Old-age pensions and family support in China: Bridging the two levels of intergenerational relationships

Jiaxin Liu

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Abstract

This thesis is motivated by the recent demographic and policy changes in China. It explores the two levels of intergenerational support relationships in China, that is, public pension provisions at the macro level and the intergenerational family support at the micro level. In 2009 and 2011, the Chinese government initiated two new pension schemes to expand the public pension coverage to the long-excluded older residents. Considering the well-recognised role of Chinese family in providing for its older members, there is surprisingly little research on how far such support networks and relationships have been changed by the new public pension arrangements.

Against this background, the present mixed-method study seeks to understand how older Chinese obtain old-age support and financial security via public pensions and/or family support. Based on unobserved effects models and Heckman two-step selection regression analyses of the China Health and Retirement Longitudinal Study, the quantitative part of this study examines the impact of public pensions on intergenerational support transfers. The qualitative part constitutes a thematic analysis of in-depth interviews with older Chinese in the Baoji area, where the new pensions were first initiated, to explore the support arrangements and negotiations. Results show that the new pensions fail to change the already-in-place intergenerational support arrangements as effectively as the established pension schemes. On one hand, the continuous family support arrangements reflect the familial agency in the mobilisation and redistribution of resources to meet the needs of its members. On the other hand, both generations are exercising individual and familial agencies to adjust to, reinterpret, and reshape their intergenerational relationships.

The study brings together older people's expectations and support behaviours, financial transfers and care support, as well as the solidarity and ambivalence experiences of both generations. It contributes to the analytical framework of considering family as a primary socio-economic actor by exploring and examining the mobilisation and transfers of different forms of resources in Chinese intergenerational families. The study also demonstrates the potential merits of mixed-method research design.

Declaration

I, Jiaxin Liu, declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where it states otherwise by reference or acknowledgment, the work presented is entirely my own.

Jiaxin Liu

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Part I

1. Introduction

This thesis is about the two levels of intergenerational support relationships in China, namely, the public pension arrangements at the macro and institutional level, and the cross-generational private support at the micro and familial level. In this chapter, I will briefly explain the motivations for the research. After that, I will then state the aims and significance of the presented mixed-method study. Finally, I will conclude the chapter with an outline of the thesis structure.

1.1 Ageing, family, and pensions

Population ageing emerges as one of the new social risks (Taylor-Gooby, 2004; Bonoli, 2005) bringing massive challenges not only to individuals and their families, but also to social welfare provisions in both established and emerging welfare states. By the end of 2020, the number of Chinese people aged 60 years and above had reached 264.02 million (National Bureau of Statistics of China, 2021). The older generation (aged 60 and above, as specified in the *Main Data of the Seventh National Population Census*) now accounts for 18.70% of China's total population, increasing by 5.44% in the past decade (National Bureau of Statistics of China, 2021). Meanwhile, the working-age generations (15 to 59 years old) have experienced a decline from 70.41% to 63.35% of the population (National Bureau of Statistics of China, 2021). Similar to many societies with pay-as-you-go (PAYG) public pension arrangements, where pension benefits paid to current recipients are financed by contributions made by current workers/taxpayers (e.g, see Walker, 2005), such demographic changes are challenging the sustainability, adequacy, and coverage of China's public pension system.

The changing demographic structure in China is also partly reflected at the family level by the shifts in the (multi-generational) family structure. With the first baby-boomer generation (those who were born around the 1950s) entering their old age, and the first only-child generation (those who were born around the 1980s) entering their middle age, the mainstream family structure in China becomes the "4-2-1/+" multi-generational family (e.g., see Peng, 2011; Cai and Du, 2015; Su, Hu and Peng, 2017) . The "4-2-1/+" family, as suggested by its name, consists of four older parents, a working-age

couple, and one or more young children¹. As a result, Chinese families are under unprecedented pressure to continue its primary role in protecting and support its older members.

The primary role of Chinese families in old-age support is not only shaped by cultural and social norms but also institutionalised by social policy arrangements. On one hand, one of the core values of Confucian culture and Chinese filial piety emphasises that one should obey, respect, and most importantly, provide for their older parents. On the other hand, failure to provide support for older parents is not only considered morally unacceptable but also a breach of legal obligation and, in severe cases, can incur legal punishments. Under such old-age support arrangement, family is the immediate source of support whilst the state is no more than "a distant supporter" (Walker and Wong, 2005, p.78).

This arrangement had been in place for decades until the recent expansion of public pension coverage beginning in 2009. Before 2009, the only public pension schemes in effect were employment-based pension schemes, which cover employees in public sectors (the Government and Institution Pension, GIP) and enterprises (the Enterprise Employee Basic Pension, EEBP). This meant that almost the entire rural population and many urban residents were excluded from public pension protection. In 2009 and 2011 respectively, the Chinese government started to expand the public pension coverage to rural and urban non-employed residents by introducing two new pension schemes, namely, the New Rural Social Pension (NRSP) and the Urban Resident Social Pension (URSP). By the end of 2020, the number of recipients of the two new pension schemes had reached 160.68 million (Ministry of Human Resources and Social Security of China, 2021).

Given the rapid changes in demographic and family structure as well as the recent policy development, there is surprisingly a lack of updated research on the roles and process of intergenerational family support under the new public pension arrangements. For instance, previous literature has established that older Chinese, especially those who were excluded from the formal

¹ The 'One-Child Policy' was in effect from 1980s and ended in 2015 when it was replaced by the 'Two-Child Policy' which allows couples to have up to two children. By the time of the writing-up of the thesis, the Chinese government has further relaxed the birth control policies and allows and encourages couples to have up to three children, which is also known as the 'Three-Child Policy'.

pension protections, were financially dependent on family support before the new pensions were introduced (e.g., see Xu, 2001; Walker and Wong, 2005; Saunders, 2006; Guo, Chen and Perez, 2019). However, little is known to what extent the new public pensions provide an alternative way for older people to obtain financial security, or to what extent the Chinese family continues to play the primary role. In recent decades, there have been ongoing debates on the interactions between the public transfers and private transfers in different welfare regimes (e.g., see Becker, 1974; Cox, 1987; Kohli, 1999; Reil-Held, 2006; Deindl and Brandt, 2011; Nikolov and Adelman, 2019; Peng et al., 2021). These have shed limited light on the intergenerational dynamics in the Chinese context due to the neglect of the symbolic value of family support and/or the potential links between different forms of support. Furthermore, despite the complexity of such interactions, there remains a lack of qualitative research on the dynamics of intergenerational support under the new public pension arrangements, with few exceptions (e.g., see Zhong and Li, 2017; Eklund, 2018; Qi, 2018; Huang, 2018; Gu, 2021). These studies, however, are limited in that they neglect the potential role of public pension. This results in an inadequate understanding of how older Chinese and their families arrange, adjust, and/or negotiate for intergenerational support under the new demographic and policy situations.

Inspired and motivated by these gaps in the literature, the presented thesis was developed. The next section will specify the research aims of the study and briefly demonstrate the significance of the thesis.

1.2 The interactions of the two-level intergenerational support

The overall aim of the presented thesis is to develop a better understanding of the ways in which older Chinese obtain and arrange old-age support via intergenerational family support networks and/or formal public pensions. The focus of the study is on the analyses of the potential interactions between the macro-level intergenerational support (i.e., public pension arrangements) and the micro-level intergenerational support (i.e., cross-generational family support). Specifically, the thesis seeks to shed light on the following aspects of such interactions.

The first specific research aim is to evaluate older Chinese's financial dependence on intergenerational family support, and to investigate how such dependence is influenced by current

public pension arrangements. It aims to understand the impact of public pensions on older Chinese's financial dependence on family support, from both subjective (older people's expectation of relying on family support) and objective (the proportion of actual private transfers to older people's total incomes) aspects. Moreover, considering the long-standing urban-rural divide in social and economic development, the paper attempts to capture the potential urban-rural difference in the impact of public pensions. In other words, it also aims to examine if urban and rural older people are affected differently by the public pension arrangements.

The second research aim is to examine the interactions between public pensions and intergenerational family support, also known as the "crowding-out/in" effects (more discussions on the "crowding-out/in" effects can be found in Chapter 3.4.2). The study aims to advance the understanding of the debate by viewing older people as both recipients and providers of intergenerational private transfers and incorporating both financial private transfers and care support into analysis. It seeks to estimate the changes in the incidence and amount of intergenerational family support caused by public pensions.

The third research aim is to explore in more depth how older Chinese and their families arrange and negotiate for intergenerational family support under the current pension system. The purpose of this enquiry is to gain knowledge of the process and decision-makings of intergenerational support arrangement from older people's lived experience, perceptions, and interpretations. By giving voice to older people, the thesis aims to explore the interactions between agency and structure in the matter of intergenerational relationships.

The thesis is based on a mixed-method research design underpinned by critical realism (see Chapter 4.3). Both quantitative and qualitative data collection and analysis techniques are applied to develop a better understanding of the two-level intergenerational support. The quantitative analysis (the first and second research aims, as stated above) is mainly derived from a range of regression model estimations of three waves of the China Health and Retirement Longitudinal Study (CHARLS, 2011-2015). The qualitative analysis (the third research aim, as stated above) is drawn from a thematic analysis of indepth semi-structured interviews with 14 older Chinese from Baoji, where the new pensions (NRSP) was first initiated.

The study aims to shed new light on the understanding of the interactions between public pensions and intergenerational family support in China. It contributes to the empirical knowledge of the newly introduced public pensions and their impact on family support arrangements. The thesis is among the first few studies that apply a mixed-method approach to examine and explore intergenerational relations, contributing to a growing body of literature that challenges the methodological dichotomy. By focusing on the interactions between public pensions and family support, the thesis attempts to bridge these two levels of intergenerational analysis. The thesis also contributes to the analytical and theoretical framework of viewing family as a socio-economic actor (Papadopoulos and Roumpakis, 2017, 2019) by examining the mobilisation and redistribution of resources via intergenerational support network in Chinese families.

Next the chapter goes on to present the roadmap of the thesis.

1.3 Structure of the thesis

This thesis is composed of four main parts and takes the form of eleven chapters in total.

Part I (Chapter 1, 2, 3, and 4) aims to establish the contextual, theoretical, and methodological perspectives of the thesis. Specifically, Chapter 2 provides an overview of the demographic, cultural, and policy background of the study. It contextualises the intergenerational support research in a society with an ageing population, changing cultural norms, and developing policy arrangements. It also offers an insight in the welfare mix by portraying the roles of the state and the family in welfare provisions.

Chapter 3 considers the existing literature on old-age risks and disadvantages, intergenerational relationships, family, and social policy to inform the study and identify possible research gaps. It justifies the role of social policy in protecting older people by discussing the agency-structure approach to old-age poverty and presenting evidence on the multidimensional hardship related to (the lack of) social policy arrangements. Chapter 3 on one hand focuses on the theoretical development and empirical evidence on intergenerational solidarity and ambivalence models. On the other hand, by engaging with the ongoing debates on the "crowding-out/in" effects, it reviews the literature that

bridges the analysis of two levels of intergenerational support. From the literature review, family emerges as an important socio-economic actor in the understanding of the two levels of intergenerational relationships.

Contextualised by the previous chapters, Chapter 4 raises three main research questions, which are:

- 1) What is the impact of public pensions on family dependency among Chinese older people?
- 2) Does public pension provision crowd out family support?
- *3)* How do Chinese older people arrange and negotiate for family support in the context of changing family structure and new public pension arrangements?

To answer the above research questions, Chapter 4 proposes a mixed-method research design based on the epistemological and ontological positions of critical realism. It provides the rationale for applying quantitative data and analytical techniques to answer the first two main research questions as well as qualitative data and analytical approaches to answering the third main research question.

Part II (Chapter 5, 6, and 7) is an elaboration and presentation of the proposed quantitative analysis of the study. Chapter 5 is concerned with the data and regression models used for answering the first and second research questions. It first presents a series of research hypotheses derived from the research questions. It then moves to introduce the nationwide longitudinal datasets and the operationalisation of the key concepts, measures, and variables used in this study. Chapter 5 also includes and specifies the analytical regression models.

Chapter 6 reports and discusses the data analysis results for the first research question on family dependence. It highlights the impact of public pensions on older people's expectations of relying on family support as well as the proportion of actual private transfers they received to their total incomes. The results show that the new pensions (i.e., NRSP and URSP) fail to reduce older recipients' financial dependence as much as the existing employees' pension schemes (i.e., GIP and EEBP) and that urban and rural older recipients are affected differently.

Chapter 7 continues to examine the impact of public pensions on a range of intergenerational family

support. It expands the "crowding-out/in" debates by including both upward child-to-parent and downward parent-to-child private transfers. It also attempts to incorporate the analysis of intergenerational care support by examining the grandparental childcare arrangement. The results indicate that the "crowding-out" and "crowding-in" effects co-exist in the interactions between public pensions and intergenerational support.

Part III (Chapter 8 and 9) moves to the qualitative analysis of the study. Chapter 8 focuses on the qualitative data collection and analytical techniques. It describes the methods of conducing semistructured in-depth interviews with older Chinese in Baoji and provides detailed information on samples, recruitments, and the interviewing process. It also explains the advantages of using thematic analysis as the data process method. Chapter 8 concludes with a reflection on potential ethical considerations in the qualitative part of this study.

Chapter 9 presents and discusses the findings from the interviews and thematic analysis. It first focuses on the patterns of intergenerational support arrangement by highlighting the different life stages, genders, hukou types, and pension schemes. It then explores and interprets the attitudes, strategies, and decision-making process of intergenerational support within the family sphere. It also delves into how older people and their family react to factors outside the family sphere such as public pensions. Chapter 9 concludes with a discussion on the two-level of agencies in the arrangement and negotiation of intergenerational support.

Part IV consists of the two final chapters (Chapter 10 and 11). Chapter 10 brings together the findings from three analytical chapters and discusses how these chapters answer the research questions. It also provides a discussion on the potential empirical, methodological, analytical, and theoretical contributions to the knowledges made by the presented thesis. The thesis concludes with Chapter 11, which briefly reviews the thesis, discusses the limitations of the study, and attempts to shed new light on future research directions.

2. Old-age security in the ageing China

2.1 Introduction

Population ageing is a world-wide challenge faced by many developed welfare states and emerging economies. It is also seen as one of the major new social risks that arise from economic and social changes in the process of transition to a post-industrial society (Taylor-Gooby, 2004). If tackling old social risks such as poverty and unemployment can be perceived as the intrinsic driving force of the emergence and development of welfare states, then the new social risks might be viewed as a critical opportunity for welfare reforms. Among all social policy responses to population ageing, pension reforms in welfare states, which are often designed to achieve either adequacy and/or sustainability (OECD, 2015, 2019), have received wide attention. Policy priority of pension reforms varies across welfare states, which is partly determined by its social, economic, and political context. Moreover, cultural context is also vital to understand pension reforms as it can induce path dependency in the process of institutional reforms (Alesina and Giuliano, 2015), where historical-institutional factors play an important role in shaping and/constraining social policy decisions (Hudson, Jo and Keung, 2014).

In this light, this chapter aims to contextualise the presented study by portraying the demographic, cultural, and policy background. It moves beyond a descriptive account but attempts to disentangle the complex issue of old-age security in the ageing China by examining each abovementioned aspect. It first reviews the demographic changes in China and highlights the challenges to older individuals, families, and society. Then the chapter explains the role of Chinese culture in shaping social norms, behaviours, motives and expectations, as well as its implications on old-age support arrangements in China. The chapter, next, briefly summarises the development of China's key social policies in the sphere of old-age security, focusing on the evolution of pension system and old-age care legislations. It concludes with a discussion of the welfare mix in China, portraying the roles of the state, family, market, and community in protecting older Chinese. Altogether, the chapter demonstrates the complexity of old-age security in China by highlighting the increasing pressures on and demands for public support, the institutionalised primary role of family support in social policy arrangements, and

the enduring and far-reaching impacts of Confucian culture on the norms, values, and behaviours among Chinese families.

2.2 Demographic context

2.2.1 The ageing population in China

Population ageing is perceived as more of a social and economic challenge (OECD, 2013) than simply a demographic phenomenon. The ageing of a population is different from but related to the ageing of individuals, which refers to a natural process of physical and functional changes accumulated in the body over time. Reflected in the societal and financial aspects, the ageing of individuals may lead to a decrease in individuals' capability to undertake paid employment, participate in social activities, and perform self-maintenance in daily activities. In particular, the loss of income sources and lack of social participation when reaching the age of retirement are among the crucial old-age related social disadvantages (Alesina and Giuliano, 2015), which will be further discussed in Chapter 3.2.

The ageing of individuals happens naturally, whereas the ageing of a population refers to the size, proportion, and condition of older people as a (heterogeneous) group within a given society. A commonly accepted indicator that has been used to measure the degree of population ageing is the demographic *old-age dependency ratio*², defined as the number of older people (aged 65 and above) per 100 working-age people (aged between 20 and 64). Nearly all Organisation for Economic Co-operation and Development (hereafter OECD) countries have experienced an increase in the old-age dependency ratio over the past half-century (OECD, 2019), while some countries and societies are faced with greater challenges than others. For example, Japan is known for its high old-age dependency ratio, which increased from 13 in 1975 to 53 in 2019, and is expected to reach 80 in 2050 (meaning by then for every 100 working-age people there would be 80 older people) (OECD, 2019).

² Also known as demographic old-age to working-age ratio.

Compared with OECD countries, the old-age dependency ratio in China seems moderate. However, given China's large population base³, as well as the rapid growth of the number of the population who are currently entering old age, population ageing in China has attracted extensive attention from academics and beyond (Chomik and Piggott, 2015; Ezeh, Bongaarts and Mberu, 2012; Su, Hu and Peng, 2017; Cai and Cheng, 2014; Du and Yang, 2014). By the end of 2020, the number of Chinese people aged 65 years old and above had reached 190.63 million, which led to an increase in the proportion of older people to the total population from 8.87% to 13.50% since 2010⁴ (National Bureau of Statistics of China, 2021). Meanwhile, the proportion of people aged between 15 and 59 years old had dropped from 70.14% to 63.35% over the past decade. Moreover, the consistently low fertility rate even after the relaxation of China's One-Child Policy (Peng, 2021) means that population ageing in China is a long-term challenge with continuous impacts on near future. For instance, it is projected that the number of older population (aged 65 years old and above) will reach 240 million in 2030 and 365 million in 2050 (Peng, 2021).

Commonly acknowledged contributing factors to population ageing include the extended life expectancy due to enhanced medical technologies and better healthcare services, as well as constantly low fertility rates in many developed welfare states and emerging economies (OECD, 2013). Although the extended (healthy) life expectancy allows people to engage in social production for a longer period, and the low fertility rates might have reduced the costs of childcare, together they have been perceived as generating a demographic dividend and even contributing to economic growth⁵ at the early stage in such demographic shifts (Chomik and Piggott, 2015). Nevertheless, a low fertility rate also implies that the size of the population who will enter the labour market in a foreseeable

³ China's total population had reached 1.44 billion by the end of 2020, as shown in the Seventh National Census results (National Bureau of Statistics of China, 2021).

⁴ By the end of 2020, the number of Chinese people aged 60 years old and above had reached 264.02 million, accounting for 18.70% of the total population, whereas only 13.26% of the total population aged 60 and above in 2010 (National Bureau of Statistics of China, 2021).

⁵ Researchers believe that the high economic growth rates in East Asia during the 1970s to 1990s, which is also known as the "East Asian miracle", can be partly accounted for by the effects of demographic dividend (Lee, Mason and Park, 2011; Bloom and Williamson, 1998; Chomik and Piggott, 2015).

future is shrinking, which marks the long-term impact of such demographic changes. In this sense, when it comes to the current stage, population ageing brings massive socioeconomic challenges not just to welfare provision but also to individuals and their families.

2.2.2 Challenges to individuals, families, and the society

Welfare states with relatively generous and inclusive old-age pension schemes, in particular with PAYG pension scheme designs, are seeking to reform pension policies to cope with the ageing population and the financial pressures caused by it (Ridge and Wright, 2008). To maintain financial sustainability, prevalent responses include a shift from public-funded pension schemes towards private pension schemes (Ridge and Wright, 2008; Van Vliet et al., 2012). Other pension reforms in well-developed welfare states include tightening the requirements for public pension eligibility and postponing retirement ages or encouraging flexible retirement ages (OECD, 2013; Lain and Vickerstaff, 2014).

Whereas for countries where institutionalised old-age public pensions are still absent or incomprehensive, the primary pressure of population ageing comes from the demand for meeting the needs of an increasing number of older people and the assurance and maintenance of a standard of living (Cai and Cheng, 2014). In many middle- or less-developed countries such as China, the challenges of population ageing is often referred to as "getting old before getting rich", which puts emphasis on economic growth (e.g. Ziegenhain, 2021). However, it is argued that, instead of focusing merely on the financial aspect, the real concern lies in the lack of preparation of social policy arrangements, in particular, in areas of public pensions and old-age care (Peng, 2011; Su, Hu and Peng, 2017; Freedman and Yanxia, 2016). In this sense, some scholars argue for a better expression of the challenges brought about by the ageing population, namely, "getting old before getting *ready*" (e.g., see Li, 2007, p.52). The increasing number of older people, in both absolute terms (i.e., the size of older population) and relative terms (e.g., the old-age dependency ratio), is challenging the existing old-age policy arrangements with great pressures on its sustainability and adequacy.

In addition to financial pressures, the ageing of population is also closely associated with the generational equity debate, in particular under the PAYG pension arrangement (Hills, 1992;

Williamson, McNamara and Howling, 2003; Lau, 2013). The core assumption and concern is that each generation should be responsible for its economic security and that the improvement of older people's economic situation via the redistribution of social resources is at least partially at the expense of the wellbeing of other generations (Williamson, McNamara and Howling, 2003). It is therefore concerned that the variations in cohort sizes and shifts in relevant policies might lead to inequalities among generations (Izuhara, 2010). Those concerns frame a conflict of interests between older people and the working-age population and leads to, among others, an argument for an increased importance of individual responsibility and a proposal of increasing the privatisation of pensions as opposed to enlarging the institutionalised protection for older people (Williamson, McNamara and Howling, 2003).

The challenges of population ageing in China is characterised by the heavy reliance on family support, large regional disparities in socio-economic development, and massive rural-to-urban migrating workers (for example, see Peng, 2011; Zhao, Smith and Strauss, 2014; Cai and Du, 2015; Su, Hu and Peng, 2017). Similar to other East Asian countries (e.g. South Korea), the Chinese family has long been playing an important role in providing support and protecting its members from social risks such as poverty and unemployment. For instance, family takes the primary responsibility of caring and supporting for older people and children. The profoundly rooted family responsibility is on one hand normalised by the Confucian culture and Chinese filial piety (e.g., see Li and Shin, 2013). On the other, it has also been institutionalised by China's social policy arrangements. Both aspects will be discussed later at length.

Alongside population ageing, the past three decades have witnessed shrinking family sizes and changing family structures. Starting from the 1980s, China initiated the 'One-Child' policy to slow down the then rapid population growth. The policy required the majority of Chinese couples to have only one child, otherwise, they would be charged with a large amount of fine, which is called "Social Support Fees" (*she hui fu yang fei*). Contrary to what is implied by its official title, the society or the state does little to support these cohorts. Since the first decade of this century, the only-child generation starts to enter their middle age, and the baby-boomer generations (born in the 1950s) starts to retire, Chinese families, especially working-age couples, are faced with greater pressures to support

their older parents. Adding to that is the recent abolishment of the One-Child Policy (2016), which is replaced by an encouragement to have more children. The mainstream family structure, therefore, becomes "4-2-1/+": four older parents, a working-age couple, and one or more young child(ren). It shows that the ageing of population happens not only at the society level but also at the family level, indicating that the function and ability of family to undertake traditional responsibilities are under great challenges (Su, Hu and Peng, 2017).

The spatial disparity of population ageing includes the differences in the ageing process and outcomes between urban areas and rural areas, as well as the regional demographic imbalance among provinces. Many younger rural residents have been leaving their hometowns for urban areas to seek better employment opportunities. The implications are two-fold. First, rural areas are faced with even greater ageing problems (Queisser, Reilly and Hu, 2016; Su, Hu and Peng, 2017) and so are less-developed urban areas. Developed urban areas are less likely to suffer from population ageing as the immigration of young labour from rural and less-developed urban areas brings about a regional demographic dividend (Su, Hu and Peng, 2017), which further contributes to the imbalance in regional socio-economic development. From a political economy perspective, this imbalanced development has important repercussions for local labour markets and pension policy and runs the risk of perpetuating this rural-to-urban migration pattern. Second, the changes in family structures and especially in the geographic proximity between generations of migrant families have posed challenges to the existing family support arrangement (Zhao, Smith and Strauss, 2014). It remains to be explored how families are adjusting their strategies to the changing demographic context in order to continue protecting the older members.

Next, this chapter continues to examine the implications of the Chinese culture on family support arrangements as well as the expectations and values that underpin these practices and strategies.

2.3 Cultural context

The following sections will look at the Chinese culture and how it shapes the role of family in providing for older people. At the macro level, the Chinese culture, in particular Confucianism, has put family at a core position and therefore is featured with family-centred welfare arrangements for

older people. At the micro-level, Chinese filial piety has been providing codes of conduct for the interactions between the older and the younger within the family sphere. Faced with new structural challenges, such as migration of the working-age generations and the shrinking size of families, older people and their offspring are renegotiating the intergenerational contracts, developing new familial strategies, or even reshaping the shared values and beliefs. The discussion here is aimed at setting the cultural context for this study on the formal and informal old-age support arrangement in China, in particular, to the audience who are more familiar with the "Western" welfare arrangements and intergenerational relations.

