.

[161] 《老年人权益保护法》, 民政部网站（http://www.mca.gov.cn/article/gk/fg/ shflhcssy/201507/20150700848507.shtml)。

4.1.4 Community service should be continuity of ageing in place.

There is another model for community-based LTC service, which is providing daytime care from community center, called Old People Care House in China. The major recipients of this service are partially disabled old persons, and the major objective is to continue the ageing in place as more as possible. As mentioned, such a semi-institutional and semi-home services means a family entrusts old person to service center in the daytime and care old person at home in the evening. Community service can also provide service for relaxing family caregiver. When family members are tired of caring old persons for a long period, or they need to trip for business or tourism, old person could be cared by community canter.

4.1.5 Choosing of in-home, community and institutional services should be based on the degree of disability.

When a person gets 60 years old and called old person, he or she doesn't necessarily need special care from the society and government. However, when an old person gets older, he or she would gradually lose autonomy in life due to disease, function reduction and cognitive disability. For old people, there is a general process from losing social functions to losing physiological functions. Therefore, choosing of in-home, community and institutional services should be based on the degree of disability. As mentioned before, 3% of old people are fully disabled, who cannot get off beds and recognize their families. This group should receive institutional services for whole day. If they don't want to leave home, formal and informal cares should be combined for caring them. There are also 3% of old people are fully disabled and are not able to take bath and walk outdoor. It is suggested to mainly adopt combination of formal and informal services. Daytime services by community center are also suggested. There are still 7% of old people are socially disabled. They cannot take bus, go shopping and cook. For them, in-home care supported by social and community services are suggested.

4.1.6 Provider should integrate in-home, community and institutional services.

Thinking from the perspective of LTC provider, the best choice is to integrate in-home, community and institutional services into a unified framework. Firstly, there should be a flagship institution with 200-400 beds set up in an area to provide service to fully disabled old people. Secondly, professional force of institutions should be extended for building community centers, which provides daytime care for partially disabled old persons, and it should also be extended for providing in-home services for families. Because LTC institutions are actually doing neighborhood business, comprehensive operation can make all old people around the institutions be potential clients. It is also needed to mention that community and in-home services that are fighting by themselves are not possible to continue.

4.2 Models of LTC financing

On the basis of the investigation and LTC definitions, we have 5 points to be proposed for LTC financing, as follows:

4.2.1 The objective of LTC is to activate effective demand.

Obviously LTC needs the funding, but a fact must be clarified: as mentioned before, even for retired employees that receive old-age insurance benefits, after the 12 times of continuous pension increase, the pension is only 2400 RMB per month. Today, in the first-line cities, LTC institution usually charge 5000-6000 RMB per month as the fee for services, and in second- or third-line cities, the fees are not less than 300 RMB per month. This data show that about 1/2 to 1/3 old people have only potential demand of LTC. Therefore, for disabled old people, it is necessary to provide a guaranteed income for paying for LTC services. Only this way can the potential demands be transformed into effective demands.

4.2.2 Establishing LTC insurance is for reducing pressure on medical insurance.

Ageing's greatest impact on social spending is the increase in medical costs. If include the LTC costs of old people into medical insurance, the funds for medical insurance would not be sustainable. China's medical insurance system is weak, because according to the Social Insurance Law, the pension system is jointly contributed by employees and employers, together with government's subsidy, while the funds of medical insurance is not subsidized by the state.[162] Therefore, there is no government's guarantee for medical insurance. In fact, the future of medical insurance is not optimistic. Researches conducted by relevant authorities indicate that in 2019 the fund of the Basic Medical Insurance for Urban Employees would be in deficit and in 2034 its accumulative balance would be negative.[163] For this and in accordance with President Xi's instruction on establishing LTC security system, a separated financing approach for an independent LTC services is a necessary choice for the country.

4.2.3 LTC insurance should start from services for fully disabled old persons.

If without classification of disability degrees, it is difficult to cover all the disabled old persons with LTC insurance at once. If we firstly covers the 3% of old people who are fully disabled in every aspect, and then extend the coverage to another 3% of old people who are partially having physiological disability, it is fully possible to establish a LTC system in China. Perhaps, we should bear it clearly in mind that the coverage of LTC should always limited within 6% of old people, so that the LTC system can be sustainable. Recent information shows that there are problems in financial sustainability of Japanese and German LTC systems. The reason might be that the coverage of these systems are two broad in terms of recipients and services.

As mentioned before, in 2016, 60+ people in China were over 231 million. According to investigation, 3% of them were fully disabled, which are about 6.93 million. If we make full payment to this group through LTC insurance, which means 3000 RMB per month (plus pension of these people), it needs totally 20.8 billion RMB. For financing, if each old person contributes 100 RMB per month to the system, then 231 million old people can accumulate 231 million RMB per month. This is optimistic for the system.

4.2.4 The channels for financing should be diversified.

[162] 《社会保险法》, 人社部网站 (http://www.mohrss.gov.cn/gjhzs/GJHZzhengcewenjian/201506/ t20150625_212402.htm)。

[163] 《医保基金增幅"收不抵支"藏风险》, 经济参考网 (http://jjckb.xinhuanet.com/2016-02/05/c_135076100.htm)。

According to the calculation made in the previous paragraph, the system doesn't require old persons to pay for all the contribution. The diversified way that we propose for LTC financing can be called cocktail financing. Firstly, it means old people should pay contribution, as urban old persons pay 25 RMB per month, which accumulates to 300 RMB per year, while rural old persons pay 10 RMB per month, which accumulates to 120 RMB per year. This standard is affordable to most old persons. A small part of Dibao recipients can pay the contribution through poverty reduction program or charities. The rest of the contribution, 75RMB per month, as social pooling, could be paid by pension insurance, which can be dug in annual increase of the fund, and medical insurance, which is reduction of medical costs, housing credit, which is the part accumulating after retirement, disability pension, since over 50% of people with disability are old, and lottery revenue for public welfare, of which 50% are regulated to be used for old-age affairs. In conclusion, the general objective of this financing model is to collect 75 RMB per month (900 RMB per year) from urban old people and 90 RMB per month (1080 RMB per year) from rural old people, and this way, the financing level could be same as the level we mentioned in the previous text.

4.1.5 Mix of Social and Commercial Insurances

Insurance system can adopt mix of social and commercial approaches. This means relevant public authorities are responsible for planning, collecting contribution and monitoring the administration, while the management of funds and payment of contribution are in charge of commercial insurance companies. Generally, fully disabled and eligible old persons are suggested to receive institutional services and insurance companies sign contract with LTC institutions chosen by the recipients, with 3000 RMB per month being paid to the institutions automatically. If old people do not want to enter institutions and choose to stat home, a part of care fee should be paid to qualified informal caregiver, while another part should be reserved for supporting social services.

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7. A Proposal on Improving the Service System of Elderly Care in China

Policy Recommendation Report

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1. Introduction

As China entered the aging society in 2000, with the extension of the people's life expectancy, the long term care for the elderly has drawn wide concern. According to "*the Fourth Sample Survey of Living Conditions of the Elderly in Urban and Rural Areas of China*"[164] (hereinafter referred to as "the Fourth Survey"), the number of disabled[165] elderly constitutes 4.2% of people above 60-year-old, among which the severely-disabled elderly constitutes 1.3%, the moderately-disabled elderly 0.5%, and the mildly-disabled elderly constitutes 2.3%. In 2017, the total population of China was around 1.39 billion, and the number of people aged 60 and above was 240 million. If the fourth survey could be representative, then there were about 1 million disabled elderly in total, within which 0.43 million are severely and moderately-disabled in 2017. Fully aware of these statistics, the Chinese government was far-sighted in launching the construction of elderly care in the early 1990s, and giving full consideration to the construction of long term care delivery system for the elderly in 2006. After the construction for more than a decade, a comprehensive welfare system, which is based on family unit and community, supported by related institutions, and combines treatment with convalesce, has been established.

With the extension of the people's life expectancy, the demand for long term care will continue to grow. In addition, the demand for long term care for the elderly is not met within the family due to the family planning policy, family miniaturization and the specialization of medical care. Therefore this demand will spill over into social demand and require elderly care from the society. Besides, the long term care, involving huge time and economic costs, can be very costly even if it is provided by the family. As we know, the elderly care provided by the society can directly address the concerns about economic costs, and a well-established financing system would be very helpful in providing better elderly care. As a result, we should take the financing system into account while we discuss about the long term care delivery.

Having drawn on practical experience of countries and regions with high income, we find that the way of raising funds depends on many factors: the economic development, the family system, the attribution of responsibility in long term care, and people's perception of the role of government. Singapore and Hong Kong focus on the role of the family, and they, as well as its overall social system, takes major responsibility for vulnerable groups; the Nordic countries aim to establish a top-notched and universal welfare system for long term care in line with their overall welfare system; the UK attaches great importance to the role of family and the community, and it provides a subsidy system for household budget survey, which contradicts their title as "welfare state" and the national medical care system; countries such as the Netherlands, Germany and Japan raise funds through the social insurance system,

[164] *The Fourth Sample Survey of Living Conditions of the Elderly in Urban and Rural Areas of China* is a large-scale data survey conducted by the National Committee of Aging in 2015. The survey is based on 222179 individual samples from 31 provincial-level units nationwide, which includes 22,158 long-form samples and 7,087 community samples, 1871 township samples and 460 samples in counties and cities.

