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A STUDY ON FUNDING FOR ELDER CARE IN CHINA

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A thesis submitted in partial fulfilment of the requirement for the
degree of Doctor of Philosophy in Social Policy

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Declaration

I declare that, apart from work whose authors are explicitly acknowledged, this thesis and the materials contained in this thesis represent the author's own original work. I confirm that this thesis has not been submitted for a degree at any other university.

Abstract

Today, the rapid growth of aged populations is a pressing issue across the globe. In China, longevity risk is also associated with complex social issues consequent on birth control policies in the 1980s, raising the demand for elder care services in recent years. However, the relatively high cost of elder care services creates financial burdens not only for elderly people themselves, but also for their children. While increasing retirement incomes, the Chinese Government has also promoted new forms of social elder care, introducing market mechanisms into public nursing institutions, to increase financial resources for elder care provision. This thesis analyses these new funding models for elder care, examining supply and demand side factors that shape their effectiveness within a theoretical framework of New Public Management (NPM) and social investment. First, case studies are used to compare funding policies in four types of nursing institutions in and around Wuhan, Hubei Province, to evaluate different Public and Private Partnership (PPP) funding arrangements and their consequent influence on the performance of the nursing institutions. Second, Data Envelopment Analysis (DEA) is employed to calculate and compare the elder care services index in urban and rural areas. The outcomes provide insightful and useful guidance to identify probable problems within the elder care funding system. The results reveal that investment is more efficient when dedicated to financing the incomes of the elderly rather than to the construction of elder care institutions. The conclusions propose the feasibility of public long-term care insurance (LTCI) in China, as an appropriate approach to improve elderly people's retirement income and thus their ability to purchase long-term care (LTC) in the future.

List of Abbreviations

BCC	Banker, Charnes and Cooper
BOO	Build-Own-Operate
BOT	Build-Operate-Transfer
CPC	Communist Party of China
DEA	Data Envelopment Analysis
DLA	daily living of activities
FOF	Fund of Funds
GDP	Gross Domestic Product
LOT	Lease-Operate-Transfer
LTC	long-term care
LTCI	long-term care insurance
MLSS	Minimum Living Standard Support
NGO	non-government organisation
NPM	New Public Management
NPO	non-profit organisation
OECD	Organisation for Economic Co-operation and Development
O&M	Operations and Maintenance
PAYG	Pay-As-You-Go
PFI	Private Finance Initiative
PPP	Public and Private Partnership
PPPs	Public and Private Partnerships
ROT	Rebuild-Operate-Transfer
SOEs	state-owned enterprises
SPC	Special Purpose Company

Chapter 1 Introduction

1.1 Research Background

An increasingly aged population is globally a pressing issue, and China's ageing problem is more severe than other countries due to the birth control policy in the early 1980s. In 2000, the proportion of Chinese over 60 years and over 65 years was 13.26% and 8.87% respectively (Ministry of Civil Affairs, 2016d), an indicator that China was becoming an ageing society¹. Since then, China's population has been ageing fast. According to National Statistical Bureau (2017a), people over 60 years exceeded 230 million by 2016, 16.7% of the total population. Among the elderly population, the population of people over 80 years was 23 million in 2015, and the growth rate was 4.5% annually (Di, Chen and Li, 2016). It is estimated that elderly people will increase by approximately 1 million annually from 2016 (*ibid*). In addition, the longevity risk is also associated with disability and chronic illness. In 2015, the total semi-disabled and disabled elderly reached 40.36 million (National Ageing Work Committee Office, 2016), accounting for 18.8% of the elderly population. Moreover, the dependency ratio keeps growing too. It is estimated that dependency ratio for elderly people in China will be 30% in 2023 (Powell and Cook, 2010). Thus multiple social issues consequent on growing numbers of elderly have created great challenges to and pressures on elder care provision in China.

For centuries, it has been a Chinese tradition for elderly people to be cared for by their offspring (especially sons), which is called 'bringing up sons to support parents in their old age' ('*yang'er fanglao*' in Chinese). The traditional family-supported and inter-generational elder care pattern is still the most popular in China due to the low

¹ By international definitions, an ageing society is defined as such if the proportion of the population aged 60 years and above accounts for 10% of the total population; or if the proportion of those aged 65 years and above constitutes 7% of the total population (United Nations, 1956).

level of overall social security and undeveloped infrastructure for elderly people, especially in the vast rural area where the majority of elderly people still live below the poverty line without access to general elder care and relevant healthcare assistance. Meanwhile, the tradition of ‘fallen leaves return to the roots – return to one’s hometown when old’ (*‘luoye guigen’* in Chinese) demonstrates that people prefer living with their children when they are old and need the financial support and physical care provided by their children until they pass away. However, recent demographic shifts and social structural transitions have made it increasingly unsustainable for family members to fulfill these traditional duties. In urban China, due to the one-child policy, the ‘4-2-1’ family structure² is quite common. At present, the proportion of ‘empty-nest’ families³ (*‘kongchao jiating’* in Chinese) is over 50% in the cities, while the situation in rural China is much more severe, mainly due to the rapidity of rural-urban migration and the unprecedented development of urbanisation. In 2015, the population of rural ‘left-behind’ elderly people⁴ (*‘liushou laoren’* in Chinese) accounted for 23.3% of the total rural elderly people (National Health and Family Planning Commission, 2015). The pressures posed by longevity risk and deteriorating family capability for elder care has stimulated demand for government and market to provide more elder care services in China.

In 2011, the Chinese State Council (2011b) issued a report – *‘Construction and Planning of Social Elder Care System (2011-2015)’*. In order to respond to growing demands for elder care services and associated care provision, elder care services can be subdivided into three categories – home-based, community-supplied and institution-supported elder care services (*ibid*).

² ‘4-2-1’ family structure is a common family structure in China, which consists of four grandparents, two parents and one child, so a young couple has to raise their only child and take care of four old parents.

³ ‘Empty-nest’ family refers to a family pattern that develops when elderly people, or a couple, live alone because their children move out to work or start their own family. Due to the ‘one child’ policy in the early 1980s, the only child in the majority of ‘empty-nest’ families moves elsewhere to live and work, and seldom returns to care for their parents and grandparents.

⁴ ‘Left-behind’ elderly people are those whose children live in other places for the long-term (usually more than half a year), and their parents stay in the family home. These elderly people’s lives are usually very simple and difficult, and they might need to raise their grandchildren.

The home-based elder care services mainly provide door-to-door services offered by the local communities. To those who are over 80 or disabled and stay at home alone, the local community would offer some free or market-based services, such as sending volunteers to help with shopping, cooking and housework, or social workers to impart healthcare knowledge and simple treatments, installing safety facilities for the elderly, offering emergency help or legal assistance, etc (Wang, 2015). In some wealthy developed regions, the communities subsidise some paid services, and local government encourages the construction of facilities for rehabilitation and medical assistance, so as to improve their quality of life and independence (Yang, Mao and Zhang, 2014).

Community-supplied services are an important support for home-based elder care. They cover day care and home-based care as well as other elder care facilities, aiming to provide services to elderly people in the community who need daily assistance. In cities, every community is required to establish a home-based service point, which acts as a contacting and monitoring centre. This station usually apportions existing communal resources, including the community infrastructure and neighbourhood direction of entertainment, healthcare and rehabilitation facilities for elderly people. It advocates and guides various forms of volunteering activities and mutual assistance, convening people from all walks of life to participate in community elder care services. While in the rural areas, with the development of urbanisation and the introduction of the socialistic new rural construction movement⁵, some rural nursing institutions have been transformed into regional elder care service centres, which offer day-time or short-term care to ‘left-behind’ elderly people. Relying on self-governance and collective economy, regional elder care service centres are exploring a new model of mutual assistance among the elderly (Chinese State Council, 2011b).

Institution-supported elder care services have three basic functions: (1) daily care – satisfying elderly people’s requirements for dressing, eating, bathing, going to the toilet and outdoor activities, and so on; (2) rehabilitation nursing – helping elderly people

⁵ The reform of ‘socialistic new rural construction’ was proposed in October 2005, with an aim to support overall development in the rural areas of China, including economy, politics, culture and society (The Fifth Plenary Session of the Sixteenth Central Committee, 2005).

recover physical functions or reduce rates of physical deterioration; (3) emergency assistance – providing elderly people in crisis with efficient help (Chinese State Council, 2011b). China's nursing is divided into two sectors: public and private nursing institutions. The public nursing institution is called Social Welfare House (*'shehui fuliyuan'* in Chinese) in China, and every city or town has at least one. The urban social welfare institutes only perform basic functions and duties, providing 'Three-Nos' elderly people⁶ (*'sanwu laoren'* in Chinese) with free elder care services. If these elderly people are not willing to come to the nursing institutions, the government gives them a basic monthly allowance. While in the rural areas, the local Social Welfare House offers free beds and care to 'Five-Guarantees' elderly people⁷ (*'wubao laoren'* in Chinese). In some cases, surplus beds in social welfare institutes can be provided to private elderly people (*'shehui laoren'* in Chinese⁸), who pay a reduced fee. However, the limited resources of Social Welfare Houses have already led to an inadequate supply of elder care services, so the Chinese Government plans to introduce market-based mechanisms into the public provision of elder care services to foster the establishment of private nursing institutions.

Above all, the Chinese Government has initiated the establishment of an elder care system. However, this system is only free to a limited number of beneficiaries ('Three-Nos' and 'Five-Guarantee' elderly people). As to the rest, no matter how much they save for retirement, they are also stimulating a rising demand for long-term social care. However, the relatively high cost of elder care services creates burdens not only on elderly people themselves, but also on their children, or even grandchildren. As we see from the experiences in Western developed countries, economic growth preceded the genesis of an ageing society while in China, the current generation of elderly are 'getting old before becoming rich' (*'weifu xianlao'* in Chinese) (Li, 2013). In other

⁶ 'Three-Nos' elderly people (*sanwu laoren*) are defined to be those who are over 60 years and have no labour ability, no financial source and no legal dependants.

⁷ 'Five-Guarantees' elderly people (*wubao laoren*) are those over 60 years living in towns and rural areas, without labour ability, income source and legal dependants, and thus, government will guarantee their rest of life in five aspects: eating, dressing, healthcare, living and funeral.

⁸ Private elderly people (translating as social elderly people, *'shehui laoren'* in Chinese) differ to the 'Three-Nos' and 'Five-Guarantees' elderly people who are supported by the governments, so the private elderly people need to purchase elder care by themselves or their children.

words, the majority of Chinese elderly people are relatively poor in their old age. China's GDP per capita is only 22% of the average amount of that of the Organisations of Economic Co-operation and Development (OECD) countries, while the proportion of Chinese elderly people over 60 years is equivalent to the average world level (Zheng, 2011). Although China's social security system almost covers all elderly people, the standard is relatively low, especially in the rural areas. During the last two decades, the Chinese Government has issued relevant policies concerning the increase in people's retirement income, advocating several forms of social elder care patterns, and introducing market-oriented mechanism in public nursing institutions, in order to increase finance and expand social provision for the elderly⁹. In this sense, provision and funding for old age are not just a responsibility for elderly people themselves or their family members, but pose multiple social problems for both governments and markets.

The debate over the evolution of elderly welfare policy in China over the last three decades has been quite controversial (Tsai, 1987; Leung and Nann, 1995; Zheng, 2011; Wang, 2012). Since the late 1990s, many new thoughts and strategies of social policy have been formulated and proposed that transform the state's function in funding elder care provision. Social policy tends to be 'people-oriented' (*'yiren weiben'* in Chinese), indicating that the government pays greater attention to people's living standards by fostering both public and private interventions in the provision of elder care services. In 2000, the Chinese Government explored social welfare reform in elder care and emphasised the importance of '*Socialisation of Social Welfare*' (General Office of Chinese State Council, 2000). This meant that the Chinese Government introduced more diversified investment channels and different providers, including individuals, families, society, the market, non-government organisations (NGOs), non-profit organisations (NPOs) and charitable organisations, in order to generate more investment in the elder care system. Subsequently, a number of government documents specifying the provision and finance of elder care in China emphasised the diminishing role of

⁹ More detail of these relevant policies will be introduced in Chapters 4&5&6.

government and the integration of public and market-based financial resources. Various financial policies to expand elder care services and increase elderly people's retirement income have been introduced in different localities. In the latest 19th National Communist Party of China (CPC) Congress, the president Xi Jinping (2017)¹⁰ points out that China's current major social contradiction lies in the increasing demand for a better living standard and in a context of unbalanced development. This provides a political guide for the further improvement of China's social policy for elder care in the Thirteen 'Five-Years' Period (2016~2020). In other words the Chinese Government should strengthen the social security system and integrate social and market resources on elder care, in order to enhance the elderly's social welfare, as well as narrow the gap of elder care funding between the urban and rural areas and between different regions.

The above outline of China's elder care describes the general background of elder care provision and funding in China. Over the past 10 years, positive outcomes have been produced in the reform of elder care funding, both on the supply and demand side, but this also triggers new problems and challenges which are either generated from policy weakness or flaws in the system itself. This research focuses on the funding models of China's social elder care services, and systematically analyses the main problems existing in current elder care service funding in China. Public expenditure on elder care services has expanded continuously year on year, and the participation rate of private sectors keeps increasing too. However, problems such as inadequate funds and lack of elderly facilities are still the main driving forces that restrict the development of elder care services. At present, current funding models for elder care services in China mainly operate on the supply side. New approaches include various mixed funding methods (i.e. public-private partnerships) to fund the construction and operation of elder care services. However, elder care funding on the demand side is not really developed in China. Although China's current social welfare system covers nearly all aspects of elderly people's life, it still remains quite low level and cannot cover long-term care (LTC) for all. In this respect, a research perspective on the issue of how to fund elder care services

¹⁰ In the report '*Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era*'.

in China is unusual, as this dimension is too frequently ignored. Thus, this research has both theoretical and empirical significance that is described below.

1.2 Significance of the Research

From a theoretical perspective, the significance of the research lies in the application of several theories related to neo-liberalism, new public management and social investment. The care system plays a very important part in elderly welfare, and it should target all elderly people who need daily and medical care in their old age. Thus, it is necessary to explore the theoretical foundations that underpin the funding system of elder care and the coverage and level of elder care services. At present in China, the funding of elder care is conducted in two different paths, which are studied in this research – supply and demand side – and can be explained by different but related theories.

On the supply side, a market-based mechanism has been introduced and applied in the process of reforming public nursing institutions and the expansion of new facilities. Neo-liberal ideas have affected the traditional administration within public nursing institutions. New market-based approaches in public management are considered more motivating and efficient than simple public provision. As to the latter form, the evidence of this research demonstrates how multiple arrangements – with care providers and financial institutions – have long been found in the provision of elder care/long term care. Indeed, we might conclude that this has always been the case and that the creation of a model of ‘public-private partnership’ is a construct that simply applies a new label to well-established systems.

Added to the market-based dimension, there is an increasing recognition that social policy for some purposes or in some forms can contribute to both economic growth and social development. Thus social policy should be conceptualised as ‘investment’ rather than ‘public expenditure’. The term ‘social investment’ has been used to describe various attempts that aim to prevent social risk and personal misfortune by investing in

people's talents and capacities rather than merely offering economic compensation through fiscal subsidies. The idea of 'social investment' is to integrate the economic and social dimensions of policy and achieve the aims of both economic growth and social stability (Perkins, Nelms and Smyth, 2004: 2-3). Thus, 'social investment policies' include various attempts that offer services (mainly through education and training) to enable all to develop human capital and enhance personal capacity and to contribute to the creation of wealth (Giddens, 1998: 117). In a social investment state, social policies can be gradually turning its focus away from employment and towards social services, in order to increase labour market participation rates and help more people avoid welfare dependency (Esping-Andersen, 1994). Elder care or LTC is difficult to accommodate under this perspective. This research will explore how entrepreneurship and state funds combine to increase resources to expand social provision for the elderly in the empirical cases found in and around Wuhan, Hubei Province.

On the demand side, funding for elder care services is commonly conducted as part of a social insurance model, with the participation from the government, enterprise and individuals. At present in China, elder care is provided under a single social assistance system, but might revert to a moderate universal social insurance system (e.g., in the form of public long-term care insurance). This would mean that the coverage of beneficiaries will turn from low income people alone to all elderly people enrolled in the public medical insurance scheme. Elderly people can obtain a certain proportion of cash benefits or a form of elder care services from a mixed funding pool. In addition, this research further explores investment outcomes by using statistical analysis to discover which investment strategy is more efficient, and whether returns from investment can contribute to the improvement of the living standards of the elderly people as well as the quality of the elder care service as a whole.

On the empirical level, the provision and funding for elder care/LTC is currently a global issue, which is given priority in all developed and developing countries. In China in particular, with the very swift development of urbanisation and industrialisation, different consequences (e.g., smaller family structure, etc.) resulting from demographic

shifts have already put great pressure on traditional informal elder care provision. The change of policy to involve more market-based mechanism demonstrates the multiplicity of arrangements that can emerge in response to local conditions, all of which involve the private sector. However, it is hard to conceive of private provision of elder care services that does not involve the state. How far this involvement of commercial institutions compromises welfare objectives that seek to prioritise human need over financial profit is a recurring theme in this research.

Currently, there are mainly two challenges in the development of an elder care provision and funding system in China. On the one hand, the coverage rate of social elder care is low, and the quality and level of elder care services is also poor. The provision of elder care is inadequate for both urban and rural elderly people, and a fragmented social welfare system and the widespread differences in invested funds in different regions have led to growing inequalities in the provision of social welfare. On the other hand, in the process of expansion of elder care provision, the Chinese government encourages the private sector in local areas to explore diversified funding models for the construction and operation of nursing institutions or other relevant facilities. Whether these funding models can produce expected results is important to judge the efficiency of the investment. Therefore, the research offers a comprehensive perspective on a work in progress, as the Chinese Government has introduced new initiatives in this area consistently over recent years – and the results will take time to show through.

1.3 Research Questions

Much of the research into the field of elder care/long term care, in China as elsewhere, has focused on the professionalization of elder care, the needs of the elderly people, strategies for coping with an aged population and so on. Far less has addressed the problems of funding. Accordingly, this thesis addresses the following specific questions:

RQ1. What are the achievements and problems of current funding arrangements for elder care/LTC on the supply side in China?

RQ2. Can LTCI work as a social insurance to benefit the Chinese elderly people on the demand side? How can China learn from international lessons in this area?

RQ3. Does the analytical framework offered by PPP funding arrangements help us analyse current trends in funding elder care/LTC in China?

RQ4. What is the investment efficiency in the elder care funding in China? Which investment orientation is more efficient in terms of extending care for the elderly?

RQ5. What kinds of elder care funding seem to be working most effectively at present that might serve to direct future policy?

1.4 Research Contributions

This thesis offers critical insights and useful guidance to policies shaping elder care funding in China, and the situation will be analysed from the following three aspects:

1.4.1 Contribution on Theoretical Exploration

Chinese politicians and academic scholars constantly seek to find a solution to establish an elder care funding system using perspectives developed by relevant Western scholars. There are plenty of studies of neo-liberalism and New Public Management (NPM) on the management and delivery of welfare systems (Perkins *et al.*, 2004; Lee and McBride, 2007), while few explain these principles and their application to China's current elder care funding system. In addition, current research on social investment theory aims to foster the development of human capital and enhancement of people's capabilities, through investments in education and training. However, investment in elder care is unlikely to be an area that yields positive and productive returns. Thus, this research will offer an insight to extend the theoretical connotation and applied range of the social investment theory.

Additionally, studies on the structural arrangements of social welfare institutions usually consist of two different views: residual welfare and universal welfare (Titmuss, 1976). In the field of elder care funding, residual welfare refers to means-test safety-net models that aim to provide social relief to the very poor elderly people, while universal welfare systems involve cooperative participation from market, society and government. This research will explain how elder care funding is currently being transformed from residual relief to more universal provision in China from the perspective of an institutional transition. Therefore, this thesis offers a theoretical foundation for ‘welfare triangulation’ as a funding model that includes market, society and government, which offers a new perspective to improve China’s elder care funding system.

1.4.2 Contribution on Empirical Guidance

The research focuses on elder care funding as the main theme and explores the various funding arrangements from the perspectives of supply and demand. On the supply side, China’s elder care funding is mainly guided by government. The main source of funds for the construction of elder care industry comes from direct funding, public funds (mainly from central and local tax revenues), mixed funds (from the private investors and government) and purely private funds (market-based operations). A series of preferential policies (e.g., preferential tax, land leasing, credit funding) is adopted by the government as a form of indirect investment. The result implies that the construction of China’s elder care industry is promoted and conducted by the mixed funding models. The forms of funding arrangement of elder care services are decided by the degree of participation by the private sector and government. This usually results in varied mixed forms of financing arrangements operating under a partnership between government and market agencies. At present, various forms of elder care funding on the supply side have been generated in China, such as, ‘Public Construction and Private Operation’, ‘Private Build and Public Subsidy’, ‘Public and Private Partnerships’, etc¹¹. The research explores the performance of these models using four typical cases of PPP projects that deliver institutional care in and around Wuhan, Hubei Province.

¹¹ These funding models will be examined in section 5.3.

This research also summarises the financial resources that elderly people have available to access elder care from the perspective of the demand side. Lessons can be drawn from the international experiences and lessons from Western countries, such as, Germany and Japan, which have implemented LTCI for more than two decades. In China, free elder care services are only provided as social assistance on a mean-tested basis for the vulnerable ('Three-Nos' and 'Five-Guarantees' elderly people). Public LTCI in China is quite new and may prove an important funding model for all private elderly people to access services in the future.

1.4.3 Contribution on Research Methods

The quantitative method employed in this research is unique, and offers a useful analytical insight to determine the efficiency of public financial inputs for elder care services in China. This compares the differences in the regions and between the urban and rural areas. It establishes an elder care service index system, and uses a Data Envelopment Analysis method and multiple linear analysis to evaluate the efficiency of public financial input in the elder care industry.

Additionally, the decision to observe how funding issues are addressed from a local perspective influenced part of the research design adopted in this research. However, closer examination of local situations revealed how private nursing institutions within a major city combined very varied systems of generating funds and this more specific perspective was adopted to shape the analysis documented in Chapter 7¹².

1.5 Thesis Structure

This thesis contains ten chapters:

¹² The research methods will be explored in more detail in section 3.2.

Chapter one (Introduction – above) has offered some background information, established the significance of the research, and identified the research questions, research contributions and the structure of this thesis.

Chapter two (Theoretical Perspectives) examines some relevant theories and explores a theoretical framework in funding for the elder care services in China as a whole.

Chapter three (Literature Review and Research Methodology) offers a critical assessment of the research methods and research design.

Chapter four (Historical Development and Rationales leading to the Construction of Elder Care System in China) reviews historical changes in the policy orientation on elder care funding in China over the last few decades, and illustrates how and why public policies related to elder care funding are being transformed from government-dominated provision to public-private partnerships.

Chapter five (Funding Models for Elder Care in China) provides comprehensive summary of the overall structure of funding for elder care in China and discusses the relative problematic issues within the various funding models employed.

Chapter six (Financial Resources: The Ability of Elderly People to Pay for Elder Care Services) examines the overall structure of financial resources provided for Chinese elderly people by addressing social insurance benefits and alternative old-age assistance. It also discusses the differences in financial conditions between urban and rural elderly populations, and analyses the reasons behind the low purchasing power of the majority of elderly people.

Chapter seven (Funding for Institutional Care in Wuhan, Hubei Province: Case Studies) presents four typical institutional cases in a major city in central China (Wuhan, Hubei Province), to demonstrate how each reveals different funding arrangements and assesses comparative performance achieved by the variety of partnerships between government and the private sector.

Chapter eight (Empirical Analysis of the Financing Efficiency of the Elder Care: Based on the Perspective of Public Expenditure) establishes an elder care service index and analyses the efficiency of public expenditure on elder care in China.

Chapter nine (Elderly Welfare Policy: A Feasibility Analysis for Establishing Public Long-term care Insurance) offers a statistical estimation on the elder care supply and demand scale found in China and proposes a pathway for the elder care funding system in the future.

Chapter ten (Conclusion) concludes with findings and explains some limitations of this study, as well as including suggestions for further research.

Chapter 2 Theoretical Perspectives

In the context of neo-liberal economy and later new public management theories, governments in most western countries have made great efforts to adopt market-oriented approaches to reform traditional bureaucratic systems at all levels radically and thoroughly. At the same time, many new ideas about welfare policy concerning the transformation of the role and function of the state in the provision of social services have been proposed, including bringing business ideas into public administration, applying technological information in managing public routines, setting up performance criteria and targets for the delivery of public goods and services, etc. Additionally, the public sector is encouraged to cooperate with the private sector, generating ‘joined-up’ partnership models to be applied in funding and providing social services. Central to these empirical changes, neo-liberal initiatives, in turn, have provoked efforts by most western countries to transform from a welfare state to a social investment state which claims to combine extensive social protection with support for economic growth.

With the rise of demographic ageing and growing demand of social services for the elderly, elder care has become one of the major public services both in the developed and developing world. Apart from outright privatisation, a variety of cooperative mechanisms have been proposed and adopted in public service provision. Rethinking and re-emphasising the development of market-based elder care from a social investment perspective is central to this research. Thus, this chapter mainly focuses on theoretical perspectives underpinning social investment. The first part reviews the background of neo-liberalism, elaborating on how and why neo-liberal theories affect welfare states and the relationships between states and markets. Second, it presents the alternative delivery mechanisms of public social services by discussing the performance

of public management reform and analysing the transformation in the role of those services which introduce a market-based approach in cooperation with private agencies. The third part describes the theoretical arguments underpinning the transition from welfare state to social investment state, and explains its criticisms and problematical issues on implementation of Public-Private Partnerships (PPPs). The last part explores this theoretical framework and its practical consequences for elder care services in China.

2.1 Rise of Neo-liberalism: Against Welfare States and In Favour of Markets

Esping-Andersen (1990) once described the post-war development of the welfare state as ‘politics against markets’. It is evident that state intervention has been a dominant economic approach that has achieved well-recognised economic growth success around the world. However, the political, economic and social changes that appeared in the final decades of twentieth century undermined confidence in statist economic policies, as well as placed increasing pressure on social welfare provision. Moreover, ever-growing flows of goods and capital both nationally and internationally have shrunk governments’ capacity to guarantee consistent and stable welfare entitlements and job security. In this respect, politicians attempted to find out a way to transfer the role of government in delivering public services, and some adopted neo-liberal reforms to their welfare systems. The most well-known are those introduced by Margaret Thatcher in the United Kingdom and Ronald Reagan in the United States in the late 1970s and early 1980s (Jones, Parker and Bos, 2005). To be specific, neo-liberal reform was generated in a particular context:

Firstly, since the end of the 1970s, the occurrence of oil crisis witnessed the demise of the ‘welfare golden age’ of the 1940s to the 1970s. Most welfare states could not maintain a managed market economy to further sustain and develop welfare (Schmidt, 1983). The economic recession exposed the limits of a Keynesian approach. That had

addressed strong job protection, high minimum wages and overly generous unemployment support, which led to a simultaneous rise in unemployment and inflation (Esping-Andersen, 1994). Unlike the Keynesian demand-side approach which emphasises 'passive' social policies and government intervention via fiscal policies, the supply-side approach supported by neo-liberals views social expenditures as an impediment to economic growth and social stability and argues that economic growth can be effectively generated by lowering the threshold for market access and capital investment, so that the consumers can benefit from a greater supply of goods and service at lower prices (Goodwin, Harris, Nelson, Roach and Torras, 2015).

Secondly, economic globalisation is the external factor driving welfare state reform. Due to the end of cold war, competition between the states largely comes from the economic field rather than political ideology. In the process of economic globalisation, the mobility of products, technology, information and labour are much more frequent than ever before. Due to high welfare expenditure in welfare states, together with cheap migrant labour and the development of multinational corporations, a rising unemployment rate made the country less competitive in the context of global competition (Armingeon, Beyeler and Binnema, 2001). Thus, globalisation and in-depth economic integration expose national economies to competitive pressures, stimulating them to reduce social expenditure and create a more flexible labour force with lower marginal taxation and less regulation (Cox, 2012: 18).

Thirdly, the comprehensive systems found in Keynesian welfare states gradually increase the disadvantages consequent on rising welfare dependency as people realise that the opportunity cost of returning to work is greater than being unemployed and relying on social insurance benefits. This situation is regarded as the 'welfare trap' which reduces individuals' work incentives and constrains their financial accumulation (Kaasch, Starke and Breme, 2010). Giddens (1998) points out that the resulting high unemployment would aggravate the government's fiscal burden and make welfare expenditure unsustainable. Additionally, welfare states also face many other social risks: changing employment patterns and family structures, along with the increasing aged

population and growing participation of women into the workforce, have triggered more negative effects on the development and sustainability of welfare states.

Above all, the integrative forces of economic globalisation, fiscal burdens and welfare dependency have strengthened neo-liberal arguments, which directly led to the gradually shrinking government, the introduction of market mechanisms and retrenchment in state welfare provision from the late 1970s. Since the first ‘Washington Consensus’¹³ was promoted in 1989, neo-liberal approaches and practices have dominated the relationship between states and markets in both the developed and developing countries (Lee and McBride, 2007). Policies promoted by economic neo-liberals are found in many areas: privatisation, deregulation, free trade, fiscal austerity, and reductions in social expenditure are designed to stabilise the domestic macroeconomic environment and enhance the role of the private sector in the economy.

2.2 Restructuring Delivery Mechanisms: Alternative Governance

The debate over the institutional character of the state and role of government in the last two decades of the twentieth century was increasingly intensified thanks to neo-liberal policy. This debate became most focused in the 1990s when a new approach, defined as New Public Management (NPM), addressed the capacity of public administration to secure the efficient and effective provision of public services under a minimal state (Hughes, 1997; McLaughlin, Osborne and Ferlie, 2006: 7). With in-depth processes of reform within the public sector, many countries have focused on a series of cooperative arrangements to deliver social services. With the collaborative involvement of governments, non-government organisations, profit or non-profit sectors, public-private partnerships fit into the new public governance regime as they allow governments to cooperate with a number of private sectors in often contractually sophisticated and

¹³ ‘Washington Consensus’ is a ‘standard’ reform package which contains 10 economic policies promoted by Washington, D. C. for economic transitional countries in 1989. The prescriptions covered the areas including fiscal policy discipline, tax reform, trade liberalisation, privatisation of state enterprises, deregulation, and legal security for property right, etc.

complex relationships, to jointly develop products and services, as well as share rewards, risks, costs and resources (Van Ham and Koppenjan, 2001: 598).

2.2.1 New Reforms in Public Management

In the last decade of twentieth century, new market-based management within public sectors has been intended to replace the traditional bureaucracies featured by hierarchy, direct planning and control, centralisation and self-sufficiency (Stewart and Walsh, 1992). This NPM is regarded as the solution for improving performance in various organizational contexts, and it also can affect political decision making in social welfare reform. Under the NPM system, public managers have an incentive-based motivation and discretion, and concentrate on the business-like professional management ideas and approaches proposed by the private agencies, which more rely on customer satisfaction, market mechanisms, information technology and entrepreneurial spirit to raise standards and secure efficiency (Farazmand and Pinkowski, 2006).

It is argued that the practice of NPM first emerged in the United Kingdom under the leadership of Conservative government. The Prime Minister – Margaret Thatcher – launched radical changes in public management policy in the areas of civil services, labour relations, expenditure planning, state-owned companies, financial management, etc., with an aim to defeat inflation, curb the power of trade unions, liberalize markets and restrict the extension of state intervention (Wolf, 2014: xix). The Conservative government's agenda of public management reform involved the privatisation and marketization of public services, so enhancing the ability and responsibility of public authority to guarantee an economic, efficient and effective delivery of these services (Hughes, 1997). Subsequently, the impact of NPM spread. Since the start of the new century, the central function of NPM has been away from a narrow focus on marketization of public services, and towards a concentration on coordinated partnership relationships. The government is no longer defined solely as a planner or provider for public services. On the contrary, it seems that the planning, management and provision of public services are negotiated between a number of participants, including the government, communities, voluntary organisations and the private

commercial sector. In this model, the primary mission for government is to deal with these complex networks of public service provision (Kickert, Klijn and Koppenjan, 1997; Clarke and Stewart, 1998). In this respect, the development of NPM is an evolving phenomenon rather than a static process.

For a long time, there has been a general idea that public service has a quasi-charitable nature and the state is always seen as an effective redistributor of sources or as a producer of last resort, in order to ensure equity and fairness, and avoid market failure and the decline of social value (Walsh, 1995: 4-6). However, there is also another general argument against state provision of public services, stating that it is ineffective and inefficient to operate on bureaucratic and rational planning principles, due to the waste of public resources and lack of incentives to control costs, and the inability of politicians to make informed decisions and monitor performance. This debate leads to the paradoxical conclusion that purely privatisation or total government intervention is not possible, state activities need to be operated and managed through the introduction of market mechanisms. Thus, the NPM has been seen as a transitory stage in the evolution from traditional public administration, and it is denoted as an implementation regime within the overall field of public policy implementation and public service delivery.

The spread of NPM, from the beginning of 1990s onwards, has asserted the superiority of private-sector managerial techniques over those of traditional public administration, with the assumption that the application of such techniques to public policy implementation and public services delivery would lead to improvements in the efficiency and effectiveness of these services (Thatcher, 1995, as cited in Osborne, 2006). Thus, there are several key elements of NPM in the field of public service provision which can be summarised as follows. First, NPM focuses on professional entrepreneurial management which is the advantage of private sector performance: to establish short-term labour contracts, and design corporate plans, performance agreements and mission statements which are focused on the targets that public agencies are trying to reach. Second, NPM promotes competition in the public sector which

could in turn lower costs and service prices, avoid restriction and achieve a higher quality of work through term contracts. Third, NPM emphasis on input and output control and performance assessment within public service organisations can be empirically measured by explicitly quantitative performance indicators. Fourth, NPM emphasises a decentralised system in which public managers have some flexibility to provide various possibilities from which customers can choose, and are not limited to agency restrictions (Kaboolian, 1998). Therefore, NPM promotes clarification of intentions, goals, targets, and indicators for progression and guarantees the application of markets, competition and contracts for resource allocation and service delivery within public services organisations.

2.2.2 Public-Private Partnerships (PPPs): Seeking Pathways to Social Investment

Public-Private Partnerships (PPPs) have emerged as quasi-market organisational and institutional forms in public governance regimes. These grow out of the privatisation era but are something more than just marketization (Bovaird, 2006; Greve and Hodge, 2010: 150). They refer to the combination of social resources via the cooperation between governments and private agents (businesses or NPOs) to deliver public products and services so as to secure societal purposes (Skelcher, 2007: 348). Generally speaking, the major purported advantages of PPPs are briefly summarised as follows: first, they increase the efficiency of delivery of public products and service: the key to the increase of efficiency lies in the transformation of responsibility for the production and provision of public services and products from public sectors to private agencies (Savas, 1987). PPPs offer a useful incentive for public sector cooperation with private partners, to adopt their advanced expertise and technology in order to meet the clients' demands (Allen, 1999). Second, they provide qualified products and services to the public at low costs: cost saving can be achieved mainly through increase in efficient and flexible managerial skills and reduction in human resources (Skelcher, 2007: 350). Thirdly, they allow public services to access private capital: apart from specialised expertise and proprietary technology introduced from the private sectors, partnership provides great opportunity for government to get private capital to guarantee adequate public

expenditure and reduce fiscal risks so as to better serve the public interest (Seader, 2002). Besides, the forms characterised by capital allocation allow governments and private agencies to relate to each other through contracting, and the purchase of services (Walsh, 1995: xviii). Fourth, they solve political and social issues for governments: PPPs can be a great approach to achieve politicians' objectives and avoid serious controversies on the issues of labour participation, border relationships, regionalisation implementation of difficult policies, and coordination of political entities (*ibid*). Thus, PPPs can effectively minimise the extent of government and market failure by providing quality public products and services at low cost, and would strengthen the government's leading position in the allocation of investment while maintaining its controls over the economy.

According to European Commission (2003), PPP arrangements were driven by limitations in public funds to cover investment needs, to allocate and integrate social capital to the largest extent possible by implementing various cooperative models that identify the borders and functions of public and private sectors. Their contents cover the processes of design, financing, construction and operation for the public utilities. Previous reports published by the world's renowned organisations, including World Bank (1997), European Commission (2003) and United Nations (2008), have explored overall performance of PPPs from the perspective of ownership, the rights of management, the extent of risk sharing and investment returns. Contemporarily, the forms of PPPs have extended from the early contractual model to encompass long-term strategies based on more professional and relational forms, such as, the contracting-out of services, the franchising of public utilities, and the establishment of hybrid organisations for reward-gaining, risk-sharing and co-production between public and private agents (Skelcher, 2007).

Through reviewing the literatures concerning PPPs, it appears that there are mainly three general models of PPPs across the world: (1) Outsourcing model: it involves contracting-out, by which it means that the governments usually define the criteria of public services, and then contract out the provision to a private or NPO. This kind of

component contracting-out suits areas in which public providers fail to offer the best solution, and calls for more market-based approaches, for example, competitively tendering municipal services (Domberger and Hall, 1996). The outsourcing model also includes entirety outsourcing, such as Design-Build (DB) model, Design-Build-Finance-Maintenance (DBFM) model, Design-Build-Operate (DBO) model, etc. In these models, the private sector designs and builds, or even finances an asset or maintenance services under a long-term agreement (European Commission, 2003: 5); (2) Franchising model: this partnering model is different from the former one in that the government auctions a license to a private organisation to deliver a public service over a fixed period of time, while its reimbursement comes from the consumers (Savas, 2000: 80). Common forms under this model include Build-Operate-Transfer (BOT) model, Design-Build-Finance-Operate (DBFO) model, Design-Build-Transfer-Operate (DBTO) model, etc. These models occur when the governments first propose the intention of a project and then designate two or more independent agencies to engage in a collaborative venture in terms of its scope and the commitment of partners' resources (Schaeffer and Loveridge, 2002); (3) Divestiture model: this includes complete divestiture and partial divestiture. A complete divestiture is much like a franchising model which gives the private sector full responsibility for investment, operations and maintenance, but the difference lies in the ownership of the assets is transferred to the private sector, so the nature of the public-private relation is slightly different (World Bank, 1997: 7-8). Thus, the government's responsibility under a divestiture model is to make regulations to prevent price-fixing and poor quality of products and services.

Therefore, these inter-related hybrid agencies operate according to quasi-market principles, and the public services are gradually becoming a more integrated network with private agencies through contracting, franchising and the purchase of services. These new forms of organisation are neither market- nor hierarchically oriented, but lie between the two extremes to combine the advantages of market competition and

government capacity at the same time. Their performance is monitored and controlled by performance standards and predicted targets.

2.3 From Welfare State to Social Investment State: A New Trend in Social Service Expenditure

The welfare state at the beginning of the twenty-first century appears to be undergoing a transformation. NPM movements offer a great opportunity to re-emphasise the potential advantages of market-based mechanisms in the provision of social care. Today, there is increasing recognition that social policy for some purposes or in some forms can contribute to both economic growth and social development, and this social policy should be conceptualised as an ‘investment’ rather than an ‘expenditure’ (Morel, Palier and Palme, 2011). Increasing labour force participation in the late 1990s, regarded by some as an extension in the ‘commodification’ of labour, became the central function of the ‘social investment state’, a concept first pointed out by Giddens (1998) in his famous book: *The Third Way*, which has been regarded as a solution to the neo-liberal critique of the traditional welfare state (Jenson and Saint-Martin, 2003; Sipila, 2012).

2.3.1 Origins and Nature of the Social Investment State

Since the end of Second World War, many western countries chose to establish a universal and comprehensive welfare system to revive their floundering economies while resisting the aggression of socialism. These western countries were later referred to as welfare states by many scholars. At that time, any welfare arrangement seemed to be a powerful weapon for politicians to win the next election battle and sustain social stability. Mishra (1990) points out that the full-employment policies, common public interests, and measures for poverty prevention, are three basic principles in welfare states. During that time, many welfare states were devoted to expanding welfare, to form a comprehensive and universal welfare system, including pension, healthcare, unemployment, and so on (Esping-Andersen, 1994). Since the end of the 1970s, two

separate political trajectories – social democracy and neo liberalism – began to design the future of the welfare state. However, the ideational orientations of these two groups are quite different. The philosophy of wealth creation in classical social democracy is based on economic security and equitable redistribution; while, neo-liberals attach great importance to market competitiveness and the generation of wealth much more than the former. With an in-depth process of reform in privatisation and deregulation during the era of neo-liberalism, the shortcomings of a neo-liberal approach became apparent by the late 1990s. It no longer responds to social issues, such as growing social polarisation, social exclusion and rising poverty rates. Such criticisms are in line with the growing awareness that the traditional welfare state cannot adapt to the demographic transformation of families and society, which will produce more, new social risks.

In this respect, the politicians and academics alike attempt to find a way which could solve the ‘either this or that’ dichotomy between ‘welfare state’ and ‘market state’, or – more specifically – between the political pursuit of ‘social democracy’ and ‘neo-liberalism’, between the operational approaches of ‘state intervention’ and ‘market regulation’, between the social preferences of ‘welfare privilege’ and ‘social responsibility’. Giddens (1998) proposes ‘a third way’ to end such dilemmas, and argues that states play an essential role in fostering the development of human capital by offering the necessary infrastructure to avoid human capital depletion. The ‘social investment state’ promoted by Giddens gives a clear developmental direction to the western countries undergoing rapid political and economic transformation. In politics, the New Labour prime minister of the UK, Blair (1996), accepted this argument and stated that investments in people, infrastructure and industry should be government’s strategic responsibility, and all states need to promote the cooperation between public and private sectors, applying market-based approaches to serve public needs and interests in a context of global economic competition.

A social investment perspective largely accepts the neoliberal belief that a free market system is the most efficient organising principle under all circumstances; while, it also acknowledges the existing phenomenon of market failure and the necessity for

government involvement in and the appropriate application of market forces in order to improve both economic and social outcomes (Perkins *et al.*, 2004: 2-3). Thus, the chief concern of a real social investment state is to recognise and integrate the economic and social dimensions of policy in order to achieve the aims of both economic growth and social stability. The term ‘social investment policy’ can be understood as the various attempts that aim to move beyond redistributive and consumption-based social welfare systems to secure the prevention of social risk and personal misfortune by fostering the development of human capital and the enhancement of people’s capabilities, through investments in education and training, rather than merely direct fiscal subsidies for economic compensation (Giddens, 1998: 117; De Deken, 2012). Therefore, social investment policies yield positive and productive returns not only at present, but also in the future (Morel *et al.*, 2012: 6).

Moreover, traditional forms of social intervention and poverty relief found in post-war welfare states cannot satisfy the needs of the current economy, to facilitate its transition to a ‘knowledge economy’ which attaches great importance to the value of human capital (Morel *et al.*, 2012). A knowledge economy fosters the miniaturisation and decentralisation of job markets and social organisations, so the power of trade unions is seriously impaired. It is argued that in this ‘knowledge economy’, there is a pressing demand for an educated and skilled workforce, who can quickly adapt to a constantly changing society (De Deken, 2012). Without the necessary investments to foster human capital development, inadequate skills and education are also expected to restrain future economic growth and employment creation (Perkins *et al.*, 2004: 3; European Commission, 2009). Thus, a social investment state provides economic incentives for better quality jobs and minimises the risk of an intergenerational transfer of poverty.

With the improvement of the healthcare and medical technology and continuously rising living standards, people tend to live much longer than before. The growth of an aging population leads to great pressure on pension payment costs and on the provision of social care services. Giddens (1998: 120-121) suggests that statutory retirement should be abolished, and the elderly people should remain in the workforce to work with

younger generations. The variations of family structures, including increasing family breakdown and growing female labour force participation (including low-skilled women), have called for more welfare services (De Deken, 2012). These changes have resulted in new forms of need: to balance paid work and family responsibilities (especially for women who need to take care of younger children and frail elderly parents) and to obtain the training required for a secure job.

Esping-Andersen (1994) addresses the importance of social services in maximising participation in the labour force. Thus, the concept of social investment in the field of elder care services can also secure social purposes: increasing the labour market participation of the population of any age and improving productivity of those participating in the elder care industry. As is summarised by Bouget, Frazer, Marlier, Sabato and Vanhercke (2015: 31), ‘the more extended is elder care, the more middle-aged women work’. Although the gradual increase in pension levels has largely improved the financial status and social autonomy of the retired, these elderly people tend to feel lonely and live passively due to smaller family size. Moreover, Palme (2006: 160, as cited in Sipila, 2012: 82) stresses the primary purpose of a social investment state is to deal with work, ageing and the new ‘gender balance’. Growing numbers of females working in the labour market have reduced the possibility to take care of their elderly parents. At present, local services have become limited to the greatest elder care demands, especially to the most handicapped elderly people, which weakens preventive policy and also threatens women’s participation in the workforce. What is worse, many countries lack eligible and accessible assessment of the social consequences of fiscal consolidation, which leads to gradual downsizing in the supply of public elder care services.

To sum up, a social investment state can adopt productive approaches that are essential to economic stability, employment growth and social cohesion in the long term. With the aim of ‘preparing’ rather than ‘repairing’, the underlying policy logic in social investment seeks to sustain a competitive and dynamic knowledge-based economy and to promote a flexible, professional and skilled labour force. With investment in elder

care, not only would the elderly's disabilities be prevented and better access to more efficient and sustainable elder care services be secured, but also the previous care staffs' qualifications and skills would be promoted to enable them to positively participate in the labour market.

2.3.2 Returns from Social Investment: A Perspective on Social Care Provision

Elder care provision has often been seen as an expenditure rather than as part of community social capital. In fact, it comes as a significant recessive cost to the households who prefer family care: firstly, the carers have no alternative employment income and have to work for a long time in caring for their old relatives; secondly, it might reduce the accrual of social protection entitlements available from waged work (European Commission, 2013). At present, from a global perspective, reducing the public costs of elder care provision is likely to increase the social investment via providing private elder care. A determined social investment strategy can achieve both economic and social returns in reducing disability in old age, enhancing labour force participation, improving the productivity of care delivery, etc. Returns from the social investment in elder care needs to take account of all costs and benefits, which are not just in a monetary form, but also need to cover the benefits to the wide variety of people who get involved in it (Ellis, 2017). Specifically, it can be argued that providing and improving elder care might produce significant economic and social returns, as it is demonstrated below:

From a macro-economic perspective, social investment in elder care protects family carers from heavy care responsibilities, enabling them to go back to the labour market, so making contribution to the government tax revenues, social welfare contributions, and even the country's Gross Domestic Product (GDP). It also avoids any depreciation of human capital among the care workers. Additionally, more private institutions become involved in providing and funding elder care, so relieving public financial burdens. It also encourages public authorities and stakeholders to understand and implement policy options on social care services. What is more, social investment in

elder care enhances social protection expenditure and reduces the risk of poverty and health inequality among elderly people.

From a meso-social perspective, the current care delivery still remains highly labour-intensive, so it provides professional social care services and enhances the supply of caring and administrative jobs, especially stimulating the labour participation among late middle-aged women. Besides, it provides higher productivity of care provision by training and recruiting professional care workers, so contributing to an improved allocation of labour resources. Moreover, it facilitates the development of other industries, such as pension markets, insurance markets (including LTCI and the development of reverse mortgage loans), etc.

From a micro-individual perspective, social investment in elder care encourages people to recognise life's risks and prepare to confront them at an early age rather than simply accept public help to solve the consequences in late age. It affects and determines people's current and future capacities, in terms of employment income and prospects. Moreover, it enhances the material wellbeing and health status of care-givers by reducing the physical and mental stress from work and family responsibilities, improving their social inclusion and cohesion through participation in work. It also facilitates the integration of people outside the labour market into paid employment.

However, returns from investment in elder care cannot be easily measured or quantified, so this research will focus as much on the social returns from social investment in elder care provision. In addition, there is an absence of consideration of the negative outcomes from social investment in much of the literature. So, this research also takes these unintended outcomes into account.

2.3.3 Criticisms and Problems of the Transition: Issues of Co-ordination in Elder Care

Over the last several decades, as the global population is ageing fast, social change associated with transformed demographic structures, intergenerational relationships and the redistribution of roles and transfers within the family have challenged the traditional

way of caring for the elderly people. Confronted by the tension between elder care needs and insufficient informal care services, most industrialised nations have attempted to improve the structure for their elder care system with the goal of allocating social resources at all levels to meet the expanding demand for care. The phenomenon of an ageing society leads to the dependency not only in physical but also in financial terms. In the practical situation, however, the fiscal cost of increased elder care provision is higher than that of increased pension provision (Casey, 2003: 67). High social demand for elder care services, coupled with constrained financial resources in the public sector, calls for the necessity of co-ordinated arrangements which open broader conversations about how to establish and maintain a sustainable elder care system. With restricted budgets, governments are promoting cooperative models and exploring new capital and operational structures to reduce costs and improve positive outcomes, thereby guaranteeing greater efficiency in the financing and delivery of elder care.

While there is a wide consensus on social investment policy and co-operative models between government and the private sector, this approach has also attracted criticisms from different academics. Some of these criticisms are related to the implementation and negative consequences of the approach, but some of them might come from the approach itself.

First and foremost, there is no appropriate balance for public and private resources in financing, managing and delivering elder care services. The controversies always arise when it comes to the issues of who pays, who can pay and who should pay for elder care. On the issue of informal elder care, there is near absence of direct public and private expenditure, even on medical aids and assistive devices. Costs of informal care tend to be a significant burden for families, especially when it includes the working time of the carers, alternative employment income foregone and reduced accrual of social protection entitlements. Within the formal care area, it generates conflicts between different branches of public sectors and different private agencies as to the issues of who pays for what and when payment should be made (Casey, 2003: 86). Also, policy makers face the challenge of securing affordable quality care while offering decent pay

to the employed carers. Thus, the supply and quality of care may fall short of needs and expectations. Besides, when NGOs or a social insurance institution pays with care allowances, the separation between financing and care-providing bodies would make quality control more complicated, and many preventive measures, such as day-care facilities and rehabilitation, may not be covered (European Commission, 2013: 13-15).

The second criticism stems from foreseen drawbacks of public-private partnerships in empirical situations. For instance, PPP projects usually cover benefits from several interested parties, so governments need to examine partnering projects strictly due to complicated procedures and it might lead to delay in procedural examination and approval before moving to contract on a partnering project. Besides, academics also doubt whether PPPs can really eliminate inefficiency in the provision of elder care in a competitive market. Because in a practical situation, PPPs might have high transaction costs, and limits of applicable range, the contract agreements are long-term, complicated and comparatively inflexible because of the impossibility to envisage and evaluate all particular events that could arise in the future (Katz, 2006). Also, private agencies may lack adequate experience to cope with problems in providing social services, compared with traditional public provision. Additionally, PPPs confront risks in the process of construction and operation, such as cost overrun, government default, environment destruction, market demand alteration, inadequate business income, inflation, and other uncontrollable risks (Van Herpen, 2002).

The third criticism lies in the unequal power relations between government and contractor in the provision of services, as government is always the dominant authority on the project. Unlike the legal contract between two private entities which gives both rights and responsibilities, the contract between public and private sector is more flexible and unstable, due to this imbalance of power. There is significant scope for government to improve its approach to contracting for public services, and the government has the right commercial and financial skills to manage contracts and it may use the full range of powers in different stages of coordination (House of Commons, 2014). While, on the other hand, government has a tendency to make

managing contractors' performance overly complicated and uncontrollable, and the coordination may not achieve partnership objectives, especially when the interests of the private sector conflicts with the interests of the public, which might create a net loss to society as a whole (Bo, 2006).

2.4 Creating the Social Investment State in China: Social Services for the Elderly People

The above review of relevant theoretical and empirical perspectives found in European countries can shed much light on the issue of funding and delivery of elder care services in China. European countries have demonstrated that population ageing is the key common challenge in the field of elder care provision and the number of very elderly people (people aged over 80 years) will triple over the next five decades, so there are strong arguments for a social investment approach to the delivery of elder care service. According to the 'Social Investment Package' (European Commission, 2013), a long-term strategy of social investment can combine the policies of prevention, health promotion and rehabilitation, to improve systematic productivity in informal and formal care delivery and provide measures that raise the capacity of frail older people to manage self-care and independent living. Given that member states are at very different stages in their efforts to address the need for elder care services, this policy receives more attention than any other field of social protection.

In China, the population aged over 60 years has reached 230 million by the end of 2016, approximately 16.7% of the total population; the percentage increased by 6.5% points compared with figures in the sixth national census conducted in 2010 (National Statistics Bureau, 2011). However, China's ageing problem is far more serious than other countries due to the one-child policy that lasted over three decades as well as unsustainable social security. Besides, the transition to a market oriented economy and everlasting economic growth have transformed family patterns as well as existing traditions involving the elderly in China. An ageing society with increasing mobility of

labour force and smaller family size has severely impacted the traditional family care model, and the increasingly growing demand for elder care services calls desperately for an alternative approach for care provision. By 2025, the population aged over 60 is expected to reach 300 million in China, so elder care is a pressing issue (Yang, 2015). To address this issue, China has introduced an increasing number of regulations and guidelines to encourage private investment in what is emerging as an elder care service industry. This aims to increase the supply of healthcare facilities as well as to improve the quality of healthcare.

In June 2006, the General Office of the Chinese State Council (2006) issued *'Suggestions on Accelerating the Elder Care Service Industry'*. Elder care was first defined as a service industry in this official document. It also proposed the policy measures to develop social welfare for the elderly, improving social service institutions and home-based elder care services and launching pre-employment training for service staff. Besides, local government was required to promote market consumption of services by the elderly and to induce private sector provision of social care services, including: daily care, housework, psychological consultation, rehabilitation and emergency relief, etc., for the elderly people who stay at home. In 2011, the Chinese State Council (2011a and 2011b) issued two further plans in relation to the elder care system: *'Twelfth 'Five-Year' Plan of China's Aging Development (2011-2015)'* and *'Construction and Planning of Social Elder Care System (2011-2015)'*. Both of these documents present the background of current aging society in China and arrange the to-do list on different aspects of social elder care services during the period of 2011 to 2015. The latter document emphasises the dominant role of government in guiding other social organisations to participate in an elder care service industry, including institutions, planning, finance and management. It also addresses the market-based approaches to the process of resource allocation and provision, such as, 'Public Construction and Private Operation' (*'gongjian minying'* in Chinese), 'Private Construction and Public Subsidy' (*'minban gongzhu'* in Chinese), government purchase of healthcare services and various subsidies. Local governments are required to use a portion of social welfare lottery fund

in the construction of their elder care system. In 2012, the Ministry of Civil Affairs (2012a) issued *Implementation Suggestions on Encouraging and Guiding Private Capital to Enter the Field of Elder Care*. It was the first official document that focused on the funding of elder care provision, for the purpose of realising the diversification of investors to relieve the imbalance between supply and demand of elder care. Private capital is encouraged to participate in family and community-based elder care, building nursing institutions and service facilities, offering basic elder care services and developing the elder care industry. In 2013, *Several Suggestions on Accelerating the Development of Social Services Industry for Elderly People* was released by the Chinese State Council (2013), which first proposed a list of detailed implementation policies, including financing and investment, land supply, preferential tax, subsidies, employment and training, non-government organisations and charity, to pour into the construction and development of the elder care industry in China. Late in 2014, the Ministry of Commerce and Ministry of Civil Affairs (2014) jointly issued the *Circular on Various Issues on Foreign Investment in For-profit Senior Care Facilities*, providing detailed guidelines for foreign investment in elder care businesses in China. Foreign investors are encouraged to scale up investment, develop franchises and cultivate the elder care market. They are also allowed to participate in the privatization and restructuring of public elder care facilities. In February 2015, the Chinese Government introduced further regulations on the framework for private investment in the elder care industry¹⁴. The regulations aim to encourage private investors actively to participate in this area and reflect the on-going efforts China is making to ease market access barriers for private investment. This document added some new insights, such as, proposing a list of permitted business models including shareholding co-operative systems and Public-Private Partnerships, collaborating nursing institutions with medical

¹⁴ *The Implementation Suggestions on Encouraging Private Capital in the Development of Elder Care Industry* was issued by the Ministry of Civil Affairs (2015a), National Development and Reform Commission, Ministry of Education, Ministry of Finance, Ministry of Human Resources and Social Security, Ministry of Land and Resources, Ministry of Housing and Urban-Rural Development, National Commission of Health and Family Planning, China Banking Regulatory Commission and China Insurance Regulatory Commission.

treatment organisations, promoting various incentives ranging from funding measures¹⁵ to tax exemptions, as well as discretion on service fees¹⁶. Given the official statements of previous years, the current Chinese elder care system is gradually moving away from state provision and towards market provision (albeit in a carefully constructed market), allowing private investors to consult on the implementation of the framework and incentives provided by the Chinese Government.

On the way to explore the diversification of suppliers of elder care and promote the PPPs in the elder care industry, the Chinese Government has advocated pilot models in the construction and operation of elder care services, including ‘Public Construction and Private Operation’ and ‘Private Construction and Public Subsidy’ – all will be discussed in more detail in chapter 5. These models had already been used in several public infrastructure construction projects in China, such as highways, underground, water-supply and urban village reconstruction, etc. As to the construction and operation of elder care, the participants for PPPs include: public sector, private sector, PPP project companies as well as other organisations, such as financial institutions, insurance companies, consulting companies, design companies, suppliers of materials, etc.

However, there exist several criticisms on the current situation of provision and funding for the elder care services in China. First, the operation and management of private nursing institutions is not efficient, funding shortages are endemic and banks or other financial organisations doubt their solvency and will not offer them loans (Shi, 2012). Second, there are doubts as to whether China has realised the marketisation of the elder care industry, as more and more nursing institutions have mixed ownership structures, involving both public shareholders and private investors, which exposes them to more government intervention (Yang, 2015). The boundary between the public and private ownership becomes a reflection of the contradiction between resource allocation

¹⁵ The new regulations for funding issue are: 50% of the welfare fund collected through the sale of lotteries should be used in the local elder care industry, and this proportion must increase with the growth of old population; that allocated for the promotion of private investment must not be less than 30%.

¹⁶ The operators of elder care businesses could decide a range of reasonable service fee levels, but the government authorities retain the right to supervise their operation, fee items and frequency of fee changes.

mechanisms and the search for profit, which leads to unbalanced resource allocations between different departments and regions, industry barriers, unequal competitive environments, etc. (Wang and Yang, 2014). Third, there is still a lack of laws and regulations that focus on the operation and management of PPP projects in China. It is difficult to define who is the person in charge, how to reach maximum profits, how to distinguish the responsibilities and rights of public and private sectors respectively, how to cope with the risks of compensation if losses occur (Ren and Yang, 2012). Fourth, the construction of a new nursing institution requires pre-period financial inputs and professional talents, but has to wait for a long period for investment returns. The limited consumption capacity of elderly people can set limits on the development of an elder care industry. In practice, preferential policies for the participants, financial channels and partnership modes are not advanced, so the various participants, including nursing institutions, insurance companies, foreign investors, are not confident of a profitable future (Wang, 2014).

From the empirical perspective, however, the social care system in China is still at a low-level stage of development and confronted with several issues. First, the remaining publically funded nursing institutions usually offer only limited beds, while large high-end or small private nursing institutions have high rate of empty beds and run at a loss. Second, community-based elder care centres lack money, land and working staff, and can only provide limited services (Zhao, 2016). For example, according to Hubei Provincial Government (Yin, 2016), the future new missions on Hubei's elder care system include: reforming public nursing institutions (Social Welfare Houses) and expanding their scale by more than 120,000 beds; introducing market mechanism through purchasing services, and public-private partnerships, etc., to increase the supply of elder care services; exploring LTCI; promoting the combination of medical treatment and elder care and introducing medical institutions into community-based elder care; establishing a comprehensive information network for the elderly people. All these efforts need time to bed down, but the rate of elderly demand is rising faster than the capacity of these new initiatives to meet it.

In summary, this research will apply a social investment perspective to examine the provision of China's elder care system, analysing how social investment, especially PPPs, has affected the roles of state, market and society in providing and funding elder care services, examining how different types of PPPs fit into the construction and development of elder care services, while analysing their advantages or disadvantages.

Chapter 3 Literature Review and Research Methodology

This chapter will begin with an overall literature review of current funding trends in elder care/long-term care (LTC) in the Western countries as well as in China, followed by a presentation of the research methods employed.

3.1 Literature Review: Current Trend of Funding for Elder Care/Long-term Care (LTC)

During the past three decades, an increasing volume of published studies has emerged on the provision of LTC for frail elderly people, its definition, types of services, pricing and costs, and assessment from both national and international perspectives. With population ageing and a shrinking pool of potential family carers, increasing demand for social elder care is pushing up the cost of formal LTC across the world. So, this raises questions in policy discussion about who should pay more. So far, current research that has systematically reviewed LTC funding mainly aims at comprehensively summarising and analysing the available evidence on policy development in the LTC funding system, comparing the funding frameworks of LTC in different countries over recent years. This section offers an overview of elder care/LTC funding by reviewing the categories of funding arrangements and problems of LTC in Western countries. It then examines the current studies of elder care/LTC funding in China, and ends by identifying the gaps between the existing literature and the research done for this study, to justify the aims of this thesis.

3.1.1 Categories of Funding Arrangements for LTC in the Western Countries

Although the sources of funding in LTC are heterogeneous due to the complex mix of schemes, services, and benefits, it is still possible to distinguish clusters of countries with similar approaches from the underlying evidence on cost-incentives. For instance, family provision of informal care is prevalent in Southern and Eastern European countries. In Scandinavian countries, public expenditure on LTC is the main source of funding. While, in Spain, Germany and Switzerland, where market intervention is more common, both for- or not-for-profit providers offer LTC services. Means-tested programmes are the primary source of public funding in the United States and the United Kingdom (Costa-Font and Courbage, 2012). In general, the LTC systems mainly fit into two broad funding arrangements which include: public funding through social insurance schemes or supported by tax revenues to deliver universal benefits; and private spending coming from individuals or private insurance plans (Gold, 2013).

3.1.1.1 Public LTC Funding

Colombo and Llena-Nozal, Mercier and Tjadens (2011) use two criteria to distinguish different types of public long-term funding by identifying the scope of entitlement to LTC benefits: whether it is a universal or a mean-tested entitlement, and whether coverage is through a single system or multiple benefits, services and programmes. Three broad types of LTC funding across Western countries can be identified using these two criteria: universal coverage within a single programme, mixed systems and mean-tested safety-net schemes.

Universal coverage within a single programme

Under this type, publicly-funded LTC is provided through a single universal system to all individuals assessed as eligible due to their care-dependency levels. The forms of this funding model reflect the relationship between LTC and health care, as long term care may be separate from health system or be part of health coverage (*ibid*). Three main sub-models can be summarised as following:

(1) Tax-based models. These are typically found in Nordic countries, including Sweden, Norway, Finland and Denmark. The state organises universal and tax-funded LTC and healthcare services provision for the elderly and disabled (Karlsoon and Iversen, 2010). These comprehensive and broad public services absorb a relatively large share of GDP spending on LTC, ranging from 2% in Denmark to 3.6% in Sweden (Colombo *et al.*, 2011).

(2) Public long-termcare insurance (LTCI) models. A number of countries, including Germany, Japan, Korea, the Netherlands and Luxembourg, typically finance LTC via a social-insurance arrangement. This model usually involves mandatory employment-based contributions and a separate funding system to health insurance (Fernandez and Forder, 2012; Zuchandke, Reddemann and Krummaker, 2012). It is similar to the previous model in that coverage is also generally comprehensive and covers the entire population (Glennester, 2009). As a share of GDP, LTC spending is around the OECD average of 1.5% for this group of countries, apart from two extreme cases of Korea (0.3%) and the Netherlands (3.5%) (Colombo *et al.*, 2011).

(3) Personal care via the health system. Belgium typifies this model, which is based on the coverage of LTC costs under the health system. In this model, LTC is viewed as a health risk, and care services, including daily care, such as dressing, washing and eating, are primarily delivered by skilled nursing providers, financed under the universal public health system. LTC spending as a share of GDP accounts for 2% in Belgium (*ibid*).

Mean-tested safety-net scheme

The United States and England belong to this model. Under this scheme, income and/or asset tests are used to set thresholds for eligible recipients to receive publicly funded social care, which is designed as a means-tested scheme to assist those who are unable to pay for the medical and LTC expenses themselves (Colombo *et al.*, 2011; Costa-Font and Courbage, 2012). For instance, Medicaid – the public programme in the US – pays for 40% of total LTC costs and LTC spending accounted for around 0.8% of GDP in

2010 (Glennerster, 2009; Kaiser Commission on Medicaid and the Uninsured, 2010). In England, LTC spending as a share of GDP was 1.2% in 2014 (OECD, 2017).

Mixed systems

Most countries do not have a universal single programme for LTC services, but combine different universal programmes, depending on target groups and specific long-term cost. Three main sub-models can be identified as follows:

(1) Parallel universal schemes. This model combines different coexisting schemes, each providing universal coverage for different types of care. Typically, universal nursing care is financed through the health system, while universal personal care is under a separate scheme. Scotland, Italy and Czech Republic typify this approach.

(2) Income-related universal benefits or subsidies. Typical countries under this model are Australia, Austria, Ireland and France. In these countries, the recipient is required to complement public long-term funding with a personal contribution, which is adjusted to their income level, as a condition for receiving the cash allowance or in-kind LTC services.

(3) Mix of universal and means-tested benefits. The universal entitlements under this model generally consist of the following services: health-related and skilled nursing care (Switzerland), and nursing and personal care in home-care settings (New Zealand and Canada). In countries with limited formal services delivery, universal benefits may apply only to certain services, for example to institutional care, or to cash benefits (Colombo *et al.*, 2011).

3.1.1.2 Private LTC Funding

Private LTC funding approaches seem to play a potential role in the delivery of LTC, although the market for private LTCI is not well developed in Western countries. A wide range of private LTC coverage arrangements can be found in these countries, differing in eligibility rules, benefit triggers and reimbursement levels. At present, there are mainly three main private LTC funding models which can be identified as follows:

Private long-term care insurance (LTCI)

Private LTCI insurance aims to offer complementary coverage for the LTC costs which may not be covered under public social insurance programmes. Currently, there are two main products emerging over time: the first is a reimbursement model, designed in line with private health insurance arrangements (e.g., US). It usually has a maximum amount of benefit payment to cover nursing home or outpatient care expenses. The second is an indemnity model, designed in line with an annuity contract (e.g., France). Once the insured meet criteria set out in the policy determining dependency level and waiting period, they can receive a fixed level of monthly benefits for life (Colombo *et al.*, 2011). The main advantages of private LTCI are the simplicity and flexibility it offers subscribers with fixed cash benefits according to their preferences. It also facilitates the management of the financial risk associated with dependency for providers (Cremer and Pestieau, 2009).