2.3.1 The long-standing and far-reaching influence of Chinese culture

Culture is difficult to define, observe, or measure in a direct manner, and contributing to that is the vagueness and fluidity of its connotation. Empirically, culture might be defined as a combination of values and beliefs that are collectively created, shared, and transmitted by certain groups from generation to generation (for example, see Guiso, Sapienza and Zingales, 2006; Alesina and Giuliano, 2015). Specifically, some scholars argue that culture involves the beliefs about whom to trust (Guiso, Sapienza and Zingales, 2006) and the consequences of one's actions (Alesina and Giuliano, 2015). Others view culture as more of primitive values and preference (Akerlof and Kranton, 2000 as cited in Alesina and Giuliano, 2015) or common identity based on social relations and beliefs (Neuman, 2011). Although individuals develop new understandings and interpretations of certain culture based on their lived experience, the beliefs and values derived from culture are less an option but more of a "given" (Becker, 1996, p.16). This indicates that culture has profound impact on individuals. For instance, the beliefs, values, expectations, and preferences derived from cultures have extensive and enduring impacts on individuals by shaping their decisions and behaviours.

On top of that, culture is closely related to institutions. Institutions refer to a set of socially-generated constraints on human interactions and behaviours, which comprises both formal and informal aspects (North, 1991). The links between culture and informal aspects of institutional constraints, such as norms and convention, are somewhat more straightforward. The links between culture and formal aspects of institutions, for instance, can be found in financial and legal areas such as the decisions

about whom to trust with money and the beliefs on rights, rules, and power (Alesina and Giuliano, 2015). In particular, given its enduring and continuing impacts, culture, as one of the core components of institution, may induce path dependency by play an important role in shaping social policy development or hindering social reforms (Pierson, 1994; Alesina and Giuliano, 2015). For instance, societies based on strong familial ties and values tend to have a higher level of informal provision, reflected as encouraging good conduct within family or kin, having a lower level of generalised trust and civic sense, and generating greater home production which is mostly done by women and older people (Alesina and Giuliano, 2015).

Culture has also been frequently referred to as one of the key parameters of the classification of welfare regimes. In the ongoing debate about the East Asian welfare regime, the primary role of family in providing for its members has received wide consensus. Some researchers, represented by Catherine Jones Finer (1990, 1993), have attempted to use Confucian culture as an explanatory tool to understand the uniqueness of social policy arrangements in these societies. In her arguments, Jones (1990, 1993) points out that family or the household is the key to social governance and development. In Confucian culture, individuals exist in the unique combination of hierarchically structured groups, follow a certain order, fulfil their obligations, and behave accordingly based on their positions (Jones, 1993; Holroyd, 2001). Therefore, family, rather than individual, is seen as a key unit of society or an epitome of interpersonal relationships and social order (Jones, 1990, 1993; Walker and Wong, 2005). By looking at the expected characteristics of an ideal family in Confucian culture — hierarchical, orderly, obedient, solidary, and harmonious - we can learn what constitutes a good society: "... the good society is seen as resting not on individuals but on interlocking groups, not on equal rights but on ascending orders of duty and obligation, not on 'constructive conflict'... but on the maintenance of stability and harmony at all costs" (Jones, 1990, p.450). The governance of society is therefore embodied in the governance of family, and the solidarity and harmony within families contributes to the stability of society and economic growth.

One of the approaches to maintain solidarity and harmony within the Chinese family is the fulfilment of duties and obligations (but less about the fulfilment of one's rights) associated to one's roles that are underlined by Confucian culture (Chiu and Wong, 2005). Specifically, in terms of family roles, the

obligations include upholding family honour and taking care of vulnerable family members. To achieve that, resources are shared and transferred in the culturally specified manner within Chinese families — the younger generation is to be nurtured and protected for the expectation of bringing family glory and continuing family clan, and the older generation is to be respected, obeyed, supported and cared in line with the tradition of filial piety and familial hierarchical (Jones, 1990). The primary responsibility of protecting the vulnerable from poverty and other risks, therefore, falls onto the family rather than the state as often seen in mature welfare states. For instance, the individual experience of poverty by older people is perceived as more of a failure of Chinese family than a failure of society or government policies. In this sense, such welfare arrangement has also been labelled as "familistic residualism" (Chiu and Wong, 2005) or "informal care regime" (Abrahamson, 2011) for its minimalised formal public protection and the crucial role of informal private support networks.

The primary role of informal support required by the Confucian culture has been institutionalised in social policy (Abrahamson, 2017), and simultaneously, the policy arrangements designed to mobilise familial resources to meet the social needs of its members have been legitimised by the Confucian values and beliefs (Chiu and Wong, 2005, p.88). For instance, it is not only a moral obligation for adult children to look after and provide for their older parents but also a legal obligation that has been written in law for decades (see Chapter 2.4). To put it in other words, refusing to support one's older parent(s) may bring about both moral condemn and legal punishment. The feature of "familistic residualism" can also be seen in the previous Five Guarantee social assistance scheme⁶. To be eligible for the Five Guarantee benefits in rural areas, individuals were required to prove that they had no family members who were capable of providing support. Only after then the government would provide limited subsides in a residual form.

To sum up, family becomes the only resort available for many older people while the state acts as a "distant supporter" (Chiu and Wong, 2005, p.78), and the private market, including private pension

⁶ The Five Guarantee, or "*wubao*", is a social assistance scheme in rural China that supports the benefits recipients with foods, clothing, fuel, education, and funeral. The Five Guarantee scheme has now been replaced by the Rural Minimum Living Standard (rural *dibao*) scheme. See Chapter 2.4.4 for more information.

schemes and paid care provision, is an alternative only for the better-off (Abrahamson, 2017). Although the recent decades have seen an effort of the Chinese government to encourage the development of community-based social services, these services are provided not for the purpose of replacing the function of family, but, instead, to preserve and strengthen it (Chiu and Wong, 2005). For instance, the professional team and facilities are established in the community to better meet the diverse needs of older people who are based at their family. In this sense, the community is used to restore the role of family and therefore further encourage informal support (Jones, 1993; Chiu and Wong, 2005).

2.3.2 Chinese filial piety: code of conduct for both generations

This section will provide a closer look at how culture shapes intergenerational relationships in Chinese families. Chapter 2.3.1 highlights that the Confucian culture sees family as the key unit of the society, and the interpersonal relations and social orders can be epitomised by the blood-tie-based group. But what cultural aspects serve as the codes of conduct for familial interactions especially across generations? This leads to the notion of Chinese filial piety, which constitutes one of the centre components of Confucian culture.

The Chinese filial piety has two fundamental dimensions, the reciprocal aspect and the authoritarian aspect (Yeh et al., 2013). The reciprocal aspect of filial piety refers to a horizontal and equal relationship between two individuals, and it is based on the close and intimate interaction and mutual affection between parents and children over a long time (Yeh et al., 2013). The authoritarian aspect of filial piety, on the other hand, refers to a vertical and hierarchical relationship between the older and the younger, and it is based on the latter's normative reaction to the former's absolute authority endowed by age seniority (Yeh et al., 2013). The reciprocal component of intergenerational relations is less unique as it is shared by both Eastern and Western societies and takes the form of social exchange and mutual support among family members. However, the authoritarian element of Chinese filial piety marks the uniqueness of the interactions between two generations in China and other East Asian societies (Croll, 2006; Yeh et al., 2013). The younger generations are required to be subordinated to the older who own the normative authority, and to behave in the way to satisfy the demands and expectations of their parents so that collective identification can be obtained (Croll,

2006; Yeh et al., 2013). The asymmetric relationship is developed at a very early stage of the interactions between two generations. As soon as the older take on their role of parents, they are expecting their children to be unconditionally obedient. That obedience, along with the fulfilment of continuous care obligations, constitutes the most important elements of the norms of filial piety.

Apart from filial piety, there is also a set of related but slightly different values and beliefs that have been shaping the intergenerational interactions among family members, for instance, the Chinese clan culture and its underpinning patriarchy. A clan is featured with a shared family name in explicit terms and common property and resources in implicit terms (Zhang, 2019). Besides, the Chinese clan culture also contains patriarchy in power relationships, patrilineality in family structure, and patrilocality in living arrangements (e.g., see Zhang, 2019; Shi, 2009). For instance, in line with the authoritarian aspect of filial piety, the clan culture allows the older generation to exercise domination over the younger, and simultaneously requires the younger generation to show respect, loyalty, and take care of the older (Zhang, 2019). In terms of intergenerational support relationships, the family property and resources will be transferred to offspring, specifically to sons (patrilinear support network). In return, sons are expected to remain co-residing with their older parents after marriage (patrilocal living arrangement) and take the main responsibility of taking care of older parents (Zhang, 2019). In contrast, the filial obligations of daughters will be transferred from her natal family to her parents-in-law upon marriage. In this sense, filial piety is largely gendered and can be seen as a "male virtue" (Shi, 2009, p.349). Another implication of the Chinese clan culture is that the purpose of having children (especially sons) is to prepare for old age (Zhang, 2019). It on one hand reflects the long-term reciprocity in intergenerational support arrangements. On the other, the downward transfers of resources to offspring can be seen as an investment to achieve or secure family reputation and longlasting prosperity.

The process by which ordinary people came to share the Confucian values and practices, especially in the sphere of family-related practices and attitudes, are termed "Confucianization" (Ebrey, 1991, p.45). Based on historical analysis, Ebrey points out that the process was not simply trickle-down from the elite, but also affected by other particularly important agents, namely, "popular religion, the state, the educated elite, and books" (Ebrey, 1991, p.77). Through family teaching and parenting, the

values and beliefs have been passed down from generation to generation. In addition to that, the notions of filial piety, respect and obedience, and family solidarity have also been strengthened by laws, schools and media. Via these approaches, individuals have gradually developed a sense of obligation to support their older parents (Holroyd, 2001; Teo et al., 2003). Along with strong emotional affections derived from intimate interactions, the needs for the fulfilment of such culturally specified obligations have brought about mutual support and dependency between two generations.

In recent decades, there have been continuous concerns that the traditional filial piety has been eroded in the process of modernisation, and that it leads to a weakening intergenerational relations and even a reversed direction of resources flow (for example, see Caldwell 1976). For instance, potential intergenerational conflicts might arise when individuals and their families are exposed to urbanisation, migration, and demographic transition. The market economy also exposes the collectivism-orientated Chinese society to individualism, which emphasise on individual responsibility and self-reliance. Nevertheless, the intergenerational support relationships are not necessarily eroded, as empirical evidence has shown that instead of a reversion, the resources flow in both directions, indicating a renegotiated and reinterpreted intergenerational relationship (Croll, 2006). Moreover, it is also shown that the older generations have been lengthening the investment of resources to the adulthood of their children, in an exchange for more direct, short-term return, that is, old age care and support (Croll, 2006). Such investment includes assistance in house chores, taking care of grandchildren, and providing housing or housing-related financial support (for example, see Croll, 2006; Izuhara and Forrest, 2013b; Li and Shin, 2013). Rather than taking it for granted, the younger generations recognise this support as valuable family resources, and return with gratitude and support towards their older parents (Croll, 2006). It demonstrates the deeply rooted cultural value and belief that family should protect its members by mobilising different forms of resources.

Next, this chapter goes on to review the development of China's social policy arrangements in the areas of old-age support.

2.4 Policy context

Old-age pension policy is among the key policy areas that focus on old-age support arrangements.

This section first outlines the development of China's public pension system from the establishment of the People's Republic of China to the latest reform on public pension coverage. It then reviews the achievements and limitations of the current public pension arrangements. Moreover, to provide a full picture, this section also briefly discusses China's old-age care related policy and legislation in recent years, as well as related social assistance programmes.

2.4.1 Pension reforms

In general, the development of public pension arrangements in China can be divided into three phases. *The first phase* of China's public pension system existed between the 1950s and 1990s. After the establishment of the People's Republic of China in 1949, a framework for "cradle-to-grave" benefits was developed. But such benefit provision system was only for urban employees of state-owned enterprises (SOEs) or large collectively owned enterprises, as well as employees in public institutions and sectors such as governments, universities, and hospitals (Queisser, Reilly and Hu, 2016). The system was on a pay-as-you-go basis and was funded exclusively by employers, also known as "work unit" (*danwei*), with a contribution rate of 3% of total wage payments. Specifically, 30% of the pension funds went to the National Trade Union and 70% remained within the trade unions of each *daiwei*. As rural residents were excluded from participating in the abovementioned employment, they were, therefore, excluded from the public pension system at the very beginning.

The transition from a planned economy to a market economy since the 1990s led to a shrinking size of public sectors and the emergence of private and informal sectors. Due to the fundamental changes in economic ownership, the previously established public pension plan for workers in the public sector no longer aligned with the new economic circumstances. Therefore, *the second phase* of pension reform arose at that moment. In the late 1990s and a decade afterwards, to facilitate the economic reform, and in particular, to adapt to the restructuring of SOEs, the previous public pension arrangement was reformed, and the coverage was extended to employees in private sectors. A new public pension (EEBP). Meanwhile, civil servants and employees in public sectors experienced few changes in their pension arrangements, which is named as Government and Institution Pension (GIP) to distinguish form each other. A dual-track public pension system for

employees of public sectors and employees of private sectors, then, came into formation.

The second phase also marks a clearer boundary in pension funding responsibility between enterprises and the state, as previously in the planned economy the state was behind the enterprises (Lu, 2018). In this phase, the state took a step back and ensured that the employers and employees contribute jointly to pension funds. In the 1990s, according to the Decision of the Central Committee of the Communist Party of China on Some Issues Concerning the Establishment of the Socialist Market Economy (Communist Party of China, 1993), a fully-funded element, namely, the so-called "individual account", was added to the urban worker pension scheme. The individual account is exclusively funded by employees themselves. After a few years of pilots and adjustments, the China State Council decided to set a unified contribution rate (China State Council, 2000). It is required that employers contribute 20% of wages to social pooling in each province or city and employees contribute 8% of wages to individual account. The social pooling account is on a PAYG and Defined Benefit (DB, where the amount of pension benefits is guaranteed as a proportion of pre-retirement salary) basis. The individual account is expected to be on a Fully Funded (FF, where current contributions are expected to be sufficient to cover the future pension benefits payment) and Defined Contribution (DC, where the level of pension benefit is dependent on returns on pension fund investment) basis. However, the individual account is in fact merely notional, which means that in practice this part of the funds is not separated from the social pooling funds. In this sense, the intention to inherit from the strengths of both PAYG and FF to cope with financial pressures is failed (Dong and Wang, 2016).

The underlying principle of the then old-age pension arrangements in China was labour insurance rather than social insurance, as the eligibility is strongly related to employment status (Liu and Sun, 2016). Almost the entire rural older population and a large segment of urban residents whose employment and contribution history failed to meet the eligibilities of EEBP or GIP were excluded from the public pension arrangements. Although there was an attempt to establish a fully funded social pension scheme for rural older people (Ministry of Civil Affairs of the People's Republic of China, 1992), the initiative failed due to extremely low levels of benefits, poor administration, and low participation. Consequentially, without access to public old-age support, support from family members and limited savings were therefore the main, if not only, income resources for rural older

people and the non-employed urban older residents.

As EEBP and GIP are, in essence, occupational public pension schemes, with eligibility based on formal labour participation and employment, this arrangement had profound gender implications. Women have a lower labour participation rate than men, resulting in significant gender disparities in public pension coverage (Zhao and Zhao, 2018). During the economic restructuring in the 1990s, women experienced higher labour retrenchment (lay-off) rates than men (Appleton et al., 2002; Ding, 2009). Additionally, women are disproportionately overrepresented in informal and casual employment without a secured labour contract, further contributing to the gendered coverage gap in public pensions (Liang, Appleton, and Song, 2016). Even when women participate in formal labour market, they are more likely to withdraw from the workforce or work fewer hours due to family or caring responsibilities (Chen et al., 2017). Consequently, due to interrupted career and shorter public pension contribution records, women tend to receive lower levels of public pensions after retirement.

In the reports of the 16th (2002) and 17th (2007) National Congress of the Communist Party of China (Jiang, 2002; Hu, 2007), the Party set the goal of extending the coverage of old-age pension scheme to rural older people. Many local authorities started to explore the possibilities of rural pension schemes. Among these local initiatives, the pilot rural pension project in Baoji, Shaanxi Province, drew attention from the central government due to its high coverage rate. The Baoji pilot project was characterised by a combination of individual contributions and financial subsidies, as well as individual account and basic pension benefits. After conducting a series of in-depth field studies in Baoji in 2008, the Ministry of Human Resources and Social Security of China approved the policy initiatives in Baoji and decided to promote "Baoji mode" nationwide (Zhang and Tang, 2008).

In 2009, marked by the promulgation of the *Instruction of the State Council on piloting New Rural Social Pensions* (China State Council, 2009), the coverage of social pensions was first officially extended to older people in rural areas, which signals *the third phase* of China's pension arrangements. The new pension scheme in rural China, also known as New Rural Social Pension (NRSP), consists of two parts: the first part is non-contributory basic pension benefits, and the second part is "highly subsidised personal savings" pension benefits (Liu and Sun, 2016: 20). Shortly after, in 2011, the coverage of public pensions was further expanded to non-employed older residents in urban China, as an additional public pension scheme, Urban Resident Social Pension (URSP), was introduced in urban areas (China State Council, 2011). The two initiatives were then written into the *Social Insurance Law of the People's Republic of China* and spread out across the country quickly. Both of the new social pension schemes stipulate that older people who have already reached 60 years old at the time of policy implementation can claim the non-contributory basic pension benefits as long as they are registered into the schemes. With the minimum amount set by the central government, local governments can top up the basic pension benefits part. Therefore, the level of this part of pension benefits varies largely according to the financial capability of local government.

The latest years have also witnessed several steps forward a nationally unified pension system. First, the newly-developed public pension schemes for rural residents (i.e., NRSP) and urban residents (i.e., URSP) were quickly merged into a single scheme (China State Council, 2014). It has contributed to the transformation from urban-rural segmentation towards urban-rural integration. Second, the longexisted dual-track pension system between employees in governments and public institutions and employees in non-public enterprises started to come to an end in 2015, as GIP and EEBP are being incorporated into a single, unified pension scheme for all workers (China State Council, 2015). These changes facilitate the transformation of China's old-age pension arrangements from a fragmented system to a more integrated system. Third, in both of the Reports of the 18th and 19th National Congress of the Communist Party of China (Hu, 2012; Xi, 2017), one of the key pension reforms was to gradually increase pension pooling level and bring it under a national management (quan guo tong *chou*). As a result of pensions pooling at the provincial level, some provinces benefit from lower oldage dependency ratios and therefore have a surplus in pension funds, while others find it difficult to make ends meet and are faced with a deficit. It leads to an imbalance in pension funding among provinces and damages the sustainability of China's pension system (Zheng, 2017). In the power game between central and local governments, the former aims to get back control of pension funding management while some wealthier provinces wish to maintain their advantageous financial position. In 2018, the China State Council decided to establish a central adjustment system for employees' pension funding. A special account was created and financed by a fraction of pension funds in each province in order to allow adjustments and balance the funding burden among provinces across China (China State Council, 2018b). This reform marks a substantial step towards the national level pooling
and management.

By the end of 2021, EEBP and GIP benefits had achieved annual increases by 5% on average for a period of 17 continuous years⁷ (e.g., see Ministry of Human Resources and Social Security and Ministry of Finance, 2019, 2020, 2021). In 2018, the minimum standard of NRSP and URSP benefits received by urban and rural older residents increased again after its initial increase in 2015 with the central government encouraging local governments to set up a pension benefits adjustment mechanism (Ministry of Human Resources and Social Security of the People's Republic of China, 2018).

Moreover, to secure the sustainability of pension funds and promote intergenerational fairness, the Chinese government has decided to transfer part of state-owned capital to social security funds management agency to fortify social security funds (China State Council, 2017b). The state-owned capital includes a number of large and medium-sized enterprises and financial institutions owned and controlled by the central and local governments. The government has also made an effort to encourage the development of the third pillar of the pension system. In 2018, the Ministry of Finance started a tax-deferred commercial pension insurance pilot programme in Shanghai, Fujian, and Suzhou Industrial Park. For individuals who have purchased a qualified commercial pension insurance product, the insurance payment is deductible for individual tax, with a cap of 6% of monthly salary or ¥ 1000 (ca. £ 112). Altogether, the new round of reform aimed to establish a fully covered, multi pillared, and national unified pension arrangement.

2.4.2 Current pension system: achievements and limitations

In spite of the progress, the new pension arrangements (as summarised in Table 2.1) are criticised as insufficient, incomplete, and inequality-enlarging (Lu, He and Piggott, 2014; Guo, 2014; Wang, Béland and Zhang, 2014; Liu and Sun, 2016; Jiang, Qian and Wen, 2018). A number of studies have pointed out that the low level of benefits and actual limited coverage rate of the newly introduced

⁷ Except for 2021, when the average pension benefits increased by 4.5% (Ministry of Human Resources and Social Security and Ministry of Finance, 2021).

residents pensions (i.e., NRSP & URSP) undermine their impacts on poverty reduction and can hardly protect the older people from poverty (Lu, He and Piggott, 2014; Liu and Sun, 2016; Queisser, Reilly and Hu, 2016; Tao, 2017). For instance, in 2018, the monthly non-contributory part of NRSP benefits ranges from less than \ddagger 100 (ca. £ 11) to \ddagger 850 (ca. £ 94). This was even lower than the Minimum Living Standard (*dibao* threshold, a proxy for poverty line as there is no official poverty line in China) for rural households, which ranges from around \ddagger 300 (ca. £ 33) to \ddagger 1070 (ca. £ 118) (National Bureau of Statistics of China, 2018).

Table 2.1 Coverage, recipients, benefit levels of different public pension schemes in 2020.

Pension Scheme	GIP/EEBP ¹	NRSP/URSP
Eligible groups	Employees in public (GIP) and Private sectors	Rural (NRSP) or urban (NRSP) residents
Retirement ages	60 for men, 55 for women (50 for blue-collar women workers)	60
Coverage (million)	456.21	542.44
No. of receipts (million)	127.62	160.68
Average monthly benefits (CNY)	¥ 2900	¥ 179
Average monthly incomes (CNY) ²	¥ 6655	¥ 1428
Replacement rate ³	43.56%	12.54%

Data source: Ministry of Human Resources and Social Security and National Bureau of Statistics, 2021.

Note: ¹The data from the Ministry of Human Resources and Social Security do not distinguish between GIP and EEBP. ² It shows the national average monthly salary incomes of all employees and national average monthly disposable incomes of rural residents. ³Proxy measures (average pension benefits/average income) are applied here as pre-retirement incomes statistics are unavailable.

The inequality and inadequacy can be also seen from replacement rates. As shown in Table 2.1, the average NRSP/URSP benefit in 2020 was only \pm 179 (ca. \pm 20), accounting for approximately 12.54% of pre-retirement income of rural residents. Whilst the average GIP/EEBP benefit was \pm 2900 (ca.

£ 319) in 2020, accounting for 43.56% of pre-retirement salaries. Moreover, rural older people might be less likely to enroll themselves in the new pension schemes due to factors such as distrust of the pension systems (Tao, 2017), expected low return on investment ratio, as well as the phenomenon of "policy bundle" (*zheng ce kun bang*), a practice in some rural area where older people's pension eligibility is conditional on their adult children's participation in the same scheme (Liu and Sun, 2016). Both NRSP and URSP also have a contributory part, which means a higher level of contributions leads to a higher level of benefits and therefore more subsidies from governments. However, rural older people tend to choose the lowest contribution level due to the lack of trust (resulted from the failure of the previous attempt), financial literacy, and/or disposable incomes (Tao, 2017).

A second feature that has been receiving much attention is the high level of stratification of China's pension system. Instead of countering the inequalities that have already existed in current socioeconomic arrangement, the system is "locked into the old socialist hierarchies" (Cai and Cheng, 2014, p.637) and therefore has reproduced inequalities among different groups. It can be seen from the pension arrangements that employees in public sectors, especially those inside the governments, are more favoured than those outside the governments and in private sectors, and the latter are in a better position than those in informal sectors. Adding to that is the long-standing urban-rural disparity. In fact, the urban-rural segment exists across almost all social security policies in China (Cai and Du, 2015) and leads to unneglectable differences in the scope, coverage, and level of benefits (Liu and Wu, 2006; Sicular et al., 2007; Shi, 2012). Benefits in rural areas are minimal and residual while in urban areas are more generous (Freedman and Yanxia, 2016). The disparity is to a large extent an institutional failure of the household registration (hukou) system and legacy from a dual society. Although the two residents pensions schemes are merged recently, China's pension system is still fragmented and needs to be integrated into a single scheme with uniform standards (Cai and Du, 2015; West, 1999).

By using competition theory and the concept of decentralisation, Freedman and Yanxia provide new insight into the urban-rural and regional disparities in China's pension system (Freedman and Yanxia, 2016). Local governments have been given considerable autonomy in many social and economic

decisions. They are allowed to decide the way in which welfare benefits are provided, the level of those benefits, the conditionality imposed on the benefits, and regulations on the labour market such as provincial minimum wage. Moreover, as stated above, the public pensions are pooled at the provincial level. It is therefore argued that the decentralisation of China's political and economic structure has led to a "race to the bottom" in pension funding and preventing efforts to create a national pension system (Freedman and Yanxia, 2016). It is consistent with West's thesis (1999) that a higher level of pooling and a unified system is difficult to achieve as local governments and specific industries were afraid of losing control over fund surpluses. It reflects and exacerbates the long-lasting regional and urban-rural inequality.