[165] The disabled here is defined as: For six items of the ADL scale, eating, dressing, going to the toilet, walking in the room, going to bed and getting out of bed, and taking a bath, if one is unable to execute any one of the items, he or she is defined as "disabled". However, if one can execute all of items effortlessly, he or she is defined as "able to take care of oneself". In addition, one unable to conduct 1-2 ADL items is defined as "mildly- disabled"; one unable to conduct 3-4 ADL items is defined as "moderately-disabled"; one unable to conduct 5-6 ADL items is defined as "severely disabled".

and the cost varies according to how much their citizens depend on the family and the institution. Therefore, we also find that the more the family relies on care delivery from the institution, the higher the cost will be and the family will seek more help from outside regardless of the funding system. That is to say, the demand generates the supply, and the expansion of supply, in turn, will promote or stimulate demand.

At present, the concern about long term care starts to gain momentum in China. During the discussion about the construction of long term care delivery system, the interaction between financing model and delivery model should also be taken into account.

2. Development of China's elderly care and the exploration of long term care financing system

2.1 Evolution of China's policy on elderly care delivery system

Before 1994, elderly care was provided only by family members in China. After the founding of New China, the rural areas were the underdeveloped places where more than 80% of the population lived. To address this issue, the Chinese government, driven by collective economy, established a "Rural Five Guarantees" system for the elderly and kids who have no family and no income to rely on, and provided centralized elderly care for the disabled, and subsidized the children and the "Three Noes" [166]elderly in urban areas with the support of charity house.

After 1994, the policy on elderly care was amended in terms of its major provider. With the home-based care as the foundation, the "social security system for elderly care", including the community- and institution-based care, had been introduced, which ushered a new era of diversified elderly care delivery. In 1994, the Chinese government released *the Seven-year Development Plan for the Work on Population Aging (1994-2000)*, proposing "we must adhere to combining the home-based care with social elderly care", and "spare no efforts to establish and improve the social security system for elderly care by building more welfare facilities and expanding the scope of social elderly care. Meanwhile, we must give full play to the role of family in economic support, life care and spiritual consolation." In 1996, *the Law of the People's Republic of China on the Protection of the Rights and Interests of the Elderly* was promulgated. It not only stipulated that "the family should shoulder major responsibility for elderly care", but also pointed out that "it's essential to develop community-based care and build up facilities and network so that the elderly can enjoy life care, cultural and sports activities, health care and recovery". During this period, the government proposed the notion of "social elderly care", and also gave full play to the role of community in meeting the elderly' demand for the care, which largely differed in ideology from the home-based care, and paved the way for the following home-based care policy. It was also during this period that institutions for elderly care sponsored by social capital entered the elderly care market.

After 21st century, the policy on elderly care delivery has always been adjusted to promote the allocation of duties and coordination among the family, community and institutions. Besides, the elderly care for the disabled and moderately-disabled is put forward and the construction of long term care system has drawn wide concern. In 2006, the General Office of the State Council released *the Opinions*

[166] "Three Noes" Refers to the elderly in urban areas who have no income, no support and are unable to work. ——译者注

on Promoting the Development of Elderly Care, which said: "The development of elderly care requires the guidance of policy, government support, sponsorship from the society, and promotion through the market. Therefore, we should take steps to establish a system based on home-based care, supported by social elderly care and assisted by the institution endowment." The "12th Five-Year Plan" for Population Aging, promulgated in 2011, emphasized the role of the institution, and the policy was amended into "home-based, community-based, and institution-supported". In the same year, the Ministry of Civil Affairs promulgated *the "12th Five-Year Plan" for Social Elderly Care*, in which the statement: "addressing the elderly care for the disabled and moderately disabled should be given highest priority in strengthening social elderly care system and promoting social stability" was proposed for the first time. With the social capital quickly introduced into elderly care market, the government subsidized the institutions of elderly care in large numbers and resulted in many excessive institutions. Therefore, the "13th Five-Year Plan" for Elderly Care aims to advocate "a home-based, community-based and institution-supported elderly care system that combines health care and elderly care". In this way, the major care provider, as is mentioned in the statement of 2006, shall meet the demand of long term care in terms of the contents of the care delivery, and the idea of combining health care and elderly care was brought up.

Since the statement of "addressing the elderly care for the disabled and moderately disabled" was brought up in 2011, the state once again revised and promulgated *the Law of the People's Republic of China on the Protection of the Rights and Interests of the Elderly* at the end of 2012, and it stipulated that "the state would launch the security program for long term care to ensure the elderly can receive sufficient health care."

2.2 Status quo of urban-rural elderly care and long term care system

After many years of construction, a home-based, community-based and institution-supported elderly care system that combines health care and elderly care has been established.

The family is the major and ideal place to offer long term care. According to the living arrangement for the elderly mentioned in Fourth Survey, 13.3% of the elderly are empty nesters while 86.7% are living with others. In terms of the elderly in urban and rural areas, the proportion of living alone/empty nesters in urban areas is 12.2%, lower than that of rural areas which accounts for 14.5%. The statistics show that 15.22% of the elderly in urban and rural areas really need elderly care, and 14.14% of them live in urban areas and 16.38% in rural areas. Among these elderly in need of care, 91% of them actually received elderly care. To make it more specific, 93.46% of the elderly in need of care in urban areas had been served and the number is 89.43% in rural areas. Only about 10% of elderly people did not have access to the care they need. Family members are still the major providers who can offer elderly care: spouses (43.48%), sons (28.64%), daughter-in-law (10.08%) and daughters (10.35%) account for 93% of the total providers. Similarly, this ratio is 95% in rural areas and 90% in urban areas. As we can see from the care provided outside the family, 5.35% of urban elderly and 0.58% of rural elderly are served by housekeeping workers; 1.32% of urban elderly and 0.62% of rural elderly are served by the staff from the institutions for elderly care; very few people would choose the elderly care provided by community staff or day care center.

Recently, community-based elderly care delivery, especially for special groups such as the disabled & moderately disabled elderly, the elderly with more advanced age, low-income empty nesters, has been in rapid development. Due to the increase in both the financial investment and care staff since 2010, the community-based elderly care system has been in transition to a well-round center that provides health care & rehabilitation, medical treatment & endowment and emotional care in addition to the basic life

care, such as providing meals and cleaning; furthermore, the system has paid more attention to the mental and physical health of the elderly rather than their economic state; besides, the system allows the community to support the home-based care by integrating more resources instead of minding their own business, which offer great help to the special groups and their families. By 2016, there are 35,000 community-based institutions and facilities for elderly care and 76,000 community-based endowment facilities intended for mutual help; among all kinds of beds, there are 3.229 million beds for community accommodation and day care.[167]

Basically, the community-based elderly care platform is well-established owing to the information care system. During the "12th Five-Year Plan" period, the local governments spared no efforts to build the information platform of community and home-based care, and further established a community-based "virtual nursing home" on the platform mainly sponsored by people from all walks of life. Beyond that, the local government also attempted to create an all-round and convenient model for community- and home-based care, including door-to-door care, emergency care and mutual help care, etc. so as to meet all kinds of needs from the elderly.[168]

With a rapid growth in the number of beds in the institutions, long term care, rehabilitation, and hospice care are receiving more and more attention. By the end of 2016, there were 29,000 institutions for elderly care registered with a total of 732,000 beds (31.6 beds per thousand elderly people, including community accommodation and day care beds). According to a survey conducted by Qing lianbin on 421 institutions for elderly care by the end of 2014 and 2015, 84.6% of the institutions for elderly care set up beds for the disabled elderly, and 91 beds on average, accounting for 42% of the overall beds on average; 61.8% of the institutions for elderly care set up multi-function care beds with an average of 53 beds per institution. Among all the 421 institutions for elderly care, 75.5%, which involves 318 institutions for elderly care, set up rehabilitation therapy rooms with an average area of 126.7343 square meters; about 276 institutions for elderly care set up 508 hospice rooms in total and 1.84 rooms on average, and up to 26 hospice rooms in each among all institutions.[169]

[167] The data is based on the statistical bulletin of the development of social elderly care in 2016. The web portal of the Ministry of Civil Affairs: http://www.mca.gov.cn/article/zwgk/mzyw/201708/20170800005382.shtml.

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[169] QING Lian-bin. A survey and preliminary analysis on the basic conditions of institutions for elderly care in China[J]. Academic Journal of Jinyang, 2017(1). From 2014 to 2015, the Central Public Welfare Lottery Fund have supported elderly care for disabled elderly people in China by funding a total of 525 institutions for elderly care (29 provinces, autonomous regions and municipalities directly under the Central Government, excluding Shanghai, Tibet, Taiwan, Hong Kong and Macao). This article collected the basic data of these institutions for elderly care and made some supplementary investigations on some institutions for elderly care, eliminating the institutions with incomplete data and acquiring the basic information of 421 institutions. However, it should be noted that only the institutions that have met the requirements or standards in qualification and management, facilities, care places, care equipment, the elderly care, the employee forces, and standardized and institutionalized construction are eligible to apply, The institutions that have passed the qualification

2.3 Major problems of the development of long term care system for the elderly

As an important part of the elderly care system, long term care system must be observed under the big picture of the elderly care system. The major concerns about long term care and the care delivery system for the elderly lie in both the total amount and structural mismatch in supply-demand relationship.