Combining LTCI with life insurance

An integration of LTCI and life insurance into a single product has been developed to cover the risk of dependency. Combining life insurance with long-term coverage has several advantages: firstly, it could avoid adverse selection in the life insurance market, because dependent people may not live long enough to qualify for long-term annuities; secondly, the risk is minimised because it crowds out the individuals who can immediately benefit from insurance payments (Costa-Font and Courbage, 2012); thirdly, it may reduce the cost of both products as well as make them more attractive and accessible to potential buyers (Murtaugh, Spillman and Warshawsky, 2001).

Self-funded care using house property

As Glennerster (2013) puts it, if the elderly people were single and owned a house property, they could sell the house and use the proceeds to pay for care costs. In some other cases, a reverse mortgage scheme can be used by those who are deemed housing-rich and cash-poor (Casey, 2003; Costa-Font, Mascarilla-Miro and Elvira, 2009). A reverse mortgage is a commercial loan which allows the elderly to access the

house equity secured on the value of a property. In some cases, reverse mortgages would link to LTCI rather than LTC spending. The insured would receive an annuity depending on the value of the house and the level of dependency (Chen, 2001). Thus, the house would be used as finance of last resort. However, the market for reverse mortgages is not prevalent due to the uncertainty of housing prices and in some instances, elderly people are reluctant to pay for this scheme because they prefer to bequest the house to their children (Costa-Font, Gil and Mascrillia-Miro, 2010).

3.1.2 Problems of LTC Funding in the Western Countries

As it illustrated above, financial plans for LTC include subscription to a public or private LTC coverage product, which could offer more options regarding the care that the elderly people receive, as well as protect their income and assets against the risk of future needs for LTC. However, there are still some problems within these schemes. The current literature focuses on the problems encountered under LTC funding and can be summarised as follows:

3.1.2.1 Funding Pressure on Public LTC System

Both Colombo *et al.* (2011) and Glennerster (2013) argue that funding levels for LTC in Western countries are inadequate, so that the standard of any category of care may not be well developed. The public LTC funding system generally costs a larger proportion of national fiscal revenue than the OECD average level, typically from 1.5% to 3.6% of GDP. It also features potentially high care costs and relatively higher reimbursement rates compared with other systems (Colombo *et al.*, 2011). Wittenberg (2011) points out that life expectancy is rising at a faster rate than official estimates assume, thereby creating greater pressure to raise the funding levels. Casey (2003), Glennerster (2009) and Dilnot, Warner and Williams (2011) also point to rising costs of care as a factor that is set to exacerbate the problems of inadequate support for the care of elderly people. The current availability of financial support for elderly people is very limited, and the situation may get worse if care expenses continue to rise in the future. Fernandez and Forder (2012) compare the cost and disadvantages of LTC funding arrangements in the

Western countries, and point out the main disadvantage of a universal system is the higher cost to the public in the form of higher contribution through general taxation or mandatory contribution for LTC. They also claim that in both Germany and Japan, the significant increase in demand in the low-level needs population has led to the over-consumption of the insurance system.

3.1.2.2 Complexity of Funding Systems

Dilnot *et al.* (2011) examine the funding system for LTC in the United Kingdom and argue that the current LTC system is confusing, unfair and unsustainable: first, assessment processes for eligibility are usually complex, opaque and not portable; second, there are significant uncertainties as well in its duration and intensity; thirdly, provision of information and advice is poor, so that individuals may not be able to plan ahead properly to meet their future care needs, or the wider care and support system may fail to join up. Colombo *et al.* (2011) argue that unlike the universal programmes, a mixed system is viewed as desirable for reasons of efficiency rather than equity, so it may generate fragmentation, according to different sorts of services and benefits, and it can be more difficult to quantify the overall entitlements received by a user relative to the cost incurred. Fernandez, Forder, Trukeschitz, Rokasova and McDaid (2009) use a means-tested model as an example to conclude that it is difficult to set a fair threshold and may result in unmet demands, because it may leave elderly and disabled people much poorer in order to qualify for care and means the families above the income thresholds tend to pay more for the LTC. However, the means assessment is administratively expensive and this system can be unfair if it leaves frail elderly people to be poor to become eligible for LTC and also may lead to confusion over eligibility for public funding and reduce transparency due to no uniform criteria for eligibility.

3.1.2.3 Unpopularity of Private LTCI

Potential demand for private LTCI is inadequate and the market of private LTC coverage is generally small in OECD countries (OECD, 2004). According to the

research from Colombo *et al.* (2011), the United States and Japan offer the most developed examples, where the share of private LTCI financing accounts for 7% and 5% of total LTC expenditures in 2010, while in other countries, such as Germany, New Zealand, Portugal and France, etc., private arrangement for LTC accounts for less than 2% of total LTC spending.

To address this issue, some research has explored the reasons behind this situation: Costa-Font and Courbage (2012) reveal two reasons to the unpopularity of private LTCI. The first one reflects inter-generational factors within most countries that reduces the demand for LTCI, as elderly people are more likely to receive care from their children and may be reluctant to purchase insurance. Another explanation for the limited development of the private LTCI market is asymmetric information, the individuals are inadequately informed about the products available. Tumlinson, Aguiar and Watts (2009) argue that the potential consumers do not calculate future returns of private LTC associated with their investment, nor do they know about the detailed arrangements and the evolution of supply due to the complexity of the LTCI contracts and unpredictable costs. Costa-Font *et al.* (2009) believe that the interaction of public insurance programmes arguably crowds out private insurance. Moreover, Colombo *et al.* (2011) point out that the phenomena of moral hazard (over-consumption of care encouraged by insurance) and adverse selection (over-representation of bad risks in the insured population) lead insurers to protect themselves by limiting access to the private cover. Merlis (2003) and Courbage and Roudaut (2008) claim that low demand for private LTC arrangements reflects people's neglect to plan for the financial risk associated with longevity risk in their youth. They also demonstrate people's awareness of the high proportion of private LTCI in terms of their disposable income which might lead to financial crisis within the family, as well as people's preference of living with their families which might affects their willingness to buy private LTCI.

3.1.3.4 Boundaries of Responsibility in Funding for LTC

The majority of people recognise the importance of LTC as well as the requirement to make some contributions to the costs of care in later life, but they need a fairer way of

sharing costs and responsibility between the state and individuals in order to relieve uncertainty. Glennerster (2013) claims that the cost of elder care has always been shared between families and the state, but this boundary line has caused some difficulties in policy making in most countries.

Glennerster (2009) identifies some dilemmas in funding LTC in advanced economies: who should pay for the growing costs of an aged population? Who should shoulder most responsibility? Will the state be able to do more and if so how much more? Should the state be confined to funding or extend to the provision of services? Should the funding be national or local? What role can private insurance play? However, there is still no entirely satisfactory solution to this problem in Western countries.

3.1.3 Research on Funding for Elder Care/LTC in China

In China, where the whole society upholds traditional values, an emphasis on filial piety requires the younger generation to take care of their older parents or other old relatives, and thus many Chinese elderly prefer to live at home rather than in a nursing home. In this situation, family care still dominates care patterns in China, and community care is viewed as a supplementary model for elder care provision while institutional care is used as a last resort (Lin, 2014). Currently, there is a mass of Chinese literature on elder care/LTC systems. Most of these publications mainly focus on the current situations of provisional models, on international comparisons and on the construction of an elder care industry. However, an ageing society with growing mobility of labour has greatly impacted on the provision of LTC, and the current structure of care provision for the elderly is no longer consistent with changing family size and life styles of younger generations (Feng, Liu, Guan and Mor, 2013). Seen from the existing studies on China's elder care/LTC funding, current research mainly focuses on the following five perspectives: (1) international comparisons: examining the different funding models for LTC in Western countries; (2) funding structure of LTC according to the participation of different investment agencies; (3) financial resources of the elder care/LTC funding system: public and commercial LTCI and reverse mortgage markets; (4) current

situations and problems of China's LTC funding; (5) future expectations and recommendations on the construction of elder care/LTC funding in China.

3.1.3.1 International Comparison of Different Funding Models of LTC

The first research orientation offers overviews of the LTC funding system in Western countries and analyses the current situation of elder care funding models in China. For instance, Lin and Liang (2016) and Fang (2016) identify different funding models for LTC in OECD countries. Fang (2016) discusses the current situation of LTC funding models in China from three aspects: subsidies to the providers, subsidies to the elderly people and reimbursements for the portion of medical care. The author later evaluates the problems of LTC funding policy in practice: provision for LTC is unavailable to elderly people on low income; government does not fund informal family care. Lin and Liang (2016) conclude two main funding models exist for social elder care in developed countries: the tax-based expenditure model (e.g., the United Kingdom) and the social insurance model (e.g., Japan). They then conclude that current funding policy for elder care in China mainly depends on the government. Government should increase the investment of public welfare lottery funds and fiscal payment in the provision of elder care, and explore other effective methods to subsidise provision.

The research from Yin (2011), Chen (2014) and Zhang (2015) also reviews the funding models for LTC in OECD countries, and discusses experiences and lessons for China. Yin (2011) compares the developmental process of LTC systems in Western countries (e.g., France, Germany, Japan, the United States and the United Kingdom) and discusses features relating to finance, contents and forms of services, targeted objects and fee burdens, human resources and quality control, etc. Ma, Yuan, Zhang and Sa (2016) compare the different funding models of LTC in Western countries and later suggest that China needs to establish a professional assessment panel to define the elderly's disability level and the subsidy standard, and to integrate the resources from the hospitals and nursing institutions. Chen (2014) argues that a sustainable funding system for LTC requires a comprehensive consideration of economic conditions; the existing social security system; cultural and demographic situations and the elderly's

health condition. Reviewing the experiences from Western countries and practical situations in China, these authors conclude that public LTCI should be the main funding method for the elder care in China. Due to the different economic and fiscal conditions to be found in different regions in China, however, the funding models also require diversification. So they propose local government should issue pilot arrangements for public LTCI and then set a unified national policy for the future.

Above all, all these studies just examine the specific funding models of LTC in the Western countries, but they do not actually review the overall situation of elder care funding systems in the Western countries, nor do they completely summarise the funding models of the elder care in China.

3.1.3.2 Discussion of Funding Structure from Different Investment Agencies

Quite a lot of studies focus on the funding for the elderly through the participation from different investment agencies. For instance, He and Chen (2006) believe that government, company and non-profit organisations should take the responsibility for funding LTC.

Zhu, Huang and Guo (2011), Chen and Fan (2014) and Zhang (2015) discuss LTC funding mechanisms from the perspectives of three financing entities – individuals, employers and the government. There are four LTC funding mechanisms – personal retirement savings/pension; commercial LTCI; compulsory long-term insurance; taxation. Their functions are duplicated between the three financing entities. Personal retirement savings is the most popular funding mechanism, because it has high transparency and low administrative cost, but all risks have to be taken by individuals and outcomes might be affected according to their actual economic level. Also, individuals can participate in commercial LTCI, but it only applies to those who have the capacity to pay or work in a company which offers this welfare benefit to their employees.

Han and Liang (2012), Zheng (2012), Xiao and Wang (2013) argue that the private companies are already under great pressure derived from social insurance contributions,

so they suggest that these companies temporarily do not need to contribute to a LTCI scheme, and the contribution to LTC can be proportionately deducted from pension and medical care insurance.

Xiao and Wang (2013) argue that the government plays an important role in the provision and funding for the elderly, especially to the elderly on low incomes. If the elderly people have enough pension, they can purchase commercial LTCI on a voluntary basis.

3.1.3.3 Financial Sources of the Funding for Elder Care/LTC

Public LTCI

Zhu *et al.* (2011), Dai (2011), and Chen and Fan (2014) propose the establishment of a separate compulsory LTCI scheme in China. Li and Hou (2009) point out the necessity to establish different LTCI schemes for elder care for different groups of people. Urban employees who have enrolled in the medical care insurance should contribute to a compulsory LTCI scheme; urban residents can enrol in a LTCI scheme voluntarily; rural residents can choose any one of the three models, one is the same as for urban employees (only for rural-urban migrants), the second is a kind of accumulative LTCI scheme, and the third is a government subsidy model (for very poor rural residents).

Commercial LTCI and Reverse Mortgage Funding

Some scholars support commercial LTCI or other relevant commercial insurance schemes as the main funding models for LTC. For instance, Li and Zhang (2004), Dai (2007), Zhou (2008), Dai (2011), Shi (2012), and Deng and Deng (2016), compare different LTCI schemes in several Western countries: Germany, Netherlands, Japan and the United States, etc., including their legislation and regulation, principles of insurance, financing, management and benefit payments. Other scholars, such as Li and Hou (2009), Dong (2011), Geng and Liu (2014), Wang (2015), and Tang and Feng (2015), analyse the necessity and feasibility to establish LTCI in China.

As to reverse mortgages, Guo (2013) argues that the reverse mortgage goes against the traditional Chinese idea of rearing children to help look after their parents in old age who then bequest the property to the children in return. At the same time, the appraisal of house values and the function of government are also of central concern. Chen (2014) believes that the current relevant insurance designs, whether LTCI or reverse mortgage, are only just starting and develop very slowly. All these studies actually understand LTCI as equivalent to the funding for elder care, however, LTCI is currently only one part of the elder care funding system.

3.1.3.4 Current Situations and Problems of China's Elder Care/LTC Funding System

According to the relevant research, the problematic issues of China's elder care/LTC funding can be summarised from the following five perspectives:

From a perspective of macro-economic environment, as Zhang (2013) puts it, the total population of elderly people in China is approximately equal to the total population of elderly people in all OECD countries, while China's GDP per capita is only 22% of OECD countries. Due to the progress in technologies of medical treatment and longer life expectancy, the period of LTC will rise and the burden coefficient of providing for the elderly will increase, and thus, it is difficult to guarantee the sustainability of LTC financial resources.

Li (2013) claims that elder care funding is largely reliant on government's subsidies and tax preferences, and this increases the government's fiscal burden in absolute terms. Due to the different economic conditions among different regions, well-developed regions have more resources to fund the construction and operation of elder care, while less developed regions do not have adequate funding sources. At the same time, economic investment is usually indeterminate and frequently changes, tax preference policy is not implemented very well and these factors seriously constrain the development of elder care at the local level.

Additionally, Zhang (2015) points out that from the perspective of family and individual, elder care is mainly viewed as a family responsibility, so government and society will

fiscally intervene into social elder care only if family care does not work well. This is the reason why the Chinese Government mainly supports the socially dependent urban ‘Three-Nos’ and rural ‘Five-Guarantees’ elderly people, while the majority of elderly people have to rely on their own pension or medical care insurance, which largely depends on their income level and years in work.

Li (2012) states that private nursing institutions do not perform very well in the delivery of LTC. The financial resources for them come from government subsidies (50%), membership fees and service fees (35%), donations (10%), and others (5%). Although these private institutions mainly rely on government subsidies, in practical terms, they might not easily get these subsidies, and so this significantly constrains their development and reduces the efficiency of elder care/LTC provision. Due to less funding and business revenue, these nursing institutions cannot provide their administrative and service staffs with adequate income and benefits, which leads to high labour turnover

Some researchers concentrate on analysing the funding models of the specific elder care services in China. Zhang (2013) points out the shortcomings of existing funding models of home-based elder care in China. First, the provision of social security for the elderly mainly creates inadequate pension and medical care insurance; second, the development of private insurance for the elderly is immature; third, elder care funding relies heavily on government subsidies as private capital is inadequate.

3.1.3.5 The Construction of the Elder Care/LTC Funding System in China

In order to solve the problems mentioned above, Chinese scholars have proposed recommendations on LTC. First and foremost, China currently does not have enough specialist LTC institutions, so a number of scholars suggest legislation to give the LTC system funds to provide care homes and service staff as soon as possible (Zhuang, 2009; Zhang, 2013; Wang (2005, as cited in Cao and Wang, 2013).

Some scholars propose a specific feasible financing model for China after reviewing different models in Western countries. Yin, Tian and Li (2006) propose a social

insurance system that should cover LTC, and LTCI should be viewed as a special insurance amalgamated with pension or medical care insurance. Li (2016) states that establishing an elder care funding system needs first to consider the disabled elderly's practical care needs, and suggests a combination of elder care subsidy and medical care insurance to ensure the diversification of financial resources.

Zhang (2015) points out that there is a distinct difference in LTC between urban and rural areas in China, so it is difficult to establish a unified LTC system. Long-term funding mechanisms should take different groups into consideration: establishing LTCI coverage to those who are covered by basic pension and healthcare insurance; offering LTC subsidies to those who do not have a formal job, such as rural-urban migrants, the unemployed, temporary workers, etc.

Shi (2012) claims that in the long run, China needs to establish a LTC funding system which is based on public LTCI and supplemented by social assistance and commercial LTCI. However, China's current economic condition is not well developed and the relevant social security systems are not mature, so progress involves several stages. First, the launch of a pilot LTCI scheme in some well-developed cities. Later, the establishment of a unified national-based LTCI system, supplemented with social assistance and commercial LTCI.

Yang *et al.* (2014) propose the idea of the '*Monetisation of Adult Child Supporting Responsibilities*' to solve the fund shortage problem for medium and low-income families. This idea involves the government collecting a service fee from those working children who cannot give informal care to their parents, and then establishing a special fund by charging the children with a proportion of the care fee, which aims to pay for elderly people's care service fee in the future. Based on an empirical study inviting future participants to compare three feasible funding management models – mutual cooperation model, personal account model and tax pooling model – this research finds that more people (the proportion of the interviewees: 43.68% of the elderly and 40.06% of the elderly's children) support personal accounts and the income level does not significantly affect the interviewees' preferences.

Yang, He, Fang and Mossialos (2016) focus on the financing of institutional LTC by examining three emerging models in pertinent urban settings: Social Health Insurance in Shanghai, LTC Nursing Insurance in Qingdao and a means-tested model in Nanjing. Results show that the Qingdao model is by far the most desirable policy option. The experiences are summarised and used to draw up proposals for LTC financing for Chinese policy makers: first, a national-based financing mechanism needs to be established for prepayment and pooling specific to LTC costs (although it surely takes a long time to achieve this goal); second, assessment mechanisms to determine eligibility rules and the extent of cost-sharing needs to be set; third, care providers need to move away from fee-for-service payment arrangements, because these might lead to price hikes and overuse of services.

3.1.4 Summary

To sum up, we can learn from the established literature that the majority of studies concerning elder care/LTC funding in China mainly focus on the introduction of LTC funding models found in Western countries, especially on LTCI systems. Currently, there is an abundance of research materials on the elder care/LTC systems found in China and Western countries: their characteristics, operating models, current problems and measurements. However, there is far less research examining and explaining the elder care funding system in China from both a theoretical and empirical perspective. Also, currently there is no study on efficiency of elder care/LTC funding based on a comprehensive quantitative analysis.

3.2 Research Methodology

One conclusion from previous studies in the field of elder care/LTC funding is that the Chinese government has long been aware of the imbalance of the increasing care demand from the elderly and the difficulties in public provision and funding for elder care. More market-oriented approaches to provide and fund care of the elderly in China are urgently required at both policy-making and implementation levels. This research

aims to identify current funding models of elder care services on both the supply and the demand side, and to analyse the problems within these models. This section will outline and discuss the methodological framework and approaches employed.

The section is in three parts. In the first part, the research strategy and case selection are described and justified. This is followed by an explanation of each of the qualitative research methods employed – documentary analysis supplemented by semi-structured interviews – and a description of the analytical strategies used. Subsequently, the quantitative methods and their analytical framework are examined, and finally there is a brief presentation of ethical considerations pertinent to this research.

3.2.1 Research Strategy: Qualitative Case Studies

Methodologies can employ a variety of research strategies, and the case study design is suitable for most ontological and epistemological approaches (Creswell, 2014). The term ‘case study’ covers the detailed study of a case or cases, which can be an analysis of particular persons, events, decisions, periods, projects, policies, institutions and other systems using one or more research methods (Thomas, 2011). The case study method is grounded in in-depth investigation and can be descriptive or explanatory, quantitative or qualitative, based on multiple lines of enquiry or sources of evidence (Yin, 2014). Bryman and Bell (2007) state that interviews, questionnaires, documents, audio-visual materials and reports can be applied. With a wide range of information, case studies can illuminate and explain the occurrence of an object, and the findings of research in case studies can be especially persuasive.

However, case study research has often been criticised for using informal designs with too many variables and too few cases, resulting in unsystematic research (Gerring, 2007). Yin (2014) also argues that case studies provide very little basis for generalisation because they focus on small numbers of subjects that are not necessarily representative. Therefore, the case selection rationale and analytical strategy employed in this thesis are elaborated below.

3.2.1.1 Case Selection Rationale

The selection of Wuhan in Hubei Province as the fieldwork site is justified because the characteristics of the ageing problem in Wuhan are generally typical of those found in China as a whole:

- The ageing rate (the proportion of elderly over 60) in Wuhan was 20.72% in 2016, higher than the national average level (16.7%) (Hubei Provincial Department of Civil Affairs, 2017b). Wuhan is an old industrial city with a large population of retired elderly, so the aged population receives priority as a pressing problem from local government.
- In the reform of elder care, Wuhan (in Hubei Province) is often selected as a pilot city. Examples include the House-for-Pension Scheme (Wuhan is the only second-tier city), investment funds for developing an elder care industry (Hubei Province is one of the eight pilot provinces), public and private partnership (PPP) projects on care of the elderly (Hubei Province is one of the fifteen pilot provinces), and so on.
- Wuhan has a strong record in trying to explore different forms of PPP projects to extend elder care, from the beginning of ‘Public Construction and Private Operation’ and ‘Private Construction and Public Subsidy’¹⁷ to more complex shareholding co-operative models. This makes it an ideal venue for studying various funding models.

The cases in this research are selected from the nursing institutions belonging to the Wuhan Elder care Industry Association. The Association was founded in December 2015. It was launched by Wuhan Municipal Civil Affairs Bureau and organised by public and private nursing institutions located in and around Wuhan, together with other relevant agencies, such as insurance companies and tourist agencies.¹⁸ The latter agencies are involved in every aspect of the elder care industry, including social care

¹⁷ These funding models will be examined in Section 5.3.

¹⁸ These are agencies that offer travel and entertainment to elderly people.

services, medical care and rehabilitation, products for the elderly, training for service staff, tourism, etc. Association members usually organise some activities themselves (e.g., annual conferences) and invite government officials and academic scholars to join in others, such as seminars to communicate experiences and lessons related to the elder care industry. Academic scholars and government officials also engage in fieldwork to investigate these agencies and produce academic work.

In two of these seminars the author had access to high ranking government officials and some professors in a university. One seminar was held in the Department of Public Administration in Zhongnan University of Economy and Law in May 2015, where a group of professors and representatives from Hubei Provincial Department of Civil Affairs discussed their latest fieldwork concerning home-based community elder care services in Hubei Province. This research project was funded by Hubei Province Department of Civil Affairs, and attendance made it possible for the author to interview the director of the Social Welfare and Charity section in this department. The other seminar was held in Hubei Province Academy of Social Sciences in December 2016. A representative from the Wuhan Municipal Bureau of Civil Affairs and some members from the Wuhan Elder care Industry Association attended the seminar and discussed the marketisation of elder care provision in Wuhan. Thus, the author was able to confirm case selection and to identify participants for interview.

In order to achieve the objectives of the research, case studies were selected to cover the different types of funding models in PPP elder care projects in Wuhan. Four cases were chosen: Wuchang District Sunshine Welfare House, Wuhan East Lake District Fozuling Welfare House, Hanchuan Social Welfare House/Hanchuan Elderly Apartment, and Wuhan Social Welfare House/Xiehe Elderly Apartment. Table 3.1 gives details of each case selected:

Table 3.1 General Information on Each Case

Name of the nursing institution	Foundation date	Location	Types of PPP project	Nature of private sectors
Wuchang District Sunshine Welfare House	2007	Wuchang District, Wuhan	Private construction and public subsidy	Private non-profit organisation
Wuhan East Lake New Technology Development Zone Fozuling Welfare House	2013	Hongshan District, Wuhan	Public construction and private operation (commission)	Private non-profit organisation
Hanchuan Social Welfare House / Hanchuan Elderly Apartment	2016	Hanchuan (close to Caidian District, Wuhan)	Public construction and private operation (contracting out)	Private company
Wuhan Social Welfare House / Xiehe Elderly Apartment	2017	Jiang'an District, Wuhan	R-O-T (rebuild-operate-transfer) and franchising	Private company

Because of practical problems, the case study research was conducted at different times: from April to June 2015 and October to December 2016, the fieldwork consisted of semi-structured interviews in four public nursing institutions and two private nursing institutions in and around Wuhan. During this period, however, Hanchuan Social Welfare House and Wuhan Social Welfare House were still public nursing institutions run by the government. The new initiatives in cooperating with private companies in elder care provision made necessary further interviews to investigate funding issues, especially the mixed funding models employed in these cases. So, during August 2017, several telephone interviews were conducted to procure more information on these PPPs.

3.2.1.2 Analytical Strategy

Case study methodology in this thesis entails multiple-case design with a single unit of analysis. The main analytical strategy chosen for the case studies is ‘description’ with

the main focus on the structure and performance of funding arrangements in PPP elder care projects in Wuhan. The findings from each case study and the specific analytical techniques used to produce the comparative cross-case analysis are presented descriptively in Chapter 7. The analytical steps taken are the following:

- (1) Brief introduction of basic background information on each nursing institution, including its foundation date, building area, accommodation rate, etc.
- (2) Identification of the specific funding model for elder care provision and examination of how ‘public private partnership’ operates in each case.
- (3) Examination of the operating situation under public private partnership and analysis of any problems within each case.
- (4) Evaluation of experiences and lessons of each case and summary of the overall performance of different approaches and models

To sum up, the qualitative multiple-case study was chosen as an appropriate research strategy for this thesis. It can incorporate different research methods to suit research questions. Cases were selected according to their type of PPP project and funding model. The analytical strategy in the case studies is descriptive and explanation-building in its assessment of the comparative performance of the case studies.

3.2.2 Qualitative Research Methods: Data and Source Materials

The focus of this section is on the specific research methods of data collection applied in this thesis. This thesis uses document analysis and semi-structured interviews as its qualitative methods.

3.2.2.1 Document Analysis

Document analysis is a type of qualitative research in which the data source and its content are reviewed and assessed rigorously and systematically by the researchers (Corbetta, 2003). This approach is usually used in social science to facilitate impartial and consistent analysis of written policy (Altheide, 1996). The application of document analysis methodology has three aims in this thesis:

- Systematic exposure of the strategy behind elder care provision, funding policy (at both national and local levels) and China's elder care funding structure.
- Comprehensive examination of policies relevant to PPP for elder care, and mapping the actors involved in PPP elder care projects. This helped in the selection of interview participants for the case study.
- Establishing the basic information for specific empirical cases of PPP in elder care projects. The purpose is to identify the questions that might be raised in the interview schedule.

The above information was to be contrasted with data from the case studies. When selecting the documents for analysis, it was necessary to consider in advance: the department/organisation/person involved, the types of documents to be reviewed, and the time of publication and release of these documents (Altheide, 1996). Documents usually come from a wide range of sources, including personal documents in both written and visual form; official documents from the state and private organisations; and mass media and virtual sources (Bryman, 2016). For this thesis, documents were collected from the following sources:

- (1) Governmental and official written documents, both at national and local levels, including policy and evaluation documents from government bodies and other actors involved in policy making in such areas as elderly welfare, social assistance, social security, and tax policy;
- (2) Statistical databases from the National Bureau of Statistics (including those covering demographic and economic development); and
- (3) A wide range of other sources, including academic papers, websites and discussion forums.

The documents analysed, grouped by category, are presented in Tables 3.2 and 3.3.

Table 3.2 Documents as Source of Data in this Thesis (National Policy)

Sources of data	Functions and contents	Examples
Chinese State Council	Chinese State Council is the central government of China. Its duty is to design important national plans and strategies.	1. <i>Construction Plan of Social Elder care Service System (2011-2015)</i> (issued December 2015). 2. <i>Implementation Suggestions on Accelerating Promotion of Elder care Service Industry</i> (issued September 2013).
Ministry of Civil Affairs	Its duty is to design the plans related to social welfare, elder care, social assistance, etc.	1. <i>Suggestions on Promoting Home-based Elder care Services</i> (issued February 2008). 2. <i>Development Policy Suggestions on Encouraging Social Capital to Participate in the Elder care Service Industry</i> (issued February 2015).
Ministry of Finance	Its duty is to design taxation plans, fiscal collection and payment, etc.	1. <i>Notification of government purchasing elder care services</i> (issued September 2014).
Ministry of Human Resources and Social Security	Its duty is to implement policy related to pensions, LTCI, medical care insurance, etc.	1. <i>Guided Suggestion on Launching Pilot of Long-term Care Insurance</i> (issued July 2016).
National Ageing Work Committee Office	Its duty is to propose policy, plan and implement measures for China's ageing workforce, including elderly welfare, etc.	1. <i>Suggestions on Further Promoting Preferential Policies for Elderly</i> (issued December 2013).
National Development and Reform Commission	Its duty is to study important issues related to economic reform and social development, and to produce macro-economic policy, etc.	1. <i>Notification of Accelerating Promotion of Construction of Healthcare and Elder care Service Project</i> (issued September 2014).

Table 3.3 Documents as Source of Data in this Thesis (Local Policy, Statistics and Others)

Documents	Sources of data	Functions and contents	Examples
Local policy	Hubei Provincial Department of Civil Affairs	Its duty is to implement national policy from Ministry of Civil Affairs and to design policies relevant to Hubei Province.	1. <i>Thirteenth ‘Five-Year’ Plan of Social Elder care Service System Construction in Hubei Province</i> (issued 2017).
	Wuhan Municipal Bureau of Civil Affairs	Its duty is to implement national and provincial policy and design plans for social welfare, elder care, social assistance, etc. in Hubei Province.	1. <i>Thirteenth ‘Five-Year’ Plan of the Development of Elder care in Wuhan</i> (issued 2017).
	Policy documents published in such cities as Beijing, Shanghai, Qingdao, and Jingmen.		1. <i>Notification on Establishing Subsidy Regulation for Elderly People with Financial Difficulties and Disabled Elderly People in Beijing</i> (issued 2017)
Statistics	National Bureau of Statistics	Its duty is to collect and publish statistics related to the economy, demography, labour, etc.	1. <i>China’s Statistical Annual Report</i> . 2. <i>Statistical Bulletin of National Economy and Social Development</i> .
Others ¹⁹	Academic research, websites, discussion forums and others		1. China National Knowledge Infrastructure (CNKI): articles associated with care for the elderly and LTC. 2. Government portal websites (at both national and local level). 3. Discussion forums/seminars of government work.

Document analysis in this thesis focuses on the documents’ contents, rather than the process and context of each production (Coffey, 2014). Document analysis in this thesis is used to investigate policy approaches and strategies for elder care funding, as well as to map actors at the local policy level. However, the documents analysed have their limitations. First, documents are used to understand the institutional context and specific official purpose, and may sometimes reveal a purpose that is not relevant to the

¹⁹ Such sources are essentially of a secondary nature, being produced by people who are not directly involved with policy making or its execution.

researcher's interests (Corbetta, 2003). Documents in this thesis are mainly used as background information to identify the interview questions and then to complement the interview method.

Second, the direct translation of some terms might be misunderstood by English readers. For instance, in the Chinese government's official documents, certain key terms appear frequently, such as 'socialisation' ('*shehuihua*' in Chinese), 'social forces' ('*shehui lilian*' in Chinese), 'social capital' ('*shehui ziben*' in Chinese) and 'social elderly people' ('*shehui laoren*' in Chinese). To English readers, the term 'socialisation' refers to the extension of state ownership and control while to Chinese readers it implies just the opposite, that what were originally public-funded products/services can be provided by the society/market. To some extent, thus, the connotation of 'socialisation' is similar with the terms 'marketisation' and 'privatisation'. Similarly, 'social forces' refers to the social (private) agencies that are involved in the provision of care for the elderly; and 'social capital' stands in contrast to government capital and means investment by private or third sectors ('private capital'). 'Social elderly people' means the elderly people who are not paid for by the government, and so this thesis uses the term 'private elderly people' instead. In addition, there are other specific terms used only in China, such as the '4-2-1 family', 'loss of the only child family', and 'Three-Nos' elderly people. All these terms are explained in the footnotes.

3.2.2.2 Semi-structured Interviews

Qualitative interviews were suitable for the data collection in this thesis. The interviews conducted for this research were semi-structured, containing elements of both the structured and the unstructured interview (Bryman, 2016):

- Because of differences in participants' background and position, the interview schedule had a pre-set number of questions while still ensuring that initial interview questions were sufficiently open-ended to allow participants to comment from their own perspectives and in their own terms.
- Clarification and exploration of some themes was sometimes necessary to avoid

misinterpretation by the participants of the questions.

- Unstructured interviews tend to be more flexible, and this allows participants to focus on what they think is important and to elaborate on their ideas. New questions can be asked to follow up on participants' replies or the order of questions can be altered.

Thus, this research used one-to-one, in-depth, semi-structured interviews to allow the participants to provide detailed insights into the research topic. The system for selecting participants and the interview procedures used are presented below.

Selection of the Participants

Participants in this research were selected mainly from the following three groups:

- Government: the interviews were with senior staff, such as chief executives or heads of governmental departments, the aim being to have participants involved in policy development and policy implementation within the field of elder care funding.
- Nursing institutions: interviews were conducted with presidents, managers and administrative staff working in these organisations. Beyond general information on the organisation, information was sought specifically on financial resources and the PPP funding model adopted.
- Insurance companies: interviews were conducted with the managers of insurance companies. The areas of interests included private and policy-based LTCI and the 'House-for-Pension' Scheme.

Access to organisations was granted through networks of academic contacts in which trusting and confidential relationships had already been built. Table 3.4 presents details of the participants:

Table 3.4 General Information on the Interviewees

Identifier	Organisation types	Interviewees' position
Government	Hubei Provincial Department of Civil Affairs	Director of Social Welfare and Charity Office
	Wuhan Municipal Bureau of Civil Affairs	Director of Administrative Office
	Hanchuan Municipal Bureau of Civil Affairs	Vice-director of Administrative Office
	Jingmen Municipal Bureau of Human Resource and Social Security	Director of Medical Care Insurance Bureau
Nursing institutions	Wuchang District Sunshine Welfare House	President
	Wuhan East Lake District Fozuling Welfare House	President
	Hanchuan Social Welfare House/Hanchuan Elderly Apartment	President of Hanchuan Social Welfare House and the manager of Hanchuan Elderly Apartment
	Wuhan Social Welfare House/Xiehe Elderly Apartment	Administrative staff of Wuhan Social Welfare House and the manager of the PPP project company
	Wuhan Hezhong Healthcare and Retirement Community	Administrative staff
	Wuhan Qiaoya Elderly Apartment	Secretary of Manager's Office
Insurance companies	Hezhong Life Insurance Company Limited (Wuhan branch)	Manager
	Hezhong Life Insurance Company Limited (Beijing branch)	Manager

Interviews were conducted between April and June 2015, October and December 2016, and in August 2017: the majority of the interviews were conducted face-to-face and in the first two periods. However, there were major changes in elder care funding policy (at both national and local level) which led to the introduction of PPP systems in some nursing institutions in the year 2016~2017. So, supplementary telephone interviews were conducted in August 2017, including interviews with:

- The Director of the Medical Insurance Bureau from Jingmen Municipal Bureau of Human Resource and Social Security about public LTCL.
- Staff members from the Hanchuan Elderly Apartment and the Xiehe Elderly Apartment about their PPPs elder care projects.

- A manager from Hezhong Life Insurance Company Limited (Beijing Branch) about policy-based LTCI²⁰.

The speed with which earlier material became outdated indicates just how quickly elder care policies that involve collaboration between public and private funders are developing in China. The research was aimed at a moving target and hitting it was a challenge.

Interview Procedure

At the start of the interview, participants were informed of the research objectives, the timescale of the interview, the usage and storage of the data, anonymity procedures, etc. Interviews were arranged at a time and place which suited the participants. Questions were made understandable and unambiguous, and participants were made to feel that their answers would contribute to the research (Bryman, 2016). In the first and second periods (April~June and October~December 2015), in-depth interviews were conducted face-to-face and lasted between one and two hours. Later in August 2017, several additional telephone interviews were conducted, in order to obtain the latest information of public LTCI and PPP elder care projects.

An interview schedule was developed based on the thesis research questions. The schedule clearly stated the information that needed to be collected, but permitted flexibility enough to adapt to each case study and participant. The focus of the interviews is mainly the elder care funding structure, financial sources for a nursing institution, PPP elder care funding, its practical operation, etc. The topics included in the interview schedule can be grouped under three main headings (see Tables 3.5 and 3.6).

²⁰ More detail of policy-based LTCI will be introduced in section 6.4.3.

Table 3.5 Interview Schedule Topics (Government)

Organisations	Topics	Research areas
Government	Aged population	Characteristics
	Elder care provision	1. Overall situation of public and private nursing institutions in Hubei Province; 2. PPP elder care projects (with types) in Hubei Province.
	Elder care funding	1. Important policy documents, including the contents-related subsidy standard, public welfare lottery funds and fiscal transfer payment ; 2. Funding source for elder care (construction and operating stage).
	Public LTCI	1. Implementation situation; 2. Computational basis of contribution.
	Others	1. (Private) non-profit organisations which provide elder care services; 2. Social donation to elder care; 3. Problems in elder care provision and funding in Hubei Province; 4. Other issues concerning policy development and implementation.

Table 3.6 Interview Schedule Topics (Nursing Institutions and Insurance Companies)

Organisations	Topics	Research areas
Nursing institutions	Basic background of the organisation	Location, date founded, size, number of beds
	Basic information on the elderly living in the organisation	1. Number of ‘Three-nos’ and ‘Five-Guarantees’ elderly people, and number of private elderly people; 2. Degree of disability among the elderly (mild, medium and severe); 3. Personal financial resources of elderly (pension and children).
	Charge fee	The price standard of service fee, bed fee and living fee.
	Initial investment in the construction of organisation	Expenditures on assets depreciation fee, rent, equipment and facilities, etc.
	Financial sources	1. Construction stage: fiscal subsidy, social donation and land lease; 2. Operating stage: subsidy standard, preferential administrative fees.
	PPP elder care project	1. Types of PPP; 2. Specific contents of PPP contract; 3. How PPP project company works; 4. Roles of public and private sectors.
	Human resource	1. Number of doctors, nurses and other administrative and service staff; 2. Salaries.
Insurance companies	Private insurances for the elderly	Implementation of policy-based LTCI (Beijing) and ‘House-for-Pension’ Scheme, and the possible problems.

The above topics suggest a number of interview questions which explore elder care funding models and PPP elder care funding at the administrative level, in policy fields, and in nursing institutions. There are 15 audio records of the interviews, and the transcribed interviews capture the necessary information to answer the research questions.

3.2.3 Quantitative Research Methods

In this thesis, the case studies are used as an analytical basis for identifying different typologies of PPP elder care projects and typical funding models for institutional care in

China. However, as this thesis will demonstrate, public expenditure and public LTCI play a very important role in current Chinese funding for elder care. This research uses quantitative and statistical analysis to study the important factors which affect the scale of these two funding models. It then establishes a financial model and verifies its feasibility.

3.2.3.1 Empirical Analysis of the Efficiency of Public Expenditure on Elder care Services

We first construct input and output indicators of the efficiency of public expenditure on elder care services in the 31 regions of China for the year of 2015. By using data envelopment analysis (DEA) and DEAP 2.1 software (Coelli, 1996), we calculate the relative efficiency of public expenditure (the overall evaluation of multiple inputs and outputs) on elder care services in these 31 regions.²¹ Later, we evaluate the DEA calculation results – the comprehensive efficiency, technical efficiency and scale efficiency of the decision-making units and choose two regions (Hunan and Yunan) to suggest how to improve the efficiency of the decision-making units.

3.2.3.2 Empirical Analysis on the Effects of Public Expenditure on Care Services for the Elderly

This analysis is based on the data related to social security and elder care services from the perspective of the demand and supply side, and a construction of elder care service index system for China.²² The components are formed through a process of refining and quantifying, and are used to calculate an elder care service index in both urban and rural areas of China from 2011 to 2015. We present the results in four scatter diagrams by using Stata statistical software and comparing the investment direction and effectiveness of elder care funding between urban and rural areas. In addition, the statistical characteristics of the variables are presented, and results based on multiple-linear regression analysis are verified.

²¹ The application of Data Envelopment Analysis (DEA) is introduced in Appendix 1.

²² The introduction of key indices of elder care services in this research will be presented in Table 8.14 and section 8.3.2.

3.2.3.3 Statistical Analysis on Forecasting the Supply and Demand Costs of Long Term Care (LTC)

The statistical analysis is divided into two frameworks – demand and supply costs of LTC. The calculation of demand cost mainly follows two steps. The first step is to calculate the population of disabled elderly people in China. Based on the available data of the population over 60 years in different regions of China in 2015, we use the proportion standard identified by China’s Ageing Scientific Research Centre (Jing and Li, 2014), which finds that the proportions of severely, moderately and mildly disabled elderly people are 1.08%, 0.31% and 4.83% of all people over 60 years. We then calculate the population of disabled elderly people in 2016. We use the population estimated by the United Nations (2017) and the disability rates provided by National Statistical Bureau (2004) and Li, Tang and Wang (2016) to estimate the population of different age groups of disabled elderly people between 2020 and 2050 (see Table 9.5). In the second step, we calculate and estimate the demand cost for LTC. Because there is no unified nationwide standard of LTC service charges, we assume that costs of LTC for severely, moderately and mildly disabled elderly people are 40%, 30% and 20%²³ of average social salary²⁴. The first two standards refer to the cost of institutional care, and the third standard is for community and home-based elder care. Then, we estimate the costs of LTC from 2020 to 2050. We assume the annual growth rate in the average social salary will be 3%. Because of the huge estimated increase in the population of elderly people between 2020 and 2050, we have reduced the proportion standards of the costs for LTC to severely, moderately and mildly disabled elderly people to 30%, 25% and 20%²⁵ of average social salary.

²³ According to the publication ‘*Notification of Adjusting the Standard of Nursing Care Expense for Work-related Disabled Employees*’ (Ministry of Labour, Ministry of Finance and All-China Federation of Trade Unions, 1992), the costs of nursing care for severely, moderately and mildly disabled employees are 50%, 40% and 20% of the average social salary. Then, I assume that the proportion criteria of LTC expense are lower than the previous ones, so I choose ‘40%, 30% and 20%’ as the proportion criteria to calculate the demand for LTC in 2016 (see Table 9.1).

²⁴ Average social salary refers to the average salary of all employees within one region in one period. The growth rate of average social salary is 3% between 2020 and 2050, which is defined according to the previous average growth rate.

²⁵ When I applied ‘40%, 30% and 20%’ to estimate the demand for LTC from 2020 to 2050, I found that the amount of demand is more than the supply, which makes it unrealistic and unsustainable, so I reduced

The calculation of supply costs also follows two steps. We first calculate total supply costs of LTC by using the cross-section data of population of people enrolled in the public medical insurance scheme²⁶ and disposable income per capita (using multiple-linear regression to estimate future data from previous data) to calculate the total supply costs of LTC. After reviewing the public LTCI schemes in several pilot cities, we chose Jingmen's public LTCI as the financial model and analysed its feasibility at the national level.²⁷ Because of the unduly low financial rate (0.4% of local disposable income) in Jingmen, we set three standards of 0.7%, 1.0% and 1.4% as the financial rate to define low, median and high estimates of supply cost. Second, we estimated the supply costs of LTC between 2020 and 2050, and calculated the possible financial rate that can meet the future demand for LTC funds.

3.2.4 Ethical Considerations

Ethical issues need to be considered in order to protect the rights, dignity, privacy and safety of the research participants, to safeguard the researchers conducting the study, to ensure the high quality and viability of the research, and to maintain the reputation of the university (Social Research Association, 2003). This thesis is guided by the ethical scrutiny process of Warwick University. This ensures that all research involving collection of individual-level information from human participants and their data addresses relevant ethical considerations and is subject to appropriate ethical review. As the research design did not require any detailed information about the clientele of the institutions under review, the need for extensive ethical protection was limited.

Even so, the author has recognised the entitlement of participants to ethical protection. Before interviews were carried out, participants were fully informed of the research objectives and design, data management and its usage. Permission was also collected for recording the interviews. During the course of the interviews, participants were also

the values to '30%, 25% and 20%' to calculate the estimation of future demand for LTC (see Tables 9.6, 9.7 and 9.8).

²⁶ We assume that urban and rural residents are all covered by a public medical insurance scheme, and that people enrolled in a public medical insurance scheme will also be enrolled in a public LTCI scheme.

²⁷ The details of Jingmen's public LTCI scheme will be introduced in section 6.4.2.

made aware that they had the option to cease or pause the audio recording or even end the interview and retrieve all data at any point.

Because some of the information participants provided might be considered sensitive, confidential and anonymous treatment of participants' data was the norm at both professional and personal levels. The information provided by participants cannot reveal their identity and no personal information will be shared without the participants' permission. Participants were told how and why their personal data were being stored and assured that all data are password-protected.

Chapter 4 Historical Development and Rationales Leading to the Construction of the Elder Care System in China

This chapter is structured into three sections. First, China's current ageing phenomenon is presented by examining the four main features of an aged population. Second, this examination is followed by a review of the development of China's elder care service in three historical contexts: 1949~1982, 1982~2000 and 2000~the present. Third, the rationales leading to the construction of the social elder care service system in China are discussed from three perspectives – changes of policy orientation, economic transition and market prosperity, and social development and urbanisation.

4.1 An Ageing Society in China: Longevity Risk and its Features

A decrease in death rates and fertility rates generally exists across the world. From a global perspective, an aged population is an inevitable result of demographic transition. China is one of the most rapidly ageing countries of the twenty-first century, and its elderly population is comprised of over 200 million people. Compared with other developed countries, China only took 18 years to become an ageing society (from 1981 to 1999), while the United Kingdom, United States, Germany and Japan took about 47, 71, 40 and 24 years (World Health Organisation, as cited in Fang, 2015). Aside from additional public pension pressure, the issues associated with an ageing society have emerged as another great challenge for China in the twenty-first century: the family planning policy, rapidly increasing longevity, rural to urban migration, the weakened role of the family care model and the limitations of formal care provision in the past 30 years, all interact to exacerbate the problem.

4.1.1 An Increasing Aged Population

According to the definition provided in the *'Law of the People's Republic of China Regarding the Protection of the Rights and Interests of the Elderly'* (1996), an aged population is comprised of citizens of 60 years and above (Lin, 2015). In China, since the end of twentieth century, ageing trends and their internal structure (i.e. the way the aged population is distributed) are astonishing. The Sixth Nationwide Demographic Census (National Statistical Bureau, 2011) shows that the number of people over 60 years in China reached 178 million by the end of 2010; that is, 13.26% of the total population, which is an indicator that China has already become an ageing society. This ageing trend has become far more serious over the past few years, and at the end of 2016 the aged population had increased to 230 million, a percentage of 16.7% (National Statistical Bureau, 2017a). Chart 4.1 illustrates the growth trend of this aged population. It can be seen that growth gradually accelerates year after year. Estimates by Di *et al.* (2016) of the trend of China's aged population predict that the growth trend will not slow down, due to advanced medical technology and increased life expectancy, as shown in Chart 4.2. It is estimated that the aged population will reach 310 million by the end of 2026, approximately accounting for 25% of total population, and the aged population will increase to 410 million by the end of 2036 and 470 million by the end of 2040 (*ibid*).

With the ever-increasing aged population, China's ageing society is accompanied by four typical characteristics:

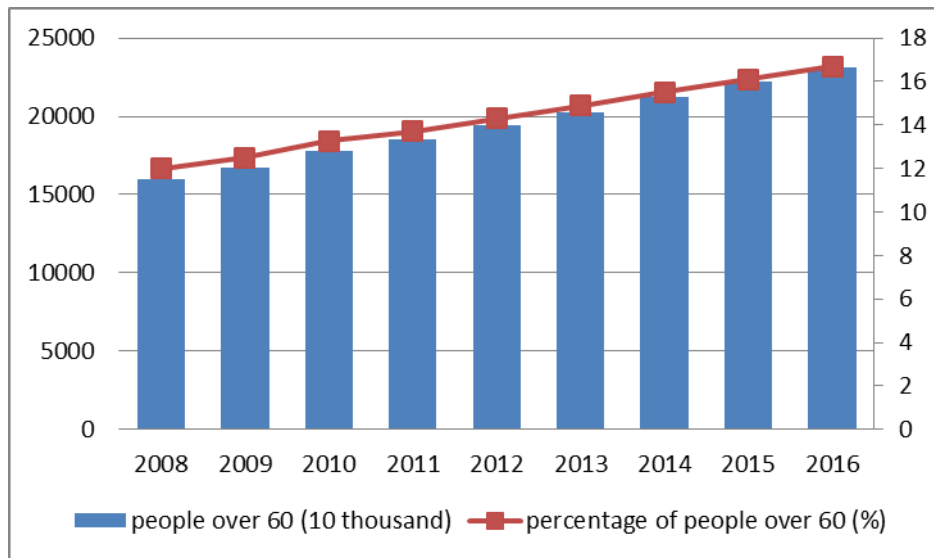


Chart 4.1 Numbers and Proportions of China's Aged Population (over 60) from 2008 to 2016

Data Source: Statistical Bulletin of Social Services Development (Ministry of Civil Affairs, 2016d).

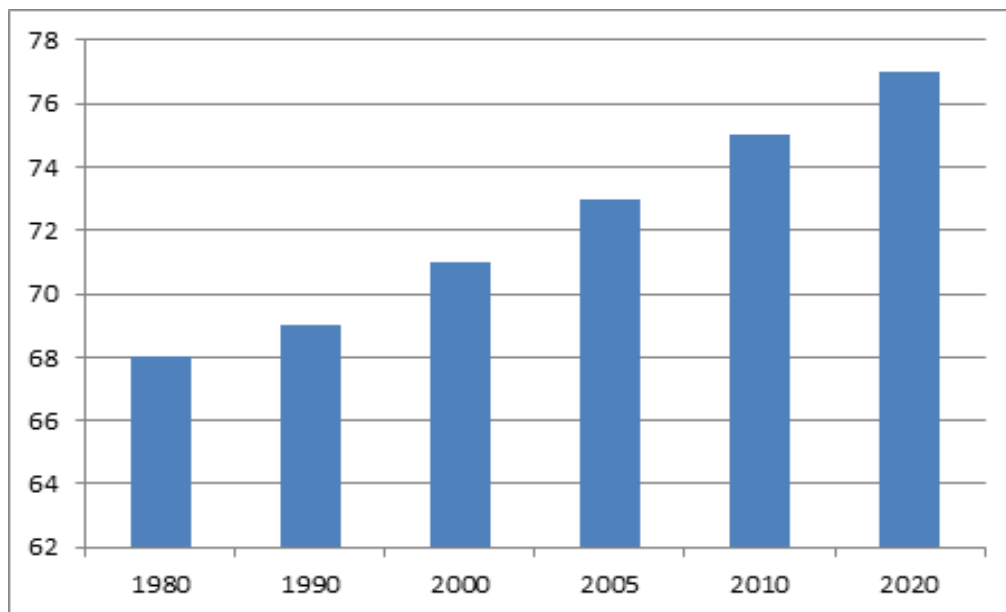


Chart 4.2 Average Life Expectancy in China (1980, 1990, 2000, 2005, 2010 and 2020)

Data Source: Strategic Research Report on Health China 2020 (Ministry of Health, 2013).

First, when observing China's overall aged population trend, I am not solely concerned with the expansion of the overall scale (size) of the aged population in China, but also with the rapid ageing phenomenon acting on its internal structure due to increased life expectancy. That is to say, the proportion of China's population which is over 60 is

growing so fast that the very mature population (of people over 80 years) keeps rising. This age group reached 23 million in 2013, and may increase by 1 million annually until 2025. By 2050, it is estimated that the proportion of elderly people over 80 years will have continued to grow from 11.5% to 23.2%, which means one out of four people of the aged population will be over 80 by the middle of the twenty-first century (Di *et al.*, 2016).

Second, the number of mature people with incapacities and chronic illness is on the increase. According to the '*Sixth Nationwide demographic Census*' (National Statistical Bureau, 2011), mature people with incapacities account for 2.95% of the total number of the aged population (over 60 years), and 57.55% of them were aged between 72 to 86 years in 2010. From a gender perspective, the proportion of people with incapacities who are women is higher than men – 58.36% and 41.64% respectively (Lin, 2015).

Third, the first generation to be brought up in 'one child' families was born in the early 1980s. This generation is now in their thirties and leaving home to start their own families. Most of their parents are in their fifties which is near retirement age for China²⁸. The strong influence of the fertility control policy has had implications for the aged population, if we reflect that fewer children are being born, related to an increase of 'empty-nest' families emerging in the last three decades. The skew towards a mature population is exacerbated by the rising number of 'loss of only child' families – there is even a special rite, called '*Shidu jiating*' in Chinese, for the loss of an only child. There were at least 1 million families, in 2012, that had lost their only child, and the figure rises by approximately 76,000 each year (Wu and Tang, 2013).

Finally, fluctuations are to be expected in the total dependency ratio. Powell and Cook (2010) predict that China will reach a higher 'dependent burden' earlier in the twenty-first century than was previously forecast. It is estimated that the dependency

²⁸ The retirement age in China currently is 60 for men and 55 for female civil servants and 50 for female workers (Chinese State Council, 1978). Due to public pension payment pressure, academics and politicians in China propose postponing the retirement age. For instance, in 2013, in the third plenary meeting of 18th CPC Central Committee (Central Committee of the CPC, 2013), it was suggested that it was necessary to move forward in '... designing a gradual postponing retirement age policy'. Yin (2014) predicts that the Ministry of Human Resource and Social Security will post an announcement on postponing the retirement age in China in 2020.

rate for the elderly in China will be 30% in 2023, and increase to 60% in 2047. This means that less and less labour force provided by younger generations would be available to support the elderly in the middle of twenty-first century. Thus, the burden of elder care that will fall on China's economically active population and economy are predicted to become the main social dependency burden in the future. That is, the working population and the country's economy will face increasing pressures in order to support and provide the social services needed by older persons. From the perspective of the dependency ratios of children and elderly people, they are roughly the same before 2022; but the gap between these ratios is widening, in fact, the elderly dependency ratio might be 38% higher than the children's dependency ratio by the 2050s (Di *et al.*, 2016).

Therefore, increasing attention, stimulated by the impact of fast demographic changes on the ageing structure and the size of the aged population, incorporating the four characteristics raised above, is of vital importance to the problem of provision and funding policies concerning elder care.

4.1.2 China's Transformation in Family Structure

Before the 1980s, Chinese couples could have two or more children, so that they could be looked after by their children when they were old. However, since the 1980s due to the 'one-child' policy the fertility rate has dropped dramatically and family structure has gotten smaller (Whyte, Feng and Cai, 2015). In the cities, new family structures have arisen, such as, the '4-2-1' family, and the 'empty-nest' family. In October 2015, the Chinese government proposed a 'two-children' policy (Xinhua News, 2015), so that the current generation in their '20s' and '30s' might face a challenge in the near future of taking care of eight grandparents, four parents and two children at the same time. Apart from the influence of demographic policy on birth control, this transformation of family structure can lead to some social issues which will be discussed over the next two paragraphs.

First of all, filial piety is a vital component of traditional Chinese family values. Respecting, supporting and taking care of the elderly is one's legal duty, rather than a social responsibility. If children abandon obligations of care towards their parents, they will be condemned by the public. Even though some parents are open-minded and willing to live in a nursing institution in order to reduce their children's burden, parents might give up this idea as they do not want their children to be criticised or even accused of neglecting their elders by other people. Thus, traditional values greatly influence the current '4-2-1' family structure.

Second, the existence of '4-2-1' family structure enhances mutual assistance among family members. For instance, if the grandparents are healthy, and can take an active part in daily housework, they could take care of their grandchild when the young couple are engaged at work. Within a traditional Chinese family, the grandparents will do as much as they can to contribute to their children's family, not only in financial terms, but also with invaluable labour.

In recent years, the '4-2-1' family model has gradually separated into two parts – '4' (the 'empty-nested' family model) and '2-1' (the nuclear family model), which makes the family structure even smaller. The possible causes of a generation of 'empty-nest' families are as follows: rapid economic development and globalisation after the 1980s, have brought in more and more job opportunities for younger generations who are quicker and smarter in absorbing new thoughts and technologies, so that they can get well-paid jobs and not depend on their parents. Besides this rapid development and opportunity, a difference in education, living habits and modes of thinking between older and younger generations also lead to the phenomenon of the 'empty-nest' family, both in urban and rural areas. The alienation of affection and distant relationships have greatly challenged traditional modes of family elder care, and might generate more conflicts between the two generations.

4.1.3 An Uneven Ageing Situation in Urban and Rural Areas

Under an overall influence of social and economic development, the proportion of aged population is mainly driven by three factors – fertility, death and rural-urban migration (Du and Wang, 2010). According to ‘*The Sixth Nationwide Demographic Census*’ (National Statistical Bureau, 2011), urban and rural fertility rates in China were 0.88 and 1.44 births per woman. At the same time, due to satisfactory sanitary conditions, medical resources and social security provisions for the urban elderly, the average life expectancy in urban areas is longer than that of rural areas – 76 years and 69 years respectively. Although death acts as a decreasing factor on aged population in the cities, and also elsewhere, there is an additional increasing factor caused by rural-urban migration. According to official national demographic statistics, the aged population of urban residents increased by 21.82 million, while the same in rural areas decreased by 13.73 million from 2015 to 2016 (National Statistical Bureau, 2017a). Average disposable income per capita is three times more for urban residents compared with rural residents. So cities can absorb any rural surplus of young labour by offering more job opportunities with good salaries, as a result, less young people stay in rural areas due to a lack of similar opportunities (Liu, 2014b). For the first time, in 2005, the proportion of people over 60 in rural areas was higher than in urban areas, although, this gap is less than 2%. This gap has widened since then, by the end of 2011 the proportion of people aged over 60 in rural and urban areas was 15.5% and 12.0% respectively, and it is estimated that this gap will not narrow in the future (*ibid*). What is worse, an imbalance of labour resources, capital, and public facilities between urban and rural areas in China has resulted in an uneven distribution in elder care in urban and rural areas.

4.1.4 Elderly Poverty: Getting Old before Getting Rich

From the experience of a developed country such as the US, when it first became an ageing society the Gross Domestic Product (GDP) was at least 2,000 US dollars per capita, which is an upper-middle level even by current standards. When China first became an ageing society, at the end of 1990s, the GDP per capita was around 640

dollars, far less than that of the developed countries (Li, 2013). With an ever-increasing aged population in China, the facets of problematic phenomena related to aged impoverishment are much more complicated, and the solutions to these problems are more difficult to obtain than ever before.

Compared to developed countries, poverty levels in the aged population of China demonstrates a phenomenon of ‘getting old before getting rich’ (*weifu xianlao* in Chinese). The majority of elderly Chinese people are relatively poor in their old age for different reasons. First of all, elderly people are amongst the lowest-income groups, and are more vulnerable to poverty due to a lack of, or inadequate, economic resources. Secondly, social welfare levels are quite low in China, and most elderly people are marginalised from daily care or other social security schemes. The minimum and basic income guarantee is not sufficient to prevent poverty brought about by sickness. Thirdly, most elderly Chinese people hold the traditional view to save money for their unmarried or married children and grandchild, and thus, they might remain poor in their old age due to this custom (National Ageing Work Committee Office, 2013a).

4.2 The Historical Development of Elder Care in China

Following the formation of the People’s Republic of China in 1949, a socialist and a centrally planned economy was established by the new rulers. With the Chinese economic reform (‘reform and opening-up’) that started in 1978, China abandoned its planned economic isolationism and adopted an open socialist market economy (Dahlman and Aubert, 2001). The development of China’s elder care services system was accompanied by an everlasting evolution in the political and economic situation, social transformation and demographic changes. While maintaining its political and economic uniqueness, China has utilised different welfare characteristics for the elderly people in different periods under specific historical contexts. In general, the development of the construction of the elder care service can be illustrated through the following three periods: 1949~1982, 1982~2000 and 2000~the present.

4.2.1 Family-supported Elder Care (1949~1982)

The first period lasted from the founding of the People's Republic of China to the early stages of reform and opening-up. During that time, China's elder care service was not given adequate attention by the new government. There are three reasons: firstly, new China had just been founded and the Chinese Government had to prioritise the recovery of the damaged infrastructure, and improve basic living conditions for the impoverished population (Dong, 2010). Secondly, thanks to Chairman Mao's proposal that 'more people means more labour force', women were encouraged to have more children. The Chinese population underwent a period of rapid growth and the demographic structure²⁹ was reformed. As a result of increased birth rates the younger generation formed a large percentage of the whole population, so there was a low social care demand for the elderly at that time (Tsai, 1987). Thirdly, the traditional idea of 'bringing up sons to support parents in their old age' (*yanger fanglao* in Chinese) was deeply rooted among Chinese households. Elderly people preferred to stay at home and be taken care of by their children until the end of life. Therefore, the elder care service at this period was mainly recognised as the responsibility of family members, and supplemental welfare packages were provided for people through other forms. For instance, a universal lifelong employment policy was adopted in cities for the Work Unit (*Danwei* in Chinese) system, which is comprised of state-owned enterprises (SOEs), government departments, and other organisations in the public sector (Ringen and Ngok, 2013). In rural areas, the local government offered social security to local citizens through 'land reform' – 'gaining welfare at the cost of land', implementing an agricultural cooperative movement, establishing a People's Commune (*renmin gongshe* in Chinese)³⁰, and allocating benefits to local citizens by their collective labour (Lin, 2006). Throughout this period, the elder care service was relatively simple, as it only concentrated on basic

²⁹ The demographic structure refers to the extent to which the proportion of each age group is transforming.

³⁰ The People's Commune (*renmin gongshe*) was the largest collective unit in rural areas in the late 1950s. The Communist Party took the land back from the farmers and forced them to join the 'People's Commune', where people were divided into production brigades and production teams.

levels of demand – providing adequate food and clothing. However, there were some distinctive differences between urban and rural elder care services during this period.

In the cities, urban residents' elderly welfare can be divided into two forms. The first one was arranged by the *Danwei* system, which guaranteed a job for life for almost every urban citizen of working age. Such an arrangement was known as the 'iron rice bowl' (*tiefanwan* in Chinese), characterised by the provision of cradle-to-grave social security for its workers (Fang, Zhang and Fan, 2002). The *Danwei* system functioned as a self-sufficient 'mini welfare state', and more than 80% of the urban labour force was covered by it (*ibid*). At their retirement, retirees received pensions which were based on a percentage of their salary, and also enjoyed medical healthcare and entertainment provided by the *Danwei* system. Another form of urban residents' elderly welfare focused on the 'Three-Nos' Policy³¹, where 'Three-Nos' elderly people depended only on government relief, or went to the Production and Education Institutes³² (Dixon, 1981; Liu, 2014b). By the end of 1953, there were approximately 920 of these kinds of institutions across the nation which accommodated around 100,000 elderly people ('Contemporary China' Editorial Board, 1994). After the 'Socialist Transformation'³³, the Production and Education Institute threw out anyone with the ability to work. Some institutions became nursing homes³⁴, and only accepted 'Three-Nos' elderly people. In 1961, the Ministry of Internal Affairs started to reorganise welfare agencies, which involved addressing the services that they provided, so they could meet the population's social welfare needs.

³¹ The 'Three-Nos' Policy refers to those who have no source of income, no working capacity, and no legal support or care obligations.

³² The 'Production and Education Institute' (*shengchan jiangyangyuan* in Chinese) is the predecessor of the Social Welfare House (*shehui fuliyuan* in Chinese). Its original intention was to accommodate the homeless, and provide education and training for them. At present, the main purpose for the Social Welfare House is to support urban-living 'Three-Nos', including the elderly, and disabled and abandoned children (in order to protect the legal rights of vulnerable groups and maintain social stability).

³³ The Socialist Transformation is put forward from the general line of the transition period since 1953, and its main content is to carry on socialist transformation in the agriculture industry, handicraft industry and capitalist commercial industry, in order to eliminate private ownership and set up public ownership.

³⁴ In China, retirement institutions for the elderly are named in different ways, for instance, 'nursing institution' refers to the ones in the cities, and the phrase 'nursing home' is *jinglaoyuan* in Chinese, which translates as a place for the elderly people in rural areas. But there are also some special terms for nursing institutions in China, such as 'Social Welfare House' (*shehui fuliyuan* in Chinese), which is a kind of public nursing institution.

During this period of development, the welfare system in China's rural areas went through a stage of collective elder care (before 1978) and a stage of family-supported elder care (after 1978). Since 1953, the agricultural cooperative movement started with vigour, and individual farmers' private land ownership was replaced by socialist collective ownership. In August 1958, the Chinese Communist Party introduced a *'Resolution on the Establishment of People's Commune in the Rural Areas'*, which officially defined the rural People's Commune as rural social basic units. Farmers were organised into communes based on the collective ownership of land (Ringen and Ngok, 2013). Ensuing from this background, of the collective ownership of land and the People's Commune system, family production units were replaced by collective production units, and the peasant household economy transferred to the collective economy. Collective organisations implemented the production and organisation of resources according to unified plans, and distributed financial resources in the same way (Lin, 2006). Mao (1977) points out in the Preface to the *'China's Socialist Climax in the Chinese Countryside'* that all collective organisations have the responsibility to help mature people who have no children, no working ability, and no financial resources, as well as helping those who have the ability to work but live in a difficult environment. Under these circumstances, all able-bodied adult farmers worked for the People's Communes through which daily necessities were distributed, and according to the egalitarianism distribution principle, rural elderly people could also satisfy their basic social needs (mainly food and clothing) from the People's Commune, regardless of whether they were able to work or not. For the poorest rural households, especially those who had no children and no working ability, a 'Five-Guarantees' system (Third Conference of the First National People's Congress, 1956) funded by rural collective organisations was developed to cater for their basic demands (food, clothing, firewood, education for their children and funeral) through an unified institutional arrangement (Chen, Ngok and Philips, 2008; Liu, 2014a). Therefore, during this period, the function of rural family care was relatively weakened, instead, collective organisations bore the main responsibility of security for the elderly people.