The low level of benefits, limited policy coverage, and fragmented and unequal pension arrangement have been contributing to increasing inequality between older people in urban and rural areas, wealthier and underdeveloped provinces. Therefore, whether older people can achieve security from public pensions, and how does this picture vary among older people remain to be investigated.

2.4.3 Old-age care policies

On top of public pensions, old-age care policies and legislation also impact on the wellbeing of older people and their families. By providing a narrative of the development of these policies, it attempts to unpack the way in which the role of family support is institutionalised in China's social policy arrangement.

The *Law of the People's Republic of China on Protection of the Rights and Interests of the Older* (1996) is the first legislation specialising for older people in China. Although it stipulates that the state should take measures such as establishing an old-age pension system to provide social security for older people (e.g. see Chapter One Article 3 and Chapter Three Article 20, 1996), Chapter two makes it rather clear that family should take the predominant responsibility to care and support for older people, and that it is a legal obligation of an adult child to look after his/her older parent(s), as it puts, "provide financial support, daily life care, emotional support, and meet special needs of older people" (Chapter Two Article 11, 1996). It is also encouraged to develop community-based older care services (Chapter Three Article 35, 1996) and stipulates that the state should support organisations and

individuals to initiate facilities designed for aged people such as apartment and rehabilitation centres (Chapter Three Article 33, 1996). However, as the provisions regarding the content and implementations are rather ambiguous, the role of the state remains unclear (Wang, 2013). Instead, the primary role of family in the financial, care, and emotional support for older people was officially set as a legal obligation.

During the first decade of the 21st Century, the community became an important tool employed by the government to cope with the increasing amount of care needs of the ageing population (Wang, 2013). Family retained the primary role in supporting for aged people, while the government were seeking to facilitate and complement such role by providing public services and supporting community services. In 2008, led by China National Committee on Ageing, multiple Ministries issued the Instruction on Promoting Home-based Older Care Programme (2008), which defines home-based older care as "a form of service in which the government and society, in reliance on community, provide services such as daily care, housekeeping, rehabilitation nursing, and emotional support". Several Ministries including Education, Civil Affair, Labour and Social Security, Finance, Health, Taxation decided to guide, support, and facilitate the development of home-based community older care services via a set of measures such as professionals training, tax reduction, and resource integration (China National Committee on Ageing et al, 2008). The subtle changes in the roles among family, state, and community can also be detected from the 2012 revision of the Law of the People's Republic of China on Protection of the Rights and Interests of the Older (2012), where the Article "family should take the predominant responsibility to care and support for older people" (Chapter Two Article 10, 1996) was changed into "the provision for older people should be based on family" (Chapter Two Article 13, 2012). Besides, there were also additional Chapters and Articles focusing on the development and regulation of community services (e.g. see Chapter Four, 2012), and the role of the state to protect the older via establishing public basic pensions, healthcare, and long-term care services is emphasized (e.g. see Chapter Three Article 28, 29, and 30, 2012).

Acknowledging an increasing need for older care and a weakening function of family in providing older care, the government continue to boost the development of socialised older care such as community-based facilities and services. In the wider context of the development of the tertiary

economic sector and high-technology, products, services, and high-tech specialise for older people are highly encouraged and subsidised (China State Council, 2013, 2017a). To further facilitate the development of older care institutions and agencies, in the latest version of the *Law of the People's Republic of China on Protection of the Rights and Interests of the Older (2018)*, Articles on the requirement of applying for administration permission from local governments when establishing older care institutions or agencies (Chapter Four Article 44, 2012) has been removed. At the same time, to avoid harm from low-quality institutions and agencies caused by deregulation and market failure, the Ministry of Civil Affairs is now seeking to establish a grading system. On the other hand, for older people who still receive support predominantly from adult children, the government has decided to reduce the financial burden of their adult children via tax measures. From 2019 on, for each adult child, ¥ 2000 (ca. £ 225) per month (the quota can be shared with siblings but with a cap of ¥ 2000 in total) will be deductible for individual tax if the taxpayer provides support for at least one older person (China State Council, 2018a).

2.4.4 Social assistance

Having established the important role of family in protecting old people, it is also necessary to examine social assistance policies that can be considered as the public safety net for protection against old-age poverty.

In 1993, the pilot means-tested Minimum Living Standard Guarantee (*dibao*) Scheme in urban areas was first initiated in Shanghai. It then expanded to cover all urban areas in China and became a national level policy arrangement by the end of the 20th Century. At the same time, in rural areas, the Five Guarantees scheme, a social assistance scheme which provides support with food, clothing, housing, healthcare, and funeral (as known as *wubao*), was established to support older people, people with disability, and children who have no supporters or income sources by offering very basic in-kind benefits and limited cash allowance (China State Council, 1994). To claim for the Five Guarantees benefits, apart from justifying for their needs for social assistance support (e.g., no income sources due to old-age, disability, etc), one had to prove that they don't have any supporters (normally family members). The Five Guarantees scheme was gradually replaced by the *dibao* scheme in late 2000s when the latter was established in rural areas (China State Council, 2007). Households with annual

income per capita lower than the local dibao threshold are eligible to apply for the *dibao* benefits. The *dibao* threshold is set by local governments based on the prices for basic living necessities and the financial capability of local governments and is dynamically adjusted according to the price index.

In recent years, a few more cash benefit schemes have been introduced by local and central governments, as part of the Chinese Communist Party's anti-poverty campaign. One example is the nationwide allowance programmes for older people in hardship, especially the oldest group. Although the central government acknowledges and encourages these programmes, the decisions on funding, benefits level, and eligibility are down to local authorities. For instance, the benefits can be meanstested in some provinces (e.g., Shandong, Liaoning) but universal to all older residents above certain age thresholds (e.g., Beijing, Guangdong, and Shaanxi) (General Office of the Ministry of Civil Affairs, 2016).

2.5 Conclusion

2.5.1 Welfare mix and the care diamond: the role of the state and family

Although there is an ongoing typological debate regarding the East Asian welfare regime, the strong role of family seems to be a consistent theme. For instance, in Esping-Andersen's re-examination of comparative welfare regimes, East Asian countries (Japan as the typical case) is labelled as the hybrid welfare regime which "combines liberal residualism and conservative corporatism" (Esping-Andersen, 1999, p.p 91). It is featured as having marginalised public social services and strong and institutionally-assumed family support (Esping-Andersen, 1999). East Asian countries have also been categorised as the 'productivism welfare regime' (for example, see Holliday, 2000), where social policies are subordinated to economic growth. The role of family cannot be ignored in this perspective either, as is an important channel to boost the economy via investment in education, care, and human capital accumulation. The Confucian welfare regime (for example, see Jones, 1993) is another type seen as capturing the cultural norms in East Asian societies. With an emphasis on Confucian cultural influence such as filial piety, family stands out in social policy arrangements. Researchers also consider East Asia as an informal care regime or familistic welfare regime since its heavy reliance on family, in particular female members, to provide care services (Abrahamson, 2017).

Although these typologies have been criticised to more or less degree, they all demonstrate the importance of family in the welfare mix in China. Compared with family and the state, the market is playing a less important role in old-age support arrangements. For instance, by applying the care diamond model to six Asian societies, Ochiai (2009) investigates the balance between the state, family, market, and the community in terms of the responsibility of childcare and older care. In the case of China, the importance of family in welfare provision has been confirmed by the large family sector compared to the state, market, or community (Ochiai, 2009). Although it is found that in China the roles of community and state in care provision are increasing (Ochiai, 2009; Yamashita, Soma and Chan, 2013), it is not clear how the different actors interact with each other in the welfare mix. For instance, the state to a large degree is playing its role via supporting and guiding the development of community-based care services (Ochiai, 2009; Yamashita, Soma and Chan, 2013).

The persistence of the attitudes towards and the perceptions of old-age support provided outside families highlighted the importance of cultural and symbolic implications of family support. For instance, Zhan and her colleagues' studies show that the management of stigma related to receiving institutional old-age care rather than familial care has been one the centre themes for both generations (Zhan, Feng and Luo, 2008; Zhan et al., 2011). Although some older people see receiving care services at a public or private institute as privileged for its high cost, which is translated and interpreted by older people as a filial conduct (Zhan, Feng and Luo, 2008), the absence of family in care and support provision tends to be considered as stigmatised.

The primary role of Chinese family in welfare provision is not limited to care. Borrowing from the term of social reproduction, Papadopoulos and Roumpakis (2017) have moved beyond the caring-provider role of family and seen it as a collective socio-economic actor that seeks to protect its members by mobilising and exchanging different forms of resources (e.g. financial, emotional, symbolic). For instance, by taking the advantage of the micro-level local survey data in three East Asian societies (Japan, South Korea, Taiwan), Kwon (1999) examines the role of the state and family in protecting older people from income poverty and compares the dependency ratio and relief ratio of both public transfers and private transfers. It is found that private transfers (family) contribute

significantly to the incomes of older people, and in particular for the lowest-income groups, whereas public transfers (the state) hardly make any significant difference in the incomes of older people (Kwon, 1999). This study reveals the importance of an informal safety net in Confucian culture, but at the same time he also acknowledges the great challenges on family induced by the changing demographic and family structure as well as the evolving Confucian culture (Kwon, 1999).

Given the significant demographic and policy change during the past years as discussed throughout the chapter, a question emerges: How do Chinese older people achieve old-age security? The next chapter will discuss and examine the existing literature on the dynamic roles of the state and family in protecting older people.

3. Literature review

3.1 Introduction: age, life-course, generation, and social policy

Chapter 2 presented the demographic, cultural and policy context in which this study is situated. The ageing population and changing family structure, the emphasis on filial piety and family provisions, and the newly introduced public pension schemes aimed at a full coverage for Chinese older people lead to this question: how do Chinese older people achieve old-age security after retirement, especially since the 2009 pension reform?

Three interrelated concepts emerge from the question, that is, age, life-course, and generations. Inspired by Daly's (2020b) work, a multi-level framework can be used to understand how social policy is constructed by and influencing age, life-course, and generational relationships. Age, among other characteristics, is often associated with the entitlement to social welfare (Daly, 2020b). Social policies involving horizontal redistributions often smooth incomes across different age groups (Daly, 2020b). Age-related entitlement also extends to intangible aspects. For instance, as presented in the previous chapter, in China the growing of age also carries with the entitlement to the respect from and the authority over the younger. Life-course, similarly, focuses on organised and sequential life stages. However, the life-course perspective moves beyond "the patterning of biography" (Daly, 2020b, p.294) and can be seen as a "social institution of contemporary societies" (Kohli, 2007, p.253), as it often contains implications for socioeconomic roles and relationships, as well as cultural expectation and norms (Daly, 2020b). In this sense, it is essential to understand social risks associated with old age and/or retirement among Chinese older people.

Generation, on the other hand, refers to a group of people sharing the same period, experiences and collective identity, and social and political location (Daly, 2020b). Social policies such as the PAYG public pension arrangement are often based on the generational contract at the society level, where resources are transferred based on the generational membership (Daly, 2020b; Williamson, McNamara and Howling, 2003). Generational relationships are also manifested at the familial level, where the interactions and the situations under which those interactions take place are also among the main areas where social policies, especially family policies in an implicit way (Daly, 2020a), aim to

intervene.

Based on the above discussion, this chapter is organised as follow. It starts with a discussion of the agency and structural approaches to understanding poverty in old age. The section attempts to explore the existing literature on social risks associated with old-age and/or retirement and why it is important in social policy studies. This section also discusses empirical evidence on the trends and patterns of poverty and disadvantages experienced by the Chinese older people. Next, it focuses on theoretical frameworks that have been applied in previous studies of intergenerational relationships, that is, the intergenerational solidarity model and the intergenerational ambivalence theory. The section also empirically reviews the patterns of and changes in the intergenerational relationships in Chinese families. The chapter moves on with an attempt to bridge the two levels of intergenerational relationships for analysis, which is the intergenerational relationship at the familial level and the intergenerational relationship at the societal level. It is achieved by the discussion of the crowdingout/in theories and reviewing empirical evidence exploring the potential interactions between public formal support and private informal support. Drawing together available theories and evidence, the chapter concludes with a discussion of the approach that sees family as a unit of analysis and a collective socio-economic agent (Papadopoulos and Roumpakis, 2019). The chapter concludes with a brief discussion of the existing debates and knowledge gap in the query of how Chinese older people achieve old-age security since the 2009 pension reform.

3.2 Theorising old-age poverty

Old age was and remains one of the three stages in the life course with a high risk of poverty (for example, see Rowntree, 1901; Kvist, 2013) and is faced with greater exposure to social disadvantages (for example, see Grundy, 2016). The prolonged debate on the concept and causes of poverty also applies to the discussion of poverty in this specific life stage. Based on a review of existing theoretical arguments and empirical evidence regarding poverty and income inequality among the older, this section attempts to draw an overall picture of the trends and patterns of old age poverty and related disadvantages among Chinese older people.

3.2.1 Agency vs structural approach to old-age poverty

Old-age poverty refers to poverty-related risks and disadvantages during one's older years. Prior to the discussion of poverty in the specific life stage, a brief review of different approaches to poverty and its causes may provide a foundation on which we can better capture the nature of old-age poverty and understand the rationale for policy intervention.

Poverty is an "ancient" (Dean, 2016, p.3) and contested social concept involving a certain relationship between unmet human needs and individuals' conditions. Pioneers have started to empirically map poverty as early as the 19th Century based on different ideas about poverty (e.g. Rowntree, 1901; Booth, 1903). Different approaches to poverty and a wider range of social policies reflect the variety in the understanding of human needs (Doyal and Gough, 1984; Lister, 2004). For example, a conventional and most prevalent approach to the conceptualisation and operationalisation of poverty focuses on the monetary aspect and view poverty as the lack of material resources to sustain a most basic standard of living. This approach yields different poverty measures such as income poverty and consumption poverty in both absolute and relative terms.

Comprehensible and operationalisable as it is, the monetary approach to poverty is criticised as only considering the material aspect of people's lives and having neglected other possible barriers to individuals' participation in society (e.g. Townsend, 1979; Sen, 1992). Instead, Townsend (1979) proposed a relative deprivation approach: people/households who are unable to participate in social activities and enjoy an average living standard due to lack of resources are defined as in poverty. Measures based on this approach tend to combine relative income thresholds with material deprivation (Lister, 2004; Dean, 2016; Bradshaw and Finch, 2003). A third approach has been developed by Amartya Sen (1992) who defines poverty as capability failure, a situation where choices and opportunities available to individuals are too limited to reach a minimal level of living (Lister, 2004). Based on this approach is a contested but "fashionable" concept (Dean, 2016, p.14) named 'social exclusion'. Social exclusion provides a new way to understand poverty rather than an alternative to it (Lister, 2004). According to Burchardt and her colleagues' work (2002), social exclusion approach focuses on (the lack of) participation in four key social activities including

consumption, production, political engagement, and social interaction. The latter two approaches, namely the deprivation approach and the capability approach, look beyond the income circumstances of individuals or households and aim to capture the multidimensional disadvantages related to their social relations within wider social structures (Alcock, 1997).

The divergence exists not only in the understanding of human needs but also in the discussion about the causes of poverty. For instance, the agency approach argues that individuals should take the responsibility for their own "bad" choices, while the structural approach believes that the failure of social policies to remove economic, social, and political disadvantageous factors leads to poverty (Alcock, 1997). Individuals' decisions indeed influence their living circumstances, however, the decisions that individuals made in certain social contexts are to a great extent constrained by social structural factors (Alcock, 1997, p.35). Therefore, instead of being contrary ideas, agency and structural causes co-exist and together provide a better explanation of what leads to poverty.

The agency-structure debates, along with the different approaches to the concept of poverty, have impacts on how policymakers identify who are in poverty and respond with certain poverty alleviation policies. Influenced by the ideological context and political orientation, social policies are dynamically seeking a balance between these approaches (Alcock, 1997). For example, since the 1980s the emphasis of welfare states has been shifted from reforming social relations such as redistribution of resources towards bringing back the role of individual agency in shaping their life courses (Alcock, 1997).

From the life-course perspective, people in old age are faced with a higher risk of poverty than in working age (Rowntree, 1901). Retirement from the labour market means the loss of the main income source for many older people. Furthermore, the capability of social participation and the sense of social connection will also be influenced as a result of leaving the labour market (Weiss, 2018). Although older people may have their reserves for later life, such as savings from earlier better-off life stages or returns on investments in the market, individuals are not always able or rational enough to foresee the risks in their later lives and thus have the willingness to restrain their consumptions before that (Barr and Diamond, 2006). International evidence shows that women and young people are more

likely to have a myopic view regarding saving for later life (Lusardi and Mitchell, 2011). Moreover, even if they have a good sense of accumulation before getting older, the reserves may be depleted by various factors such as deterioration in health conditions, depending on the availability and affordability of support such as health and care (Grundy, 2016). All the above-mentioned factors may contribute to the dependency of older people. It also shows that the disadvantages and risks of old age are less about the process of ageing of individual selves or the accumulated physical and functional changes within the body, but more about the undesired social result from inadequate social policy arrangement, as well as opportunities to save throughout the life course such as employment conditions.

For example, critical gerontologist may argue that the dependency of older people is caused by existing structural constraints, in particular, the way in which social policies are arranged and operated, rather than by ageing itself (Walker, 2009; Chen, Walker and Hong, 2018). Therefore, they believe that welfare states should promote socioeconomic security and empowerment for older people through a wider range of social policies, rather than seeing the risks and challenges experienced by old people as the results of individuals' choice (Walker, 2009; Chen, Walker and Hong, 2018). Moreover, drawing from cumulative advantage and disadvantage theory and life course theory, Ferraro et al (2009) argue that disadvantages in earlier life stages increase exposure to risks, and therefore lead to an accumulation of disadvantages in old age. The meaning of disadvantage, as defined by the authors, is "an unfavourable position in a status hierarchy due to structural determinants and/or behaviour that reflects the past and the present circumstances of one's life" (Ferraro, Shippee and Schafer, 2009, p.422). The accumulative disadvantage approach emphasises the impacts of structural factors, policies, and past circumstances one has experienced, though it is also acknowledged that life course trajectories can be reshaped or altered by human agency – they believe that through the mobilisation of resources and/or the modification of process one can change the accumulation of disadvantages (Ferraro, Shippee and Schafer, 2009). Their approach to old-age related disadvantages reflects the long-standing structure-agency dialectic.

From a policy perspective, there used to be a consensus that old age is a deserving cause for welfare spending, and that adequate old-age pensions constitute an important aspect of fulling the "social

rights" (Marshall and Bottomore, 1992) of older people. Public pension systems, either functioned as a "piggybank" by smoothing consumptions across one's lifetime or on the other hand, redistributing social resources among the rich and the poor (Barr and Diamond, 2009), have long been one of the most crucial components of social security policies. In most welfare states, the public pension system accounts for a large proportion of public spending and involves both horizontal and/or vertical redistribution to varying degrees (Le Grand, 1982; Hills, 2005). It is therefore an important policy channel to prevent and alleviate old-age poverty and inequality. The cuts in public pensions not only widen the income gap between workers and retirees but also enlarge income disparities between the older who rely on state pensions and those who can afford private pension schemes (Atkinson, 2015). However, policy reforms since mid-1970s, especially in countries such as the United Kingdom and the United States, often labelled as neoliberal reforms (e.g., see Walker, 2009), weaken the role of the state and put the emphasis on the responsibility of individuals. Such agenda contributes to the shift of the policy aim of old-age social protection from adequacy to the so called "equity", which prioritises the principle of self-reliance and the role of markets in old-age provisions (Williamson, McNamara and Howling, 2003; Lau, 2013).

3.2.2 Empirical evidence on old-age poverty among the Chinese older people

The theoretical debates around the meaning and measures of poverty provide a foundation to understand what is happening to or experienced by older people in real life. The empirical knowledge of the lived experience of old people and the ways in which they cope with old-age related risks and disadvantages, in turn, provides evidence for further discussion of old-age poverty and contributes to theoretical understanding. By reviewing existing empirical studies, this section attempts to identify the trends, patterns, and lived experience of poverty among older people in China.

Before moving to the mapping of old-age poverty in China, it is crucial to acknowledge the sensitivity of poverty to its definition and measurement, as the diversity in poverty measures can produce rather different pictures (Saunders, 2007; Chan and Chou, 2018). Although it is a prevalent issue in poverty studies, measuring poverty in China is even trickier due to the massive population, the lack of representative survey data, the bureaucratism, and limited reliability in official statistics. For example, for some political reasons, local governments may either understate the prevalence and depth of

poverty to avoid public criticism or overstate it to receive more special subsidies from the central government (Li and Piachaud, 2004). China's official "National Poverty Line", which is set by the central government, is a low-income threshold for rural residents. Given the long-standing unneglectable disparity between urban and rural areas, it means that the official poverty line may be neither applicable nor appropriate to present the full picture. Besides, the threshold was far lower than the Global Poverty Line set by World Bank (\$1.9 per day in 2011 price, around ¥ 4480 per year at the 2011 exchange rate). In 2011, China's official poverty line was set as annual incomes lower than ¥ 2300 (around £ 230 based on the 2011 exchange rate), and in 2015 it increased to ¥ 2800 (around £ 289 based on 2015 exchange rate). A lower poverty threshold will underestimate the incidence and depth of poverty experienced by older people. Therefore, caution is required when interpreting the percentage of older people considered to be in poverty based on different definitions and measurements. It is also important to pay attention to the differences in poverty measures between urban and rural areas and between men and women.

Li and Piachaud (2004) point out that poverty in China can be described in three phases. The first phase starts from 1949 when the People's Republic of China was established and ends in 1978, on the eve of China's economic reform. In this first period, the government prioritised the development of heavy industries and imposed strict control of workers' salaries and labour mobility. Both urban and rural populations suffered from limited resources, and their living condition and incomes remained low. As estimated by the authors, in 1978, the net income of the rural population is less than half (40%) of the average consumption of the urban population. What's more, rural residents had no access to any of the social benefits which were available to urban workers such as education and healthcare services. In this phase, the fact that the majority of the population were in poverty, this partly disguised the issue of inequality.

Transforming from a planned economy to a market-orientated economy, the second phase (1978-1999) is characterised by dramatic economic growth and enlarging financial and social inequality. In this phase, the urban-centred social policies in the sphere of pension, housing, healthcare, and social assistance were utilised to facilitate economic growth. Meanwhile, with the development of the market, the state sought to promote decentralisation and privatization to reduce welfare burdens.

Towards the end of the 1990s, the issue of inequality such as the growing income gaps between urban and rural residents became more salient than ever. The rural labour force started to migrate to urban areas for better employment opportunities. At the same time, given the shrinking size of state-owned enterprises and the growing private sector, the pension arrangements which had been designed for urban workers in the public sector were no longer suited to the economy even in urban areas. Consequently, all the above-presented developments led to a widening coverage gap in social protections, in particular in public pension arrangements, over the second phase of China's social and economic development.

Since the 1990s, there have been several distinctive features in terms of poverty and income inequality. In addition to the even more challenging issue of rural poverty, there emerged the "new poor" in urban areas: the urban unemployed and the laid-off in the process of economic restructuring, and the rural-urban migrants who were not fully protected in the absence of labour market regulations. Income inequality no longer merely hold for urban and rural residents, but also exists between the urban rich and the urban poor, as well as among coastal/east provinces, middle inland provinces, and western provinces (see Table 3.1 for urban-rural and regional differences in incomes).

	Total	Urban	Rural
National	2,369	4,429	1,564
West	2,105	4,963	1,167
Centre	2,229	4,175	1,558
East	4,264	7,555	2,527

Table 3.1 Mean household disposable incomes per capita in 1995 (unit: Chinese yuan)

Data source: National Bureau of Statistics Household Survey, summarised from Table 1 (p.100) and Table 2 (p.102) in Sicular et al. (2007)

Having realised these issues, social policies have entered into a new era since 1999. The third phase is described by the authors as a "pro-poor growth era" (2004, p.3) because of the determination of the government to deal with poverty issues in rural areas and less developed western provinces. For example, the establishment of an urban and rural social assistance system, namely the Minimum

Living Standard Guarantee (*dibao*) scheme, the abolition of China's agricultural tax, and the initiative "Developing the West" which is aimed to boost the economic growth in west provinces by diverting resources from coastal areas to inland areas. However, the deeply rooted high concentration of poverty in rural areas and the increasing rural-urban and inter-regional income inequality remain to be harming social solidarity and cohesion.

Li and Piachaud's study (2004) represents a large body of literature that has investigated the overall trends and provided a general picture of poverty and income inequality in China. It helps to understand poverty and income inequality among older people as there are shared features and trends such as the improved but unequal condition of rural residents and the huge urban-rural and interregional income inequality. Even so, as argued above, poverty in old age has its particular socially-structured causes, and therefore, needs further investigation.

By using the 2000 Sample Survey of the Aged Population in Urban and Rural China data, Saunders and his colleague have conducted several studies on poverty among older people in urban areas (Saunders and Lujun, 2006; Saunders, 2006, 2007). For instance, adopting a cross-national comparative approach, Saunders compares the incidence and determinants of poverty among older people in urban China with the old-age poverty in other richer industrial countries (Saunders, 2007). By employing a relative income poverty measure (incomes relative to the 50% of the median and mean incomes in each country), he finds that poverty incidence among older people aged 65 and above in urban China is much higher than that in OECD countries and that the urban older who live alone are more likely to be in poverty than their peers who live with spouse (Saunders, 2007). Although the author acknowledges that the heavy reliance on support from family members (mainly from adult children) distinguishes the old-age poverty and support arrangement in China from that in other OECD countries, the study fails to take these factors into estimation due to lack of information. It is also worth noting that up-to-date data would be helpful to understand the most recent picture of old-age poverty from a comparative perspective as the circumstances have experienced significant changes in the past two decades.