From the perspective of home-based care, there are several issues that need to be addressed: First, the rural elderly are more vulnerable in health and earning less than the urban elderly, and therefore the supply-demand gap of long term care is larger in rural areas than that in urban areas. However, the current policy favors the elderly in urban areas in terms of providing elderly care, making this gap even larger. Another issue that has not drawn much attention is that the first generation of migrant workers from the rural areas is aging, but they have no access to the elderly welfare of the city they work in due to household registration, so it is noteworthy to see how their return to rural areas shape the structure of the population and long term care in rural areas. Secondly, the current policy has benefited the elderly with advanced age, empty nesters, and the elderly with less income, but is yet to take the whole into account. After several generations, some cohabited families might be unable to offer long term care or even afford the elderly care; besides, families with two generations of elderly to provide for (the elderly live with their parents) also find it hard to offer long term care; in addition, the demand for home-based medical care in urban areas is not accessible enough. “The Fourth Survey” indicates that door-to-door care of doctors is widely accepted in home-based care. In rural areas, doctors are allowed to visit their patients while that will be against the rules in urban areas, which reveals the system defect in dealing with supply-demand relation. At present, some local governments started to encourage the family doctors to visit their patients based on the contract between them. Thirdly, most elderly are not proficient enough in using the Internet. In this information era, many cares, including telemedicine, cleaning, catering, shopping and online payment for utility bills, can be offered through the Internet. Unfortunately, these benefits are not accessible to the elderly due to low penetration degree of home Internet and lack of knowledge in using it.

The supply-demand mismatch in community- and institution-based care:

In some communities, the supply-demand mismatch is mainly reflected in these aspects: Firstly, the lack of beds in the community helps explain the supply-demand mismatch in beds of all institutions. The statistics from “the Fourth Survey” show that the demand for day care in the community was not huge, and only 2.13% of the elderly in urban and rural areas need day care, and only 1.56% of the elderly who can do part of the self- maintenance and 0.54% of those who cannot need day care. Some local governments, on the contrary, spent much on facilities for day care in community recently regardless of the demand. By 2016, more than 3 million beds for community accommodation and day care were set up, causing huge waste of beds. Beijing Municipal Government had invested 300,000-700,000 yuan in day care institutions of each community and more than 2,700 day care centers were built. Currently, less than 700 institutions are actually used for long term care and other institutions are left unused or used for other purposes. Secondly, the mismatch in government’s care delivery through community and all kinds of needs from the elderly. Local governments only purchase elderly care, including cleaning and catering, for the elderly and those who need long term care in community platforms, and are yet to meet the various needs from the elderly. There is no such delivery method that can be universally applicable.

examination can be funded by the Central Public Welfare Lottery Fund. Therefore, among the tens of thousands of institutions for elderly care across the country, these institutions are generally above the average.

In some institutions, the supply-demand mismatch is mainly reflected in these aspects: First, the mismatch between the aggregate supply and total demand of beds. According to the data released by the National Bureau of Statistics by the end of 2014, there were 34,000 the institutions for elderly care equipped with 5,514,000 beds for accommodation and only 2,887,000 of them were used by the elderly, which marked a vacancy rate of 48% (as is shown in the figure). After this figure caught the media's attention, the Bureau no longer released the number of occupancy, but the number of beds was growing more rapidly, further expanding the scissors differential between supply and demand. Secondly, there is a supply-demand mismatch in term of the location of many institutions for elderly care. Even if they are willing to live in the institution, the elderly in need of long term care and their families prefer to a well-equipped institution near their home and bustling business streets, while most institutions of that kind are located in urban areas. Due to the limited space in central urban areas, many large-scale institutions for elderly care are often built in suburban areas, which fail to match the demand of the elderly and families who need long term care. Due to the mismatch in location, the supply of beds is tight in central areas but excessive in remote areas, which helps explain why the total supply of beds exceeds its demand. Thirdly, the mismatch between financial investment and its target. The government has been focusing on the investment in building the facilities for institutions for elderly care which function as the supplier of care. There are several ways of investment from the government in the supply side: (1) works as the investor and manager of the institutions for elderly care or makes them run by the public or private organizations; (2) invests in community-based care facilities; (3) subsidizes private institutions for elderly care according to the scale of investment or beds. This supply-side policy has caused a series of problems: the demand for beds of state-run institutions has exceeded the supply due to its exceptional location, high level of care, and the price advantage, etc. This "Hard-to-get bed" phenomenon sent misleading messages to the market, and the supply-side policy yielded little, encouraging the herd mentality in social capitals. Generally speaking, the government role in long term care should be "ensure the basic supply". In addition to the elderly care of the "households enjoying the five guarantees" and the "Three Nos", the government should give the top priority to providing shelters for low-income disabled groups with insufficient family support. However, these people have no access to the benefits from the providers.[170] Recently, as is shown in a new research, the number of disabled elderly and those in need of hospice care in state-run institutions is unexpectedly less than that in private-run institutions[171], which indicates most financial resources are being used by the healthy elderly with more income and the targeting system of the welfare needs to be recalibrated.

On a macro level, limited resources have been wasted when the total supply of institution-based care exceeded its total demand and a majority of beds were left unused. On a micro level, it was a tough time when 10% of institutions for elderly care gained profits while 25% of them were in a deficit.[172] As some small private-run institutions withdrew from the market and large-sized ones expanded their size, more mismatches might occur in terms of the scale and location of some institutions for elderly care. Besides, some pressure groups may try to affect public policies and stimulate the demand for elderly care and long term care through so-called institutional innovation in order to narrow the supply-demand differential of institutions for elderly care.

[170] ZHANG Xiang, Lin Teng. Grant subsidy according to "Bricks", "Beds" or "Heads": A case study of institute for the aged in X county of Zhejiang Province[J]. Social Security Studies, 2012(04).

[171] QING Lian-bin. A survey and preliminary analysis on the basic conditions of institutions for elderly care in China[J]. Academic Journal of Jinyang, 2017(1).

[172] 2016 Statistical Bulletin of Social Service Development. Ministry of Civil Affairs portal, http://www.mca.gov.cn/article/zwgk/mzyw/201708/20170800005382.shtml

2.4 Exploration of long term care financing system

With the exploration and development of care delivery system, the Chinese government is playing an active role in researching various financing systems in order to secure the long term care for the elderly.

First, a comprehensive subsidy policy through government supply. After entering the 21st century, some high-income areas attempted to subsidize the elderly by old-age allowance. As the demand for long term care drew attention, the government made the subsidy available to more elderly with low income and high demand. Since the institution-based care was put on the agenda of the "12th Five-Year Plan", the institutions for elderly care have always been oversupplied and local governments have paid more attention to the demand-side in recent years. A late starter as the long term care subsidy is, it will be sure to benefit more people in the foreseeable future. By the end of August in 2016, 26 provinces (autonomous regions and municipalities) have promulgated the subsidy policy for old-age allowance, 20 provinces (autonomous regions and municipalities) have promulgated the subsidy for elderly care, and 17 provinces (autonomous regions and municipalities) have promulgated the subsidy policy for long term care. In addition, 23.554 million elderly people have enjoyed old-age allowance, which marks an increase of 9.3% over the previous year; 405,000 elderly have enjoyed care subsidies, which marks an increase of 52.8% over the previous year; 2.82 million elderly have enjoyed elderly care subsidies, which marks an increase of 9.7% over the previous year[173].

Second, the social insurance model. In July 2016, *the Opinions on Piloting Long Term Care Insurance System* was promulgated by the General Office of Human Resources and Social Security, selecting 15 cities for pilot projects to explore the ideal model of the social insurance for long term care. The pilot program pointed out: "we can raise funds in staff's medical insurance through optimizing the structure of social pooling account and individual account, transferring the fund balance and adjusting the rate of medical insurance", which can be regarded as the expedients for the current situation. On the one hand, the Law on Social Insurance stipulates that funds should be earmarked and the transfer of medical insurance funds violates the law; on the other hand, the balance of medical insurance funds varies from different places, so the measure mentioned above is not universally applicable. Therefore, the financial support is still an indispensable channel to ensure the long term care insurance in our society.

Third, mutual insurance model. As a risk-dispersion mechanism between social insurance and commercial insurance, mutual insurance is, like social insurance, non-profit in terms of its purpose of business. However, what makes the mutual insurance from other mechanism is that it is voluntary and self-financing. As a typical example of cooperative economy, the mutual insurance has more profound history than commercial insurance, and currently 27% of premium income worldwide comes from mutual insurance, which is still not a familiar concept to Chinese people. Currently, some places started exploring the mutual insurance of long term care, such as Haidian District, Beijing and Wuhou District, Chengdu City, Sichuan Province.

3. Consideration and suggestions on improving the long-term care delivery system

[173] The data is based on the statistical bulletin of the development of social elderly care in 2016. The web portal of the Ministry of Civil Affairs: http://www.mca.gov.cn/article/zwgk/mzyw/201708/20170800005382.shtml.

We are heading towards the right direction when we try to improve the home-based, community-based, institution-supported elderly care system that combines health care and elderly care. Based on previous analysis of the status quo and problems in elderly care and long term care, we found that (1) home-based care and long term care needs support from the outside; (2) the facilities and beds are oversupplied, and the information work of community should be done according to the demand. In addition, to address the issue of long term care must give priority to establishing funding systems.

3.1 The government role in long term care is to "ensure the basic supply and build a tightly woven safety net"

Basically, the long term care for the elderly has always been the private affair in which individual and family should take major responsibility. However, some vulnerable groups in our society really need some help from others in handling private affairs. In order to achieve a shared growth by encouraging everyone to fulfill their own duty, the Chinese government must take the initiative to ensure the basic supply and build a tightly woven safety net. Based on the economic and care ability of individual and family in long term care, the government should provide targeted support to vulnerable groups so that they can benefit from the social development. Therefore, to secure the long term care for the elderly requires the effective cooperation among government, individual and families.