The negative impact of the egalitarian and agricultural cooperative movements, in the centralised-planned economy, caused some common problems in rural areas: inefficient agricultural production, laggard technology production, and a shortage of basic necessities. A majority of farmers lived in poverty. After 1978, rural areas abolished the People's Commune and began to implement the 'Household Contract Responsibility System'³⁵. Farmers were endowed with autonomy, in the production and management of their land, which symbolised the starting point for the reform of agricultural management (Lin, 2006). Land is the most important possession for a rural family, as it can provide them with various means for food production and livelihood. The reform stimulated an increase in farming, which rapidly enhanced efficiency in agricultural production. Under the 'Household Contract Responsibility System', elderly with working ability gained more income from their labour, and those who could not work, had the option of renting their land to others and gaining from this investment. At this time, the function of elder care was returned completely to the family, as more elderly people engaged in some light physical work, such as housework and taking care of their grandchildren. Because of mutual assistance within the family, these elderly people benefited from financial or spiritual support from their children when they needed it, including the coverage of daily care, medical expenses and spiritual comfort, etc.

In summary, the elderly welfare system, though characterised by a sharp urban-rural divide and a low level of government provision, only offered basic social protection for both workers and farmers (Leung and Nann, 1995). However, the outsourcing of social responsibility from the urban *Danwei* system, or rural cooperative organisations, was pursued via a painful process of trial and error, and elder care institutions suffered severely during the period of Cultural Revolution (1966~1976)³⁶ (Dong, 2010; Ringen

³⁵ In 1978, the third Plenary Session of the 11th Central Committee of the Chinese Communist Party pioneered a new phase of reform and opening-up policy. The reform started in the countryside in the early 1980s, as local governments allocated land to each household. This conduct was later defined as the 'Household Contract Responsibility System'.

³⁶ The Cultural Revolution was a socio-political movement which was set into motion by Mao Zedong from 1966 until 1976. Its stated goal was to preserve 'true' Communist ideology in the country by purging remnants of capitalist and traditional elements from Chinese society, and to re-impose the position of Mao and his thought as the dominant ideology within the Party. The movement paralyzed China politically and negatively affected the country's economy and society to a significant degree.

and Ngok, 2013). As to the elder care system, the urban ‘Three-Nos’ and rural ‘Five-Guarantees’ elderly people were the main service objects (elderly people targeted by the government) during this time, while the majority of elderly people had to rely on their family.

4.2.2 Government-leading Elder Care (1982~2000)

The second period started from the beginning of the reform and opening-up policy until 2000. Since the start of 1980s, China carried out transformative reform from a centralised-planned economy to a market-based economy. Economic liberalisation developed forcefully, as demonstrated by unprecedented industrialised growth, marketisation and modernisation. Due to the collapse of cooperative organisation and the bankruptcy of SOEs, the provision of security by way of guaranteed access to jobs or land was gradually discontinued. The egalitarian welfare system disappeared, and in the cities there was an increase in laid-off workers and young retirees (from 40-50 years), who were more likely to need social services from their local community (Wong and Poon, 2005; Yang, 2016). During this time, the diversity of elder care services attracted attention from Chinese academics and politicians, and the Chinese Government attempted to create a social welfare system which was independent from the *Danwei* or the cooperative system.

The new Constitution of 1982, with subsequent amendments and additions, introduced various social rights for the elderly (Ringen and Ngok, 2013). In the same year, the National Ageing Work Committee Office was established, with an aim to design an ageing work network from central to local government. In 1984, the Ministry of Civil Affairs proposed the idea that ‘society can do social welfare work’, encouraging social sectors, such as individuals, private companies, social organisations, and so on, to participate in the delivery of elder care (Yang, 2016). In August 1993, the Ministry of Civil Affairs (1993) and other fourteen ministries jointly issued another document entitled ‘*Suggestions on Accelerating the Development of Community Services*’, which established the goal of a community service network. In March 1998, the Ministry of Civil Affairs selected 13 locations, as pilot cities, to launch what was termed the

‘socialisation of social welfare’ project in order to promote a ‘residents’ service industry’. In the same year, the General Office of Chinese State Council (1998) issued the *‘Suggestions on Accelerating the Socialisation of Social Welfare’*, and further promoted projects all across the nation. In 1996, *‘The Law on the Protection of Senior Citizens’ Rights’* pointed out that the contents of elder care should be transferred from living security (food and clothing) to a comprehensive package incorporating housing, healthcare, rehabilitation and entertainment, while ensuring quality of service. In its latest amended version (2015), the law denotes that the legal contents of elderly welfare include family support, social security, participation in social development, legal liability, etc. Moreover, the law dictates that Chinese society should extend care to ensure that elderly people, especially those in difficulty, can be provided with a treasured sense of security, belonging and worthiness. Since 1999, several relevant documents were issued, such as *‘Temporary Measures for the Administration of Social Welfare Institutions’* (Ministry of Civil Affairs, 1999), *‘Basic Norms on Elderly Social Welfare Institutions’* (Ministry of Civil Affairs, 2000) and *‘Design Specifications of the Architecture for Elderly people’* (Ministry of Construction and University of Harbin, 2006). These documents created guidelines for a standardised construction of elderly institutions, and selective criteria for elder care service management. During this period, various elderly institutions were founded, including administrative departments for the elderly, nursing homes, elderly entertainment centres, etc. The number of these elderly institutions increased from 33,000 in 1986, to 40,000 in 2000 (Chen, 2014). The accepted group of elderly people in these elderly institutions were not only provide cover for the ‘Three-Nos’, but also others who needed elder care.

During the 1990s, the rural elderly welfare system in China was gradually improved. In order to standardise the rural ‘Five-Guarantees’ system, and ensure that they received basic living conditions, Chinese State Council (1994) promulgated *‘Regulations on the Provision of Rural ‘Five-Guarantees’ Elderly People’* in 1994. In this document, provisions listed for the ‘Five-Guarantees’ system changed to food, housing, clothing, healthcare and funeral costs. Thus, the ‘Five-Guarantee’ system was viewed as social

relief for the rural poor, and collective provision still played a role in its welfare characteristics. On 18 March 1997, the Ministry of Civil Affairs (1997) issued the *'Interim Measures for the Management of Rural Nursing Homes'*, in order to further strengthen the management of rural nursing homes and enhance service quality (Nie and Yang, 2006). The achievements were remarkable during this period; in 1999, the state allocated 110 million RMB's relief funds, while the funds collected from the local government were substantially higher, at 1.7 billion RMB. In addition, there were nearly 2,003,000 'Five-Guarantees' elderly people receiving care, and the average annual living allowance for one rural 'Five-Guarantees' elderly person was 994 RMB, an increase of 14.4% from the year before (Liu, 2014c).

Community began to play an important role in this period, because the community met elderly people's needs and in addition promoted a housekeeping service and provided mutual assistance within neighbourhoods. However, the community care provision also encountered some challenges: firstly, low efficiency in the community care centres, malignant competition and a lack of supervision by the government, seriously affected the development of the elder care system; secondly, most community care centres only accepted healthy people, while refusing the very elderly and/or disabled; thirdly, communities were limited in financial and human resources, so that the majority of rural elderly people were unable to access community provided services.

4.2.3 The Market-oriented Elder Care System (2000~the Present)

The third period runs from 2000 to the present, and 2000 was a transformative point for establishing a social elder care system in China. In 2000, the country, as a whole, became an ageing society. In addition, smaller family sizes and labour migration forcibly weakened the family's role in elder care. Government at all levels promoted social care provision for the elderly by increasing financial support and encouraging investing bodies to participate in the elder care services industry under less restrictive conditions (Tian and Yang, 2016).

Since 2000, several cities, such as Shanghai and Ningbo, launched home-based community care in order to combine the functions of both family and community. In February 2006, the idea of a ‘home-based, community-reliant and institution-supplemented elder care system’ was officially addressed in the following document: *‘Suggestions on Accelerating the Development of Elder Care Service Industry’* (General Office of Chinese State Council, 2006). Since then, the importance of elder care has attracted increasing attention across the nation and there has been a move toward a system which incorporated government, community and nursing institutions. During this time, the quality and quantity of relevant nursing institutions improved. From the beginning of 2006, there were around 38,000 elderly welfare institutions; available beds for social elder care increased from 15.35 million, in 2006, to 31.49 million, in 2010; and numbers of accepted elderly people increased from 13.03 million to 24.26 million during the same period (Chen, 2014). Thus, the accommodation rates of nursing homes significantly increased. With the continuous development of government-guided social investment in the elder care system, several other mixed-delivery forms of care arose in China, such as ‘Private Construction and Public Subsidy’ and ‘Public Construction and Private Operation’. From 2006 to 2010, the number of registered private nursing institutions was 4,141, accounting for 10.6% of the total nursing institutions. Geographical distribution was distinctive: more in the east, developed areas, and less in the west, undeveloped areas; more in the cities and less in the countryside. In 2011, the *‘12th Five-Year plan of Ageing Affairs (2011-2015)’* described the situation more clearly as aimed at ‘...developing a moderate universal elderly welfare system’, and addressing the interactive relationships between families, communities and nursing institutions.

In the same year, the Ministry of Civil Affairs (2011) issued the *‘Construction Plan of Social Elder Care Services System (2011-2015)’* which stated that ‘...solving the elder care problems for disabled and semi-disabled elderly people’ was a pressing task in order to strengthen the social elder care service system, and maintain social harmony and stability. It also pointed out that the central government plays a leading role in

planning and guidance, cultivating the market, and encouraging ‘social powers’ (*‘shehui lilian’* in Chinese)³⁷ to contribute towards the construction and operation of elder care services. Since 2013, several documents have addressed the role of ‘social capital’ (*‘shehui ziben’* in Chinese)³⁸ in delivering and operating elder care services, and more mixed models for investment have been proposed, such as Public and Private Partnerships (PPPs). By the end of 2014, all kinds of nursing institutions and facilities for elder care existed across the nation: 94,110, in total, of which 18,927 were community care institutions; there were 57.78 million available beds for social elder care; and 1.88 million community care and day-care services beds (Qing, 2016).

In China’s rural areas, with the development of urbanisation and new construction, rural areas started to explore a new model of mutually assisted elder care, depending on collective economy and village self-governance. They also build regional elder care centres, usually based on the existing rural welfare housing, and offer beds for day-care and short-term care, especially for the ‘left-behind’ elderly people. Rural areas make full use of farmhouse courtyards to provide relevant facilities for elder care, such as day-care centres, nursing homes and elderly activity stations, which were established during this period. At the same time, several other places, such as rural Party-building activity rooms³⁹, clinic centres, libraries and schools, are required to support the elder care service in local areas, and organise relevant activities for elderly people. In 2013, the Ministry of Civil Affairs and Ministry of Finance jointly donated special lottery funds of 3 billion RMB to rural welfare housing, where more than 50 million elderly people received elder care services. The coverage rate of community care in rural areas was 37% by the end of 2014 (Qing, 2016).

Above all, since 2000, the contradiction between the increasing demand for social elder care and the gradually weakening function of family care, has forced the Chinese

³⁷ The term ‘social powers’ (*‘shehui lilian’* in Chinese) in this thesis refers to those basic units which could contribute to social development, these units include: individuals, social organisations, non-government organisations, associations, non-profit organisation and private companies, etc.

³⁸ The term ‘social capital’ (*‘shehui ziben’* in Chinese) in this thesis refers to an investment of ‘social power’.

³⁹ ‘Party-building activity rooms’ refers to a place for members of CPC to have meetings to study CPC guidelines, and they are also used to organise other activities for the elderly people.

government to motivate and lead ‘social powers’ to deliver elder care services. The elder care system moved towards industrialisation and marketisation during this period. The development of China’s elder care industry gradually introduced new accomplishments related to innovative investment channels, operation and competition mechanisms, to meet the diversified and multi-level needs of elder care.

4.3 Rationales for the Construction of the Social Elder Care System in China

According to the previous section, the historical development of China’s elder care services has demonstrated the necessity of constructing a social elder care system that can offer multiple provisions through the participation of government, community and market. This section examines the changing rationales involved in the construction of the social elder care system in China from three perspectives – policy, economy and society.

4.3.1 Changes of Policy Orientation

Since the ‘reform and opening-up’ policy came into being in the late 1970s, China has established a series of policies on social security which cover pension and medical care in urban and rural areas. The constantly enlarging coverage of elderly people supported by the social security system, and increased financial support of this make a convincing argument that there have been great advances made in protecting the elderly’s basic rights, and guaranteeing their financial income when they retire. However, China’s social elder care system is still in its initial explorative stage. Traditional informal care faces greater challenges than ever before, due to the ever-increasing aged population and smaller family structures. Since the twenty-first century, the Chinese Government started to concentrate on the construction and development of the social elder care system to meet an increasing demand for social care. In order to relieve the burden of traditional family care and advocate for ‘social power’, to invest in social services for

the elderly, it is inevitable that China will need to further establish and improve its social elder care system in line with economic and social development (Li, 2013). According to relevant policy documents, policy orientation changes over time in relation to social elder care, and mainly demonstrates the following three stages:

4.3.1.1 Elder Care as a Social Affair: Emphasising the Importance of the ‘Socialisation’ of Elder Care

The year 2000 is regarded as a milestone for the politics of elder care, as the care service is first regarded as a service industry, and the term ‘social elder care system’ starts to appear in official documents. In February 2000, the General Office of Chinese State Council (2000) issued the document ‘*Suggestions on Accelerating the Realisation of Social Welfare Socialisation*’.⁴⁰ The document points out that China’s increasing aged population and smaller family size has led to a great demand for social care among the elderly. However, for a long time China’s social welfare has mainly been provided by the state, and some emerging problems, such as a lack of welfare institutions, inadequate funding sources, and low quality social services, makes it difficult to satisfy the constantly increasing demand. In response to these, the government is forced to broaden the scope of its care provision, and introduce more providers in the elder care industry. This document also proposes aims to establish a social welfare network by the end of 2005; a network which is connected to a range of diversified ownerships, including family, community and social welfare institutions. The proposed overall requirements for welfare socialisation involve investors, service objects, service patterns and service staff. The Chinese State Council formulated a number of preferential policies for the ‘social powers’ who participate in establishing elder care institutions. Above all, this welfare socialisation document is regarded as a turning point for the

⁴⁰ The ‘*socialisation*’ of *social welfare* in this content means that the provision of social welfare is the mutual responsibility of the whole society. ‘Socialisation’ of social welfare is different from a marketisation of social welfare, as it not only highlights the role of government in supervision and financial support, but also promotes a cooperative mechanism between community, institutions and family. The ‘socialisation’ of social welfare includes the following aspects: the pluralisation of welfare providers, a diversification of investment channels, and the professionalisation of services staff.

construction of elder care, and would later be applied as a guideline document for relevant policies.

Later in the same year, The CPC Central Committee and Chinese State Council (2000) issued another report – *‘Decision on Strengthening the Work of Elder Care’*. It is the first time that an ‘elder care service industry’ was proposed, and developed a consumption market for the elderly. The aim of a comprehensive consumption market is to provide suitable products and projects to guide elderly people to purchase and consume rationally and reasonably throughout their lives, in order to satisfy their demands for later in life on different levels and within different groups⁴¹. The idea of a consumption market is also considered an effective approach to ensure the efficient consumption and distribution of resources in Chinese society. Later in June 2006, *‘Suggestions on Accelerating the Development of Elder Care Service Industry’* – the first report to focus only on the elder care service industry – was issued by the General Office of Chinese State Council (2006). It defines main policy measures in order to: develop social welfare for the elderly; improve social service institutions and home-based elder care services; develop the elderly’s consumption market; and launch pre-employment training for the service staff.

4.3.1.2 Elder Care as Industry: Extending the Patterns of Provision for Social Elder Care

In August 2006, the National Ageing Work Committee Office publish *‘Eleventh Five-Years’ Plans of the Development of Ageing Programmes in China (2006-2010)’*, which proposed guidance to develop ageing programmes from 2006 to 2010. Specific requirements and guarantee measures cover nearly all aspects of the elderly; including social security, infrastructures, industry, spiritual life, legal rights, and social participation. At the same time, Ministry of Civil Affairs took a major role in leading and coordinating relevant departments to perform their functions, and ensured the implementation of the elder care system. It was announced that there were almost

⁴¹ The consumption demand for elder care will be discussed in section 4.3.2.

39,553 social welfare institutions (comprised of 1,456 comprehensive Social Welfare House, 6,724 nursing institutions in cities, and 31,373 nursing houses in towns and the countryside), and a further 1.7 million beds for the elderly in China by the end of 2006 (Dou, 2007).

Realising that traditional family-supported elder care is the main care model over the comparative long term in China, an increasing number of politicians and academics promote a home-based elder care pattern, as a supplement to the traditional family-supported care, and which also promotes home-based care by combining the functions of self-care and social services. In 2008, the National Ageing Work Committee Office (2008), Ministry of Civil Affairs and 8 other ministries and committees worked together and published a report: *'Suggestions on Promoting Home-based Elder Care Services'*. This report stated that 'government and social powers rely on community, and offer daily care, household service, rehabilitation nursing care and spiritual consolation to the elderly people who prefer staying at home'. This document also proposed four basic principles to promote home-based elder care: people oriented; community reliance; adjusting measures to local conditions; and socialisation.

At the fifth plenary conference of the 'Seventeenth Central Committee of Chinese Communist Party', October 2010, 'priority to develop the social elder care system' was proposed as a strategic goal for national economic and social development. In 2011, two important documents: the *'Twelfth Five-Year Plan of Development in China's Ageing Development (2011-2015)'* (China State Council, 2011a) and the *'Construction and Planning of the Social Elder Care System (2011-2015)'* (Chinese State Council, 2011b) were issued, which both analyse the background of China's ageing society, and arrange the to-do-list of social elder care from 2011 to 2015. The former document, above, points out that there are conflicts and problems in the designs of ageing programmes, such as: an unimproved social security system, inadequate non-profit service facilities, an underdeveloped service network, and social administrative system, etc. Thus, local government is required to cope with the challenges of an ageing society from the

standpoint of materials, spirituality, service provision, policies, and institutional and procedural mechanism. Moreover, the document further proposes main tasks for elder care in the future, including: social security, healthcare and sanitation, family construction, social administration, living conditions, spiritual and cultural life, industry, rights protection and international academic cooperation (Chinese State Council, 2011b). The latter document, as above, states the necessity of establishing a social elder care system which contains three components: home-based, community-reliant and institution-supported elder care, and explains their functional orientations in Chinese society. For example, that social elder care should focus on elderly people's actual needs, and meet basic service demands for low-income, lonely and disabled elderly people, as well as improving service conditions for all elderly people. This document also lists a series of aims and tasks regarded to construction models, fundraising approaches and supporting measures.

In December 2012, a revised version of the *'Law on Protection of Rights and Interests of Seniors'* (National People's Congress, 2012) was released after its first implementation in 1996. The law provides regulations in family support, social security, social services, preferential treatment, liveable environment and legal responsibility, etc. It points out the importance of caring for '...elderly people's spiritual demand[s]'⁴², and emphasises elderly people's increased legal rights to receive spiritual services – apart from material allowances from family, society and the government. Thus, the implementation of the new amended law has proved to be timely and useful in a context of an ageing society in China.

4.3.1.3 Elder Care as Social Investment: Expanding Investment Channels of Social Elder Care

In 2012, the Ministry of Civil Affairs (2012a) issued *'Implementation Suggestions on Encouraging and Guiding Private Capital to Enter the Field of Elder Care'*. This document encourages the private sectors (national and international) to participate in

⁴² Chinese elderly people's spiritual demands mainly come from companionship, from relatives and friends, and through respect and recognition from society.

financing social elder care systems in different areas; not only in building community day care centres and nursing institutions, but also to offer facilities and care services. In addition, the private sectors are also advocated to develop and expand other areas within the elder care industry, such as cooking and healthy eating, clothing, nutrition and healthcare, medical rehabilitation, leisure activities and tourism, culture and media, finance, real estate, and so on.

In September 2013, the Chinese State Council (2013) issued '*Several Suggestions on Accelerating the Development of Elder Care Services Industry*'. The report points out the goal in 2020 is to establish a home-based, community-reliant and institution-supported social elder care system across the nation. Comprehensive facilities (or service) centres will be built in 90% of towns and countryside, in over 60% of rural communities. This means that 35~40 beds per 1,000 elderly people are guaranteed across the nation in order to improve service quality and market capacity. In addition, this document emphasises the construction of nursing institutions, the development of rural elder care, and a combination model of healthcare and social service ('*iyang jiehe*' in Chinese). The proposed policies cover six areas: investment, land supply, preferential taxation, fiscal support, employment and the involvement of non-government organisations (i.e. charities). According to this document, government advocates and encourages different forms of investments, from various channels, to pour into the construction and development of social elder care. The policies related to funding issues are illustrated by the following four aspects:

Investment policy. Government at all layers should increase investment in the construction, operation and management of the social elder care system by introducing private capital. Then, financial institutions, including banks, insurance companies, etc., should expand the scope of mortgage credit; applying approaches, such as credit support, financial discounts and petty (payday) loans to increase the investment in social elder care. Additionally, insurance companies are encouraged to invest in elder care, for instance, by launching a 'House-for-Pension' Scheme for the elderly and liability insurance for nursing institutions.

Preferential tax policy. All nursing institutions benefit from paying no sales tax on the care services that they provide. For non-profit nursing institutions, there are no relevant administrative and institutional fees, no building tax or land use tax on their properties, and even no business income tax. For private nursing institutions, administrative and institutional fees can be cut to half. In addition, according to the ‘Taxation Law’, social donations can be deducted before income tax. Moreover, some operational fees, for instance, water, electricity, gas and heating are paid according to a residential criterion, rather than a business criterion.

Subsidy supporting policy. Local governments should launch an evaluation mechanism for elder care services, increase subsidies to disabled and very elderly people who are also experiencing economic difficulties. In order to encourage private sectors and charitable organisations to participate in the provision of elder care, the government will provide investment grants, operational subsidies, financial loan discounts and service purchasing, etc. In addition, more than half of welfare lottery funds should be transferred and used in constructing and developing the local social elder care industry, a proportion that would increase with the growth of the aged population. Moreover, pension, healthcare insurance, and minimum living standard support (MLSS) should be adjusted according to local economic and social developments, or the increasing of employees’ average incomes and the price of commodities.

The involvement of non-profit organisations. Local governments need to guide non-profit organisations to participate in the construction of the elder care system, elderly product development and elder care services, and voluntary activities. The elder care service industry is regarded as a major innovative field, as it is shown in provisions (No.25 to No.28) of ‘*Guiding Suggestions on Encouraging Social Investment in the Investment and Financing Mechanism of Major Innovative Fields*’ (Chinese State Council, 2014b). The Chinese State Council encourages ‘social powers’ to invest in infrastructure construction for the elderly, and launches the reform of public nursing institutions – transforming state-owned training rehabilitation institutions into private nursing institutions. It also advocates the government, at all layers, to expand the scale

of government purchasing and create an equal business environment for all social care operators. Local governments should give rights of dependent pricing to private nursing institutions under what is considered normal pricing policy in the local area. This document also suggests promoting PPP mechanisms in building and operating elder care projects, guaranteeing the interests of all participants, and establishing risk prevention, supervision and exit mechanisms.

Later, the State Development and Reform Commission and the Ministry of Civil Affairs (2015) issued a brief, guiding the *'Management of Service Charges in Nursing Institutions'*. Apart from the preferential tax policy, mentioned above, it also proposed the decrease of cable TV maintenance fees, and a cancellation of administrative and institutional fees for private nursing institutions.

In the beginning of 2015, the Ministry of Civil Affairs (2015a) and other 9 departments jointly issued *'Implementation Suggestions on Encouraging Social Capital Participating in the Development of Elder Care Service Industry'*. This document highlights the decisive role of market in the allocation process of resources and further encourages the social powers to become the main force to develop a social elder care services industry, including the home, community and institutional care services. It also encourages the social powers to develop relevant projects on entertainment, education, sports, tourism and healthcare services, and legal consulting services for the elderly. Additionally, commercial banks, insurance companies and security companies are encouraged to develop some financial products, such as financial management, credits, loans and insurances which are suitable for the elderly. As for investment policies, this document claims that 30% of local welfare lottery funds should support private nursing institutions.

In December 2016, the Chinese State Council (2016b) released *'Several Suggestions on Opening the Elder Care Service Market and Enhancing the Quality of Elder Care Services'*. This document points out two approaches to expand the elder care services market: one is to relax market access conditions, including reducing the barriers to entry, easing the investment boundary for foreign investors and cancelling administrative

procedures; and another approach is to optimise the market environment, including improving government services, establishing a pricing mechanism, reforming public nursing institutions and strengthening the credit system.

Above all, when I conducted a review of relevant policies on social elder care in China, I found that the state is aware of the impact of ageing issues on Chinese society. Changes implemented in policy documents and their concentration on social elder care have gone through different political processes over time (Figure 4.1). The socialisation of welfare was first announced in the report of *'Suggestions on Accelerating the Realisation of Welfare Socialisation'* (General Office of Chinese State Council, 2000). Since then, more regulations and rules related to social elder care have been issued. The contents of the document, *'Suggestions on Accelerating the Elder Care Service Industry'* (General Office of Chinese State Council, 2006) has demonstrated that the issue of social elder care is no longer regarded as merely a social affair, but a range of various aspects within a services industry. At the fifth plenary conference of the 'Seventeenth Central Committee of Chinese Communist Party' in October 2010, 'priority to develop social elder care' was first proposed as a strategic goal of national economic and social development, as stated in the report of *'Twelfth 'Five-Year' Plan of China's Aging Development (2011-2015)'* (Chinese State Council, 2011a) and *'Construction and Planning of Social Elder Care (2011-2015)'* (Chinese State Council, 2011b). Since then, it is obvious that main government policies focus on funding issues of social elder care, I refer to reports, such as *'Implementation Suggestions on Encouraging and Guiding Private Capital to Enter the Field of Elder Care'* (Ministry of Civil Affairs, 2012a) and *'Several Suggestions on Accelerating the Development of Social Services Industry for Elderly People'* (Chinese State Council, 2013).

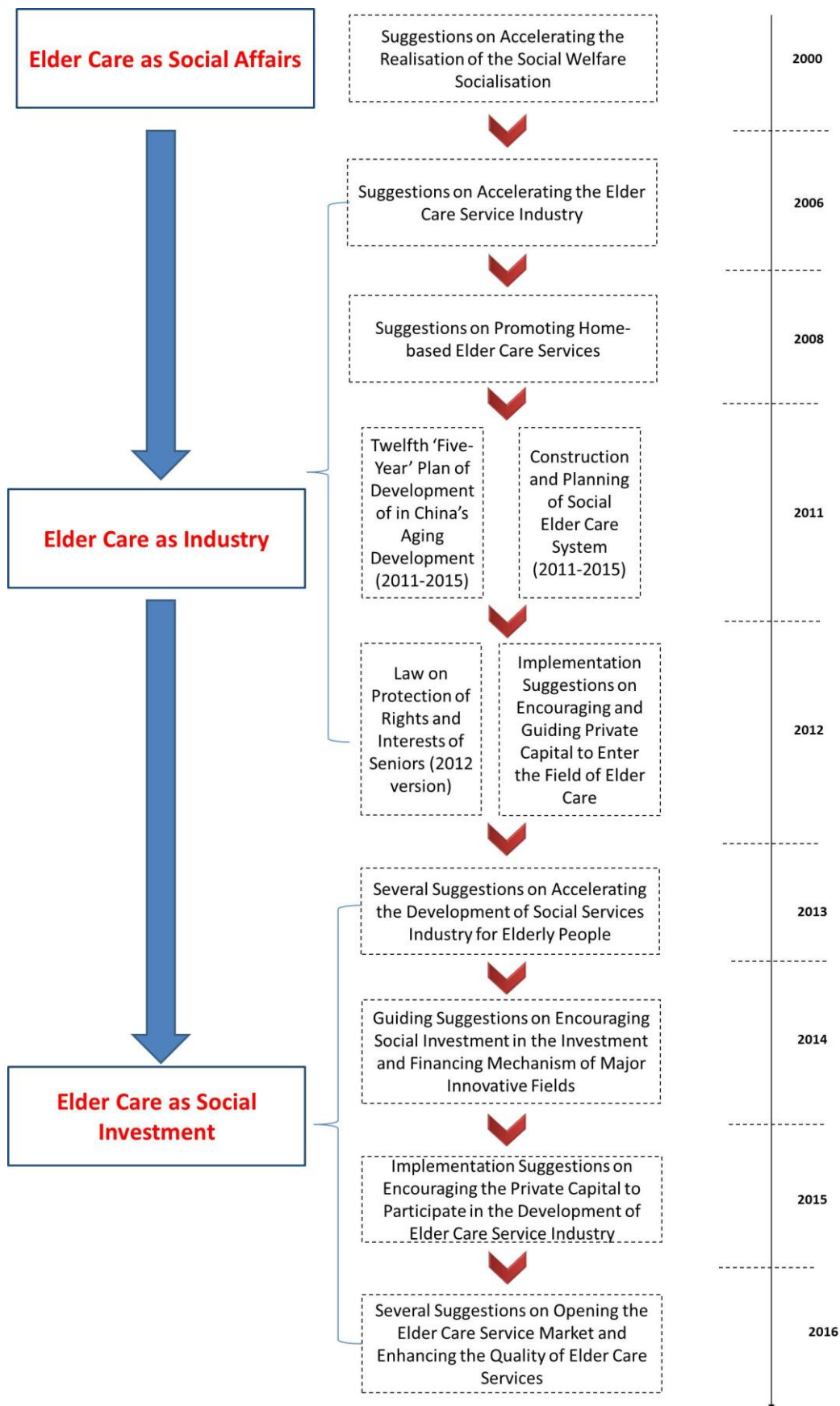


Figure 4.1 Main Documents Related to Elder Care System Development (2000~2016)

4.3.2 Economic Transition and Market Prosperity

Since the introduction of economic reforms in 1978, China started the transition from a centralised-planned economy to a market-oriented economy (Fang *et al.*, 2002: 431). In the last two decades, the Chinese economy has experienced astonishing growth, and become the world's second largest economy, after the United States. In recent years, China's modernisation and marketisation propelled the service industry to become the largest category of GDP with a share of 48% in 2014 (World Bank, 2015a). The elder care industry is recognised as one of the most promising new service industries of the twenty-first century.

With an improvement of living quality, elderly people's consuming demands rise too. Elderly people use a range of appropriate, accessible and adequate services to their social demands. These services are not just constrained to food, living space, clothes, and healthcare, but also daily care, spiritual comfort, social relationships, psychological consultation, healthcare nutrition, culture, education, tourism, entertainment, legal assistance, and so on. According to Figure 4.2, the supply sides of the elder consumption market responding to the demand are the elder financial market, elder products market and social elder care service market. These consumer factors create a good opportunity to develop a consumption market for the elderly, according to the book, *'Data Analysis of the Sampling Survey of the Aged Population in Urban/Rural China 2010'* (Wu and Guo, 2014). Due to smaller family structures and migration, the number of empty-nest families is increasing – nearly 50% of elderly couples live alone. 16.5% of urban, and 28.6% of rural elderly people feel lonely and unhappy while living alone, one possible solution is a focus on increasing their spiritual comfort and social connections. The quality of medical and healthcare conditions has greatly improved during the last ten years. The coverage rates of public healthcare security have reached 95.8% in urban, and 98.3% in rural areas (in 2010), which is 40.0% and 89.4% higher than that in 2000, respectively.

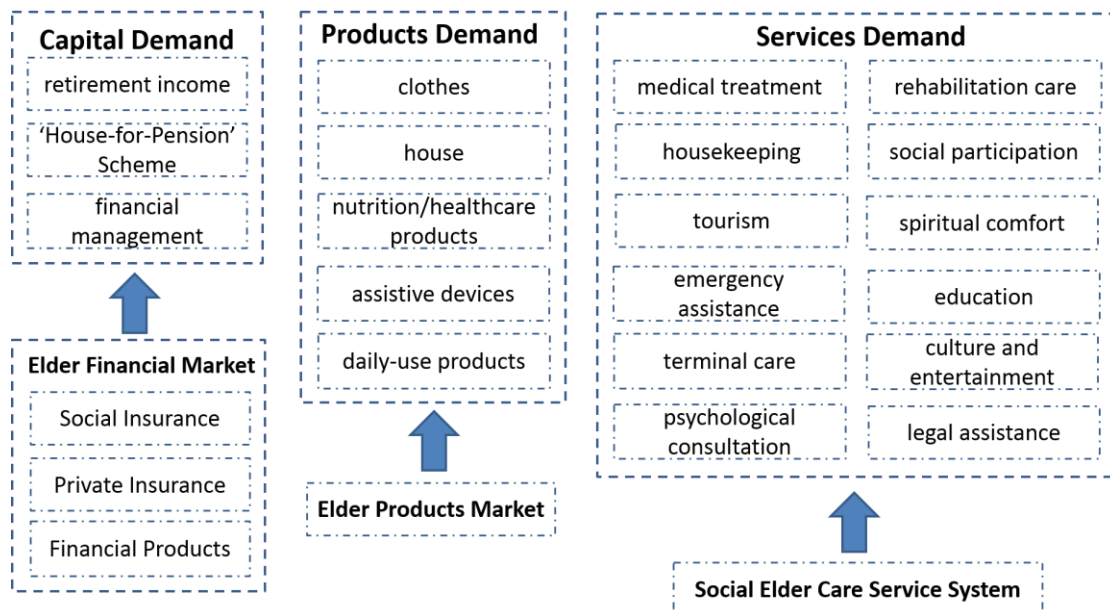


Figure 4.2 Market Categories for the Elderly People in China

With regards to the elderly's demands for services and goods, there are usually two perspectives: capital amount and absolute quantity. First, the proportion of elderly expenditure to GDP, in 2011, was 5.55%, and is predicted to increase to 14.64% by 2020, and 28.97% by 2040. The capacity of consuming demand is 1-2 trillion RMB in 2011, and it is predicted to increase to 10 trillion RMB by 2020. Second, demands for beds in nursing institutions reached 45.98 million in 2015, and the number of general nursing assistants was 10.49 million. The demand for beds for long-term care increased to 4.4 million, and the numbers of professional nursing assistants for long-term care and home-based elder care were 3.36 million and 3.13 million respectively (Wuhan University, 2013).

The above predicted data only presents potential demands for social elder care. As long as the provision of the social elder care industry can guarantee the quality and quantity of elder care services, these potential demands will become actual demands. At present there is a huge gap between the demand and supply of elder care services in China. Thus, the demand for elder care provides a great opportunity to develop the elderly consumption market.

4.3.3 Social Development and Urbanisation

Due to freedoms of fertility since the 1950s, and the ‘one child policy’ since the early 1980s in China, the first generation, that is, the first generation of the ‘baby boom’ (those born in the 1950s) have to confront conflicts such as whether to take care of their parents, while their only child may not bear the burden of family care for their parents anymore. Apart from demographic policy, other social events contributed to the generation and development of social elder care in China. In this section, I will present two major factors that affect the issue of elder care.

4.3.3.1 Evolution of Community Services

In the late 1980s, the central government decided to transform community services by segregating them by geography: the basic unit of urban administrative jurisdiction, which restructures the absolute urban governance system, and guarantees the stability and control of ‘an organised society’ (Wu, 2002; Zhang and Yan, 2014). Of equal importance, the government intended to expand community services to fulfil the service gap caused by the collapse of work-unit systems. Unlike the urban community, which was formed resulting from the missing function of the work-unit system, the rural community was formed in the process of new rural construction, with an aim to narrow the urban-rural differences (Chinese State Council, 2011b). It facilitated the modernisation of local areas and improved the quality of public services. Accordingly, a Residential Committee is the main provider of community services in both urban and rural China, and its main objects are widows/widowers, orphans, and the disabled. However, overloaded administrative responsibilities, lack of financial sources and low payment, led to a transitional reform of the Residential Committee in the mid-1990s (Lin, Gabbard and Hwang, 2009). In response to the growing aged population and their urgent demands for social services, the Chinese central government began to advocate a community-based elder care service pattern across the nation (Xu and Chow, 2011).

4.3.3.2 A New Form of Urbanisation

China's urban population has dramatically increased during the last three decades, and first exceeded the rural population by the end of 2011 (World Bank, 2015b). Urbanisation occupies a significant position in public policy decision-making, thus, rapid urban growth would bring about many social issues. A traditional definition of urbanisation is that it refers to the growth of an urban population, which is mainly driven by two factors in China: first, rural-urban migration; second, a rise in the number of cities. Urbanisation occurs when cities absorb rural surplus labour by offering more job opportunities (Li and Piachaud, 2004). Since the 1980s, the urban population of China has increased steadily, mainly due to the influx of rural-urban migrants (Wu, Webster, He and Liu, 2010). In addition, along with the strategy of the 'Chinese-style Urbanisation Way', urbanisation underwent unprecedented development. The number of cities soared to 655 by the end of 2008, with an average of 11 cities growing annually during this period (National Statistical Bureau, 2009).

The rapid process of urbanisation has given rise to a number of social problems, for instance, an imbalance of urban and rural development, and unequal benefits and rights for the rural-urban migrants (due to the urban household registration system). In this respect, the Central Committee of the Communist Party of China and Chinese State Council (2013) together proposed the term, 'New Form of Urbanisation' in the '*Planning of New Form of Urbanisation (2014~2020)*' document. The 'New Form of Urbanisation' is distinguished from the traditional concept of urbanisation, in that the growth of the urban population is not merely a determinant for urban development, but also combines with other characteristics among different sized cities, towns and rural communities, such as urban-rural integration, economical and intensive production, friendly eco-environment and harmonious development.

In the process of the new form of urbanisation, social issues related to elder care emerged gradually. First, rural-urban migrants cannot enjoy the same, and adequate, public services as urban citizens, especially pension and healthcare services, as well as social elder care services. Second, the phenomenon of 'left-behind' elderly people is

even worse than before, especially in rural areas, where young people move to cities and leave their parents back home. Therefore, the elder care issues of rural-urban migrants should also be taken into consideration by the local government.

4.4 Summary

Based on the previous demonstration, it can be concluded that the aged population is currently a pressing issue in China. An issue that challenges the traditional way of providing care for the elderly. The issue of the aged population seems particularly complicated in China due to demographic changes, shrinking family structures and the weakened function of family care, rural-urban migration, and the limitations of formal care provision, in particular. Thus, this chapter reviews the development of social elder care from a historical perspective by examining the main policy documents and their function in guiding the social elder care system towards socialisation and marketisation (via the participation of different ‘social powers’); for the purposes of satisfying the elderly’s urgent demand for social elder care, transforming the government’s function in providing elder care, and addressing the importance of social investment in making up a deficiency of public investment. However, whether social elder care is affordable for Chinese elderly people, how China’s social elder care is formed and what the problematical issues within the social elder care system are, has not been discussed in this chapter. Therefore, the next chapter will review the current situation of social security for the elderly, elder care services provision and the problems of China’s social elder care system.

Chapter 5 Funding Models for Elder Care in China

The previous two chapters examined the characteristics of the aged population in China – characteristics which are relevant within the context of this thesis. I traced major government policies, private initiatives and analysed the increasing challenges brought about by rapidly growing demands for social elder care. Embedded within these, it was argued that aged population growth has received increasing attention in China, and traditional elder care (primarily provided by family and self-reliance) may be gradually eroded by demographic shifts and socio-economic transformations in Chinese society. At present, China's elder care industry mainly consists of production and service industries which are, in general, divided into five areas: the provision of products (e.g., drugs, medical appliances and mobility aids); daily care and long-term care; relevant facilities in homes and nursing institutions; finance and insurance services; education, culture, and entertainment. Each area is considered to have an enormous market profit potential. According to the report *'Plans of China's Elder Care Service Industry'* (National Ageing Work Committee Office, 2015), it is estimated that the total market value of China's elder care industry will exceed 10 trillion RMB by 2030, of which the outputs of elder care services (daily care and long-term care) will be approximately 3 trillion RMB. Thus, escalating demands for social elder care generate urgency within Chinese society to explore all market and social potential, to expand the elder care industry.

In Chapter 5, I summarise and analyse funding models of elder care that have been applied in China. This analysis is subdivided into two chapters: the first addresses direct and indirect subsidies to providers of elder care; the second examines initiatives which aim to enable consumers to pay for care. Both policies involve different collaborations and partnerships between the government and the private sector that create sub-models

for elder care funding. Each model has its own characteristics, functions, and multifaceted challenges. This first chapter offers a brief introduction to the overall funding structure of elder care, identifying the various channels through which policy promotes a viable industry. It describes, with examples, the collaborative arrangements created between public and private sectors in the production of elder care and evaluates the outcomes of these collaborations.

5.1 The Overall Structure of the Elder Care Funding System in China

Currently, China is building a multi-subject and multi-channelled elder care funding system that involves government, private enterprise, social organisations and individuals at every level.

Direct funding models for elder care

(1) Public funding model. There are four sub-sections under this model: the first two sub-sections are central fiscal payment and fiscal transfer payment based, which means that funding resources mainly come from public tax revenues. The remaining two sub-sections are non-taxation funding sources, i.e., public welfare lottery funds and charitable donations.

(2) Mixed funding model. Categories under this model are determined according to the degree to which investors participate in the operational processes of elder care provision, and sources arise from mixed funds. The most common mixed funding models in China are ‘Public Construction and Private Operation’ and ‘Private Construction and Public Subsidy’. Meanwhile, the establishment of government-led investment funds in the elder care industry creates opportunities for the government to introduce an appropriate market mechanism, and to cooperate with private investors via PPPs. The above mixed models offer more control/power to the private management of the elder care system, and introduce some private financial investment.

(3) Market funding model. This model refers to a private enterprise fund for in-the-market financing, where elder care services are mainly structured around a commercial old-age real estate model, and a commercial insurance company old-age model. These two investors – one the commercial real estate developer, and the other the commercial insurance company – usually have huge funding resources, so they do not need to rely on the government's fiscal support. In this way, they can provide high-end elder care services to elderly people with a relatively high retirement income which enables them to pay for such a care service.

Indirect funding models for elder care

Indirect funds originate from different government policy provisions during the construction and operation of elder care services. Indirect funding models mainly consist of land leasing/grants, preferential taxation and financial credit in order to support the development of the elder care industry.

Accordingly, in reference to the examples above, the overall elder care funding structure is presented in Figure 5.1.

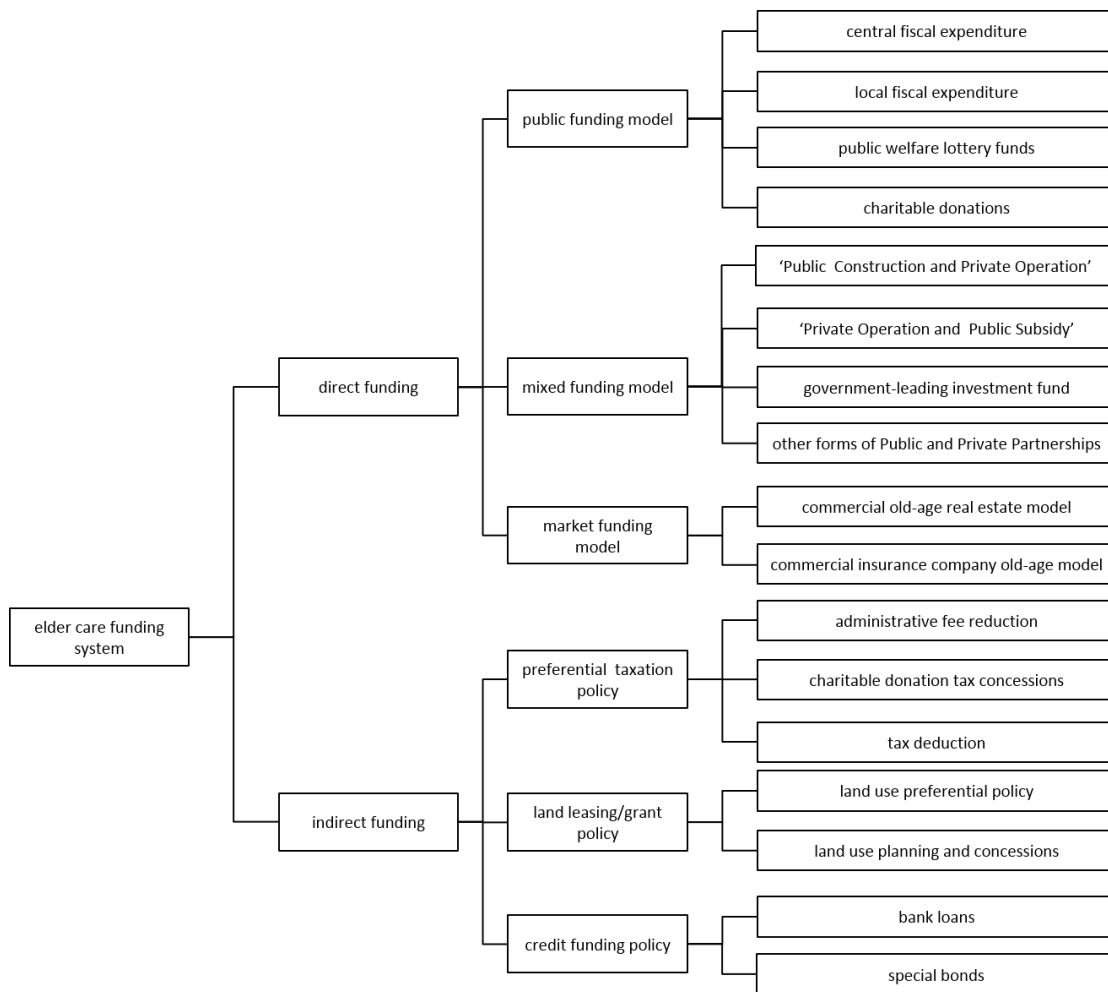


Figure 5.1 The Overall Structure of Funding Models for Elder Care in China

The figure above demonstrates the multiple and complex ways in which elder care is currently financed in China, involving direct and indirect ways of stimulating the consumption and production of care. Necessarily, this has involved the creation of multiple and varied typologies to coordinate resources between the public and private sectors.

5.2 Public Funding Models

Public funds for elder care services are allocated and distributed by national and local government or other public sectors. In 2012, the Ministry of Civil Affairs (2012b) launched the programme *'Promotion of the Construction of Social Elder Care Service*

System', in which it introduced a project named 'Respecting, loving and helping the elderly' in the Twelfth 'Five-Year' period (2011~2015). In this project, public funds are distributed through the implementation of various plans: (1) 'Sunshine Plan' (*'yangguang jihua'* in Chinese), (2) 'Moonlight Plan' (*'yueguang jihua'* in Chinese), (3) 'Starlight Plan' (*'xingguang jihua'* in Chinese), (4) 'Happiness Plan' (*'xingfu jihua'* in Chinese) and (5) 'Sunset Plan' (*'xianguang Jihua'* in Chinese). These five plans are described in Table 5.1.

Table 5.1 Five Plants for the Distribution of Public Funds for Elder Care in China

Projects	Supported objects	Subsidy standards
Sunshine Plan	Nursing institutions at a municipal level	Provincial governments subsidise nursing institutions with more than 18,000 square meters and at least 500 beds the sum of 5 million RMB; and 3 million RMB to nursing institutions of more than 11,000 square meters, and with at least 300 beds.
Moonlight Plan	Comprehensive social welfare centre at a rural level	Subsidies are based on the scale of each institution's construction and the total number of beds. Elder care institutions with more than 200 beds and 7,000 square meters receive a subsidy of 2 million RMB; institutions with more than 100 beds and 4,000 square meters receive a subsidy of 1 million RMB.
Starlight Plan	Facilities for elder care services in the urban community	A new urban community day care centre with more than 30 beds and 200 square meters receives a subsidy of 500,000 RMB. A new-built or rebuilt elder care services centre in the urban community receives a subsidy of 100,000 RMB.
Happiness Plan	Facilities for elder care services in the rural community	The local government provides a mutual assistance nursing house (new-built or re-built) with a subsidy of 50,000 RMB.
Sunset Plan	Service facilities for rural 'Five-Guarantees' households	Local governments raise funds for the construction of elder care service facilities, and the central government offers an appropriate subsidy. Throughout the country, no less than 100 million RMB is allocated annually to rural areas by central government. The total investment from 2006 to 2010 was 5 billion RMB.

Data Sources: The above information is from the official website of China's Ministry of Civil Affairs and then summarised by the author.

Specifically, the public funding sources mainly come from the following four sources: central fiscal expenditure, local fiscal expenditure, public welfare lottery funds and charitable donations.

5.2.1 Central Fiscal Expenditure

Since the twenty-first century, the Chinese central government has invested in community or nursing institutions in order to establish a nationwide elder care service system. In 2001, the Ministry of Civil Affairs implemented a ‘Starlight programme of community elderly welfare service’ for 3 consecutive years, which involved a total investment of 13.4 billion RMB, and built 32,000 ‘Starlight aged homes’ across China that benefited more than 30 million elderly people (Wang, 2012).

In 2008, the National Development and Reform Commission and the Ministry of Civil Affairs invested 200 million RMB, respectively, to support the development of the rural ‘Five-Guarantees’ system so as to support the construction of community services; at the same time, the Ministry of Finance also arranged 1.8 billion RMB to subsidise public community health services (Ao, 2012).

During 2009 to 2011, the National Development and Reform Commission and Ministry of Civil Affairs invested 1.4 billion RMB in special funds from their central budget which supported the preliminary construction and development of elder care service systems throughout the country (Wang, 2012). Later, in 2012, the Ministry of Civil Affairs arranged another 3.1 billion RMB central-special funds to sustain elder care service facilities in local areas (National Ageing Work Committee Office, 2013b). In addition to this, since 2013, accumulated central-specialised funds have invested 3 billion RMB in the elder care systems of rural areas, and founded 100,000 happiness houses called ‘*xingfuyuan*’ in Chinese⁴³ (National Ageing Work Committee Office, 2013b; Yang, 2013).

⁴³ Rural Happiness House (‘*xingfuyuan*’ in Chinese) refers to a place that offers daily care to local elderly people in rural areas. The houses differ from nursing homes (‘*jinglaoyuan*’ in Chinese) which provide nursing and elder care.

From 2014~2015, the central government allocated 4.8 billion RMB of special funds to form a kind of ‘government-led investment fund’ for healthcare and the elder care service industries⁴⁴ (CNSTOCK News, 2014). Eight provinces were selected as pilot regions, including Hunan, Inner Mongolia, Jilin, Jiangxi, Shandong, Anhui, Hubei and Gansu, in order to carry out a market-oriented approach to promote the development of a local elder care services industry. In this way, central government, local governments, financial institutions and private enterprises jointly set up a funding platform using a market-oriented operational model, which supports the development of home-based, community and institutional elder care services (*ibid*).

During 2013~2016, the total public funding expenditure for elder care services came to 54.89 billion RMB (Table 5.2), which, as shown below accounts for a very small proportion of general public fiscal revenue.

Table 5.2 Central Financing on Elder Care in China (2013~2016) (billion RMB)

Year	General public fiscal revenue	Investment demands for elder care borne by the government	Public fiscal expenditure on elder care	Public welfare lottery funds on elder care		Total public expenditure
				central	local	
2013	12921	115.3	11.18	1.28	11.53	23.9
2014	14035	121	12.24	1.6	14.54	28.4
2015	15221.7	119.3	13.34	2	17.85	33.2
2016	15955.2	126.7	18.13	2.48	21.37	42

Data Sources: All general public fiscal revenue data derives from the ‘*Public Bulletin of the Development of Social Services*’ published by the Ministry of Civil Affairs in various years. The rest of the data originates from ‘*Research on the Investment Scale of Fiscal Funds for the Elder Care Service Industry in China*’ published by China’s Macroeconomic Forecasting Department (2015).

In the Thirteenth ‘Five-Year’ period (2016~2020), China will invest 290.8 billion RMB in the elder care service industry with an average amount of 58.16 billion RMB planned annually.

⁴⁴ More details of the government-led investment fund will be discussed in section 5.3.3.

5.2.2 Local Fiscal Expenditure (including Fiscal Transfer Payments)

Since 1994, the total amount of funds given to elder care from fiscal transfer payments has experienced a rapid growth trend. For example, nearly 5.2 trillion RMB was provided to elder care by the end of 2015 (Chart 5.1) – 23 times higher than in 1994. From 2013 to 2016, the accumulated amount of fiscal transfer payments that was invested in local elder care system was 55 billion RMB (excluding public welfare lottery funds and charitable donations) (Ministry of Civil Affairs, 2016d). However, if those funds are equally distributed over the four years, from 2013 to 2016, then the proportion of expenditure on elder care services is very small, when compared to funds spent on other areas, such as pensions and medical insurance.

There are special funds allocated from fiscal transfer payments to provide basic pension provisions, medical insurance and medical assistance. For instance, fiscal transfer payments towards China’s basic pension, medical care insurance and medical assistance were 566.6, 255.8 and 14.1 billion RMB in 2017, respectively (Ministry of Finance, 2017). However, elder care services have not been included yet in this general fiscal budget.

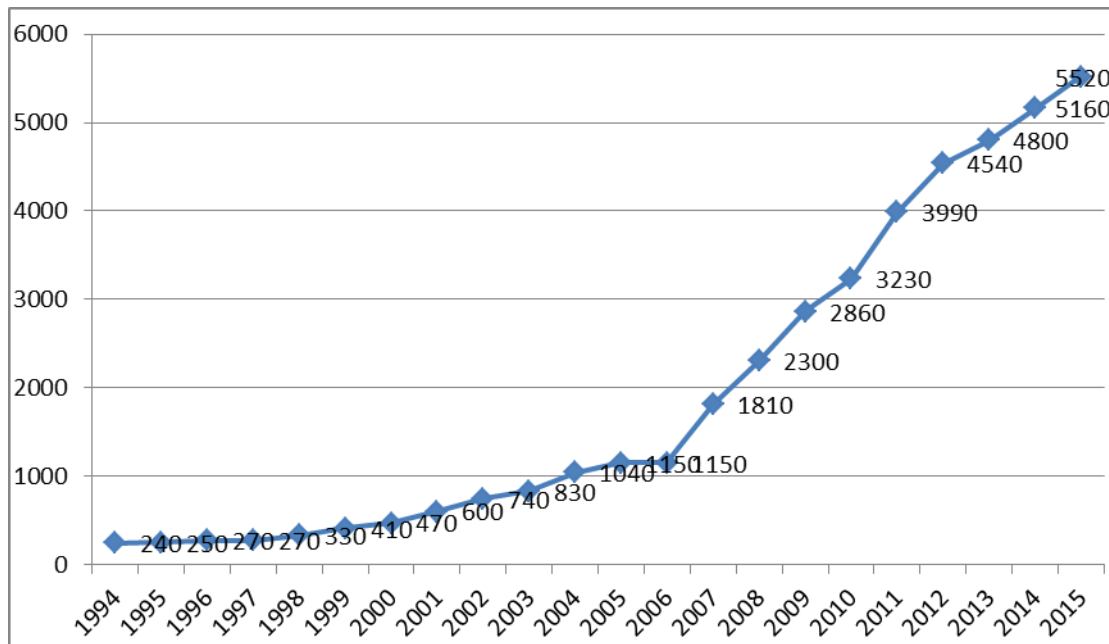


Chart 5.1 Amount of Fiscal Transfer Payment since 1990 (billion RMB)

Data Sources: The database of ‘Central Budget Summary of Fiscal Transfer Payment’ published by the Ministry of Finance in various years.

Compliant with Chinese ‘from top to bottom’ policy-making processes, local governments respond to national policy directives to financially support elder care services, and to stimulate the construction and operation of relevant elder care facilities. Formulated and implemented locally, incentives and subsidies vary substantially in numbers and procedures across regions.

Accounting for more than 95% of total investment, the local government plays an important role in the provision and funding of elder care services or facilities (China’s Macroeconomic Forecasting Department, 2015). Local funding sources invest in the construction and development of the local elder care services industry including infrastructure and relevant facilities. In addition they pay for old-age allowances and other subsidies for elderly people, or special groups of elderly people such as the very mature population (of people over 80 years), ‘Three-Nos’ and ‘Five-Guarantees’ elderly people. Various forms of subsidies coming from fiscal transfer payments have effectively enhanced opportunities for Chinese elderly people to gain from social and economic development.

In general, the reconstruction and expansion of any public nursing institutions are fully funded by local government. ‘Three-Nos’ and ‘Five-Guarantees’ elderly people are further covered by the MLSS System (Ministry of Civil Affairs, 2016b). Chart 5.2 shows that although the number of elderly people enjoying public elder care has gradually decreased, levels of subsidy have gradually increased.

Subsidies for private nursing institutions mainly consist of two parts: (1) local government offers a one-time construction subsidy, and preferential policies on land acquisition to eligible private nursing institutions⁴⁵; and (2) local government provides occupied beds in private nursing institutions with a monthly subsidy⁴⁶.

⁴⁵ National standards of eligible nursing institutions can be found in the official document ‘Measures of

Apart from the government’s direct investment in the construction of elder care service facilities, national policy directives have urged local governments to apply ‘subsidy preferential policy treatments’, such as tax exemptions, and reduced utility rates.⁴⁷

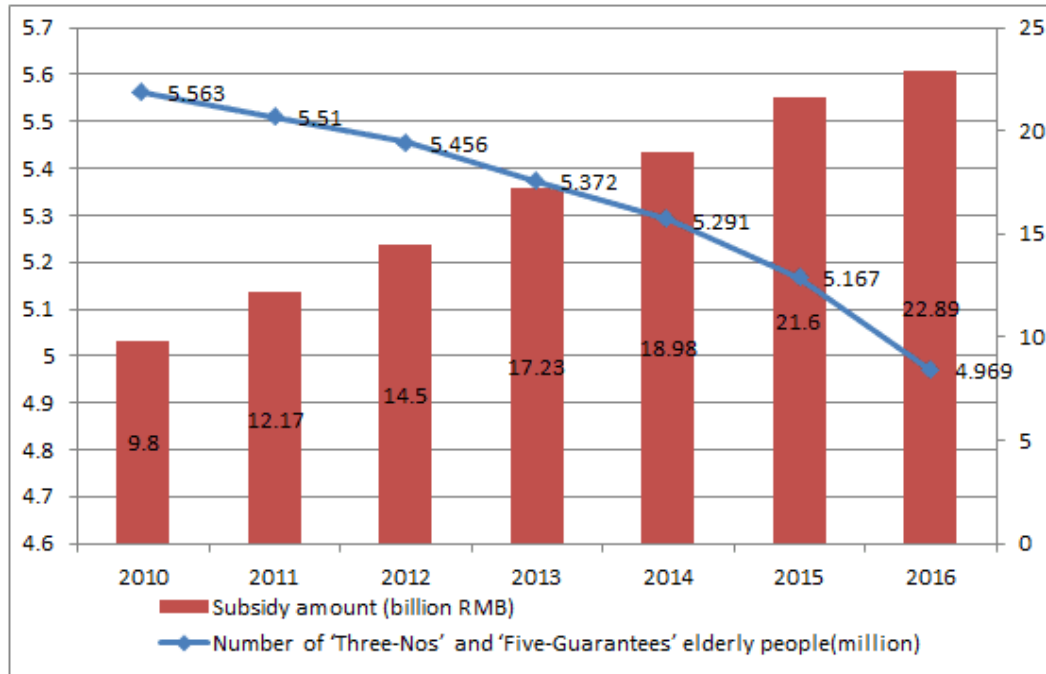


Chart 5.2 Number of ‘Three-Nos’ and ‘Five-Guarantees’ Elderly People and the Subsidy Amount

Data Sources: ‘Public Bulletin of the Development of Social Services’ published by the Ministry of Civil Affairs in various years.

5.2.3 Public Welfare Lottery Funds

The national welfare lottery is the official lottery of China, which has been issued in various forms, such as scratch cards, dual-coloured balls, and so on, since 1987. The national welfare lottery fund is non-tax revenue which is accumulated, distributed and administered by the central and provincial government (Ministry of Finance, 2007). According to a statement released by the Welfare Lottery Distribution and Management Centre, for the period of 1987~2016 welfare lottery tickets worth more than 1.52 trillion

Central Subsidizing Initiatives in the Construction of Elder Care System’ (National Development and Reform Commission, 2009). More information on the construction subsidy will be discussed in section 5.3.2.

⁴⁶ More information of the operational subsidy will be discussed in section 5.3.2.

⁴⁷ More information of preferential policy on tax and administrative fees will be discussed in section 5.5.

RMB were sold, raising 475 billion RMB for the national welfare fund. At the end of 2016, China's welfare lottery sales were 206.5 billion RMB, an increase of 2.47% annually (Xinhua News, 2017). Since 1987, 30%~35% of public welfare lottery sales were classified as public welfare lottery funds raised by the state. These funds aim to support the elderly, the disabled, those who have been orphaned, and those in poverty (*'fulao, zhucan, jiugu, jikun'* in Chinese). Wealth redistribution and accumulation can be realised under a public welfare lottery funding system. Although the growth of the national welfare lottery indicates that there is a strong demand for the lottery as an entertainment medium for the Chinese people, it has also demonstrated that state taxation is not the only financial resource available for the development and provision of all forms of social welfare.

According to relevant policy, 50% of public welfare lottery funds allocated by the central government are further divided as follows: 60% is invested in a social security fund, 30% in a specialized public fund, 5% in social welfare to be delivered by the Ministry of Civil Affairs, and 5% in public sports affairs allocated by the State Sports General Administration. The remaining 50% of public welfare lottery funds remain in local areas to develop elder care services (Ministry of Finance, 2006). Since 2011, an accumulated amount of approximately 100 billion RMB welfare lottery funds have been utilised at national and local levels to support the development of the elder care service industry (Ministry of Civil Affairs, 2016a). Since 2014, Ministry of Civil Affairs has promoted an initiative to use public welfare lottery funds to purchase social services, including staff training, research, social assistance, and so on, as well as exploring more innovative modes of funding, such as 'venture philanthropy' (*'gongyi chuangtou'* in Chinese)⁴⁸ to satisfy local residents' potential demands (Chinese State Council, 2014a). Thus, public welfare lottery funds have been applied as an efficient financial mechanism to supplement public budgets in raising funds for the development of public welfare projects, and improving the welfare of society as a whole.

⁴⁸ The term 'venture philanthropy' refers to charitable funds raised by applying venture capital and business management to achieve charitable aims.

According to current regulations, more than half of welfare lottery funds are used to support social security for the elderly, and launch welfare programmes on elder care. It has been predicted that standards of elder care will increase with the growth of the aged population (Chinese State Council, 2013). These welfare lottery funds are mainly invested in: training programmes for service and administrative staff working in nursing homes; social assistant programmes and rehabilitation treatment programmes covering different staff training needs in order for them to work with elderly people who are disabled or struggling with serious diseases; building and expanding social welfare institutions; and improving facilities for elderly people in urban or rural communities (Ministry of Civil Affairs, 2016a).

Considering the practicalities of population size and structure, and differing degrees of financial difficulty in different regions, the Department of Civil Affairs at provincial level distributes public welfare lottery funds to welfare projects in accordance with local elder care needs. For instance, the amount of welfare lottery sales in Guangdong Province is the highest when compared to other areas in China. According to distribution regulations, 50% of public welfare lottery funds will be allocated in Guangdong Province. Of this, 70% will be invested in social welfare projects as specialised funds, 6% as retained funds allocated by the Guangdong Provincial Department of Finance, and 24% as special funds allocated by the Guangdong Provincial Department of Civil Affairs. The Guangdong Provincial Department of Civil Affairs invests their 24% of special funds as follows: disabled people (20%), medical assistance (20%), especially in well-developed areas, and the remaining 60% into other areas, such as rural elder care services, urban home-based community elder care services, and so on (Feng, 2015).

5.2.4 Charitable Donations

Charitable donations are another public funding source for elder care in China, usually raised by donation, individually or collectively. In 2016, the National Foundation received 62.5 million RMB from charitable donations (Ministry of Civil Affairs, 2016d). As seen from Chart 5.3, the Ministry of Civil Affairs received public donations of 65.45

billion RMB by the end of 2015, and these funds enabled the formation of 30,000 charity stations and supermarkets⁴⁹ throughout the country. Thus, as a kind of non-tax revenue, charitable donation, together with the public welfare lottery fund, constitutes a source of financial support for the development of the elder care industry. However, in an interview with the director of the Hubei Province Department of Civil Affairs, the director pointed out that charitable donation as a public funding resource for elder care is proportionately very small, and it is difficult to calculate exact amounts of donations invested in elder care. As a consequence, the major funding resources for elder care in China are fiscal payment and public welfare lottery funds.

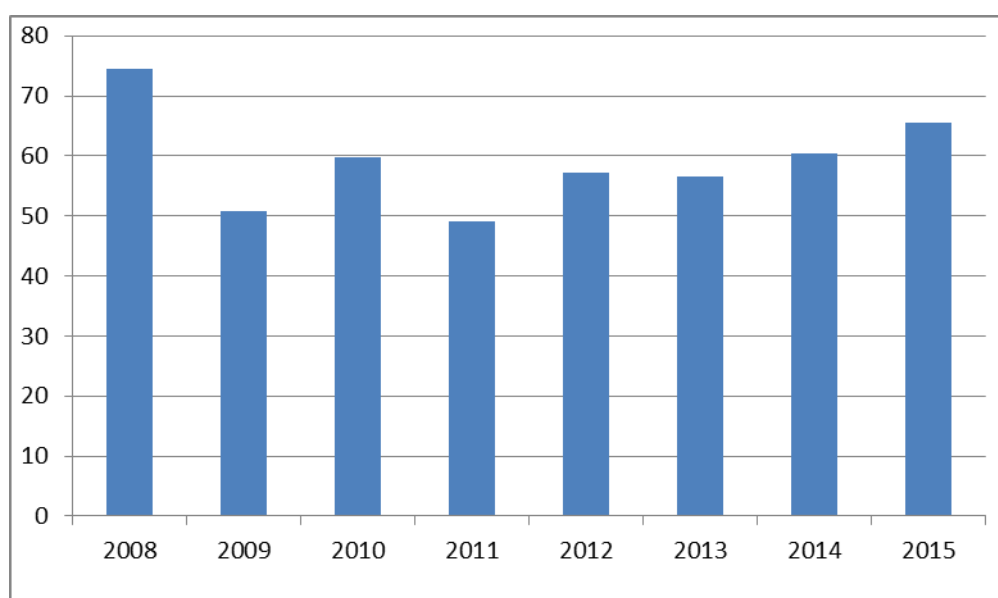


Chart 5.3 Charitable Donation Amounts collected by the Ministry of Civil Affairs (2008~2015) (Unit: billion RMB)

Data Sources: Statistical Bulletin of Social Services Development (Ministry of Civil Affairs, 2016d).