Based on the same data, Saunders and his colleague have also examined the overlap of poverty and multidimensional hardship among the urban older in China (Saunders and Lujun, 2006). By using

province-specific Minimum Living Standard (MLS) thresholds as the poverty line, they find that those whose incomes are lower than MLS thresholds are more likely to be experiencing economic insecurity, housing and health hardships, and social isolation (Saunders and Lujun, 2006). Further analysis reveals that more than 90% of older people whose incomes are below the poverty line have no access to public pensions, and that the older women are faced with higher risks of poverty and hardships due to reasons such as the gender coverage gap and poor health conditions (Saunders and Lujun, 2006).

Compared with urban older people, their rural peers are experiencing a higher risk, greater intensity, and longer period of poverty (Cai et al., 2012). Based on a longitudinal analysis of five waves of the China Health and Nutrition Survey data (1991, 1993, 1997, 2000, 2004), Cai and his colleagues (2012) have investigated the prevalence, depth, and inequality of poverty among rural older people. Their results show that although the rural older income poverty head ratio has decreased over the years (dropping from nearly 40% in 1991 to less than 20% in 2004 with reference to the official poverty line), old-age poverty in rural China remains higher than the old-age poverty in urban China (Cai et al., 2012). The authors have also estimated the poverty gap, an indicator that measures the depth of incomes below the poverty thresholds, suggesting a greater severity and intensity of old-age poverty in rural China (Cai et al., 2012).

Apart from having a higher poverty risk and a greater poverty gap, the persistence in poverty status is also worth noting, especially for rural older people aged 70 and above. In 2000, more than one fifth older Chinese in rural area remained in poverty for at least three waves of survey (Cai et al., 2012). As indicated by the cumulative inequality theory discussed above, the disadvantages one experiences increase the exposure to risks, or put in another way, disadvantages create new disadvantages (Ferraro, Shippee and Schafer, 2009). Without institutional social protection, the marginalised older people in rural areas are faced with multiple disadvantages, such as limited education and employment opportunity in earlier life states, higher cost and poorer quality of healthcare, lack of access to public pensions. In the absence of available resources to make informed decisions, these adverse situations have in turn further perpetuated the disadvantageous status experienced by them, leading to accumulated disadvantages (as discussed in 3.2.1).

Building on the concept of multidimensionality of poverty and the discussion of social exclusion, researchers have also investigated poverty among older people with different measures. For example, Wang et al (2011) have investigated subjective well-being poverty (SWP) experienced by the older by using 2006 CHNS data. They argue that the multiple vulnerabilities faced by the older in contemporary China cannot be resolved with social policies which are merely designed to reduce income poverty (Wang, Shang and Xu, 2011). They find that the patterns of self-reported life satisfaction are consistent with the patterns of income poverty, which are, female older people, rural older people, and older people who live alone are more likely to experience a lower level of subjective well-being (Wang, Shang and Xu, 2011). Besides, there is a positive but nonlinear association between income and SWP, that is, a higher income is related to a higher level of subjective wellbeing, and the association is stronger for those whose incomes fall below the poverty line (Wang, Shang and Xu, 2011). In other words, income matters much more to life satisfaction for older people who are experiencing income poverty (for example, female, the rural, or those living alone) than those who are not. In addition, income in old age is closely related to other dimensions of life quality such as economic security, trust, social networks, and social participation (e.g., see the concept of Social Quality in Foster, Tomlinson, and Walker 2018). Studies on social exclusion among older people have also provided new insights into the patterns and experiences of those in disadvantageous conditions (Feng, 2012; Feng, Phillips and Jones, 2018).

Although limited in number, there are also attitudinal survey research and qualitative studies that are designed to provide the perception, attitudes, understanding, and experience from the perspectives of older people themselves. By utilising the data obtained from the attitudinal questions in the 2000 SSAPURC survey, Saunders (2006) has explored the attitudes of the urban older towards the role of family and state in old-age security. It is revealed that quite a few older people believe that they are a "burden" on society and/or family, accounting for around half of the urban older population (Saunders, 2006). It is also indicated that older people believe that even when lacking access to necessary support or transfers provided by the state, their family members (adult children, mainly) will take the responsibility of caring and income support (Saunders, 2006).

Based on two rounds of life-story interviews with low-income urban older people in Beijing in 2009

and 2010, Chen and her colleagues (2018) attempt to provide an in-depth understanding of the experience of older people living in poverty. Four themes emerge from the narratives of these older people, namely, extreme difficulties in obtaining necessities of living, poor health conditions and lack of healthcare resources, continuous care responsibility for extended family members, and strong poverty-related shame and isolation (Chen, Walker and Hong, 2018). The authors argue that anti-poverty policies that only focus on limited and means-tested financial support have neglected the multiple vulnerabilities experienced by older people, and therefore are insufficient to relieve these partially socially-constructed stresses and constraints (Chen, Walker and Hong, 2018). To better support the older in poverty, they suggest that multiple indicators rather than merely incomes should be used to identify those in need, support in both cash and kinds such as healthcare services should be combined to relieve the stresses and meet the needs, and that actual resources sharing and caring responsibilities in family should be taken into consideration (Chen, Walker and Hong, 2018).

Previous literature has attempted to identify the determinants of the incidence of poverty in old age, and indeed many studies have agreed on its association with a few factors such as educational attainment, gender, age, marital/living status (Saunders, 2007; Saunders and Lujun, 2006; Saunders, 2006; Wang, Shang and Xu, 2011; Chen, Walker and Hong, 2018; Feng, Phillips and Jones, 2018; Chan and Chou, 2018; Zhu and Walker, 2018; Cai et al., 2012). Even so, one should not jump to the conclusion that poverty in older age is caused by individual characteristics. Instead, the evidence has to a large degree reflected the structural factors. For instance, the strong association between being women and falling in poverty can be explained as the feminisation of poverty (for example, see Pearce, 1978), which is also found in Nordic countries with egalitarian welfare states and redistributive pension systems such as Finland and Sweden (Nygård et al., 2017). This outcome can be attributed to a combination of structural factors such as disadvantageous position in the labour market, lower income levels, and the assumed larger responsibility for non-paid, unacknowledged domestic work (Nygård et al., 2017).

Besides, a major factor related to a higher risk of poverty is evident in the large urban-rural inequality. Poverty in China is highly skewed and concentrated on rural older people (Saunders, 2007). Using the one-dollar-a-day line set by the World Bank, the head counts older poverty ratio in rural areas is ten

times that in urban areas (Cai et al., 2012). Another source of poverty and income inequality comes from pension arrangements (Li et al., 2018; Zhu and Walker, 2018). There is an increasing reliance on public pensions over the recent years of reforms (Li et al., 2018). However, the priority of recent pension reforms lies in the expansion of coverage rather than ensuring adequacy. Empirical evidence has shown that the pension benefits have indeed improve the incomes and living conditions of older people, however, they are not enough to lift the poor above poverty line (e.g. Saunders, 2007; Li et al., 2018). By looking at the most up-to-date pension arrangements and analysing recent available CHARLS data, Zhu and Walker (2018) find that despite an increasing public pension coverage rate during the reforms, new inequalities among older people have been created. These inequalities are manifested in the distinct pension schemes for different groups, which reflects and reinforces the existing social stratification, and in the strengthened link between benefits and contributions, from which the better-off are favoured (Zhu and Walker, 2018). Similar findings have also been reported in other studies. For instance, it is estimated that public pensions alone have contributed to more than 50% of the total income inequality level among older households since 2002 (Li et al., 2018).

In addition to formal pension arrangement, working beyond retirement age also has implications for the incomes of older people and other aspects in later life such as social participation. However, a study based on an analysis of the China Household Income Project data reveals that the labour participation rate after retirement in China is much lower compared to Russia (Gustafsson, Nivorozhkina, and Wan, 2021). It is found that in 2013 only 10.81% of Chinese older people worked at least one month in the past year (among women over 55 years old and men over 60 years older). The proportion increased to 12.42% in 2018 but remained to be lower than half of the rates in Russia. Among them, younger older people (up to 70 years old) and older men were overrepresented in the labour market. For instance, 15.46% men and 16.74% of younger older people participated in labour market in 2018 (Gustafsson, Nivorozhkina, and Wan, 2021). This could be explained by factors such as family arrangement and social norms (Gustafsson, Nivorozhkina, and Wan, 2021)

Past empirical studies have provided important evidence on the trends and patterns of poverty among older people in either rural China or urban China or both. The arguments and debates have also contributed to the theoretical understanding of the concept of poverty, the measurement issues, and

the possible causes and policy implications. However, some of them are constrained by time lag, the unavailability of representative survey data and/or related variables. Besides, given the continuous importance of family in providing for and supporting older people, only a few studies have touched on the implication of intergenerational support within the family sphere on old-age security. Next, the chapter will review the theory and empirical evidence of intergenerational support in Chinese families and its implication on how older people achieve security.

3.3 Analysing intergenerational support in Chinese families

Intergenerational relationships are a special type of social, and often economic, relationship. At the micro-level, it refers to the interactions and relations among family members across different generations; at the macro level, it involves the interactions between different age cohorts in a larger social structure such as a pension system (Izuhara, 2010; Daly, 2020b). This section starts with a brief review of the intergenerational solidarity model developed by Bengtson and his colleague (Bengtson and Schrader, 1982; 1991), highlighting the inter-related multidimensional aspects of intergenerational relationships at the familial level. It then moves beyond the solidarity aspect and discusses the intergenerational ambivalence approach which integrates both solidarity and conflict into an analytical framework. The second part of this section reviews empirical evidence on the changing patterns of intergenerational relations in Chinese families.

3.3.1 Intergenerational solidarity and ambivalence

Drawing from previous literature, Bengtson and Schrader frame six "conceptually distinct but interrelated" (1982, p.p.116) constructs of intergenerational relations and provide operationalised measurements for each of them. Bengtson and Schrader's (1982) work paves the way for later analysis of the multidimensional intergenerational relations. The six constructs are (1) *Family structure*: factors such as number, type, and geographic proximity of family members that influence the extent of interaction⁸; (2) *Associational solidarity*: frequency and type of interactions and common

⁸ Bengtson and Schrader (1982) also make a particular point that children-in-law cannot be neglected in intergenerational interaction, which makes particular sense in the case of China where evidence has shown that, for instance, daughters-in-law are providing support no less than sons (Hu, 2017), and that support from

activities; (3) *Affectional solidarity*: subjective reflections of the quality of interactions and feelings and sentiments; (4) *Consensual solidarity*: the extent of agreement on values, attitudes, and beliefs among family members across generations; (5) *Functional solidarity*: the cross-generational exchanges of assistance and support; and (6) *Normative solidarity*: the expectations and presumed obligations in intergenerational interactions (e.g. Bengtson and Schrader, 1982; Bengtson and Roberts, 1991; Katz and Lowenstein, 2010; Guo, Chi and Silverstein, 2012).

The six elements are interrelated and the relationships among them are non-linear (Bengtson and Roberts, 1991). Empirical evidence shows, for instance, a higher level of normative solidarity is positively related to high levels of affectional and associational solidarity; a greater structural opportunity (e.g. residential proximity) contributes to an intense association (Bengtson and Roberts, 1991), and affection between parent and adult child is associated with greater reciprocal exchanges in various forms of help and support (Parrott and Bengtson, 1999). However, in their influential study, there is a lack of evidence regarding the association between intergenerational exchange relations and family norms or perception of reciprocity, leaving room for researching the dynamics of exchange patterns across different generations.

Later research focusing on the intergenerational exchange contributes to the understanding of intergenerational solidarity by, for instance, discussing the reciprocal relationships between generations. Although the term "reciprocity" implies rights to receive and responsibilities to offer support, namely, the support flows in both directions across generations, the volume received and provided is not necessarily equal (Li and Shin, 2013). Besides, the expectation of future support allows for the considerable time lag in exchange behaviours (Izuhara, 2010), which also demonstrates the impacts of social and cultural norms on intergenerational exchange. Furthermore, to capture the complexity of intergenerational relations in the real world, and in particular, to better understand the generational relations in extended families, scholars have moved beyond parent-child relations and tailored the intergenerational solidarity to three generations, namely, the interactions among

daughters-in-law (rather than sons) are associated with lower level of depressive symptoms (Cong and Silverstein, 2008).

grandparents (the older generation), adult children (the working-aged generation), as well as the grandchildren (the young generation) (e.g. Chen, Liu and Mair, 2011; Izuhara and Forrest, 2013b).

Admitting the significant contribution of the solidarity model to the understanding of the multidimensionality of intergenerational relations, however, people may argue that solidarity alone is hardly enough to capture the whole picture of the relationships between generations, especially in the changing time when different values and norms collide. Prior to the intergenerational ambivalence approach, studies on intergenerational relations tended to interpret consensus and shared values as solidarity and the negative aspects of family life as "an absence of solidarity" (Lüscher and Pillemer, 1998, p.414). It simplified the complex and dynamic relationship between generations within the family sphere to an "either-or" situation. Instead, conflicts arise from daily interactions, and sometimes conflicts may even result from solidarity itself (Lüscher and Pillemer, 1998). For instance, intergenerational conflicts are more likely to be generated among inter-dependent generations (Braiker and Kelley, 1979).

Many scholars have been trying to define intergenerational ambivalence and explore its implications for studies of intergenerational relationships. For instance, Lüscher and Pillemer (1998) define intergenerational ambivalence as "contradictions in relationships between parents and adult offspring that cannot be reconciled" (1998, p.416). The contradictions in this context are discussed at two levels, that is, contradictions at the level of social structure such as roles, norms, and expectations, and contradictions at the subjective level such as cognitions, emotions and motivations (Lüscher and Pillemer, 1998). Connidis and McMullin (Connidis and McMullin, 2002) further develop the concept of intergenerational ambivalence as "structurally created contradictions that are made manifest in interaction" (Connidis and McMullin, 2002). They agree with Lüscher and Pillemer's (1998) definition of the two-level of contradictions, but they underline the individuals' agencies in the negotiation of relationships within the constraints of structured social relations (Connidis and McMullin, 2002). They further claim that intergenerational ambivalence is the basis for social action, as it either reproduces the contradictions and paradoxes in existing social structured relations or lead to individuals' action to resolve ambivalence and change structural arrangement (Connidis and

McMullin, 2002).

The above discussion paves way for using intergenerational ambivalence as a bridging concept to link the analyses of contradictions at the micro, meso, and macro levels (Lüscher, 2002; Connidis, 2015). For instance, the concept links psychological ambivalence experienced by the individuals, the contradictions in social institutional resources and requirements, and the macro-level systemic inequalities caused by the structured social relations such as gender and age (Lüscher and Pillemer, 1998; Connidis, 2015). Moreover, it also links individuals' attempt to exercise agencies to negotiate in the intergenerational relationships to "the opportunities and constraints embedded in social institutions, social structure, culture, and economic and political processes" (Connidis, 2015, p.79). The latter, especially social policies, are also crucial to understand "sources of ambivalence, their implications for negotiating relationships, and solutions to socially created ambivalence that go beyond individual adaptation" (Connidis, 2015, p.83). For instance, the way in which the relationship is negotiated is not only determined by the resources owned by the individuals in the relationship and the cultural values and beliefs held by them (Bengtson et al., 2002; Connidis and McMullin, 2002), but might also be shaped by (the lack of) social policies which can either contribute to avoiding intergenerational conflicts via eliminating and/or reducing social structural contradictions (Bengtson et al., 2002; Connidis and McMullin, 2002).

This section starts with a review of two theoretical approaches to the understanding of intergenerational relationships. The intergenerational solidarity model highlights the inter-related multidimensional "building blocks" of relationships and interactions between generations within the family sphere (Bengtson et al., 2002, p.572). The intergenerational ambivalence model, on the other hand, provides a framework to bridge the multilevel analysis of intergenerational relationships by linking individuals' experience and agencies, institutions, and social structured relations (Connidis and McMullin, 2002; Connidis, 2015; Lüscher, 2002). Both approaches provide valuable theoretical insights into the analysis of intergenerational (support) relationships in Chinese families. Next, the section continues to review empirical evidence and identify the (changing) patterns of China's intergenerational relationships.

3.3.2 Patterns and changing norms in China's intergenerational relationship

As discussed in the previous chapter (Chapter 2.3), intergenerational relations in Chinese families have for long been seen as deeply rooted in the Confucian culture, especially in the Confucian filial piety which on one hand emphasises reciprocal relationships but on the other on the obedience of the child to their parents (Yeh et al., 2013). The traditional filial piety requires adult children to live and behave in obedience to the parent(s)' will, stick to his/her land and seldom migrate to elsewhere, correside with (husband's) parents after marriage in a large, multi-generational, and extended family, as well as support and take care of older parents when they are in need. (Chen, Liu and Mair, 2011; Izuhara and Forrest, 2013a; Li and Shin, 2013; Lin and Yi, 2013; Abrahamson, 2017; Huang, 2018). Such cultural norms and their impacts on intergenerational relations had been rather stable for centuries during China's long agrarian society (Ebrey, 1991). However, the process of industrialisation and in particular, urbanisation, and accompanied by dramatic socio-economic and demographic changes has exposed the traditional intergenerational relations to great challenges. This part aims to review the existing literature on the (changing) patterns as well as the diversity and complexity of intergenerational relations within Chinese families.

Based on the intergenerational solidarity model and using a latent class analysis on provincial survey data, Guo *et al.* (2012) portray five types of parent-child relations in rural China. The five types of intergenerational relationships identified in rural China (Guo, Chi and Silverstein, 2012) are distinguished from each other by different combinations of degrees in geographic proximity, frequency of contact, monetary and instrumental support, emotional closeness and conflict. Among those types identified by Guo *et al.* (2012) , the most prevalent intergenerational relationships is the distant ascending relationship (33.6%), where there is a low level of cohesive generational ties and strong conflict, greater geographic distance between generations, but upward child-to-parent monetary support predominating in the intergenerational interactions. Moreover, compared with intergenerational relationships in other societies, the most unique type of intergenerational relationship (30.0), where although with great geographic distance and little contact between generational relationship (30.0), where is a low level of cohesive generational relationship size the intergenerational interactions. Moreover, compared with intergenerational relationships in other societies, the most unique type of intergenerational relationship found in rural China is the distant reciprocal ties relationship (Guo, Chi and Silverstein, 2012), where although with great geographic distance and little contact between generations, there is a high level of monetary support and instrumental support flowing in both directions (i.e., upward child-

to-parent and downward parent-to-child).

Guo and his colleagues' findings on one hand highlight an increasing geographic disparity between generations caused by domestic migration. For instance, in their latent class analysis, the only explanatory variable which shows a high level of statistical significance (p-value smaller than 0.1%) across the five types is the migration status of adult children (Guo, Chi and Silverstein, 2012). On the other, the study shows that the lack of geographic proximity, however, not necessarily leads to a weaker intergenerational support network across generations. Instead, as indicated by the study, both upward and downward support are found to remain strong in those families (Guo, Chi and Silverstein, 2012).

Similar findings are also reported in more recent studies. For instance, based on 38 interviews with migrant families in Hunan and Shenzhen, Gu uses the intergenerational contract as an analytical tool to understand "space strategies" (2021, p.11) adopted by both generations in migrant families. For instance, older people in migrant families are found to tend to be staying at village residences while receiving financial support and/or compensation from migrant adult children and providing care support to their grandchildren (Gu, 2021). The latter form of living arrangement and/or household structure is often referred as "skipped-generational" (e.g. Gu, 2021; Shi, 2017; Chen, Liu and Mair, 2011; Arrondel and Masson, 2006), where the older generation take care of grandchildren while the middle-generation migrates provide with financial support. Chen and her colleagues investigate the skipped-generational ties by using a longitudinal dataset (China Health and Nutrition Survey) and confirm the new pattern that grandparents provide extensive care services for young, pre-school aged grandchildren in both developed urban areas and less developed villages (Chen, Liu and Mair, 2011). Alternatively, instead of staying in villages, older people might also (temporarily) relocate to the places where adult children work to provide childcare support and boost intergenerational solidarity (Qi, 2018). Based on the fieldwork and 88 in-depth interviews in six Chinese cities with considerable migrant workers, Qi (2018) describes older people of migrant families as the "floating grandparents", who take initiatives to reinterpret and renegotiate intergenerational relationships with their adult children.

The above evidence shows that adult children become increasingly dependent on intergenerational childcare support from older parents. Although grandparental childcare is not unique to China or even East Asian societies (e.g. see Blome, Keck and Alber, 2009; Hank and Buber, 2009; Bratti, Frattini and Scervini, 2018; Cox, Galasso and Jimenez, 2006 for studies in European countries), this pattern reveals the changing norms from traditional filial piety which requires adult children to provide unconditionally for older parents to an inter-dependent, but most importantly, a reciprocal intergenerational relationship in Chinese families. The concept of filial piety which historically emphasised the responsibility of children for parents is shifting to one that comprises reciprocal norm, where aged grandparents become an important source of care support instead of merely acting as a recipient of support in the intergenerational flow of resources (Chen, Liu and Mair, 2011). For instance, it is found that grandparental childcare support is strongly related to child-to-parent upward financial support (Gruijters, 2018; Bao, 2019). The "unconditional" filial piety of adult children, as put by Shi (2009), is to be earned by older people by fulfilling their obligations as parents, which extends from upbringing to support in later life stages such as grandparental childcare. Grandparental childcare arrangement on one hand demonstrates the flexibility, resilience, and solidarity of Chinese families in protecting their members and coping with new challenges (Guo and Zhang, 2021; Wang, 2021). On the other, it also contains the potential source of intergenerational conflicts caused by, among many other factors, the lack of supportive family policies such as childcare and labour market policies (Xu, Zhou and Ling, 2019).

The inter-dependence and reciprocal intergenerational relationship are also manifested in the sphere of housing-related support. For instance, by applying a support flow model, Li and Shin (2013) investigate the housing-centred support between retired older parents and their adult children in Tianjin, which includes both upward child-to-parent and downward parent-to-child support. In their definition, housing-related support consists of not only support in financial terms such as transfers to assist purchase or rent housing but also support in non-financial terms such as co-habitation arrangements (Li and Shin, 2013). This new, but not dominant pattern in the sphere of housing support suggests that the traditional adult-children-to-older-parents support relationship is gradually being shifted to an exchange relationship, where parents provide material support and receive care

and/or emotional support from their adult children in return (Li and Shin, 2013). The emerging pattern of intergenerational inter-dependence and reciprocity has been triangulated by Izuhara and Forrest's comparative qualitative studies in Shanghai and Tokyo (2013a, 2013b). They innovatively conducted semi-structured, face-to-face interviews with members from three generations in the same families to capture the complexity of intergenerational interactions and provide insights into the dynamics of the support relationship in greater depth (Izuhara and Forrest, 2013b). The qualitative data indicate that there is a decreasing dependence of older generation and meanwhile an increasing dependence among the younger generation (i.e., adult children) in housing-related support; moreover, their study also confirms the extensive role of grandparents in looking after pre-school aged grandchildren (Izuhara and Forrest, 2013a).

Both Li and Shin's (2013) and Izuhara and Forrest's (2013a, 2013b) studies share a common limitation in external validity as respondents are from developed metropolitans, where older people are more likely to be better-off or less vulnerable groups than their rural peers and therefore ending up as a "donor" rather than a "recipient" in the flows of intergenerational housing-related support. Nevertheless, their studies confirm the shift from a unidirectional support relationship to a reciprocal intergenerational relationship. Resources owned by older people, whether in the form of childcare, time and housework (Zhou, Kan and He, 2021; Hertog and Kan, 2021; Kan et al., 2021), or housing, are mobilised, redistributed, and exchanged across generations within Chinese families.

Apart from the geographic proximity between older people and their adult children, intergenerational co-residence as a special form of living arrangement has also been studied in the intergenerational relationship literature. Previous literature on intergenerational co-residence tends to either examine its impact on the wellbeing of older people and their adult children or view it as a form of intergenerational support itself and examine how far it has been influenced by public pension arrangements. For instance, a growing body of literature has been attempting to identify the relationship between the intergenerational co-residence and older Chinese's psychological wellbeing and mental health (Silverstein, Gans and Yang, 2006; Cong and Silverstein, 2008; Liu et al., 2019; Yuan, Zheng and Hui, 2021). It has also been found that intergenerational co-residence is closely

related to the labour supply of working-age adult children or time allocation patterns in Chinese and Japanese families (Zhou, Kan and He, 2021; Hertog and Kan, 2021). Whilst other studies attempt to view intergenerational co-residence as a form of long-term older care support (Gruijters, 2017; Kumar and Williams, 2021) or grandparental childcare support (Chen, Liu and Mair, 2011; Shi, 2017; Han, Whetung and Mao, 2020). There is also an emerging body of research on the potential impact of public pensions on intergenerational co-residence (Chen, 2017; Cheng et al., 2018; Peng et al., 2021).