3.1.1 The long term care for the elderly has always been the private affair in which individual and family should take major responsibility.

In the report at the 18th and 19th National Congress of the Communist Party of China (CPC), it is clearly mentioned that "clearly defined rights and responsibilities" is of great importance in strengthening the social security system. Therefore, defined rights and responsibilities is the basis of the overall arrangement in building the financing and care delivery system for the long term care of the elderly. At present, many people worldwide have reached consensus on the concept of "welfare pluralism" which indicates the diversification of welfare providers. However, people may share few common grounds due to different cultural and historical background, so it must be a long way to draw the line for each stakeholder and achieve joint development through collaboration. Though originated from the West, the concept of "welfare pluralism" is further developed in its meaning by Chinese people. In terms of providing long term care, "welfare pluralism", under the western background, refers to the transfer of responsibility from government and society to individual, family and enterprise, but it is exactly going the other way around in China. It is noteworthy that more and more people regard long term care as their private affair which was once seen as part of citizenship in some welfare states[174]. As those welfare states "move to the right", China should have more discussion on the basic theories before heading leftwards.

There are two issues that need to be addressed in long term care for the elderly: (1) financing and cares related to health care; (2) financing and cares related to day care. The cares related to health care can be purchased[175] through basic medical insurance, so it is unnecessary to establish another type of insurance

[174] Ellen Grootegoed, European welfare states are cutting back their responsibilities for long-term care, emphasising 'self-reliance' and replacing care as an entitlement of citizenship with targeted services. Journal of Social Policy / Volume 41 / Issue 04 / October 2012, pp 677

[175] The reason why Chinese scholars propose to establish the long term care insurance system is partly because a large amount of medical resources are occupied by the hospitalized elderly, and they also propose to draw on

to cover the medical expenses for the elderly; in addition, from the perspective of economic theory and social ethics, the cares related to day care, just as babysitting or life care for other family members, belong to private affair, which should be provided by individuals who can provide elderly care on their own or purchase long term care through self-pay or transferring insurance, it is up to them to decide. To remind people that providing elderly care for family members are private affairs, *the Law on the Protection of the Rights and Interests of the Elderly* and *the Marriage Law of the People's Republic of China* stipulate that all family members, such as couples, parents and their kids, have the right and obligation to take care of each other economically and physically. Furthermore, China has no specific law on the legacy and the elderly usually pass it onto their children, so their children should have the moral obligation to provide for their parents. Apart from the retirement allowance provided by the government, most of individuals and families have certain financial capability. As we can see from the statistics, the stronger financial capability the families have, the higher their saving rate will be. Chinese families have two significant characteristics. The first is high saving rate. About 90% urban residents and 60% rural residents have a saving rate of over 20% (2012). The second is house property. About 94% rural residents and 91% urban residents own houses[176]. Under the circumstance of population aging, savings and housing can provide certain support for the elderly to avoid the risk of disability.

3.1.2 Social insurance for long term care is not in line with the national conditions

To cover the costs of long term care for the elderly, the government will never hesitate in providing common products and elderly care (social insurance) or providing public products and elderly care enjoyed by all. Before that, the government needs to conduct all-round surveys on the level of economic development, structure of family system and people's attitudes towards related taxation. By providing common or public products, some welfare states had offered comprehensive long term care for the disabled and the disabled elderly, which caused great losses in national economy afterwards. Having reflected on the past, these welfare states decide to attach more importance to the indispensable role of family in long term care. Therefore, China should learn from the past mistakes: neither social insurance nor financial subsidy should exceed the affordability of national economy.

There are several reasons why it is not the right time to push forward social insurance system under current situation. (1) With a profound history in China, family system has always been regarded as an important part of the social security system, which is completely different from that of welfare state. Besides, filial piety, as one of the codes of ethics in our society, is deeply rooted in Chinese culture and it is a moral obligation for every Chinese to pay more attention to their family and take good care of their parents; (2) The social security system in China is centered on the principle of "ensuring the basic security" which aims to protect people from basic risks and ensure the basic level of social security. Since the cost of long term care does not belong to basic risk or even pure risk, China must remain firm in following its own path of development in social security; (3) According to the statistics, the per capita GDP of China is just above average and the per capita disposable income is characterized by skewed distribution. Generally speaking, people with higher income tend to take more advantage of the insurance funds while those with less income tend to use less. In terms of the beneficiaries of the

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experience from the model of Japan and the Netherlands and other countries. In fact, the Japanese case does not prove that establishing long term care insurance can address the problem of "social hospitalization." Besides, the reform of the Netherlands in 2015 reintegrated medical care into medical insurance.

[176] Li Zhen. The Future Reform of Chinese Housing Provident Fund from the Perspective of Boundaries of the Government's Responsibility. Chinese Social Security Review, 2017, 1(4):106-115.

welfare, the social insurance may cause reverse redistribution in the system of critical illness medical care and public reserve funds. (4) Due to the dual economic and employment structure in urban and rural areas, the urbanization rate of household registration is only 41% and about 290 million people participated in the medical insurance for employees, and the rest of the population will be covered by medical insurance for the residents. Although it would be much better to promote long term care insurance among those participated in employee's medical insurance, people in rural areas, with a greater demand for long term care, are yet to be covered by the insurance. If it is extremely hard to achieve universal coverage of long term care in a short period, how to realize universal coverage for long-term care insurance under the circumstances that the security level of current residents' medical insurance is still insufficient. (5) Under the circumstance of the reform on supply-side, the government urged related departments to reduce corporate taxes and fees and it would be inappropriate to establish another type of insurance.

3.1.3 The government role in long term care is to "ensure the basic supply and build a tightly woven safety net"

As a developing country with 8,100 dollars per capita GDP in 2016, China still has a long way to go to catch up with high-income countries and is yet to provide universal long term care security for the elderly. In order to provide more welfare for the people, the government needs to tax more, for which we have to make cost-benefit analysis between welfare and obligation. Throughout the urbanization process of household registration, the government role is to provide help to the disabled elderly whose family cannot provide long term care or afford those elderly care on their own, which is exactly in line with the principle of "ensure the basic supply and build a tightly woven safety net" mentioned in the report of "the 19th CPC National Congress". Similarly, this principle can be applied to the disabled people of other age groups whose long term care is yet to be put on the agenda. Compared with the social insurance system, the system mentioned above can be more accurate in redistribution and maximize the wellbeing of people through public expenditure.

Based on the theories mentioned above, this paper proposes to categorize the disabled elderly into four groups characterized by different economic and family capacity of individuals and families rather than their family structure and age: low-income with few family support, low-income with family support, high income with few family support, and high income with family support. Among these four groups, the government would prioritize the security of the first one, especially for the severely disabled elderly in the first group. With the development of national economy, the government support can be extended to the second category, and so on. At present, the current policies have supported the "Five Guarantees" and the "Three Noes" elderly of the first group. In fact, some families, where many disabled people live with their relatives, actually need the support from both the family and the government.

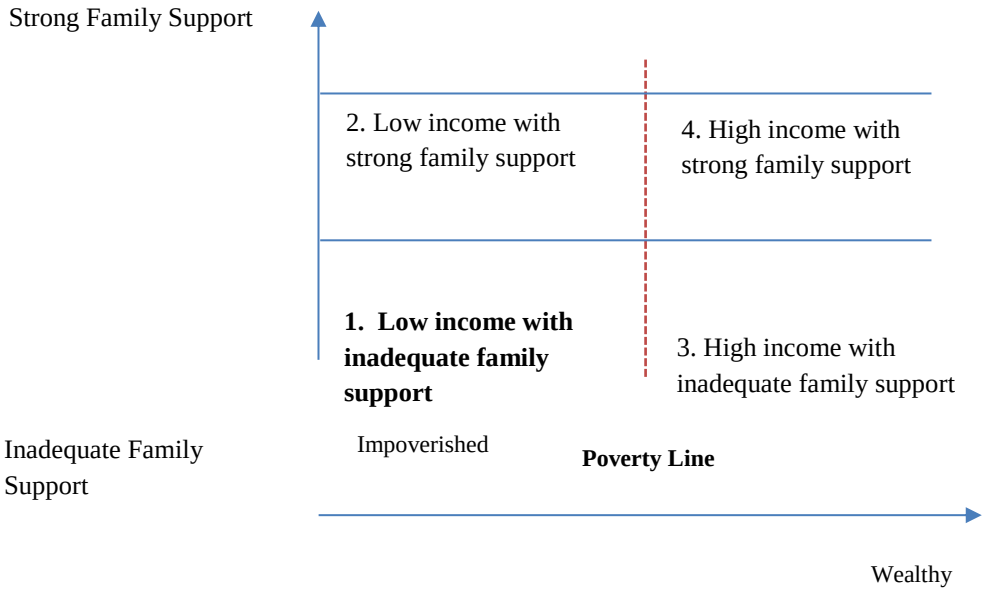

Figure 1: Diagram of Categories for the Demand of the Elderly and Policy Targeting Mechanism

3.2 A Proposal on the transformation from targeting the "supply-side" to focusing on the "demand-side" in fiscal expenditure policy

3.2.1 Support the demand-side in long term care for the elderly

During the "12th Five-Year Plan" period, the government has been promoting the development of institutions for elderly care through the supply-side reform, including the pilot program of elderly care, elderly care through the Internet of Things, the standard construction of institutions for elderly care, subsidies for beds and tax preference. However, many beds are left unused, the institutions suffered great losses and the elderly had no sense of gain, so currently the fiscal expenditure should be put into the demand side to create more supply, which is in line with the principle of "use the money according to the needs of people". One of the lessons that the welfare states should learn in long term care is the high cost of institution-based care, and therefore we should not follow their path of creating demand from supply.