⁴⁹ ‘Charity station’ (*‘shehui juanzeng zhandian’* in Chinese) refers to a place that is established by the local government (e.g. the Bureau of Civil Affairs), which allocates by necessity (e.g., water, food, tents, etc.) to areas effected by poverty and disasters. ‘Charity supermarket’ refers to an institution that sorts out and sells donated clothes, and then donates their sales to welfare institutions for the disabled and unemployed. At present, Shanghai, Guangzhou, Shenyang, etc. have built charity supermarkets.

5.3 Mixed Funding Models: Varied Typologies of Public and Private Partnerships (PPPs)

This section mainly examines the varied typologies of PPP funding elder care services.

5.3.1 ‘Public Construction and Private Operation’ (‘gongban minying’)

Nursing institutions under the ‘Public Construction and Private Operation’ model are different from other public or private nursing institutions, the former are originally public nursing institutions (‘Social Welfare Houses’) fully funded by the government during their construction period, but subsequently operated and managed by non-profit organisations, private enterprises or individuals through a series of market economic practices. Due to fiscal pressure from the local government, ‘Public Construction and Private Operation’ becomes a useful method to conduct a market-based reform of public nursing institutions, which corresponds to governmental changes and political transformations focusing on the ‘Socialisation of Social Welfare’ in China. Specifically, the ‘Public Construction and Private Operation’ model is conducted as follows: first, local government has already built nursing institutions, then individuals or private sector companies operate and manage them following an invitation to tender; second, local government transfers the contracted management rights of existing elder care institutions to the management of private sectors or individuals. Generally speaking, this model has two distinctive characteristics: on one hand, it introduces market-based economic rules, including the reform and innovation of human resources management, operational management and the distribution of resources into the elder care industry; on the other hand, it changes the way government funds elder care, and applies opening bids to attract individuals or the private sector to contribute to the construction and management of nursing institutions, while local government only takes responsibility for inspection and supervision.

The operational mode of ‘Public Construction and Public Operation’ is presented in Figure 5.2.

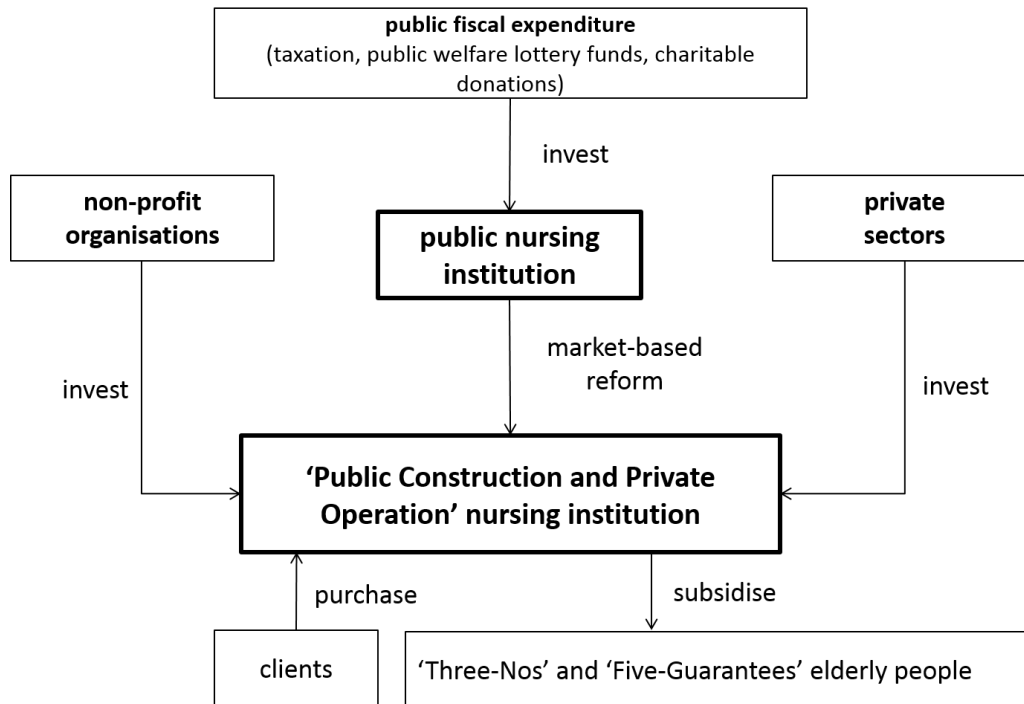


Figure 5.2 Operational Mode of ‘Public Construction and Private Operation’ in Elder Care

In December 2013, the Ministry of Civil Affairs (2013) issued a report – *‘Notification of Carrying Out the Pilot Reform of Public Nursing Institutions’* – which urged the government at all levels to select one public nursing institution in its own area to carry out a pilot market-based reform. As a result the first batch of pilot projects commenced in 2014. For instance, 18 public nursing institutions (containing approximately 8,000 beds) in Zhejiang Provincial underwent market-based reform through a public auction procedure (Zhejiang Provincial Department of Civil Affairs, 2014); Hubei Province selected 27 public nursing institutions (Hubei Provincial Department of Civil Affairs, 2014); in Beijing, 215 out of 400 public nursing institutions underwent the same reform, and any newly established public nursing institutions in Beijing will be directly operated and managed in a market-based way (Beijing Municipal Bureau of Civil Affairs, 2015); in Nanjing, more than 80% of public nursing institutions have gone through ‘Public Construction and Private Operation’ reform (Office of Nanjing Municipal Government, 2016); and in Jiangsu Province, more than 100 public pension

institutions and rural nursing homes launched the reform (People's Government of Jiangsu Province, 2016).

In the Thirteenth 'Five-Years' Period (2016~2020), China will launch the second stage of the reform in public nursing institutions, providing more subsidies and other financial support for these public-pilot nursing institutions. By 2020 the Chinese government plans to run 50% of all public institutions, in most provinces, by 'Public Construction and Private Operation' (Ministry of Civil Affairs, 2016e).

5.3.2 'Private Construction and Public Subsidy' ('minban gongzhu')

Under the 'Private Construction and Public Subsidy' Model, non-profit organisations, private companies or individuals can purchase/rent buildings and facilities for the purpose of providing elder care services in local areas, and operate these buildings and facilities in a market-based way. As seen in Figure 5.3, under this model, local governments reallocate their fiscal budget (taxation revenue, public welfare lottery funds and social donations) to establish a fund pool. Local governments not only invest in the construction of nursing institutions, but also subsidise services during their operation. Non-profit and private enterprise can use a competitive market-based approach in their management and price-making decisions. Clients can then purchase these elder care services according to their financial resources.

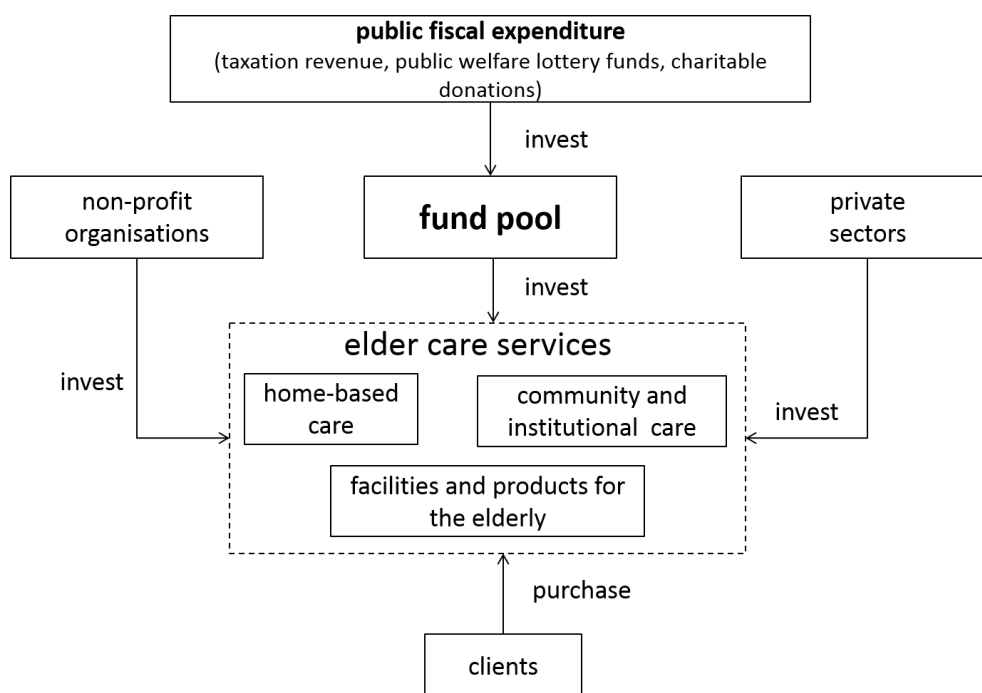


Figure 5.3 Operational Mode of ‘Private Construction and Public Subsidy’ in Elder Care

In 2013, the Ministry of Civil Affairs (2013) proposed the term ‘Three Subsidies’ (*‘sanbu’* in Chinese) to describe the funding policy of the elder care system in China. These three subsidies are: (1) a subsidy for services (People: *‘bu rentou’* in Chinese), which includes an old-age allowance to the very mature, and subsidises the services that are provided for elderly people; (2) a subsidy for the construction of nursing institutions (Bricks: *‘bu zhuantou’* in Chinese). Local governments are required to fund the costs of facilities, and the construction subsidy standard is usually according to the number of built beds; and lastly, (3) a subsidy for the operation of nursing institutions (Beds: *‘bu chuangtou’* in Chinese). The standard subsidy for beds is usually related to the number of used beds. In practice however, the ‘Three Subsidies’ Policy varies in different regions, largely dependent on a region’s economic condition and fiscal capacity. We now turn to view the content of these three subsidies in turn:

Subsidy for Services (People)

Types of subsidy under this category mainly consist of two parts: old-age allowance and service subsidy. First, *old-age allowance* refers to the subsidy that is given to people

who are over 80 years of age⁵⁰. At present, 27 provinces and cities have promoted the old age allowance policy. The standard subsidy amount ranges from 100 to 500 RMB/month/person. There were approximately 23.56 million people receiving this subsidy by the end of 2016. Second, the *service subsidy* aims to provide elder care services to elderly people who have a disability, and the very mature (over 80s) or elderly (over 70s) who have experienced the ‘loss of one child’⁵¹. At present, 20 provinces and cities have promoted the service subsidy.

Subsidy for the Construction of Nursing Institutions (Bricks)

In the construction stage of a nursing institution, the local government grants one-time construction subsidies to new or expanding private nursing institutions. In order to increase the effective provision of beds for elder care, the local government, at all levels, launched various subsidy standards ranked according to different local economic situations (Table 5.3).

In some cities, in order to increase subsidies, the district government also grants subsidies to local nursing institutions. For instance, in Beijing, the district government allocates the same amount of subsidy as the municipal government, so the subsidy standard equals 50,000 RMB/bed (Beijing Times, 2013). In some places, the local government subsidises the cost of rent as well. For instance, in Jing’an District of Shanghai, the district government pays 0.3 RMB/square meter/daily to private nursing institutions for three years. If an institution’s average bed area is over 30 square meters, the subsidy standard can be increased to 0.5 RMB/square meter/daily (Shanghai Jing’an District Government, 2013).

⁵⁰ More details of the old age allowance will be discussed in section 6.6.1.

⁵¹ More details of the service subsidy will be discussed in section 6.6.2.

**Table 5.3 Construction Subsidy Standard for Private Nursing Institutions
in Different Provinces and Cities in China**

Provinces and Cities	Operational Subsidy (RMB/bed)	Implementation Date	Provinces and Cities	Operational Subsidy (RMB/bed)	Implementation Date
Beijing	20,000~25,000	2011	Henan	1,500~3,000	2011
Tianjin	10,000~15,000	2011	Hubei	500~4,000	2012
Hebei	3,000	2010	Hunan	5,000~10,000	2011
Shanxi	1,000	2012	Guangdong	2,000~3,000	2011
Inner Mongolia	5,000~9,000	2011	Guangxi	1,000~3,000	2012
Liaoning	6,000~7,000	2011	Hainan	2,500	2012
Jilin	2,000~3,000	2011	Chongqing	2,000~4,000	2012
Heilongjiang	1,000~2,000	2012	Sichuan	5,000~10,000	2011
Shanghai	10,000~20,000	2011	Guizhou	3,000	2015
Jiangsu	5,000~10,000	2012	Yunnan	5,000~10,000	2011
Zhejiang	1,000~6,000	2011	Shaanxi ⁵²	2,000~3,000	2011
Anhui	1,200~5,000	2012	Gansu	5,000~10,000	2012
Fujian	2,500~5,000	2012	Qinghai	5,000	2010
Jiangxi	2,000	2011	Ningxia	5,000	2012
Shandong	2,000~8,000	2011	Xinjiang	1,000~5,000	2011

Data Sources: All data for the above construction subsidy standards are from the relevant governmental documents in different regions.

Subsidy for the Operation of Nursing Institutions (Beds)

The local government directly subsidises private nursing institutions at the operational stage. Due to differences in ageing trends and economic development levels the subsidy standard varies across different regions (Table 5.4).

⁵² Two provinces are the same in Chinese – ‘Shanxi’, but their Chinese characters are different: the one on the left column, above Inner Mongolia, is ‘山西’ (Shanxi) and the one on the right column, above Gansu, is ‘陕西’ (Shaanxi).

**Table 5.4 Operational Subsidy Standard for Private Nursing Institutions
in Different Provinces and Cities in China**

Provinces and Cities	Operational Subsidy (RMB/bed)	Provinces and Cities	Operational Subsidy (RMB/bed)
Beijing	300~500 RMB/month	Henan	50~150 RMB/month
Tianjin	1,050~2,250 RMB/annual	Hubei	360~2,400 RMB/annual
Hebei	100 RMB/month	Hunan	160 RMB/month
Shanxi	100 RMB/month	Guangdong	100~500 RMB/month
Inner Mongolia	100~300 RMB/month	Guangxi	100 RMB/month
Liaoning	200~400 RMB/month	Hainan	50 RMB/month
Jilin	1,200 RMB/annual	Chongqing	200 RMB/month
Heilongjiang	1,200 RMB/annual	Sichuan	1,200 RMB/month
Shanghai	100~200 RMB/month	Guizhou	200 RMB/month
Jiangsu	30~200 RMB/month	Yunnan	50 RMB/month
Zhejiang	100~200 RMB/month	Shaanxi	----
Anhui	1,200 RMB/annual	Gansu	----
Fujian	1,000 RMB/annual	Qinghai	30 RMB/month
Jiangxi	100 RMB/month	Ningxia	100 RMB/month
Shandong	360~720 RMB/annual	Xinjiang	100 RMB/month

Data Sources: All data for the above operational subsidy standards are from relevant governmental documents in different regions.

Apart from the numbers of occupied beds, additionally, differences in subsidy standards also depend on an elderly person's degree of disability. For instance, in Shanghai's Jing'an District, according to the regulations, the district government subsidises 200 RMB/month for each bed. If the disability degree of an elderly person is moderate or severe, subsidies add an extra 50 or 100 RMB respectively (Shanghai Jing'an District Government, 2014).

5.3.3 Elder Care Industry Investment Funds

Since 2014, the central government has allocated 2.4 billion RMB of special government-led investment funds for the elder care industry (i.e. elder care industry investment funds) in 8 provinces in China, including Hunan, Inner Mongolia, Jilin, Jiangxi, Shandong, Anhui, Hubei and Gansu. The total amount of investment was 4.8

billion RMB over two successive years (CNSTOCK News, 2014). This government-led investment fund is also viewed as the ‘Fund of Funds (FOF)’, because it can stimulate the ‘leveraging’ role of central fiscal expenditure via a market-oriented operating method which includes equity, guarantee, or acquisition (Wu, 2015). For example, this government-led investment fund can attract and encourage 5 times more social capital investment from financial institutions and other social organisations in order to jointly set up an elder care investment fund, called a sub-fund (*ibid*). At present, there are mainly three models that are under the operation of elder care industry investment funds:

The first model involves establishing a PPP fund (Fund of Funds: FOF). The local government (usually the Department/Bureau of Finance) authorises government investment platforms, financial institutions or other social investors to jointly establish and found a PPP funds management institution (Figure 5.4).

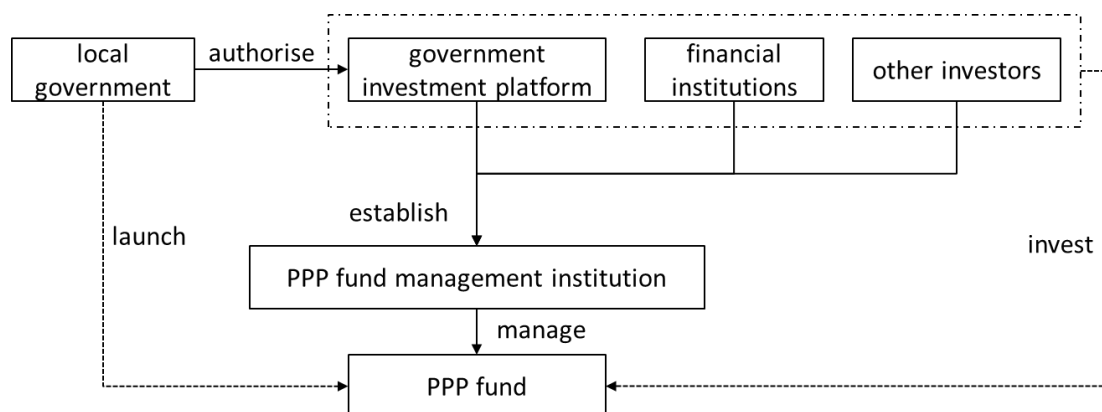


Figure 5.4 Structure of Elder Care Industry Investment Funds (1)

The second model establishes several different PPP sub-funds (Figure 5.5). For instance, in interview, the Director of the Hubei Provincial Department of Civil Affairs, stated that the government-led investment fund was 600 million RMB in 2014, and launched 5 different sub-funds on elder care, which attracted another 3 billion RMB of private capital into the elder care industry investment fund (the ratio between the

government-led fund to social capital was 1:5, and is run by five different fund management institutions).⁵³

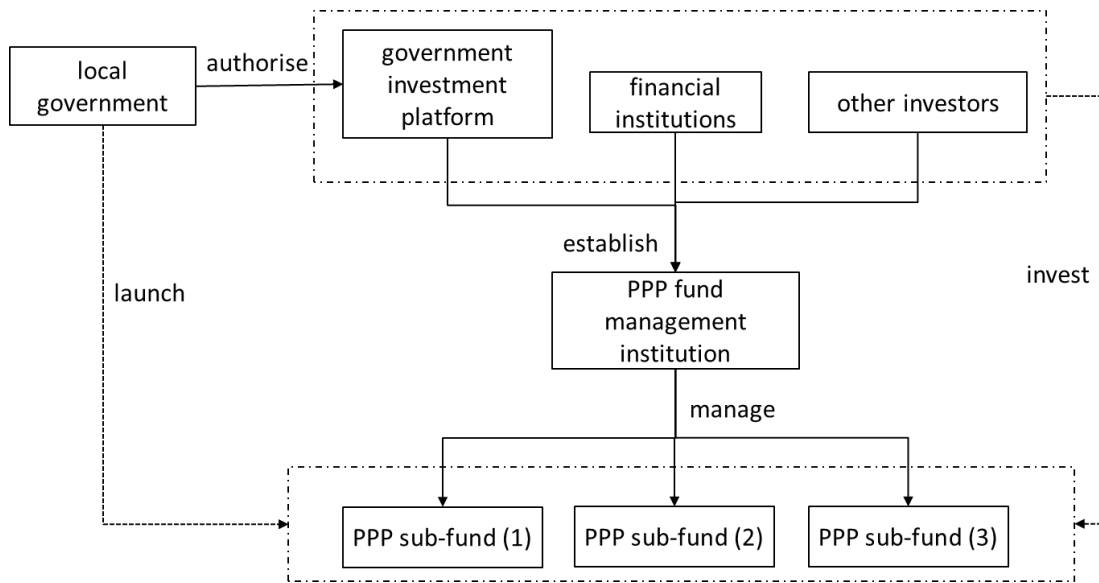


Figure 5.5 Structure of Elder Care Industry Investment Funds (2)

The third model establishes both a PPP fund and PPP sub-funds (Figure 5.6). Under this model, the total investment of the PPP fund is equivalent to the sum of investment of each sub-fund. The government will authorise different management institutions to manage PPP sub-funds respectively.

⁵³ More detail of elder care industry investment funds in Hubei Province will be discussed in section 7.4.

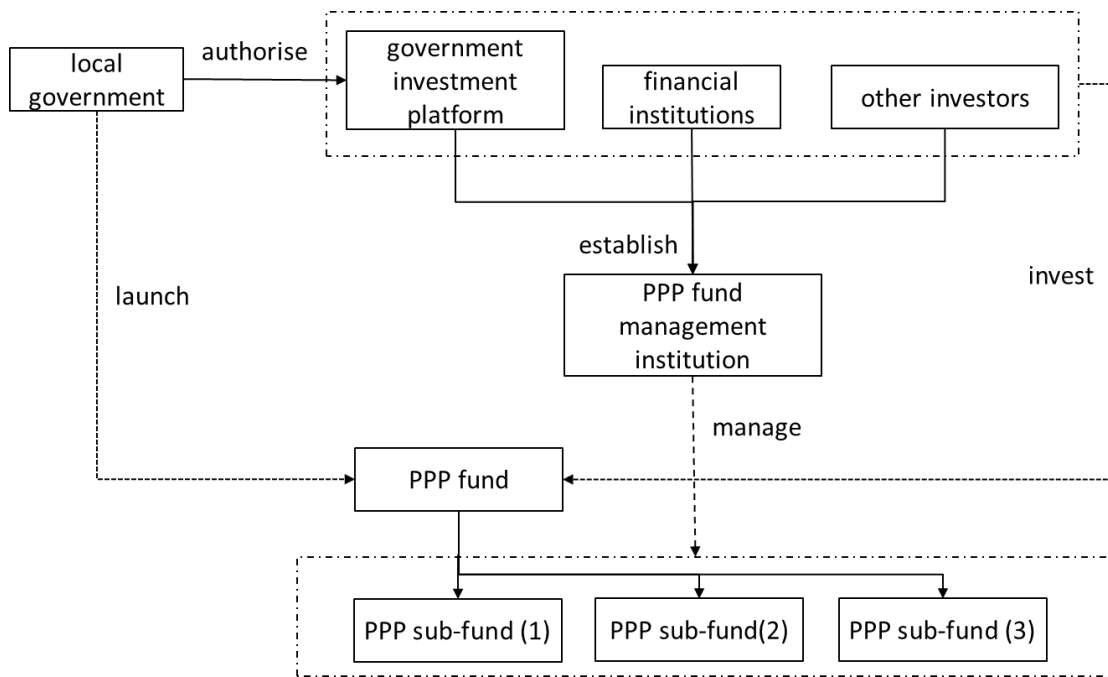


Figure 5.6 Structure of Elder Care Industry Investment Funds (3)

So far, in addition to the first 8 pilot provinces in 2014, other provinces/cities have launched elder care industry investment funds, as demonstrated in Table 5.5:

Table 5.5 Current Situation of Elder Care Investment Fund in Provinces/Cities in China

Province	Foundation date	Fund amount (billion RMB)	Duration of the fund	Investment method	Investment field
Hunan	2015.8	4.5	8	Equity	Healthcare, elder care
Hubei	2016.3	4.4	8	Equity	
Inner Mongolia	2017.2	1.34	8	Equity	Elderly department Elder care service centre
Jilin	2016.1	1	8	Equity	
Jiangxi	2015.12	3	8	Equity	Tourism for elderly, medical care, elder care
Shandong			8	Equity	
Anhui	2016.1	4.5	8	Equity	Elder care, medical care
Gansu			8	Equity	
Jiangsu	2016.3	2	8-10	Equity	Medical care, elderly resident
Shaanxi	2017.8	1-1.5	8	Equity Credit Joint investment	Rebuild and expansion of the nursing institutions, combination of medical care and elder care
Dalian ⁵⁴		1	8	Acquisition	Combination of medical care and elder care
Fujian	2015.1	6	8	Equity	Nursing institutions, community care, home-base elder care, medical rehabilitation

Data Sources: All data are from the government documents in each province. Some data were unavailable in these documents.

5.3.4 Other PPPs

Currently, the allocation of elder care institutions is quite uneven in providing quality and efficient facilities and services. In some private elder care institutions, the facilities are of a good standard, but the costs are relatively higher so many elderly people cannot afford private care, resulting in vacant beds and wasted resources; while in public elder care institutions, due to the limited number of beds at lower prices, elderly people usually have to wait for a bed for a long time, so a public elder care system cannot alleviate the pressure of elderly people's care demands. Therefore, the increasing

⁵⁴ Dalian is a coastal city in Liaoning Province.

demands for elder care and a shortage of care provision in China have led the Chinese Government to make the elder care industry an urgent priority. The government has taken major steps to facilitate private investment into the elder care industry over the last few years. The state is necessarily involved in the provision of elder care as a quasi-public good and this forms the foundation for a PPP model. In recent years, the Chinese government has increased efforts to promote PPP projects in elder care industry by actively creating a sound policy environment within which market-based provision can flourish.

5.3.4.1 Overall Situation of PPP Projects on Elder Care in China

In 2014, the first 30 results of PPP projects publicised by the Department of Finance only included one project on elder care: the expansion and rebuild of a ‘combination of healthcare and elder care’ project. By 2015, 10 out of 206 documented PPP projects were associated with elder care. By the end of 2016, the total number of elder care PPP projects was 283 – 89% of them were initiated and dominated by the government, while the other 11% were initiated by social or private organisations (Cooperative Centre of Government and Social Capital, 2016). As shown in Chart 5.4, since the first PPP projects started in 2012, there appears to be a dramatic increase during 2014 to 2015. This astonishing phenomenon can be attributed to a series of official directives issued from 2014 onwards, including one important report from the National Development and Reform Committee (2014) on speeding up the construction of healthcare and elder care service projects. It points out the necessity of encouraging social capital by applying a ‘... PPP approaches through sole proprietorship, joint venture, cooperation, joint operation, share participation and lease, etc., to participate in healthcare, elder care, sports facility construction and public sector reform’ (*ibid*).

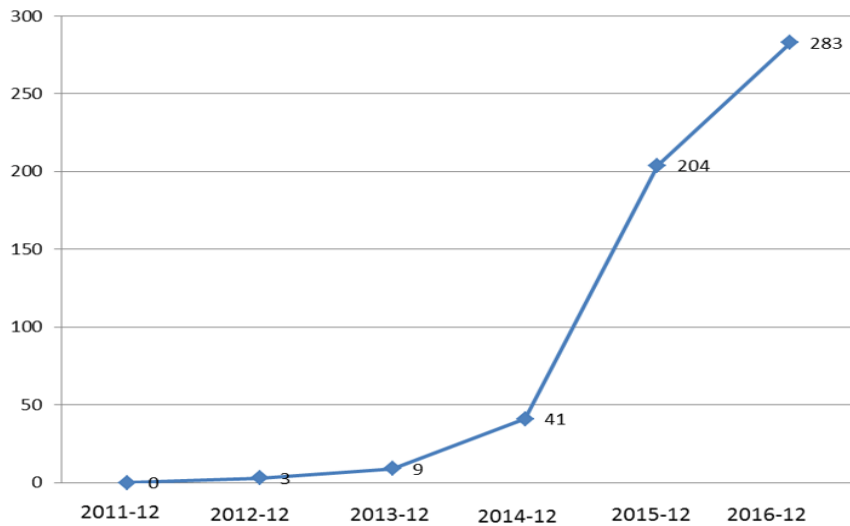


Chart 5.4 Number of PPP Projects on Elder Care in China (2011~2016)

Data Sources: The data is from the *National PPPs Information Platform Project Database*, established by the Cooperative Centre of Government and Social Capital (2016).

These 283 PPP projects were distributed in 24 regions. The top 3 regions were: Shandong province (50 PPP projects), Guizhou province (41 PPP projects) and Henan province (22 PPP projects) (Cooperative Centre of Government and Social Capital, 2016).

5.3.4.2 Funding Structure of PPP Projects on Elder Care

The funding model of a PPP project is operated by a Special Purpose Company (SPC) which is assigned by the government, and funded by the government and private companies. The general funding process of this model is seen in Figure 5.7:

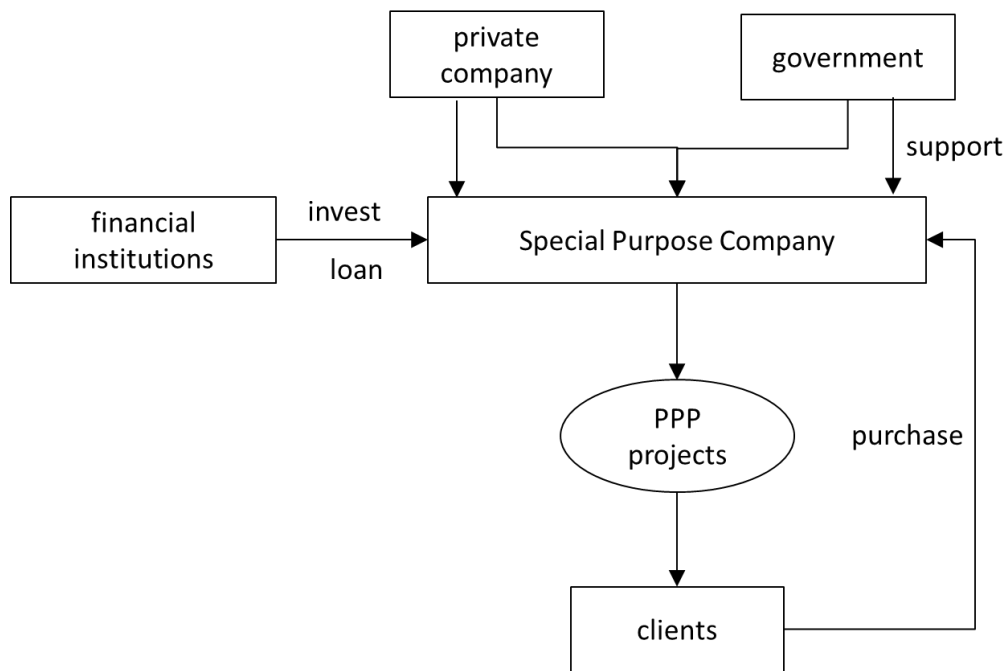


Figure 5.7 Funding Structure of PPP Projects on Elder Care

Government and private company fund a Special Purpose Company and make a concession contract. This Special Purpose Company is granted with a franchise right to design, build and operate nursing institutions. In order to ensure PPP projects will be funded, the government signs a contract with the banks or other financial institutions involved, taking account of the operating cash flow and the condition of the assets of the private company (Gan and Jiang, 2017).

5.3.4.3 Investments and Returns under PPP Projects

From the perspective of investment tendency (Chart 5.5), by the end of 2016, the amount invested in nearly half of these PPP projects was below 0.2 billion RMB – and only 46 were over 1 billion RMB.

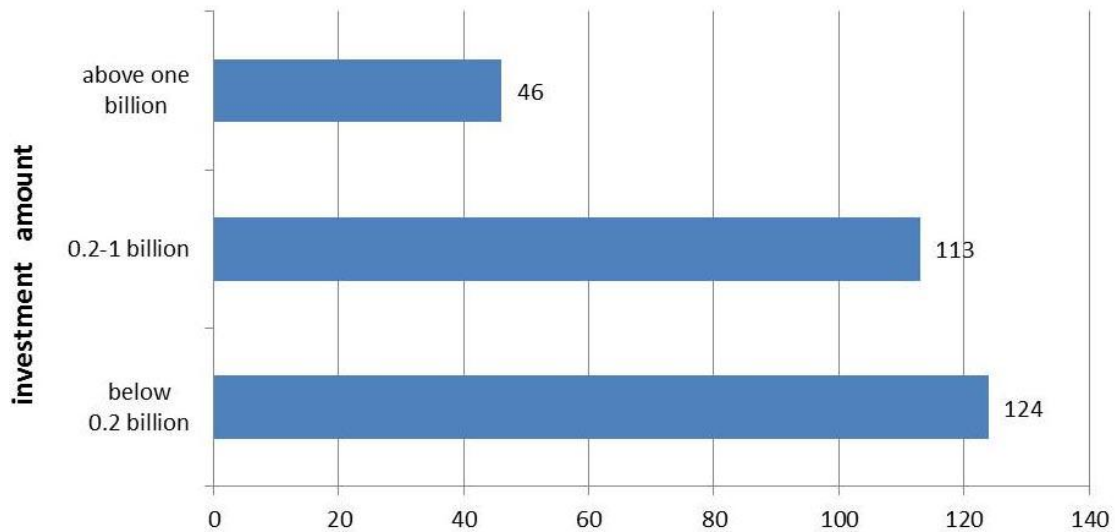


Chart 5.5 Investment Tendency of PPP Projects on Elder Care in China

Data Sources: The data are from the ‘National PPPs Information Platform Project Database’ (Cooperative Centre of Government and Social Capital, 2016), and filtered by the author.

The return mechanisms of PPP projects on elder care include three forms: government payment, user charge and viability gap funding (Chart 5.6). User charge, also the self-financing form, is the most popular form within PPP projects, accounting for 70% of PPP projects’ income and a total investment amount of approximately 105 billion RMB. However, when a user charge is inadequate and cannot deliver reasonable returns for social or private organisations, the government will provide additional funding to cover the viability gap, which affects nearly 27% of the PPP projects of this type. Only 3% of the PPP projects on elder care are fully funded by the government.

5.3.4.4 Investment Distribution in PPP Projects on Elder Care

The investment field of PPP projects is mainly distributed in the elder care industry (nursing institutions and elder care services), as a ‘combination of medical treatment and elder care’ (*‘yiyang jiehe’* in Chinese) and elderly apartments (Chart 5.7). 56.2% of PPP projects invest in the elder care industry (nursing institutions and elder care services), while 24.0% and 18.4% invest in a combination model and apartments.

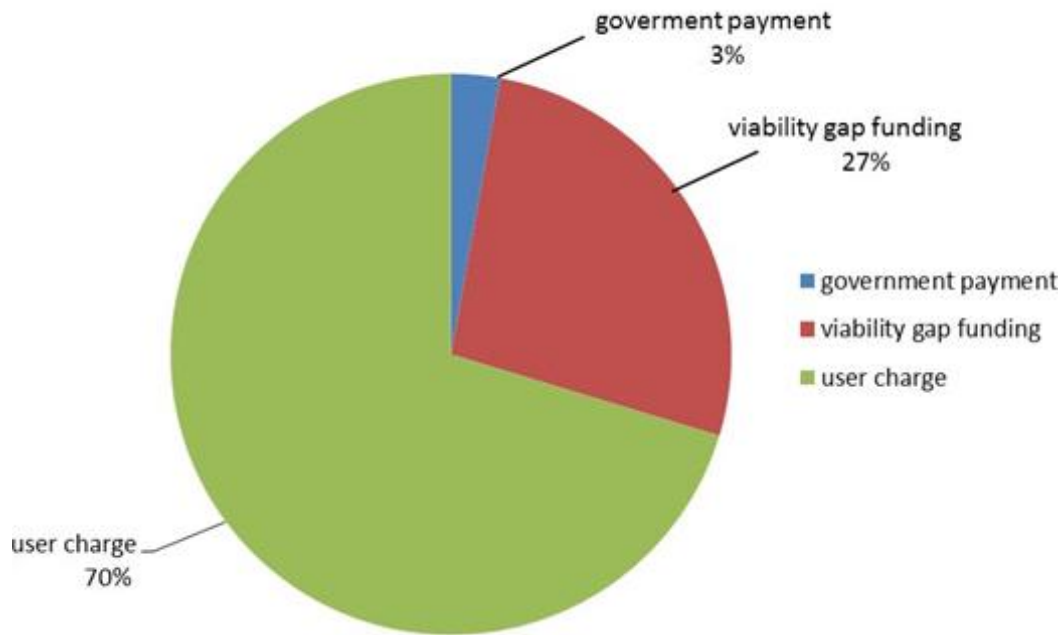


Chart 5.6 Return Mechanisms of PPP Projects on Elder Care in China

Data Sources: The data are from the 'National PPPs Information Platform Project Database', established by the Cooperative Centre of Government and Social Capital (2016).

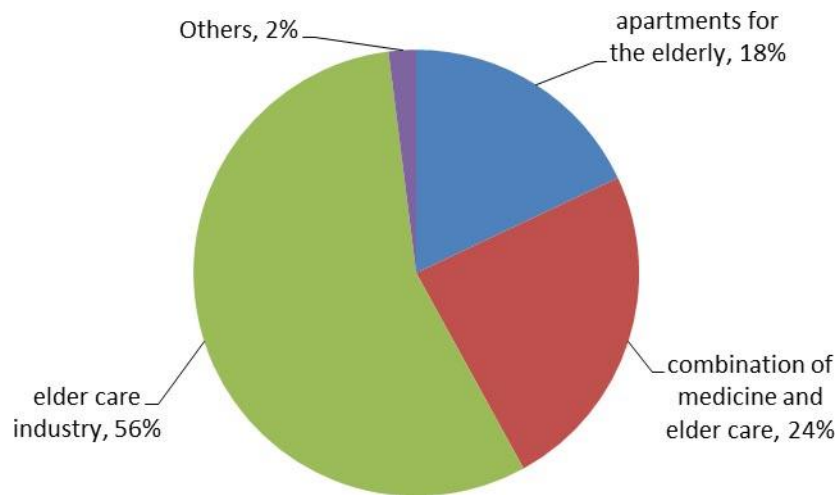


Chart 5.7 Distribution of Investment Field of PPP Projects on Elder Care in China

Data Sources: The data are from the 'National PPPs Information Platform Project Database', established by the Cooperative Centre of Government and Social Capital (2016).

5.3.4.5 Operational Models of PPP Projects on Elder Care

The most common operational models of PPP projects on elder care in China are summarised in Table 5.6. By the end of 2016 (Chart 5.9) over 83% of the operation models were BOT (Build-Own-Transfer) and BOO (Build-Own-Operation).

Table 5.6 Classification of Operation Models of PPP Projects on Elder Care

Classification	PPP models	Investor	Property right	Operation and maintenance	Contract period
Outsourcing	Operation & Maintenance (O&M)	Government	Government	Government and market	Generally no more than 8 years
	Management Contract (MC)	Government	Government	Market	Generally no more than 3 years
Franchise	Lease-Operate-Transfer (LOT)	Government and market	Government	Market	20 to 30 years
	Build-Operate-Transfer (BOT)	Government and market	Government	Market	20 to 30 years
	Transfer-Operate-Transfer (TOT)	Government	Government	Market	20 to 30 years
	Rebuild-Operate-Transfer (ROT)	Government and market	Government	Market	20 to 30 years
	Concession	Government and market	Government	Market	20 to 30 years
Privatisation	Build-Own-Operate (BOO)	Government and market	Market	Market	Permanent
	Buy-Build-Operate	Government or government and market	Market	Market	Permanent

Data Sources: Cooperative Centre of Government and Social Capital (2016).

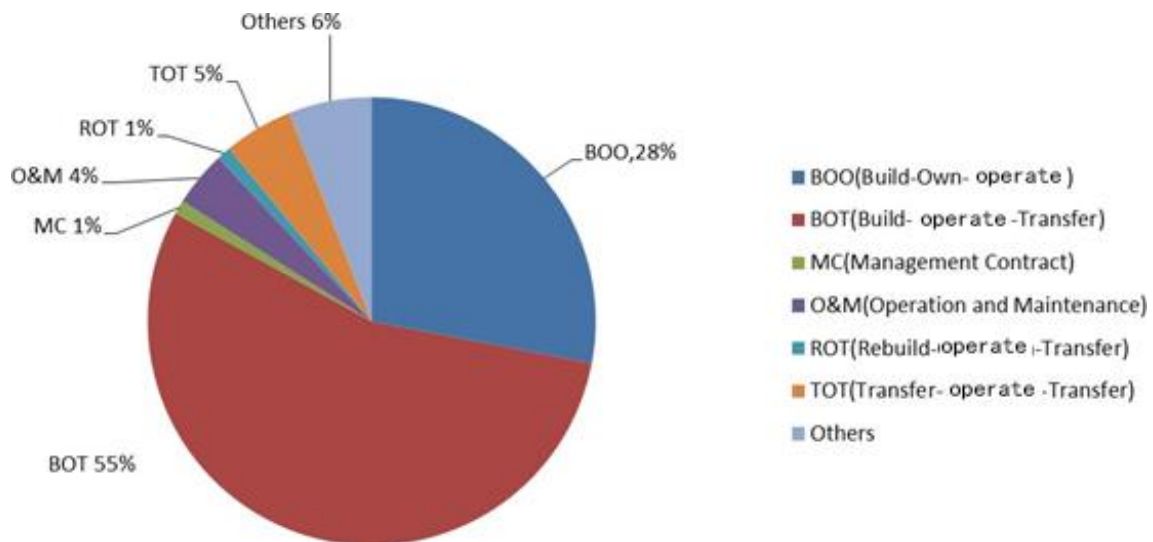


Chart 5.8 Distribution of Operational Models of PPP Projects of Elder Care (2016)

Data Sources: The data is from the 'National PPPs Information Platform Project Database', established by the Cooperative Centre of Government and Social Capital (2016).

An outsourcing model is usually a short-term project where the government applies a market-based approach, and purchases relevant social services from a social organisation or private company. For instance, in the O&M model, the government signs a short-term contract with a social organisation or a private company, and transfers their profitable business to them, including catering, laundry, social work and real estate management.

A franchising model can transfer operational responsibilities and risks from the public sector to the social or private sector. In this instance the government only plays a role as a public interest regulator. Take the BOT model, for instance, which refers to government provided land, and preferential policies for the social or private sector, which is responsible for the full or part construction of nursing institutions and, in addition, obtains a franchise over a certain time period. During the franchising period, social or private agencies operate independently and earn service income from their elderly users. In some cases, however, the government needs to subsidise these institutions to cover the viability gap if these social or private agencies do not have adequate profits. This model usually has a long operational period, from 20 to 30 years.

When the ownership period expires, the nursing institution is returned to the government.

In a privatisation model, the private sector will eventually own the property of the project. For instance, in the BOO model, there will be two approaches according to the nature of the private agency involved. If it is a profitable company, the government might offer cheaper land for building nursing institutions or permit a land asset mortgage, and then the company is required to fund the construction and operation of the nursing institution on that land. If the company is a non-profit organisation, the government will offer land without a land-transfer fee, and this non-profit organisation is required to fund the operation of its nursing institution.

5.4 Market Funding Model

In order to expand the private provision of elder care services, market funding approaches (usually via the development of real estate for elder care) operate as Private Finance Initiatives (PFIs). At present, there are an increasing number of large scale private enterprises, such as real estate and commercial insurance companies, who engage with the elder care industry in a business capacity. This indicates their primary motivation is to make a profit. The participation of private enterprise also helps to solve the elder care system's financial difficulties. Two typical market funding models are illustrated in the next two subsections below to expand on these points.

5.4.1 Commercial Old-Age Real Estate Model

Commercial old-age real estate ventures are elder care facilities built by real estate developers. 'Elder Care + Real Estate' is the latest model in the construction of elder care in China. By integrating the real estate industry with other related industries, it becomes possible to combine the development of real estate with elderly people's lifestyle needs, and most importantly to provide the elderly with a comfortable residence (Wang, 2011). Thus, the commercial old-age real estate model can create

more residential value and commercial benefits than a traditional real estate model. The differences between ‘commercial old-age’ and ‘traditional residential’ real estate are given in the follow table:

Table 5.7 Differences between Traditional Residential Real Estate and Old-age Real Estate

	Traditional residential real estate	Commercial old-age real estate
Funding sources for construction	self-collected funds; bank loans; advance payment of house property	self-collected funds; bank loans; insurance funds; land concessions; government subsidies for beds
Profit points	sale or possession of property	rental; property sales; product sales; property services fee; care service fees
Sales models	mortgage or one-time payment	reverse mortgage; membership; rental; property sale
Facilities and services	provision of home safety, daily property management and services.	the real estate developers can provide various facilities and services, such as a daily care centre, elderly university, rehabilitation centre, etc.
Products planning	business or residence	healthcare centre, elderly university and other special supporting facilities
Property use	residence, investment	elder care

The commercial old-age real estate model takes real estate for elder care as a long-term funding project which introduces business operational ideas and community management ideas into elder care provision, and creates comprehensive projects on healthcare services, universities for the elderly, hotels, restaurants and supermarkets, etc.

At present, there are over 20 medium and large real estate enterprises that have been announced and have publicised their entry into the old-age real estate industry across China, including Vanke (*wanke*), Poly (*baoli*), Greentown (*lvcheng*), and Ocean (*yuanyang*) (Zhao, 2014). For instance, China’s largest elder care institution – *xiaoxianfang* – was built by Heng’an, Vanke and Greentown real estate enterprises. However, as these real estate enterprises are profit-driven, so they develop real estate in

order to obtain cheap land. They pursue profit, rather than public welfare. In some extreme cases, in order to achieve performance targets set by the central government, some local governments encourage such real estate enterprises to build luxurious nursing institutions. As construction costs for luxury accommodation is high, this results in higher service costs and further results in a large number of empty beds as most ordinary elderly people may not be able to afford them.

5.4.2 Commercial Insurance Company Old-Age Model

As one of the main participants in the elder care funding system, insurance companies contribute to elderly people's income security and guarantee elder care funding. For a long time, there has been a distinctive division between the elder care funding system and the elder care service system. Insurance companies, although they have sufficient funds, might not invest in the provision of elder care services over the long run, because sustaining a return is always their principal concern. With government support, however, insurance companies enter the elder care industry and launch funding models that offer good returns on their investment, for example, the 'Sustainable Healthcare Retirement Community' model.

In September 2010, the Chinese Insurance Regulatory Commission (2010) issued *'Interim Measures for the Investment in Real Estate by Insurance Funds'*, which proposes that insurance funds invest in the real estate industry related to elder care, and medical care, via different measures, such as debt, equity or property rights. At present, Hezhong Life Insurance Company, Taikang Life Insurance Company, China Life Insurance Company, Xinhua life Insurance Company, Taiping Life Insurance Company and many other life insurance companies plan to establish their own elder care communities. For instance, Hezhong Life Insurance Company has built elder care communities in several big cities, such as Wuhan (the capital city of Hubei Province), Shenyang (the capital city of Liaoning Province), Nanning (the capital city of Guangxi Province) and Hefei (the capital city of Anhui Province). Included here, the Elder Care Community in Caidian District, Wuhan, was the first elder care community to be invested in by an insurance company. The manager of Hezhong Elder Care Community

(Wuhan Branch) stated in an interview that Hezhong Life Insurance Company bought a 2,000 Mu (1 Mu = 666.67 square metres) piece of land in the Caidian District, Wuhan, and received a land preference policy from the local government as it developed this by building an elder care community. Thus, it only paid 800,000 RMB/Mu, much cheaper than the local market price of 20 million RMB/Mu. In the first construction project, it developed 480,000 square meters, and provided 2,005 rooms and 4,000 beds. By their third project, the company had already expanded to 30,000 beds and a total investment of 3 billion RMB.

Elder care communities built by insurance companies can extend business to industry chains associated with the elder care industry; connecting the upstream (pension, healthcare insurance, retirement financial plans and other financial industries) to the downstream (medical care and daily care, etc.), so that the elder care community business can provide comprehensive support for the elderly.

5.5 Indirect Funding Models for Elder Care in China

No matter what kind of provision is put in place for elder care, profit margins can be very small from the perspective of service suppliers, especially as they are faced by large numbers of low-income and low-consumption elderly people. In these respects, service suppliers save some costs in tax, land and bank loans in the process of constructing a nursing institution – according to a series of preferential policies regarding taxation, land leasing and credit loans, etc.

5.5.1 Preferential Taxation Policy

There are different tax policies regarding the construction and operation of elder care. First, nursing institutions do not pay value-added tax on their services income (Ministry of Finance, 2016). Second, contributions to business income tax can be reduced under two circumstances: (1) non-profit nursing institutions do not pay business income tax; and (2) other nursing institutions can deduct half of their services income from their

taxable income. Third, nursing institutions do not pay building tax, urban land use tax and farmland conversation tax, that is, if they use their own buildings and land to provide elder care services. Fourth, if nursing institutions receive donations from individuals or other social organisations, they can be proportionally deducted from the amount of income tax due (Chinese State Council, 2013).

In addition to the four tax benefits above, local government allows other preferential policies for nursing institutions. For instance, utilities – such as water, electricity, gas, heating, telephone, television and internet network and other facilities – are paid at a lower rate according to residential criteria, rather than business criteria. Therefore, nursing institutions save operating costs thanks to preferential tax policies (*ibid*).

5.5.2 Land Leasing/Grant Policy

The land leasing and grant policy for elder service facilities are the most basic conditions required for the development of elder care real estate and the elder care service industry. There was no single document on land use and facilities for elder care services until April 2014 when the Ministry of Land and Resources (2014) issued ‘*Guided Suggestions on Elder Care Facility Land Use*’, which introduces nine aspects of land use for elder care service facilities, including: scope, purpose, planning, systematic management, and supervision. In China, all land is public, so it is either owned by the state or collective organisations, and the provisional models for land use are mainly transfer, bid, auction and negotiation. The 2014 report consists of three parts. First, it clearly defines land specification, and provides guidelines that distinguish the usage of land for non-profit nursing homes compared to commercial nursing homes. In order to encourage the private sector to operate elder care institutions, local government offers reasonable rent leasing standards for land or buildings. Second, making full use of idle land or buildings and developing land into elder care facilities is encouraged by local government, with land for elder care provision being considered a priority in terms of land leasing. For instance, if existing idle land or buildings in a factory, school or community is transformed into a non-profit nursing home that operates for more than one year, annual rent cannot be increased for five years. If the private company later

changes their usage of the land to a specification other than elder care provision, then, it has to pay an extra land fee. Third, if the private sector uses idle land or building for a commercial purpose, they should only use it to offer elder care or other relevant services. If they transfer the land or building to provide services unrelated to elder care, they need to initiate a lease/grant transfer procedure which comes at a cost because they cannot change the usage of the land specification unless they pay a land premium rent (i.e. land-use fees).

A conflict of policy incentives emerges in the allocation of land for new construction purposes. The majority of private-sector elder care facilities are registered as not-for-profit entities in order to gain tax exemptions. Due to the scarcity and escalating cost of land and economic growth targets, local governments tend to favour for-profit organisations when approving land deals, rather than non-profit entities that do not generate tax revenue (Feng, Liu, Guan and Mor, 2013).

5.5.3 Credit Funding Policy

Credit funding for the elder care service industry generally comes from commercial banks or other financial institutions. No matter what kind of nursing institution, over half of an institution's financial resources are from bank loans. For instance, if nursing institutions are formed from PPP projects, it will be easier for them to get loans from banks through a government-backed guarantee. If nursing institutions are built by real estate developers, it also will not be difficult to get bank loans, because real estate projects usually result in a high profit return and stable cash flow. However, with the transformation of China's commercial banks to an independent type of corporate business, banks are likely to become more cautious before lending money to nursing institutions. For instance, asset disposal and profit distribution in non-profit nursing institutions might be restricted according to the relevant bank's policy, so nursing institutions might not obtain loans very easily. The same situation exists for other small-scale nursing institutions which cannot guarantee stable and profitable income.

Thus, the Ministry of Civil Affairs and the China Development Bank (2015) published a joint statement on developing financial support for the construction of the social elder care service system. In this document, the China Development Bank proposed issuing loans to the following projects: (1) community home-based elder care facilities; (2) home-based service networks; (3) nursing institutions; (4) training bases for elder care service staff; and (5) other elder care industry projects, including private enterprises that offer services, and related products, to the elderly. The maximum duration of these bank loans is 15 years, but they can be extended another 3 years. Additionally, the bank also proposes providing a certain proportion of credit support to the elder care industry annually, or associating this support with government credit, which not only reflects the commercial bank's support for the construction of social welfare facilities, but also makes full use of financial resources to alleviate the enormous funding pressure experienced by nursing institutions.

In addition, another innovative funding model – special bonds – has been introduced. According to the policy '*Guidance on Issuing Special Bonds for Elder Care Industry*' (National Development and Reform Commission, 2015), the private sector can issue special bonds to the public, and use the capital to launch elder care projects, including: purchasing land and relevant facilities (existing public buildings, such as schools and hospitals); also rebuilding and expanding current nursing institutions. For instance, Zigui Investment Company (in Zigui, Hubei Province) issued special bonds for elder care. The total amount of bonds is 800 million RMB, including 400 million RMB to be used in the establishment of a combination of medical and elder care, and the rest dedicated to its operation and management (National Development and Reform Commission, 2017).

5.6 Summary

This chapter has demonstrated collaborations created by national/local governments and the private and social sectors to promote the provision of elder care facilities and

support for China's fast-growing elderly population. From the funding models provided above, we can see that new initiatives are commonly based on government policies to fund service supply (provision) – such as increasing the numbers of beds for elder care and building more nursing institutions. Wealth redistribution is secured through the use of public funds to support the basic security of the 'Three-Nos' and 'Five-Guarantees' elderly people, while other elderly people in economic difficulty cannot enjoy the same benefits and they have to fend for themselves. Thus, China's elder care funding system demonstrates is only partially redistributive. Moreover, these new initiatives have been mostly promoted in larger cities (usually capital cities) and richer provinces where local fiscal conditions and business acumen are better developed, and where more resources are available to meet elder care needs. In such cities, richer populations are also capable of paying for elder care. The picture is very different in rural areas where the elderly have less means to make such payments, and where commercial ventures find the prospect of creating a viable industry less attractive.

As shown above, with the exception of pure state-funded nursing institutions, consumers must pay for at least a proportion of the care that they receive. The ways in which governments have sought to increase the retirement incomes and reinforce the consumption of elder care is therefore a pertinent question. The following chapter addresses policy initiatives designed to alter the current situation where there is deficient demand for elder care. This draws our attention to the incomes of the elderly in order to ascertain their capacity to pay for elder care. In addition to the direct and indirect subsidies provided by government to foster service provision, policy has also paid extensive attention to retirement income, to enable the elderly to pay for the services they need, thereby promoting a viable elder care industry by raising public demand. The nature of these policies and an assessment of their weaknesses and strengths is provided in the following chapter.

Chapter 6 Financial Resources: the Ability of Elderly People to Pay for Elder Care Services

The previous chapter examined the elder care funding system, and addressed government policies to create an elder care industry by stimulating the extension of elder care provision via financial incentives to the private companies. This chapter addresses the initiatives taken to raise the retirement incomes of elderly people and stimulate their ability to pay for elder care services. According to statistics released by the Chinese Ageing Scientific Research Centre (2015), over 24 million people were over 80 years old, and over 40 million elderly people were disabled or semi-disabled by the end of 2014. It was estimated by Li Zhihong, the vice director of the National Ageing Work Committee Office, that this number will rise to 29 million and 42 million respectively by 2020 (Xinhua News, 2016). Contemporarily, China has an increasing aged population who experience difficulties in living independently due to chronic disease and disability, health problems that are rising. It is unrealistic to leave such elderly people to rely on their children for LTC. Therefore, relevant policies have been issued concerning increases in elderly people's retirement incomes, their demand for elder care services, and satisfaction with the services that they can afford. However, whether this additional retirement income and other old-age benefits for elderly people can provide cover for meaningful payments towards elder care services is the first of two main issues examined in this chapter. The other issue concerns whether these elderly people's actual purchasing power can raise their consumption of elder care services.

This chapter is divided into seven sections. Section 6.1 briefly introduces the current social insurance system for the elderly in China, and the overall structure of financial resources provided for the elderly by addressing insurance benefits and alternative

old-age benefits for the elderly in China. Section 6.2 examines and assesses the pension system for the elderly in China, and the basic medical insurance system is explored in section 6.3. Section 6.4 reviews both public and private LTCI schemes that have been promoted in recent years, and which have involved, to varying degrees, collaborations between commercial companies and the government in the financing of elder care. I discuss the potential and pitfalls of this funding model, then examine two other benefits for elderly people: social assistance (MLSS system and rural ‘Five-Guarantees’ system) in section 6.5, and universal financial support (old-age allowance and service subsidy) in section 6.6. Section 6.7 then examines the differences in financial conditions between urban and rural elderly populations, and analyses the reasons behind the low purchasing power of many elderly people. Finally, the chapter summarises the overall patterns of supply and demand for elder care services in order to assess whether, by raising the purchasing power of elderly people, Chinese policy is succeeding in creating a viable industry in this sector.

6.1 The Structure of Financial Resources for Elderly People in China

Corresponding to China’s level of socio-economic development and an increasing aged population, the Chinese government regards the establishment of an elderly social security system as a priority task. Its undertakings for the aged population largely comprises of focusing on gradual improvements to form a comprehensive social security system involving the government, society, the family and the working individuals together to guarantee elderly people’s basic standard of life. China’s social security system is mainly categorised into three parts: social insurance, social assistance and social welfare. These three parts are based on guidelines issued by the central government, while its administration and specific logistics are managed by the local authorities. A comprehensive national framework of social insurance is codified in the ‘*Social Insurance Law*’ (National People’s Congress, 2011), which includes five components: pension, medical insurance, unemployment insurance, work-related injury

insurance and maternity insurance. Together with another mandatory housing fund, this system is also called ‘Five Insurances and One Fund’ (*wuxian yijin* in Chinese). In general, the ‘Five Insurances and One Fund’ scheme for Chinese working people/residents is taken out of their income on a mandatory basis; contributions toward the ‘Five Insurance and One Fund’ for employees and enterprises accounts for over 16.5% (employee) and over 40.0% (employer) of an employee’s total income, respectively. This involves an incredibly high labour on-cost, and such additional obligations discourage employers from taking on more people or, by employers’ refusal to contribute to the scheme, leave employees to pay into the fund themselves on behalf of their company. All contributions ensure a basic social right and living standard for all Chinese citizens. As basic pension and medical insurance alone cannot satisfy a financial demand for elder care, so other methods are used as financial resources for elderly people to pay for their elder care services. These financial resources can be grouped into the following five categories:

- *The pension system.* A pension is the main source of income for elderly people in China. The pension system currently in place has three pillars: The first pillar is a basic pension which contains four parts according to different groups of people (employees working in urban enterprises, those working in the public sector, urban residents and rural residents). The second pillar – an occupational pension – only covers a minority of urban employees. Lastly, commercial insurance products for old age are considered to be the third pillar, which is on a voluntary basis for anyone who has extra income to purchase private insurance products, such as personal depositing insurance and the ‘House-for-Pension’ Scheme.
- *Medical insurance system.* Getting access to prompt medical care is also important to elderly people in China. Public medical insurance covers nearly all elderly people, and has two components: a basic medical insurance system and a new rural co-operative medical system.
- *Long-term care insurance (LTCI) scheme.* Under this category, public LTCI is considered as social insurance, and has been launched in some pilot cities since

2016. Some private insurance companies can offer commercial LTCI products to anyone who purchases them. In addition, another new initiative called policy-based LTCI has been established since 2016, which involves coordination between each private company and the government.

- *Social assistance.* This contains a Minimum Living Standard System (MLSS) for ‘Three-Nos’ elderly people and a Rural ‘Five-Guarantees’ Support System for ‘Five-Guarantees’ elderly people.
- *Universal financial support.* This financial support is known as a ‘subsidy for the people’ (*bu rentou*) under the ‘Three Subsidies’ (*sanbu*) policy and involves a wide amount of cover for all groups of elderly people. Two main forms exist under this category: an old-age allowance for elderly people over 80 years; and a service subsidy which is usually applied on an ‘elder care card’ for elderly people over 65 years, which can only be used for elder care services.

The categories of all these financial sources above are presented in the Figure 6.1:

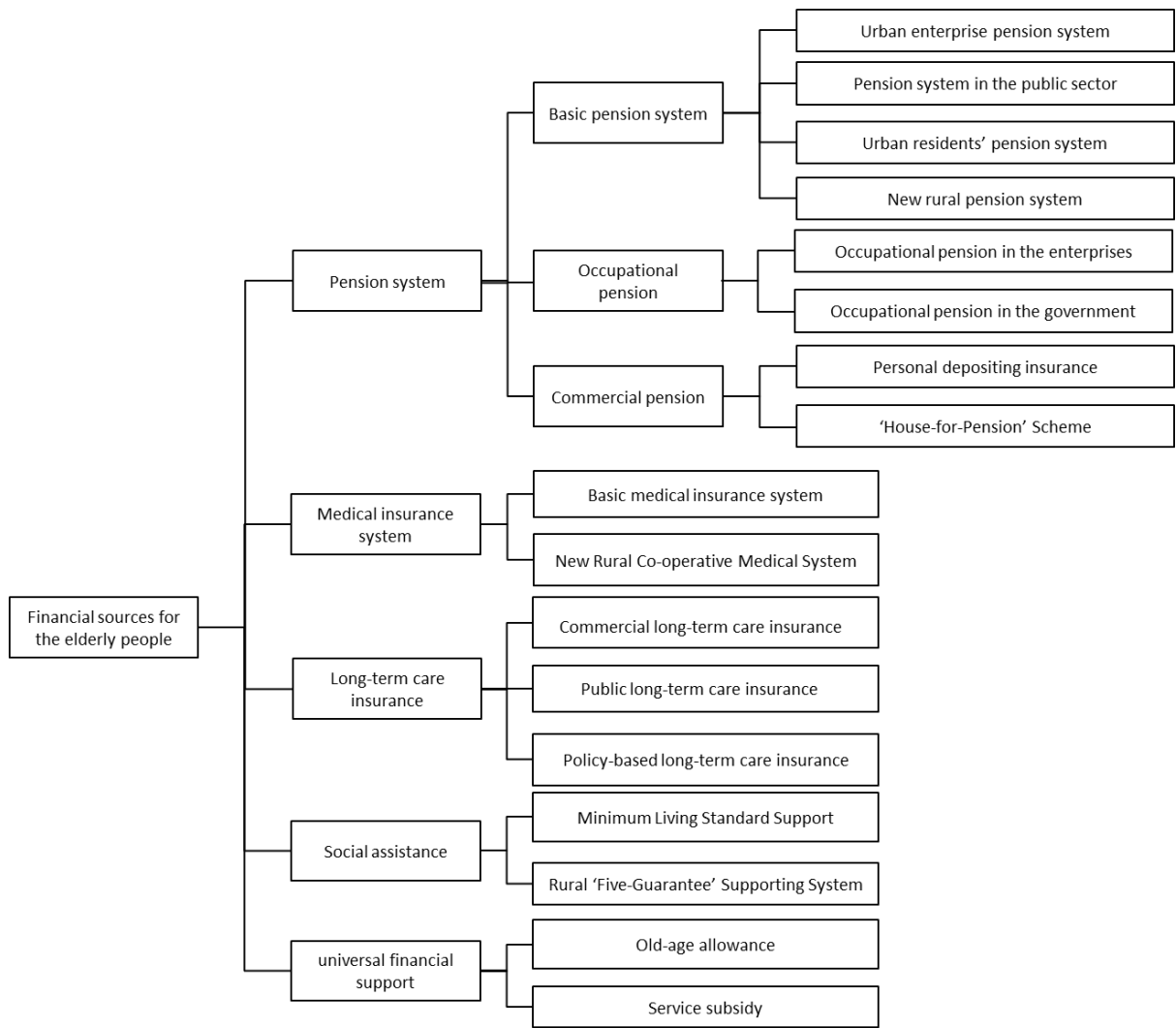


Figure 6.1 Categories of Financial Sources for Elderly People in China

The following section will examine these five financial sources in detail.

6.2 The Pension System in China

China's multiple level pension system includes: a basic pension, occupational pension (enterprise supplementary pension) and commercial pension.

6.2.1 Basic Pension System

At present, a basic pension is the primary financial resource for elderly people in China.

Pension programmes were first set up for the urban and formal sector, and then

gradually expanded to the rural and informal sectors. In general, China's basic pension system is mainly separated into three parts: urban employees (enterprise employees, civil servants and institution staff), urban residents and rural residents. Thus, the pension system is distinctively different between urban and rural areas, as well as among different social groups.

6.2.1.1 Urban Enterprise Pension System

China's pension reforms, starting in the early 1990s and ending in mid-2000s, aimed to cover China's entire urban labour force; and transferred the relatively generous benefit of a defined-benefit pension system to a defined-contribution model by placing responsibility on both the employees and employers. According to the State Council Document – *'Decision on Establishing a Unified Basic Pension System for Enterprises Employees'* (Chinese State Council, 1997), the urban pension system planned to move away from a pay-as-you-go (PAYG) system to a partially funded system, in preparation for the increasing aged population (Zhao and Xu, 2002). At present, the basic structure of the urban employee's pension system is one comprised of a mandatory two-part system, which includes defined benefit 'social pooling' account features which are pay-as-you-go (PAYG) in nature, and a defined contribution 'personal account'. The first part is financed by enterprises with contribution rates of up to 20% of a total employee's salary; the personal account on the other hand is intended to be fully funded, financed by an employee with 8% of their salary (Dunaway and Arora, 2007). Supplementary contributions can also be made on a voluntary basis. Pensions are payable after a minimum of fifteen years of contributions.

The 1997 pension reform has generated three groups of employees: the old, middle and new group. The 'old group' (*'laoren'* in Chinese) are people who retired before 1997 and received a pension based on the old pension system; the 'new group' (*'xinren'* in Chinese) entered the labour market after 1997, so a new multi-pillar pension system applied to them. In between the old and new group are the 'middle group' (*'zhongren'* in Chinese) who worked before 1997 and retired after 1997, they will receive a pension

according to social pooling and individual accounts, but will also receive compensation for lost contributions to individual accounts (Ebbers, Hagendijk and Smorenberg, 2012).

By the end of 2015, the population participating in the basic pension scheme reached 262.19 million, as the number of retirees reached 91.42 million. The national average pension level was around 2,300 RMB/month (Ministry of Human Resources and Social Security, 2016), and the overall pension fund was 2,934.1 billion RMB, while disbursement of the pension fund was 2,581.3 billion RMB (*ibid*). This implies that in the near future, alterations (in terms of higher contributions or reduced/restructured pension rights) will be required in order to prevent pension funds falling into deficit. The state has set up an adjustment mechanism for the basic pension, by which the state adjusts the level of the basic pension of enterprise retirees according to price fluctuations and rising wages at local level.