However, the above research tends to simplify intergenerational co-residence by reducing it to a single dimension of intergenerational interactions. Moreover, existing literature fails to put this special form of living arrangement (and/or intergenerational support) under the wider and dynamic context or take into consideration the potential interconnections between co-residence and other forms of support. For instance, in their study on the impact of state pensions on intergenerational private transfers, Chen and his colleagues (2017) exclude older Chinese who co-reside with adult children. The findings from this study can be therefore considered as being biased as a separate study indicates that older people who do not co-reside with adult children but live within close proximity tend to receive more intergenerational monetary transfers than those who live with adult children (Chen, Leeson and Liu, 2017).

The existing studies on intergenerational support relationships in Chinese families have also highlighted the gender aspect. Family resources in China are channelled along the patriline to sons rather than daughters (Eklund, 2018). Sons are required and expected to take the responsibility of providing and caring for their older parents, while the filial obligations of daughters are transferred to the husband's parents (Croll, 2001; Eklund, 2018). Evidence shows that compared to daughters, sons are more likely to receive both financial support and instrumental support from older parents (Hu, 2017; Chen and Jordan, 2018). However, the gendered division in the provision of upward child-to-parent support is being weakened. For instance, studies show that daughters are more likely to provide support and that the overall economic support from daughters is similar, if not higher, compared to sons' (Gruijters, 2018; Hu, 2017; Xie and Zhu, 2009). Besides, daughters tend to provide more care and emotional support (Silverstein, Gans and Yang, 2006; Huang, 2018; Shi, 2009) and are often

perceived by older people as more filial (Shi, 2009; Guo et al., 2020). It on one hand reflects the financial independence and economic empowerment of Chinese women, which enables daughters to play a more active role in intergenerational support networks. On the other, it is also a consequence of the reinterpretation of filial behaviours, as care and emotional support provided by daughters are deemed by older parents as important as financial support.

In fact, previous studies have shown that the extensive direct provision of financial support across generations has shifted to indirect, material or emotional support (Izuhara and Forrest, 2013a, 2013b). Moreover, it is also reported that the receipt of intergenerational support from adult children leads to a higher level of life satisfaction (Chen and Jordan, 2018), lower probability of depression (Cong and Silverstein, 2008), and less psychological ambivalence experience (Guo et al., 2020) in old age. It shows that intergenerational support carries emotional meanings and values.

To sum up, the above studies have demonstrated the complexity, diversity, multidimensionality, and dynamics of intergenerational relations within Chinese families. Intergenerational support can be in different forms (e.g. care, emotional, financial), occur in both directions (i.e., upwards and/or downwards), and involve in different generations (namely, grandparents, adult children, and grandchildren). These patterns suggest that the connotation of filial piety is changing, and intergenerational reciprocity has been gradually added to the domain of this cultural norm. Although it is found that there is an increasing interdependency among adult children, in particular in terms of housing-related support and childcare, it might reflect the process of renegotiation of generational contract under the situation such as precarious labour market and absence of institutional childcare services, rather than a reflection of an eroded generational contract or reversed intergenerational resources flow (Croll, 2006). Family is still a crucial unit to protect its members, however, faced with great structural challenges, the way in which family fulfils the role of protection, or in other words, its strategy, has been changing and under renegotiation to adapt to the socio-economic and demographic transition and maximize the benefits of its members (Croll, 2006; Izuhara, 2010; Izuhara and Forrest, 2013a; Lau, 2013; Papadopoulos and Roumpakis, 2017). It is therefore of great theoretical and empirical significance to explore how family adjusts its strategies and interplays with the state to

protect older people.

3.4 Bridging the macro-and micro-level analyses of support

3.4.1 Two levels of analysis of intergenerational support

This section attempts to put the analysis of micro-level intergenerational relations within families under the larger, macro-level analysis of related social policy arrangements. One reason for bridging the micro-level intergenerational relations and the macro-level interactions across different age cohorts in a larger social structure is due to an attempt to shed light on the debate on generational equity. As discussed in the previous chapter, the issue of population ageing has fueled the debate of generational equity (Williamson, McNamara and Howling, 2003; Lau, 2013). The belief that inequality is generated between generations by the difference in cohort size and pension policies leads to an intense relationship between older people and the working-age population. However, when taking into consideration the intergenerational relations at the micro-level, it has been demonstrated that there is a high level of generational interdependency within families where support flow in both directions (Williamson, McNamara and Howling, 2003). It is also suggested that public transfers to the older generations are partially channelled back to the younger generation. As a result, social policies that benefit older people also benefit the young indirectly, in a sense that resources are redistributed via the intergenerational family support network (Kohli, 1999; Williamson, McNamara and Howling, 2003).

Another reason for bringing the two levels of analysis together comes from the agency-structure perspective. As indicated above, the intergenerational relations are dynamic in nature and are under renegotiation in face of the challenges and new social risks resulting from massive domestic migration, rapidly ageing population, increasing females' labour participation. The shift in the patterns of intergenerational relations can be seen as an outcome shaped by the interactions between individual and/or collective agency and social structure. The decisions on the way in which intergenerational support network operates are on one hand made by the members of the family. But those decisions and negotiations, on the other hand, are largely affected by and limited to what is available under the

certain socially-structured conditions (for example, see Ochiai, 2009; Izuhara, 2010). For instance, in the absence of institutionalised public childcare provision and well-regulated or developed childcare services from the market, younger older people in China have taken on the primary responsibility of caring for their pre-school aged grandchildren. It shows that the availability or absence of such social services influences the generational practice within families (Izuhara, 2010). The availability of older people caring for young children, in turn, affects women's labour participation and willingness to give birth (Chen, Liu and Mair, 2011).

Moreover, the multilevel analysis of intergenerational relationships also echoes with the intergenerational ambivalence theory in that it links the micro-level intergenerational interactions within the family to the opportunities and constraints embedded in social structure, institutions, and policies (Connidis, 2015). By bridging the two levels of analysis, it will provide a better understanding of the role of family in protecting older people and the possible interactions between what happened within families and what happened in the public sphere.

3.4.2 The "crowding-out/in" hypothesis and evidence

Debates on the potential impact of public pensions on family support have long been concentrated on the two dominating motives of private transfers: the altruism model and the exchange model. According to the altruism model, the behaviour of providing support to family members is driven by the altruism motive (Becker, 1974; Becker and Barro, 1988). In the case of intergenerational private transfers, adult children provide support to their older parents because the utility of adult children is partly dependent on the utility of their older parents, and vice versa (Becker, 1974; Becker and Barro, 1988). A pure altruism model assumes that public transfers to older people increase their utility as good as private transfers, therefore private transfers from adult children would be substituted, which is also known as the "crowding-out effect".

In contrast to the altruism model, Cox (1987) argues that support provided by adult children to older parents could be based on the exchange motive. The underlying assumptions for the exchange motive are that the utility of adult children is partly determined by support such as care and services received

from older parents, and that older parents' marginal utility of private transfers decreases with their total incomes (Cox, 1987). As indicated by Cox (1987), adult children need to provide more private transfers to sustain the same level of care and services from their older parents. Cox's approach tends to view intergenerational support behaviour, either in the form of financial transfers and/or services, as "part of a transaction that contains a quid pro quo" (Cox, 1987, p.508) between family members, where individuals make rational choices to maximise their individual interests. This process represents what economists describe as the "crowding-in" effect, where public transfers stimulate more private intergenerational transfers.

Earlier evidence indicates that the crowding-out effect of public transfers may be of less importance in developed countries (e.g. Cox and Jakubson, 1995) than in developing countries. Cox et al. (2004) later clearly point out that developed countries with large public transfers are the "wrong place" to look for the crowding-out effect, as it may be a "fait accompli" (2004, p.p 2194). They propose that the best place to investigate crowding-out is developing countries where public transfers are relatively small so that responsive transfers can be better detected (Cox, Hansen and Jimenez, 2004). In the case of Peru, it is found that child-to-parent transfers would have been 20% larger without social security benefits (Cox and Jimenez, 1992). Amuedo-Dorantes and Juarez (2013) find that in rural Mexico the old-age public transfers lower the likelihood of receiving domestic transfers by 31%, and the impacts on female older people are greater than male older people. In terms of the probability of the occurrence of private transfers, Jensen (2004) estimates the crowding-out effect of the expansion of old-age pension in South Africa. He finds that a one-rand increase in pension income of the older leads to a 0.25-0.30-rand reduction in private transfers, and after adjusting for the crowding-out, the author re-evaluates the redistribution effects of the pension programme and confirms the overstatement of the anti-poverty effects (Jensen, 2004).

However, it is argued that the altruism and exchange motives may co-exist and each may predominate in different parts of the income distribution (Cox, Hansen and Jimenez, 2004, p.p 2196). Maitra and Ray's study (2003) has confirmed it by stressing that in South Africa the crowding-out effect holds only for households below the poverty line rather than the non-poor. As a consequence, the

interactions between public pensions and private transfers are, in fact, inequality-increasing because of their "asymmetric effects" on the poor and non-poor (Maitra and Ray, 2003, p.p 43). It has also been found in South Korea that the crowding-out effect does not hold for all older people (Lee and Lee, 2009), except that the crowding-out effect is found to be less of concern for the poor but more of an issue for middle-income families. In China, the crowding-out effect of public pensions on private transfers is found to be insignificant for rural older people (Gibson, Olivia and Rozelle, 2011), or minor for the urban poor (Chen et al., 2017). Yet for urban older people with annual pension incomes more than \pm 5000 (c. £ 550), private transfers are crowded in by public pensions (Chen et al., 2017). The possible heterogeneity in the interaction between public pensions and family support behaviours highlights the redistributive effect of public transfers.

The co-existence of crowding-in and crowding-out effects of public pensions can also be observed when taking support flow in both directions into consideration. For instance, Reil-Held (2006, p.264) examines the interactions between public and private transfers in Germany, where older people are viewed by the researcher not only as "benefactors" but also as "beneficiaries". It is found that the more public transfers older people receive, the more private transfers they provide to younger generations (crowd in downward private transfers) but the fewer private transfers they receive from younger generations (crowd out upward private transfers) (Reil-Held, 2006). The crowding-in of downward private transfers from older people to adult children also proves that public transfers to the older are partially channelled back to the younger generation via informal support network (as suggested in Kohli, 1999; Williamson, McNamara and Howling, 2003).

These studies have focused on and measured merely the monetary aspect of intergenerational support, which, however, have oversimplified the multidimensional intergenerational relations as discussed earlier in this chapter, and have shown an incomplete picture of the interactions between welfare states and familial support across different generations. By taking Germany as a model case and analysing the relations between the public and private transfers on the aggregate level, Kohli (1999) considers the flow of material transfers and instrumental support (excluding care) across three generations and argues that far from crowding out familial support, the public pension transfers to the older have crowded in new generational links.
The crowding-in effect has also been found in later comparative studies. For instance, based on the exchange motives and intergenerational reciprocity, Künemund and Rein (1999) have further confirmed the process of "crowding-in effects" of public transfers by comparing the patterns of intergenerational support in five countries with different levels of welfare spending (the United States, the United Kingdom, Canada, Germany, and Japan). Their study has taken advantage of micro-level comparative data and shows that the more older people receive from the welfare state, the more likely they will be engaged in mutual support across generations (Künemund and Rein 1999). Also from a comparative welfare state perspective, Motel-Klingebiel et al. (2005) discuss the interactions of intergenerational support within families (informal support) and welfare state support (formal support) in five different welfare states (i.e., Norway, England, Germany, Spain, and Israel). Consistent with the findings of the above studies, they conclude that in welfare states with a higher level of formal social services, the total quantity of support received by older people from family is greater (Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005). Drawing data from Scandinavian countries, Continental West European countries, Southern European familial countries, and Eastern Post-Communist countries, Brandt and Deindl (2013) find out a positive correlation between public transfers and the occurrence of help and financial transfers.

These studies have challenged the dichotomy in support motives and brought in the institutional and contextual factors to the understanding of the potential interactions between public transfers and private transfers. The discussion on welfare states and family solidarity, for instance, suggests that public transfers to older people may reduce potential conflicts over financial resources between the two generations and therefore create new forms of reciprocity (Blome, Keck and Alber, 2009; Künemund and Rein, 1999). In this sense, pension benefits from the state will not necessarily crowd out family support or lead to the erosion of family solidarity, instead, grown children can then spend more time in paid employment and/or provide more emotional and instrumental support to older parents, public transfers crowd in family support (Blome, Keck and Alber, 2009). The above evidence also highlights the division of labour among family, the state, and private sector in supporting and securing the older (Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005), and specialisation of private and public support (Deindl and Brandt, 2011). Moreover, the comparative approach also

suggests that the cultural and social norms on family support arrangement and the symbolic values of private transfers are crucial factors in the interactions of public transfers and private support (e.g. Blome, Keck and Alber, 2009; Kohli, 1999; Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005).

In the case of Greater China, there are only a few studies that have attempted to detect and measure the potential interaction between public pensions and private transfers, in particular lacking empirical evidence that focuses on the recent public pension expansion in the past decade. The exceptions, however, have shown inconsistent findings. For instance, by using evidence from Taiwan and applying the difference-in-differences (DiD) research design, Peng et al. (2021) find a significant crowding-in impact of Taiwan's old-age allowance programme on intergenerational contact, but the impact is less significant on financial transfers. By employing a fuzzy regression discontinuity design on two provincial datasets Chen et al. (2018) examine the impact of NRSP on the amount of intergenerational transfers among rural families and report a slight decrease in the skippedgenerational private transfers (i.e. transfers between grandparents and grandchildren). Using two waves of the China Health and Retirement Longitudinal Study (CHARLS) 2011 and 2013, Nikolov and Adelman (2019), Wang and Chen (2017), and Ko and Möhring (2021) have found contradictory impacts of NRSP. The former study employs a difference-indifference-in-differences approach and finds a negative impact on the probability of older people receiving private transfers from adult children and a statistically insignificant "crowding-out" effect on the amount of private transfers (Nikolov and Adelman, 2019). While the two studies carried out by Wang and Chen (2017) and Ko and Möhring (2021) apply a fuzzy regression discontinuity design and a first-difference regression model and both report a highly significant and positive impact on the amount of private transfers received by older people.

A few more studies based on analyses of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) have also presented inconclusive results. For instance, based on their propensity score matching (PSM) research design and Tobit regression analysis of the CLHLS 2008, 2011, and 2014, Liu and Zhang (2019) find an "crowding-out" effect of the new pension schemes on the probability of older people receiving private transfers from adult children whereas no statistically significant impact

is found on the overall amount of private transfers. Using a similar method (PSM and DiD) to analyse the CLHLS 2008 and 2011 datasets, Chen and Zeng (2013) find a significant "crowding-out" effect of NRSP, where every one-yuan increase in the new pensions leads to a 0.81 yuan decrease in private transfers from adult children. Based on their findings, Chen and Zeng (2013) claim that adult children of older people are the main beneficiary of the new pension schemes as the new pensions help to relieve their financial burden of providing for older parents. Moreover, it is also found that the new pensions "crowd in" downward private transfers from older people to their offspring (e.g., see Zhang and Sun, 2011; Zhu, 2019). Apart from the differences in analytical approaches they have applied and the datasets they have used, one possible reason for the inconsistency of evidence may lie in the time lag between the introduction of the new pensions and the responses of family support arrangements which may lead to the ambiguity.

To sum, researchers have investigated the potential crowding-out/in effects of the public transfers from both economics and comparative welfare states perspectives. The former perspective tends to ignore the multifaced nature of intergenerational relations and tend to see different sources of support as homogeneous, therefore offering limited scope on the understanding of interactions between what happened in the public sphere and within families. To better capture the dynamics of the response of familial support across generations to the public provision of welfare and its implication on the wellbeing of older people in China, a combination of macro-level analysis of welfare states and micro-level analysis of the multidimensional intergenerational support can be of great use. However, studies from the perspective of welfare states have employed comparative design (Künemund and Rein, 1999; Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005), although the best way to investigate the potential crowding-out/in effect, as claimed by Künemund and Rein (1999), would be longitudianl analysis before and after a significant change in the welfare system. Besides, both economic literature and comparative welfare states literature acknowledge that crowding-in and crowding-out may occur in different situations, which creates room for qualitative studies to identify the specific conditions where different effects occur (Künemund and Rein, 1999).

3.5 Conclusion

3.5.1 Family as a unit of analysis

Going back to the earlier enquiry, "how do older Chinese achieve old-age security since the 2009 pension reform?", the review of previous literature in this chapter highlights the risks related to old age and the support from the public and the private spheres. Throughout the chapter, intergenerational support and its interactions with social institutions, structure, and policies are at the centre of research debates. Two levels of agency emerge from the discussions of previous studies: the agency of individuals themselves (i.e., older people and/or their adult children), and the agency of family as a socio-economic actor (Papadopoulos and Roumpakis, 2017, 2019).

To understand family and the role of familial agency in the arrangement and negotiation of intergenerational support under the wider social structure, one should consider the economical, sociological, ideological, and political implications of family. For instance, family plays an important role in income redistribution, labour supply and consumption; family provides for care needs and arranges relations across generations; family has an impact on the continuity and change in values; family can be seen as a site of social control (Daly, 2010). Family can be seen as an economic actor in terms of stocking "moral capital", a concept coined by Silverstein *et al.* to refer to "the internalised social norms that obligate children to support their older parents" (Silverstein, Conroy and Gans, 2012, p.1246). The concept of family is further expanded to a socio-economic actor by Papadopoulos and Roumpakis (Papadopoulos and Roumpakis, 2017, 2019), which on one hand generates relational goods and on the other organises different types of economic practices.

Studies on China's intergenerational relationship have, to a greater or lesser extent, touched the dual roles of family in organising and facilitating social production and reproduction (see Roumpakis, 2020 for informality in social production and social reproduction) and highlighted the familial agency in strategically coping with structural constraints such as geographic distance caused by China's massive domestic migration (Lee, Parish and Willis, 1994; Cong and Silverstein, 2012; Gruijters, 2018; Qi, 2018; Gu, 2021; Zhou, Kan and He, 2021). The familial agency is realised by, among others, the flexibility and resilience of China's intergenerational support network and the renegotiation

and reinterpretation of filial piety (Huang and Chang, 2020; Guo and Zhang, 2021; Wang, 2021). For instance, interviews show that it is viewed by older people as one of the core values of the new filial piety that familial interests take precedence over the interests of individual members (Guo and Zhang, 2021). The new patterns of intergenerational relationships in Chinese families indicate that the Chinese family acts as a corporate group (Lee, Parish and Willis, 1994; Cong and Silverstein, 2012; Gruijters, 2018) which actively adjusts to new challenges and situations, makes familial rational choices (Huang, 2011) and long-term arrangements to protect its members. In this sense, it is crucial to view family as a socio-economic agency and to understand how the Chinese family exercises its agency to (continue to) protect its members, especially how resources are mobilised, allocated, and redistributed via intergenerational support network.

3.5.2 Identifying potential research gap

This chapter identified that people in old age are likely to face higher risks of multidimensional poverty and social disadvantages. This is not necessarily the responsibility of older people themselves but also a consequence of social structural factors such as insufficient public protection (e.g., low level of or no access to pension benefits) and spatial disparity (i.e., regional imbalance and urban-rural differences). Especially, but not exclusively, in China old-age insecurity had long been a more serious issue in rural and underdeveloped areas than in urban developed areas due to weaker networks of public support but also due to the penetration of informal networks of work. Overall older people in China were at a higher risk of poverty than the younger generations or their peers in OECD countries. From the literature, it was shown that the experience of poverty or hardship in old age may be associated with factors such as gender, hukou type, living arrangement, access to public pension benefits, employment history, educational background but at the same time, as the literature suggests turning to family members, adult child(ren) in particular, for old-age security is a widely accepted belief and practice. The intergenerational relationships within Chinese families have multidimensional aspects and the support across generations takes on many different forms and flow in both directions (i.e., upwards and/or downwards). These relationships are dynamic and subject to change and renegotiation under new social and economic situations. As a result, it becomes imperative to explore how dependency on family networks may become mutual between generations as older people might

support their adult child(ren) with childcare, and some better-off urban older people may even end up as a "donor" rather than a "recipient" in the intergenerational support. It becomes equally crucial to explore how and how far public support might crowd out family support as suggested in altruism motive theory, or on the contrary, crowd in more family support in different forms.

Therefore, the question requests further investigations. There are so far numerous reasons: partly because the 2009 pension reform has made significant progress in extending the public pension coverage to those who have long been institutionally excluded from public protection. Another reason is that population ageing occurs at both society level and family level, leading to a changing family structure and therefore an increasing pressure on family to protect the young child(ren) and older parents. At the same time, the available literature is often limited in their scope to the province level or focus only on urban older people or rural older people. Besides, the potential interactions between public support and private support are far less studied in the context where public support is institutionalised and where the Confucian cultural plays such an important role in intergenerational relationships. Family is like a black box and from the existing literature little is known about the process of decision making and the strategies of resource mobilisation in terms of protecting older people from old-age poverty, especially in China since the 2009 pension reforms.

In this sense, this thesis sets the goal to understand how China's older people achieve old-age security 10 years after the 2009 pension reform. Specifically, it attempts to understand the following research questions: to what extent do Chinese older people rely on the state and/or the family, and how does this picture change over time and vary across groups? Is public pension crowding out or crowding in family support, and how does this interaction differ among older people? How do older people renegotiate with their families to achieve old-age security since the 2009 pension reform? The next chapter will provide a detailed explanation of the mixed-method research design employed in this study.

4. Research design: a mixed-method approach

4.1 Research aim and questions

This study aims to contribute to the understanding of how China's older people achieve old-age security in retirement after the nationwide extension of public pension coverage since the 2009 pension reform. Built on the contextual background of old-age security and family support in China in Chapter 2, and the review of theoretical and empirical studies of old-age related disadvantages as well as the implications on social policy and intergenerational support in Chapter 3, three general research questions (RQs) were developed to realise the research aim.

<u>RQ</u> 1: What is the impact of public pensions on family dependency among Chinese older people? Specifically, it asks:

RQ 1.1 - To what extent do Chinese older people financially depend on family support?

RQ 1.2 - Does public pension decrease older people's financial dependence on family support?

RQ 1.3 – Is there any urban-rural difference in older people's family dependency?

<u>RO 2:</u> Does public pension crowd out family support?

Specifically, it asks:

RQ 2.1 – Does public pension decrease upward intergenerational support from adult children?

RQ 2.2 – Does public pension decrease downward intergenerational support to adult children?

RQ 2.3 – Is there any urban-rural difference in the above interactions?

<u>RO 3</u>: How do Chinese older people arrange and negotiate for family support in the context of changing family structure and new public pension arrangements?

Specifically, it explores the arrangement patterns, the negotiation process and strategies in the family sphere, and the interaction process between older individuals (and their families) and factors outside the family sphere.

This short chapter presents the rationales for the mixed-method research design employed to answer the above research questions. It starts with a discussion on the so-called "methodological dichotomy" between quantitative and qualitative approaches and how methodological pragmatism addresses the potential conflicts. It then provides an alternative position by bringing in critical realism and critical methodological pluralism and focusing on its implications for the use of mixed methods. After a brief review of the complex relationship between agency and structure, the concept of the open system, the abductive inference, and the generative mechanism implied by critical realism, this chapter concludes with a discussion about why and how a mixed-method research design is appropriate for the presented study.

4.2 Beyond the dichotomy: the pragmatic approach

Quantitative and qualitative approaches have been viewed as two different traditions by many social science researchers. Some may believe that the distinctions between them are so significant that the two can hardly be combined in a single research project. Quantitative methods are often characterised by numerical data collected by structured interviews, survey questionnaires, official statistics, or existing datasets. Concepts and theories about social phenomena are abstracted through operational definitions and measurements into variables and hypotheses (Bryman, 1984). Mathematics and statistics are then applied to construct models, test hypotheses, and make predictions. There is often a distance between researchers and the observed in quantitative studies (Bryman, 1984). Qualitative methods, on the other hand, typically involve non-numerical textual data collected by semi-structured or unstructured interviews, focus group discussions, participant observations, or from documents, archives and so on. Based on analyses of the content, themes, narratives, discourse, social phenomena, or individuals' behaviours are contextually understood through the perspectives of and interpretations by the observed themselves (Bryman, 1984). The distance between researchers and the observed is closer than that in quantitative methods, as the former often involves in-depth fieldwork. Due to the great depth of enquiry, qualitative methods can generate "rich" or "thick" data.

Researchers who are sceptical about the combination of both quantitative and qualitative methods argue that the differences in the data collection and analysis techniques between the two approaches are, in essence, a reflection of two distinct and incompatible paradigms, or specifically, ontological and epistemological assumptions (for example, Guba, 1985). Ontology involves the philosophy of

"being" and "existing", specifically, it asks questions about the nature of social reality (Hay, 2002; Bryman, 2016). Some ontological issues include whether social reality can be considered as objective external facts independent of social actors (objectivism), or they should be considered as continuously constructed by social actors in a certain context (constructionism) (Bryman, 2016). Ontology and ontological approaches attempt to provide positions to questions that can hardly be resolved empirically, such as the structure-agency relationship and the distance between the observable and the reality (Hay, 2002).

Epistemology involves the philosophy of knowledge, specifically, it asks questions about how the knowledge of social reality can and should be gained (Hay, 2002; Bryman, 2016). In social science, epistemological consideration focuses on whether the knowledge of the social world can be obtained through methods with similar principles and procedures of methods in nature science (positivism) (Bryman, 2016). Epistemological positions shape the answer to questions such as the extent to which specific knowledge can be generalised beyond the observed immediate context and the degree of confidence for the conclusions drawn from the observations (interpretivism) (Hay, 2002).