3.2.2 The government should issue the vouchers as subsidies rather than purchase cares

The long term care for the elderly are diversified in forms, and the cares that government purchased, to some extent, cannot effectively even the odds between supply and demand. By using the vouchers issued by the government, the elderly can decide what kind of care they would like to enjoy, which is an effective way of making full use of financial funds. Currently, the elderly can have access to the care provided by the market since the care industry is well-established and abundant in its supply.

3.3 Build a policy system of "family supporting[177]"

The report at the 19th CPC National Congress pointed out that "As we respond proactively to population aging, we will adopt policies and foster a social environment in which senior citizens are

[177] According to the Law of Singapore

respected, cared for, and live happily in their later years", which charts the course for family-based elderly care system. Through formulating related policies on family, the government would give full play to role of family in providing care and spiritual consolation to the elderly. In this respect, it is necessary for us to draw on experience from Singapore with whom we shares similar cultural background. As an upgraded version of the traditional home-based care, the modern home-based care is characterized by the elderly care jointly supported by the government, society and community, which is no longer a private affair.

3.3.1 Connect to the Internet in the families of the elderly by using the existing television network or other resources; community-based institutions can organize related training for the elderly and their family members so that the convenience of the Internet can benefit the elderly, especially those with disability;

3.3.2 Promote the contract signing of family doctors and incorporate the care of family doctors into long term care, and allow medical staff to visit patients in order to address the most urgent needs in the long term care for each family;

3.3.3 Support the transformation of age-friendly housing. For the time being, with high demand for long term care, most of the elderly are living in the houses which were built in the 1980s and were not equipped with elevators, causing inconvenience for home-based care. Therefore, the housing transformation is a matter of great urgency;

3.3.4 Grant income tax relief for the family members who are responsible for long term care;

3.3.5 Provide respite care or allowances for the family members who are responsible for long term care;

3.3.6 Population aging and family miniaturization should be taken into account before we design the space of housing in urban areas because both the elderly and family members not only need their private space but also want to take care of each other;

3.3.7 Encourage the children to live "a bowl of soup" away from their parents by promoting the tax benefit policy;

3.4 Enhance the policy of healthy and active elderly care in order to reduce the disability rate

To live a long and healthy life is an ideal for all. Although disability may come with ages, we can still find a way to avoid them or keep them to a minimum so as to enhance our expectation of life. At present, the policies for the elderly are advocating the concept of promoting healthy elderly care through active elderly care, which requires the joint efforts coming from the whole society and the positive role of the communities, medical institutions in grassroots, and general practitioners in particular.

3.4.1 Popularize the concept of active elderly care and healthy elderly care. To some extent, aging is a negative concept that has been imposed on the public. Therefore, it is highly necessary for us to popularize the concept of active elderly care through all kinds of media, especially through the platform of community. In addition, we would like to encourage the elderly to participate in social activities to maintain a healthy body and postpone the process of aging. As is mentioned above, the current policy has done a lot of work, and we still need to enhance the policy in its depth and popularity.

3.4.2 Take active measures to reduce the disability rate. For example, to build more age-friendly houses and communities can help prevent the fractures and strokes caused by unexpected falls; besides, to organize classes for health education and management can help improve the health and prevent chronic diseases.

3.4.3 Strengthen rehabilitation training to reduce the degree of disability.

3.5 Leave some space for family- and community-based care in urban and community planning.

3.6 Open the market for institution-based care, and carry out the supervision during and after the opening process rather than simply conduct the pre-approval. Above all, the supervision standards must be in line with the level of local economic development.

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[25] Ellen Grootegoed，European welfare states are cutting back their responsibilities for long-term care, emphasising ‘self-reliance’ and replacing care as an entitlement of citizenship with targeted services.

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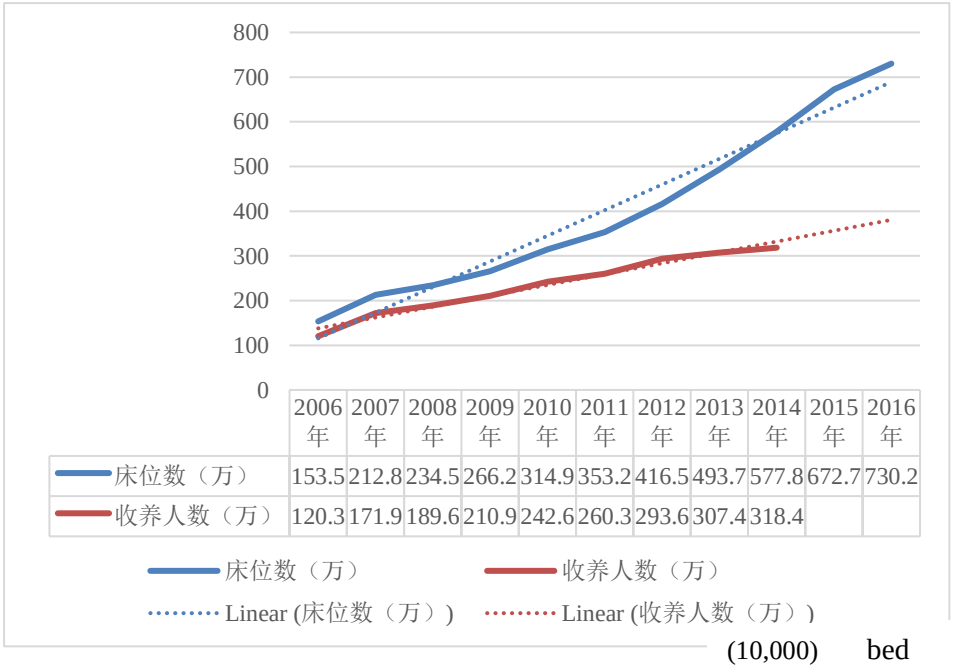
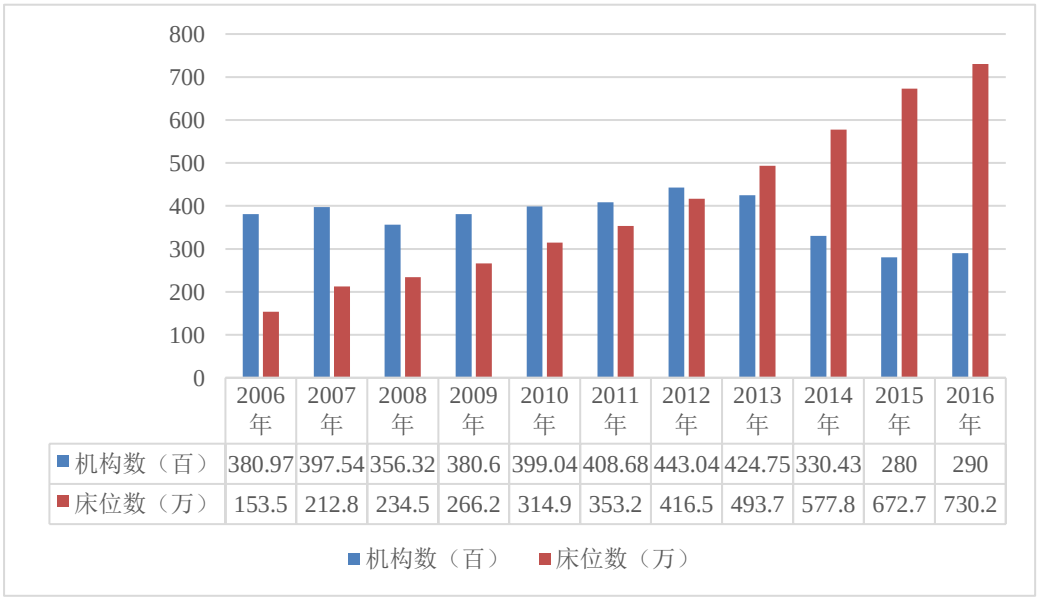
Appendix

Figure 1. Growth of bed number and occupancy in elderly care institutions from 2006 to 2016



Source: National Bureau of Statistics website

Figure 2. Growth of bed number and elderly care institutions from 2006 to 2016



Source: National Bureau of Statistics website.

8. Sharing long-term care responsibilities: the role of the individuals, their relatives, the market and the State

Policy Recommendation Report

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Contents

1 Document Scope

This aim of report is to inform the Chinese debate about the most appropriate way to shape the Long-Term Care (LTC) system, learning from the European experience. Based mainly on the European experiences, the report discusses the degree to which the provision of care is primarily a private or a State responsibility. It also discusses the role of private LTC insurance and critically reviews some of the EU practice and policy-reform options on how best private LTC insurance could complement or supplement the state systems.

The report extends the critical review of EU-LTC policies included in Morciano (2017). It specifically aims at addressing some critical questions including the pros and cons of universal and safety-net LTC systems in terms of the degree of risk sharing responsibilities and level of flexibility the system provides. It also considers a catastrophic social insurance model (as proposed in England) as an approach that is not incompatible with the Chinese government's key LTC strategy based on the "road of Singapore". Namely, to promote an "order of responsibility" that sees the individual and his/her relatives as primarily responsible institutions for the funding and delivery of LTC services.

It is important to clarify the boundaries of this report. Clearly, it presents author's opinion and do not necessarily reflect those of the Consortium nor the Funding Agency. Additionally, it cannot claim to provide a systematic coverage of the subject. This is beyond its scope. Instead, it provides references to a reader interested in an in-deep discussion. Hopefully, this report will lead to a good discussion within the members of the EU-China Social Protection Reform Project and will be a source of inspiration to stimulate research and policy debates in the LTC field for China.