6.2.1.2 Pension System in the Public Sector

With reform progress in state-owned enterprises, enterprise employees first took the step towards reforming their pension system. This led to a ‘dual-track framework’ which has been operated by two distinctive pension systems in the enterprise and public sector (government, universities, and other research institutions) for nearly three decades. The pension system for employees in government and other public institutions is a non-contributory benefit system which is financed via central tax revenues, and administered by individual work-units. Usually, a retiree from these public institutions receives a pension of up to 80%~90% of the replacement rate if they have worked for 30 years. Since the 1990s, enterprise employees were required to pay their own monthly insurance premiums, but only received a pension of approximately 60% of the average social salary. The disparities between these two urban employees’ pension systems have been criticised by the general public, and attempts to reform the pension system for government and public institutions started from October 2014. This reform currently covers 38.7 million people (7.17 million from the government, and 31.53 million from other public sectors). The aim of new reform is to merge these two different pension

systems together, and to make use of the contribution mechanism already in place associated with benefit payment (Chinese State Council, 2015a).

It is the same with the basic pension provided for the employees of urban enterprises. The pension reform in the public sectors has generated some practical issues, for instance, the pension level for those who worked before 2014 and retired after 2014 will be negatively affected. In an interview with an official from the Hubei Provincial Department of Local Taxation, they stated that the replacement rate drops roughly 5%~10% compared with the original rate.

6.2.1.3 Urban Residents' Pension System

On July 1, 2011, the Chinese State Council (2011c) carried out a pilot of the urban residents' pension system, aiming to achieve full pension coverage for urban residents by the end of 2012. People who are at least 16 years old, non-employed urban residents (excluding students) can join this system in their registered *Hukou* residence area. Financial resources for the urban residents' pension fund are sourced from individual contributions and government subsidies, which create personal accounts and social pooling. There are 12 annual contribution levels for this personal account, ranging from 100 RMB to 2,000 RMB (Chinese State Council, 2011c). The higher the annual contribution, the more monthly pension a resident will receive. Government subsidy is no less than 30 RMB/person annually. Local government can increase these standards according to the local economic situation. Meanwhile, residents are required to contribute to their personal account for 15 years before they receive a monthly pension. Eligible urban residents can receive 55 RMB per month when they reach the age of 60. If urban residents were over 60 when the policy was introduced and do not qualify for the urban enterprise pension system, then they do not need to contribute to the urban residents' pension system and receive the monthly basic pension (*ibid*).

By the end of 2015, there were 504.72 million urban residents enrolled in this pension scheme, and over 148 million urban residents collected this pension. The average

amount provided under this pension scheme was 1,192 RMB/month (Ministry of Human Resources and Social Security, 2016).

6.2.1.4 New Rural Pension System

In 2009, the Chinese State Council (2009) released '*Guided Suggestions on the Launching New Rural Pension Pilot Guidance*', which is an important document in the context of an ageing rural population. The significance of the new rural pension system lies in guaranteeing a basic standard of living for rural residents as well as shrinking the pension gap between urban and rural areas (Gao, Su and Gao, 2013). This pension scheme allows rural residents to make voluntary contributions to individual accounts that are subsidised by local and central government. Standards of individual contributions are set over 10 levels from 100 to 500 RMB, and the government provides an extra subsidy of 30 RMB/person annually (20 RMB from provincial government and 10 RMB from local government). There are basic pension and personal account pensions. The standard of a monthly basic pension is 60 RMB/person, which includes 55 RMB from the central government and 5 RMB from the local government; while the monthly distribution of a personal account pension is the accumulated amount divided by 139. Related regulations ensure that rural residents over 60 can receive the monthly basic pension without contributions if their children pay an enrollment fee. Rural residents whose age is under 60 need to contribute to the pension system for more than 15 years.

At present, although the urban residents' pension system and the new rural pension system have almost realised full coverage among all urban and rural residents, the pension schemes still remain at a low support capacity which is not adequate for all elderly people to be able to purchase the same standard of social services (Liu, 2011). In addition, in order to build a unified and standardised pension system for rural and urban residents, the Ministry of Human Resources and Social Security (2016) issued '*Service Regulations of the Basic Pension System for Urban and Rural Residents*' in January 2016. This pension scheme, together with other social assistance and benefits, will better guarantee elderly people's basic standard of living in the future.

6.2.2 Occupational Pension

The occupational pension is a kind of supplementary pension for employees, in addition to their basic pension. An occupational pension has been viewed as an additional benefit for the employees, such wage benefits (workfare) helps a company to enhance its competitiveness by attracting motivated employees by offering a retirement income. In 2004, the Ministry of Labour and Social Security⁵⁵ (2004a and 2004b) released two important documents: *‘Temporary Measures for Occupational Pensions’* and *‘Temporary Measures for the Management of the Occupational Pension Fund’*.⁵⁶ The first document initiated regulation on the establishment of voluntary occupational pensions in China. According to the first document, annual pension contributions of the enterprise shall not exceed 1/12 of total salary costs for the previous year; and the total contributions from the enterprise and their employees should not exceed 1/6 of this sum. By the end of 2016, the number of enterprises that launched an occupational pension was approximately 76,300, an increase of 138% since 2007, yet less than 1% of the total of registered urban enterprises (Ministry of Human Resources and Social Security, 2016). As shown in Table 6.1, the number of employees enrolled into this scheme was 23.25 million, only accounting for 8.3% of the total population that had enrolled in the basic pension scheme (*ibid*).

⁵⁵ In March 2008, the Ministry of Labour and Social Security and the Ministry of Human Resource merged and became the Ministry of Human Resource and Social Security.

⁵⁶ Another version of the second document has since been released (in 2011).

Table 6.1 Development of Occupational Pension in China (2008~2016)

Year	Population of enrolment in the Basic Pension Scheme (million)	Population of enrolment in Occupational Pension Scheme (million)	Percentage (%)	Number of Companies
2008	165.87	10.38	6.2	---
2009	177.43	11.79	6.6	---
2010	194.02	13.35	6.8	---
2011	215.65	15.77	7.3	44,900
2012	229.81	18.47	8	54,700
2013	241.77	20.56	8.5	66,100
2014	255.31	22.93	8.9	73,300
2015	262.19	23.16	8.8	75,500
2016	278.26	23.25	8.3	76,300

Data Sources: 'Statistical Bulletin of the Development of National Human Resource and Social Security Work' published by the Ministry of Human Resources and Social Security in various years.

In contrast, the occupational pension scheme in government departments and public institutions is compulsory and is funded by contributions from government departments and their employees – 8% and 4% of their tax-based salaries, respectively (Chinese State Council, 2015c). The proportion of payment is adjusted according to local economic development.

Above all, the development of occupational pensions is seriously lagging behind. The majority of enterprises haven't established such a pension scheme, so accumulated occupational pension funds are very small. Moreover, the development of occupational pension schemes is regionally imbalanced. For instance, occupational pensions are more developed in the eastern region of China compared to the central and western regions. Moreover, occupational pensions usually cover senior leaders and outstanding employees in state-owned enterprises or profitable, foreign-funded enterprises and, as a consequence, only account for 6%~8% of the total working population (Xuan and Zhao, 2016).

6.2.3 Commercial Pension

A commercial pension is an important part of the structure of national retirement income. As the third pillar of the pension system, the commercial pension is on a voluntary basis for anyone who has extra income. Personal depositing insurance and the ‘House-for-Pension’ Scheme are typical of this type of pension.

6.2.3.1 Personal Depositing Insurance

Chinese savings, the result of individual thrift, have been higher than the rest of the world’s major economies for some time. In 2013, 38.46% of household income went towards household savings; in 2014, the proportion of China’s total savings accounts was 48.67% of that year’s GDP, far higher than the world average of 24% (Chinese State Council, 2017a). Thus, personal deposit insurance seems to hold great potential in China, which helps to correct the structural imbalance of China’s pension system. Personal deposit insurance is a supplementary insurance that employees can choose voluntarily. Employees can purchase personal deposit insurance and these extra contributions go into a personal account. The interest rate for these personal deposits is higher than the bank savings interest rate. When these insured individuals reach retirement age, they can opt to receive a lump sum or receive payments in installments.

In 2016, the premium income of personal deposit insurance was 860 billion RMB, accounting for 25% of the income generated by insurance premiums. However, life insurance premium income was 150 billion RMB, accounting for only 4.4% of the income generated by insurance premiums, which benefited only 17.07 million elderly people (Dong and Yao, 2016).

6.2.3.2 ‘House-for-Pension’ Scheme

With the accelerating size of the aged population and many unsolved problems in China’s funded pension system, new social issues makes this area even more complicated and difficult to face for governments. Due to rising life expectancy it can be predicted that the elderly will spend more in the future for care, and pensions, the main retirement income for the elderly, are not enough to cover the costs of LTC

services. In this respect, China has explored a ‘House-for-Pension’ Scheme so as to increase elderly people’s financial resources.

In September 2013, the Chinese State Council (2013) proposed running a pilot ‘House-for-Pension’ Scheme (also called a reverse mortgage loan, see Figure 6.2) in a report titled *‘Several Suggestions on Accelerating the Development of the Social Service Industry for Elderly People’*. The ‘House-for-Pension’ Scheme allows elderly property owners to re-mortgage their homes to a bank or an insurance company, and receive either fixed monthly payments depending on the market value of the property and the applicant’s life expectancy, or alternatively, a guaranteed form of old age care. The ‘House-for-Pension’ Scheme intends to help elderly people financially and improve their current living standards. In 2014, the China Insurance Regulatory Commission (2014) issued *‘Guidance and Suggestions on Implementing a Pilot ‘House-for-Pension’ Scheme’* (Exposure Draft). This document devised regulations on the conditions and requirements of elderly people and insurance companies. Four cities – Beijing, Shanghai, Guangzhou and Wuhan – were nominated as the first pilot cities. In this draft, the ‘House-for-Pension’ Scheme was divided into two models – participative and non-participative products – according to the way of disposing the appreciation of a re-mortgaged house. The first model, the participative product, proposed that insurance companies could share a specific proportion of the appreciation of a re-mortgaged house according to the agreed contract; while the second model, the non-participative product, referred to a scheme where all appreciation from the property will be returned to the insured elderly people and their heirs. As a matter of fact, the ‘House-for-Pension’ Scheme also covered a series of related financial products, including real estate evaluation, housing preservation and maintenance, housing transfer, LTCI, financial planning and investment in elder care real estate (Southeast Morning Post, 2013).

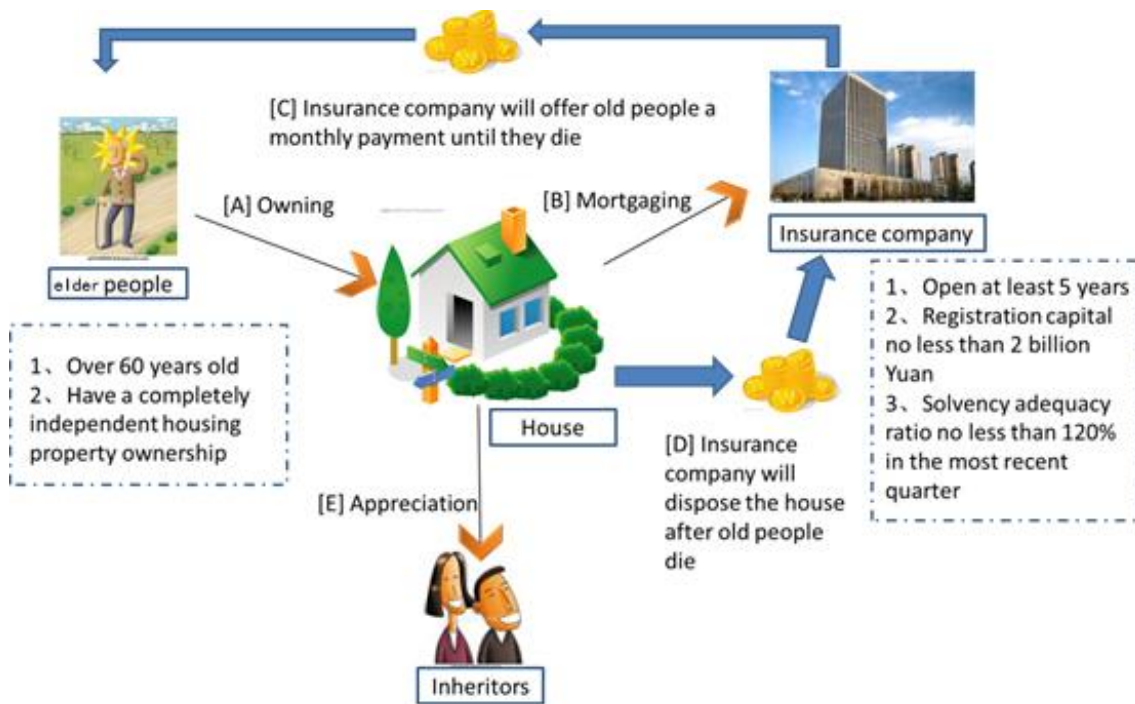


Figure 6.2 'House-for-Pension' Scheme (or 'Reverse Mortgage Loan') in China

However, this proposal caused a public outcry, because it contradicts the traditional Chinese idea of rearing children to look after their parents in old age, bequeathing the property to the children in return. At the same time, the appraisal of house values and the function of government are also of central concern to the insurance companies (Guo, 2013). From their perspective, they do not show as much interest in such a scheme as the draft originally anticipated. Three out of seven insurance companies which took part in related research and the discussion process of the 'House-for-Pension' Scheme failed to submit their final implementation plans, while the other four (the Ping'an, Taikang, Xingfu, Hezhong insurance companies) still wanted to claim a preferential taxation incentive. What is worse, this scheme is confronted by multiple risks. Lin, Peng and Chen (2014) stated that 70 year leases makes it difficult for insurance companies to implement this scheme. For example, if an insured person owns a house when they are 30 years old and then retires at 60, when the house is pledged to an insurance company, according to the regulations of property ownership (70-year leases), an insurance company can only have a maximum of 40 years' ownership upon this house. However,

if this insured person dies at 80, the insurance company only has a 20-year disposition right. Additionally, once the house is mortgaged to an insurance company, the insured person may neglect to maintain it, and in this situation, moral hazard will emerge and affect the house's actual value (Southeast Morning Post, 2013). Insurance companies could face a great loss if the house is sold during the insured period. Moreover, the legal risk needs to be highlighted due to a lack of legal policies for the 'House-for-Pension' Scheme, and conflicts that might be incurred after the contract is signed, from the appraisal of house value to proprietary rights, all of which might result in a loss for elderly people and insurance companies (Qu, 2014). Thus, it has taken some time for the Chinese government and related insurance companies to put this scheme into effect, and to persuade Chinese citizens to accept a 'House-for-Pension' Scheme.

Taking all the above pension schemes into account, China's pension system is mainly based on the national basic pension scheme, because the scale of enterprise occupational pensions and the commercial pension is relatively small.

6.3 Public Medical Insurance System

The framework for China's medical insurance system is much more complex and fragmented than that of its pension schemes: due to the existence of different social groups, various regulations in different regions, as well as a different range of medical projects. In general, the medical insurance system in China can be categorised into the following two parts:

6.3.1 Basic Medical Insurance System in Cities

China's employee medical insurance system was established in 1998, based on the document '*Decision on the Establishment of a Basic Medical Insurance System for Urban Employees*' (Chinese State Council, 1998). Like the pension scheme, employers and employees are required to make contributions to the basic medical insurance scheme which combines an individual account with a social pooling account.

Employees contribute 2% of their monthly salary towards their individual account, while employers usually contribute between 6%~12% of their workforce's salary – a proportion of which (usually 30%) goes into the employees' individual accounts while the rest goes to the social pooling account. The employees' individual account is supposed to cover the cost of any medical treatment that amounts to around 10% of the local average annual salary to four times the local average annual salary. Employees have to pay for any medical expenses that cost in excess of five times their average wage.

In addition, urban residents' basic medical insurance was launched in 2007. It covers nearly all non-employed urban residents, including children, students (technical secondary school, vocational high school) and other urban residents who do not qualify for employees' medical insurance. The standard annual contribution for people aged over 70 is 120 RMB from individuals and 440 RMB from local government. Their reimbursement ration is 50% for third-grade hospitals, 60% for second-grade hospitals and 65% for first-grade hospitals⁵⁷.

6.3.2 New Rural Co-operative Medical System

Since 2002, the Chinese government started to establish a new rural co-operative medical system to improve access to healthcare, and relieve the financial burden of healthcare on rural residents with the aim of achieving universal healthcare coverage in rural areas, and also to narrow the gap between rural and urban areas in terms of public services and social protection. The system is guided, organised and subsidised by central, provincial, and county governments. This system demonstrates two important features: voluntary participation by rural residents, and an emphasis on protection against catastrophic illnesses. The new rural co-operative medical benefit package is modest: inpatient service and some high-expenditure outpatient services are covered,

⁵⁷ In China, hospitals are divided into three grades. First-grade hospitals are basic community hospitals, which provide a comprehensive list of services including medical treatment, preventive measures, rehabilitation and healthcare. Second-grade hospitals are regional hospitals which provide technical guidance for first-grade hospitals, and participate in monitoring high risk groups. Third-grade hospitals provide comprehensive medical and healthcare services, and develop teaching and research for medical technology across different regions, cities and provinces.

although the fraction of costs that are covered depends on the availability of funding. Payment to providers is still dominated by the fee-for-service model, but a growing number of counties have piloted and implemented alternative payment methods, such as capitation and case-based payment.

6.4 Long-term Care Insurance (LTCI)

LTCI first started as a form of commercial insurance in 2006, and in 2016 LTC was given high priority by the Chinese government which began to promote it through social insurance in some pilot cities. Thus, this section will examine three categories of LTCI:

6.4.1 Commercial LTCI

The creation of commercial LTCI has a longer history than that of public LTCI. At present, there are 16 insurance companies promoting such commercial insurance products. The total number of registered LTCI products is over 140 (Chen, 2014). China's LTCI was developed from health insurance. In 1996, Ping'an insurance company launched health insurance, and later in 1997 some serious illness and comprehensive medical insurance products were issued. After 2000, advanced medical insurance and dividend serious illness insurance became prevalent, and promoted the rapid development of commercial healthcare insurance. LTCI usually needs a longer contribution period than health insurance (typically more than 10 years); in most cases, people can obtain a more cost-effective insurance plan if they are young and healthy, otherwise they have to pay a higher insurance premium.

The first commercial LTCI product was introduced by the Peoples Insurance Company of China in June 2006, which advertised 'No Worries of LTCI for Personal Health'. Later, the Guo Tai Insurance Company launched another commercial LTCI plan – 'Kang Shun LTCI'. According to this plan, if the insured's health status is determined by the insurance company as requiring LTC, he or she can receive 20% of the premium as a LTC fund within six months. In addition, the China Life Insurance Company

promoted a commercial LTCI plan – ‘Guo Shou Kang Xin LTCI’. Benefits from this plan mainly include a LTC allowance, an old-age disease benefit, and a death benefit. The Kun Lun Health Insurance Company later launched a series of care insurance products which provided insured individuals with disease insurance, LTCI and healthcare insurance. The insured could also receive 10 times their original insured amount of longevity care allowance back from the insurance company.

Since 2015, more public policies concerning LTCI have been issued. A policy introducing tax relief for commercial health insurance was issued in May 2015. This regulation claimed that if the individual purchased a specific commercial health insurance product they were allowed to receive a pre-tax deduction with a maximum amount of 200 RMB/month (Chinese State Council, 2015b).

According to a LTCI Investigation Report (China Insurance Industry Association, 2016), the popularity of commercial LTCI is very low because many people think they are too young and healthy to be aware of the risks of LTC in their old age. Besides, the high insurance premium is another reason for less demand for long-term healthcare insurance. People would rather depend on alternative investment approaches, such as housing property, social insurance (pension and basic medical insurance) and financial support from their children. Commercial LTCI has been promoted for more than 10 years. It has encountered some other problems and challenges during this period.

Firstly, the age range of targeted customers is too narrow. On the one hand, customers who can purchase LTCI products should not be over 60; on the other, only elderly people aged 70~88 can receive these benefits. So insurance companies lose potential customers aged from 60~70, just as this group start to realise the importance of elder care. Meanwhile, if insurance companies do not compensate for increased care service fees for those who are over 88, these products still cannot guarantee the recipients economic security.

Secondly, the insurance premium of commercial LTCI is relatively high. If the insured purchases commercial LTCI at the age of 30, they need to pay 6,300~8,800 RMB

premiums annually, which is 2.16~2.34 times higher than supplementary healthcare insurance, and 2.95~3.1 times higher than life insurance (Jing and Xie, 2014). Thus, commercial LTCI is not affordable for the majority of middle to low income families.

Thirdly, unlike multiple forms (cash benefits and LTC services) that are offered in Western countries, in China payments of LTCI are restricted to a certain proportion of reimbursement on medical treatments or social services, rather than the actual and direct costs of elder care services. As an interview with a manager from a life insurance company confirmed, commercial LTCI is not universally understood by its potential clients, although it is some time since it was introduced. The younger generation would rather purchase an investment product with more guaranteed profit returns, so that they do not recognise LTCI as value for money. The manager also stated that for those who know the benefits of commercial LTCI, nearly half of them do not trust the commercial insurance company. This may be due to the immaturity of commercial long-term insurance, and the dominant tradition of family care in China. So such schemes are not that popular in China currently.

6.4.2 Public LTCI

Given the rapid increase in total LTC expenditure and pension pressure, LTCI has been seen as an economic method to solve the increasing demand for LTC, which will operate as a social insurance scheme in line with China's five current social insurance programmes.

In June 2016, the Ministry of Human Resource and Social Security (2016) released the document '*Guided Suggestions on Launching a Long-term Care Insurance Pilot Plan*', which emphasized its important position in the goals of the Thirteenth 'Five-Year' Plan. The department selected 15 cities to launch a pilot LTCI plan by 2020, including Shanghai, Chongqing, Chengdu (the capital city of Sichuan Province), Changchun (the capital city of Jilin Province), Qiqihar (in Heilongjiang Province), Ningbo (in Zhejiang Province), Suzhou and Nantong (in Jiangsu Province), Anqing (in Anhui Province), Shangrao (in Jiangxi Province), Qingdao (in Shandong Province), Jingmen (in Hubei

Province), Guangzhou (in Guangdong Province), Chengde (in Heibei Province) and Shihezi (in Xinjian Province). According to this document's proposals, these pilot cities needed to first establish a policy framework of LTCI according to local economic conditions. Current coverage includes people who have contributed to basic healthcare insurance, while the use of funds provided is independent of any provided by basic healthcare insurance. The funding structure consists of three parts: individual contribution, a healthcare insurance fund and fiscal subsidy. The criteria of each part vary between different regions, and can be adjusted according to the economic environment and practical implementation situations within each region. Below, three pilot projects are reviewed: Qingdao (a coast city in Shandong Province), Jingmen (in Hubei Province) and Shanghai.

In July 2012, Qingdao was the first city to propose Long-term Medical and Care Insurance. It covers elderly people enrolled in the Urban Basic Medical Insurance System. LTCI is funded by the municipal government and draws funds from Basic Medical Insurance Funds at fixed periods. This scheme offers: (1) special hospital medical care (to a maximum imbursement of 170 RMB/day for an individual); (2) medical care in care institutions that combine medical treatment and elder care (maximum imbursement is 65 RMB/day for an individual); (3) residential care (maximum imbursement is 50 RMB/day for an individual); and (4) community care (maximum imbursement is 800~1,600 RMB/annual for an individual). The imbursement rate of these benefit criteria varies from 40% to 90% according to the contribution level (Qingdao Municipal Bureau of Human Resource and Social Security, 2014).

In November 2016, Jingmen released a LTCI policy which also covered the elderly who enrolled in the Urban Basic Medical Insurance System. As for the contribution criteria of this scheme, 0.4% of local residents' disposable income (over the last year) is defined as the base amount of their LTCI contribution, which is divided into three parts: personal contribution (37.5%), social pooling funds of public medical insurance (25%) and fiscal subsidy (37.5%) (Jingmen Municipal People's Government, 2016). An

interview with an official from the Jingmen Municipal Bureau of Civil Affairs revealed that, according to the base amount calculation of LTCI in 2016: eligible candidates pay 30 RMB annually, the local government subsidises 30 RMB/person/annual, and pooling funds of medical insurance is 20 RMB for a person annually. Contribution methods differ according to different groups: contributions for working employees are directly deducted from their salary account; contributions for retirees and the self-employed are deducted from their personal medical insurance account; low-income groups and the disabled are not required to contribute to this scheme and are subsidised by fiscal revenue. Thus, unlike other forms of social insurance, the LTCI provided under this scheme is actually a flat rate, fixed amount, and is not earnings-related. Moreover, it is more convenient for elderly people to enjoy LTC services and cash payment compared with medical insurance. LTCI only covers payments in the following respects: (1) residential care: 100 RMB/day for elderly people (80% paid by LTCI and 20% paid by individuals); (2) institutional care: 100 RMB/day for a bed (75% paid by LTCI and 25% paid by individuals); and (3) hospital medical care: 150 RMB/day for a bed (70% paid by LTCI and 25% paid by individuals) (Jingmen Municipal People's Government, 2016).

In December 2016, the Shanghai Municipal Government (2016) issued *'Measures for Pilot LTCI in Shanghai'*. The funding principle of LTCI is the same as that for medical insurance, which is to 'determine payment according to the contributions and ensure a balance between contribution in and payments out'. Contribution approaches are divided into two different groups: (1) for people enrolled in the Basic Medical Insurance Scheme (the first group) contributions from the company and employee amounts to 1% of the total medical insurance base amount, and 0.1% of personal contributions of his/her medical insurance respectively; (2) for people enrolled in the Resident Medical Insurance Scheme (the second group), residents contribute around 15% of the average amount of contributions of 'the first group', and the rest is shared between the municipal and district government. During the pilot period, however, individuals and companies do not need to contribute to this scheme, instead, LTCI funds are transferred

from a medical insurance account. According to regulations, LTC services consist of community home-based elder care, institutional care, and hospital medical care. As a result, the expenses reimbursement regulation is based on three kinds of services: (1) the expense reimbursement rate is 90% of the expenses of community home-base care; (2) the expense reimbursement rate is 85% of the expenses of institutional care; (3) the medical care expense reimbursement is determined according the basic medical insurance regulation.

As seen from these three pilot plans, funding resources for public LTCI mainly depend on public medical insurance funds. Eligible participants for public LTCI are those who were previously enrolled in the Urban Basic Medical Insurance Scheme. In fact, all these LTCI schemes are very immature, and what is promised and what is actually delivered may differ considerably in different pilot cities, so we cannot make any judgements about their respective performances as of yet. But, if we review current financial arrangements in these LTCI schemes, we can find that the earning-related financial model may not sustainable. We take Shanghai's LTCI scheme as an example, the financing scale of LTCI in Shanghai (contribution from company and employee amounts to 1% of the total medical insurance base amount, and 0.1% of personal contributions of his/her medical insurance respectively) greatly exceeds the LTC needs. According to a rough calculation, the enterprise has to pay around 600~700 RMB/month for each employee if they join in the LTCI insurance scheme, so the financial burden on enterprises and individuals is relatively heavy. By contrast, Jingmen's LTCI scheme is much easier to operate and manage. It does not increase the burden on enterprises, which can also rationally use the medical insurance balance funds (25% of the contribution base is from public medical insurance funds). However, 0.4% of the financial rate (the contribution base is 0.4% of local residents' disposable income) is too low to satisfy the elderly people's LTC demands. Thus, we suggest that Jingmen's LTCI scheme, but with a higher contribution base, can be applied to other regions of China. In the chapter 9, we use Jingmen's public LTCI scheme as the typical case to conduct a feasibility analysis on the national level.

6.4.3 Policy-based LTCI

In practice, an overall social insurance plan for LTC in China is unrealistic at present, and commercial LTCI remains unpopular among the majority of people. With this in mind, Beijing first proposed a policy-based LTCI plan, with an aim to overcome the shortcomings of the former two plans.

In the Haidian District, Beijing, 2016, the District Bureau of Civil Affairs (Haidian District) and Life Insurance Company (Beijing Branch) jointly launched a cooperative project on policy-based LTCI. This was the first policy-based insurance aimed at providing professional LTC for frail elderly groups of people, to alleviate the pressure of care placed on families to provide for elderly relatives.

This voluntary LTCI scheme is designed for Haidian District registered residents (excluding university students) who are over the age of 18. An insurer can purchase this insurance product in a consulting centre for disability and mutual assistance in any Haidian sub-district office. LTCI funds consist of three components: personal contribution, government subsidy and mutual assistance funds from nursing institutions (Figure 6.3).

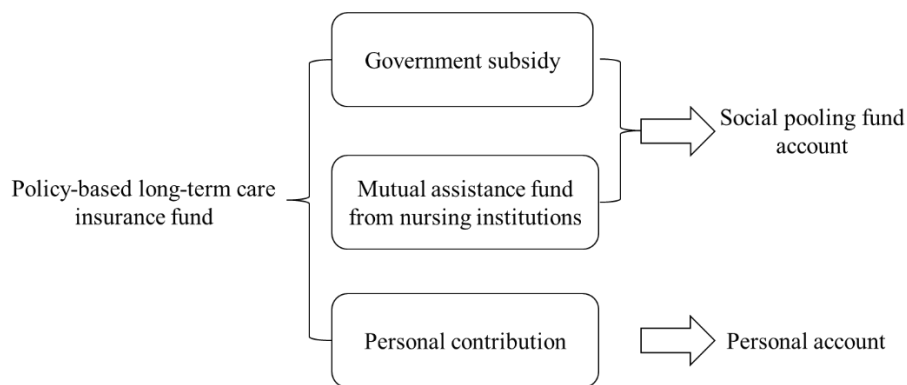


Figure 6.3 Components of Policy-based LTCI Funds

Individuals contribute no more than 100 RMB per month (see the different contribution standards listed in Table 6.2) and need to contribute for at least 15 years. The government will subsidize 20%~30% of the total amount of contribution funds

according to the age range of the insured, and if the contribution period is no more than 15 years. If the insured is over 60 years old, they need to contribute to the insurance for 15 years continuously (the district government will subsidise 20%~30% of the personal contribution) and can still receive elder care services during this contribution period.

Table 6.2 Contribution Standards of Policy-based LTCI (2016)

Age group	Personal payment limit (annual)	Government subsidy (annual)		Average personal contribution amount (RMB/person/month)	
		Urban registered household	Rural registered household	Urban registered household	Rural registered household
18~39	1,140 RMB standard contribution base	The district government subsidise 20%~30% of the personal contribution.	The district government subsidise 20%~30% of the personal contribution.	75	65
40~59	1,254 RMB increasing standard contribution base by 10%			83.6	73.83
over 60	1,368 RMB increasing standard contribution base by 20%			91.2	81.2

Data Sources: Office website of Beijing Government (www.beijing.gov.cn).

As for the over-65s, the extent of their disability will be assessed by a professional institution and divided into three levels based on ‘*Assessment of Daily Living Ability*’: mild, moderate or severe. Then, they can receive elder care in the value of 900 RMB/month, 1,400 RMB/month and 1,900 RMB/month. The management and operation of funds is conducted by the commercial insurance company. Elder care costs are reimbursed by the commercial insurance company via LTC mutual assistance funds. Currently, Haidian district government has arranged a budget of 10 million RMB to fund this project.

The policy-based LTCI scheme in Beijing has offered a wealth of experiences for other regions to design their own funding model. It involves several strengths which are described below:

The aim of policy-based LTCI is to provide elderly people with social care when they are incapable. This delivery mechanism is more suitable for China's current elder care demand, as the majority of Chinese elderly prefer family care rather than institutional care. LTCI funds pay for basic and professional elder care for frail elderly, such as day care, rehabilitation care, hospice care, etc. An interview with an official from the District Bureau of Civil Affairs revealed that the average pension for a retiree was less than 3,500 RMB/month in 2015, although it is enough for their basic living needs this amount might not be adequate for their care demands if they get a severe illness or cannot take care of themselves. Some children of these insured are more concerned about what kind of elder care services their parents will receive after they buy insurance, and whether these services can really relieve the pressure of caring for their parents. So, LTCI is a good option for the elderly people to receive professional elder care and relieve the economic burden on their families.

Besides, the policy-based LTCI scheme has a price advantage over other similar insurance products, because there is really no reasonable profit on a policy-based LTCI scheme, which also saves in service costs as commercial insurance companies arrange the delivery of LTC for reasonable prices. Compared with commercial insurance products, the annual contribution of a commercial insurance product is 2~3 times more than policy-based LTCI (Jing, Yang and Zhu, 2017).

Additionally, a policy-based LTCI scheme applies a commercial insurance operational mechanism, so it ensures the efficiency of the delivery of LTC services. The interviewee from the District Bureau of Civil Affairs stated that this market-oriented operation can overcome the shortcomings of current commercial and public LTCI, and magnifying the social benefits of fiscal expenditure. The interviewee further stated that multiple participation and coordination from the government, the market and society will effectively promote the development of the elder care industry.

Moreover, compared with other social LTCI schemes conducted in other pilot cities, policy-based LTCI expanded its coverage to more elderly people, not merely restricting the insurance to those who were enrolled in either of the main urban medical insurance

schemes. Unlike commercial LTCI schemes that usually reject over-60 purchasers, policy-based LTCI can be purchased by people over 60, and they can enjoy LTC whenever they need it.

6.5 Social Assistance for Elderly People

With the rapid development of a market-oriented economy, China has established a social assistance system which includes long-term basic living assistance (minimum living standard support system and rural ‘Five-Guarantees’ provision), special assistance (healthcare, housing and legal aid) and temporary assistance (disaster rescue, homelessness assistance and temporary relief) (Ding and Liu, 2014). The following measures are commonly applied in relieving elderly poverty and guaranteeing elderly people’s basic standard of life.

6.5.1 Minimum Living Standard Support (MLSS) System

The MLSS system was established in nearly 600 cities, between 1995 and 1999, in order to assist Chinese households with income levels below the subsistence minimum (Wu and Huang, 2007: 171). This system, supported by local government, can guarantee a basic living standard and the material demands of urban and rural residents. Minimum living standard refers to the local variation of real living costs indicated by a representative basket of goods, and this indicator would increase with economic growth (*ibid*). According to Table 6.3, the standard of MLSS in both urban and rural areas kept increasing from 2010 to 2016, and the latest standard is shown in Table 6.4. In terms of the ‘*Regulations on Minimum Living Security for Urban Residents*’ (Chinese State Council, 1999), urban ‘Three-Nos’ elderly people shall receive subsistence allowance according to the local minimum living standards. At present, poor elderly people in the cities can also enjoy relief aid for their basic needs. In some places, the local government also gives priority assistance to widowed elderly, who enjoy additional subsistence allowances of 20% based on the local standard. However, MLSS adopts a

low standard which is insufficient in that it only covers basic needs, such as clothing, food, water, electricity and gas, and thus does not cover LTC.

Table 6.3 Situation of MLSS in the Urban and Rural China (2010~2016)

Year	MLSS in the urban areas		MLSS in the rural areas	
	Population (million)	Average level (RMB/month)	Population (million)	Average level (RMB/annual)
2010	3.32	251	18.45	1,404
2011	3.42	288	19.32	1,718
2012	3.36	330	20.17	2,068
2013	3.30	373	20.75	2,434
2014	3.14	411	20.64	2,776
2015	2.93	451	20.04	3,178
2016	2.54	495	18.59	3,744

Data Sources: 'Statistical Yearbook of China's Civil Affairs' published by the Ministry of Civil Affairs in various years.

Table 6.4 Minimum Living Standard Support in Urban and Rural Areas of China (2016)

Regions	Urban	Rural	Adjustment Date
Beijing	800 RMB/month	800 RMB/month	2016
Tianjin	780 RMB/month	780 RMB/month	2016
Shijiazhuang (Hebei)	550 RMB/month	4,000 RMB/annual	2013
Taiyuan (Shanxi)	500~530 RMB/month	320~400 RMB/month	2016
Hohhot (Inner Mongolia)	515~565 RMB/month	3,644 RMB/annual	2016
Shenyang (Liaoning)	620 RMB/month	380 RMB/month	2016
Changchun (Jilin)	360~510 RMB/month	280~300 RMB/month	2016
Harbin (Heilongjiang)	510 RMB/month	3,000 RMB/annual	2016
Shanghai	880 RMB/month	880 RMB/month	2016
Nanjing (Jiangsu)	750 RMB/month	750 RMB/month	2016
Hangzhou (Zhejiang)	744 RMB/month	744 RMB/month	2016
Hefei (Anhui)	510 RMB/month	510 RMB/month	2016
Xiamen (Fujian)	7,320 RMB/annual	7,329 RMB/annual	2015
Nanchang (Jiangxi)	480~510 RMB/month	310 RMB/month	2016
Qingdao (Shandong)	580~650 RMB/month	470~580 RMB/month	2016
Zhengzhou (Henan)	550 RMB/month	320 RMB/month	2016
Wuhan (Hubei)	580 RMB/month	320 RMB/month	2016
Changsha (Hunan)	450 RMB/month	450 RMB/month	2016
Guangzhou (Guangdong)	745 RMB/month	745 RMB/month	2016
Nanning (Guangxi)	290 RMB/month	130 RMB/month	2016
Haikou (Hainan)	520 RMB/month	460 RMB/month	2016
Chongqing	420 RMB/month	230 RMB/month	2013
Sichuan Province	450~550 RMB/month	400~500 RMB/month	2016
Guiyang (Guizhou)	545~583 RMB/month	278~583 RMB/month	2016
Yunnan Province	475~530 RMB/month	215~295 RMB/month	2016
Lhasa (Tibet)	640 RMB/month	2,450 RMB/annual	2016
Xi'an (Shaanxi)	565 RMB/month	255~265 RMB/month	2016
Lanzhou (Gansu)	387~515 RMB/month	2,453 RMB/annual	2016
Xining (Qinghai)	403 RMB/month	2,970 RMB/annual	2016
Yinchuan (Ningxia)	440 RMB/month	2,400 RMB/annual	2016
Urumchi (Xinjiang)	395 RMB/month	215 RMB/annual	2016

Data Sources: MLSS data was retrieved from relevant documents in the Department of Civil Affairs in different cities. The regions in brackets are provinces, next to the capital city of that province.

6.5.2 Rural 'Five-Guarantees' Support System

The Chinese State Council (2006) released the document of *'Implementation Regulations on Rural Five-Guarantees'* on 1 March, 2006. It stated that subsistence

allowances for the poor rural elderly should be not lower than local average living standards, and local government could set a reasonable allowance level based on local economic conditions. The local government arranged rural ‘Five-Guarantees’ funding in their annual budget plan, while central government offered subsidies to areas in financial difficulty. In addition, more rural social welfare service centres and rural nursing homes were built and related facilities were improved, and they could offer collective support, including free daily care, medical assistance, regular physical examination and legal advocacy services, to poor rural elderly people.

6.6 Universal Financial Support

Currently, governments at all levels have launched relevant policy that aims to increase benefits for elderly people – old-age allowance and service subsidy fall under this category.

6.6.1 Old-age Allowance

China has universally established different standards of living allowance in different regions for elderly who are the ‘older old’ (e.g., usually those over 80 years). According to the documents *‘Suggestions on Further Strengthening the Work of Preferential Treatment for the Elderly’* (National Ageing Work Committee Office, 2013b) and *‘Notification of Establishing Subsidy Policy for the Elderly on a Provincial Level’* (Ministry of Civil Affairs, 2014), people who are over 80 can receive an old-age allowance. At present, 26 provinces (regions and cities) have issued relevant policies for an old-age allowance. However, when the policy is implemented in the specific regions, the standards of old-age allowances vary among different ages. The elderly population is usually divided into three age groups: 80~89 years old, 90~99 years old and over 100 years old. In most areas of China, people over 100 can receive an old-age allowance up to 100 RMB/month, and the amount keeps rising. In Tianjin, the old-age allowance for people over 100 years is 500 RMB/month, which is the highest among the regions; in

Hebei Province, Shanxi Province, Jilin Province, Shanghai and five other regions, the standard is 300 RMB/month; Ningxia Province offers 450 RMB/month for people over 90; Qinghai province and Shanxi province, two underdevelopment areas, offer 90 RMB/month and 50 RMB/month for people over 70, respectively (Wu, 2016).

6.6.2 Service Subsidies for Elderly People

The service subsidy aims to provide elder care services to elderly people who have a disability, and the very old (over 80s) or elderly (over 70s) who have experienced the ‘loss of one child’. For instance, Beijing launched an ‘elder care service card’ policy, and 48,000 elderly people have already enjoyed this policy. Under the policy disabled elderly people can receive 300 RMB/month, and ‘loss of one child’ families can receive 100 RMB/month. All these subsidies are not paid in cash but transferred onto an ‘elder care service card’, which can only be used to buy elder care services in home-based elder care service centres (Beijing Municipal Bureau of Civil Affairs, 2016). In Shanghai, elder service subsidies are also used as a kind of ‘non-cash service vouchers/cards’ to purchase various types of elder care services (Liu, 2014d). Standard benefits are calculated based on service hours and prices, which are determined according to an elderly person’s degree of disability. Disabled grades are divided into mild, moderate and severe, and the monthly service hours are 30, 40 and 50 hours respectively, while the service price is 18, 18 and 20 RMB/hour respectively (Shanghai Municipal Bureau of Civil Affairs, 2015).

6.7 Discussion of Outcomes

This chapter has reviewed current categories of retirement income for all Chinese elderly people. The main financial sources aim at ensuring elderly people’s basic living standards while not solving their demand for elder care. Additionally, China experiences huge variation in financial situations between different regions, and among different groups of elderly people. This discussion will first summarise the fiscal expenditure, disposable income and pension level across different regions during

2014~2015, and summarise how the balance of financial sources can be used to pay for elder care. Second, it will review the financial resources gap between urban and rural elderly people, and analyse the reasons for the low consumption of elder care in China. Third, it will compare and draw conclusions about different funding models/sources for elder care from the supply and demand side (which have been reviewed in chapters 5 and 6).

6.7.1 Fiscal Expenditure and Pension Distribution across Different Regions

As shown in Table 6.5, expenditure on elderly welfare increased dramatically during 2014~2015 across different regions of China. The overall basic pension level and welfare level for elderly people in China also demonstrates that the living standard of elderly people is rising, and the retirement life of the elderly has been greatly improved. This is based on the situations of different provinces, for instance, in some economically undeveloped regions, such as Hebei, Shanxi, Shaanxi, Henan, Gansu, Guizhou, Tibet, Qinghai, Ningxia and Xinjiang Province, etc., the basic pension level exceeds the local urban disposable income level, while rich regions (municipalities directly under the central government: Beijing, Tianjin, Shanghai and Chongqing; eastern, coastal regions: Zhejiang and Guangdong Province, etc.) show the opposite, in an adverse direction. This indicates that fiscal expenditure is focused most strongly on undeveloped and poor regions. Thus, the redistribution function of fiscal expenditure is obvious and follows basic welfare principles.

Table 6.5 Pension per capita and Disposable Income per capita in Urban China (2014 and 2015)

Regions (Provinces and Cities)	2014				2015				Growth Rate of Elderly Welfare
	Elderly Welfare (Fiscal Expenditure) Million RMB	Disposable Income per capita RMB/annual	Pension per capita RMB/month	Percentage of Pension to Disposable Income	Elderly Welfare (Fiscal Expenditure) Million RMB	Disposable Income per capita RMB/annual	Pension per capita RMB/month	Percentage of Pension to Disposable Income	
National	4,735.89	28,843.9	2,070	86.12%	19,274.21	31,790.3	2200	83.04%	307%
Beijing	516.64	48,531.8	3,050	75.41%	1,326.46	52,859.2	3355	76.16%	157%
Tianjin	69.39	31,506	2,295	87.41%	262.87	34,101.3	2525	88.85%	279%
Hebei	189.53	24,141.3	1,950	96.93%	788.35	26,152.2	2232	102.42%	316%
Shanxi	97.65	24,069.4	2,389	119.11%	279.4	25,827.7	2630	122.19%	186%
Inner Mongolia	91.23	28,349.6	2,097	88.76%	702.63	30,594.1	2142	84.02%	670%
Liaoning	72.74	29,081.7	2,050	84.59%	340.84	31,125.7	2234	86.13%	369%
Jilin	3.7	23,217.8	1,722	89.00%	122.88	24,900.9	1935	93.25%	3221%
Heilongjiang	49.50	22,609	1,846	97.98%	170.37	24,202.6	2119	105.06%	244%
Shanghai	101.94	48,841.4	2,936	72.14%	572.06	52,961.9	3283	74.39%	461%
Jiangsu	107.26	34,346.3	2,236	78.12%	1,916.5	37,173.5	2460	79.41%	1687%
Zhejiang	294.37	40,392.7	2,593	77.03%	1,205.93	43,714.5	2640	72.47%	310%
Anhui	113.94	24,838.5	1,890	91.31%	543.82	26,935.8	2024	90.17%	377%
Fujian	170.55	30,722.4	2,160	84.37%	374.43	33,275.3	2322	83.74%	120%
Jiangxi	329.38	24,309.2	1,892	93.40%	449.02	26,500.1	2046	92.65%	36%
Shandong	325.17	29,221.9	2,268	93.14%	1,661.06	31,545.3	2454	93.35%	411%
Henan	158.92	23,672.1	1,940	98.34%	318.86	25,575.6	2087	97.92%	101%
Hubei	78.83	24,852.3	2,039	98.45%	657.32	27,051.5	2213	98.17%	734%
Hunan	181.13	26,570.2	1,818	82.11%	550.99	28,838.1	1918	79.81%	204%
Guangdong	314.07	32,148.1	2,200	82.12%	1,389.87	34,757.2	2400	82.86%	343%
Guangxi	283.89	24,669	2,182	106.14%	706.92	26,415.9	2305	104.71%	149%
Hainan	43.89	24,486.5	1,825	89.44%	240.77	26,356.4	2007	91.38%	449%
Chongqing	124.69	25,147.2	1,688	80.55%	327.67	27,238.8	1838	80.97%	163%
Sichuan	92.16	24,234.4	1,790	88.63%	1,040.41	26,205.3	1886	86.36%	1029%
Guizhou	89.7	22,548.2	1,977	105.21%	463.09	24,579.6	2140	104.48%	416%
Yunnan	91.14	24,229	1,977	97.92%	34.621	26,373.2	2150	97.83%	280%
Tibet	---	22,015.8	3,320	180.96%	15.63	25,456.6	3678	173.38%	---
Shaanxi	135.71	24,365.8	2,116	104.21%	1,048.79	26,420.2	2300	104.47%	673%
Gansu	118.95	21,803.9	2,065	113.65%	269.42	23,767.1	2168	109.46%	126%
Qinghai	10.94	22,306.6	2,593	139.49%	347.77	24,542.3	2910	142.28%	3079%
Ningxia	0.44	23,284.6	2,169	111.78%	107.80	25,186	2469	117.64%	24401%
Xinjiang	478.49	23,214	2,298	118.79%	726.08	26,274.7	2500	114.18%	52%

Data Sources: The data of ‘fiscal expenditure’, ‘disposable income’ and ‘pension’ are from ‘Blue Book of Elder Care Indexes in Urban China’ (2017) published by the Development Research Centre Group of the Chinese State Council (2017). The data of ‘percentage of pension to disposable income’ and ‘growth rate of elderly welfare’ were calculated by the author.

6.7.2 Purchasing Power for Elderly People in China

By 2016, there were 40.63 million disabled elderly people in China, while only 2.69 million of them chose institutional care, accounting for 6.7% of the total disabled elderly population (National Ageing Work Committee Office, Ministry of Civil Affairs and Ministry of Finance, 2016). The reason for this low demand for social elder care largely lies in insufficient purchasing power of elderly people, because most of them belong to middle and low income groups. As shown above, the majority of the elderly population in China belong to middle and low income groups, because their main financial resources are from the basic pension. Generally speaking, most private nursing institutions target the relatively rich elderly. As for those non-profit private nursing institutions which are also market-based operations, their service prices may still be too high for the majority of elderly people. The majority can hardly afford to pay for elder care using their own pension.

At present, there is a huge difference in financial conditions between urban and rural elderly people. Thus, the following subsections will examine these differences in relation to pensions and other financial resources, to analyse the reasons for the low purchasing power of elderly people.

6.7.2.1 Basic Pension Income Gaps between Urban and Rural Elderly People

The basic pension gap between urban and rural elderly people is widening. In urban China, according to a investigation conducted by the Renmin University of China (2016), by 2016 the average pension in government departments and public institutions was 3,174.69 RMB/month, and the average pensions of the employees in urban enterprises and urban residents were 2,400.22 RMB/month and 1,387.2 RMB/month, respectively. With the development of China's economy and growing maturity of the pension schemes, retirement income rises continuously. From 2005 to 2016, the Chinese government enhanced the basic pension level for retirees in urban enterprises – introducing a growth rate of 5.5% from January 2017 (Ministry of Human Resource and Social Security and Ministry of Finance, 2016).

In rural China, since July 2011 every rural elderly person over 60 years received a minimum basic pension of 55 RMB/month funded by the central government (Chinese State Council, 2009). Local governments can increase the standard of their basic pension for the local elderly according to local economic conditions. In 2015, the basic pension level increased from 55 to 70 RMB/month (Ministry of Human Resources and Social Security and Ministry of Finance, 2015). The expenditure on pensions in central and western undeveloped regions is fully fund by the central government, while in the eastern developed regions, the basic pension for rural residents is half funded by central government and half funded by the local government (Ministry of Finance, 2009). This demonstrates that the redistribution of funding a basic pension in different regions and different group of elderly people can be quite diverse, while basic pension gaps between urban and rural residents are still huge.

6.7.2.2 Main Financial Resources for Chinese Elderly People

At present, there is a huge difference of financial resources between urban and rural elderly people.

Main Financial Sources for Urban Elderly People

Urban elderly people usually rely on different forms of financial resources, which consist of two elements: (1) self-owned financial resources, including labour income, pension, property, commercial insurance, and rental income from housing property, etc.; (2) non self-owned financial sources, for instance, government subsidy (MLSS and old-age allowance) and financial support from family (children and other relatives). As shown in Table 6.6, labour income, pension and family support are the main financial sources for urban elderly people, and their amounts vary greatly. The proportion of labour income decreased from 32.99% in 2000 to 12.8% in 2015. Around 10% of elderly people were still engaged in work at this time, and earned a salary (Renmin University of China, 2016). The proportion of those taking pensions increased from 19.16% in 2000 to 41.1% in 2015, hence pensions became the primary financial source for elderly people. As for other personal income, over 85% of urban elderly people have

their own housing property (6% have two housing properties and 1% have three housing properties) (*ibid*). So, rental income from property is also considered to be a constant financial source for urban elderly people.

Table 6.6 Constitution of Financial Sources for the Urban Elderly Population (by %)

	2000	2010	2015
Labour income	32.99	36.6	12.8
Pension	19.61	28.9	41.1
Minimum Living Standard Support	3.9	4.1	3.4
Family support	40.7	28.2	39.1
Property	0.4	0.4	0.8
Commercial insurance	0.03	0.03	0.1
Others	2.37	1.77	2.7
Total	100	100	100

Date Source: 'Follow-up Investigation Report of Ageing Society in China' published by Renmin University of China (2016).

In addition, urban elderly people also mainly rely on family support. As shown in Table 6.6, family support is major source of funds for the elderly (40.7% in 2000, and 39.1% in 2015), although this shows a slight downward trend.

Main Financial Sources for Rural Elderly People

Apart from rural elderly people's basic pension and old-age allowance, as examined above, there are some other forms of financial sources available: (1) there were approximately 39.7% rural elderly people undertaking farming or raising livestock (cows, chicken, etc.) in 2015, and earning income connected to farming (Renmin University of China, 2016). At the same time, these rural elderly people can receive an *agricultural subsidy* from the central government (Ministry of Finance and Ministry of Agriculture, 2016); (2) *subsidy for the 'loss of agricultural land'*. Due to the development of rural areas, agricultural land might be expropriated by local government. In order to guarantee the basic living standard of rural residents affected by the expropriation of land, central government introduced the 'loss of agricultural land' pension policy, where rural elderly who are over 60 can receive a pension of up to 129

RMB/month (Ministry of Labour and Social Security, and Ministry of Land and Resource, 2007).

6.7.2.3 Reasons to Low Purchasing Power in terms of Elder Care

Since 2000, Chinese elderly people's financial conditions have improved, however, as shown in Table 6.7, there is still a large gap between the income and expenditure levels of urban and rural elderly people, which indicates a continuing problem of imbalance between urban and rural elderly people. There are some other reasons that explain why Chinese elderly people have lower purchasing power in terms of elder care.

**Table 6. 7 Income and Expenditure for Elderly People
in Urban and Rural China(2000,2006,2010 and 2016) (Unit:RMB)**

income/ expenditure	Indexes		2000	2006	2010	2016
Income	overall average monthly income	urban	708	996.92	1,491	1,994.17
		rural	186	226.83	396.33	635.08
constitution of retirement income	proportion of supportive income ⁵⁸ to total income	urban	73%	75.90%	86.80%	79.40%
		rural	10.70%	13.60%	18.70%	36%
	proportion of elderly people enrolling in the pension system	urban	72.20%	78%	84.70%	100%
		rural	5.50%	4.80%	34.60%	100%
	average monthly income (including urban basic pension)	urban ⁵⁹	904	990	1,527	2,400
		rural	14.75	30.75	74.17	141.21
Expenditure	average monthly expenditure	urban	727	835.67	1,318.25	1,230.33
		rural	190	224.25	396.58	---
expenditure on medical care	proportion of elderly people enrolling in the public medical insurance scheme	urban	60.80%	74.10%	95.30%	98.90%
		rural	3%	44.70%	98.30%	98.60%
	averagemonthly expenditure on medical care for elderly people	urban	1,664	885	1,565	1,889.79
		rural	422	287	378	---
	proportion of expenditure on medical care to total expenditure	urban	19.07%	8.80%	8.75%	12.80%
		rural	18.51%	10.70%	7.95%	---
expenditure on basic necessity	proportion of expenditure on basic necessity to total expenditure	urban	63.30%	64.20%	---	56.50%
		rural	77.20%	75.50%	---	---

Data Source: 'Blue Book of Elder Care Indexes in Urban China' (Development Research Centre Group of the Chinese State Council, 2017) published by China Development Press.

⁵⁸ Supportive income includes social insurance or other benefits issued by the government, this is distinguished from the income earned from other channels.

⁵⁹ Under this category, the data of average monthly income is only taken from urban employees.

First, as shown in Table 6.7, both urban and rural elderly people's overall income is increasing. By 2016, the income of urban and rural elderly people reached 23,930 RMB and 7,621 RMB respectively, with an annual increase of 5.9% and 9.1% respectively, demonstrating that there has been evident investment in financial support for rural elderly people. Urban elderly still receive relatively more support than rural elderly people – 79.4% (urban) compared to 36% (rural). In addition, nearly all urban and rural elderly enrol in the public medical insurance scheme, and medical care expenditure accounts for a large proportion of elderly people's income. Over 50% of elderly people's expenditure is spent on basic necessities, which means that they have less money to pay for elder care and/or medical care. Finally, rural elderly people's disposable income is low. According to the China Family Health Development Report (National Family Planning Commission, 2015), the high income urban households (the top 20%) earn 19 times more than low income rural households (the bottom 20%), which indicates that the gap between urban and rural households is obvious.

Second, although China's social security system is universal, in that it almost covers all elderly people, the standards are relatively low. So the system is not conducive to increase the service consumption of low-income elderly people, especially those in rural areas. This is mainly due to different pension scheme arrangements among different groups, and in different regions. In developed and rich areas, the elderly receive higher pension benefits, while in undeveloped and poor areas (small and medium-sized cities and rural areas), the elderly might receive lower basic pension benefits. Due to the recalibrations of pension policy in recent years the pension level of urban retirees has been raised, while the majority of rural elderly areas only receive a basic pension (of more than 100 RMB), and do not have access to other financial sources except an agricultural subsidy. In addition, although the public medical insurance scheme covers all Chinese people, elderly people have to pay themselves despite medical care being viewed as a crucial necessity. In 2013, the average out-of-pocket cost of medical care (hospitalisation) was 16.7% and 33% for urban and rural elderly people, respectively

(National Family Planning Commission, 2015). Thus, the poverty rate of the elderly in rural China is relatively high, while the welfare level is relatively lower.

6.7.3 Conclusion: Supply and Demand Side of the Elder Care Funding System

Based on the current situation of China's elder care funding system, which has been evaluated in chapters 5 and 6, the overall structure of the elder care funding system (the demand side) was established by observing existing funding models, elderly people's sources of funds, targeted elderly groups, levels of security, etc. As shown in Table 6.8, the social assistance model for 'Three-Nos' and 'Five-Guarantees' elderly people is based on a MLSS System; public LTCI has been established in some pilot cities, for those already enrolled in the basic medical insurance system; and a universal model was established for those over 60 years, such as an old-age allowance for those over 80, and a service subsidy for those over 65. In addition, various commercial insurance products have been launched by private insurance companies, such as private pension, private LTCI, and the 'House-for-Pension' Scheme.

Table 6.8 Comparison of Elder Care Funding Models in China (Demand Side)

Funding Models	Social Assistance Model	Social Insurance Model	Universal Model	Commercial Insurance Model
Sources of funds	Fiscal revenue, public welfare lottery funds, charitable donations	Premium and government subsidy	Fiscal revenue, public welfare lottery funds, charitable donations	Premium paid by the individuals
Forms	MLSS system	Public long-term care insurance (LTCI)	Old-age allowance, service subsidy for elderly people	Private pension, private LTCI, 'House-for-Pension' Scheme
Targeted elderly group	'Three-Nos' and 'Five-Guarantees' elderly people	The insured who have enrolled into medical insurance	Elderly people over 65 years	The insured who purchase relevant insurance products
Compulsory or voluntarily	Legal	Compulsory in the pilot cities	Legal	Voluntarily
Government responsibility	Government-dominated	Government-dominated	Government-dominated	Market-based mechanism and government supervision
Contribution	No contribution	Benefits based on contribution	No contribution	Benefits based on contribution
Government financial pressure	Lighter	Related to the local administrative costs and subsidy level	Heaviest	Lightest
Level of security	Basic	Related to the local economic condition	Relatively low, related to the local economic condition	Related to the premiums of insurance products

From a supply-side perspective, an elder care industry has been created in China which incorporates re-financing and investment via different mixed funding models that include 'Private Construction and Public Subsidy', 'Public and Private Partnerships', a market funding model, elder care industry investment funds and an elder care bond funding model. The characteristics of each funding model are summarised in Table 6.9.

Table 6.9 Comparison of Elder Care Funding Models in China (Supply Side)

Funding Model	Private Construction and Public Subsidy	Public and Private Partnerships	Market Funding Model	Elder Care Industry Investment Funds	Elder Care Bond Funding Model
Sources of funds	Private capital and government subsidy	Government and private capital	Private capital	Government and private capital	Private capital
Degree of compulsory	Government guidance, market participation	Government guidance, market participation	Private financial initiative	Voluntary agreement	Voluntary agreement
Responsibility	Private sectors, government subsidises insurance liability insurance	Shared responsibility between public and private sectors	Enterprises' responsibility	Shared responsibility between public and private sectors	Enterprises' responsibility
Operational mode	Quasi market-based	Quasi market-based	Market-leading	Government-leading via equity	Market-leading via bond
Funding scale	250 billion RMB	150 billion RMB	67.8 billion RMB	FOF: 7.2 billion RMB Sub-fund: 36 million RMB	5.2 billion RMB
Number of projects	12,000	241	29	400	6

Data Sources: Statistics of funding scale and number of projects of 'Public Construction and Private Subsidy', Public and Private Partnerships, elder care industry investment funds and elder care bond funding model were sourced from relevant government documents (2015 and 2016). The statistics of financing scale and the number of projects in the marketing funding model were sourced from the insurance companies involved.

Above all, in the process of funding elder care, funding sources, policy intervention and financial methods, all play an important role in diversifying the funding channels available for elder care on both a supply and demand level.

In spite of diversification on both demand and supply side, evident gaps remains and the challenge at local level lies in deciding how to utilise available resources in order to extend access to elder care to lower income groups. How localities, and public and

private agencies seek to address these challenges is examined in the following chapter. Here the research addresses four case studies from Wuhan, Hubei Provinces, to examine in more detail how public-private partnerships have combined (and with what degree of success) to create new facilities and opportunities, to enable an extension of elder care to more elderly people in the local community.

Chapter 7 Funding for Institutional Care in Wuhan, Hubei Province: Case Studies

7.1 Introduction

The previous chapters have reviewed the current funding structure of social elder care and social security for the elderly in China, and discussed problematic issues within the funding structure. Within the general models that have been outlined in previous chapters, local government is given room to determine strategies pertinent to local circumstances. Hence, in each of the case studies outlined below, we witness slightly different types of PPP arrangements based on different funding models that allow us to observe a variety of elder care arrangements and funding emerging from recent reforms. This chapter will look at the situation from a different perspective, examining the problems encountered at a local level by examining the experience of four nursing institutions in and around the city of Wuhan, the capital of the Hubei Province in central China.

This chapter is divided into four sections. First, it examines the overall situation of the aged population in Wuhan. Subsequently, it reviews the provision and funding policy for the elder care industry in Wuhan since 2011, especially the policy promoting the elder care market and the cooperation of social forces. Four typical cases – (1) Wuchang District Sunshine Welfare House, (2) Wuhan East Lake New Technology Development Zone Fuzuling Welfare House, (3) Hanchuan Social Welfare House and (4) Wuhan Social Welfare House – are used to discuss and analyse how Public and Private Partnerships (PPPs) are working in providing and funding elder care in Wuhan. The features of these funding models (their advantages as well as problems) are evaluated and some issues emerging from these four cases studies are discussed.

7.2 Overall Situation of the Aged Population in Wuhan, Hubei Province

Wuhan is the capital city of the Hubei Province, which is located in central China. Lying at the intersection of the middle reaches of the Yangtze and Han rivers, the capital is well known for its important geographic role in the transportation history of China, as it connects to other major cities with dozens of highways and railways. Wuhan is also regarded as an important economic base within the Yangtze River Economic Zone, as developments in technology and education have profoundly affected the strategic layout of the 'Rise of Central China'. As we can see from the map of Wuhan (Figure 7.1), it is currently divided into 13 districts. The central districts of Wuhan consist of seven areas: Wuchang, Hongshan, Qingshan, Jiang'an, Hanyang, Jiangnan and Qiaokou; the suburbs of Wuhan include six areas: Huangpi, Xinzhou, Huangpi, Xinzhou, Dongxihu, Caidian, Hannan and Jiangxia.

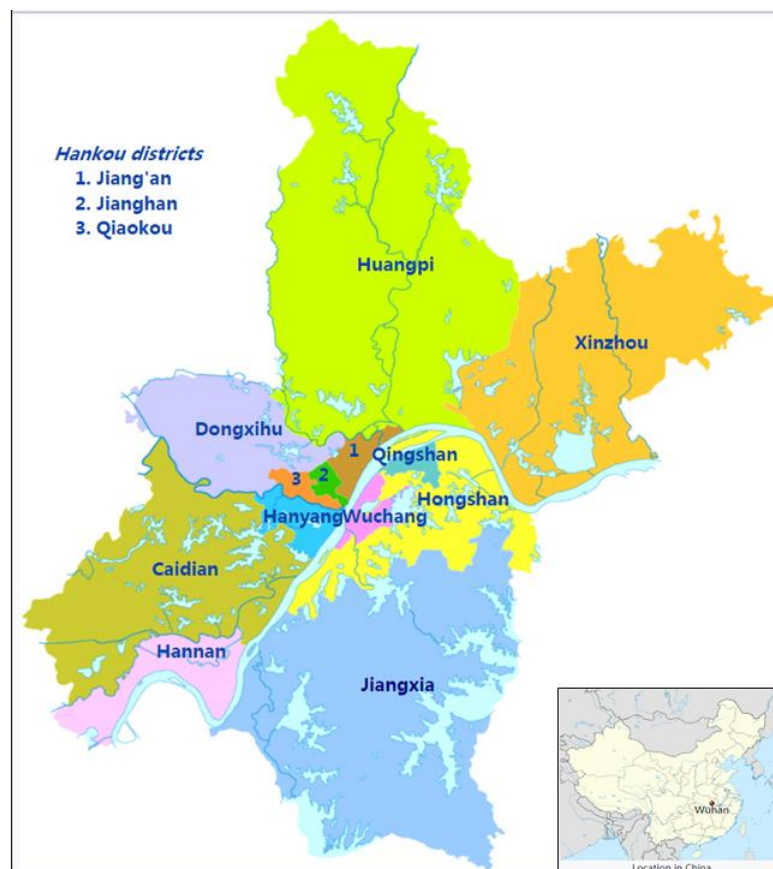


Figure 7.1 Map of Wuhan

Over the past five years, the aged population in Wuhan has faced increasing challenges. There were 17.28 million people over 60 years at the end of 2016 in Wuhan, which as 20.72% of the total population is higher than the national average of 16.7% (Hubei Provincial Department of Civil Affairs, 2017b). As can be seen from Chart 7.1, over the last six years the aged population increased at the rate of an average 75,500 every year, with a year-on-year growth rate of 5.49%. It is estimated that the proportion of elderly people will increase to 21% in 2020 and 30% in 2030 (Zhang, 2013). Semi-disabled and disabled elderly in Wuhan, numbering approximately 296,000, account for 17.1% of the total aged population, higher than the national average level of 11.5% (Hubei Provincial Department of Civil Affairs, 2017b).

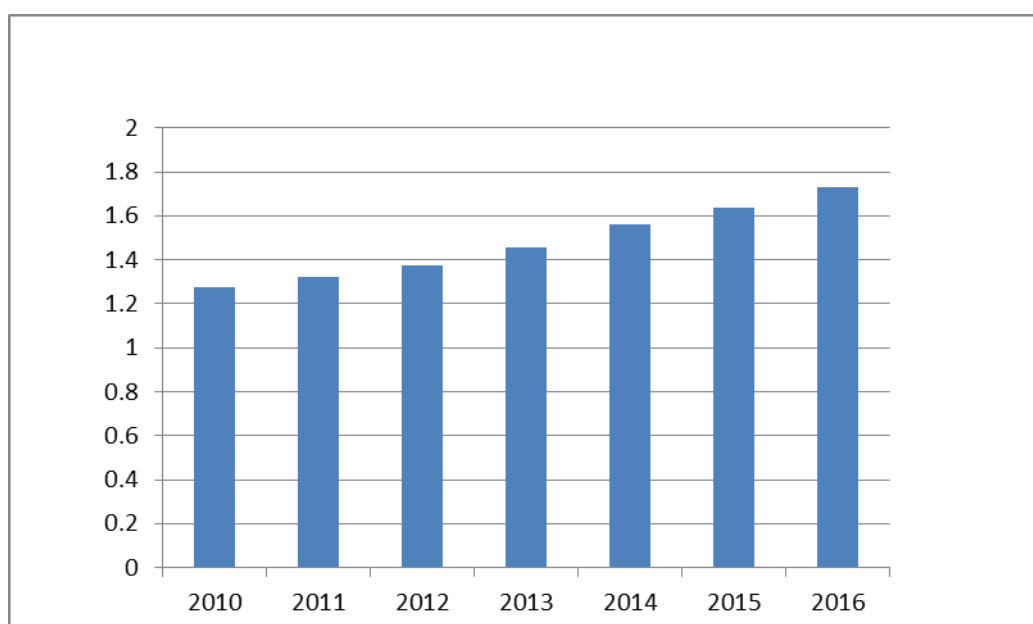


Chart 7.1 Aged Population (in millions) over 60 in Wuhan since 2010

Data Source: The data is from the 'Wuhan Aged Population Report' (2010~2016) issued by the Hubei Provincial Department of Civil Affairs (2017b).