In essence, the ontological position determines what can be learnt about social reality, the epistemological position outlines how it can be learned. These two perspectives significantly, if not decisively, share the methodological approach, determining the selection of tools, strategies, and techniques to be employed in gaining an understanding of it. The methodological dualism between quantitative methods and qualitative methods then, often, reflects the dualism in the philosophical positions. Traditionally, quantitative approaches are viewed as related to ontological objectivism and epistemological positivism (Bryman, 2016). In this view, the subject of knowledge is the tangible social entities that exert constraining forces on social actors, the agency is determined by the structure, and the task of social research is to identify the generalisable covering law, and use deductive inference to test theories about structure and behaviours (Bryman, 2016; Hay, 2002; McEvoy and Richards, 2006; Maxwell and Mittapalli, 2015). At the other end, researchers adopting qualitative approaches are often seen as committed to ontological constructionism and epistemological interpretivism (Bryman, 2016). In this view, social reality is about social phenomena and their meanings which are constructed by social actors, the structure is caused by agency, and the task of

social research is to inductively provide an interpretation of how the social world is constructed and understood through the perspective of the people and their institutions being studied (Bryman, 2016; McEvoy and Richards, 2006; Hay, 2002). Therefore, the clash between quantitative approaches and qualitative approaches seems to reflect the embedded clash between positivism and interpretivism, objectivism and constructionism, structure and agency, and behaviours and meanings.

However, the above dualistic perspectives have been subject to criticism. For instance, scholars in favour of combining quantitative and qualitative approaches argue that the differences between quantitative and qualitative methods are to a large degree at technical levels, and the choice of methodological tools and techniques are not necessarily rooted in philosophical assumptions (e.g. see Bryman, 2016). It is further pointed out that the correspondence between epistemology and research methods is neither unambiguous nor sustainable as expected (Bryman, 1984, 2016; Becker et al., 2012). For example, there is an increasing number of quantitative studies exploring meanings by using questionnaires that contain questions about attitudes, perceptions, and feelings (e.g. see the use of European Social Survey in Jowell et al., 2007), and qualitative studies examining behaviours in the context (Bryman, 2016). It is argued that both quantitative and qualitative studies are concerned with behaviours and meanings, just in different ways (Bryman, 2016). Therefore, the links between epistemology and research strategies and techniques, as emphasised by Bryman (2016), are more of tendency rather than definitive connections.

Such claims about the flexible commitment to philosophical positions to some degree correspond with the ideas of methodological pragmatism. According to the pragmatic perspectives, the choice of research methods should be based on practical and empirical issues, and the conflicts and disagreements in ontology and epistemology between qualitative and quantitative approaches, which are not fundamental, can be ignored if there are practical benefits (Tashakkori and Teddlie, 1998). In other words, the priority should be given to the considerations such as the fit between the research questions and data collection strategies, as well as the resources available to researchers, rather than any prior philosophical commitment of researchers (Becker et al., 2012).

The pragmatists bypass the epistemological considerations and emphasise the potential benefits of

combing quantitative and qualitative methods. As put by Fincham and his colleagues, "Once the quantitative/qualitative distinction ceases to be treated as a rigid one then the benefits of mixed strategy research become fairly obvious" (2011, p.42). The "obvious" benefits, as highlighted by many advocates of mixed methods, include the triangulation of findings, the offset of each approach's disadvantages, the benefits from complementary methods and combined strengths, and the function of informing/facilitating the development of the other research approach (Creswell and Creswell, 2017; Bryman, 2016; Becker et al., 2012; Fincham et al., 2011; Tashakkori and Teddlie, 1998).

The above presents one of the ways out of the dichotomy and polarisation between qualitative and quantitative methods. Nevertheless, the claim that epistemological and ontological assumptions can be ignored in mixed methods research remain questionable. The lack of fundamental principles for combining different methods itself can hardly constitute a persuasive justification for evading the ontological and epistemological issues, let alone the great risks entailed in the separation of research methods and the concepts about the nature of social reality (Danermark, Ekstrom and Jakobsen, 2005). Alternatively, the methodology dichotomy can be also approached by providing a dialectical philosophical perspective. The following part will briefly discuss this perspective, namely, critical realism and its implications for the combination of quantitative and qualitative research methods.

4.3 Critical realism: implications for the mixed-method design

Critical realists agree with the methodological pragmatists on the view that the dichotomy and polarisation of quantitative and qualitative methods are fruitless and misleading (Danermark, Ekstrom and Jakobsen, 2005). Instead, it is suggested that social science researchers should "abandon the 'either-or' approach, and adopt the 'both-and' approach" (Danermark, Ekstrom and Jakobsen, 2005, p.2). However, critical realists differ from methodological pragmatists in that, instead of skirting around the seemingly conflicting ontological and epistemological positions embedded in quantitative and qualitative methods, they provide a new metatheory that reflects on the fundamental philosophical foundation on which mixed methods rest. Critical realists criticise what they regard as the illusive separation of ontology/epistemology and methodology, because social research always carries with the conception of the nature of social reality, whether explicitly or implicitly (Danermark, Ekstrom

and Jakobsen, 2005).

Before exploring these debates in more depth, there are two notes worth mentioning. First, although the discussion on how critical realism approaches the above philosophical positions is a stimulating subject, the primary aim of this section is to highlight its implications for the use of mixed methods. In this sense, one may find it disappointing if one expects to see a comprehensive account of the philosophical positions of critical realism⁹. Second, critical realism is not a research method, and there is no such thing as the method of critical realism (Danermark, Ekstrom and Jakobsen, 2005). Instead, based on the ideas about the nature of the social reality and about what knowledge can be possibly known, critical realists may find some methods "more productive" (Danermark, Ekstrom and Jakobsen, 2005, p.150), and that will be the focus of this section.

Critical realists believe that when talking about research methods, the emphasis should be switched from epistemological issues to ontological issues, as how the knowledge can be learnt is determined by the nature of the object to be studied – issues about what levels of social reality can be possibly known (Bhaskar, 1975; Danermark, Ekstrom and Jakobsen, 2005). One of the ontological foundations on which critical realism sits is that there are three domains of social reality: the empirical domain, the actual domain, and the real domain (Bhaskar, 1975). The empirical domain refers to the level of reality that we experience directly or indirectly, or the observable and experienced events and social phenomena, and it is often in this domain that we collect "data" for research; the actual domain refers to the level of reality where events occur, whether the events are experienced or not; and the real domain refers to the level of reality which has the potential to produce the events, namely the generative mechanism(s) (Bhaskar, 1975; Danermark, Ekstrom and Jakobsen, 2005; McEvoy and Richards, 2006; Zachariadis, Scott and Barrett, 2013). In short, the deep dimension of social reality, namely the generative mechanism(s), is separated from what can be observed and experienced.

Critical realists consider mechanisms as stratified; although each mechanism is emergent at its own stratum and cannot be reduced to the other, the higher strata of mechanism and structure can be

⁹ Alternatively, one may find it useful to refer to the work of Bhaskar (1975) and Archer and her colleagues (2013).

explained by underlying strata of mechanism(s) (Danermark, Ekstrom and Jakobsen, 2005). Besides, the relationships between mechanism(s) and actual effects are better understood as tendencies because the actualisation of causal mechanisms depends on various conditions (Lawson, 1997; Danermark, Ekstrom and Jakobsen, 2005; McEvoy and Richards, 2006). Those conditions under which the generative mechanism(s) can or cannot operate include the interactions between social structure and agency. Different from the objectivists' claim that social structure determines agency (structuralism), and the constructivists' claim that agency causes social structure (intentionalism), critical realists view both social structure and agency as emergent strata of social reality (Hay, 2002; Archer et al., 2013). They acknowledge the influence of social structure as the pre-conditions for individuals' agency (partly consistent with structuralism), but also appreciate the reflexivity and consciousness of social actors, which allows agents to reproduce and transform social structure (Archer et al., 2013, pp.373–374). What's more, critical realism sees the interactions as a continuous process where the outcomes of agents' reproduction and transformation then further constitute the pre-existing social structure for later socialisation (Bhaskar, 2010; Archer et al., 2013). The emphasis, therefore, is put on the interplay between agency and structure over time (Hay, 2002).

Critical realism is consistent with ontological objectivism in the claim that there exists an external social reality, but the two stances differ in the belief about the distance between the observed reality and the real mechanism and hence differ in the ways in which knowledge of social reality can be obtained (Danermark, Ekstrom and Jakobsen, 2005). Critical realists disapprove of the positivists' approach because the latter focus only on observable events and understand the causality as regularities or statistic relationships among events (Zachariadis, Scott and Barrett, 2013; Danermark, Ekstrom and Jakobsen, 2005; Maxwell and Mittapalli, 2015). They believe such approaches fail to recognise that social reality is an open system where there are complex interactions among social structure, human agency, and mechanisms (Danermark, Ekstrom and Jakobsen, 2005; McEvoy and Richards, 2006; Zachariadis, Scott and Barrett, 2013).

In this sense, critical realists claim that no particular method should be excluded beforehand in the study of this complex open system, and instead, practical research benefits from combining methods (Danermark, Ekstrom and Jakobsen, 2005). To differentiate from methodological relativism or

pragmatism, such an attitude towards combining methods is named "critical methodological pluralism", and the concepts of the two distinct empirical approaches are substituted with the concepts of "intensive" and "extensive" design (Danermark, Ekstrom and Jakobsen, 2005, pp.152; 161–171). The intensive approach refers to research methods that adopt qualitative data collection and analysis procedures. This approach is designed to answer research questions related to the process of the events, and to explore relations of connections, but is limited to a few cases and therefore is less generalisable (Danermark, Ekstrom and Jakobsen, 2005, p.165, see Table 6). On the other hand, extensive approaches refer to research questions related to regularities and patterns, and to explore relations of similarity, but is limited to explaining individual cases when the conditions changed (Danermark, Ekstrom and Jakobsen, 2005, p.165, see Table 6).

As claimed and encouraged by critical realism, the *ultimate* object of social science research is not to discover the covering law (as suggested by positivists), instead, is concerned with developing the understanding of the underlying powers, structures, and generative mechanisms that under certain condition(s) produce events and social phenomena (Danermark, Ekstrom and Jakobsen, 2005; McEvoy and Richards, 2006). It is suggested that the generative mechanisms are discovered in an intensive approach, as capturing how a mechanism works under certain conditions requires an indepth understanding of the causal power and process that produce events (Danermark, Ekstrom and Jakobsen, 2005; Maxwell and Mittapalli, 2015). But the extensive approach is valuable in identifying mechanisms as well because in real life mechanisms sometimes appear with patterns and in a systematic way so "important empirical manifestations of mechanisms" can be identified from quantitative analysis (Danermark, Ekstrom and Jakobsen, 2005, p.175). Therefore, under the guide of critical realism, the two procedures can be combined and complemented to identify generative mechanism and describe the regularities and patterns.

Having said so, it is admittedly an ambitious goal for an empirical mixed-method social study to identify the generative mechanism(s) because of the distance between it and the observable empirical domain of social reality. Since the foundation of knowledge is produced in the empirical domain (Danermark, Ekstrom and Jakobsen, 2005), a high level of abstraction is required to make claims on

the real domain of social reality. However, what can be possibly achieved is to "gain a deeper knowledge of social meanings, structures and mechanisms" via the analysis of the manifestations of mechanisms at the empirical level and the redescription and re-contextualisation of the already known events with a set of new ideas, and the latter refers to the abduction mode of inference (Danermark, Ekstrom and Jakobsen, 2005, p.92). Different from deductive inference where universal laws are applied to analyse individual events and phenomena, or inductive inference where generalised knowledge is drawn from many observations, the abductive inference seeks to broaden knowledge and stimulate research by providing a new frame of interpretation of the connections and relations among events and phenomena (Danermark, Ekstrom and Jakobsen, 2005).

4.4 A mixed-method research design in this study

Mixed-method research design is never simply adopting two different strategies, nor should be poorly combined because of the false belief that "the more the merrier". A study conducted by Bryman and his colleagues (Bryman, Becker and Sempik, 2008) reveals a consensus among social policy researchers that in addition to satisfying the quality criteria for quantitative and qualitative research (will be discussed in the following sections), mixed-method research needs to be well-integrated and justified for its rationale. The above discussion demonstrates the possibility and philosophical foundation of combining different research approaches in one single project, and the potential benefits of having complementary elements to explore the structure, meanings, and underlying mechanisms. However, it needs a further demonstration of the appropriateness of the use of mixed research design in this study – a study aims to understand how older people in China achieve old-age security. To understand how distinct research methods can be combined and complemented to provide an answer to the research questions, it is of importance to explain how these questions are related to the research aim and what the interconnections among them are.

The first research question examines the extent to which Chinese older people are financially dependent on family support, and how such dependence varies to their socio-economic situations, in particular, public pensions and hukou types. The question is asked to identify the generalisable patterns and regularities in the relationship between the characteristics and attributes of older people

and the degree of reliance on support from within the family. A large volume of literature has shown that family in China is playing a vital role in protecting older people from social risks, but only little has taken into consideration the heterogeneity in older people themselves. The identification and quantification of the systematic differences in the degree of dependence among different older people will help to understand the determinants and their relevant importance.

The second research question investigates the potential interplays between public support and family support, namely whether the public pension benefits crowd out, have no impact on, or instead crowd in the support from family members. This question takes a closer look at the situation of older people and the support they received by investigating the possible interactions between the structural factors (i.e. public pension arrangement) and the behaviours and conducts of agents (i.e. the intergenerational support decisions between older people and their family members) at an aggregation level. It is expected to provide an empirical answer to the dynamics of resources allocation and mobilisation within the family under the changing policy condition, and how these strategies are related to the characteristics of the older and their families.

The third research question explores older people's arrangement and negotiation of intergenerational support in the context of the changing population and family structure as well as public pension arrangements. It moves from "what" questions to a "how" question. The emphasis of this question is put on exploring in more depth the complex interplays between family and the state in protecting older people, and how these interplays are mediated by available resources, cultural norms, legal obligations, intergenerational relations and so on.

To sum, this study adopts a critical realist approach to questions about what constitutes social reality, and how knowledge can and should be obtained, but admits the limited ability of this empirical study in the identification of generative mechanism(s). The study, however, benefits from critical methodological pluralism in that the quantitative/extensive approaches and qualitative/intensive approaches complement each other and provide a deeper understanding of the knowledge about the complex interactions of pensions arrangement and family support for older people in China. The quantitative elements of this study aim to uncover the generalisable patterns, trends, regularities of the

extent to which Chinese older people rely on the state and family to achieve old-age security, the magnitude and direction of the possible interactions between the state and family, and how those pictures are quantitatively associated with the characteristics of older people themselves. What is not captured by quantitative methods, however, is a closer look at the complex and dynamic interplays between the state and family. By adopting qualitative approaches and employing abductive inference, the study is then allowed to explore the process of the renegotiation between older people and their families in great depth and reinterpret the roles of family in protecting older people not only among family members but also in relation to how the family as a unit of analysis interacts with the state in a novel way.

So far, Part I (Chapters 1 to 4) has presented the contextual, theoretical, and methodological background of this study. Next, Part Two (Chapters 5 to 7) and Part Three (Chapters 8 and 9) will go into depth of the specific quantitative and qualitative research methods, techniques, findings, and implications respectively.

Part II

5. Quantitative methods

Part II focuses on the quantitative components of this study. Specifically, it consists of an account of quantitative methods (Chapter 5) and the presentations and discussions of quantitative analytical results (Chapter 6 and Chapter 7).

As suggested in Chapter 4, the first and second research questions are approached in a quantitative manner (or extensive procedure, as in critical methodological pluralism). This chapter elaborates the specific techniques used to answer the two quantitative research questions. It starts with defining the research hypotheses derived from each research questions and related sub-questions. Then the chapter goes on to introduce the datasets and samples used in the quantitative part of this study. After that, it explains how the concepts stated in the research questions and hypotheses are operationalised to measurable variables and how the hypothesised statistical relationships are tested via analytical models.

5.1 Research hypotheses

As stated in Chapter 4.1, the **first research question** and its related sub questions focus on the degree to which older Chinese are financially dependent on family support as well as how it is related to public pensions and hukou type. Based on the research questions, the following null hypotheses are proposed:

<u>Hypothesis 1a</u>: The degree of financial dependence on family support is the same between urban older people and rural older people.

<u>*Hypothesis 1b:*</u> The degree of financial dependence on family support is the same among older people in different types of public pension schemes.

As discussed in large volume of literature (e.g. see Li and Piachaud, 2004; Lau, 2013), there have been long-standing social and economic differences between urban and rural China. It is then possible that public pensions might have different impacts on the degree of family dependence between urban and rural older people. Therefore, an additional hypothesis will be tested to examine the possible interactions between hukou type and public pension schemes.

<u>*Hypothesis 1c:*</u> The impact of public pensions on the degree of financial dependence on family support are the same between urban older people and rural older people.

The **second research question**, "Does public pension crowd out family support?" examines the potential impact of public pensions on intergenerational family support. As indicated in sub questions RQ 2.1 and RQ 2.2 (see Chapter 4.1), intergenerational support flows in two ways, that is, upward support from adult children to older parents and downward support from older parents to adult children. It is also noted in RQ 2.3 that the "crowding-out" impacts might be different between urban and rural families. Informed by previous studies, the influence of public pensions on family support may be examined by either the participation in a particular pension scheme or the amount of pension incomes received by older people. In this sense, the following null hypotheses are developed.

<u>Hypothesis 2a</u>: The **participation** in public pension schemes has no impact on the amount of upward intergenerational support **received** by older people.

<u>Hypothesis 2b:</u> The **amount** of public pension income has no impact on the amount of upward intergenerational support **received** by older people.

<u>Hypothesis 2c:</u> The **participation** in public pension schemes has no impact on the amount of downward intergenerational support **provided** to adult children.

<u>Hypothesis 2d</u>: The **amount** of public pension income has no impact on the amount of downward intergenerational support **provided** to adult children.

And should the impacts exist (any null hypothesis stated above being rejected):

<u>Hypothesis 2e</u>: The impacts of public pensions on intergenerational support are the same between urban older people and rural older people.

5.2 Dataset and samples

The quantitative elements of this study are based on a series of secondary analyses of the China Health and Retirement Longitudinal Study (CHARLS).

Secondary analysis as a method has been widely used in quantitative research, often involves using existing large-scale survey data to make statistical inference or test hypotheses. It is also frequently used when longitudinal data is required. Secondary analysis is a cost-effective approach. The advantages of secondary analysis include the high quality and large quantity of datasets which provide rich information (Bryman, 2016). It also increases the transparency of a study as data sources can be accessed the study can be replicated. However, secondary analysis relies on the availability and quality of the data sources. Hence there are several weaknesses of secondary analysis such as limited control of variables and the often time lag between data collection and data release (Bryman, 2016). Having said this, secondary analysis is still very powerful and useful, especially given the limited time and resources for this PhD project.

The CHARLS produces high-quality datasets which collect comprehensive information on demographics, health, family and household, work, retirement and pension, income and consumption, housing, as well as information at community level from a nationally representative samples of Chinese residents ages 45 and older. The CHARLS surveys are led and conducted by the Peking University with reference to related ageing surveys such as the English Longitudinal Study of Aging (ELSA) and the Survey of Health, Aging and Retirement in Europe (SHARE).

The national CHARLS baseline survey was carried out in 2011, when more than 10,000 households and 17,500 individuals in 150 counties/districts and 450 villages/resident committees were selected through multi-staged stratified probability proportional to size (PPS) sampling strategy. The age structure obtained from the weighted baseline CHARLS survey data (2011) is accord with the age structure from Census data (Zhao et al., 2019), which indicates a high level of representativeness. The respondents are followed up every two years, and the data will normally be made available to the public (application required) one or two years after the survey. Hitherto, the response rates for the two waves of follow-up survey have been kept above 85%. The CHARLS has gained massive popularity in recent related research filed (Sun et al., 2011; Zhao, Smith and Strauss, 2014; Lu, Liu and Piggott, 2015; Ning et al., 2016; van Dullemen, Nagel and de Bruijn, 2017; Lu, Liu and Yang, 2017; Zhao and Zhao, 2018; Zhao et al., 2019) for its high level of detail, large volume of information, good representativeness of population, and open access to the public. Moreover, the CHARLS produces panel data which on the one hand provides time series information on the same older respondents over time, and on the other hand takes a snapshot on the information across a wider population. In other words, it provides opportunities for researchers to look into dynamic relationships and cross-sectional heterogeneity simultaneously (Frees, 2004).

The advantages of panel data are threefold: increasing sample size, incorporating both dynamic and heterogeneous information, and last but not least, improving the efficiency of model estimation by reducing omitted variable bias and therefore, at least partially, addressing endogeneity issues (Frees, 2004; Wooldridge, 2010). However, the above features of panel data allow for multiple econometric model choices, which, on the other hand, increases the complexity in model selection, specification, and diagnostics (the selection, specification, and diagnostics of models will be discussed later in Chapter 5.4). Besides, since individual respondents were given the right to opt out the longitudinal survey at any time, panel data are faced with the risk of attrition, which refers to the increasing nonresponses over time (Frees, 2004). Therefore, it is difficult to maintain balanced micro-level panel data, where all individual respondents were surveyed in all waves. Although it is possible to attain balanced panel data, such as to construct a subset of samples by removing respondents who were not appearing in all survey years and keeping those who were. However, by manually balancing the panel data it might create new issues such as a smaller sample size. It could also be counterproductive if selection bias are generated when there are systematic differences between the left/removed respondents and the remained respondents (Frees, 2004).

In this study, three waves of the CHARLS data (2011, 2013 and 2015) spanning the expansion of the new pension schemes for urban and rural residents will be used. The number of respondents for each survey year were, respectively 17,682, 18,589, and 20,730 (57,001 in total). Since retirement ages in China differ between women and men and vary to employment types and pension schemes (ranging

from 50 to 60, as showed in Table 2.1), respondents aged below 60 at the time of survey have been removed from the sample for the consideration of comparability. This has been done so that all samples in this study have reached the eligible age for public pensions, regardless of their genders or specific pension schemes. The numbers of respondents aged 60 and above for each survey year are 7,680 in the CHARLS 2011, 8,916 in the CHARLS 2013, and 9,939 in the CHARLS 2015 (26,535 in total). Although the data used in this study are unbalanced panel data (as the sample sizes for each wave of the CHARLS vary), decisions have been made not to manually balance the data. The main reason is to avoid creating potential selection bias, which could be possibly generated if the observations in one of the three CHARLS waves are removed when they are not included in the other wave(s) of the CHARLS. For instance, if participants who lack stable formal or informal support network, or who have lower socio-economic status tend to drop out from the follow-up survey, then the analysis based on the samples who are kept in the survey for all waves would be biased.

In addition to the three waves of the CHARLS, supplementary data is also used from the National Bureau of Statistics of China (2020) to obtain the Consumer Price Index (CPI), so that the information of pension incomes and private transfers from different waves of study can be comparable.

5.3 Measures and variables

For **the first research question**, two variables are considered for the operationalisation of the degree of financial dependence on family support. The first is **older people's expectations** of the most reliable source for financial support in old age. The CHARLS survey asked older respondents "Who do you think you can rely on financially for old-age support?" with respondents being able to choose one out of the following five options: children, respondent themselves (savings), public pensions, commercial pensions (private pension), and others. Informed by previous empirical and theoretical literature, as well as preliminary data check¹⁰, the five options are re-organised into three categories, namely, children, public pensions, and others (including savings and commercial pensions). The

¹⁰ Preliminary data check shows that in each wave of the CHARLS survey, less than 3.5% older people have chosen either savings or commercial pensions as the most reliable source for old-age support.

second dependent variable that is used to measure the degree of financial dependence on family support is the **proportion of actual private transfer** received by older respondents to their total incomes. This continuous variable ranges from 0 to 1, with a higher value indicating a greater proportion of the actual private transfers to their total incomes, and therefore a higher degree of financial dependence on family support.

The two dependent variables for the first research question incorporate both subjective and objective aspects of financial dependence on family support. Older people's expectations of the most reliable source of old-age support and their presumed obligations of their adult child(ren) reflect the normative solidarity of intergenerational relations, whereas the actual financial support from adult children to older people reflects the functional solidarity of intergenerational relations (see intergenerational solidarity model by Bengtson and Schrader, 1982; Bengtson and Roberts, 1991). The changes in older people's expectations and the amount of actual financial transfers received over time not only reveal the shift in the ways for older people to achieve financial security but also show the dynamic intergenerational relations within Chinese families.

The **second research question** and related hypotheses look into the potential interactions between public pensions and intergenerational support within family. Three dependent variables are considered for the operationalisation of intergenerational support: the amount of upward private transfers **received** by older people from their adult child(ren), the amount of downward private transfers **provided** downwards to adult child(ren), and lastly, the number of **hours** that older people spent on caring for grandchild(ren). It is worth noting that transfers from and to grandchild(ren) are counted in as well for two reasons. First, grandchild(ren) are not necessarily old enough to be financially dependent and therefore the transfers may come from and go to pocket money which is mainly financed by their parents. Second, in both cases older people can be considered as the "recipient" and/or the "donor" in the intergenerational support, regardless of whether the support is from/to adult children or grandchild(ren). Somewhat different in scope, the third dependent variable (i.e., grandparental childcare hours) attempts to capture the non-monetary aspect of intergenerational support which not only constitutes an important resource but also portrays a rather common picture of the intergenerational support relations in contemporary Chinese families (e.g., Guo, Chi and

Silverstein, 2012; Zhang et al., 2019).