2 Introduction

Population aging- the increase of the share of older individuals in a society- is posing major challenges to the foundation of the welfare systems around the globe. It has been estimated[178] that EU citizens aged 65 could expect less than half of their remaining years to be free from conditions affecting their ability to manage daily living activities. As documented in a previous report (Morciano, 2017), the risk of needing expensive Long-Term Care (LTC) assistance rises steeply with age and it is more pronounced in proximity of the end of life, in particular for people living alone. Population ageing, therefore, resulting from rising life expectancy and the ageing of large cohorts of baby-boomers, will greatly expand the number and proportion of people at risk of LTC services over the coming decades not only in Europe but also around the globe.

Such challenge has highlighted concerns about how to finance the ageing population in needs of LTC services. The policy debate, not only in the Europe, has focused on finding a sustainable and equitable balance in sharing the intra- and inter-generational responsibilities around the risks of LTC needs. It has highlighted the need for policy reforms and investments that will allow to pay for the expected needs of a larger elderly population while maintaining (and boosting) productivity growth. Austerity measures imposed in many EU countries have tightened eligibility criteria for LTC services, introduced/increased user co-payments to LTC services, incentivised private savings for LTC, improved market conditions in a sector – the LTC one- subjected to market failures. In summary, many EU countries are reconsidering the balance of the risk-sharing responsibility for caring for an elderly person's LTC needs.

This report aims at addressing the following questions:

- How should responsibility for caring for an elderly person's needs be shared among the individual, the family, the market and the State?
- Should the State support be focussed on those least able to afford LTC costs (safety-net approach), or should the need for LTC alone determine eligibility for publicly funded support (social insurance approach)? Or should public LTC programs provide assistance only after a person's out-of-pocket expenses exceed a threshold (catastrophic social insurance)?
- Should LTC services being financed with general revenues or dedicated taxes and contributions (creating social insurance)? Should eligibility being defined using an entitlement principle or a budget-constrained one?

The report is set as follow. The next section sets up the scene by describing how the LTC design can vary along the sharing of responsibilities among the three institutions involved in the delivery of LTC services: the individuals and their relatives, the market and the State. Section 3 argues that, if a public intervention is planned, it is crucial to define at least three different arrangement dimensions. Section 4 concludes and provides elements that might be useful for the policy debate in China.

[178] Social Protection Committee-European Commission (2014).

3 Risk sharing & the mix of responsibilities

Three are the institutions involved in the delivery of LTC services: the family (individuals and their relatives), the market and the State. As highlighted in a previous report (Morciano, 2017), LTC needs are met in many EU countries with a system of different cash-benefits and services provided through a mix of responsibilities shared among these three institutions. The degree to which the provision of care is primarily a private or a state responsibility varies considerably among EU States. The role of the market is lower but it is expanding.

3.1 The role of the family and the provision of informal care.

Informal carers provide the main source of social care support for people (family members, relatives or friends) with LTC needs. The most prevalent caregiving relationships involve care between spouses and adult children caring for elderly parents. Caring activities range from help with light daily activities to intensive, around the clock care, for complex care needs. The high fraction of elderly who receive informal (unpaid) assistance in EU (See Morciano 2017) provides one indication that most people in EU believe families have a responsibility to care for ageing relatives who cannot live independently. People in the south of Europe (e.g., Italy, Spain, Greece and Portugal) believe that the family is the primary caregiver for elderly people, with the public sector viewed as a last resort for very poor people and those without family. Legal norms in the Scandinavian countries (e.g., Sweden and Norway) explicitly indicate that children are not economically responsible for their elderly parents. However, the fractions of older people receiving assistance from relatives in these Countries is not far from those observed on average in other EU countries. The German social insurance system is built around the pivotal role of the informal carers, with strong cultural (and legal) expectations that the bulk of the support should be provided by the family[179].

The belief that individuals and families are responsible for aging relatives has being challenged over the past decades. Even if informal caregiving is often seen as a preferred option to formal care by care recipients, it is far from being optimal a system where the bulk of support is on the shoulders of family caregivers. People with neurological diseases such as Parkinson, Alzheimer etc. often need constant attention and levels of care that a family caregivers cannot provide. Additionally, caring for an older disabled person creates psychological and economic effects on the carers. For example, on the labour market participation of the carer that ultimately affect the economic growth of the Country. Increasing proportions of women are active in the labour force than was the case few decades ago. This raises economic conditions and level of independence of the new generations that are now more likely to live separately from their (old) parents than before. Increasing proportions of young people live today with some physical distance from their (old) parents. As such, multigenerational households have declined dramatically in many developed countries. The increasing old-age dependency ratio and in particular the rising proportion of elderly singles (with no children or spouse that act as caregivers) is producing an increasing number of elderly with un-meet

[179] Reliance on caregivers is also reflected in the 0.25% extra insurance contributions required of childless people.

LTC needs that raises important equity issues. All these socio-demographic trends partially explain the growing role played by the State in financing and delivering LTC services.

3.2 The role of the individual and the risk of out-of-pocket expenditures.

Increasing life expectancy is associated with greater numbers of elderly with disability-related needs that require far more than simple care by relatives and can therefore be very expensive. The costs can quickly exceed most people's financial resources, in particular when formal caregivers are involved in the provision of LTC. The financial impact of catastrophic out-of- pocket LTC expenditures appears with alarming frequency in the EU countries. There is strong evidence that average out-of-pocket expenditures are growing over time. It has been estimated[180], that about ten percent of people in England who reach age 65 were recently estimated to be likely to spend more than $160,000 out-of-pocket on LTC in their remaining lifetimes.

3.3 The role of the market and the failure of private LTC insurance.

Given the uncertainty about LTC expenditures, and in particular the very "long tail" of potentially catastrophic financial outcomes, standard economic models suggest that risk averse individuals should place a high value on the ability to insure against LTC risks. Yet the private market for LTC insurance is not very well developed in EU, leaving much LTC expenditure risks uninsured. There is a general agreement in Europe that a social insurance or tax-based LTC system is more efficient than one left entirely to the private initiative. Several member States, however, are considering multiple ways with which the public could support the expansion of an equitable and sustainable private LTC insurance market. As highlighted in a previous report (Morciano, 2017) a fully private LTC insurance market is problematic from both and efficiency and equity point-of-view.

A private insurance market might improve the ability of the elderly to engage in optimal consumption smoothing over the life-cycle. Because of their benefit structure, most LTC policies are far from being comprehensive. They imply a "deductible", an amount that must be paid out-of-pocket by the policy holder before the insurance provider will pay any expenses or an "elimination period" (often 30-100 days) in which a person must be in care before insurance payments commence. Most policies also specify a maximum "benefit period" (often 1 to 5 years) which caps the length of time that an individual can receive benefits. The lack of comprehensiveness of LTC policies is problematic because it mainly occurs precisely when the financial costs of LTC care are the greatest and for which consumers ought to value insurance the most. Consumer wishing to have a more comprehensive benefit package could purchase a policy with no such clauses. Yet despite the existence of these comprehensive policies, very few consumers purchase them. Such policies suffer from more intense adverse selection problems, being purchased by those who expect to need LTC care. The premium for additional unit of LTC coverage is far more expensive and therefore unaffordable for many people. This is particularly relevant for the poorest segment of the population that is more likely to face LTC needs and less predisposed to buy private insurances (Morciano (2017)).

[180] Commission on Funding of Care and Support (2011).

Another problem the LTC insurance market faces is on the risk pooling. Insurance works as a mechanism for pooling the risks of (catastrophic) costs, so that the risks of all the people insured by the scheme are collectively borne by the insurance scheme. This works only when the LTC costs are predictable so that it can be computed the contribution that should be made by each insured individual, in exchange for the security of coverage of the LTC costs eventually needed. This allows individuals to pool risks, despite some future uncertainties. Tong-term nature of the contracts, however, exposes insurance companies to long-term demographic, epidemiological, economic and political risks that cannot be diversified simply by pooling individual risks. The difficulty in diversifying these risks can lead insurers to avoid insuring for certain risks or to exclude a certain group of people. It can also lead to higher prices.

A large body of academic literature[181] that shows that, even if LTC insurance premiums that covered the full costs of LTC were actuarially fair, they would still be unaffordable for large sections of the population. In practice, policies with actuarially fair premiums are unlikely to be offered, especially in LTC market. Evidence in fact suggests that the over-price applied to typical LTC insurance policies is substantially higher than the one applied to other private insurance products.

There are a number of countries where the markets for LTC are more developed than that in others. The two countries with the biggest markets for LTC insurance are the United States and France. In the United States, about 10% of the population aged 60 and over have private LTC insurance. In France the percentage is of about 24% (Comas-Herrera *et al.*, 2012). In Germany, many people were covered by supplementary LTC insurance, which is sold as a supplement (or top-up) to the benefits of the social (mandatory) LTC insurance system in place.

Employer-sponsored insurance policies are the most common form of private insurance, with the State that often incentivises the developement of the LTC market, for example by giving employers an incentive to bundle LTC insurance with employee remuneration packages (e.g. in France and in Italy[182]), coupled with tax allowances for LTC premium.