Besides, as shown in Chart 7.2 there are more aged females than aged males in Wuhan. The higher the age, the wider the sex ratio gap between males and females.

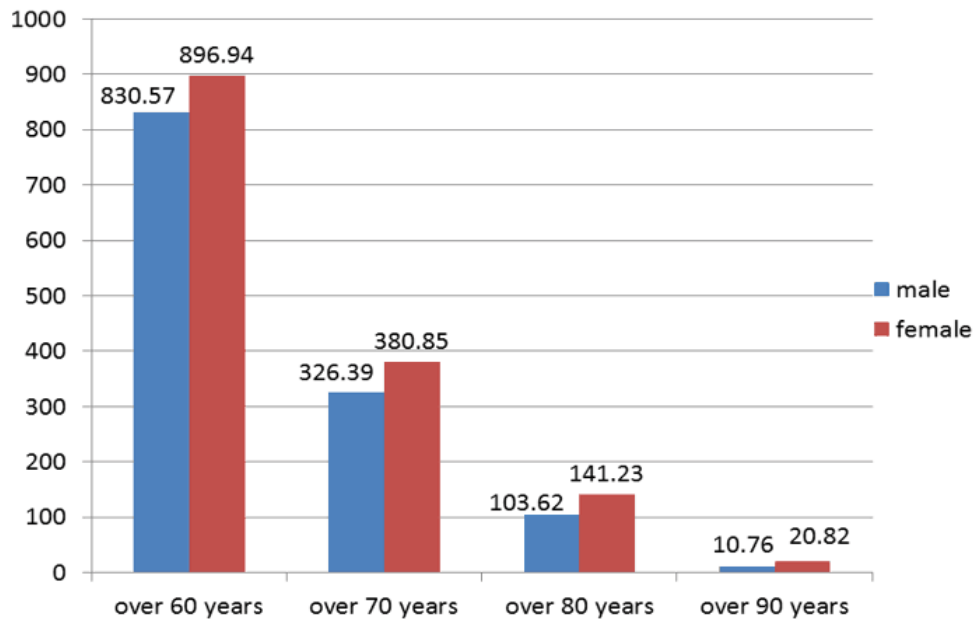


Chart 7.2 Gender of Aged Population (in thousands) in Wuhan in 2016

Data Source: The data is from the ‘*Wuhan Aged Population Report*’ (2010~2016) issued by the Hubei Provincial Department of Civil Affairs (2017b).

Additionally, regarding the distribution of the aged population in different districts in Wuhan, the aged population in eight districts was over 100,000 by the end of 2016 (Chart 7.3). The first three districts are Huangpi, Wuchang and Xinzhou. As illustrated in Chart 7.3, the majority of central districts have more elderly people than the suburbs. As to the proportion of elderly people, all central districts except the Hongshan District of Wuhan exceed 20% by the end of 2016, far more than in the suburbs. Among them, the proportion of elderly people in the Wuchang District exceeds 20% for the first time. The highest proportion is from the Qingshan District which used to be an industrial area – 26.81%, rising by 1.24% from the previous year. The lowest proportion is from the Hannan District at 14.21%.

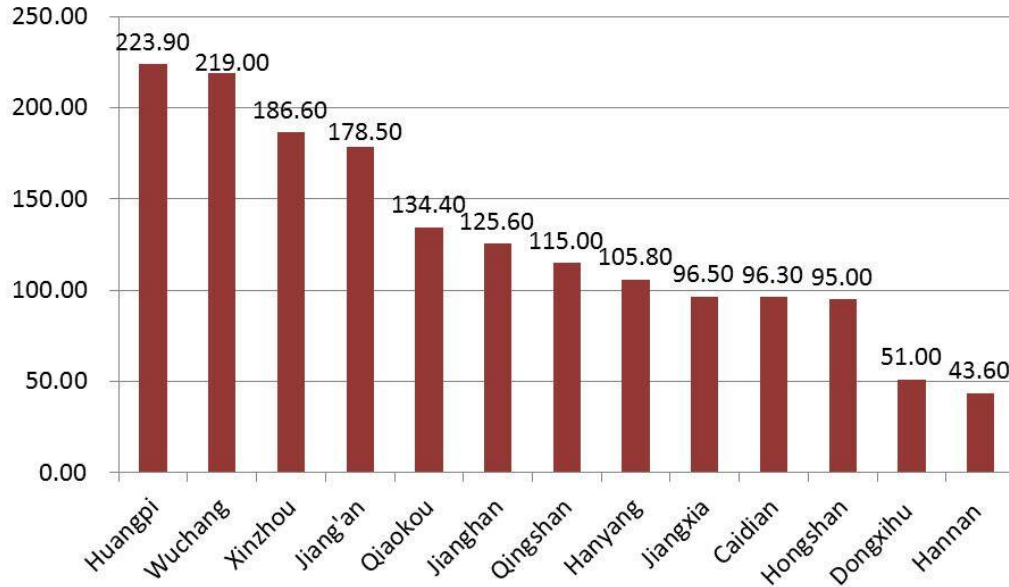


Chart 7.3 Population of Elderly People (in thousands) in Different Districts in Wuhan in 2016

Data Source: The data is from the 'Wuhan Aged Population Report' (2010~2016) issued by the Hubei Provincial Department of Civil Affairs (2017b).

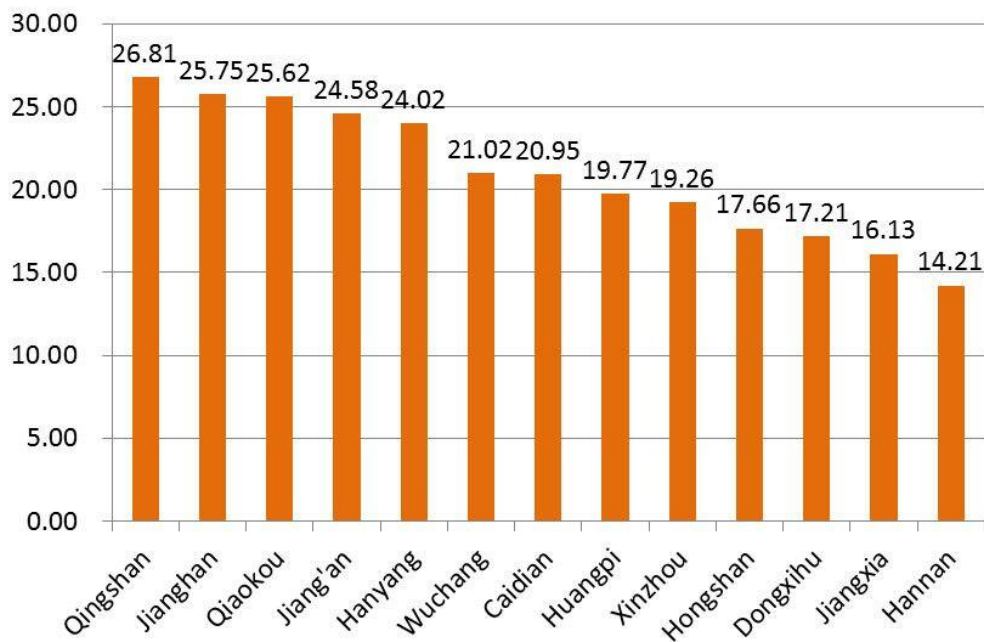
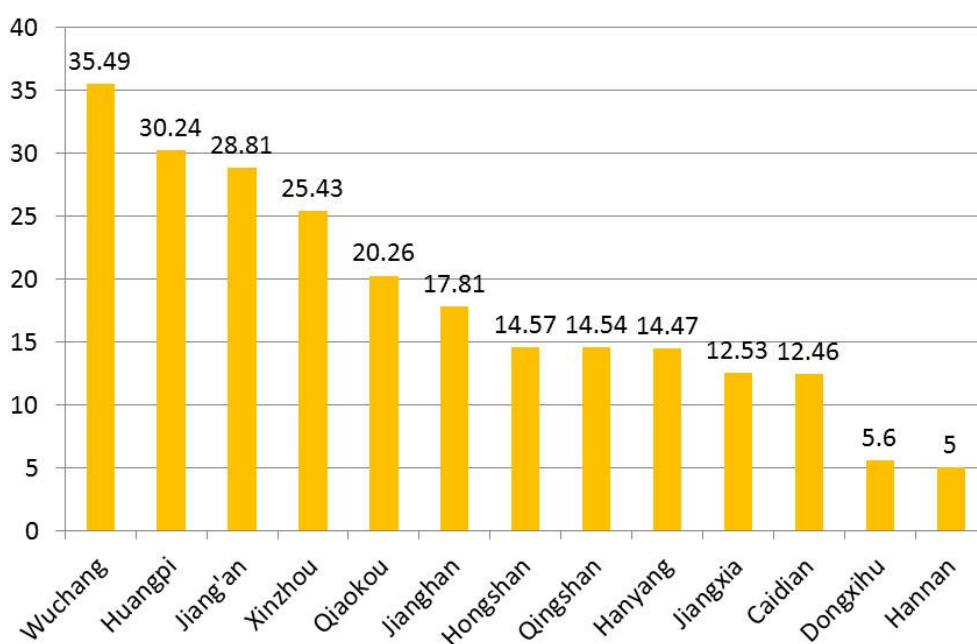


Chart 7.4 Proportion of Elderly People over 60 in Different District in Wuhan in 2016 (by %)

Data Source: The data is from the 'Wuhan Aged Population Report' (2010~2016) issued by the Hubei Provincial Department of Civil Affairs (2017b).

Moreover, the aged population phenomenon also presents itself in the increased numbers of the very elderly population (over 80). By the end of 2016, those aged 80 and above were 244,850 in Wuhan as a whole, accounting for 2.44% of the total population, and 14.17% of the total aged population (Hubei Provincial Department of Civil Affairs, 2017b). The numbers of the very elderly population increased by 17,800 from 2016 to 2017. The growth rate of the over 80s was 7.84%, well above the growth rate of the over 60s elderly population at 5.49% (*ibid*). This group is widely distributed in 13 districts of Wuhan (Chart 7.5). Among them, the Wuchang District had 35,494 elderly people over 80. According to Chart 7.6, the proportion of very elderly people (over 80) among elderly people (over 60) was over 10%, and the situation in the central districts is much more serious than those in the suburbs (Chart 7.6). Some common features of this age group (over 80) are loneliness, disability, poverty and disease. Therefore, they are more likely to need elder care.



**Chart 7.5 Population of Elderly People over 80 (in thousands)
in Different Districts in Wuhan in 2016**

Data Source: The data is from the 'Wuhan Aged Population Report' (2010~2016) issued by the Department of Civil Affairs of Hubei Province (2017b).

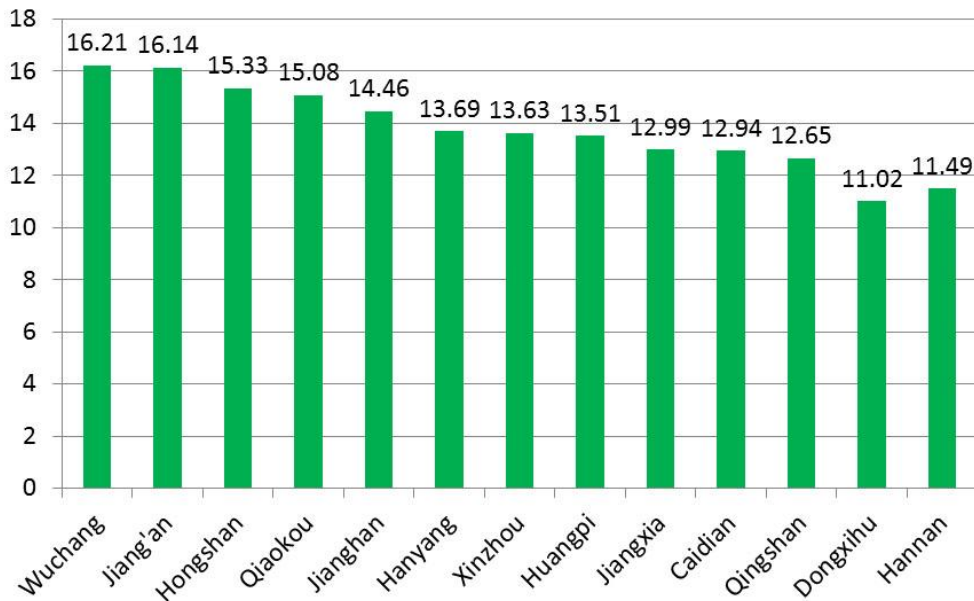


Chart 7.6 Proportion of Elderly People over 80 in Different Districts in Wuhan in 2016 (by %)

DataSource: The data is from the 'Wuhan Aged Population Report' (2010~2016) issued by the Department of Civil Affairs of Hubei Province.

Furthermore, issues of the 'empty-nest' and '4-2-1' family models are increasingly serious. According to the Sixth Demographic Census (Hubei Provincial Statistical Bureau, 2011), 27% of elderly households in the cities comprised of couples, and 21% of single elderly people (Li, 2013). In some communities, the proportion of 'empty-nest' families was over 75% (the average was around 40%), a phenomenon that was more serious in rural Hubei at around 60% (Jiang, 2016).

7.3 Varieties of Provision of Social Elder Care in Wuhan, Hubei Province

According to the 'Thirteen 'Five-Year' Plan of the Development of Elder Care in Wuhan' (Wuhan Municipal Bureau of Civil Affairs, 2017) and the 'Thirteen 'Five-Year' Plan of Social Elder Care Service System Construction in Hubei Province' (Hubei Provincial Department of Civil Affairs, 2017a), the construction and

development of the elder care system in Wuhan has achieved great things from 2011 to 2015. The reasons being as follows:

First of all, social security for the elderly in the Hubei Province is improving. The basic pension for enterprise retirees was adjusted and increased for 5 consecutive years, reaching 2,213 RMB/month by the end of 2015, and increased by 88.2% by the end of the Eleventh 'Five-Year' Period. The average centralised and decentralised support for Rural 'Five-Guarantees' elderly people was enhanced to 5,692 RMB/annual and 3,917 RMB/annual respectively. Meanwhile, the provision of an old-age allowance to elderly over 80 years is expanding, and the cumulative payment of elderly benefits was more than 400 million RMB by the end of 2015 (Wuhan Municipal Bureau of Civil Affairs, 2017).

Second, in the Twelfth 'Five-Year' period, the relevant facilities for elder care services increased. From 2011 to 2015, there were 918 facilities for elder care, including: 512 urban home-based community service centres, 120 rural elderly mutual care centres, 15 public nursing institutions, 146 community nursing institutions, 49 private nursing institutions and 76 rural welfare houses. The total number of beds was 61,000, which increased by 5,000 annually during 2011 to 2015, and there were 37 beds per 1,000 elderly people (aged 60) by the end of 2015. Above all, the overall provision level of elder care in Wuhan topped the list of 15 provincial capital cities in China (Hubei Provincial Department of Civil Affairs, 2017b).

Third, an increasing number of private organisations participate in the elder care industry. By the end of 2015, accumulated funds invested in the elder care industry from private organisations were more than 4 billion RMB. More than 5,800 social organisations engaged in offering services related to elder care, such as home-based elder care services like housekeeping, meal delivery, rehabilitation, spiritual comfort, etc. Meanwhile, the total number of private nursing institutions reached 217 by the end of 2015, providing over 30,000 beds for elder care. Therefore, the private sector and community services were gradually becoming the main supplier of elder care provision in Wuhan by 2015 (Wuhan Municipal Bureau of Civil Affairs, 2017).

Fourth, the coverage of beneficiary elderly has expanded and the allowance level increased. Apart from urban ‘Three-Nos’ and ‘Five-Guarantees’ elderly people, the social elder care system also offers various forms of social services (e.g. free door-to-door home care and free annual medical check-ups, etc.) to the very elderly people (over 80) or disabled elderly people, the ‘empty-nest’ elderly people and other seniors with low financial resources (Yin, 2016). At the end of 2015, an old-age allowance covered all elderly people over 80 years in Wuhan, and the resulting cumulative grant is over 0.4 billion RMB (Wuhan Municipal Bureau of Civil Affairs, 2017).

Since 2015, Hubei Province has issued a series of official documents concerning the expansion of elder care coverage achieved by supporting private organisations to develop the elder care industry. In an interview with the Director of the Social Welfare and Charity Office, Hubei Provincial Department of Civil Affairs, the director stated that elder care development in Hubei Province includes the following four working priorities: the first is to further liberalise the elder care service market, and encourage more social forces to adopt a joint-stock cooperative system, PPP model and other models to operate a nursing institution. Second, to develop policies on land grants, credit financing, tax relief, construction and operational subsidies for beds. Third, to standardise pricing by establishing a market-based mechanism for the service charges of nursing institutions, innovating the service provision approach. The fourth priority is to reduce barriers to entry and support new entrants into the elder care industry by improving the administrative efficiency of registration and approval to establish a nursing institution.

7.4 Funding Initiatives in the Development of Social Elder Care in Wuhan, Hubei Province

Currently, the local governments in Hubei Province follow the national subsidy policy – ‘Three subsidies’ (*sanbu*) policy (Ministry of Civil Affairs, 2013) – which proposed a

metaphor to describe the elder care subsidy system: *'bricks'* (*'zhuantou'* in Chinese), *'beds'* (*'chuangtou'* in Chinese) and *'person'* (*'rentou'* in Chinese). The financial input for *'bricks'* and *'beds'* is included in the process of constructing nursing institutions, and funding for the *'person'* relates to the operational stage, or is included under other old-age allowances and benefits.

In the latest official document from the Hubei Provincial Department of Civil Affairs (2017a), the overall funding situation for elder care in Hubei Province showed that in 2016, the total subsidies for promoting a local elder care service system were 110 million RMB. Local authorities have raised the subsidy levels of the construction and operation stages for private non-profit nursing institutions. The construction subsidy for each bed is around 1,500 RMB, an increase of 50%. Local authorities also subsidise nursing institutions' security risk insurance. Besides this, Hubei Province will prepare special funds of 20 million RMB to support 20 areas to build provincial exemplary community home-based elder care centres. Provincial demonstrative projects will be purchased by government but managed by the private sectors. Above all, Hubei Province explicitly requests that all local authorities should increase investment in the construction and operation of the social elder care services. Specifically, funding arrangements in Wuhan's elder care industry can be illustrated from the following perspectives:

First, public welfare lottery funds are still the main financial resource for the construction of elder care in Wuhan. Each year 50 percent of local public welfare lottery funds are invested in the social elder care system; for example, the Wuhan Finance Department arranged for 101.79 million RMB to be provided to the elder care industry in 2017 (Hubei Provincial Department of Civil Affairs, 2017a). In the case of public nursing institutions, they are fully funded by the local government, however, these institutions have experienced a financial deficit in recent years, as they struggle to maintain sustainable management and operational practices. As a result, they have to accept to care for private elderly clients in addition to the *'Three-Nos'* and *'Five-Guarantees'* elderly people. Meanwhile, the Wuhan municipal government is

exploring other approaches to reform public nursing institutions, and expand investment channels, such as ‘Public Construction and Private Operation’ and ‘Private Construction and Public Subsidy’, where local governments plan to subsidise every bed in private nursing institutions with 2,000 to 4,000 RMB at the construction stage. Besides land, property is a major intangible asset. In the big cities where land is very scarce, local governments usually authorise public-owned buildings to develop as sites for elder care services. Investors may receive free resources (e.g., land or buildings, facilities, etc.), or only pay a percentage of the resource depreciation fee. Hubei Provincial Finance Department is the biggest fundraiser for the social elder care system. Since 2008, it has raised over 1 billion RMB and subsidised nearly 85 public nursing institutions in the reconstruction of buildings and facilities.

Second, there are different forms of subsidies at the operation stage. In the case of public nursing institutions, local governments provide a monthly subsidy to ‘Three-Nos’ and ‘Five-Guarantees’ elderly people – according to the local MLSS System. As for private nursing institutions, the local government subsidises the elderly according to their fiscal resources. So, subsidy levels across Hubei Province differ from region to region, ranging from 360 to 2,400 RMB/person/annual. The local government also offers preferential policies, for instance, a reduction in business income tax and added-value tax. Administrative fees, such as water, electricity, gas and heating may be paid according to residential criteria, rather than business criteria.

In December 2016, Hubei Provincial Department of Civil Affairs (2016) issued ‘*Temporary Measures of Guided Funds for Elder Care Service Industry in Hubei Province*’. The Hubei government arranged government-sponsored investment funds (FOF: 600 million RMB), and set up 5 sub-funds (4,400 million RMB) run by 5 fund management institutions respectively (Table 7.1).

Table 7.1 Establishment of Elder Care Industry Funds in Hubei Province

Fund Management Institutions	Private Partners	Amount of Funds (million RMB)
Hubei Gaolong Healthcare Industry Investment Fund Partnership Company	Mayinglong Pharmaceutical Group Limited Company	500
Jiuzhoutong Gaotou Elder Care Industry Investment Fund Partnership Company	Jiuzhoutong Pharmaceutical Group Limited Company	2,400
Yichang guotou Elder Care Industry Investment Fund Partnership Company	Yichang Guotou Group	500
Jiaotou Hanjiang Healthcare Industry Centre	Hubei Provincial Transportation Investment Company	500
Wuhan Ruide Capital Industry Fund	Tongjitang Pharmaceutical Limited Company	500
Total amount		4,400

Data Sources: The above information was obtained from internal government documents while I was doing investigation work in the Hubei Provincial Department of Civil Affairs.

In the next section, I use four typical cases to discuss and analyse how nursing institutions are funded under different forms of co-ordinated co-operation between the government and the private sectors.

7.5 Case Studies

The first case – Wuchang District Sunshine Welfare House – is a non-profit organisation, which is a typical example of a nursing institution running on a ‘Private Operation and Public Subsidy’ funding model. The second case is another private nursing institution – Wuhan East Lake New Technology Development Zone, Fuzuling Welfare House. This welfare house is run on a ‘*Public Construction and Private Operation*’ model, and was a purely public nursing institution which became a private one. The third case is Hanchuan Social Welfare House (now called ‘Hanchuan Elderly Apartment’), which is also typical for the ‘*Public Construction and Private Operation*’ funding model, except it has both public and private operational systems. The fourth

case, Wuhan Social Welfare House (now called ‘Xiehe Elderly Apartment’) is currently viewed as the biggest PPP elder care project in elder care in China. All of these case studies are based on semi-structured interviews which were conducted in April~June 2015, and in August 2017.

7.5.1 Case Study One: Wuchang District Sunshine Welfare House

Wuchang District Sunshine Welfare House (which I will refer to as Sunshine Welfare House from this point onwards) is one part of the Wuhan Sunshine Medical Care Group. Wuhan Sunshine Medical Care Group is a group of comprehensive elder care service institutions that are famous for combining elder care (nursing institutions) with medical care (hospitals). Its hospital in Wuchang District used to be a state-owned hospital for employees, which after restructuring was privatised. Its nursing institution, the Sunshine Welfare House, used to be an old factory building and a staff dormitory. The institution was a state-owned enterprise, subsequently rebuilt and expanded into a place for elder care in 2007. Its approximate scale is 10,000 square meters, with an outdoor area of 3,000 square meters, and the building can accommodate 600 elderly people. The Sunshine Welfare House has a comfortable environment, well-equipped elder care facilities, thorough servicing procedures and professional nursing staff, all of which can meet different levels of medical and elder care demand.

The most impressive feature of Sunshine Welfare House is that it can provide medical care services as well as daily elder care. The doctors do rounds of the wards every day, and nurses take the body temperature and blood pressure of the elderly, this routine is structured in order to prevent disease by offering prompt medical treatment.

Construction Funding Arrangements

According to an interview with its manager, as the institution is defined as a private non-profit organisation it is difficult for Sunshine Welfare House to obtain bank loans. So, in the construction stage, its main funding source was from self-raised funds, approximately 4.8 million RMB. The local government single subsidy provided 2,000 RMB for each bed, so the total fiscal subsidy the institution received is 1.2 million

RMB, accounting for 20% of its total funds. On top of this, the local government issued an operational subsidy of 100 RMB/person/month before August 2017, so these sources of subsidised income, in total, amount to 720,000 RMB a year (in the operational stage). In August 2017, the local government raised the operational subsidy standard from 100 to 200 RMB/person/month. All these subsidies are directly invested in the provision of elder care.

Operational Situation

Considering funding arrangements for the operational stage, the rent for Sunshine Welfare House is 1.5 million RMB annually. One plan is to self-raise approximately 2 million RMB (of business income mainly from medical care) towards the maintenance of relevant facilities, such as fire-fighting apparatus, barrier-free facilities for the disabled, in order to enhance safety standards, and be able to request further operational subsidies from the government.

At present, all 600 beds are occupied. Among them, 200 beds are used for medical care for the elderly, leaving 400 beds for non-medical elder care. There are four levels of care services provided: intensive care, first-grade care, second-grade care and third-grade care, depending on the (dis)ability of the elderly person involved. The institution's charging standards contains three parts: medical/elder care, bed, and living costs (including food and other fees). The medical/elder care fee has six grades according to the level of need and the capacity to pay: 1,600, 1,400, 1,200, 1,000, 800 and 600 RMB/person/month. Bed charging fees range from 400 to 1,000 RMB/person/month. The living costs fee is 600 RMB/person/month. Thus, a total fee for one elderly person ranges from 1,600~3,200 RMB/month.

Besides the associated costs above, there are around 300 employees in the Sunshine Welfare House, including administrative staff, doctors and nurses, and service staff. There are little profits when all income and expenses are offset.

Evaluation of Case Study One

From the perspective of its funding structure, the model for the Sunshine Welfare House contains three participants: the government, the private sector and individuals (individual investors and clients). Under the ‘Private Operation and Public Subsidy’ funding model, local government usually subsidises beds in the construction and operational stage. In the construction stage, local government grants a one-time subsidy to beds based on quantity. In the operational stage, a subsidy is released according to the occupation rate of beds, and subsidy standards differ according to the client’s condition. In this case, the government subsidy only accounts for 20% of the pre-period investment cost, without any bank loans or other credit finance. Sunshine Welfare House has to depend on self-financing and uses operating income (mainly from service and bed fees charged to the elderly and their families) to rebuild and expand the institution. All government subsidies are only available when the local government assesses whether their standards have been met. As a private non-profit institution, the Sunshine Welfare House encounters financial pressure because they cannot obtain bank loans. Thus, they have to raise funds by themselves in order to have enough money for the pre-period construction.

From the perspective of its operational mode, the Sunshine Welfare House completely operates under a market-oriented and privatised system, as this enables the institution to determine a price, and sell services to those who can afford them. Unlike public social welfare houses, it does not need to accept ‘Three-Nos’ elderly people. This private non-profit institution is different compared to other private institutions, as it needs to register under the local Bureau of Civil Affairs rather than the Industrial and Commercial Bureau⁶⁰. As the Sunshine Welfare House can determine its own pricing structure, their service and bed fees can be set lower than other private nursing institutions, however, this costing strategy affects their operating income.

⁶⁰ In China, a private company needs to register under the Industrial and Commercial Bureau, so they might go through a complicated procedure to do so. While, if a private non-profit institution provides elder care, they register under the local Bureau of Civil Affairs, which is easier for them to do more quickly. Meanwhile, they also enjoy more preferential policies and more subsidies.

From a client perspective, this model is unfair as the current government's subsidy policy is more likely to benefit suppliers rather than individuals. Elderly people need to pay for elder care services by themselves. Their main source of funding is from their pension. If the pension is not enough, then their family (children or grandchildren) might support them. In practice, the government supports the development of the elder care industry, by providing the social capital to participate in delivering elder care, while ignoring the purchasing capacity of the elderly, especially, as care fees might prove unaffordable. In this case, care and bed fees in Sunshine Welfare House are relatively affordable compared to private nursing institutions, and are welcomed by the elderly. According to the interviewed manager, she admits that they first consider the possible expenditure and other operating costs, and then determine a suitable price range for the elderly. Only in this way, can the Sunshine Welfare House make ends meet, and create a small operating balance, or the welfare house would not be sustainable.

From the perspective of care being considered a product for the consumption of the elderly, products clearly demonstrate a kind of commodity attribute rather than a welfare attribute. What kind of care services consumers choose depends on their purchasing power. 'Three-Nos' elderly can access free elder care in a public social welfare house, while elderly people with low incomes are not a specific targeted group for the government to protect. Without universal coverage of public LTCI, the elderly and their families might bear a heavily economic burden in the long-term.

7.5.2 Case Study Two: Wuhan East Lake New Technology Development Zone, Fozuling Welfare House

Wuhan East Lake New Technology Development Zone Fozuling Welfare House (which I will refer to as Fozuling Welfare House) was built in February 2012, with an approximate area of 14,000 square meters, and a total investment of 60 million RMB which aimed, specifically, to provide elder care services to 'Three-Nos' and 'Five-Guarantees' elderly people. Fozuling Welfare House is a comprehensive public nursing institution, with: 515 beds, a canteen, laundry, medical clinic, entertainment and

fitness centres, and other relevant facilities. In June 2013, the local government launched the '*Public Construction and Private Operation*' reform in Fozuling Welfare House, and chose Wuhan Sunshine Medical Care Group – a private non-profit organisation – as a social commissioning agency (via a bidding procedure) which has a comparative advantage in the provision of medical care, as it could then operate the Fozuling Welfare House in a market-based way.

Commission Contract

At the start of 2013, the local government and Wuhan Sunshine Medical Care Group signed a commission contract. This marked the first '*Public Construction and Private Operation*' elder care project in Wuhan. The contract contained the following terms:

(1) The period for the contract is 10 years. The commissioning agency does not need to pay any asset depreciation fees⁶¹ in the first five years. There is no other government subsidy in the construction period, so the commissioning entity has to self-finance in order to expand or build other relevant facilities (e.g., medical equipment and pharmaceutical resources for a clinic). In the subsequent five years, the commissioning agency needs to pay asset depreciation fees to the local government (this amount is still not known at the moment).

(2) Sufficient beds should be ensured to support all 'Three-Nos' and 'Five-Guarantees' elderly people (total existing number is 217), after which 100 beds should be reserved for those who need medical care, and finally, the rest can be provided as a private elder care service.

(3) The contractor is responsible for the attendance of all 'Three-Nos' and 'Five-Guarantee' elderly people, and the government subsidises them with 850 RMB/person/month, while the subsidy standard for private elderly people is 200 RMB/person/month.

⁶¹ In this case, the assets depreciation fees refer to the collocation of the cost of assets (the existing buildings or the facilities, such as beds and equipment) to periods in which the assets are used.

(4) The relevant departments from local government, such as the Bureau of Civil Affairs and the Bureau of Sanitation, conduct regular inspections every month, and evaluate institutions on different criteria concerning service quality, the state of appliances and equipment, etc. Once an institution has passed the inspection, the local government releases the subsidy.

Operational Situation

Sunshine Medical Care Group invested 3 million RMB in purchasing relevant facilities, and improving the environment for medical and elder care provision during the construction period. Currently, except for 217 ‘Three-Nos’ and ‘Five-Guarantees’ elderly, in Fozuling Welfare House there are around 100 private elderly people. The welfare house also opened a professional hospital for local people, and employs nearly 80 doctors and nurses there. Thus, Fozuling Welfare House is basically running profitably.

As this is the second elder care project for Sunshine Medical Care Group, it still uses the same service price standards as outlined in case one: a medical/elder care fee with six grades: 1,600, 1,400, 1,200, 1,000, 800 and 600 RMB per person/month; bed charging fees that range from 400 to 1,000 RMB per person/month; and a living charging fee of 600 RMB per person/month. As the interviewed manager clarified, Fozuling Welfare House is located in a rural-urban continuum where the residents are relatively poor, compared to the central districts. So, given that situation, Fuzuling Welfare House actually asks less than the service prices listed.

Additionally, Sunshine Medical Care Group set up a team of professional nursing staff and introduced a series of improved management procedures in Fozuling Welfare House. According to questionnaire results from monthly regular inspections, the degree of satisfaction from the patients and elderly people is over 90%. Thus, the service quality of medical care and elder care in Fozuling Welfare House is acceptable to the majority of their clients.

Evaluation of Case Study Two

In case study two, the relationship between the government and Sunshine Medical Care Group is subject to contractual law. After obtaining operating rights from the government, Fozuling Welfare House transformed from a purely public nursing institution to a nursing institution that is owned by the government, but operated by Sunshine Medical Care Group on a market basis. Sunshine Medical Care Group assumes sole responsibility for all profits and losses. The typical feature of this case is the separation of ownership (government) and management (Sunshine Medical Care Group). In this instance, this commission mode can be evaluated from the following aspects:

First, the *'Public Construction and Private Operation'* model demonstrates how the government can release its responsibility for providing and funding elder care to a non-profit organisation. Governments are not the only entities able to provide public goods. The *'Public Construction and Private Operation'* model of the elder care industry makes it possible that a social party, no matter whether it is a private company or a non-profit organisation, can bring more positive elements from market rules and provide elder care services with a market-oriented approach, which not only satisfies care demands from different groups of the elderly, but also promotes the development of the elder care industry.

Second, this case also shows that this *'Public Construction and Private Operation'* model can produce more positive economic results for both the local government and Sunshine Medical Care Group. For one thing, it reduces public subsidies from local government. For instance, before the reform, as the interviewed manager puts it, the local government used to pay over 7 million RMB to sustain the basic operation of Fozuling Welfare House (e.g., maintenance of relevant facilities, personnel allocation, etc.), and to support all 'Three-Nos' and 'Five-Guarantees' elderly people each year. In contrast, after the reform local government only needed to pay an operational subsidy towards 'Three-Nos' and 'Five-Guarantees' elderly people's care (850 RMB/person/month), and private elder care (200 RMB/person/month). Assuming there

are 217 ‘Three-Nos’ and ‘Five-Guarantees’ elderly people and 100 private elderly people, the government only needs to pay 3.36 million RMB. Thus, the local government saves roughly 4 million RMB a year. The interviewed manager also stated that since there are no asset depreciation fees in the first five years, expenditure is reduced. In the operational stage, the government subsidy for ‘Three-Nos’ and ‘Five-Guarantees’ and private elderly people has a surplus each month. Thus, the current overall financial situation is generally sound.

Third, the ‘Combination of Medical and Elder Care’ service model in Fozuling Welfare House has more advantages in market competition. The hospital not only provides a convenient and safe medical environment for local residents, but also produces profits and cross-subsidises Fozuling Welfare House. Further, the improved quality of medical care services attracts more elderly people willing to pay for the elder care services.

7.5.3 Case Study Three: Hanchuan Social Welfare House / Hanchuan Elderly Apartment

Hanchuan Social Welfare House was built in 2011. It is a public, fully-funded institution and its main responsibility is to take care of ‘Three-Nos’ elderly people and orphans. In the early stage of construction, the total invested funds were around 13.5 million RMB, including: 4.4 million RMB of public welfare lottery funds, 4.11 million RMB municipal special funds, 2.5 million RMB of social donations, and 2.47 million RMB self-raised funds. The building area is 8,500 square meters and accommodates 300 elderly people. From 2009 to May 2016, the number of elderly living in Hanchuan Social Welfare House was only around 130 people, including 36 ‘Three-Nos’ elderly, and the rest were private elderly people who needed to pay for the services and living expenses. In the coming years, Hanchuan’s local government intends to launch a privatisation reform, and support social forces to invest in the elder care industry, in order to relieve the fiscal pressure, increase accommodation rates and improve the quality and efficiency of elder care. In June 2016, a market-based mechanism was introduced as a ‘Public-Private Partnership’ in Hanchuan Social Welfare House. Under this new agenda, the original social welfare house has two systems: ‘Three-Nos’ elderly

people are still supported by the government; the remaining empty beds and relevant facilities are run by a private company and operated privately through contract management.

Before the 'Public and Private Partnerships' Reform

Before May 2016, Hanchuan Social Welfare House was a public institution that only accepted 'Three-Nos' elderly people, and the remaining empty beds were provided to other elderly people in order to generate profits. But during an investigation in May 2015, I found the empty bed rate to be more than 50% most of the time. As for the relevant policy, the subsidy for 'Three-Nos' elderly people in Hanchuan was 820 RMB/person/month in 2015. Prices for other elderly people ranged from 1,110 RMB to 2,600 RMB/person/month according to their dependency level. In interview, the president of Hanchuan Social Welfare House stated that several problems have been generated in the delivery of public elder care services, and these can be arranged as follows:

First, according to the MLSS System in Hubei Province, the minimum living standard was 410 RMB/month in 2015, which was lower than Wuhan MLSS level (580 RMB/month). The standard in Hanchuan should be adjusted and might increase around 10 to 20 RMB every year. As to the monthly subsidy for 'Three-Nos' elderly people in the Social Welfare House, the MLSS system determined that it should be at least 200% of local minimum living standard, so every 'Three-Nos' elderly people in Hanchuan should receive at least 820 RMB/month. These subsidies should be covered by the local fiscal budget and transferred to the Hanchuan Social Welfare House directly. In practical terms, however, these subsidies are not covered by the local fiscal budget. Instead, the MLSS Centre issues the subsidies, so the actual amount is usually lower than the regulated amount (around 650 RMB/month) due to inadequate tax revenues. The social welfare house is a non-profit organisation and service pricing is decided by the local Price Bureau⁶², so they could not charge more to other elderly people in order

⁶² The Price Bureau is an administrative organisation which is responsible for price control. It mainly has three functions: first, it should implement state price guidelines, policies and regulations; second, it is

to improve their operating income and relieve their costs. In actual terms, elderly people's living costs and service staffs pay together exceed the welfare house's actual financial capacity.

Second, the requirements for the acceptance of private elderly people in Hanchuan Social Welfare House are quite strict. The president states that elderly people with infectious diseases, mental disorders, and even chronic diseases are excluded from the waiting list, because if these people are gravely ill or get hurt while living there, it may require greater responsibility from the Social Welfare House. This responsibility not only comes from financial pressures (e.g., recruiting professional nurses/social workers to take care of them), but also from criticisms made by elderly people's families if their relatives experience accidents (which might contribute to their death).

Third, the president of Hanchuan Social Welfare House says that the welfare house is a public, non-profit organisation, and as their administrative staff are civil servants, their income is ratified and issued by the state. Unlike private nursing institutions, they can only take care of 'Three-Nos' and 'Five-Guarantees' elderly people. If they accept private clients, they cannot earn much money from this business because the service price charged is usually very low. In addition, more elderly people means that they have to recruit more service staff to take care of them, raising expenses and threatening to undermine any profit. So, the incomes of these administrative staff will not vary according to business performance. Without any performance incentive mechanism, staff's monthly income will not increase, as a result, they do not show much enthusiasm for their work, and do not care how many elderly people are served. This is the reason why the welfare house is more likely to reject private elderly people who come for elder care and accounts for much lower accommodation rates as well.

Fourth, concerning service staff, the welfare house usually hires local female workers and does not offer them formal and professional training in order to save labour costs. Their average age is over 50 years, and their educational levels are poor. Hanchuan

responsible for the overall macroeconomic regulation and control on the prices on the provisional level; third, it is responsible for the monitoring system of province's prices and price information network.

Social Welfare House provides them with accommodation and meals, and their salary is very low, only about 1,500 RMB/month, around the average local income. Hanchuan Social Welfare House suffers staff shortages. Up to May 2015, there were only five full time service staff taking care of the elderly, which meant one staff member had to take care of 12 elderly with low-grade nursing demands, 8 elderly with general nursing demands and 4 with special nursing demands. Therefore, the low income of working staff and low level of service quality, all impact on the provision of social elder care.

As the interviewed president put it, if Hanchuan Social Welfare House wanted to change the present situation and solve the problems listed above, an urgent reform was needed as soon as possible, introducing market-based mechanisms and cooperation with private nursing institutions.

'Public Construction and Private Operation' Contract

In June 2016, Hanchuan municipal government signed a contract with a private nursing institution. The contract terms state:

- (1) The duration of contract is 3 years, and if business performance goes very well, the government will renew the contract;
- (2) The government will transfer 256 beds and all remaining elder care facilities to the private nursing institution to manage and operate independently;
- (3) The private nursing institution should give the government 350,000 RMB to cover annual depreciation of assets. Any operating expenses in the maintenance and the introduction of new equipment during the operational period must be funded by the private agency. When/if the contract expires, what the agency paid towards any maintenance and equipment costs (in advance) cannot be withdrawn or deducted from the previous asset depreciation charge;
- (4) The government subsidises elder care services, and the subsidy standard is 360 RMB/person/per year. The institution is exempt from business tax and value added tax; water, electricity and other utility charges are collected according to civil standards;

(5) The private nursing institution only recruits private elderly people who are needed to pay for beds and services, while the ‘Three-Nos’ elderly are still taken care of by the Hanchuan Social Welfare House. The private nursing institution has the right to make its own management decisions (e.g., independent pricing) and determine its own possible risks and losses.

After reform: Performance and Achievements

After the restructuring of its operating approach, the private nursing institution renamed the social welfare house as ‘Hanchuan Elderly Apartments’. Currently, there are 160 elderly people living there. The service charging standard has 7 grades: 1,200, 1,450, 1,550, 1,750, 2,150, 2,400 and 2,600 RMB per person/month. In addition, they need to pay a 500 RMB bed fee and 500 RMB for living expenses. The majority of the elderly are from rural areas and their basic pension is only around 100 RMB, so they are supported by their children. 40% of the elderly are urban residents who can afford most of their service fee by using their pension.

The president of the Hanchuan Social Welfare House stated, at interview, that when they first considered introducing market mechanisms (subject to their cooperative project), they found that one of the competitors owned two other private nursing institutions in Hanchuan, and they are both run very well. After much consideration and negotiation, Hanchuan Social Welfare House and the private company finally signed this cooperation contract. After the ‘*Public Construction and Private Operation*’ reform, the most distinctive transformation of Hanchuan Social Welfare House is the accommodation rate, increasing from below 40% to more than 70%. The efficiency of provision for relevant facilities and services has also improved. The reform solved the problems that were rooted in fully public-funded operation and management approaches, and takes advantage of the utilisation value of social resources and a market competition mechanism. Moreover, the government can use the asset depreciation fee to further invest in the construction of public elder care facilities.

Evaluation of Case Study Three

As seen in the previous investigation of case study three, the *'Public Construction and Private Operation'* reform of Hanchuan Social Welfare House not only reduced the government's financial burden, but also promoted improved elder care provision. However, the reform also generated some problems that cannot be ignored:

First, the level of government subsidy for private elderly people is too low. The subsidy standard is only 360 RMB annually, much lower compared with other nursing institutions in Wuhan's central districts. This is primarily due to local fiscal conditions in Hanchuan that prevent the raising of more realistic revenues.

Second, the overall pricing system of social care adjusts to market-based standards, and as a consequence prices would increase under a market-based economy. In this case, only 'Three-Nos' and 'Five-Guarantees' elderly people could enjoy public welfare and free elder care services. While, private elderly people have to pay for services if they would like to enjoy quality services. Thus, the welfare nature of elder care services declines because the majority of very poor private elderly people might have to be removed from the current elder care system.

Third, from the perspective of the Hanchuan municipal government, due to a shortage of public funds, it has to ask for an asset depreciation fee from a private company. The use of clients' fees to pay asset depreciation to local government demonstrates a strategy to reduce fiscal subsidies in the provision of elder care, and removes clear distinctions between public and private funding systems. However, this conduct leads to a heavy economic burden for the private investor. In August 2017, an interviewed manager said that their first year's retained profit was roughly 30,000 RMB which was far beneath their original expectations. So, they were considering increasing the service fees next year.

7.5.4 Case Study Four: Wuhan Social Welfare House / Xiehe Elderly Apartment

Wuhan Social Welfare House is the largest public nursing institution in the Jiang'an District, Wuhan. It is financed directly by the state. Wuhan Social Welfare House was

built in 1964 with an approximate area of 20,000 square meters, and more than 800 beds. It mainly takes care of ‘Three-Nos’, disabled elderly people with economic difficulties. Its accommodation rate was over 98%, of which 72% were disabled elderly. Due to the growing numbers in the aged population, current provisions cannot accommodate the increased demands for elder care. Thus, from 2011 to 2015, Wuhan Social Welfare House went through a large scale reconstruction and expansion, with 550 million RMB’s total investment, aimed at establishing the largest comprehensive nursing institution in Wuhan.

The new building’s area is 99,400 square meters, with 2,066 beds. This new Wuhan Social Welfare House has two parts – Block A and Block B, which were invested with 270 million RMB and 280 million RMB by the local government, respectively. Block A has 989 beds and opened to the public in March 2017. It is still used as a public nursing institution operated by Wuhan Social Welfare House, and bears its original functions and responsibilities. Currently, there are 199 ‘Three-Nos’ elderly people, and 102 private elderly people. Block B has only just completed its basic construction and decoration. It was designed by the Hubei Province Department of Civil Affairs to introduce a PPP mechanism and to cooperate with two national Fortune 500 companies – Jiuzhoutong Pharmaceutical Group Limited Company (‘Jiuzhoutong’) and Shanghai Renshou National Pharmaceutical Limited Company (‘Renshoutang’). These two private companies and the local government jointly funded the reconstruction of Block B with total investment amount of 124 million RMB. Then Block B was renamed as the ‘Xiehe Elderly Apartment’ and opened to the public in May 2017. This new building has twenty-five floors. The first to seventh floors are where the hospital is located, and 201 beds for medical care. From the eighth to the twenty-fifth floor are elderly apartments, comprised of 876 beds: including 176 beds for healthy elderly, 350 beds for semi-disabled elderly and 350 beds for disabled elderly. This PPP elder project is currently viewed as the largest one of its kind in China.

'Public-Private Partnership' Funding Structure

The PPP project on the reconstruction of Wuhan Social Welfare House (Block B) was initiated under a ROT model (Rebuild-Operate-Transfer), and its franchising contract duration is 25 years. Wuhan Social Welfare House and other two private companies (Jiuzhontong and Renshoutang), who won the bidding, formed a separate project company – *'Wuhan Jiuzhoutong Renshoutang Medical and Elder Care Limited Company'*. This company will furnish Block B with updated intelligent systems and purchase medical equipment and pharmaceutical resources.

The total investment on the PPP elder care project of Wuhan Social Welfare House is 124 million RMB. It includes a 6.16 million RMBs management fee that will go into the government public fiscal account annually, and this amount will increase by 3% every 3 years. Then, the company will pay another 6 million RMB as a deposit to the local government. In addition, this new company's registered capital is 24.8 million RMB (20% of the total investment). Wuhan Social Welfare House invested 2.48 million RMB (10% of the registered capital) and two private companies invested 22.32 million RMB (90% of the registered capital). Thus, Wuhan Social Welfare House accounted for 10%, and Jiuzhoutong and Renshoutang jointly share the other 90% of the company's shares. The remaining 80% of total investment, on the other hand, is funded by Jiuzhoutong and Renshoutang, mainly coming from bank loans (Figure 7.2).

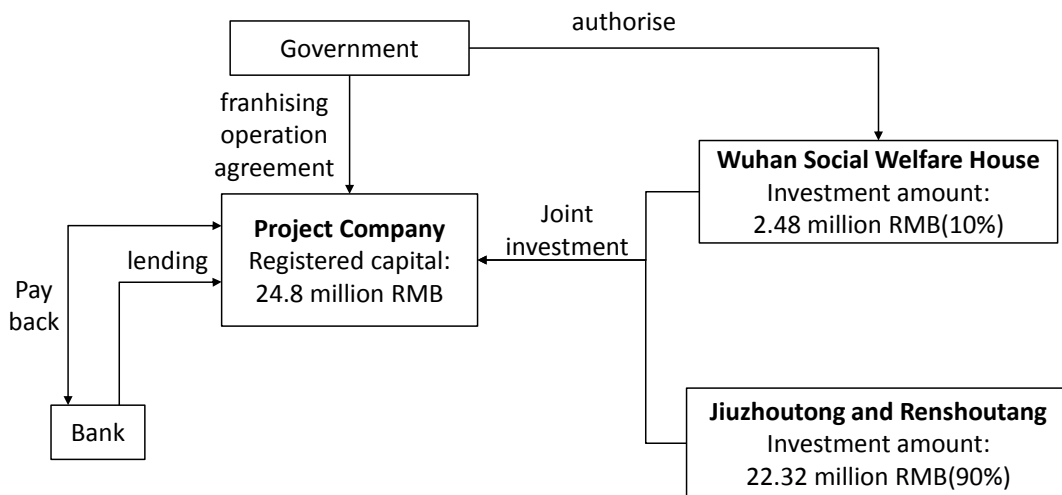


Figure 7.2 'Private and Public Partnerships' Funding Structure

Project Transaction and Investment Return Mechanism

As to the main functions and responsibilities of the two operators: Jiuzhoutong is responsible for medicine, hospital management and armamentarium (medicines, equipment and techniques used by medical practitioners), while Renshoutang mainly deals with the daily routines of elderly apartments, providing the elderly with medical care and elder care services. The operational income of this project company mainly comes from the users' charges, including elder care service fees, medical expenses, and health check-up fees, home-based care services fees, supermarket business income, and e-commerce platform income. The charging fees are structured as follows: the bed fee has three levels: 800 RMB, 900 RMB and 1,000 RMB/month; the elder care service fee also has three levels: 1,000 RMB, 2,000 RMB and 3,000 RMB/month; and the living expense fee is 700 RMB/month. In this case, the local government does not offer an operational subsidy to new elderly apartments (the project transaction structure is shown in Figure 7.3).

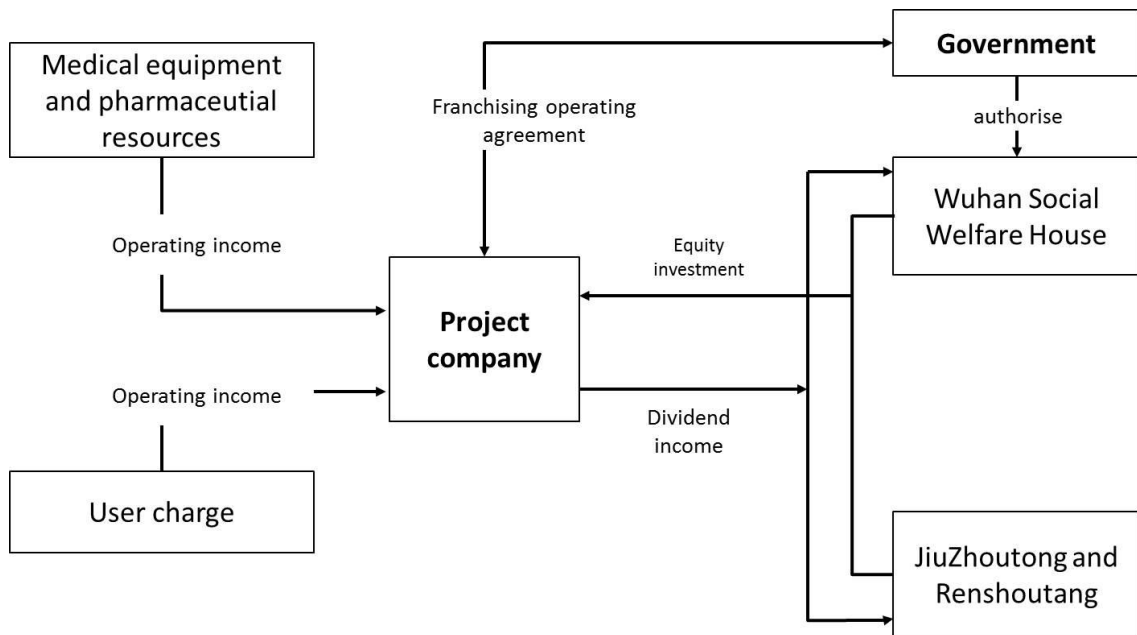


Figure 7.3 Project Transaction Structure

As for the distribution of profits, if the rate of return is less than 5% Wuhan Social Welfare House does not participate in profit sharing; if the rate of return is over 5%

Wuhan Social Welfare House will be allocated 30% from any excess profit, Jiuzhoutong and Renshoutang will share the remaining 70%. Moreover, the project company established a 'Loving and Caring Elderly Fund', aimed at organising activities, or offering welfare benefits for the elderly. At present, Jiuzhoutong and Renshoutang have already invested 2 million RMB and 1 million RMB respectively. Wuhan Social Welfare House will invest 30% of the excess amount of the profit if the rate of return is over 10%.

Evaluation of Case Study Four

First, the coordination of Wuhan Social Welfare House: Jiuzhoutong and Renshoutang can make full use of the advantages of being private companies. Their business is not only confined to medical and elder care services, but also extends to e-commerce platforms and home-based services within the local communities. Their business provides over 1,000 jobs, and has improved the provision of local services. Besides this franchise between companies there exists a long-term contract which encourages the companies to prioritise the sustainable development of their joint project. This settlement is better organised than a rental contract, which has a standard rental duration of 3 years.

Second, the organisational structure of the project company is typical. In this case, for example, there is a board of directors and supervisors. The manager of the project company stated that the three agencies (i.e., Wuhan Social Welfare House, Jiuzhoutong and Renshoutang) have only one director and supervisor on the board, and the representative from the local government has a right of veto. So, in this PPP elder care project, the local government (on behalf of Wuhan Social Welfare House) exercises extensive power over operational decision-making.

Third, this PPP elder care project is very successful in dealing with financial pressure. Wuhan Social Welfare House (Block A) receives a government subsidy and annual management fee from the two private companies, as well as profit shares each year, so its funding channels have increased compared to what it used to have access to.

Meanwhile, as the manager of the project company phrases it, the share price of Jiuzhoutong (as a listed company) increased by 5%, and obtained net profits valuing 200 million RMB on the contract date (23 February 2017). In addition, Jiuzhoutong also sold some facilities to Block A and on the e-commerce platform which resulted in further profits.

Fourth, the manager stated at interview that the transaction costs for a PPP project company are relatively high. For instance, the two private companies paid 1 million RMB to the bidding company to secure the contract. In addition, the government demands a separate accounting firm, and the project company pays 1 million RMB annually to this firm.

7.6 Discussion

As the four case studies illustrate, resources are unevenly distributed among different public nursing institutions in different districts. In the central district of Wuhan, the demand for institutional care always exceeds supply; and nursing institutions with good conditions, such as Wuhan Social Welfare House, are always full of elderly people due to their good reputation and reasonable prices. In some cases, elderly people would rather wait for several months to stay there, rather than go elsewhere. However, in the suburban districts this situation is reversed, there are so many surplus beds in social welfare houses. In some districts 50% of beds are empty.

The cost of the construction and management of most private nursing institutions is relatively high, and needs huge initial investment at an early stage. The elder care industry belongs to an industry with small profit margins which is difficult to self-finance. As a consequence, investors without ample financial resources hesitate to invest in the elder care industry. The implementation of the *'Public Construction and Private Operation'* reform unlocked a market for private investment, because the government offered a building and other relevant facilities as an incentive. Yet, private subjects need to invest at the operational stage, even if they do not have any financial

burden at the construction stage. Likewise, in the operational stage, the government will contribute a subsidy through the purchase of services, to help private companies relieve their operational expenses.

From the perspective of government's role: on the one hand, the government transfers its role from a provider to a supervisor, renouncing some of its previous functions to society and the market. It then primarily focuses on the overall plan and design of policy, supervising and inspecting from a macro-economic perspective. For, on the other hand, by reforming investment structures the government reduces the pressure for more public expenditure.

The difference in government subsidies across different regions leads to unexpected distortions. More prosperous localities usually receive higher subsidies for their nursing institutions, while in poorer areas this result is reversed. In an inferior (worse) economy, elderly people are poorer and may not be able to afford private elder care. For instance, in the Hanchuan Social Welfare House, the service fee is lower than most other nursing institutions in the central districts of Wuhan. However, because the money that the welfare house receives via an operational subsidy is much lower than in other places, it is harder for them to provide adequate care. So, it seems that the lower purchasing power of the elderly, and a poorer tax base can affect the fairness of social elder care provision in different regions.

7.7 Summary

This chapter has reviewed four typical cases of PPP projects on elder care in Wuhan, which operate under different funding models. As was demonstrated, the provision of elder care coordinated between the government and other social agencies is successful to some extent. This strategy relieves the government's financial burden, and allows the private sectors to operate nursing institutions via the introduction of a market mechanism. Meanwhile, it offers better treatment and facilities to those with the resources to pay for them. This represents a reorientation of social policy away from

redistribution and towards market principles. Additionally, it generates more job opportunities for local areas, and thus has both economic and social effects on Chinese society.

However, experiences outlined in the four case studies also illustrate the gradual undermining of the welfare nature of elder care. Once the originally public elder care services are operated through a market-based approach, prices will increase and the elderly and their families have to bear these price hikes. Meanwhile, the rights and responsibilities of different participants (local government and private organisations) are somewhat unclear, and might restrict the development of the elder care industry. Moreover, even with social investment, the problem of inadequate resources continues to haunt poorer districts – where, presumably, private corporate incentives to invest are also lower. This creates a degree of maldistribution of elder care services in different regions.

Chapter 8 Empirical Analysis of the Financing Efficiency of Elder Care: Based on the Perspective of Public Expenditure

The previous chapters have examined different models of elder care funding, as well as case studies of PPP projects on elder care services in some detail in order to evaluate their impact. One of the common criticisms of public-private partnerships in the provision of elder care services stems from a realisation that private money will be invested in accordance with the expectations of making maximum profit. Market-based mechanisms are expected to create private profits accordingly, in contravention to any welfare principle. Drawing upon the previous research, this chapter will now look at the distribution of public resources between richer and poorer districts, and between urban and rural areas. The purpose of this chapter is to investigate whether the investment, from a quantitative perspective and in terms of improving elder care services, can achieve its desired efficiency in different parts of China. To do this requires a quantitative evaluation based on the application of a series of indicators that can measure the degree to which resources are distributed according to need. The results can only be an approximation of the overall picture as China's policy related to elder care services continues to roll out at a different pace over disparate areas – the information presented in this chapter is a snapshot of a constantly changing field of enquiry.

This chapter is divided into three sections. First, to examine the current situation of nursing institutions and their relevant facilities for elderly people in various years and among different regions. Second, to conduct a quantitative analysis on the efficiency of public expenditure in elder care by using Data Envelopment Analysis (DEA), which identifies the need for efficiency improvements in eight regions. Subsequently, the third section, establishes an elder care service index system which calculates and compares measures of elder care services in both urban and rural districts in different regions of

China from 2011~2015. This index system enables an analysis of the trends and characteristics, and the differences and effects of public expenditure work, in elder care among the different regions of, and the urban and rural areas, in China.

8.1 Situation of Nursing Institutions and Relevant Facilities for Elderly People

According to the relevant official statistics (Table 8.1), the number of nursing institutions and relevant facilities for elderly people increased between 2010 and 2016, in 2014 especially it rose by 40%. Government publications also reveal other characteristics:

In terms of nursing institutions, during 2010~2012, their number kept rising, but since 2013, this started to fall, while the number of beds in nursing institutions has not experienced a substantial decline. This suggests that nursing institutions in China are moving away from small-scale institutions in a decentralised industry and are instead moving towards an intensive and large-scale industry.

As to the number of community service institutions, the method of counting these has changed. Before 2014, community service institutions only included community service centres/stations, and after 2014, others were added, such as, community elder care institutions and community assistance elder care facilities. As shown in Table 8.1, community service institutions developed rapidly with an average growth rate of 30% in recent years, and in 2014, the growth rate even reached 60%. The decline in the number of nursing institutions and the increase in the number of community service institutions demonstrate that the government has tended to support community and home-based elder care more than institutional care.

In terms of the population of elderly people in nursing institutions, this increased by 54% from 2010 to 2016, however the accommodation rate dropped from 76.8% in 2010 to 51.2% in 2016. Presumably these changes are largely due to the rising numbers of

beds for elder care. Although a large amount of investment has been put into the construction of elder care services, there still remains a great challenge as only half of the total number of beds in the nursing institutions is occupied (with a decreasing trend), thus creating an imbalance of supply and demand.

**Table 8.1 Situation of Nursing Institutions and Relevant Facilities
for Elderly People in China(2010~2016)**

Year	Number of institutions for the elderly			Number of beds for the elderly				Population of elderly people living in nursing institutions (thousands)	Accommodation rate
	Number of nursing institutions	Number of community elder care service institutions	Total	Number of beds in nursing institutions	Number of beds in community service institutions	Total	Number of beds per thousand elderly people		
2010	39,940	56,957	96,897	3,149,000	12,000	3,161,000	17.8	242.6	76.8%
2011	42,828	70,547	113,375	3,532,000	160,000	3,692,000	19.1	260.3	70.5%
2012	44,304	103,428	147,732	3,967,000	198,000	4,165,000	21.5	293.6	70.5%
2013	42,475	127,391	169,866	4,296,000	641,000	4,937,000	24.4	307.4	62.3%
2014	33,044	202,560	235,604	3,903,000	1,875,000	5,778,000	27.2	318.4	55.1%
2015	27,752	240,315	268,067	3,746,000	2,981,000	6,727,000	30.3	362.0	51.8%
2016	28,080	252,900	280,980	4,073,000	3,229,000	7,302,000	31.6	374.0	51.2%

Data Sources: 'Statistical Yearbook of China's Civil Affairs' published by Ministry of Civil Affairs in various years.

Seen from the situation of elder care services in different regions of China (Table 8.2), we can find that the percentage of elderly people in the majority of regions is over 13%. As for the accommodation rate in elder care institutions, the highest is in Tibet (although its aged population rate is the lowest, 8.33%), and Fujian and Hebei have the lowest accommodation rates (26.30% and 27.19%). In terms of the number of beds per thousand elderly people, most regions have achieved the national '90-7-3' elder care plan⁶³, however, the situation in different regions is uneven, for instance, institutional beds per thousand elderly population in Hainan, Jilin and Yunnan are relatively low, at

⁶³ The '90-7-3' elder care plan refers to a structure of the distribution of elder care services, which is divided into three parts: 90% of elderly people choose home-based elder care services, 7% of elderly people choose community elder care services and only 3% of the elderly population stay in nursing institutions.

14, 16.8 and 19.4 respectively. In other regions, such as Zhejiang, Inner Mongolia, Beijing and Tibet, the statistics are high (50, 48.5, 46.3 and 42.5) and substantially exceeds the national standard.

Table 8.2 also shows that, in the operation of nursing institutions, there is an imbalance of revenue and expenditure in some regions. In other words, the total revenue from the operation of nursing institutions is lower than total operating costs. This phenomenon is mainly due to three reasons. First, family care is still prevalent, reflecting Chinese traditions, so only a minority of elderly people (mainly disabled elderly people whose care is expensive) are resident in nursing institutions. Second, with less retirement income, most elderly people (especially rural elderly people) cannot afford the relatively high expense of institutional care. Third, with the expansion of elder care provision, public subsidies for elder care are inadequate, so private investors have to pay more of the running costs of nursing institutions.

In addition, as seen from the overall financing situation of elder care (Table 8.3), the percentage of social welfare expenditure on elder care accounts for 0.36% of public expenditure and 0.08% of GDP. There are distinctive regional differences in these percentages: for instance, the percentage of social welfare expenditure on elder care to public expenditure, where the maximum is spent in Shaanxi (0.6%) and the minimum in Ningxia (0.05%); and considering the percentage of social welfare expenditure on elder care to the GDP, the maximum is spent in Qinghai (0.25%) and the minimum in Jilin (0.04%).

These secondary statistics only describe the current overall situation of public expenditure on elder care services in China, but do not reflect the efficiency of the above indicators in terms of elder care funding and the relationship between these indicators. Thus, the next two sections (8.2 and 8.3) will explore these two issues.

Table 8.2 Situation of Elder Care in Different Regions of China (2015)

Regions	Percentage of elderly people over 60 years	Number of beds in nursing institutions	Population of elderly people living in nursing institutions	Accommodation rate	Revenue from the operation of nursing institutions (million RMB)	Operating costs of nursing institutions and community elder care service institutions (million RMB)	Number of beds per thousand elderly people
National	16.14%	6,763,300	2,915,600	51.78%	36.14	36.49	30.5
Beijing	14.32%	146,000	77,100	56.65%	2.80	2.82	46.3
Tianjin	14.33%	67,000	28,600	48.72%	0.75	0.78	31.1
Hebei	16.38%	4,807,000	110,100	27.19%	2.34	2.26	39.6
Shanxi	14.32%	89,100	39,400	51.57%	0.92	0.89	16.8
Inner Mongolia	16.40%	199,100	119,000	55.97%	0.55	0.69	48.5
Liaoning	19.09%	264,100	106,300	58.31%	2.63	3.45	33.4
Jilin	18.75%	88,400	40,600	62.85%	0.27	0.27	16.8
Heilongjiang	17.00%	192,400	98,700	62.11%	0.60	0.56	29.7
Shanghai	18.17%	135,900	73,900	58.60%	0.41	0.39	31.1
Jiangsu	19.74%	622,900	226,100	49.03%	3.45	3.40	39.4
Zhejiang	17.89%	493,000	121,600	36.45%	1.48	1.42	50
Anhui	17.11%	358,000	139,000	46.80%	6.49	0.68	34.2
Fujian	13.05%	135,200	29,800	26.30%	0.80	0.77	27.2
Jiangxi	14.13%	177,000	118,200	69.08%	0.47	0.39	27.2
Shandong	20.09%	656,000	292,200	50.15%	3.92	3.97	33.3
Henan	12.97%	344,000	209,200	64.31%	1.15	1.10	27.9
Hubei	17.66%	300,000	163,800	60.53%	2.27	2.23	28.7
Hunan	17.09%	227,000	136,400	65.86%	1.58	1.73	19.5
Guangdong	11.06%	254,100	83,600	47.10%	2.55	2.57	21.2
Guangxi	14.92%	163,500	71,700	45.07%	0.54	0.52	22.8
Hainan	14.00%	16,900	7,000	52.24%	0.24	0.22	14
Chongqing	21.67%	184,600	91,800	66.23%	0.44	0.35	27.3
Sichuan	20.39%	521,100	283,500	64.40%	1.34	1.27	29.8
Guizhou	15.26%	151,200	47,500	39.62%	0.22	0.24	28.3
Yunnan	12.77%	116,400	46,600	50.65%	0.63	0.56	19.4
Tibet	8.33%	10,800	11,600	78.91%	0.016	0.013	42.5
Shaanxi	15.82%	146,800	78,600	59.73%	1.82	1.67	24.4
Gansu	14.04%	113,100	18,700	23.67%	0.64	0.59	30.9
Qinghai	11.67%	24,100	4,200	24.85%	0.081	0.079	34.5
Ningxia	11.71%	18,100	9,000	56.25%	0.21	0.26	22
Xinjiang	10.79%	66,400	31,700	64.56%	0.37	0.36	25.6

Data Source: 'Statistical Yearbook of China's Civil Affairs' published by Ministry of Civil Affairs (2015b).