For comparability over three waves of survey data (2011–2015), private transfers (whether older people seen as "recipients" or "providers") were inflation-adjusted by the Consumer Price Index (with 2015 as the reference year). Besides, all the three dependent variables for the second research questions are transformed into their logarithm forms. Reasons for that were two-fold. From the practical aspect, for instance, the marginal utility of incomes declines as income increases (e.g. see Layard, Mayraz and Nickell, 2008). For example, the implication of a one-thousand yuan increase in incomes does not necessarily hold the same for low-income older people and high-income older people. From the statistical aspect, the observed distributions of upward private transfers, downward private transfers, and grandparental childcare hours are highly skewed (as indicated by their skewness coefficients, which are 42.39 for upward private transfers, 144.09 for downward private transfers, and -44.83 for grandparental childcare hours, respectively, far from 0 for a normal distribution). The logarithm transformation, however, reduces the skewness and increase its proximity to normal distribution (for example, the skewness coefficients for logarithmic upward private transfers, logarithmic downward private transfers, and logarithmic grandparental childcare hours are 0.50, 0.28, and -1.20, respectively).

The key explanatory variables corresponding to the first set of hypotheses are: *hukou type* (rural hukou vs urban hukou) and the *participation status of public pension schemes* (whether the older respondent participated in any public pension schemes, and if yes, which scheme did they participate). The key explanatory variables for the second research question include hukou type and participation status of public pension schemes, which are the same as the first question. Moreover, as explained earlier, not only the participation status can be considered as potentially influential, but also the amount of public pension incomes received by the older people can have an impact. Both aspects have been discussed in previous "crowding-out" literature (e.g. see Cox, Hansen and Jimenez, 2004; Jensen, 2004; Amuedo-Dorantes and Juarez, 2013; Chen, Eggleston and Sun, 2018). Therefore, another public pension related variable, namely, the actual pension incomes received by older people, is also included to answer the second research question. The pension incomes variable is also inflation-adjusted (by CPI with 2015 as the reference year) and transformed into its logarithm form

for the same reasons as stated above (for instance, the logarithmic transformation reduces the skewness coefficient of pension incomes from 40.92 to 0.95, which means the distribution of logarithmic pension incomes are closer to normal distribution).

In addition to public pensions and hukou type, previous literature has indicated that family support across generations are also closely related to: 1) the socio-demographics of older people such as income levels, gender, age, educational background, marital status, place of residence, and health condition, 2) the socio-demographics of adult child(ren) such as the total number of adult child(ren), their marital status, their income levels, and 3) the relationship between older people and their adult child(ren) such as living arrangement (co-residence) and geographic proximity as well as frequency of contact (e.g., see Xu, 2001; Guo, Chi and Silverstein, 2012; Lau, 2013; Lin and Yi, 2013; Chen et al., 2017; Chen, Leeson and Liu, 2017; Chen, Eggleston and Sun, 2018; Wong et al., 2020; Peng et al., 2021).

Therefore, to better analyse the impacts of key explanatory variables, a series of variables that capture the above information, namely, the socio-demographics of older respondents and their adult children as well as their relationships, will be controlled in the following models. For instance, the income quartile is used to measure the financial resources owned by older people¹¹. Older people's co-

¹¹ There are several alternatives to income levels. The first is to measure income poverty against a certain threshold, also known as "poverty line". The problem would be that there was no official poverty line applied to all residents. The official poverty thresholds published by the Chinese governments are applied to rural areas only. There are many potential issues with applying these thresholds such as lack of transparency or coherency (e.g., see Chen and Ravalion, 2021). The second is to use subjective indicators such as self-rated living standard compared to neighbours. Unfortunately, the question was only asked in two out of three waves of survey. The third is to measure poverty by identifying whether the older respondent was a recipient of social assistance benefits (i.e., *dibao*). It is neither an ideal indicator because of the potential inclusion and exclusion errors embedded in means-tested social support, and even if the errors are negligible, dibao itself is a kind of household-based public transfers which takes the capability of family members to provide support as one of the eligibility criteria. Income level, therefore, seems to be a more suitable proxy for financial resources in this study, because it not only looks at the lower end of income distribution, but also take into consideration the position where the older respondent was across the income spectrum. It is calculated based on income quartiles among older respondents for each survey year.

residence with at least one adult child as well as the overall geographic proximity with all adult children will also be controlled in the model estimations. Table 5.1 provides a brief descriptive summary of the explanatory and control variables used in this study. More detailed information about the specification and description can be found in Appendix 1.

Table 5.1 Descriptive summary of the explanatory and control variables

Variable		Μ	Mean (SD)/Percentage				
	value/attribute	2011	2011 2013 2015 Total	Total			
	Key explanatory variables						
	0. Not participate in any public pension schemes	54.19	26.04	22.89	32.76		
Participation status of	1. Government and Institution Pensions (GIP)	7.58	7.33	4.16	6.25		
public pensions	2. Enterprise Employee Basic Pension (EEBP)	14.81	11.53	10.33	12.02		
	3. New Rural Social Pension/ Urban Residents Social Pension (NRSP/URSP)	23.42	55.10	62.62	48.97		
Pension incomes (log)	Logarithmic amount of pension incomes	8.19 (1.71)	7.58 (1.57)	7.57 (1.46)	7.71 (1.59)		
	1. Rural hukou	76.11	75.94	77.10	76.40		
Никои туре	2. Urban hukou	23.89	24.06	22.90	23.60		
Respondent related variables							
Income level (RQ1)	1. Incomes at the lowest quarter	25.22	18.62	24.84	22.86		
	2. Incomes at the lower-middle (2 nd) quarter	24.77	31.40	25.03	27.10		
	3. Incomes at the upper-middle (3 rd) quarter	24.85	24.96	25.11	24.98		
	4. Incomes at the highest quarter	25.16	25.02	25.01	25.06		
Pre-transfer income level (RQ2)	 Pre-transfer incomes at the lowest quarter Pre-transfer incomes at the lower-middle (2nd) quarter 	27.61 17.75	21.00 33.77	21.94 32.32	23.26 28.55		
	 Pre-transfer incomes at the upper-middle (3rd) quarter 	31.21	21.73	23.22	25.02		

	4. Pre-transfer incomes at the highest quarter	23.44	25.51	22.52	23.16
Age	Respondent's age when the survey was conducted, 60 years old and above	68.47 (7.07)	68.586 (7.15)	68.59 (7.08)	68.55 (7.10)
Gender	1. Male 2. Female	50.12 49.88	49.87 50.13	49.22 50.78	49.70 50.30
Education level	 1: Illiterate 2: Not graduate from primary school 3: Up to primary school 4: Secondary school 5: High school and above 	37.13 20.29 23.48 12.00 7.10	36.27 20.61 23.05 12.48 7.59	34.61 21.53 22.36 13.60 7.91	35.93 20.84 22.93 12.74 7.56
Marital status	 Married and living with spouse Married but temporarily living alone Widowed/divorce/separated 	74.03 3.84 22.13	75.22 3.37 21.42	75.42 3.21 21.37	74.95 3.45 21.61
Self-assessed health condition	 Very good Good Fair Poor and very poor 	5.36 14.34 43.94 36.36	7.74 13.14 47.08 32.03	9.51 10.63 49.92 29.94	7.67 12.59 47.17 32.56
Province of residence	1. Developed provinces	26.53	26.85	27.16	26.87

2. Semi-developed provinces	35.66	35.34	35.41	35.46
3. Least developed provinces	37.81	37.81	37.44	37.67

Adult children related variables					
No. of children	Number of adult child(ren) of the respondent	3.34	3.34	3.28	3.31
		(1.66)	(1.62)	(1.62)	(1.63)
Co-residence	Co-reside with at least one adult child	0.43 (0.50)	0.41 (0.49)	0.37 (0.48)	0.39 (0.50)
Married Children (ratio)	Ratio of married child(ren) to all child(ren), ranging from 0 to 1	0.90 (0.22)	0.92 (0.20)	0.90 (0.21)	0.91 (0.21)
	Ratio of child(ren) who live within the same community to all child(ren), ranging from 0 to 1	0.58 (0.42)	0.54 (0.44)	0.53 (0.43)	0.55 (0.43)
	Ratio of child(ren) who live within the same city, but in different community, to all child(ren),	0.57	0.52	0.50	0.53
Proximity to adult children (ratio)	ranging from 0 to 1	(0.42)	(0.44)	(0.45)	(0.44)
	Ratio of child(ren) who live within the same province, but in different city, to all child(ren),	0.45	0.58	0.56	0.53
	ranging from 0 to 1	(0.47)	(0.42)	(0.42)	(0.44)
	Ratio of child(ren) who live in different province to all child(ren), ranging from 0 to 1	0.46	0.53	0.53	0.51
		(0.47)	(0.45)	(0.45)	(0.46)
Incomes of children	Ratio of child(ren) whose annual incomes are lower than ¥ 10,000 to all child(ren), ranging	0.51	0.46	0.45	0.47

(ratio)	from 0 to 1	(0.47)	(0.48)	(0.48)	(0.47)
	Ratio of child(ren) whose annual incomes are between ¥ 10,000 and ¥ 20,000 to all	0.54	0.49	0.47	0.50
	child(ren), ranging from 0 to 1	(0.45)	(0.46)	(0.47)	(0.46)
	Ratio of child(ren) whose annual incomes are between ¥ 20,000 and ¥ 50,000 to all	0.54	0.55	0.56	0.55
	child(ren), ranging from 0 to 1	(0.45)	(0.45)	(0.44)	(0.45)
	Ratio of child(ren) whose annual incomes are more than ¥ 50,000 to all child(ren), ranging	0.444	0.467	0.492	0.47
	from 0 to 1	(0.48)	(0.47)	(0.47)	(0.48)
	Ratio of child(ren) who contact the older respondent very frequently (almost every day to	0.56	0.50	0.52	0.52
	once a week) to all child(ren), ranging from 0 to 1	(0.45)	(0.46)	(0.46)	(0.46)
	Ratio of child(ren) who contact the older respondent frequently (once every two weeks to	0.53	0.52	0.54	0.53
Frequency of contact	every three months) to all child(ren), ranging from 0 to 1	(0.45)	(0.45)	(0.45)	(0.45)
(ratio)	Ratio of child(ren) who contact the older respondent infrequently (once or twice every year)	0.41	0.41	0.40	0.41
	to all child(ren), ranging from 0 to 1	(0.48)	(0.48)	(0.48)	(0.48)
	Ratio of child(ren) who contact the older respondent very infrequently (almost never	0.56	0.47	0.47	0.49
	contacted) to all child(ren), ranging from 0 to 1	(0.45)	(0.47)	(0.47)	(0.47)

Data source: CHARLS 2011, 2013 and 2015.

For more details on variables, please see Appendix 1.

5.4 Analytical approach

Models are not social reality; models are at best "simplified approximations" of social reality (Frees, 2004, p.24), or, in line with critical realism, approximations of the empirical domain of social reality (Danermark, Ekstrom and Jakobsen, 2005). Having said this, statistical modelling contributes to human knowledge by adding to the understandings of relationships between concepts. As the aphorism goes: all models are wrong, but some are useful (Box, 1976). This section elaborates the statistical models used in this study and discusses the merits and limitations of those quantitative techniques.

As demonstrated in previous sections, the CHARLS data can be processed as either pooled crosssectional data or unbalanced short panel data. When treated as pooled cross-sectional data, each observation is seen as an independent case, and the regression estimations are based on the comparisons of the outcomes of different groups (i.e. the treatment group vs. the control group) while holding other factors constant (Best and Wolf, 2014). It means that one shared regression model is estimated for every individual respondent, with differences between the expected outcomes and observed outcomes falling into the error term. Since one can hardly exhaust all possible factors that might influence the outcome, cross-sectional regression models are often considered as carrying a higher risk of omitted variable bias which occurs when unobserved explanatory variables impose impacts on the dependent variable. Model 5.1 shows a basic cross-sectional regression model in its simplest form:

Model 5.1: Basic form of cross-sectional regression model

$$y_i = \beta x_i + \alpha + \varepsilon_i$$

where y_i is denoted as observed outcome for respondent i, β is denoted as the unknown parameter, x_i is denoted as the observed explanatory variable for respondent i, α is denoted as the constant term, and ε_i is denoted as the difference between the expected outcome and the observed outcome for respondent i, also known as the error term. Another way to process the multiple waves of the CHARLS data is to take advantage of the longitudinal information and to apply unobserved effects models (also known as individual-specific effects model). An unobserved effects model acknowledges the unobserved effects which are specific to individual respondents (see Figure 5.1). It incorporates the time dimension and estimates one shared slope for all respondents but allows for varying constant terms across different respondents. Alongside the error term, there will be an additional individual-specific term which summarises the individual-specific effects. A basic form of unobserved-effect model of model is:

Model 5.2: Basic form of unobserved-effect regression model

$$y_{it} = \beta x_{it} + \alpha_i + \varepsilon_{it}$$

where y_{it} is denoted as observed outcome for respondent i at time t, β is denoted as the unknown parameter, x_{it} is denoted as the observed explanatory variable for respondent i at time t, α_i is denoted as the constant term for respondent i which captures the unobserved individual-specific effects, and ε_{it} is denoted as the difference between the expected outcome and the observed outcome for respondent i at time t.

One of the key strengths of unobserved-effect model is its ability to reduce omitted variable bias, or more generally, to better address the endogenous issues by separating the individual-specific effects (α_i) from the error term (ε_{it}). It explores the relationship between an explanatory variable (e.g., public pensions) and an outcome variable (e.g., family support) within the same respondent while controlling for factors that are specific to this respondent and might have impacts on the outcome variable.

Depending on whether the individual-specific effects are related to explanatory variables, unobserved effects model can be categorised into two types: the fixed-effect (FE) model and the random-effect (RE) model (as shown in Figure 5.1). By removing the effects of time-invariant factors from the outcome, a FE model provides a better account of causal relationship between the time-varying explanatory variable and the changes in outcomes within the respondent over time (Frees, 2004; Best and Wolf, 2014). However, the limitation of FE model lies in its focus on merely the impacts of

variables that vary over time (e.g., pension status, incomes), and therefore less efficient in estimations for the impacts of variables that are constant over time (e.g., hukou¹², gender). On the other hand, random-effect models assumes that the individual-specific effects are not related to explanatory variables, which allow for estimations of the impacts of time-invariant variables (Frees, 2004). In this sense, RE models take into account of the differences across individuals, and therefore the inferences can be better generalised beyond the sample (Frees, 2004).

As underlined at the start of this section and implied by critical realism, statistical models are at best approximations of a certain level of social reality. Therefore, this proximity needs to be assessed and choices need to be made. In this case, choices are made based on three factors: statistical assumption, theoretical hypotheses, and technical feasibility. For the first research question and related hypotheses, both pooled cross-sectional model and longitudinal FE model are estimated, so that comparisons can be made between groups (e.g., urban and rural older people), as well as within group (e.g., before and after receiving public pensions). Standard robust estimations are used to address the issue of heteroscedasticity in the panel regression models. F test (Ho: there are no unobserved effects specific to individual respondents) and Hausman test (Ho: the unobserved effects are not related to explanatory variables) are also performed to inform the selection of models¹³.

¹² In general, hukou type (rural hukou vs urban hukou) is relatively stable in China. Recently, the Chinese government started to end the division between rural hukou and urban hukou, but only few older respondents were affected. See footnotes in Appendix for detail.

¹³ For example, when evidence strongly rejects Ho in F test, technically it means that fixed-effect model estimation is more efficient than pooled cross-sectional model. But since comparisons between urban and rural older people are also of research interest, pooled cross-sectional model estimation is useful to provide the picture of the impacts of those time-invariant factors.





Specifically, based on Model 5.1 and Model 5.2, two models are constructed to understand older people's expectations of the most reliable source of old-age support. Model 5.3 is a multinomial logistic regression with pooled cross-sectional model and Model 5.4 is a multinomial logistic regression with FE model. The models estimate the subjective aspect of family dependence.

Model 5.3 Pooled multinomial logistic regression model for research question 1

$$log\left(\frac{\pi_{i}^{(j)}}{\pi_{i}^{(c)}}\right) = \beta_{1}^{(j)}Urban hukou_{i} + \beta_{2}^{(j)}Pension scheme_{i} + \beta_{3}^{(j)}Urban hukou_{i}$$

$$* Pension Scheme_{i} + \beta_{4-10}^{(j)}Respondent related variables_{i}$$

$$+ \beta_{11-16}^{(j)}Child related variables_{i} + \gamma^{(j)}Year + \alpha^{(j)} + \varepsilon_{i}^{(j)}$$

Model 5.4 Multinomial logistic regression model with two-way FE for research question 1

$$log\left(\frac{\pi_{it}^{(j)}}{\pi_{it}^{(c)}}\right) = \beta_1^{(j)} Urban hukou_{it} + \beta_2^{(j)} Pension scheme_{it} + \beta_3^{(j)} Urban hukou_{it}$$

$$* Pension Scheme_{it} + \beta_{4-10}^{(j)} Respondent related variables_{it}$$

$$+ \beta_{11-16}^{(j)} Child related variables_{it} + \gamma^{(j)} Year + a_i^{(j)} + \varepsilon_{it}^{(j)}$$

for each j = relying on public pensions (state) and relying on other sources. $\pi_i^{(j)}$ represents the expected probability that older people expect *j* as the most reliable source of old-age support. $\alpha^{(j)}$, $\beta_1^{(j)}, \ldots, \beta_{16}^{(j)}$, and $\gamma^{(j)}$ are unknown population parameters which will be estimated from samples. It is worth noting that there is an interaction term between hukou type and pension scheme because pension status may have different impacts on family support between urban older people and their rural peers. This interaction is also examined in the following models.

Similarly, Models 5.5 and 5.6 estimate the proportion of actual private transfers received by older people to their total incomes. The dependent variable is a continuous variable and therefore multilinear regression can be used.

Model 5.5 Pooled multilinear regression model for research question 1

 $Y_i = \beta_1 Urban hukou_i + \beta_2 Pension scheme_i + \beta_3 Urban hukou_i * Pension scheme_i$ + $\beta_{4-10} Respondent related variables_i + \beta_{11-16} Child related variables_i$ + $\gamma Year + \alpha + \varepsilon_i$

Model 5.6 Multilinear regression model with two-way fixed effects for research question 1

$$\begin{aligned} Y_{it} &= \beta_1 Urban \ hukou_{it} + \beta_2 Pension \ scheme_{it} + \beta_3 Urban \ hukou * Pension \ scheme_{it} \\ &+ \beta_{4-10} Respondent \ related \ variables_{it} + \beta_{11-16} Child \ related \ variables_{it} \\ &+ \gamma Year + \alpha_i + \varepsilon_{it} \end{aligned}$$

For the second research question and related hypotheses where the impacts of public pensions on
intergenerational support are at the core of enquiry, an adjustment for endogenous selection bias is required. Selection bias, in this case, refers to the situation where estimations will be biased if older respondents who have involved in the intergenerational support systematically differ from those who have not. Previous empirical studies have adopted Heckman two-step selection model to estimate the potential "crowding-out" effects of public transfers (for example, see Becker, 1974; Cox and Jimenez, 1992; Reil-Held, 2006; Gerardi and Tsai, 2014). The rationale behind the selection model, simply put, is to first predict the probability that the older respondent received/provided intergenerational support based on the whole sample, then estimate the impact of public pensions on the amount of intergenerational support), and lastly adjust the estimation based on the statistic derived from the first step (i.e. the Inverse Mill's ratio). An additional but also important reason for using selection models in this study is that both intensive margin (the change in the amount of intergenerational support) and extensive margin (the change in the incidence of intergenerational support) are worth examining to fully understand the possible "crowding-out" impact of public pensions.

This study takes one step further by applying the Heckman two-step selection models in panel data with unobserved effects, which is recently made possible by Stata 16¹⁴. The basic form of Heckman two-step selection model with unobserved effects is as follow:

Model 5.7 Basic form of Heckman two-step selection model with unobserved effects

 $y_{it} = \beta x_{it} + \alpha_i + \varepsilon_{it}$,

where the equation that determines which y_{it} is not missing is:

$$S_{it} = 1 (\delta z_{it} + v_i + u_{it} > 0)$$

where z_{it} represents a set of explanatory variables used to predict whether the older respondents

¹⁴ The Stata command *xtheckman* fits a random-effects linear regression model with endogenous sample selection.

received or provided intergenerational support.

The second research questions asks whether public pensions are related to the occurrence of family support, and should the family support occur, how does public pensions affect the amount. Models 5.8 and 5.9 show the Heckman two-step selection model with random effects.

Model 5.8 Main (adjusted) equation of Heckman two-step selection model with random effects

$$\begin{split} Y_{Family\ support}^{it} &= \beta_1 Public\ pension_{it} + \beta_2 Urban\ hukou_{it} \\ &+ \beta_3 Public\ pension * Urban\ hukou_{it} + \beta_{4-10} Respondent\ related\ variables_{it} \\ &+ \beta_{11-16} Child\ related\ variables_{it} + \gamma E(S_{it} = 1|S_{it}) + \alpha_i + \varepsilon_{it} \end{split}$$

where,

Model 5.9 Selection equation for occurrence of intergenerational support

$$S_{it} = \delta_1 Public \ pension_{it} + \delta_2 Urban \ hukou_{it}$$

+ $\delta_3 \ Public \ pension * Urban \ hukou_{it} + \delta_{4-9} Respondent \ related \ variables$
+ $\delta_{10-15} Child \ related \ variables + v_i + u_{it}$

In the above models, $Y_{Family\ support}^{it}$ represents three dependent variables (received private transfers, provided private transfers, and grandchild care hours), and *Public* pension_{it} represents two explanatory variables (public pension participation status, public pension incomes). S_{it} represents the probability of the respondent receive/provide private transfers from/to their adult children. The selection equation (Model 5.9) estimated the probability of the occurrence of intergenerational support between older people and their adult children, and the adjusted equation (Model 5.8) estimated the impacts of public pensions on the amount of intergenerational support after the correction for possible sample selection issues. The explanatory variables for the adjusted equation is a subset of the explanatory variables for the selection equation, and the selection equation has at least one explanatory variable that might affect the probability of being selected (the incidence of intergenerational support) but not the amount of intergenerational support (as suggested by Semykina and Wooldridge, 2010). In this case, age is assumed to have an impact only on the probability of receiving upward transfers but not on the amount of intergenerational support.

It is worth noting that robust variance estimates are applied in all linear models and multilevel models (Models 5.3, 5.5, 5.6, 5.8, and 5.9) with continuous dependent variables. In Stata 16.0, command options such as *vce(robust)* and *vce(cluster id)* are specified to obtain robust standard errors or cluster-robust standard errors. In this sense, the confidence intervals and significant tests that have been produced in the following two chapters are, therefore, robust. For nonlinear model with fixed effects (Model 5.4), robust standard errors are not applicable (Pforr, 2014).

Next two chapters go on to answer the first and second research questions by presenting, interpreting, and discussing the analyses and the results.

6. Older people's financial dependence on family support

This quantitative analytical chapter aims to answer the first research question by examining the social factors related to the degree to which older Chinese financially depend on family support, in particular the impact of public pensions on urban and rural hukou holders. As discussed in previous chapters, intergenerational relations are multidimensional, which include, for example, the expectations of the interactions and the exchange of support between generations (Bengtson and Schrader, 1982). Informed by this, the following sections investigate not only older people's expectations of family support but also the actual private transfers received by older people. By drawing from the findings of the two aspects of financial dependence, this chapter concludes with a discussion on the importance of Chinese families in old-age support arrangements.

6.1 Expectations of reliable source in retirement: the subjective aspect of dependence

This section examines older people's answers to the survey question "who do you think you can financially rely on for old-age support". The answer to this question reflects older people's expectations of family support and support from other sources such as state pensions, savings and commercial pensions. Table 6.1 - 6.4 shows an overall picture of how the expectations varied across groups. The bottom row of Table 6.1 shows that the vast majority (more than 90%) of older Chinese expected either family support or public pensions to be the most reliable source for old age support. Very few older respondents expected other sources, including savings or commercial pensions¹⁵ to be the most reliable income source after retirement. This pattern is evident across almost all subgroups shown in Table 6.1 - 6.4, indicating a rather weaker role of the market compared to family and the state in China's welfare mix.

¹⁵ Fewer than 3% of older people expected to rely on their own savings and no more than 0.3% of older people expected to rely on commercial pensions. As explained in the previous chapter, those two categories were grouped under "others" for both theoretical and statistical considerations.