3.4 The role of the State and the financial sustainability of LTC programs

As shown in Morciano (2017), the role of the public in financing, administering, regulating and providing formal LTC services varies considerably among EU Member States. Broadly speaking, many EU states opted for (a different mix of) two main models: a *competitive model* according to which the State provides financial support used for buying care services in a (quasi-)market; and a *direct provision model* according to which the State provides directly formal services to individuals in needs. Most EU countries are moving from a direct provision model towards a competitive (quasi-)market model. The shift in paradigm has pushed forward the debate on how the State should define quality requirements. Up to now, there have been mixed evidence on to what extent quasi-markets have triggered improvements in the quality of LTC services or in lowering the (private/public) costs. Contracting of services has often been based mainly on price, rather than on quality criteria. For-profit providers have therefore the incentive to lower the quality.

[181] For a review, see Comas-Herrera et al, 2012.

[182] The market for LTC insurance grew quite rapidly in Italy in 2007 and 2008, after a new collective wage agreement for insurance and bank employees that has provided automatic compulsory LTC coverage (funded, totally or partially, by employers). Linking LTC insurance to pensions is another option partially used in other countries.

Scandals and bankruptcies (e.g., in England, Sweden, Austria) in the private for- profit LTC sector have recently shown difficulties in the LTC sector, in particular if regulation and a continuous public assessment of quality are poorly developed. In countries like England, care home chains are developing fast, and the effect on competition, quality and price is not clear yet[183].

3.5 The difficulties in finding an "optimal" balance

The challenge that many countries faces is to achieve a balance in the shared responsibility. A system solely based on informal care could exist only with a steady-state growing population. It encourages each generation of older people to off-load the burden of care support onto the next generation. This is unsustainable because of the demographic transition process that many countries face.

Every country has concerns about potential moral hazard incentives embedded in the decision to shift responsibility for some services to public social care programs. Shifting responsibility to the society could imply possible over-consumption of economic resources in the healthy part of individuals' life thanks to the existence of disability-related state support at the point of need. Another moral hazard problem is embedded in the possibility that public social care programs could cause families to reduce their willingness to supply such services, increasing the societal costs beyond expectations. Formal and informal care can be substitutes or complements and the relationship between them clearly depends on the policies in force.

The solution that many EU countries are implementing is towards the involvement of the individuals in the cost of care at the time when they needed. Cost-sharing is required in all EU countries, in part to discourage people from seeking public support in place of informal care. In most EU countries, cost-sharing requirements are income/asset based and can be substantial, particularly because of the "hotel costs" connected to services provided in institutional settings (residential and nursing care homes). As the public LTC costs have risen, however, cost-sharing has shifted more costs to those who need assistance. Because an important segment of them were not prepared/able to cover such costs, the State has to play a safety-net role once private financial resources have been depleted.

Additionally, the underlying state-funded system has a major impact on the design and success of any private insurance scheme for LTC. In the Scandinavian countries, where LTC risks are mainly a public concern, out-of-pocket payments are generally low and cannot exceed a certain amount (indexed to inflation). In Germany, half of aggregate LTC costs are currently funded by users' co-payments. Private LTC insurances are meant to protect from such co- payments. This is why a private LTC insurance market co-exists with the state-run one.

When cost-sharing is income based, public LTC authorities might have a perverse incentive to prefer higher-income residents, which might lead to inefficient use of (limited) services and income-related inequities in service utilisation. Some countries create incentives for home- based care versus nursing home by disregarding the value of a person's home when determining cost-sharing amounts for home care only (e.g. England). When the home value is used to determine a person's nursing home co-payments but is ignored when calculating cost-sharing for home-based care, people have an incentive to stay out of nursing homes, which, conditional on the individual's disability status and needs, could be cost-saving for the

[183] Morciano et al (2017).

State.[184] However, the public authority might have the opposite incentive: placing individuals in residential settings to reduce (at least in the short-run) public authority's involvement to the provision of care, at the extensive (assets values above the means test threshold and therefore not eligible for State support) and at the intensive (conditional on eligibility, asking an higher comparticipation to the cost of care) margins.

[184] See e.g.,Brown & Finkelstein (2009).

4 Designing the public intervention in LTC

If a public intervention is planned, it is important to define the most appropriate way to operationalise it, learning from international experience, and in particular from the recent and on-going reforms in the EU countries. Morciano (2017) highlights different dimensions that needs to be taken into account. Following author's understanding of the Chinese debate on LTC, the most relevant features are described in this section.

4.1 Social insurance or a safety net LTC system?

Should the system cover the risk of anyone needing care (full social insurance) or just the risk of people needing care who could not otherwise afford to meet care costs themselves (a safety net)? Or should the public provide assistance only to those who face catastrophic LTC costs (catastrophic social insurance)?

One main decision that needs to be made when regulating access to LTC programmes is on whether access should take account of a person's financial means in determining the level of public support that could receive. In other words, should state support be focussed on those least able to afford LTC costs (safety-net/means testing), or should the need for LTC alone determine eligibility for publicly funded support (universal system)?

LTC can be funded from various sources, including general revenue, local taxes, and social insurance (see Morciano, 2017) and the way is funded is inerently linked with the type of coverage the system would insure. Very often, universal systems are predominantly financed through social insurance contributions.[185] Social insurance systems give service users a right or an 'entitlement' to a pre-defined level of support. Support can be in services or cash, depending on the person's need and choice.

Germany and France have implemented LTC arrangements that are predominantly based on a state-run social insurance LTC. Germany implemented a mandatory social insurance system for LTC in 1995. Outside Europe[186], the Japanese social LTC system was introduced in 2000; and France reformed its LTC system along similar lines in 2002. Major reforms on these lines have been undertaken in Spain and other EU countries. In social insurance systems the people covered are required to pay regular contributions either as taxes or mandatory insurance premiums. For example, The Japanese scheme (Kaigo Hoken) mixes contributions from general national/local taxation and also from specific age-related premiums (Naito 2009). There are two categories of insured people, conditional upon age: persons who are aged 65 or older, known as Category 1 insured; and persons between ages 40 and 64, known as Category 2 insured. The insured people in the second category (40 to 64 years old) pay their premium (in 2005, the contribution rate varies from 0.6% to 1.4%) in addition to their medical insurance premium. Premiums for the insured people in the first category (65 years and older) varies according to revenue and comprises 5 different categories. They are deducted from their pension. The system is

[185] An important exception is the notorious case of the Scandinavian countries (see Morciano, 2017). They operate universal tax-funded arrangements where public authorities provide care and support to all at the point of need. LTC is funded out of general taxation, with little co- payments from the users.

[186] A reader might be also interested in reading on Taiwan (Nadash & Shih, 2012).

financed 50:50, by contributions paid by insured persons (31% cat. II and 19% from cat. I) and subsidies (financed by tax) from local authorities and the State. The German PAYG social insurance system applies a contribution rate of 2.55% of the gross wage (up to a ceiling set at € 52,200 p.y. or € 4,350 p.m. in 2017), shared equally between employers and employees.[187] Childless employees - who are less likely to receive informal care- pay an extra 0.25% on top of their contribution[188]. Since 2004, pensioners pay the whole contribution themselves (Rothgang, 2010). A similar scheme is available in Italy to civil servants only, under the Home Care Premium (HCP). HCP has a mandatory contribution of 0.35% of the gross wage, plus a voluntary contribution of (only) 0,15% from pensioners.

In return to the payment insured people make in a social insurance LTC system, they are covered with services or cash allowances, regardless of their income, at the point of need. It is important to note that state-run social LTC insurance systems generally request a (means-tested) co-payments from the users. In Japan, co-payments are set at about 10% (with reduced rate for poorer people); In Germany, the benefit that an individual receives depends on what care level they fall into, whether they are at home or in an institution, and whether they choose to take cash or care-in-kind[189].

Mandatory social (state-sponsored) insurance models provide broad risk-pooling and predictable financing. Expenditures are covered by earmarked social security taxes and therefore entitlements may be more clearly defined and easier to enforce.

Universal insurance systems are seen "superior" from an equity point-of-view, so that the risk and consequences of LTC are 'socialised'. The German and the French systems have embedded this solidarity principle that was the main rationale for reform. The main drawback is the usual tax distortions on employment associated with contribution-based systems. Also, contributions are levied on a narrower tax base than general revenue. A rising LTC demand therefore is likely to require an increase in the level of contribution, further increasing the cost of labour. As highlighted in Morciano (2017), universal systems are generally more expensive (for the public) and in some countries there are resistances in raising (mandatory) contributions to keep peace of the increasing LTC demand and costs. From an efficiency point-of-view, universal systems might generate over-consumption problems: the lower price that people face for formal support from the public system might result in a 'crowding-out' of their use of informal care. It is widely accepted that a limited generosity of the social insurance system is likely to limit the 'crowding-out' problem. That is the reason behind the limited generosity of the German and the French systems and the use of co-payments.

An alternative to an universal system is a system that provides a safety net, so that people who cannot afford or are otherwise unable to make provision for their own care needs receive publicly-funded support. A safety net system (as the one in force in England, see Morciano (2017)) is generally financed by general revenue. These systems are seen as less expensive than universal systems. From an equity point-of-view,

[187] Those whose jobs are not covered by the German social scheme must take out private LTC insurance. This includes civil servants and the self-employed; those with incomes above the social security threshold can choose whether to join the social LTC scheme or have private insurance.

[188] To improve the financial viability of the social LTCI fund, the German government decided that it was necessary for childless people to pay higher contributions, reflecting the fact that they will be less likely to receive informal care when in need.

[189] The cash payment for home care is around half the value of services-in-kind. It is possible to take a combination of cash and care-in-kind.

the system provide public support only to disabled in financial needs. Those people who are not eligible for support usually face the full costs of care, which can still be unaffordable for middle income groups of people with care needs. From a "dynamic" point of view, however, as income/wealth of a disabled in LTC needs depletes, the public support kicks-in.