Table 8.3 Financial Indices of Elder Care Services in Different Regions of China (2015)

Regions	GDP (million RMB)	Public expenditure (million RMB)	Social welfare expenditure on elder care (million RMB)	Percentage of social welfare expenditure to public expenditure	Percentage of social welfare to GDP
National	72,276,790	15786,61	56,276	0.36%	0.08%
Beijing	2,301,459	573,77	2419	0.42%	0.11%
Tianjin	1,653,819	323,235	780	0.24%	0.05%
Hebei	2,980,611	563,219	1,904	0.34%	0.06%
Shanxi	1,276,649	342,297	1,045	0.31%	0.08%
Inner Mongolia	1,783,151	425,296	1,627	0.38%	0.09%
Liaoning	2,866,902	448,161	1,374	0.31%	0.05%
Jilin	1,406,313	321,71	608	0.19%	0.04%
Heilongjiang	1,508,367	402,066	875	0.22%	0.06%
Shanghai	2,512,345	619,156	1,677	0.27%	0.07%
Jiangsu	7,011,638	968,758	4,653	0.48%	0.07%
Zhejiang	4,288,649	664,598	3,945	0.59%	0.09%
Anhui	2,200,563	523,901	1,836	0.35%	0.08%
Fujian	2,597,982	400,158	1,256	0.31%	0.05%
Jiangxi	1,672,378	441,255	1,477	0.33%	0.09%
Shandong	6,300,233	825,001	3,764	0.46%	0.06%
Henan	3,700,216	679,935	1,925	0.28%	0.05%
Hubei	2,955,019	613,284	2,145	0.35%	0.07%
Hunan	2,890,221	572,872	2,379	0.42%	0.08%
Guangdong	7,281,255	128,278	4,089	0.32%	0.06%
Guangxi	1,680,312	406,551	1,737	0.43%	0.10%
Hainan	370,276	123,943	450	0.36%	0.12%
Chongqing	1,571,727	379,200	1,536	0.41%	0.10%
Sichuan	3,005,310	749,751	3,733	0.50%	0.12%
Guizhou	1,050,256	393,950	1,440	0.37%	0.14%
Yunnan	1,361,917	471,283	1,314	0.28%	0.10%
Tibet	102,639	138,146	214	0.15%	0.21%
Shaanxi	1,802,186	379,200	2,273	0.60%	0.13%
Gansu	679,032	749,751	988	0.13%	0.15%
Qinghai	241,705	393,950	604	0.15%	0.25%
Ningxia	291,177	471,283	231	0.05%	0.08%
Xinjiang	932,480	138,146	1,762	1.28%	0.19%

Data Sources: The data of GDP is from 'China Statistical Yearbook' published by National Statistical Bureau. The data of public expenditure and social welfare expenditure on the elder care are from 'Statistical Yearbook of China's Civil Affairs' published by the Ministry of Civil Affairs (2015b). The percentage of social welfare expenditure to public expenditure and GDP is calculated by the author.

8.2 Quantitative Analysis on the Efficiency of Elder Care Funding, Based on Data Envelopment Analysis (DEA)

This section first introduces the Data Envelopment Analysis (DEA) method, and then introduces the input and output indices which are used to conduct a DEA evaluation. Subsequently, it analyses the DEA calculation results and identifies the need for efficiency improvements in 8 regions.

8.2.1 Introduction of DEA Method

The DEA method is a non-parametric method in operations research and economics for the estimation and evaluation of production frontier efficiency, which is the set of optimal portfolios with the highest expected return, according to the performance of the production process consisting of multi-index input and output (Seiford and Thrall, 1990). This method can be applied to empirically measure and evaluate multiple objective decision making units. The DEA method can carry out a relative validity evaluation of the same type of decision-making unit, and compare the extreme values (the minimum and maximum values) of all decision-making units with the optimal frontier efficiency in order to find out the ultimate value of relative efficiency in each decision-making unit (Sherman and Zhu, 2013). In the DEA evaluation process, without assuming a particular general equation relating input and output in the decision-making units, it determines the effective production frontier by using extreme values of input and output in the decision-making units, so that it can reflect the optimal relationship between input and output. The DEA method can evaluate efficiency relative to that considered to be the best decision-making, so the final results are more objective because it does not consider the relation function of input and output in advance, which can thus avoid any artificial influence.

8.2.2 Construction of DEA Indicators of Elder Care Funding

Since the 1980s, several relevant research projects have used DEA in the field of elder care, to assess elderly people's welfare and the efficiency of the operation of nursing institutions. The selected indices in their research are presented in Table 8.4.

Examining these relevant studies, we find that most of them are about labour efficiency in nursing homes, so information about human resources and beds are usually chosen as the input indices, and the numbers of different groups of elderly people usually form the output indices. However, there is currently little research on the financial aspect of elder care services. In this research, we select the BCC model (Banker, Charnes and Cooper, 1984) from the DEA method to empirically analyse the efficiency of fiscal expenditure on elder care provision in different regions of China. Thus, in order to establish an index system on the efficiency of public expenditure on elder care services, 5 input indicators and 5 output indicators were selected which are presented in Table 8.5.

Table 8.4 Application of DEA in the Current Research on the Efficiency of Elder Care Services

Author(s)	Decision-making units	Number of cases	Number of indices	Input indices	Output indices
Sexton, Leiken, Sleeper and Coburn (1989)	Nursing homes	52	7	Working hours of registered nurses / professional nurses / assistant nurses / administrative staff / physical therapists	Care days for patients with reimbursement and patients without reimbursement
Rosko, Chilingirian and Zinn (1995)	Nursing homes	461	7	Number of registered nurses / professional nurses / assistant nurses / physical therapists / others	Care days for full-time patients / day care patients
Kooreman (1994)	Nursing homes	292	10	Number of medical doctors / nurses / nurse trainees / therapists / carers / physical nurses / general workers / others	Number of full-time patients (physical disability / psycho-geriatric / disability); day care patients (physical disability / psycho-geriatric / disability)
Wu (2011)	Nursing institutions	45	8	Number of beds, number of carers, investment on the operation of nursing institutions and fixed assets	Number of elderly people living in nursing institutions, business income of nursing institutions, numbers of independent and disabled elderly people
Ren (2016)	Nursing institutions	28	7	Number of administrative staff / doctors / carers / others	Number of healthy elderly people / semi-disabled elderly people / disabled elderly people
Zhen (2016)	Nursing institutions	23	6	Number of used beds, number of carers, investment in the operation of nursing institutions and fixed assets	Number of elderly people living in nursing institutions, business income of the nursing institutions

Table 8.5 Indicators of the Efficiency of Public Expenditure on Elder Care Services

<p>Input indicators</p>	<ul style="list-style-type: none"> • Basic construction expenditure • Elderly income supplementation • Population of elderly people over 60 years • Operation cost of the nursing institutions and community elder care service institutions • Original value of the fixed assets of the nursing institutions and community elder care service institutions
<p>Output indicators</p>	<ul style="list-style-type: none"> • Number of beds in the nursing institutions and community elder care service institutions • Number of nursing institution • Number of community elder care service institutions or related facilities • Number of staff in the nursing institutions • Population of elderly people living in the nursing institutions and community elder care service institutions

8.2.3 Explanation of the Indices in the DEA Calculation Process

In this research, the relevant data released for the year 2015 in 31 regions was selected (including direct-controlled municipalities: Beijing, Tianjin, Shanghai and Chongqing; and autonomous administrative subdivisions: Inner Mongolia, Xinjiang, Guangxi, Ningxia and Tibet). The input and output indicators for the DEA calculation are presented in Table 8.6 and Table 8.7.

Table 8.6 Input Indicators of the Efficiency of Public Expenditure on Elder Care Services (2015)

Regions	Basic construction expenditure (million RMB)	Elderly income supplementation (million RMB)	Population of elderly people over 60 years (million)	Operating costs of the elder care institutions (million RMB)	Original value of the elder care institutions' fixed assets (million RMB)
Total	23,990	56,276	221.83	36.49	49.9
Beijing	3,550	2419	3.15	2.82	1.62
Tianjin	344	780	2.15	0.78	0.5
Hebei	592	1,904	12.12	2.26	2.43
Shanxi	127	1,045	5.30	0.89	1.13
Inner Mongolia	442	1,627	4.1	0.69	1.17
Liaoning	306	1,374	8.4	3.45	1.8
Jilin	62	608	5.25	0.27	1.26
Heilongjiang	332	875	6.46	0.56	1.66
Shanghai	93	1,677	4.36	0.39	0.68
Jiangsu	2,955	4,653	15.79	3.40	5.75
Zhejiang	791	3,945	9.84	1.42	2.54
Anhui	854	1,836	10.44	0.68	1.2
Fujian	302	1,256	4.96	0.77	0.49
Jiangxi	1,556	1,477	6.50	0.39	1.83
Shandong	1,806	3,764	19.69	3.97	3.03
Henan	602	1,925	12.32	1.10	1.05
Hubei	1,560	2,145	10.42	2.23	3.17
Hunan	724	2,379	11.62	1.73	3.55
Guangdong	973	4,089	11.94	2.57	3.49
Guangxi	715	1,737	7.16	0.52	0.61
Hainan	212	450	1.26	0.22	0.21
Chongqing	1,238	1,536	6.5	0.35	0.83
Sichuan	504	3,733	16.72	1.27	3.6
Guizhou	1,423	1,440	5.34	0.24	1.05
Yunnan	1,359	1,314	6	0.56	0.95
Tibet	405	214	0.25	0.013	0.34
Shaanxi	511	2,273	6.01	1.67	2.26
Gansu	542	988	3.65	0.59	0.51
Qinghai	791	604	0.7	0.079	0.08
Ningxia	348	231	0.82	0.26	0.36
Xinjiang	937	1,762	2.59	0.36	0.73

Data Sources: All the data in Table 8.6 are from 'Yearbook of Statistics in China' (2015) published by National Statistical Bureau and 'Yearbook of Civil Affairs in China' (2015) published by Ministry of Civil Affairs. Elderly income supplementation includes universal financial support (old-age allowance and service subsidy for elderly people), and social assistance for elderly people (subsidy for the 'Three-Nos'

and 'Five-Guarantees' elderly people). The two indicators: operating costs and original value of the fixed assets, are the total amount from the nursing institutions and community elder care service institutions.

Table 8.7 Output Indicators of the Efficiency of Public Expenditure on Elder Care Services (2015)

Regions	Number of beds in nursing institutions and community elder service institutions	Number of nursing institutions	Number of community elder care service institutions	Number of staff in nursing institutions and community elder service institutions	Population of elderly people living in nursing institutions and community elder service institutions
Total	6,763,300	27,752	88,341	5,641,300	2,915,600
Beijing	146,000	597	249	155,300	77,100
Tianjin	67,000	275	126	68,600	28,600
Hebei	4,807,000	1,051	25,328	657,200	110,100
Shanxi	89,100	712	413	92,400	39,400
Inner Mongolia	199,100	674	1,708	103,600	119,000
Liaoning	264,100	1,487	301	187,000	106,300
Jilin	88,400	681	173	60,500	40,600
Heilongjiang	192,400	779	562	123,900	98,700
Shanghai	135,900	630	70	230,700	73,900
Jiangsu	622,900	2,329	4,050	532,300	226,100
Zhejiang	493,000	1,269	3,954	292,700	121,600
Anhui	358,000	1,076	1,435	182,100	139,000
Fujian	135,200	355	2,273	104,400	29,800
Jiangxi	177,000	1,537	249	100,300	118,200
Shandong	656,000	1,944	6,322	554,200	292,200
Henan	344,000	1,075	1,787	253,700	209,200
Hubei	300,000	1,658	3,464	264,000	163,800
Hunan	227,000	1,751	5,734	290,600	136,400
Guangdong	254,100	1,424	621	250,500	83,600
Guangxi	163,500	476	11,964	182,900	71,700
Hainan	16,900	83	47	12,200	7,000
Chongqing	184,600	615	2,539	126,900	91,800
Sichuan	521,100	2,547	4,189	27,0500	283,500
Guizhou	151,200	804	2,629	114,200	47,500
Yunnan	116,400	398	1,105	70,400	46,600
Tibet	10,800	81	74	8,000	11,600
Shaanxi	146,800	575	3,362	163,500	78,600
Gansu	113,100	348	2,621	93,300	18,700
Qinghai	24,100	35	643	26,100	4,200
Ningxia	18,100	98	130	14,900	9,000
Xinjiang	66,400	388	219	54,400	31,700

Data Sources: All the data in Table 8.7 are from 'Yearbook of Statistics in China' (2015) published by National Statistical Bureau and 'Yearbook of Civil Affairs in China' (2015) published by Ministry of Civil Affairs. The nursing institutions refers to the places which can provide accommodation and elder care

services for elderly people. The community elder care service institutions and related facilities include both community elder care institutions, and community mutual assistance institutions and other facilities. The three indicators: the number of elderly people, number of beds and number of staff, are the total amount from the nursing institutions and community elder care service institutions.

As we learn from the above data, it can be found that when there are more elderly people over 60 years, more nursing institutions and relevant facilities for the elderly are present in any one region. In some regions, such as, Tibet, Beijing, Shanghai, Jiangsu, Zhejiang, Inner Mongolia, Hebei, Heilongjiang, Shandong and Qinghai, the number of beds per thousand elderly people is above the national average. In some less economically developed regions, such as Inner Mongolia, Qinghai and Tibet, the population of elderly people is relatively small, but the provision for elder care seems to be greater than that found in other regions.

8.2.4 Analysis on the Results of Static DEA Calculation

With regard to analysing the available statistics, DEAP 2.1 software was used (Coelli, 1996), and then an output-directed BCC model⁶⁴ to calculate the relative efficiency of public expenditure on elder care services in 31 regions in China. Under the condition of variable scale return, the comprehensive efficiency can be divided into technical efficiency and scale efficiency (comprehensive efficiency is equivalent to the product of scale efficiency and technical efficiency), so that if there is no optimal comprehensive efficiency in the decision-making units, we can then analyse the results from the perspectives of technical efficiency and scale efficiency. Technical efficiency demonstrates whether the inputs and outputs have been effectively applied in the decision-making units, if the technical efficiency is less than 1.000, it means the input and output indicators have not reach the optimal state and thus need improvement. Scale efficiency demonstrates whether the production rate (ratio of output growth rate to the input growth rate) in each decision-making unit can achieve optimal productivity. In this thesis, for instance, it analyses the efficiency of public expenditure in the

⁶⁴ Banker, Charnes and Cooper (BCC) introduced a variable return to scale version of the input-oriented CCR model (which was invented by Charnes, Cooper and Rhodes), so it is named as the BCC model (Banker, Charnes and Cooper, 1984). More information of BCC model can be found in Appendix 1.

development of elder care in 31 regions of China. The output growth rate present the growth rate of the number of nursing institutions, community care service centres or related facilities, etc., and the input growth rate presents the growth rate of the funds in the construction of nursing institution or subsidies for the elderly people, etc.

The calculation results are realised in Table 8.8.

Table 8.8 Results of DEA Calculation

Regions	Comprehensive efficiency	Technical efficiency	Scale efficiency	Scale return ⁶⁵
Beijing	1.000	1.000	1.000	-
Tianjin	0.783	0.871	0.899	irs
Hebei	1.000	1.000	1.000	-
Shanxi	0.901	0.937	0.961	irs
Inner Mongolia	1.000	1.000	1.000	-
Liaoning	1.000	1.000	1.000	-
Jilin	1.000	1.000	1.000	-
Heilongjiang	1.000	1.000	1.000	-
Shanghai	1.000	1.000	1.000	-
Jiangsu	0.884	1.000	0.884	drs
Zhejiang	0.841	1.000	0.841	drs
Anhui	1.000	1.000	1.000	-
Fujian	0.850	1.000	0.850	irs
Jiangxi	1.000	1.000	1.000	-
Shandong	0.936	1.000	0.936	drs
Henan	1.000	1.000	1.000	-
Hubei	0.957	1.000	0.957	drs
Hunan	0.975	0.987	0.988	drs
Guangdong	0.667	0.779	0.856	drs
Guangxi	1.000	1.000	1.000	-
Hainan	0.435	1.000	0.435	irs
Chongqing	1.000	1.000	1.000	-
Sichuan	1.000	1.000	1.000	-
Guizhou	1.000	1.000	1.000	-
Yunnan	0.518	0.529	0.978	irs
Tibet	1.000	1.000	1.000	-
Shaanxi	0.663	0.693	0.956	drs
Gansu	0.826	0.919	0.900	irs
Qinghai	1.000	1.000	1.000	-
Ningxia	0.603	1.000	0.603	irs
Xinjiang	0.728	0.740	0.984	irs
Average value	0.889	0.95	0.936	

Seen from the above DEA calculation results for 31 regions of China, a comparative analysis will be discussed from the following three perspectives:

⁶⁵ The results of scale return: ‘-’ means the scale return is stable and constant; ‘irs’ means an increase in the scale return, and demonstrates the local governments need to increase the expenditure on elder care if they want to improve the efficiency; ‘drs’ means an decrease in the scale return, and demonstrates that the efficiency will not be improved if local government continues to increase the expenditure.

Comparative analysis of the comprehensive efficiency

According to the results, the national average comprehensive efficiency in 2015 was 0.889, which is close to 1.000, so the overall situation is well enough. But there is a huge difference between regions, the comprehensive efficiency in Beijing, Hebei, Inner Mongolia and 13 other regions is 1.000, which means that public expenditure on the provision of elder care is effective in these areas; while, the comprehensive efficiency in Yunnan, Shaanxi, Ningxia, Shanxi, Hunan and 8 other regions is below 1.000 (Hainan and Yunnan are among the lowest, with only 0.435 and 0.518 respectively), indicating that the public expenditure on the provision of elder care is relatively ineffective. We also find that the regions with effective comprehensive efficiency rank higher in the number of beds per thousand elderly people (Table 8.2), such as Beijing, Hebei and Inner Mongolia, etc.

Comparative analysis of technical efficiency

Technical efficiency under the BCC model in this research refers to the total input (public expenditure) to the quantity of output (elder care provision). If the technical efficiency is close to 1.000, it indicates greater efficiency of public expenditure in the provision of elder care. As is shown in Table 8.7, the technical efficiency in Beijing, Hebei, Jiangsu and 20 other regions is 1.000, which suggests that the input of public expenditure in these regions achieves maximum output; while the technical efficiency in Tianjin, Hubei, Shanxi and 5 other regions is less than 1.000 (the minimum is 0.591 in Yunnan), which means in these regions, the public expenditure does not produce enough elder care provision.

Comparative analysis of scale efficiency and scale return

As is shown in Table 8.7, the scale efficiency in Tianjin, Shanxi, Jiangsu and 12 other regions is less than 1.000, suggesting that the growth rate of output (elder care provision) is less than the growth rate of input (public expenditure), thus these regions are not achieving optimal scale efficiency. In Tianjin, Shanxi, Fujian, Hainan, Yunnan, Gansu, Ningxia and Xinjiang, the scale return is increasing, suggesting that public expenditure

is inadequate and there is a need to expand investment so as to achieve the optimal output; while in Jiangsu, Zhejiang, Shandong, Hubei, Hunan, Guangdong and Shaanxi, the scale return shows the opposite tendency, which means the scale of public expenditure is relatively higher than expected. Thus, local government needs to consider the scale return on elder care projects. For instance, as to those elder care projects defined as having diminishing scale returns, local government needs to make adjustments to avoid the possibility of efficiency loss; as to those defined as having increasing scale returns, local government should further expand financial input for elder care so as to improve efficiency.

Above all, as we learn from the overall calculation results, in those 15 regions with lower comprehensive efficiency, the situation of Jiangsu, Zhejiang, Fujian, Shandong, Hubei, Hainan and Ningxia, are mainly due to an inefficient scale. Among them, the scale returns in Jiangsu, Zhejiang, Shandong and Hubei are decreasing, thus, these local governments need to adjust their investment strategies and reduce public expenditure on elder care provision; while in Fujian, Hainan and Ningxia, increasing scale returns suggest that local government needs to increase public expenditure in order to achieve optimal output.

However, the value of comparative efficiency of 1.000 only represents the investment on elder care as efficient, it cannot testify to any improvement in the overall welfare for elderly people or the satisfaction of their actual demand for elder care. In practice, under the government's guidance, more market-oriented investment has been put into the construction of nursing institutions or other relevant facilities for elderly people, which leads to a relative waste of resources.

8.2.5 Further Improvement of the Results

The results of the DEA efficiency evaluation can judge whether the decision-making units are effective, and also provide a solution to improve the efficiency of inefficient decision-making units. The main method of doing this is to use the slack variables of inefficient decision-making units for further data analysis. These slack variables include

two parts: input redundancy and output deficiency. The optimal data is the ideal value of the index, which is the projection of each index on the production frontier. According to the calculation results from Table 8.8, the comprehensive efficiency in 15 regions is less than 1.000, then we remove 7 regions with a technical efficiency of 1.000⁶⁶, so only 8 regions need efficiency improvements (both technical efficiency and scale efficiency are less than 1.000), and these regions are Tianjin, Shanxi, Hunan, Guangdong, Yunnan, Shaanxi, Gansu and Xinjiang. According to the results of the efficiency improvement analysis, all these regions have the same problem – redundant input and deficient output, the extent of which differs between these regions. Then, two typical regions were chosen – Hunan (Table 8.9) and Yunnan (Table 8.10) – to further analyse their calculation results for efficiency improvement.

⁶⁶ If the technical efficiency is 1.000, it means that the inputs and outputs have been effectively applied in the decision-making units, so we only need to analyse the results of decision-making units where both the technical and scale efficiency is less than 1.000.

Table 8.9 Efficiency Improvement Statistics (Hunan)

Indicators	Original data	Slack variables		Optimal data
		Input redundancy	Output deficiency	
Number of elderly people living in nursing institutions and community elder care service institutions	136,400		34,900	171,300
Number of beds in nursing institutions and community elder care service institutions	227,000		108,700	335,700
Number of nursing institutions	1,754		23.11	1,774.11
Number of community service institutions	5,734		1145.72	6879.72
Number of staff in the nursing institutions and community elder care service institutions	290,600		3,800	294,400
Operational fees in nursing institutions and community elder care service institutions (million RMB)	1.73	0		1.73
Basic construction expenditure (million RMB)	724	0		724
Social welfare expenditure (million RMB)	2,379	50		2,329
Original value of the fixed asset of nursing institutions and community elder care service institutions (million RMB)	3.55	0.986		2.564

As is shown in Table 8.9, two input indicators in Hunan have redundancy, especially the indicator of ‘original value of the fixed assets’ and it can be decreased to 27.78% so as to reach the optimal result. It demonstrates that the investment in the construction of elder care services exceeds the capacity of the actual demand, or the investment has not been used effectively. In terms of the output indicators, all of them are deficient; the situation is much more serious in the number of elderly people living in the nursing institutions and community elder care service institutions, and the number of beds in the nursing institution and community elder care service institutions, and should be increased by 25.59% and 47.89% respectively. Thus, local government needs to consider the utilisation level of inputs, allocating the investment reasonably and improving the efficiency of public expenditure on elder care services.

Table 8.10 Efficiency Improvement Statistics (Yunnan)

Indicators	Original data	Slack variables		Optimal data
		Input redundancy	Output deficiency	
Number of elderly people living in nursing institutions and community elder care service institutions	46,600		50,800	97,400
Number of beds in nursing institutions and community elder care service institutions	116,400		81,800	198,200
Number of nursing institutions	398		353.86	751.86
Number of community service institutions	1,105		982.44	2,087.44
Number of staff in nursing institutions and community elder care service institutions	70,400		67,600	138,000
Operational fees in nursing institutions and community elder care service institutions (million RMB)	0.56	0		0.56
Basic construction expenditure (million RMB)	1,359	500		859
Social welfare expenditure (million RMB)	1,314	0		1314
Original value of the fixed asset of nursing institutions and community elder care service institutions (million RMB)	0.95	0		0.95

In Yunnan (Table 8.10), the calculation results demonstrate that all five output indicators are seriously deficient and only one input indicator (social welfare expenditure) has excess capacity. Due to the low technical efficiency in Yunnan, thus, local government should pay attention to the management of input, and explore the approaches to improve the utilisation of the resources for elder care services.

8.3 Empirical Analysis of the Effects of Public Expenditure on Elder Care Services: based on the Construction of an Elder Care Service Index System

The arguments of this section are mainly divided into three parts. In the first part, we review the previous two studies related to elder care service indices, and then select

relevant variables to construct an elder care service index system to cover the whole of China. Subsequently, this section explains the indices and formulas that were used to calculate an elder care service index in both urban and rural areas from 2011~2015, and then analyses the trends and characteristics of public expenditure on elder care including their differences and effects among different regions of China, and between urban and rural China, in order to analyse the efficiency of the investment direction and the effectiveness of elder care funding between urban and rural areas. It finally sets up other relevant indices and evaluates the results of a multiple-linear regression analysis.

8.3.1 The Construction and Analysis of an Elder Care Service Index in China

In order to assess the quality of retired life and elder care for elderly people in different nations or regions, the calculation and analysis of index data related to elder care has recently become popular across the globe. Three typical approaches to creating an index are as follows:

First, in the report *'2017 Global Retirement Index: An In-depth Assessment of Retirement Security in the Developed World'* (Natixis Global Asset Management, 2017), we find an index incorporating 18 performance indicators grouped into four sub-indices assessing: the quality of financial services to help preserve savings value and maximise income; the material means to live comfortably in retirement; a clean and safe environment; and access to quality health services (Table 8.11). Based on these four sub-indices, the researcher calculated a mean score (a comprehensive ratio index ranging from 1% to 100%) for each category, and combined these category scores for a final overall ranking of 43 nations.

Table 8.11 Framework of the Global Retirement Index

Finance retirement	<ul style="list-style-type: none"> • Old-age dependency • Bank non-performing loans • Inflation • Interest rates • Tax pressure • Governance • Government indebtedness
Material well-being	<ul style="list-style-type: none"> • Income equality • Income per capita • Unemployment
Quality of life	<ul style="list-style-type: none"> • Happiness • Air quality • Water and habitat • Environmental factors
Health	<ul style="list-style-type: none"> • Life expectancy • Health expenditure per capita • Non-insured health expenditure

Data Sources: '2017 Global Retirement Index: An In-depth Assessment of Retirement Security in the Developed World' published by Natixis Global Asset Management (2017).

China is ranked at 38th place in 2017, and despite the growth of its overall score from the previous year China is still placed in the bottom 10 in all three indicators of the Health sub-index (second-lowest health expenditure per capita) and the Quality of Life sub-index. China has lower levels of income inequality and higher insured health expenditure compared to last year's report, and income per capita has been rising. Within the Finances sub-index category China has the fifth-highest score for old-age dependency, and the third-highest score for tax pressure among all countries; while bank non-performing loans and government indebtedness fare relatively well. The country improves in two out of the four sub-indices, but the indices in this report are generally applied to measure the levels between different countries, with less focus on the measurement of different regions within one country.

Second, Chen's research (2015) proposed an index system for elder care in China which is based on the supply and demand side, and then divided into another four kinds of

indices (Table 8.12). However, Chen only considers the actual quantity of demand and supply side of data, without taking the ratio of the actual demand and supply into account.

Table 8.12 Construction of an Index System for Elder Care in China

First-level indices	Second-level indices	Third-level indices	Fourth-level indices
Demand Side	Total demand	Proportion of disabled elderly over 65 years to the total ageing population	Male/female
		Disability rate per thousand elderly people	
	Total benefit	Proportion of elderly people enjoying long-term care to the total aged population	60~64/65~79/over 80
			Home-based care Institutional care
Supply Side	Employee	Number of employees looking after hundred elderly people over 65 years	Home-based care Institutional care
		Proportion of employees working in the provision of long-term care to total employees	Full-time employees Temporary employees
			Female workers over 50
	Construction	Number of beds for long-term care per thousand elderly people	Nursing institution Hospital
	Fiscal input	Proportion of public expenditure on long-term care to the GDP	Medical care Community care
			Annual growth rate of fiscal expenditure on long-term care

Data Source: 'Indices of the Development of Elder Care Services in China' (Chen, 2015).

Third, the report of 'Blue Book of Elder Care Indexes in Urban China' (Development Research Centre Group of the Chinese State Council, 2017), analyses elder care in urban China from the supply and demand side. Each part of the index includes four sub-indices (Table 8.13). The report points out that growing trends of China's ageing population, such as differences of policy and capital, and a low level of elder care, are key factors which influence China's urban elder care indices and lead to an imbalance in the supply and demand of elder care.

Table 8.13 Construction of an Index System of Elder Care in Urban China

Supply Side	<ul style="list-style-type: none">• Policy• Capital• Services• Environment
Demand Side	<ul style="list-style-type: none">• Population of urban elderly people• Growth rate of the elderly population• Dependency ratio• Internal structure of the elderly population

Data Source: 'Blue Book of Elder Care Indexes in Urban China' (Development Research Centre Group of the Chinese State Council, 2017).

Based on this previous research, the current indices of elder care are usually studied from two aspects: (1) subsistence and development, focusing on the demand for elder care under a unified fiscal system; and (2) supply and demand, focusing on the relationship between the supply and demand for elder care. But they all ignore some practical issues that reflect factors shaping China's current ageing society. To further elaborate, at present, there is a major discrepancy between the urban and rural areas of China. This urban-rural divide is characterised in different ways, such as, the living and cultural environment, medical and sanitary conditions, and elderly welfare, etc. Thus, an index system needs to consider the practical situation of urban and rural areas separately in order to ensure the validity and reliability of the resulting indices. According to a '90-7-3' framework, only 3% of the elderly population will select institutional care. Then, taking this into account, we assume this 3% is spread evenly over the urban and rural population, and data on the ageing population is processed consistently with this ratio, in order to consider elderly people's actual demand for services. Therefore, using the techniques described above, this section will establish a simplified structure of elder care indices (based on the supply and demand side) to measure the welfare effectiveness of public expenditure on levels of elder care (Table 8.14).

Table 8.14 Key Indices of Elder Care Services in this Research

First-level indices	Second-level indices	Third-level indices	Fourth-level indices
Supply side	Social security	Number of beds in urban and rural nursing institutions	The indices will be explained in Section 8.3.2.
		Population of elderly people enrolling in a MLSS System in urban and rural areas	
Demand side	Social insurance	Population of elderly people enrolling the public pension scheme, and the issued pension amount	
		Population of elderly people enrolling the public medical insurance scheme, and the issued insurance amount	

Data Sources: Data of pension, medical insurance and GDP per capita are from ‘China’s Statistical Yearbook’ published by National Statistical Bureau in various years. Data of ‘number of beds in the nursing institutions’ and ‘population of elderly people enrolling MLSS’ are from ‘China’s Civil Affairs Statistical Yearbook’ published by Ministry of Civil Affairs in various years.

8.3.2 An Explanation of Key Quantitative Indices (Fourth-level Indices)

According to the index selection in Table 8.14, 12 fourth-level indices are formed through a process of refining and quantifying the above four third-class indices, and subsequently structured processing was conducted as described respectively in the following four parts:

8.3.2.1 Number of Beds in Nursing Institutions

The data concerning the ‘number of beds in nursing institutions’ reflects welfare that can solve the accommodation problem for elderly people. The local government also needs to calculate the amount of funds to invest in the construction of elder care provision according to actual demand. In terms of a ‘90-7-3’ framework, only 3% of elderly people over 65 years prefer to go to nursing institutions, so actual demand can be calculated for urban and rural areas by dividing the ‘number of beds in nursing institutions’ by the following two quantitative variables:

(1) *Percentage of beds in nursing institutions in urban areas*

$$PBU_{it} = \frac{\text{number of beds in urban nursing institutions}}{\text{population of urban elderly people over 65 years} * 3\%}$$

Where ‘P’ is for ‘percentage’, ‘B’ is for ‘beds’, ‘U’ is for ‘urban’, ‘i’ is for ‘provinces or cities’, and ‘t’ is for ‘time’.

(2) Percentage of beds in nursing institutions in rural areas

$$PBR_{it} = \frac{\text{number of beds in rural nursing institutions}}{\text{population of rural elderly people over 65 years} * 3\%}$$

Where 'P' is for 'percentage', 'B' is for 'beds', 'R' is for 'rural', 'i' is for 'provinces or cities', and 't' is for 'time'.

8.3.2.2 Population of Elderly People Enrolling in the MLSS System

The Minimum Living Standard System (MLSS) is a national welfare system which aims to guarantee a basic living standard (mainly food and clothing) to poor residents in China. At present, the majority of poor residents under the MLSS system are low-income elderly people. To calculate proportions for rural and urban areas requires dividing the 'population of elderly people enrolling in the MLSS System' by the following quantitative variables:

(1) Percentage of elderly people enrolling in the MLSS System in urban areas

$$PLU_{it} = \frac{\text{population of elderly people enrolling in the MLSS System in urban areas}}{\text{population of elderly people over 65 years in the urban areas}}$$

Where 'P' is for 'percentage', 'L' is for 'MLSS', 'U' is for 'urban', 'i' is for 'provinces or cities', and 't' is for 'time'.

(2) Percentage of elderly people enrolling in the MLSS System in rural areas

$$PLR_{it} = \frac{\text{population of elderly people enrolling in the MLSS System in rural areas}}{\text{population of elderly people over 65 years in the urban areas}}$$

Where 'P' is for 'percentage', 'L' is for 'MLSS', 'R' is for 'rural', 'i' is for 'provinces or cities', and 't' is for 'time'.

8.3.2.3 Population of Elderly People Enrolling in the Basic Pension Scheme and the Issued Pension Benefit

Public pension is the main source of income for elderly people. We subdivide the index into two dimensions: insured people (population of elderly people enrolling in the public pension scheme) and the pension benefit (issued basic pension), and then quantify each of these into another four variables:

(1) Percentage of elderly people enrolling in the basic pension scheme in urban areas

$$PPNU_{it} = \frac{\text{population of elderly people enrolling in the basic pension scheme in urban areas}}{\text{population of elderly people over 65 years in urban areas}}$$

Where the first 'P' is for 'percentage', the second 'P' is for 'pension', 'N' is for 'number', 'U' is for 'urban', 'i' is for 'provinces or cities', and 't' is for 'time'.

(2) *Percentage of elderly people enrolling in the basic pension scheme in rural areas*

$$PPNR_{it} = \frac{\text{population of elderly people enrolling in the basic pension scheme in rural areas}}{\text{population of elderly people over 65 years in rural areas}}$$

Where the first 'P' is for 'percentage', the second 'P' is for 'pension', 'N' is for 'number', 'R' is for 'rural', 'i' is for 'provinces or cities', and 't' is for 'time'.

(3) *Percentage of paid urban basic pension per capita to the GDP per capita*

$$PPQU_{it} = \frac{\text{basic pension paid per capita in the urban areas}}{\text{GDP per capita}}$$

Where the first 'P' is for 'percentage', the second 'P' is for 'pension', 'Q' is for 'quantity', 'U' is for 'urban', 'i' is for 'provinces or cities', and 't' is for 'time'.

(4) *Percentage of paid rural pension to the GDP per capita*

$$PPQR_{it} = \frac{\text{basic pension paid per capita in the rural areas}}{\text{GDP per capita}}$$

Where the first 'P' is for 'percentage', the second 'P' is for 'pension', 'Q' is for 'quantity', 'R' is for 'rural', 'i' is for 'provinces or cities', and 't' is for 'time'.

8.3.2.4 Population of Elderly People Enrolling in the Basic Medical Insurance Scheme and the Benefit Paid

Aside from the public pension scheme, the public medical insurance scheme is also a very important financial resource that reduces medical expenses for the elderly. Thus, this index was selected and divided into two dimensions: insured people (population of elderly people enrolling in the public medical insurance scheme) and benefit paid (under public medical insurance), and then the following four variables were generated:

(1) *Percentage of elderly people enrolling in the basic medical insurance scheme in urban areas*

$$PMNU_{it} = \frac{\text{population of elderly people enrolling in the basic medical insurance scheme in urban areas}}{\text{population of elderly people over 65 years in urban areas}}$$

Where 'P' is for 'percentage', 'M' is for 'public medical insurance', 'N' is for 'number', 'U' is for 'urban', 'i' is for 'provinces or cities', and 't' is for 'time'.

(2) *Percentage of elderly people enrolling in the basic medical insurance scheme in rural areas*

$$PMNR_{it} = \frac{\text{population of elderly people enrolling in the basic medical insurance scheme in rural areas}}{\text{population of elderly people over 65 years in urban areas}}$$

Where ‘P’ is for ‘percentage’, ‘M’ is for ‘public medical insurance’, ‘N’ is for ‘number’, ‘U’ is for ‘urban’, ‘i’ is for ‘provinces or cities’, and ‘t’ is for ‘time’.

(3) *Percentage of urban basic medical insurance benefit per capita to the GDP per capita*

$$PMQU_{it} = \frac{\text{paid basic medical insurance benefit per capita in the urban areas}}{\text{GDP per capita}}$$

Where ‘P’ is for ‘percentage’, ‘M’ is for ‘public medical insurance’, ‘Q’ is for ‘quantity’, ‘U’ is for ‘urban’, ‘i’ is for ‘provinces or cities’, and ‘t’ is for ‘time’.

(4) *Percentage of rural basic medical insurance benefit per capita to the GDP per capita*

$$PMQR_{it} = \frac{\text{paid basic medical insurance benefit per capita in the rural areas}}{\text{GDP per capita}}$$

Where ‘P’ is for ‘percentage’, ‘M’ is for ‘public medical insurance’, ‘Q’ is for ‘quantity’, ‘R’ is for ‘rural’, ‘i’ is for ‘provinces or cities’, and ‘t’ is for ‘time’.

8.3.3 Adjustments on the Variables

In order to reduce data redundancy and improve data integrity, adjustments on the variables included: first, for ‘PB’ which is the ratio of the number of beds in nursing institutions to the actual demand of the elder care industry. If the value of ‘PB’ is more than 1, it implies an excessive investment by the government in the elder care industry. So, the index which is more than 1 will be set to the value of ‘1’, and it implies that the government gets full marks in this performance. Second, outliers are removed which might affect the results of the normalisation process, using the ‘min-max normalisation’ method to normalise other data, such as, ‘PL’, ‘PPN’, ‘PPQ’, ‘PMN’ and ‘PMQ’, to ensure all meet the requirements for calculation. Finally, an adjustment calculates the sum of the above six indices to obtain the elder care index ‘ECIS’ which ranges from 0 to 6 in value.

According to the structure of the indices system, this process establishes both an elder care service index in urban China (*ECSIU*) and an elder care service index in rural China (*ECSIR*) respectively, presented in the following two formulas:

$$ECSIU_{it} = PBU_{it} + nPLU_{it} + nPMNU_{it} + nPMQU_{it} + nPPNU_{it} + nPPQU_{it}$$

$$ECSIR_{it} = PBR_{it} + nPLR_{it} + nPMNR_{it} + nPMQR_{it} + nPPNR_{it} + nPPQR_{it}$$

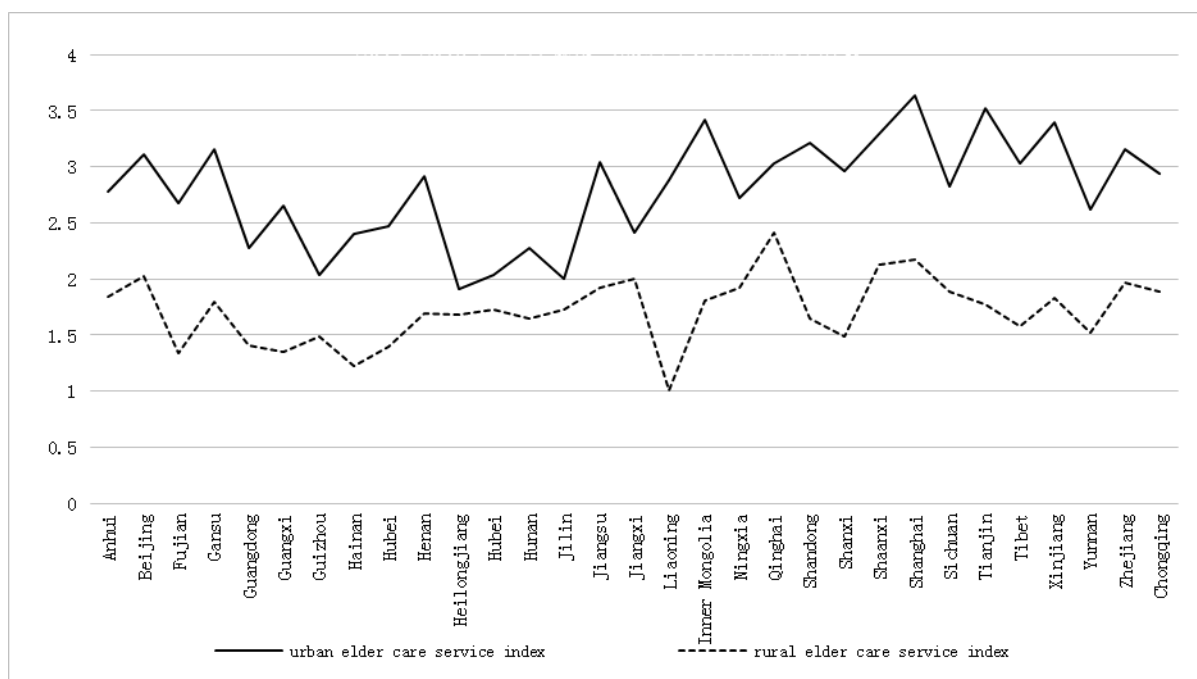
Where ‘i’ is for ‘provinces or cities’, and ‘t’ is for ‘time’, and ‘n’ represents ‘normalisation’.

8.3.4 Elder Care Service Index in Different Regions (2011~2015)

Based on the availability of relevant data and previous formulas, the resulting index demonstrates both urban and rural elder care service indices in different provinces or cities (including municipalities: Beijing, Shanghai, Tianjin and Chongqing; and autonomous regions: Xinjiang, Tibet, Qinghai, Ningxia and Guangxi Province) between 2011~2015 (Table 8.15). If we distribute these data into a chart, we can observe the overall pattern of the elder care service index in both urban and rural areas of different regions of China from 2011 to 2015 respectively.

**Table 8.15 Average Elder Care Service Index in Urban and Rural Areas
in Different Regions of China (2011~2015)**

Provinces or Cities	Urban Elder Care Service Index	Rural Elder Care Service Index	Provinces or Cities	Urban Elder Care Service Index	Rural Elder Care Service Index
Anhui	2.78	1.84	Jiangxi	2.41	2.00
Beijing	3.11	2.02	Liaoning	2.88	1.01
Fujian	2.67	1.34	Inner Mongolia	3.42	1.80
Gansu	3.16	1.80	Ningxia	2.72	1.92
Guangdong	2.28	1.40	Qinghai	3.03	2.40
Guangxi	2.65	1.35	Shandong	3.21	1.64
Guizhou	2.03	1.49	Shanxi	2.96	1.49
Hainan	2.40	1.23	Shaanxi	3.29	2.13
Hebei	2.48	1.40	Shanghai	3.64	2.17
Henan	2.91	1.70	Sichuan	2.82	1.89
Heilongjiang	1.91	1.68	Tianjin	3.52	1.77
Hubei	2.04	1.73	Tibet	3.04	1.58
Hunan	2.28	1.65	Xinjiang	3.39	1.83
Jilin	2.00	1.72	Yunnan	2.62	1.52
Jiangsu	3.04	1.93	Zhejiang	3.15	1.96
			Chongqing	2.94	1.89



**Chart 8.1 Average Elder Care Service Index in Urban and Rural Areas
in Different Regions of China (2011~2015)**

As is shown in Chart 8.1, the Top 10 regions of the urban elder care service index are: Shanghai, Tianjin, Inner Mongolia, Xinjiang, Shaanxi, Shandong, Gansu, Beijing, Jiangsu and Tibet. The lowest include Liaoning, Henan, and Heilongjiang, etc.; and the elder care services in the remaining regions fall between the two extremes. In rural China, Shanghai, Beijing, Qinghai, Shaanxi rank in the first few places. Although welfare policy (including elder care, medical care and pension policy) almost covers all parts of China, there is still a distinctive gap between the urban and rural elder care service index in all regions, which means that there is less public expenditure on elder care services in rural areas, and lower levels of welfare benefits for rural elderly people. Among all of these regions, the largest difference between urban and rural elder care services is in Liaoning (1.86) and the least difference occurs in Heilongjiang Province (0.23).

The results in Table 8.15 also show the richer regions (e.g., Beijing, Shanghai and Tianjin) are undisputedly among the highest for the elder care service index, while less economically developed regions, such as Xinjiang, Tibet, Gansu, Shaanxi, also seem to have a relatively high elder care service index. It seems that the elder care service index bears little relationship to local development, two reasons can explain this phenomenon: on one hand, in the rich regions, the population of migrant labour (including rural-to-urban migrants) is higher than in other places. These people have raised GDP in the local economy, but as only local household registered elderly residents can receive welfare benefits, the proportion of social welfare expenditure to GDP per capita is lower in the poor regions. On the other hand, the less economically developed regions, such as Qinghai, Shaanxi, Gansu, Tibet, Xinjiang and Inner Mongolia, benefit from public expenditure which includes a share of a special subsidy for remote regions. So these areas have proportionately higher public expenditure (including fiscal transfer payments) than richer regions – which leads to a higher percentage of social welfare to GDP per capita. Thus, the overall elder care service index in the poor areas is higher than in some rich regions of China. This result also shows that special subsidies have a positive effect on overall levels of welfare.

When we review the provincial differences of both urban and rural elder care service indices in various years from 2011 to 2015 (Chart 8.2 and 8.3), Shanghai and Tianjin emerge as the two cities demonstrating the highest urban elder care service index in almost every year (Chart 8.2). According to Chart 8.3, the rural elder care service index of Qinghai, Shanghai and Shaanxi are among the highest. However, the characteristics of elder care service index trends in urban and rural areas are quite different. In the majority of cities, the elder care service index increased during 2011~2015, while the elder care service index was lower in nearly half of the rural areas by 2015. This result may be attributed to two reasons: first, due to rural-urban migration, the proportion of elderly people in rural areas increases faster than that of urban areas; second, compared with urban elderly people, the growth rate of retirement income for rural elderly is much slower.

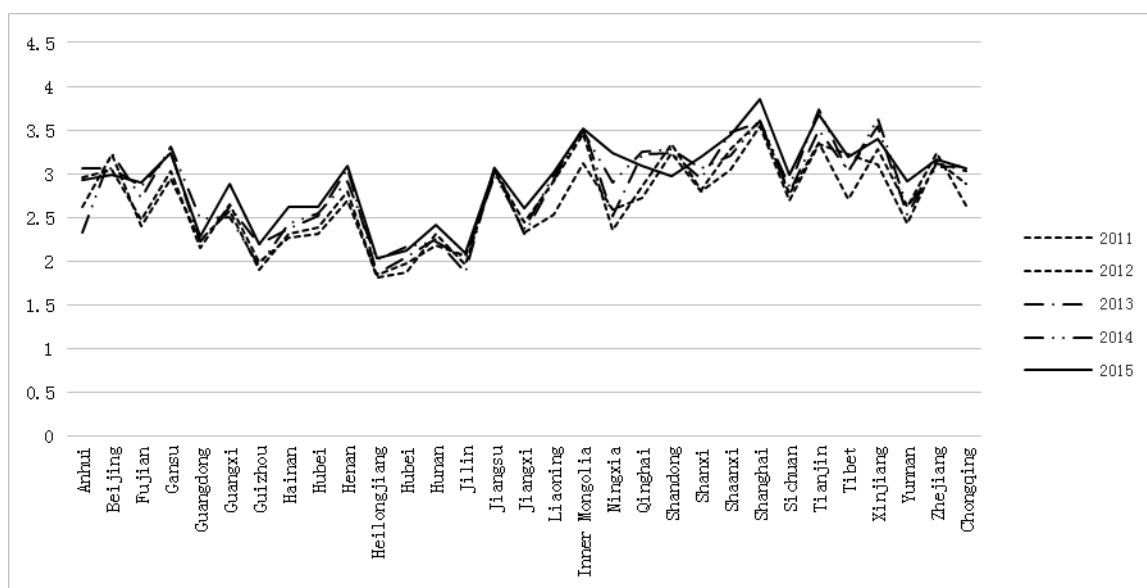


Chart 8.2 Elder Care Service Index in Urban China (2011~2015)

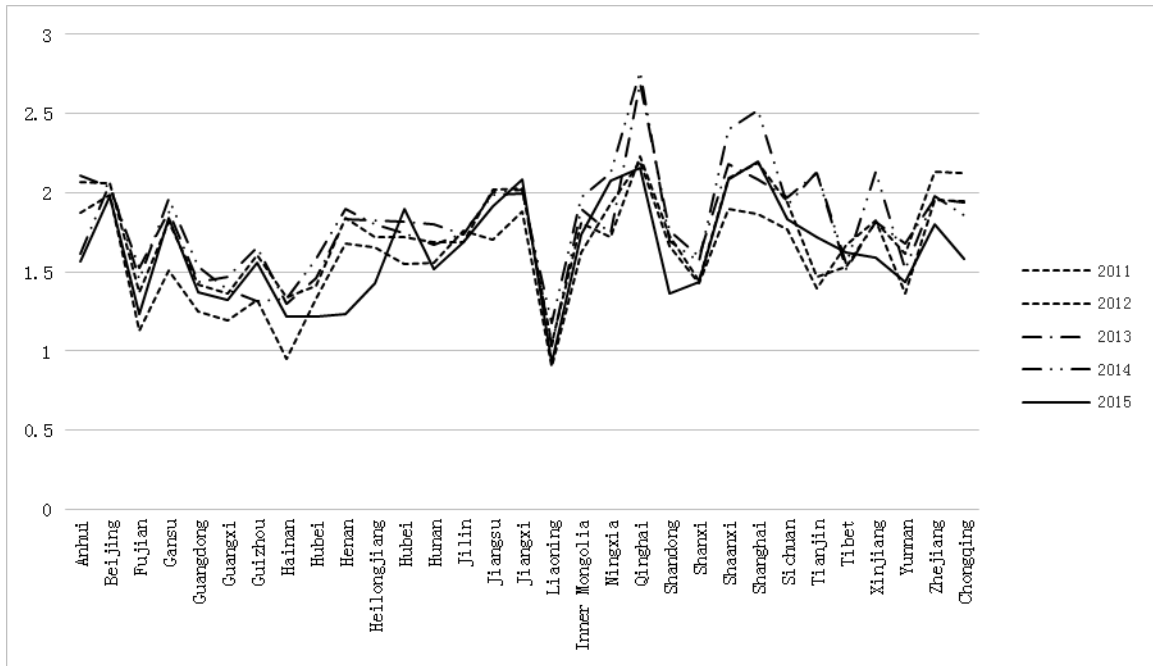


Chart 8.3 Elder Care Service Index in Rural China (2011~2015)

8.3.5 Efficiency of Public expenditure on Elder Care: Based on Multiple-Linear Regression Analysis

Public expenditure on elder care services in China is important, as a consequence it is necessary to find out how far this public expenditure has shaped funding strategies for elder care. The results will be evaluated from two perspectives: first, which is a more efficient way of funding elder care services? For instance, which can improve the elder care service index: an investment in elderly people (the demand side) or on the construction of elder care services and institutions (the supply side)? Second, do urban areas or rural areas need more public expenditure on elder care? Thus, in this section, two independent variables – elderly income supplementation and basic construction expenditure – are used to define the two investment directions of public expenditure in order answer these questions. Besides which, we also consider another two control variables in the multiple-linear regression model in order to get more informative results.

8.3.5.1 Explanation of the Formulas and Variables

Dependent variable – elder care service index. The elder care service index in urban China (EDSIU) and the elder care service index in rural China (EDSIR) are applied as an index which comprehensively measures the level of elder care service in each. The calculation results of EDSIU and EDSIR have been presented above.

Independent variable (1) – elderly income supplementation. The elderly income supplementation comes from central fiscal payments and fiscal transfer payments, calculated as benefits (e.g., MLSS, universal financial support and social assistance for elderly people) directly issued to elderly people. This is referred to as ‘investment in elderly people’. The data is from ‘*China’s Civil Affairs Statistical Yearbook*’ published by the Ministry of Civil Affairs from 2011 to 2015.

Independent variable (2) – basic construction expenditure. This expenditure includes fiscal budget and public lottery welfare funds, which aim to generate income to build nursing institutions and relevant facilities for the elderly. We refer to it as ‘investment in elder care services’. The data is from ‘*China’s Civil Affairs Statistical Yearbook*’ published by the Ministry of Civil Affairs from 2011 to 2015.

Control variable (1) – GDP per capita. Quality of life for elderly people is driven by many factors. The local economic development condition is one of the factors that directly affect their quality of life. GDP is a useful indicator which reflects the condition of local economic development. The data for GDP per capita in different regions is from the ‘*National Statistical Yearbook*’ published by the National Statistical Bureau from 2011 to 2015.

Control variable (2) – population of elderly people over 65 years. The degree of ageing in society will influence the level of elder care services provided in an area. If the demand is more than the supply, the situation will inevitably lower the availability of local elder care service level. So, this control variable eliminates any coefficient estimation bias due to this demographic factor. The data are from ‘*China’s Demography*’

and *Employment Statistical Yearbook*' published by National Statistical Bureau from 2011 to 2015.

In order to model the relationship between a scalar dependent variable and other independent variables, a multiple linear regression model was built which uses ordinary least squares (OLS) to analyse the influence of public expenditure on the level of elder care services. Thus, this model takes the forms below:

$$\ln\text{EDSIU}_{it} = \beta_0 + \beta_1 \ln\text{FUND}_{it} + \beta_2 \ln\text{CONSTRUCTION}_{it} + \lambda \ln\text{X}_{U_{it}} + \varepsilon_{it}$$

$$\ln\text{EDSIR}_{it} = \beta_0 + \beta_1 \ln\text{FUND}_{it} + \beta_2 \ln\text{CONSTRUCTION}_{it} + \lambda \ln\text{X}_{R_{it}} + \varepsilon_{it}$$

Where 'i' is for 'provinces or cities', 'FUND' is for 'elderly income supplementation in each province for various years', 'CONSTRUCTION' is for 'basic construction expenditure in each province for various years'; 'X' refers to other indices, such as, GDP per capita and population of elderly people over 65 years in each province; 'ε' is an unobserved random variable; 'β₀' is the intercept term; 'β₁' and 'β₂' are two coefficients – 'investment in elderly people' and 'investment in elder care services'.

Considering the different numeric features of each variable, a logarithm ('ln') transformation was used to adjust all the variables before applying them to the regression analysis.

8.3.5.2 Descriptive Statistical Analysis

The value of dependent variables and independent variables can reflect their internal relationship. So after calculation, we can observe the overall statistical characteristics of these variables as presented in Table 8.16: the average elder care service index is 2.72 in urban and 1.73 in rural areas, and the average elderly income supplementation and basic construction expenditure are 11,400 and 349 million RMB.

Table 8.16 Descriptive Statistical Analysis on Some Main Variables

Variables	Observed value	Average	Standard deviation	Minimum	Maximum
Urban elder care services index	155	2.72	0.39	1.91	3.85
Rural elder care service index	155	1.73	0.32	0.94	2.76
Elderly income supplementation (million RMB)	155	11,400	6,070	1,000	28,700
Basic construction expenditure (million RMB)	155	349	744	2.5	6,220
Population of urban elderly people over 65 years	155	1,169,067	817,076.4	12,165.45	3,550,976
Population of rural elderly people over 65 years	155	3,119,635	2,390,858	141,119.2	9,220,389
GDP per capita (RMB)	155	45,092.65	19,405.5	16,413	106,497

8.3.5.3 Relationship between Public Expenditure and the Elder Care Service Index

The amount of public expenditure has an effect on the level of social welfare and elder care in China, so this is used to analyse the relationships with the elder care service index in both urban and rural areas, through two important investment directions – elderly income supplementation (investment in elderly people) and basic construction expenditure (investment in elder care services) during 2011~2015 – using Stata statistical software. Thus, four scatter diagrams (Chart 8.4) are presented as below:

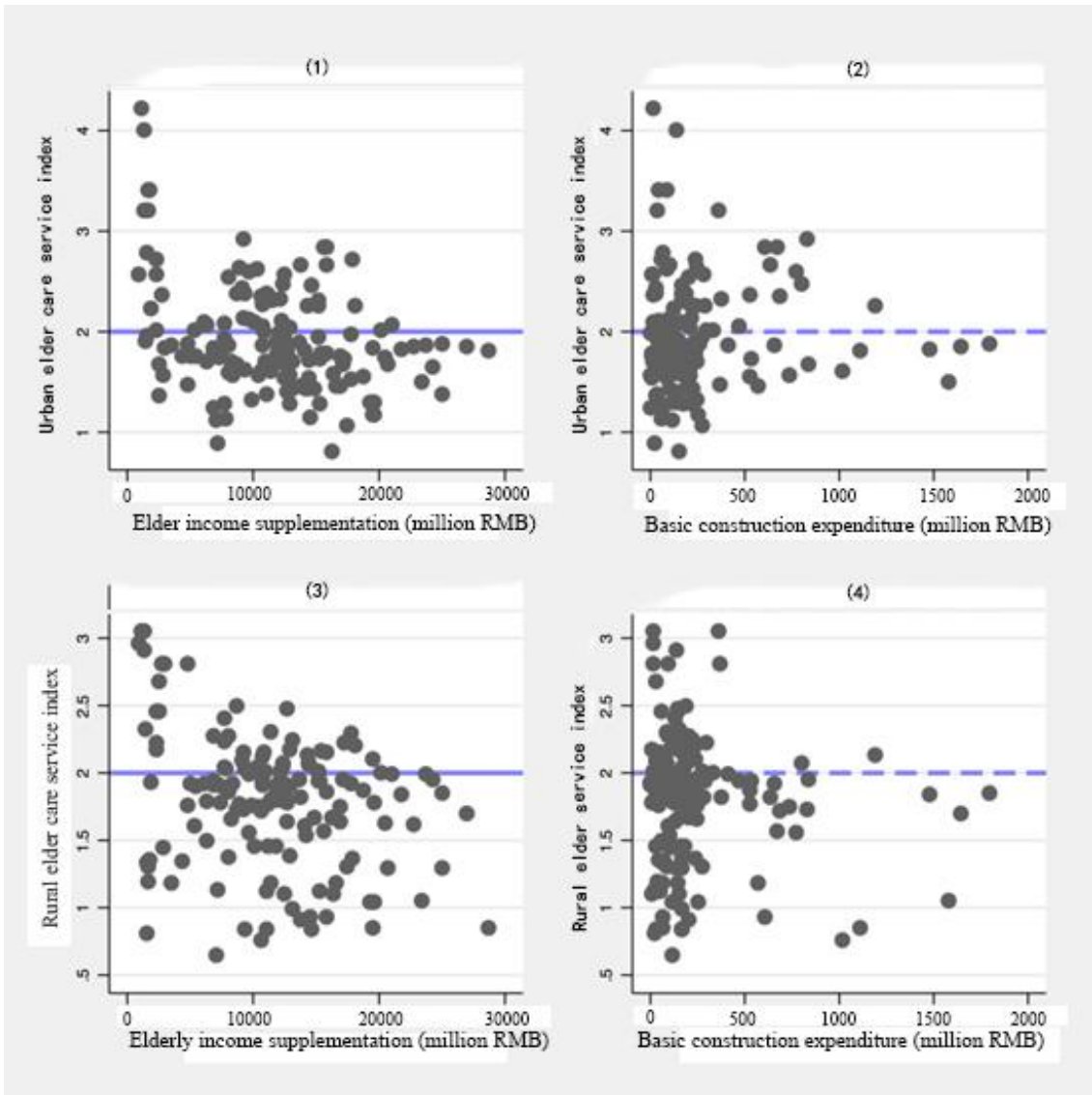


Chart 8.4 Scatter Diagrams of Public Expenditure and the Elder Care Service Index (2011~2015)

As is shown in Charts (1) and (3), the position of most cases on the Y-axis (elder care service index) is higher if the position on the X-axis (elderly income supplementation) is lower. Comparing Charts (2) and (4), the position of most cases on the Y-axis (elder care service index) is also higher if the position on the X-axis (basic construction expenditure) is lower. Thus, it does not matter whether higher public expenditure occurs in urban or rural areas on social services, as basic construction will not necessarily result in improvement of the elder care service index. On the contrary, the regions with

lower public expenditure have a higher elder care service index. However, we cannot simply measure the level of elder care in a region by using the total amount of public expenditure as a single indicator, so the internal structure and relationship of public expenditure needs to be taken into consideration.

Based on these results, more analysis on the efficiency of investment direction, and the difference in effectiveness of elder care funding between the urban and rural areas will be discussed from the following two perspectives – efficiency of investment direction and efficiency of elder care funding in urban and rural areas:

(1) Efficiency of Investment Direction: Investing in Elderly People or in Elder Care?

Seen from Chart (1) and (3) most cases are centrally distributed. In the middle of the X-axis (elderly income supplementation), there is a linear connection between the two variables – the elder care service index increases according to an increase in elderly income supplementation. So, from a statistical perspective, increasing expenditure on elderly income (investing in elderly people) will improve both the urban and the rural elder care index.

Chart (2) and (4), on the contrary, show that most cases are distributed at the lowest level of the X-axis (basic construction expenditure). Unlike the elderly income supplementation data from Chart (1) and (3), this demonstrates that an increase in basic construction expenditure cannot lead to the enhancement of the elder care service index. There is no obvious difference in the basic construction expenditure of different regions, no matter what level the elder care service index is. This result can possibly be attributed to the availability of fewer subsidies for the construction of nursing institutions over previous years. It also might suggest that there has been insufficient time for the construction of nursing institutions to impact on the elder care service index.

In this respect, these results indicate that an investment in elderly people is more efficient than an investment on the construction of elder care services, therefore, local

governments need to avoid excessive investment in the building of local nursing institutions and associated facilities for elderly people.

(2) Effectiveness of Elder Care Funding in Urban and Rural Areas

Comparing Chart (1) and (2), there is no significant linear correlation between the elder care service index and basic construction expenditure in the urban China, and it is the same for rural China when comparing Chart (3) and (4). Contrasting Chart (1) and (3), we find that the cases of the elder care service index are more dispersed in urban areas than in rural areas, which indicates that public expenditure works better in rural areas. It also suggests that in urban areas the lack of uniformity might reflect that a more uneven distribution of wealth influences elder care services. Thus, public expenditure exerts a greater influence in rural areas which are more likely to rely on public expenditure to improve the level of elder care.

8.3.5.4 Evaluation of the Results of Multiple-linear Regression

The previous series of scatter diagrams only illustrate the relationship between the elder care service index and public expenditure (elderly income supplementation and basic construction expenditure) in both urban and rural areas. In order to verify the results, there are two other control variables that might affect the level of the elder care service index: GDP per capita (economic development factor) and the population of elderly people over 65 years (demographic factor) in each province. The results of the subsequent multiple linear regression analysis are presented in Table 8.17.

Table 8.17 Coefficient of Public expenditure in Urban and Rural China

Variables	ln <i>ECSIU</i>	ln <i>ECSIR</i>
ln <i>FUND</i>	0.280***	0.518***
	(0.0586)	(0.062)
ln <i>CONSTRUCTION</i>	0.0149	0.0376**
	(0.0168)	(0.0171)
ln(<i>population of elderly people</i>)	-0.441***	-0.502***
	(0.0362)	(0.0367)
Ln <i>GDP</i>	0.192**	0.516***
	(0.0778)	(0.0689)
Constant	-2.160*	0.68
	(1.16)	(1.016)
Observation	155	
Number of provinces or cities	31	
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1 ⁶⁷		

Note 1: The cited p-values may be under-estimates, as a consequence of the lack of independence of the five yearly observations within each province/city.

Note 2: Elderly income supplementation and basic construction expenditure are the public funds to the nursing institutions and community elder care service centres, which reflect the overall public expenditure on all elderly population. While in the multiple-linear regression, I chose GDP per capita as the variable because it can more reflect the economic level in one region.

The results of the multiple-linear regression demonstrate the following three aspects:

First, the contribution degree of elderly income supplementation (*FUND*) to the elder care service index (0.280 in urban China and 0.518 in rural China) is significantly higher than that of basic construction expenditure (*CONSTRUCTION*) (0.0149 in urban China and 0.0376 in rural China). According to this result, an investment in elderly people is more efficient than an investment in the construction of elder care. So, the Chinese Government should give priority to increasing funding for elderly people, rather than blindly expanding investment on the construction of elder care services.

Second, compared with urban China, elderly income supplementation and basic construction expenditure in rural China are more significant influences on the elder care

⁶⁷ The (*) represents a result has reached the statistical significance level where it is very unlikely to have occurred given the null hypothesis.

service index, which means that elder care services in rural areas are more likely to depend on public expenditure compared to urban areas. So, the Chinese Government should invest more in rural areas.

Third, as seen from Table 8.17 there is an obvious negative correlation between the control variable of the population (of elderly people over 65 years) and the elder care service index. This information means that any proportionate growth in the elderly population will negatively affect the elder care service index. However, the other control variable (GDP per capita) reflects the opposite phenomenon, which means that any increase of GDP per capita will positively affect the local elder care service index. Meanwhile, the results also suggest that GDP per capita is much more significant in rural China than in urban China; thus, assuming that rural residents' retirement income reflects GDP per capita, to achieve welfare objectives, it is urgent to enhance rural residents' retirement income.

8.4 Summary

This chapter has analysed the overall degree of efficiency of public expenditure on elder care services across different regions of China, as well as between urban and rural areas. Work on the construction of input and output indicators of elder care services finally produced DEA results from 31 regions of China, which demonstrate that 15 regions are working at a lower level of efficiency than expected, and 8 of them need efficiency improvement. This chapter also establishes an elder care service index, and calculates the elder care service index in both urban and rural areas across the 31 regions. It also compares and analyses the relationship of elderly income supplementation and construction expenditure on elder care services to the elder care service index. Evidence shows that an investment on elderly people creates a more efficient outcome than an investment on the construction of elder care facilities, with rural areas likely to benefit more from social investment than urban areas. Thus, the results produced by the quantitative methods outlined in this chapter, accord with particular practical

assumptions. First, excessive investment in the construction of elder care institutions and facilities may not positively result in the improvement of elder care, so it is crucial to instead increase the retirement income of elderly people. Second, the Chinese elder care industry is becoming market-based and self-funded, where elderly people exercise discretion over their choice of elder care as and when required. So if the retirement income of the elderly is increased it will increase their purchasing power and thence their welfare. If the government wishes an elder care industry to thrive, investment in elderly income supplementation offers the best means to achieve this goal. Third, the gap of public expenditure between urban and rural areas appears to have resulted in a lower level of elder care services in rural areas, so the government's future investment priority should focus on the rural elder care industry.

Based on the above discussion, we need to recognise these problems and choose an elder care funding strategy which is more suited to China's current situation. The presentation of this strategy will be further discussed in the next and final chapters.

Chapter 9 Elderly Welfare Policy: A Feasibility Analysis for Establishing Public Long-term Care Insurance

The previous analysis has shown that social policies related to elder care funding that rely on the supply side do not promote the sustainable development of an elder care industry. In the context of no public long-term funding, this chapter will focus on the demand side of elder care and attempts to find ways to resolve the problems existing on the supply side of elder care services. It is divided into three sections. First, it will review the pathway of China's elderly welfare policy and propose a possible construction of elder care funding. Subsequently, it offers a feasibility analysis of a public LTCI scheme, and estimates the future supply and demand of LTC based on Jingmen's LTC scheme.

9.1 Path Selection of China's Elderly Welfare Policy

At present, the development of social policies globally and basically follows the path from 'residual type' to 'institutional type' (or from 'relief-type' to 'universal type'). At present, social welfare services for the elderly in China, which are currently being implemented, are essentially based on relief-type social assistance. They mainly target disadvantaged groups to help them meet their basic needs. With the development of society and the economy, rising public awareness of basic civil rights, and the setting of the goal to build a harmonious society by promoting social equity and justice, there are social and political pressures for changing the current social welfare model and promoting the transition from a residual type to a moderate universal type.

9.1.1 An Alternative Path between Equity and Efficiency: an Analysis of the Welfare System in China

All countries in the world are seeking different paths of equity and efficiency in order to promote economic development while maintaining a sustainable system and a harmonious society. Economic growth and social equity are the two basic elements constituting the social welfare function. To achieve a steady increase in the level of social welfare, we must strike a sound balance between economic growth and social equity.

China's social welfare system has developed from a tax-funded, all-encompassing system under a planned economy, to a market economy that is restructuring responsibility between the state, employers, the market and individuals. During the transition, we have alternated between equity and efficiency. In the initial period of China's reform and opening up, an over-emphasis on an efficiency goal created rapid and extensive economic growth. However, when the goal of economic development is over-emphasised, social equity will be weakened and this poses a threat to the enhancement of social welfare, which in turn will affect sustainable economic development. So, practices must focus on an 'equal emphasis on efficiency and equity in primary distribution and redistribution processes, giving priority to equity in redistribution' (Hu, 2007)⁶⁸. Thus, under such circumstances, reallocating a portion of the wealth of the rich to the poor can increase the socio-economic utility of the poor without any significant reduction in the utility of the rich. It not only improves the efficient allocation of resources but also enhances social equity. Such improvements must be backed by the authority of government and the application of corresponding social policies. As the demand for LTC is under much pressure, while the elderly are mostly from low-income families, so China faces an urgent choice to solve the problem of unbalanced development in implementing new elderly welfare policies in order to improve the welfare of the low-income elderly population.

⁶⁸ The pre-president Hu Jintao gave a speech in the Seventeenth National Congress Conference, which was entitled '*Hold High the Great Banner of Socialism with Chinese Characteristics and Strive for New Victories in Building a Moderately Prosperous Society*'.

9.1.2 Reconstruction of Elder Care Funding in China

Social investment theory suggests that ‘positive returns on investment’ coincide with positive welfare as promoted by developmental social policies. The development of social policy in China has gradually shifted from a non-normative, individualised and fragmented form to a systematic and standardised form (Wu, 2004). Especially since the beginning of twenty-first century, with government intervention gradually increasing, China started to develop a ‘state-led social policy’.

Below, we offer a proposal for China’s elder care funding system (as shown in Figure 9.1) based on social investment theory and developmental social policy, while drawing lessons from ‘welfare pluralism’, based on the current situation of elder care in China. The fund raising scheme suggested here would be capable of paying for full and effective elder care services.

The establishment of a public LTCI system in particular will provide funding for elder care services with government, society, enterprises, and markets bearing a reasonable portion of the costs involved. At the same time, the introduction of a market-based mechanism to an elder care industry can provide a sound operating environment.

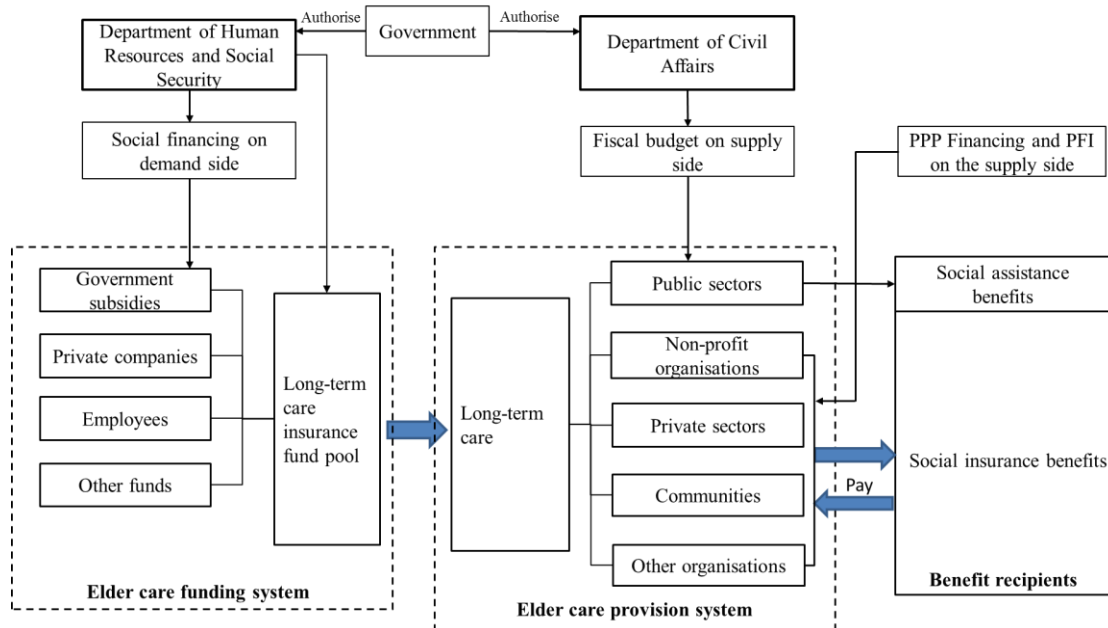


Figure 9.1 Funding System of Elder Care in China

9.2 Feasibility Analysis of Public LTCI in China

Based on relevant economic and social indicators across China in 2015, this part attempts to promote the Jingmen LTCI scheme to the national level for empirical test (static measurement), calculating the degree to which adaptation of the Jingmen scheme⁶⁹ is required to meet different socio-economic conditions in all regions of China in 2016.

9.2.1 Related Economic Indicators Selected in Static Demand Calculation

Meeting demand is the goal of finance, and the scale of demand determines the scale of funding. In this respect, the measurement of demand requires identifying two key variables, namely the population of disabled and semi-disabled elderly people, and the level of elder care services fees. The six principles of ‘daily living activities’ (DLA) offer a measurement of elderly people’s disabilities and functional status (Brie, 2014), which are ‘self-feeding, bathing, dressing, grooming, functional mobility and toilet hygiene’. We define the disability to do one or two actions as mild disability; with the disability to do three to four defined as moderate disability and five to six defined as severe disability. According to the measurement method used by China’s Ageing Scientific Research Centre, the proportion of disabled people accounts for 6.22% of the total population of the elderly in China in 2015, among them, the proportion of severely, moderately and mildly disabled elderly people are 1.08%, 0.31% and 4.83% respectively (Jing and Li, 2014). Based on these proportions, we could calculate the population of disabled elderly in different regions of China. However, as there is no nation-wide unified standard for elder care service fees, we assume that the payment level is roughly reflects a certain proportion (40%, 30% and 20%) of the local average social salary⁷⁰, with specific payment levels as follows:

⁶⁹ The details of LTCI schemes in Shanghai and Jingmen (Hubei Province) have been introduced in section 6.4.2.

⁷⁰ Average social salary refers to the average salary of all employees within one region in one period.

$$CF = S \times ratio \times D_{num}$$

Where CF represents the total financial demand for LTC, S represents the local average private salary, and $ratio$ represents the estimated ratio (40%, 30% and 20% respectively), D_{num} is the population of disabled elderly people. The calculation results are shown in Table 9.1.

According to Table 9.1, the regions with large-scale LTC fund demand include Shandong, Jiangsu, Zhejiang, Guangdong, Sichuan, Hebei and Anhui, while the regions with small-scale LTC fund demand include Tibet, Qinghai and Ningxia. The share of LTC funds for disabled elderly people in these areas is around 0.25~0.51% of 2015 GDP. Although the proportion of China's LTC expenditure is not high compared with most OECD countries, it can be seen that Germany's LTC expenditure accounted for only 0.23% of the GDP in the year when it was first piloted in 1995⁷¹, which makes it more sensible and reasonable that the initial cost and follow-up administrative expenses in China can be kept at a relatively low level during the initial period of the system.

⁷¹ The expenditure of LTC in 1995 in Germany is 5 billion Euros (Theobald and Hampel, 2012), and the 1995 GDP of Germany is 2.592 trillion US dollars (World Bank, 2018). I use 1.2 as the currency exchange rate.

**Table 9.1 Population of Disabled Elderly People in 2016 and
the Results of Financial Demand for LTC**

Regions	Elderly people over 60 years (thousands)	Population of disabled elderly people (thousands)				Total	Average local social salary (RMB per month)	Elder care service fees (billions)		
		Mild disabled elderly people	Moderate disabled elderly people	Severe disabled elderly people	Mild disability (20%)			Moderate disability (30%)	Severe disability (40%)	
National	221,828.9	10,714.3	687.7	2,395.8	13,798	5,169.1	171.17	256.76	342.35	
Beijing	3,150	152.1	9.8	34	195.9	9,282.5	4.36	6.55	8.73	
Tianjin	2,154.2	104	6.7	23.3	134	6,674.2	2.15	3.22	4.29	
Hebei	12,120	585.4	37.6	130.9	753.9	4,243.4	7.68	11.52	15.36	
Shanxi	5,300	256	16.4	57.2	329.6	4,316.9	3.42	5.12	6.83	
Inner Mongolia	4,100	198	12.7	44.3	255	4,761.3	2.91	4.37	5.83	
Liaoning	8,400	405.7	26	90.7	522.4	4,361	5.47	8.20	10.94	
Jilin	5,250	253.6	16.3	56.7	326.6	4,296.5	3.37	5.05	6.737	
Heilongjiang	6,461	312.1	20	69.8	401.9	4,073.4	3.93	5.89	7.86	
Shanghai	4,359.5	210.6	13.5	47.1	271.2	9,097.8	5.92	8.88	11.84	
Jiangsu	15,790	762.7	48.9	170.5	982.1	5,516.3	13.00	19.50	26.00	
Zhejiang	9,840.3	475.3	30.5	106.3	612.1	5,555.7	8.16	12.24	16.32	
Anhui	10,444.8	504.5	32.4	112.8	649.7	4,594.9	7.17	10.75	14.33	
Fujian	4,960	239.6	15.4	53.6	308.6	4,802.3	3.56	5.34	7.11	
Jiangxi	6,500	314	20.2	70.2	404.4	4,244.3	4.12	6.18	8.24	
Shandong	19,694	951.2	61.1	212.7	1225	4,772.5	14.03	21.05	28.06	
Henan	12,324	595.2	38.2	133.1	766.5	3,783.6	6.96	10.44	13.92	
Hubei	10,423.5	503.5	32.3	112.6	648.4	4,530.6	7.05	10.58	14.10	
Hunan	11,622	561.3	36	125.5	722.8	4,363.1	7.57	11.35	15.14	
Guangdong	11,940	576.7	37	129	742.7	5,482.3	9.77	14.66	19.54	
Guangxi	7,160	345.8	22.2	77.3	445.3	4,415.2	4.72	7.08	9.44	
Hainan	1,255.2	60.6	3.9	13.6	78.1	4,800	0.9	1.35	1.80	
Chongqing	6,500	314	20.2	70.2	404.4	5,045.3	4.90	7.35	9.79	
Sichuan	16,720	807.6	51.8	180.6	1040	4,909.6	12.25	18.38	24.51	
Guizhou	5,340	257.9	16.6	57.7	332.2	4,975.1	3.97	5.95	7.93	
Yunnan	6,000	289.8	18.6	64.8	373.2	4,380.3	3.92	5.89	7.85	
Tibet	253.9	12.3	0.8	2.7	15.8	8,154.1	0.31	0.46	0.62	
Shanxi	6,011	290.3	18.6	64.9	373.8	4,582.8	4.11	6.17	8.22	
Gansu	3,650	176.3	11.3	39.4	227	4,411.8	2.40	3.60	4.81	
Qinghai	697.7	33.7	2.2	7.5	43.4	5,090.8	0.53	0.80	1.06	
Ningxia	820.8	39.6	2.5	8.9	51	5,031.7	0.62	0.92	1.23	
Xinjiang	2,587	131.9	8	27.9	167.8	5,009.8	2.02	3.03	4.04	

Data Sources: the data of ‘population of elderly people over 60 years’ and ‘average local social salary’ is from ‘2016 Statistical Yearbook’ (National Statistical Bureau, 2016), and the rest is calculated by the author.

9.2.2 Selected Economic Indicators for LTC Provision

The coverage of the public LTCI scheme in Jingmen has a wide range of contributors, covering almost all insured people covered by medical insurance (excluding those under 18 years). Thus, the total costs of supply for LTC can be calculated as follows:

$$revenue = people \times income \times rate$$

Where ‘*revenue*’ represents the amount of LTC funds, ‘*income*’ represents disposable income per capita, and ‘*rate*’ represents financial rate of the LTC scheme.

Because 0.4% is too low, we adjust the rates here according to three standard rates of 0.7%, 1% and 1.4% to represent low, medium and high estimation. The calculation results are shown in Table 9.2 and 9.3:

Table 9.2 Estimated Supply Expenditure of LTC Funds (2015)

Regions	Total population (thousands)	Population of elderly people enrolling in public medical care insurance scheme (thousands)	Disposable income per capita (RMB/annual)	Total disposable income per capita (billions)
National	1,374,620	1,147,466	21,966.2	25,205.5
Beijing	21,710	19,512	48,458	945.5
Tianjin	15,470	13,903	31,291.4	435.0
Hebei	74,250	60,714	18,118.1	1,100.0
Shanxi	36,640	31,126	17,853.7	555.7
InnerMongolia	25,110	21,828	22,310.1	487.0
Liaoning	43,820	39,172	24,575.6	962.7
Jilin	27,530	24,231	18,683.7	452.7
Heilongjiang	38,120	34,089	18,592.7	633.8
Shanghai	24,150	21,894	49,867.2	1,091.8
Jiangsu	79,760	68,945	29,538.9	2,036.6
Zhejiang	55,390	48,237	35,537.1	1,714.2
Anhui	61,440	50,521	18,362.6	927.7
Fujian	38,390	31,644	25,404.4	803.9
Jiangxi	45,660	35,858	18,437.1	661.1
Shandong	98,470	82,366	22,703.2	1,870.0
Henan	94,800	74,905	17,124.8	1,282.7
Hubei	58,520	49,637	20,025.6	994.0
Hunan	67,830	55,342	19,317.5	1,069.1
Guangdong	108,490	91,113	27,858.9	2,538.3
Guangxi	47,960	37,109	16,873.4	626.2
Hainan	9,110	7,305	18,970	138.6
Chongqing	30,170	25,463	20,110.1	512.1
Sichuan	82,040	69,012	17,221	1,188.5
Guizhou	35,300	27,378	13,696.6	375.0
Yunnan	47,420	38,355	15,222.6	583.9
Tibet	3,240	2,476	12,254.3	30.3
Shanxi	37,930	32,222	17,395	560.5
Gansu	26,000	21,554	13,466.6	290.3
Qinghai	5,880	4,700	15,812.7	74.3
Ningxia	6,680	5,338	17,329.1	92.5
Xinjiang	23,600	18,450	16,859.1	311.1

Data Sources: The data of ‘total population’ and ‘average disposable income’ is from ‘2016 Statistical Yearbook’ (National Statistical Bureau, 2016), and the rest is calculated by the author.

Table 9.3 Estimated Demand and Supply Costs of LTC Funds (2015)

Regions	Supply costs (billions RMB)			Demand costs (billions RMB)		
	0.7% of the total disposable income	1% of the total disposable income	1.4% of the total disposable income	Elder care service fee for mild disability (low estimation)	Elder care service fee for moderate disability (median estimation)	Elder care service fee for severe disability (high estimation)
National	176.44	252.06	352.88	171.17	256.76	342.35
Beijing	6.62	9.46	13.24	4.36	6.55	8.73
Tianjin	3.05	4.35	6.09	2.15	3.22	4.29
Hebei	7.70	11.00	15.40	7.68	11.52	15.36
Shanxi	3.89	5.56	7.78	3.41	5.12	6.83
InnerMongolia	3.41	4.87	6.82	2.91	4.37	5.83
Liaoning	6.74	9.63	13.48	5.47	8.20	10.94
Jilin	3.17	4.53	6.34	3.37	5.05	6.74
Heilongjiang	4.44	6.34	8.87	3.93	5.89	7.86
Shanghai	7.64	10.92	15.29	5.92	8.88	11.84
Jiangsu	14.26	20.37	28.51	13.00	19.50	26.00
Zhejiang	12.00	17.14	24.00	8.16	12.24	16.32
Anhui	6.49	9.28	12.99	7.16	10.75	14.33
Fujian	5.63	8.04	11.26	3.56	5.34	7.11
Jiangxi	4.63	6.61	9.26	4.12	6.18	8.24
Shandong	13.09	18.70	26.18	14.03	21.05	28.06
Henan	8.98	12.83	17.96	6.96	10.44	13.92
Hubei	6.96	9.94	13.92	7.05	10.58	14.10
Hunan	7.48	10.69	14.97	7.57	11.35	15.14
Guangdong	17.77	25.38	35.54	9.77	14.66	19.54
Guangxi	4.38	6.26	8.77	4.72	7.08	9.44
Hainan	0.97	1.39	1.94	0.90	1.35	1.80
Chongqing	3.58	5.12	7.17	4.90	7.35	9.79
Sichuan	8.32	11.89	16.64	12.25	18.38	24.51
Guizhou	2.63	3.75	5.25	3.97	5.95	7.93
Yunnan	4.09	5.84	8.17	3.92	5.89	7.85
Tibet	0.21	0.30	0.43	0.31	0.46	0.62
Shanxi	3.92	5.61	7.85	4.11	6.17	8.22
Gansu	2.03	2.90	4.06	2.40	3.61	4.81
Qinghai	0.52	0.74	1.04	0.53	0.80	1.06
Ningxia	0.65	0.93	1.30	0.62	0.92	1.23
Xinjiang	2.18	3.11	4.36	2.02	3.03	4.04

Data Sources: The data above is estimated data and is calculated by the author.

According to the calculation results in Table 9.3, in the developed and rich regions, for instance, Beijing, Tianjin, Shanghai, Guangdong, Fujian, Zhejiang and Jiangsu, the charges levelled exceed potential consumption rates. While in the undeveloped regions, such as Guizhou, Sichuan and Tibet, the supply cost is inadequate, so in these areas, the contribution rate needs to be higher. If the LTC funds can be distributed nationwide, the central government could redistribute the LTC funds from developed regions with a surplus to under developed ones with insufficient funds.

9.3 Forecasting Supply and Demand Costs of LTC in China (2020~2050)

Chinese scholars have separated ‘long-term care insurance’ from the concept of ‘elder care’ and study it as an independent institutional arrangement. Some scholars (see data source for Table 9.4) have predicted the total costs of LTC for the years 2020 to 2050 in terms of the scale and rate of fund-raising. The forecast results are shown below in Table 9.4:

Table 9. 4 Summary of Current Studies on Forecast of Total Cost to LTC in China

Year	Zhu and Jia (2009)			Wei and He (2012)			Song and Zhu (2012)	Cao (2014)
	Low estimation	Median estimation	High estimation	Low estimation	Median estimation	High estimation		
2015	134.6	179.4	224.3				480.6	2587.25
2020	181.7	242.2	302.8	676.92	817.49	983.8	657.6	3580.54
2025	250.4	333.9	417.3				917.7	4931.62
2030	350.1	466.8	583.5	1,885.50	2,749.88	3,982.61	1293.3	6593.15
2035	462.0	616.0	770				1,809	9937.65
2040	563.5	751.3	939.2	4,894.78	8,621.2	15,026.2	2,352.3	14341.77
2045	666.5	888.7	1,110.9				3,009	18696.7
2050	801.8	1,069.1	1,336.4	11,263.51	23,958.13	50,252.97	3,849.7	24687.34

Data Sources: Zhu and Jia (2009); Wei and He (2012); Song and Zhu (2012); Cao and Chen (2014). The unit for all data is billion RMB.

Drawing on existing cost burden calculations, the highest cost estimates are by Wei and He (2012), who predict that by 2050 the total cost of LTC in China will reach 50.25 trillion RMB. The lowest cost estimate is by Zhu and Jia (2009), who estimate that the maximum total cost of LTC by 2050 will be only 1.33 trillion RMB. The estimated demand calculated by Cao and Chen (2014) and Song and Zhu (2015) fall between these two.

These calculations place emphasis on the principle of commercial insurance, and the design variables of rates are complex. Although it has a certain reference meaning to the actuarial balance of commercial LTC, this is not suitable for social insurance funding principles. Social security financing is a statutory fund-raising system established under government guidance and does not aim to make a profit. However, following the ‘law of large data’ principle and social policy precedent, the government measures the scale of fund-raising according to relevant economic and social indicators to achieve a policy goal of balancing revenue and expenditure.

9.3.1 Forecast of Elderly Population for LTC

We assume the disability rates by different age groups: 2.5% at 60~64 years, 4.0% at 65~69 years, 5.3% at 70~74 years, 9.9% at 75~79 years, 25.1% at 80~84 years, 35.6% at 85~89 years, and 50.3% at over 90 years (National Statistical Bureau, 2004; Li *et al.*, 2016)⁷². The proportion of disabled elderly people is measured according to the United Nations (2017), the population of disabled elderly people from 2020 to 2050 is shown in Table 9.5.

⁷² The first five proportion ratios are referred from the investigation of 7 cities (Beijing, Chongqing, Harbin, Chengdu, Xi’an, Changsha and Shanghai) in China (Li *et al.*, 2016), and last two proportion ratios are referred from ‘China’s Demographic Statistical Yearbook’ (National Statistical Bureau, 2004).

**Table 9.5 Forecast of Population of Disabled Elderly People over 60 years
from 2020 to 2050 (in thousands)**

Year	Population	Age groups							Total
		60-64	65-69	70-74	75-79	80-84	85-89	Over 90	
2020	People over 60 years	76,684	73,589	45,439	27,032	16,664	7,897	3,009	250,314
	Population of disabled elderly	1,917	2,944	2,408	2,676	4,183	2,811	1,514	18,453
2025	People over 60 years	96,000	71,372	64,536	36,044	18,556	9,205	3,983	299,696
	Population of disabled elderly	2,400	2,855	3,420	3,568	4,657	3,277	2,003	22,182
2030	People over 60 years	115,718	89,835	63,198	52,027	25,347	10,565	4,931	361,621
	Population of disabled elderly	2,893	3,593	3,349	5,151	6,362	3,761	2,480	27,590
2035	People over 60 years	109,952	108,845	80,288	51,749	37,431	14,898	5,968	409,131
	Population of disabled elderly	2,749	4,354	4,255	5,123	9,395	5,304	3,002	34,182
2040	People over 60 years	88,810	103,907	98,140	66,723	38,038	22,650	8,454	426,722
	Population of disabled elderly	2,220	4,156	5,201	6,606	9,547	8,064	4,252	40,047
2045	People over 60 years	94,358	84,311	94,458	82,737	50,078	23,678	13,182	442,802
	Population of disabled elderly	2,359	3,372	5,006	8,191	12,570	8,430	6,630	46,558
2050	People over 60 years	119,969	89,966	77,241	80,675	63,341	32,029	15,640	478,861
	Population of disabled elderly	2,999	3,599	4,094	7,987	15,899	11,402	7,867	53,846

Data Sources: The data of ‘population over 60 years’ is from ‘*World Population Prospects: the 2017 Revision, Key Findings and Advance Tables*’ (United Nations, 2017). The population of disabled elderly people is calculated by the author according to the ratios.

9.3.2 Forecast of Total Cost of Demand for LTC

Since a unified national LTCI system has not been set up in China, there is no reliable relevant data on the status of LTCI to the current Chinese aged population. So a formula is used here to establish the demand for LTCI in China:

$$TC = \sum_{i=1}^m S_i C_i$$

Where TC represents the total cost of LTC, S_i represents the population of disabled elderly people in year i , and C_i represents the average expense of LTC in the year of i .

The calculation is based on the following assumptions: the proportion of disabled elderly people in specific age groups does not change from 2020 to 2050. During the forecasting period, 30%, 25% and 20% of the average commercial wage respectively

are the high, medium and low estimation of expense for LTC, with an average annual growth rate of 3%. The calculation results are shown in Table 9.6:

Table 9.6 Forecast of China's LTC Costs for Disabled Elderly People (2020~2050)

Year	Predicted average social salary ⁷³ (RMB/month)	Forecast of LTC expense (RMB/month/person)			Forecast of total expense of LTC (billions RMB)			Costs of LTC as a share of GDP
		High estimation (30%)	Median estimation (25%)	Low estimation (20%)	High estimation (30%)	Median estimation (25%)	Low estimation (20%)	
2020	5,992.4	1,797.7	1,498.1	1,198.5	398.1	331.7	265.4	0.28%~0.42%
2025	6,946.8	2,084.1	1,736.7	1,389.4	554.7	462.3	369.8	0.37%~0.56%
2030	8,053.3	2,416.0	2,013.3	1,610.7	799.9	666.6	533.3	0.34%~0.50%
2035	9,336.0	2,800.8	2,334.0	1,867.2	1,148.8	957.4	765.9	0.38%~0.57%
2040	10,822.9	3,246.9	2,705.7	2,164.6	1,560.3	1,300.3	1,040.2	0.41%~0.61%
2045	12,546.8	3,764.0	3,136.7	2,509.4	2,102.9	1,752.5	1,402.0	0.44%~0.66%
2050	14,545.1	4,363.5	3,636.3	2,909.0	2,819.5	2,349.6	1,879.7	0.48%~0.72%

Data Sources: The date of GDP from 2020 to 2050 is from Li (2000). The data of ‘average social salary’ of 2016 is from ‘2016 Statistical Yearbook’ (National Statistical Bureau, 2016). The rest of the predicted data is calculated by the author

As shown in Table 9.6 above, the total cost of LTC in the future grows steadily from 2020. By 2050, the highest share of GDP will reach 0.72%.

9.3.3 Forecast of Total Supply of LTC

Using linear regression to predict increases in disposable income per capita from 2020 to 2050, combined with predictions of the population of disabled elderly people shown in Table 9.5, the forecast of total demand for LTC can be obtained as shown in Table 9.7:

⁷³ We assume the average annual growth rate of average social salary is 3%.

Table 9.7 Forecast of Total Supply and Demand for LTC Funds (2020~2050)

Year	Population of people enrolling public medical insurance (million)	Disposable income per capita (RMB)	Total supply for LTC Funds (billions RMB)			Total demand for LTC Funds (billions RMB)		
			Future financial rate (0.7%)	Future financial rate (1.0%)	Future financial rate (1.4%)	Low estimation (20%)	Median estimation (25%)	High estimation (30%)
2020	1,175.8	31,086.5	255.9	365.5	511.7	265.4	331.7	398.1
2025	1,199.4	40,195.0	337.5	482.1	674.9	369.8	462.3	554.7
2030	1,219.5	49,305.1	420.9	601.3	841.8	533.3	666.6	799.9
2035	1,225.1	58,414.9	500.9	715.6	1,001.9	765.9	957.4	1,148.8
2040	1,212.4	67,524.9	573.1	818.6	1,146.1	1,040.2	1,300.3	1,560.3
2045	1,186.8	76,634.8	636.7	909.5	1,273.3	1,402.0	1,752.5	2,102.9
2050	1,154.8	85,744.7	693.1	990.2	1,386.3	1,879.7	2,349.6	2,819.5

Data Sources: The data of ‘population of people enrolled public medical insurance’ is from ‘*World Population Prospects: the 2017 Revision, Key Findings and Advance Tables*’ (United Nations, 2017). We assume that 100% of age group (15-60 years) enrolling in public medical insurance scheme.

Table 9.8 Forecast of Financial Rate (2020~2050)

Year	Demand (billions RMB)			Future financial rate		
	High estimation (30% of the average social salary)	Median estimation (25% of the average social salary)	Low estimation (20% of the average social salary)	Future financial rate (High estimation)	Future financial rate (Median estimation)	Future financial rate (Low estimation)
2020	398.1	331.7	265.4	1.39%	1.04%	0.70%
2025	554.7	462.3	369.8	1.54%	1.15%	0.77%
2030	799.9	666.6	533.3	1.88%	1.41%	0.94%
2035	1,148.8	957.4	765.9	2.36%	1.77%	1.18%
2040	1,560.3	1,300.3	1,040.2	2.87%	2.15%	1.44%
2045	2,103.0	1,752.5	1,402.0	3.61%	2.70%	1.80%
2050	2,819.5	2,349.6	1,879.7	4.60%	3.45%	2.30%

Note: The future financial rate is calculated by future demand for LTC divided by the future population enrolling in basic medical insurance scheme and future disposable income per capita.

By analysing the total demand for LTC funds, we can see that the demand for LTC funds for disabled elderly grows rapidly over time. Therefore, adopting an immutable fund-raising ratio will eventually lead to an imbalance between supply and demand. By

comparing the results in Table 9.7 and 9.8, it is clear that the estimated financial rate based on supply and demand for 2016 only applies till 2025 and that there will be a growing gap between supply and demand from 2030 onwards. Therefore, it is necessary to raise the financial rate to adapt to the increasing demand for LTC.

By forecasting the financial rate in Table 9.8, we can see that China also needs to establish a dynamic and flexible fund-raising mechanism similar to some OECD countries, such as, Japan and Germany. With an increasing number of ageing elderly, the financial rate needs to be raised by at least 25% every five years from 2030 onwards.

9.4 Summary

The implementation of the social insurance function of LTCI scheme can stimulate the effective demand for LTC, and thus further enhance the effective supply of elder care services. In this chapter, we attempted to adopt the Jingmen's LTCI scheme, because it is simple and flexible to operate and so might be applicable to other places. Combined with public medical insurance funds, it helps save the administrative cost of a LTCI scheme. According to the results, the determining factor of LTC demand is the elderly disability rate. Disposable income per capita is the determinant factor in deciding premium income. Thus, future social policy needs to strive to improve people's lives and increase the role of income distribution to enhance the capacity of the insured to sustain contributions. At the same time, financial rates need to be adjusted according to prevalent economic conditions, in order to make the LTC industry more sustainable. However, we should also bear in mind that due to the large population of disabled elderly people in China, it might be difficult to meet the demand in the early stage of implementation of public LTCI, before the scheme is mature. So, the tradition of family care and home-based care continue to play a vital role in current Chinese society. This chapter simply attempts to select a possible path for the future establishment of elderly

welfare policy by helping an aged population to raise retirement income and the ability to purchase LTC in the future.

Chapter 10 Conclusion

At present, the narrow fiscal foundations of the Chinese government accompanied by vast population growth have profoundly influenced the sustainable development of the elder care industry, requiring immediate reforms in the funding of elder care. Thus, the Chinese government urgently needs to find an appropriate funding policy for China's elder care services. This thesis systematically describes and analyses the operating mechanisms of China's elder care as well as its funding models. It then analyses the degree of financial participation made by the government, market, non-profit and profit organisations in the provision of elder care services via the demonstration of four case studies and the statistical analysis of public expenditure on elder care. Finally, it estimates the potential financial demand for LTC in the future and proposes the most feasible elder care funding mechanism for China.

This chapter first offers conclusions of the thesis around the five research questions identified in Chapter 1. It subsequently outlines the strengths and limitations of the research in terms of methodology, and makes some suggestions concerning future research to explore further the outcomes described here.

10.1 RQ1: What are the Achievements and Problems of Current Funding Arrangements for Elder Care/LTC on the Supply Side in China?

Since 2000, concerns have been arisen as to the rapid demographic shifts and the escalating demands of elderly people. The central Chinese Government has been actively promoting various approaches (mainly through expansion of supply of elder

care services) to encourage the social agencies to develop the construction of an elder care industry.

10.1.1 Achievements of Elder Care Provision and Funding

The Chinese Government adopts the ideas of ‘Neo-liberalism’ in its administration of the public sector, and introduces a market-based management mechanism from the private sector to promote the development of welfare, promoting individual and family responsibility. With the introduction of New Public Management (NPM) in the Chinese public sector, the government claims that these reforms can improve the performance and efficiency in the delivery of public goods and services by incorporating professional management ideas and approaches proposed by private agencies. In this respect, the Chinese Government has launched a series of policies related to the integration of various private resources and transferred what was originally a public responsibility over to private agencies.

Responding to the requirements of central policies related to the construction and development of elder care services, local government at all levels has embarked on expanding elder care provision by encouraging private agencies to enter into the elder care industry, to produce elderly facilities or deliver elder care services via a market-oriented operational form. Since then, the number of nursing institutions and relevant elderly facilities in China has experienced a remarkable boom. According to the available data (see Table 8.1 in Chapter 8), the expansion of elder care provision in China has spurred the growth of the elder care system’s supply side (an increase in the number of beds for elder care services) from 2010 to 2016, particularly in home-based community elder care. With more varied market-oriented approaches used by private sector companies, in combination with public expenditure, more private funds have been invested in the construction of the elder care industry and the number of private nursing institutions is also growing.

10.1.2 Problematic Issues of Elder Care Provision and Funding

Despite accelerated elder care expansion over the last few decades in China, several problems exist regarding funding issues within this process which are discussed below:

10.1.2.1 Inadequate Public Fiscal Investment

In recent years, there has been a serious shortage of public financial support in the field of social elder care services. The sources of public funds mainly come from central finance, local finance and public welfare lottery funds. At present, the central government has no special funds to invest in the elder care industry, and only a small amount of public lottery welfare funds and budget subsidy funds are included. According to the data provided by the Ministry of Civil Affairs, in the ‘twelfth Five-Year’ period (2011~2015), the budget for the central and local construction of elder care facilities only accounts for around 1.7% of total public expenditure on social services (Li and Xing, 2016). Although provincial governments have formulated subsidy policies for the construction of private nursing institutions, the proportion of their total investment is relatively low, compared with the investment from private participants, hardly reaching 10%.

In 2013, the central government invested roughly 11.2 billion RMB public expenditure in the elder care industry, which is less than 0.1% of total public expenditure and 0.04% of national GDP (National Information Centre, 2014). Compared to other European countries, the gap in social care services expenditure is dramatic. For example, Sweden is the highest where social elder care accounts for 3.8% of the country’s GDP; the lowest proportion is in Italy, at 0.2% (OECD, 2015). Thus, China invests far less than the average developed country where the percentage of social care expenditure to GDP is 1.7% (*ibid*). According to ‘*The Investigation in Urban Nursing Institutions in the Twelve Cities*’ (Chinese Ageing Scientific Research Centre, 2015), 93.6% of private nursing institutions and 65.2% of public nursing institutions mainly depend on their service charges to make ends meet, while the average operational subsidy sourced from local fiscal funding is only 124 RMB/month, accounting for 5.63% of total institutional

service charges (Lin and Liang, 2016). It can be seen that elder care funds in China mainly come from private funds, so government financial subsidies occupy a small percentage of the overall funding structure. This lack of government responsibility, especially the shortage of public expenditure, directly enhances the cost of social elder care, reducing the investment efficiency of services and purchaser's demand ability, further influencing the quality and accessibility of social elder care services.

The reasons for insufficient public investment are as follows: first, there is a lack of local fiscal resources. Since the implementation of a new taxation system in 1994⁷⁴, local tax revenue has fallen, and central tax revenue is being transferred to the local level. Public funds for elder care are mainly shared between the municipal government and district/county government. The major part of budget expenditure is shared by two levels of government according to a certain ratio, while the excess is covered by the district/county government. Additionally, the transfer payment system implemented by central government might be defective, in that it eliminates business tax, increasing the financial pressure of elder care on local government through a corresponding decrease in their budget⁷⁵. Building or remoulding a nursing institution and developing infrastructure for the elderly needs financial support from local government, but without sufficient funds progress would be very slow. The second reason for insufficient public investment is the absence of an independent budget for elder care. At present, funds for elder care are not included in China's social security budget system, nor is elder care allocated a separate specially designated budget heading. This situation is not conducive to the generation of accurate scientific statistics and accurate fiscal input by central or local government.

⁷⁴ China's 1994 tax reform mainly focuses on tax-sharing arrangements in favour of the central government, so that local governments, especially at county level, experience much more pressure under tighter fiscal constraints.

⁷⁵ After China's 1994 tax reform, a product tax was abolished and a circulating tax introduced that was composed of value added tax, consumption tax and business tax. In January 2012, a new tax reform started, changing business tax to value added tax. The revenue from business tax used to be the main fiscal resource available to local government. However, because of the cancellation of business tax local public finance has been dramatically affected.

10.1.2.2 The Low Degree of Participation of the Private Sector in the Elder Care Industry

Since reform and opening-up in the 1980s, the private economy has achieved great things economically. The private economy's contribution has been highly visible in that it has produced over half of China's GDP since 2010. In 2013, the private sector invested 27 trillion RMB into urban infrastructure, with year-on-year growth of 22.8%, accounting for 62% of private sector investment in China (Sun, 2014). Thus, the private sector plays an important role in China's economic development. Since 2000, China has started to explore different approaches in order to encourage private companies to provide and fund elder care services. The gradual process of deregulation introduced by the Chinese government creates several ways for the private sector to participate in the elder care industry, such as, sole proprietorship, joint venture, cooperation and joint operation. These various forms of financing are being introduced into the construction of nursing institutions, the provision of home-based care services, and the development of a consumption market for the aged. However, private nursing institutions only offer a small proportion of the total number of nursing institutions across China. By the end of 2015, the number of nursing institutions in China was 104,899, offering 6,698,400 beds for elderly people, which means that there are, equivalently, 30 beds to every 1,000 elderly people. Private nursing institutions account for 29.3% (13,677) of the total number of beds available (National Statistics Bureau, 2016).

The introduction of private sector companies into elder care provision is understood as a useful approach to optimise the allocation of resources, to supplement the shortage of public funds. Empirically, however, private sector investment in the industry is motivated by short-term profit-seeking, in part due to the limits of their own financial situations. Establishing a nursing institution requires lots of initial funding for land, fixed assets, relevant equipment, and service staff. Due to the nature of the private sector, unlike the public sector, it is difficult for companies in the private sector to get a bank loan. Besides, as there is a long return period, profit rates are generally not high. Research from Chinese Ageing Scientific Research Centre (2015) shows that only

19.4% of the private nursing institutions in China are run profitably, 32.5% run at a loss, and 48.1% break even. This makes fund accumulation relatively weak which results in a lack of available internal capital. Additionally, in the actual implementation stage, local governments often do not strictly enforce their own financing policies in the allocation of funds. They might, for example, set various restricted conditions which do not guarantee a certain amount of subsidies on time, or policy regulations prove too complex and can hardly be implemented in a practical situation. These factors will affect the enthusiasm of private enterprise to become involved in the elder care business. All these reasons may lead to a low degree of participation by private enterprise in the elder care industry, and further influence the development, or the lack of development, of an elder care market.

10.1.2.3 Imbalance of Provision and Demand for Elder Care

From an economic perspective, the proportional relation of input and output can create an effective outcome, otherwise the economic system might generate inefficient or less than efficient results. Elderly people are viewed as terminal consumers, and only effective consumption can promote the production of elder care services. At present, however, the existing supply of services cannot meet the demand of elderly people, mainly due to high accommodation expenses which result in a large number of vacant beds in nursing institutions.

From 2010 to 2016, the number of nursing institutions increased and the number of beds has nearly doubled. Yet, the average occupancy rate of beds in various types of nursing institutions in China has dropped from 76.8% to 51.2% during this time (see Table 8.1 in Chapter 8). In fact, these low accommodation rates are a common phenomenon across China. The reasons for this are attributable to three factors: first, due to the traditional culture of China, the majority of Chinese elderly people prefer to stay at home with their children, although they might experience an increased demand for LTC due to health reasons in their old age. In some cases, communities could deliver door-to-door services to elderly people, but elderly people are also reluctant to accept these kind of services, because they prefer their families (particularly their own children) to look after

them. Besides, most Chinese elderly people tend to believe that the environment in nursing institutions is not as comfortable as at home, and that the service staffs are not as careful and considerate as their children. Thus, it is difficult for them to accept either institutional or community care. Second, the expense of institutional care is relatively high and is out of reach for most elderly people resulting in low accommodation rates in nursing institutions. If the phenomenon of low accommodation rates exists for a long time, it will have a negative effect on the sustainable development of nursing institutions, especially private agencies which are largely relying on their own capital funds and are seeking a return on their investment. If these private nursing institutions raise their service fees, this could exacerbate the exclusion of elderly people who are more sensitive to such costs. Thus, excess bed capacity due to high fees threatens to undermine the financial viability of private elder care, which cannot fully meet elderly people's care demands.

Thus, the government's misunderstanding about the capacity of the elder care industry to provide an adequate service, the ignorance of a diversified range of demands for elder care, elderly people's actual purchasing power, and the absence of any assessment system, altogether have caused structural imbalances of supply and demand, and lead to a waste of resources.

10.2 RQ2: Can LTCI Work as a Social Insurance to Benefit the Chinese Elderly People on the Demand Side? How can China Learn from International Lessons in this Area?

Due to fiscal pressures and an increasingly aged population, China cannot establish the same universal tax-based funding model for LTC as those found in Nordic countries to cover all elderly people. In China, before establishing a public LTCI plan (June 2016), elder care was regarded as social assistance supported by fiscal revenue, which is similar to the mean-tested safe-net scheme implemented in the US and the UK. Social

assistance only applied to those who are identified as ‘Three-Nos’ and ‘Five-Guarantees’ elderly people, and other elderly people have to fund themselves (depending on pensions and other benefits, e.g., old-age allowances and service subsidies) to purchase elder care services (community care and institutional care). Currently, the basic pension scheme achieves nearly full coverage across China: the urban basic pension level increased more than 58 times from 1978 to 2016, so that the average urban basic pension was 31,500 RMB/annual by 2016 (Ministry of Human Resources and Social Security, 2016). The new rural pension level is much lower, but together with an agricultural subsidy it ensures elderly people’s basic living standards (Ministry of Finance and Ministry of Agriculture, 2016). However, the financial resources for elderly people are still not adequate for the majority of Chinese people to access decent elder care services in their old age. In recognition of the growing demands of the ageing population, therefore, a reform in funding for LTC has to be launched as soon as possible. Referring to the conduct of several Western countries, a new social insurance scheme – public LTCI – is being introduced in China.

Since June 2016, the Chinese Government aims to increase elderly people’s demand for LTC by introducing LTCI as a form of social insurance by launching a pilot programme in 15 regions. Due to the limited amount of time since its inauguration, it is difficult to examine the implications of this latest reform. However, I can compare China to other countries as a public LTCI plan has already been established in some Western countries. For instance, Japan and Germany launched this plan in 2000 and 1995, respectively. The implementation of LTCI in those countries can provide both experiences and lessons for the Chinese Government to further improve public LTCI in China.

From a political perspective, since reform and opening-up in the late 1970s, the Chinese government placed economic growth as a top priority for a long time, and focused more on efficiency than on equality. At present, total Chinese GDP ranks second place in the world, but GDP per capita and disposable income for individuals lag far behind other developed countries. Thus, since the beginning of the twenty-first century onwards, the Chinese Government has paid more attention to people’s livelihoods. One objective is

to increase the elderly's retirement income, including enhancing their basic pension level, establishing a new rural pension scheme and public LTCI and issuing an old-age allowance, etc., in order to stimulate elderly people's demand to purchase elder care services. Another aim is to expand elder care provision and other relevant facilities. Although the current situation may not seem to be positive (e.g., low accommodation rates in the nursing institutions leading to empty beds), overall, policy orientations have been chosen to develop the elder care industry in order to meet anticipated future demand.

In terms of the implementation of the public LTCI programme in several Western countries, it has exhibited some differences compared with China's public LTCI scheme. For instance, in Japan and Germany, public LTCI is a mandatory system covering the whole population (Japan: 40 years and older; Germany: working-age people) (Fernandez and Forder, 2012: 350-1). But at present, in China, only 15 cities have begun to establish a public LTCI scheme which varies significantly between different locations. According to the relevant policy of the public LTCI scheme in Qingdao (in Shandong Province) and Jingmen (in Hubei Province), the scheme only covers elderly people who also enroll in the Urban Basic Medical Insurance System (excluding rural residents). In Beijing, the policy-based LTCI scheme is implemented on a voluntary basis, and it seems that the participation rate is less than expected. Thus, it will take a long time to achieve full coverage of this type of scheme across China.

In addition, the public LTCI in Germany is designed as a PAYG system and is the fifth pillar of the country's social security system. Although it is an independent and self-governing system, it is still connected to the existing statutory health insurance-funded programme, so that there is an overall financial balance among LTCI providers (Rothgang and Igl, 2007). With most cases in China, people enrolling in the Basic Urban Medical Insurance Scheme are automatically covered by the LTCI scheme, which is too immature to be an independent social insurance programme so it has to rely for its financial resources on public medical insurance funds and government subsidies. Unlike a PAYG pension scheme, the public LTCI scheme shares the same financial

principles as public medical insurance. By 2016 the balance of public medical insurance funds was so huge (277.6 billion RMB), it was higher than all other social insurance schemes (basic pension, unemployment insurance, work-related injury insurance and maternity insurance) (Ministry of Finance, 2017). Thus, the Chinese central government should consider connecting a universal LTCI scheme to the basic medical insurance system, and the LTCI can also be managed inside the medical insurance system.

Third, in Germany, public LTCI is financed by income-related contributions equally paid by both employer and employee. In Japan, the financial sources of public LTCI scheme are from general national and local taxation (accounting for 50%) and personal premiums. Thus, the finance of the LTCI in Japan is linked to the national responsibility for all citizens. Currently in China, contribution criteria are not unified in pilot cities for LTCI purposes, and most of these schemes are not earnings-related. Due to the heavy burden of social insurance contributions ('Five Insurance and One Fund'), Chinese employers are not required to contribute to the public LTCI scheme. In addition, the contribution level is more diversified in Western countries, for instance, in Japan, contributions include a 10% co-payment that is reduced for low income people (Fernandez and Forder, 2012: 351). In Germany, contribution rates vary between different groups. For instance, pensioners are required to pay the full contribution by themselves; an extra 0.25% is required from childless individuals, because they are less likely to receive informal care from relatives. Contributions for the unemployed are paid by the Federal Employment Office. Children up to the age of 25 years, and spouses or life partners with monthly income below a certain level are co-insured (Zuchandke *et al.*, 2012: 220). While in China, the contribution policy for public LTCI schemes differs considerably in all pilot cities, and there is currently no national unified contribution criteria set for these LTCI schemes. Thus, in the future, the central and local government in China need to consider establishing reasonable contribution criteria.

Fourth, in order to meet the growing expenditure on benefit levels and make the public LTCI system more sustainable, Germany has increased the contribution rate several times from 2008 to 2017: a new contribution rate (at 1.95% of salary) and levels of

payments were set in 2008, and changed in January 2017 to 2.55% (2.8% for people without children) (Backer, 2016). These rectifications imply that the Chinese government also needs to consider the sustainable implementation of their public LTCI programme.

At present, in China, the construction of the elder care industry has resulted in an increase of the population of care recipients (see Table 8.1 in Chapter 8), and reduced the elderly's reliance on social assistance (see Table 6.3 in Chapter 6). This trend is quite similar to most Western countries, where LTCI programmes relieve municipalities from having to increase expenses for social assistance programmes, and further separate social assistance from LTC risk coverage (Zuchandke *et al.*, 2012: 217; Fernandez and Forder, 2012: 353). However, the launch of LTCI and its increasing expenditure has demonstrated that private LTCI cover has been severely crowded out, especially in Japan. While in Germany, private LTCI cover is also compulsory (benefits on expenditure are the same for all LTC programmes) (Zuchandke *et al.*, 2012: 216), which can greatly relieve public expenditure pressures.

Above all, public long-term insurance programmes in Germany and Japan are compulsory and demand-oriented, covering all insured recipients. The public LTCI in Germany is designed as PAYG system, and the use of funds is not entirely restricted by fiscal budgets. The contribution rate can also be adjusted according to prevailing economic conditions, which reflects the flexibility of the policy in place. However, we should also bear in mind that in the German LTCI system, the funds covering blue collar workers has run at a deficit for some time, and this counts as a deficit on the public accounts. Whether the Chinese government would be prepared to take on this risk is questionable. Above all, the LTCI scheme designed as social insurance can, to some extent, make use of available social sources and generate positive results for society as a whole compared to those only relying on tax revenues. Thus, given my research and the available data, I suggest that a public LTCI scheme should be the main form of social welfare for Chinese elderly people in the future.

10.3 RQ3: Does the Analytical Framework offered by PPP Funding Arrangements Help us Analyse Current Trends in Funding Elder Care/LTC in China?

Currently, Public and Private Partnerships (PPPs) are regarded as the most effective funding approach to expand elder care provision, including diversifying the range of services categories, and improving the quality and the level of elder care services. In the four case studies (discussed in Chapter 7), the introduction of a market-based mechanism and private capital have a positive effect on the reform of public nursing institutions. Apart from the advantages of PPPs indicated previously, these forms of investment can also motivate private agencies to provide elder care services, and create job opportunities in the local areas. For instance, all cases have demonstrated that after reform, the scale of these public nursing institutions is extended as more beds and relevant facilities are built, accommodation rates improve greatly⁷⁶, and more jobs are offered to the local population, especially attracting women in their mid-fifties to work as service staff (e.g., the Wuhan Social Welfare House, after a new building was completed, offered more than 1,000 new jobs), which promotes the development of elder care. However, there are some problems that we need to take into consideration:

First, as we learn from the historical context of social policies on elder care services, for a quite long time, the elder care service has been regarded as a public service provided by the government. This idea is common even nowadays, because the majority of elderly people still prefer to go to public nursing institutions (Social Welfare Houses) rather than private ones. Throughout the process of market-based reform in public nursing institutions, however, PPP-oriented elder care services gradually lose their public features. My research demonstrates, from observing PPP cases, which are driven by maximum profits, PPP projects are becoming an essential vehicle for private companies to obtain a government subsidy and gain operating profits, even though the

⁷⁶ We have to exclude the Wuhan Welfare House/Xiehe Elderly Apartment, because this PPP project was just completed and the possible accommodation rate is unknown at this stage.

slow withdrawal of government funding in elder care is aimed at creating a market-based industry. However, management is entirely in private hands. As the contract period for a PPP project is quite long (e.g., in some cases, the contract period is over 20 years), private companies hope to gain more profits from these projects and usually compete during the bidding stage. Thus, new pricing systems under PPP projects tend to set higher prices for elder care than the previous system, creating more financial burdens for elderly people entering private care who might only depend on a pension for their income. In this respect, the PPP funding model has played an active role in the elder care industry, mainly working on the supply side. The investment of PPPs, which acts as a mixed funding method, works to create job opportunities, to expand beneficiary coverage, etc., but it does not satisfy elderly people's practical welfare demand for LTC. Those who really need LTC cannot afford the relatively high expenses the new hybrid nursing institutions. Thus, it cannot be denied that public interest and public benefits are diminishing, and without other supplementary welfare benefits, the issues surrounding adequate elder care services will be more severe in the future as the elderly population grows.

Second, considering the operating costs and profits of nursing institutions, it seems that after PPP reforms, private companies have not enjoyed as much profit as they had expected. For instance, in Hanchuan's case, although the nursing institution runs under a *'Public Construction and Private Operation'* model, the high depreciation fee and rising operating costs reduce profits, and this might affect their future business. In the UK's case, as public care homes shift to private ones, this is accompanied by a dramatic decline in government subsidy with fewer elderly people receiving state help with the costs of their elder care services. Recently, a private equity-owned care home – The Four Seasons – has been teetering on the brink of collapse, with loans of more than 500 million pounds and annual interest payments of 50 million pounds (Sodha, 2017). While the UK government refuses to raise the fee payments it makes for means-tested social care, these private companies face enormous difficulties in maintaining their business. The option of raising private fees to cross-subsidise elderly clients who cannot afford to

pay more provides no solution. As Williams (as cited in Sodha, 2017) argues, care homes are more suited to low-risk, low-return and long-term financing, because there is a significant mismatch between the high return of private equity and the delivery of elder care services. So, it seems that, without government intervention (in particular, a lack of public funding), a sudden shift from public to private nursing institutions may create serious financial issues over the long run.

To sum up, the above problems have demonstrated that various PPP funding models on elder care in China can produce effective results, such as an increase in the construction of elder care services and the improvement of service quality. However, the PPP model has not solved elderly people's increasing demand for LTC. Therefore, blind investment in PPP projects is not appropriate, rather social policy should consider funding models which can stimulate elderly people's purchasing power, in other words, establishing a funding model for elder care from the perspective of the demand side. Raising the consumption of the elderly would strengthen the freedom of personal choice, which is essential to the effective operation of any market.

10.4 RQ4: What is the Investment Efficiency in the Elder Care Funding in China? Which Investment Orientation is more Efficient in terms of Extending Care the Elderly?

Based on the previous section, due to the absence of a public LTC institution in China, both equity and efficiency are not guaranteed. The Chinese government tends to invest more on the construction of elder care, in particular, subsidising the construction and operation of elder care services, which indicates that the Chinese government is more likely to focus on the supply side of elder care provision. Thus, efficiency is given higher priority than equity. However, from the perspective of equity, the majority of elderly people (or elderly people's children) cannot afford to pay for relatively high care service fees; and, from the perspective of efficiency, overly aggressive expansion leads

to lower occupancy rates, thereby undermining a viable market mechanism in elder care.

In this thesis, I used quantitative methods to investigate the efficiency of public expenditure on elder care services. Seen from the results of DEA statistical analysis, I find that input redundancy and output deficiency co-exist in some regions of China (see Section 8.2.3 in Chapter 8), and the efficiency of public expenditure varies significantly in different regions. The efficiency of public expenditure on elder care services in eastern and central China is much better than in western regions. Consequently, the allocation of welfare resources in the development of the elder care industry is unbalanced.

In addition, the results of calculating an elder care service index for urban and rural China demonstrated that there is a welfare gap between urban and rural elderly people. According to my calculations, comparing different investments across areas on the construction of elder care, an investment in elderly people is more likely to significantly improve the level of elder care services in one region. Thus, it statistically proves what I have illustrated in the first three sections of the conclusion, that investment on the demand side of elder care generates greater efficiency than investment in the supply side, suggesting that demand-oriented investment should be China's policy priority for the future.

10.5 RQ5: What Kinds of Elder Care Funding Seem to be Working Most Effectively at Present that might Serve to Direct Future Policy?

Since the reform and opening-up policy in the late 1970s, sustained economic growth has created a certain fiscal foundation which can be used to establish another redistributive social policy to achieve the balance between equality and efficiency. A unified national-based public LTCI scheme as a social insurance scheme which operates

on a PAYG basis, can solve the financial issues concerning elder care services in China and provide a stable source of funds for LTC.

As discussed previously, the policy orientation in financing LTC in China has shifted priority from offering social assistance to vulnerable elderly people to establishing social insurance (in particular in the form of public LTCI) that covers all elderly people enrolling in a public medical insurance scheme. The former is fully funded by fiscal revenues issued by the Department of Civil Affairs in local areas. This needs to be maintained to provide a minimum living standard to those who are in extreme economic difficulty. Meanwhile, subsidy levels should be adjusted according to local economic conditions. As for the public LTCI as social insurance, the Departments of Human Resources and Social Security in local areas should take on the responsibilities for benefit administration and management, while elder care provision is delivered with market-based approaches.

My conclusions demonstrate that China needs to establish a unified public LTCI system for both urban and rural residents. The collection of financial resources can be allocated by pooling funds contributed by individuals, companies and local government. These contributions can be used to subsidise private elderly people's daily care services, and some medical care services. In addition, social policy needs to allocate and distribute the social pooling of LTCI funds, to balance gaps in funding between different regions. Its administrative system can follow the German model, in other words, to incorporate the lessons learnt from public medical insurance management.

10.6 Strengths and Limitations of this Research in Terms of Methodology

As I review previous studies of funding models for elder care/LTC, there is an abundance of studies mainly focusing on the examination of LTC funding models, especially the public LTCI scheme. However, there is no study on the performance of

PPP funding models, nor one making use of quantitative methods to analysis the efficiency of elder care/LTC funding systems. Thus, the strength of this research in terms of methodology is based on the incorporation of case studies into the research design, and quantitative methods that analyse the efficiency of investments on elder care services.

One of the strengths of this research is the selection of four cases to analyse PPP projects on elder care in and around Wuhan, and also the discussion of their funding structure based on the interpretation of semi-structured interviews, as well as local documentary sources. These four PPP elder care projects are all typical cases and belong to four categories of the PPP funding model. Through in-depth interviews, I investigate the details of PPP contracts, basic information of the nursing institutions, operational situations before and after PPP reform, and any achievement or potential problem, etc. Semi-structure interviews are conducted with the interviewees from the government (e.g., the Hubei Department of Civil Affairs) and nursing institutions. Thus, the use of primary data from semi-structured interviews is more likely to fit local research contexts and enrich the database.

Another strength is establishing an elder care service index system by using a multiple-linear regression model to evaluate the efficiency of public financial input in the elder care industry. This is achieved by comparing efficiency differences concerning public expenditure on the construction of elder care services, and between elderly people in urban and rural areas of China. It also establishes input and output indicators that represent the efficiency of public expenditure on elder care services. By using the DEA method, the results of calculation demonstrate the efficiency in different regions of China, and thus suggest how one might adjust the results that are lower than expected.

However, there are two limitations that need to be pointed out:

One limitation of this research is the difficulty of accessing the initial materials collected via semi-structured interviews. Some interviewees, including government

officials and managers in private companies, might choose to say whatever they wish to say or even refuse to answer questions. For instance, when I asked some questions related to the details of PPP contracts or annual financial statements, they rejected these questions with an excuse of privacy. In two instances, I asked the same question to two interviewees but the answers were somehow different. For example, when I investigated the project company of Wuhan Welfare House/Xiehe Elderly Apartment, the answer concerning registered capital differs from the official document released by the government. But I did not ask for the original contract, and finally I chose to trust the project company and use the data they offered.

Another inevitable limitation is the reliability and accuracy of collective secondary data. In this thesis, all data for the statistical analysis in Chapter 8 is from the national statistical database (published by the National Statistical Bureau, the Ministry of Civil Affairs or other departments). All these data are collected from sample surveys conducted in local areas. In fact, local governments usually pay local officials to report the most optimistic and positive results if they do not wish further investigations and inspections from the central government. Indeed, reporting average performance is usually a good idea, as today's social research tends to regard official statistical data as revealed truth and this trust may not be merited.

10.7 Suggestions for Future Study

First of all, this research attempts to predict the potential demand for LTC and provision expense in the future, and proposes the need to establish public LTCI to promote the development of the elder care industry. However, at present, only 15 cities have launched a pilot LTCI scheme since June 2016 (most of them have been implemented since 2017), so there is currently no useful data or studies available to evaluate the effectiveness of these LTCI schemes. So, further research is needed to investigate the performance of public LTCI schemes in several cities, perhaps interviewing policymakers in relevant administrative departments, for example, the Department of

Human Resources and Social Security. I will also investigate any advantages and problems within these public LTCI schemes, and compare the different performances of public LTCI schemes in these cities.

Besides, due to the complex situation of the LTCI scheme in different regions of China, some factors, such as, the total population of disabled elderly people (including severely, moderately and mildly disabled), varied fees under the different types of LTCI schemes, and relations with the public medical insurance scheme, make it difficult to evaluate the efficiency of the public LTCI scheme as a single entity or to define an appropriate contribution rate of LTCI. So, further research might first need to quantify the relevant variables and analyse the operational efficiency of the public LTCI scheme, before proceeding to identify a way to calculate a reasonable contribution rate.

In addition, due to the unavailable access to the relevant data of general private investment on elder care services, this research uses public expenditure to analyse the efficiency of fund allocation in the elder care industry, to compare and analyse the development of elder care services in both urban and rural China, or different regions of China. Further research should consider possible ways of obtaining the relevant statistics related to private investment, and identify how to quantify these statistics so as to analyse the impact of private investment on the development of elder care.

Moreover, due to the limited length of the thesis, I only offer a review on the extensive literature related to different financing models for LTC in developed countries, but there is no detailed comparison and analysis of the LTCI models or problems of elder care provision and finance. In fact, the experiences and lessons of the developed countries is worthy of more extensive consideration, especially countries with a social insurance model, such as Germany, Japan, Netherlands, and Korea, etc. So, further research can be conducted to compare the financing system of LTC in developed countries, fully considering the issues related to institutional levels as well as to the different aspects of cultures, values, political systems and economic situations that might affect the construction of an elder care funding system. All these experiences will be useful

sources for the Chinese Government to consider in order to create a suitable funding model for elder care services.

Finally, in China today, there large numbers of the population who have already retired, or are approaching retirement, who will never be covered by any LTCI scheme and whose children cannot afford (or are too distant) to meet their parents' needs for elder care. This study has not addressed the impact of this transition, which poses its own difficulties. Therefore, further study is required to review existing LTCI plans, to investigate this group of elderly people and to analyse how public LTCI insurance might impact their demands for elder care.

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Appendix 1: Application of Data Envelopment Analysis

Data Envelopment Analysis (DEA) is proposed by the operational researcher Charnes (1978), and its basic principle is to evaluate, using a non-parametric method, economic system production frontier effectiveness. This method can be applied to evaluate the performance of multiple objective decision-making units for multiple inputs and multiple outputs, and the application process is shown in the following Figure 1:

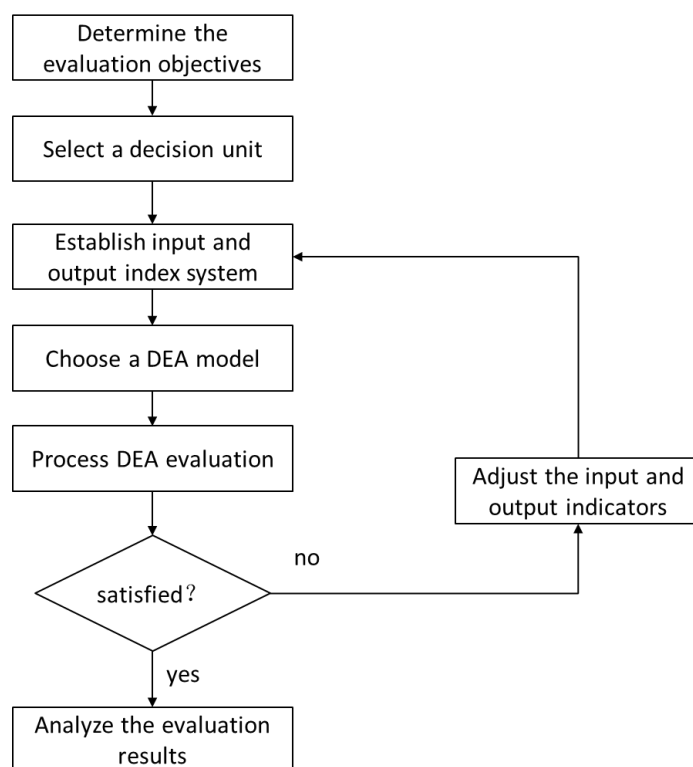


Figure 1 Application Process of DEA Method

In this research, we use BCC model (Banker, Charnes and Cooper, 1984) from the DEA method. The main advantage of the BCC model is to takes into consideration the variable return to scale in calculating efficiency, in other words, the scale of production varies in the long run in three interrelated performances: constant returns to scale,

decreasing returns to scale and increasing returns to scale. In BCC model, it is assumed that there are 'n' comparable decision making units, and each decision unit has 'm' types of inputs(X), which represents the production resources consumption of the decision unit, and there are also 's' types of output, which means the economic benefits of production after putting in production factors. So the construction of the BCC model is shown as below:

$$\min \theta - \varepsilon \left(\sum_{i=1}^m s_i^- + \sum_{r=1}^s s_r^+ \right)$$

$$s.t. \sum_{j=1}^n \lambda_j x_{ij} - \theta x_{ij} + s_i^- = 0 \quad i = 1, 2, \dots, m$$

$$\sum_{j=1}^n \lambda_j y_{rj} - s_r^+ = y_{rj} \quad r = 1, 2, \dots, s$$

$$\sum_{j=1}^n \lambda_j = 1$$

$$\lambda_j, s_i^-, s_r^+ \geq 0. \quad j = 1, 2, \dots, n; i = 1, 2, \dots, m$$

Where s^- , s^+ are the input slack and output variables, λ_j is the weight coefficient of the input and output indices, ε is the Non-Archimedes infinite small amount, θ is the DEA efficiency value of evaluated decision-making unit.

There are three types of model benefits under the BCC model:

- When $\theta = 1$ and $s^- = s^+ = 0$, the decision-making unit is DEA effective, and the output Y is optimal on the basis of input X in the economic system which consist of 'n' number decision making units.
- When $\theta = 1$ but $s^- \neq 0$ or $s^+ \neq 0$, it means the decision-making unit is DEA effective, which can also be explained by over-investment or insufficient-output.
- When $\theta < 1$, the DMU is DEA invalid.