A safety-net system respects the logic where the primary responsibility of LTC is left primarily to the individuals and their relatives. In that respect, a safety net system does not protect individual's savings from catastrophic LTC-related expenditures. Crowding-out effects are marginal, and potentially in force only among those in receipt of LTC support. Co-payments, however, are requested to limit crowding-out effects even further.

An alternative that has been suggested in England as a possible replacement of its safety net system, is a system that caps the cost of LTC. The "Dilnot Commission" proposed a combined contribution system from both the users of care services (first) and the state (later). The users' contributions to their LTC costs would be 'capped', at a given point from where the State will pay the remainder costs above and beyond that level. The main purpose of the cap is to protect a larger proportion of users' assets from what is currently an unlimited liability. Importantly, the cap is likely to introduce a degree of predictability and certainty in a person's potential cost liability, that might spark the creation of financial LTC-related products, including LTC insurance policies but also annuity-type arrangements (that can give people an income stream from their assets to meet LTC costs). This is because, the catastrophic costs are covered by the State, so that the private insurances have to cover the risk of incurring in a "capped" cost. Setting the cap is therefore of paramount importance in a Dilnot's style LTC system: a cap too high would protect mainly the richest segment of the population. Setting the cap too low would make the public coverage more "universal".

4.2 Eligibility: entitlement principle or budget-constrained?

Under an entitlement principle, anyone who fulfils the eligibility criteria has the legal right to receive public support even if this puts the whole system into deficit. In general, mandatory social insurance systems works under the entitlement principle. Examples include Japan, France and Germany, although there are some differences in the exact design. By contrast, in a budget- constrained system, public authorities can change the criteria at any time in order to balance the books.

Safety net systems are generally budget constrained: the extent of the safety net – in terms of who is eligible and how much support is offered – is adjusted according to the available resources.

Catastrophic insurance systems could adopt both a budget or an entitlement principle. However, if a policy reform's goal is to boost an affordable private insurance market, an eligibility criteria approach would be preferable. This is because it tends to protect insurance companies from long- and medium-term economic and political risks.

4.3 Should cash benefits be an option?

In many EU countries, LTC is delivered using a dual system that provides services in kind and cash- benefits. The existence of cash benefits supports the possibility for individual freedom and choice. It also improves

the opportunity to choose among different settings of care (e.g. either to buy formal care services or to support informal care-giving). But individual freedmon could be also provided in a sole service in-kind system, for example by defining personal budgets, that allow the user to choose the service that suits best his/her needs and the provider.

Many countries in the EU are moving towards a LTC set-up where individuals have the freedom to choose between (subsidised) in-kind services or cash-benefits. The latter are generally less generous than the value of the formal care option. In the EU, there are mixed evidence on the preference of the individual around the option of cash-for-care or services. It seems that very severe disabled people that cannot rely on informal care opt for services. The remaining group of LTC user seems to prefer cash-benefits.

5 Discussion & Conclusions

The policy debate on LTC systems in Europe has been dominated by concerns about the sustainability and the ability to deliver services and goods that match the rising expectations of the populations. So far, most of the efforts to slow LTC spending have involved **reshaping responsibilities around the role of the individual, the family, the market and the State**.

State responsibility in LTC implies some form of collective funding arrangements and also mechanisms for defining how publicly-funded support will be allocated to individuals in needs. The public cost share - the part of LTC costs financed by the public social protection system- varies considerably from little users' co-payments to about the totality of LTC services financed via out-of-pocket payments by the users and/or their relatives.

State responsibility also involves some inter- and intra-generational re-distribution when the amount of public support they receive is not directly linked to the financial contributions they have made. Therefore, wealthier people and those people who do not end up needing much care will subsidise poorer people and those who are less fortunate that develop substantial LTC needs. Additionally, younger generations may end up supporting heavily older generations, with a possible "free-meal" that the elderly get from the youngest during the phase-in of a new LTC program.

Countries with good LTC public coverage (universal systems) have implemented reforms aiming at freezing the services covered, restricting care to those deemed in greatest need, and increasing level of co-payments from the LTC users. These actions have caused costs of care to be shifted to individuals and their relatives as well as to other programs, notably social assistance programmes.

Countries with low public LTC expenditures relies heavily on (private) out-of-pocket payments and informal care. Systems that require high out-of-pocket payments are socially and economically sustainable only if country's private saving is considerably high. Private saving depletion, however, could create problems to the country's long-term growth and might raise social and economic inequality, when disability risks and consequences are not equally shared among the population. Leaving LTC responsability to the individual is likely to face high prevalence of un-met LTC costs, creating problems of unaffordability, sub-optimal consumption and catastrophic costs. A LTC system that leave most of the LTC responsibilities on the shoulders of relatives is likely to generate negative effects on the labour market participation of the carer and un-met needs among those disabled with no relatives nearby. EU countries with low public LTC expenditures are therefore facing the different challenges of modernising the system by expanding and improving formal care services in response to the present and future demographic, epidemilogical and socio-economic pressures.

Countries with a safety-net system, where means-testing is widely applied, provide an amount of public support that is dependent on people's assessed level of need but also for their economic condition. As a budget-constrained system, the level of support provided (who is eligible and how much public support is provided) is adjusted according to the available resources. However, in countries like England, there is a debate for extending coverage to protect people that are currently off the system. Of course, any reform that would extend the coverage must imply higher collective/public expenditure. Providing a safety net for those who cannot pay for care is seen an essential part of the public intervention in LTC. But many feel the State should also protect those who fall outside the means test criteria, with an intense debate around a state intervention towards introducing a more comprehensive (universal) system. They are also

considering a shift of paradigm by increasing the public protection against the catastrophic costs that disabled people might face. It is within this policy landscape that the Dilnot commission proposed a system where users' contributions to their LTC costs are 'capped'. The main purpose of the cap is to protect individuals' savings, to provide more responsibilities to the individual and the family but also to boost the development of an insurance market for LTC.

6 Implication for the Chinese debate

As many Mediterranian and East Asian countries, China has a strong cultural norm of filial piety according to which relatives (children) have a strong duty to support their old-members (parents). Additionally, the Chinese government's key strategy for LTC provision has been to promote a model based on the pivotal role of the individuals and the relatives in the financing and delivery of LTC services. Therefore, private coverage and informal provision of LTC is embedded in the Chinese social norms and rules.

The stark decline in fertility translates into one younger person, mostly female, that has sometimes care responsibilities for two to four (or more) older relatives or in-laws. China's rapid socio-economic modernization and urbanization have resulted in greater mobility of the younger workforce towards the cities, with an increasing number of older persons living alone in rural area without family care. Significant differences across regions, and between rural and urban areas, makes the LTC risks and costs unevenly distributed across the Nation.

China is also functioning as a natural laboratory of new policy approaches to LTC provision and financing. As a result, there is significant local variation in the approach to LTC provision and financing: while Qingdao, for example, is experimenting a LTC social insurance system, Shanghai embedded LTC through its health insurance schemes, whereas Nanjing provides means-tested vouchers for LTC services.

A variety of LTC systems are in place in the EU countries, as Morciano (2017) has highlighted. More recently, EU Member States have agreed common objectives at European level in the framework of the open method of coordination in the field of social inclusion and social protection in general, and in LTC sector more specifically. This has encouraged the processes of monitoring progress and highlighting useful recomendations that might be relevant for non- EU countries too.

The LTC social insurance systems in Germany and France (but also in Japan) have gained populaty as a way to improve coverage, equity and to reduce out-of-pocket LTC-related expenditure. As this report has highlited, the French and German systems cover only part of the cost of care, with a significant role still played by the individual, relatives and the market. These systems have seen costs increasing at a faster rate than expected such that a number of responsive policy adjustments had to be made to limit cost growth. Cost control interventions are more difficult in entitlement-based systems than in systems which are explicitly budget- constrained. An important decision to make is therefore on the level of desired ***flexibility*** of the system, bearing in mind that universal entitlement systems are less elastic to changes in the medium/long run than budget-constrained systems.

It is also important to note the increasing role of the contributions to these LTC systems levied from older people. From an inter-generational fairness and sustainability point of view, age- related contributions and contributions from pensioners help to mitigate problems associated with increasing dependency ratio that many economies, including China, will expect in the coming decades.

A LTC system that imposes co-payments (or more in general, forms of users' participation in the funding of care costs) is the most advocated in EU. This is to ensure enough incentive to discourage over-consumption of LTC services and to avoid crowding-out problems. But it has also be seen as a (public) cost containment practice in order to satisfy financial targets.

Boosting the private LTC insurance market is not a simple task due to market failure. In an universal system, there is room for a private market to cover LTC needs not covered by the public system. In a safety net system, people not covered are the higher-income/wealth groups who are -theoretically- better able to afford care or care insurance privately than those who are eligible. But market failures due to information and structural problems can influence the risk- pooling and could generate a sub-optimal market too. A Dilnot-style LTC system could be an option to consider, given its theorethical capacity to protect individuals' savings; to "nudge" the individual and the family to cover LTC needs; but also to boost the development of a more efficient (and sustainable) insurance LTC markets.

Looking ahead, China is functioning as a laboratory of new policy approaches to LTC provision and financing. It could thereby develop policy innovations that might be emulated by other countries. A possible way to push this project forward is to assess the effect of reform proposals through static and dynamic microsimulation techniques, tools used for making ex-ante policy evaluation commonly employed in Europe.

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