However, significant differences in older people's expectations of family support and state support existed across different subgroups, as shown in Table 6.1-6.3. In general, older people with urban hukou (78%, as shown in Table 6.1), who participated in pension schemes for employees in public and private sectors (87% and 90% respectively, as shown in Table 6.2), or whose incomes were at the highest quarter (64%, as shown in Table 6.3), were more likely to expect the state, rather than family, to be the most reliable source of old-age incomes. On the contrary, the more socially vulnerable older people were (i.e., rural hukou holders, older people with no public pensions, or those on low-tomedian incomes), the more likely they held the expectations that family is the most reliable source of old-age support in retirement. It is worth noting that older people who were in the lowest income quarter had slightly lower expectations of family support than those in the second or third lowest quarter. A possible reason could be the initiation of the public safety net measures such as social assistance programmes. Another explanation could be the limited social mobility expectations for the lowest-income group, as their adult children may also experience low income and therefore are not able to provide financial support.

llukou tuno	Expecta	Total		
никои туре	Children Public Pensions		Others	- TOLAI
Rural	14405	2697	1580	18682
	(77.11%)	(14.44%)	(8.46%)	100%
Urban	994	4557	296	5847
	(17.00%)	(77.94%)	(5.06%)	100%
Total	15399	7254	1876	24529
	(62.78%)	(29.57%)	(7.65%)	100%
Pearson chi2(2) = 8.7e-	-03			Pr = 0.000

Table 6.1 Older people's expectations of the most reliable source for old-age support by hukou type

First row has *frequencies* and second row has *row percentages* in parentheses Data source: CHARLS 2011, 2013 and 2015

Table 6.2 Older people's expectations of the most reliable source for old-age support by public pension

participation status

Pancion participation status	Expectatio	Total		
	Children	Public pensions	Others	TULAI
Not in any public pensions	5636	1188	891	7715
	(73.05%)	(15.40%)	(11.55%)	100%
Recipients of GIP	165	1318	33	1516
	(10.88%)	(86.94%)	(2.18%)	100%
Recipients of EEBP	240	2626	42	2908
	(8.25%)	(90.30%)	(1.44%)	100%
Recipients of NRSP/URSP	8612	2038	807	11457
	(75.17%)	(17.79%)	(7.04%)	100%
Pearson chi2(6) = 9.0e+03				Pr = 0.000

First row has frequencies and second row has row percentages in parentheses Data source: CHARLS 2011, 2013 and 2015

Table 6.3 Older people's expectations of the most reliable source for support by income levels

Incomo loval	Expectatio	Total		
Income level	Children	Public pensions	Others	TOLAT
Incomes at the lowest quarter	3854	1183	606	5643
	(68.30%)	(20.96%)	(10.74%)	100%
Incomes at the 2 nd quarter	5132	1116	621	6869
	(74.71%)	(16.25%)	(9.04%)	100%
Incomes at the 3 rd quarter	4762	1198	464	6424
	(74.13%)	(18.65%)	(7.22%)	100%
Incomes at the highest quarter	2084	4215	267	6566
	(31.74%)	(64.19%)	(4.07%)	100%
Pearson chi2(6) = 4.9e+03			Pr	= 0.000

Pearson chi2(6) = 4.9e+03

First row has frequencies and second row has row percentages in parentheses

Data source: CHARLS 2011, 2013 and 2015

One interesting finding emerging from Table 6.2 is that the proportion of older people who considered family as the most reliable source for old-age security was nearly the same between recipients of the newly introduced resident pension schemes (i.e., NRSP/URSP, 75%) and older people who did not participate in any public pension scheme (73%). It might seem counter intuitive, as the access to the new public pensions failed to make any difference in terms of older people's expectations of state

support. However, whether it holds true after taking other factors into consideration is to be discussed later. Some possible explanations include the inadequacy of the new pension benefits, the lack of trust in the new public pension schemes, the time-lag in the shifts in older people's expectations of the most reliable source of income in their retirement.

Table 6.4 Older people's expectations of the most reliable source for support, by public pension participation status and hukou type

		Expectation of the most reliable source			
Pension status and	l hukou	Children	Public pensions	Others	Total
Not in any	Rural	5137	497	723	6357
public pensions		(80.81%)	(7.82%)	(11.37%)	100%
	Urban	405	589	143	1137
		(35.62%)	(51.80%)	(12.58%)	100%
Recipients of	Rural	94	117	7	218
GIP		(43.12%)	(53.67%)	(3.21%)	100%
	Urban	70	1132	23	1225
		(5.71%)	(92.41%)	(1.88%)	100%
Recipients of	Rural	67	207	8	282
EEBP		(23.76%)	(73.40%)	(2.84%)	100%
	Urban	168	2274	33	2475
		(6.79%)	(91.88%)	(1.33%)	100%
Recipients of	Rural	8091	1670	714	10475
NRSP/URSP		(77.24%)	(15.94%)	(6.82%)	100%
	Urban	232	283	51	566
		(40.99%)	(50.00%)	(9.01%)	100%

Pearson chi2(14) = 1.0e+04

Pr = 0.000

First row has *frequencies* and second row has *row percentages* in parentheses

Data source: CHARLS 2011, 2013 and 2015

Effectively the results also expose the importance of taking the possible intersections between pension status and hukou type into consideration. For instance, rural hukou holders without access to employee's pension schemes (either GIP or EEBP) were least protected by the state and therefore faced with higher risks of old-age insecurity once their families could not support them. Table 6.4 helps to unpack the intertwined relationship via looking at the distribution of responses by pension scheme participation status and hukou type. After distinguishing the hukou type, it can be found that the high level of family dependence among recipients of NRSP/URSP and those who were not in any

public pension scheme were predominantly contributed by rural hukou holders. In contrast, the vast majority (more than 90%) of urban hukou holders who had participated in either GIP or EEBP scheme expected public pension as the most reliable source for old-age security, which was much higher than their rural peers in the same pension schemes (54% and 73% respectively).

To further examine the complex impacts of these factors on older people's expectations of most reliable source for old-age support, multinomial logistic regression models are applied as follow. The regression models are established to estimate the size and direction of the effects of the above explanatory variables while holding other social and demographic variables constant. As explained in Chapter 5, both pooled cross-sectional regression and fixed-effect regression models are applied so that between-group comparisons and within-group comparisons are possible.

Table 6.5 displays the estimations of two types of multinomial logistic regression on the odds ratio of respondents who expected support from the given category (i.e. public pension or others), rather than family support, as the most reliable source for old-age support. The first two columns of coefficients show the estimations from the pooled model, where comparisons are made between older people with different characteristics such as different hukou types. The last two columns of coefficients show the estimations from the fixed-effect model, where comparisons are made within the same older people over time. Both models estimate the natural logarithmic transformation of odds ratio, which requires exponent arithmetic to interpret the impacts of interested factors on the probabilities of expected roles of family, state, and others. For example, in the first cell, the coefficient of urban hukou for the given category *Public Pension* is 2.295, which is statistically significant at the 99.9% confidence level. It indicates that on average, the logarithmic odds ratio of relying on public pensions instead of family support for urban hukou holders is estimated to be 2.295 higher than the logarithmic odds ratio for older people with rural hukou. This, after exponent arithmetic, means that for urban hukou holders, the ratio of the probability of relying on public pensions to the probability of relying on family support (i.e. the odds ratio) is 8.924 times (= exp(2.295) - 1 = 9.924 - 1 = 8.924) higher than the odds ratio for rural hukou holders. Therefore, in Table 6.5, a positive coefficient means a greater probability of expecting the given option, for example, public pensions, to be the most reliable source of income

in retirement, while a negative coefficient means a greater probability of expecting family support to be the most reliable source of income in retirement.

Table 6.5 Multinomial logistic regression on the odds ratio of older people's expectation of the most reliable source for old-age support

	Pooled	Model	Fixed-effe	ect Model	
	Public		Public		
	Pension	Others	Pension	Others	
Urban hukou	2.295***	0.886***	1.109	-0.384	
	(0.112)	(0.149)	(0.699)	(0.888)	
Pension schemes (ref. Not in any public	pension scheme	es)			
GIP	2.363***	-0.762	1.406***	-1.135	
	(0.204)	(0.601)	(0.531)	(1.153)	
EEBP	3.242***	-0.869	1.548***	-14.964	
	(0.206)	(0.733)	(0.464)	(1,621.433)	
NRSP/URSP	0.464***	-0.459***	1.090***	-0.342*	
	(0.075)	(0.084)	(0.171)	(0.179)	
Pension schemes *urban hukou (ref. No	t in any public p	pension * Rura	l hukou)		
GIP*urban hukou	-0.112	1.057	-0.013	1.131	
	(0.268)	(0.673)	(0.695)	(1.406)	
EEBP*urban hukou	-1.020***	0.617	-0.445	13.397	
	(0.243)	(0.776)	(0.582)	(1,621.433)	
URSP*urban hukou	-0.667***	0.156	-0.091	0.437	
	(0.167)	(0.258)	(0.439)	(0.548)	
Income level (ref. Incomes at the lowest	quarter)				
Incomes at the 2 nd quarter	0.019	0.057	0.214	0.140	
	(0.110)	(0.133)	(0.268)	(0.269)	
Incomes at the 3 rd quarter	-0.193*	-0.272**	-0.195	-0.273	
	(0.108)	(0.134)	(0.265)	(0.280)	
Incomes at the highest quarter	0.329***	-0.240	-0.101	-0.258	
	(0.113)	(0.151)	(0.284)	(0.320)	
Age	0.012***	-0.018***	-0.020	-0.002	
	(0.004)	(0.006)	(0.045)	(0.063)	
Female	-0.032	-0.137*	0.606	-1.031	

Reference category: Children

	(0.060)	(0.079)	(0.996)	(1.112)
Education background (ref. Illiterate)				
Less than primary school	0.036	0.053	-0.086	0.998*
	(0.077)	(0.098)	(0.457)	(0.589)
Primary school	0.056	0.017	-0.889	0.587
	(0.076)	(0.100)	(0.587)	(0.824)
Secondary school	0.267***	0.118	-1.080	-0.065
	(0.093)	(0.129)	(0.935)	(0.976)
High school	0.840***	0.278	-1.826	14.056
	(0.128)	(0.206)	(1.550)	(899.583)
Marital status of respondent (ref. Married	d and living wi	th spouse)		
Married but temporarily living alone	0.031	-0.101	0.224	0.634
	(0.146)	(0.193)	(0.393)	(0.513)
Widowed/separated/divorced	-0.508***	-0.528***	-1.215***	-0.794*
	(0.066)	(0.090)	(0.325)	(0.409)
Self-assessed health (ref. Very good)				
Good	0.076	-0.102	-0.011	0.154
	(0.120)	(0.158)	(0.276)	(0.338)
Fair	0.056	-0.243*	0.197	0.085
	(0.101)	(0.135)	(0.251)	(0.298)
Poor	0.132	-0.128	0.264	0.057
	(0.105)	(0.138)	(0.276)	(0.334)
Province by economic development level	(ref. High leve	el)		
Middle-level	0.185***	0.466***		
	(0.069)	(0.095)		
Low-level	0.010	0.218**		
	(0.069)	(0.096)		
N. of children	-0.195***	-0.182***	-0.183*	0.068
	(0.020)	(0.028)	(0.108)	(0.120)
Co-residence	-0.271***	-0.312***	0.032	0.300
	(0.070)	(0.096)	(0.152)	(0.198)
Married children	-0.420***	-0.664***	-0.433	0.174
	(0.109)	(0.139)	(0.343)	(0.384)
Proximity to adult children (ref. Same con	nmunity)			
Same city	0.643***	0.678***	0.343	0.762***
	(0.104)	(0.139)	(0.236)	(0.286)

Same province	0.642***	0.560***	0.524*	0.311
	(0.107)	(0.148)	(0.270)	(0.331)
Different province	-0.106	0.293**	0.337	0.667*
	(0.112)	(0.147)	(0.292)	(0.381)
Incomes of children (ref. Incomes lo	ower than ¥ 10,000)			
¥ 10,000 to ¥ 20,000	-0.137	-0.150	-0.135	-0.209
	(0.097)	(0.126)	(0.226)	(0.274)
¥ 20,000 to ¥ 50,000	-0.134*	-0.089	0.124	-0.122
	(0.080)	(0.111)	(0.195)	(0.254)
¥ 50,000 and above	-0.214**	0.131	-0.361	-0.284
	(0.105)	(0.147)	(0.282)	(0.357)
Frequency of contact (ref. Very free	juent)			
Frequent	0.096	0.156	0.458**	0.208
	(0.090)	(0.122)	(0.234)	(0.298)
Infrequent	1.177***	0.924***	0.688	-0.227
	(0.206)	(0.265)	(0.485)	(0.668)
Very infrequent	0.545***	0.979***	0.530**	0.979***
	(0.101)	(0.122)	(0.249)	(0.298)
2013	0.846***	0.048	0.878***	0.029
	(0.086)	(0.103)	(0.185)	(0.231)
2015	1.220***	0.185*	1.278***	0.266
	(0.086)	(0.103)	(0.234)	(0.307)
Constant	-3.130***	-0.029		
	(0.345)	(0.458)		
Observations	13,789	13,789	2,738	2,738
LR chi2(72)	7586	5.43	365	.96
Log likelihood	-7879.	3569	-829.4	6651
Pseudo R2	0.32	250	0.18	307

Note: Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Pooled Model: Pooled cross-sectional multinomial logistic regression

Fixed-effect Model: Fixed-effect multinomial logistic regression

Data source: CHARLS 2011, 2013 and 2015

First and foremost, the pooled model in Table 6.5 shows that there were statistically significant

differences in the expectations of the most reliable source for old-age security between urban hukou holders and rural hukou holders. The differences also existed among older people with different public pension participation status. Setting aside of the interaction effects between hukou type and pension schemes (which will be discussed soon), older people with urban hukou or being in any public pension scheme seem to have significantly higher probability of expecting the state, rather than family, as the most reliable source for old-age security. For instance, taking older people who were not in any public pensions as the reference group, the odds of expecting the state rather than family to be the most reliable source for older recipients of GIP were on average 9.62 times (= $\exp(2.363) - 1 = 10.62 - 1 = 9.62$) higher. For older recipients of EEBP, the odds were 24.58 times (= $\exp(3.242) - 1 = 25.58 - 1 = 24.58$) higher. For older recipients of NRSP/URSP, the odds were only 0.59 times (= $\exp(0.464) - 1 = 1.59 - 1 = 0.59$) higher.

Turning to the fixed-effect model where comparisons are made within the same older respondents over time, Table 6.5 shows that on average, the participation in GIP increased the odds of expecting the state rather than family to be the most reliable source for old-age support by 3.08 times, the participation in EEBP increased the odds ratio by 3.70 times, and the participation in the new pension scheme for residents increased the odds ratio by 1.97 times. It is worth noting that the impacts of public pensions estimated by this within-group comparisons seemed to be smaller than the estimations from between-group comparisons. This is because the latter compared the differences across groups while controlling for certain characteristics of older people, and the differences were then attributed to the influences of public pensions. However, as one can hardly capture all potential factors that lead to the differences, the impacts of public pensions, in that case, might be under- or over-estimated. But in the within-group comparisons, the impacts of public pensions were estimated by comparing the odds before and after the respondent receiving the public pension benefits, which is therefore closer to the "treatment effect". In other words, the within-group comparisons provide a better estimation of the impact of public pension on the older people's expectation.

Both between- and within- group comparisons have shown that the impacts of public pensions varied to specific pension schemes. Furthermore, the interaction terms in the pooled model in Table 6.5 also

shows that the impacts of public pensions differed between urban older people and their rural peers. For example, in addition to the main effect of urban hukou (which increased the logarithm of odds ratio by 2.295) and the main effect of the participation in EEBP (which increased the logarithm of odds ratio by 3.242), older people who met both conditions would have an extra interaction effect (additionally, it decreased the logarithm of odds ratio by 1.020). Thus, compared to rural older people who did not participate in any public pension schemes, the logarithm of odds ratio for urban recipients of EEBP were expected to be 4.517 higher (= 2.295+3.242-1.020 = 4.517). In other words, compared to rural non-recipients (non-recipient refers to those who were not in any public pension schemes), the odds of expecting the state rather than family as the most reliable source for old-age support for urban recipients of EEBP were 90.56 times higher (= $\exp(4.517) - 1 = 91.56 - 1 = 90.56$). To facilitate the interpretation of the coefficients, Table 6.6 summarised the impact of public pensions on the odds ratio after taking into consideration the potential interactions with hukou type.

Table 6.6 The impacts of public pensions on the odds ratio of expecting the state rather than family to
be the most reliable source for old-age security with the consideration of interaction effects, estimated
from both pooled and fixed-effect models

		Not in any public	GIP	EEBP	NRSP/URSP
		pension scheme			
Pooled model	Rural	OR ^p r	10.62 * OR ^p r	25.58 * OR ^p r	1.59 * OR ^p r
	Urban'	9.92 * OR ^p r	105.43 * OR ^p r	91.56 * OR ^p r	8.10 * OR ^p r
	Urban	OR^{p}_{u}	10.62 * OR ^p u	9.23 * OR ^p u	0.82 * OR ^p u
Fixed-effect	Rural	OR^{f}_{r}	4.08 * OR ^f r	4.70 * OR ^f r	2.97 * OR ^f r
model	Urban	OR^{f}_{u}	4.08 * OR ^f u	4.70 * OR ^f u	2.97 * OR ^f u

Notes:

OR^P_r represents the odds ratio calculated with rural non-recipients as the reference group in the pooled model. **OR**^P_u represents the odds ratio calculated with urban non-recipients as the reference group in the pooled model. **OR**^f_r represents the odds ratio calculated with rural non-recipients as the reference group in the fixed-effect model. And **OR**^f_u represents the odds ratio calculated with rural non-recipients as the reference group in the reference group in the fixed-effect model. And **OR**^f_u represents the odds ratio calculated with rural non-recipients as the reference group in the fixed-effect model.

Two sets of odds ratios were displayed for urban category in the pooled model: the first set are calculated with rural non-recipients as the reference group (OR^{p}_{r}) , and the second set in parentheses are calculated with urban non-recipients as the reference group (OR^{p}_{u}) . See footnote for more detailed information.

Table 6.6 provides a summary which allows more intuitive and flexible comparisons of the impacts of

different public pensions. For example, taking urban non-recipients as the reference group, the odds ratio (state vs family) for urban recipients of GIP was on average 9.62 times higher (= $\exp(2.363 + 0)$ -1 = 10.62 -1 = 9.62), the odds ratio for urban recipients of EEBP was on average 8.23 times higher (= $\exp(3.242 - 1.020) -1 = 9.23 - 1 = 8.23$), and the odds ratio for older recipients of the new residents pension scheme was on average 0.18 times lower (= $\exp(0.464 - 0.667) -1 = 0.82 - 1 = -0.18$).

The interactions between public pensions and hukou type in the between-group comparison revealed that even within the same pension scheme, urban recipients and rural recipients were affected differently. Taking the EEBP as an example, the odds of relying on the state rather than family for rural recipients of EEBP were 24.58 times higher than the odds for rural non-recipients, while the difference in the odds ratios between urban recipients of EEBP and urban non-recipients was much smaller (with the former being 8.23 times higher than the latter).

Both between-group and within-group comparisons have demonstrated that older people's expectations of public pensions and family support vary to the specific public pension scheme they participated. Even after taking into consideration the endogenous issues, namely, the unobserved individual-specific effects (as discussed in Chapter 5), the analyses showed that the two employees' pension schemes (i.e., GIP and EEBP) had much greater impacts on older people's expectations of public pension being the most reliable source in old age regardless their hukou type. Whereas the difference in the expectations between recipients of NRSP/URSP and older non-recipients was less significant.

Moreover, both fixed-effect regression and the pooled regression without interaction effects indicated that the new pensions for residents have increased the odds of older people's expectations of old-age support from the state. But when the interaction effects were taken into consideration, the pooled regression showed opposing impacts of the new pensions between urban recipients and rural recipients. It shows that compared with urban non-recipients, urban recipients of URSP were slightly less likely to expect the state to be the most reliable source but more likely to expect family as the most reliable source of support. This might be explained by the low level of the new pensions along

with higher living costs in urban areas. Besides, the relatively smaller impacts of the new pensions that estimated by both models might be explained by the inadequacy of the benefits, the lack of trust in the newly introduced public pension schemes, or the time-lag in the shifts in the beliefs and expectations of state being a more reliable source for old-age security than family.

In addition, the fact that compared with the estimation from within-group comparisons (i.e., the fixed effect model), between-group comparisons (i.e., the pooled model) significantly over-estimated the impacts of GIP and EEBP but not so much in terms of estimating the impacts of the two new pensions schemes. It implies a greater heterogeneity between non-recipients and recipients of GIP or EEBP, as the between-comparison tends to attribute those differences in expectations to the impacts of public pensions. The non-recipients and recipients of URSP/NRSP are, on the contrary, more homogeneous in respect of the expectations of the most reliable source for old-age support in retirement.

The impacts of other social and demographic control variables are also worth discussing. For instance, Table 6.5 shows that older people's income levels had smaller impacts on older people's expectations of the most reliable source for old-age security. Other conditions being the same, the odds ratio of relying on public pensions rather than family support for those whose incomes were at the third quarter was slightly (0.17 times) lower than their poorer peers. For older people whose incomes were at the highest quarter, the odds ratio was 0.39 times higher than the lower half of older people. In other words, although the differences were minor, the subjective dependence on family support was most prevalent among older people with moderate incomes, followed by low-income older people, and was least prevalent among the best-off older people. When considering the other two possible sources for old-age security (savings and commercial pensions), the results showed that between older people with more financial resources and those with less financial resources, there were no significant differences in the odds ratio. It indicated that the market (commercial pensions) was not more appealing to the better-off older people, and that relying on the support from adult children was not exclusively popular among older people who found it difficult to support themselves.

Gender and self-assessed health seemed to have no impact on older people's expectations of

family/state being the most reliable source for financial security. The impact of age is statistically significant but very tiny: being ten-year older would lead to 0.13 times¹⁶ higher odds ratio of relying on public pensions rather than family support. The impacts of education level on older people's expectations of state/family being the most reliable source were only significant at the level of secondary school and beyond: the odds ratio of expecting to rely on public pensions rather than family support was 0.31 times higher for older people who have finished secondary school education, and 1.32 times higher for those who have finished high school and above. Being widowed, separated, or divorced increased the odds of expecting support from adult children to be the most reliable source in old age by 0.66 times¹⁷. Last, older people who reside in moderately developed areas were slightly more likely (0.20 times higher) to rely on public pensions rather than family support when compared with their peers who live in highly developed provinces.

Variables related to adult children are also influential. The more adult children older people had, the more likely they would expect family support instead of public pensions, savings, or commercial pensions as the most reliable source for old-age security: for each additional adult child, the odds ratio of expecting to rely on family support rather than public pensions was 0.22 times higher. Living with at least one adult child (i.e., co-residence) also increases the odds ratio of expecting the family, rather than state pensions, as the most reliable source of incomes by 0.31 times. It also holds true for the number of married children. Given the total number of adult children, the more of them were married, the more likely older people expected family support as the most reliable source: for example, the odds ratio of relying on family rather than public pensions for older people whose children were all

¹⁶ The coefficient of age was calculated based on one-year unit. A ten-year increase in age would multiply the odds ratio by 1.13 times $(1.127 = \exp(0.012 * 10))$.

¹⁷ When the reference category becomes public pensions (family vs public pensions), the coefficient will be 0 - (-0.508) = 0.508.

married was 0.52 times higher than older people whose children were all unmarried¹⁸.

As explained in Chapter 5.3 and especially Table 5.1, child-related variables measuring proximity, incomes, and frequency of contact were operationalised as the ratio of given category to reference category. To better interpret the coefficients of those child-related variables, it would be useful to imagine three different persons in their old age, named as A,B and C, and each of them had three adult children. Three scenarios were created to illustrate the impacts of child-related factors (see Table 6.7).

		Same community	Same city	Odds ratio (public pensions vs family)
Scenario 1:	А	3		OR1
Proximity	В		3	1.90 * OR1
	С	1	2	1.54 * OR1 ¹⁹
		Lower than	¥ 20,000 to	
6		¥ 10,000	¥ 50,000	Odds ratio (public pensions vs family)
Scenario 2:	А	3		OR2
incomes	В		3	0.87 * OR2
	С	1	2	0.91 * OR2
.		Very frequent	Very infrequent	Odds ratio (public pensions vs family)
Scenario 3:	А	3		OR3
Frequency	В		3	1.72 * OR3
of contact	С	1	2	1.44 * OR3

Table 6.7 An illustration of the effects of child-related variables on the odds ratio of older people's expectations of the most reliable source for old-age security

Notes: A, B, and C represent three older people who each have three adult children. The numbers in each cell of the first two columns represent the number of the child(ren) who fall into that category. For instance, In Scenario 1, older people A has three children who live within the same community as A; B has three children who live within the same city (but not the same community) as B; whiles C has 1 child live within the same community and 2 live within the same city as C. In each scenario, the odds ratio for older people A is seen as the reference person for comparisons (OR1, OR2, and OR3).

¹⁸ Again, the coefficient of the odds ratio (family vs public pensions) will be 0.420. Since the variable measures the ratio of the number of married children to the total number of children, for older people whose children were all married, the value of this variable was 1.

¹⁹ In this scenario, two out of three adult children live within the same city as older people C, which means the coefficient for the same city category should be multiplied by 2/3 (= 0.643*2/3 = 0.429). The odds ratio would then be 1.54 times the odds ratio of older people A (= exp(0.429) = 1.54).

<u>In Scenario 1</u>: For older person A, all their three adult children live within the same community as A. For older person B, all their three adult children live within the same city as B but in different communities from B. For older person C, one of their three children live within the same community as C and the other two live within the same city as C but in different communities. As shown in Table 6.7, other conditions being the same, the odds ratio of expecting public pensions rather than family support as the most reliable source for B was 0.90 times higher than the odds ratio for A, and for C the odds ratio was 0.54 times higher than the odds ratio for A.

In Scenario 2: For older person A, all their three adult children had annual incomes lower than \$ 10,000. For older person B, all their three adult children had annual incomes between \$ 20,000 and \$ 50,000. For older person C, one of their three children had annual incomes lower than \$ 10,000 and the other two had annual incomes between \$ 20,000 and \$ 50,000. As shown in Table 6.7, other conditions being the same, the odds ratio of expecting public pensions rather than family support as the most reliable source for B was 0.13 times lower than the odds ratio for A, and for C the odds ratio was 0.09 times lower than the odds ratio for A.

<u>In Scenario 3</u>: For older person A, all their three adult children contacted with A very frequently. For older person B, all their three adult children contacted with B very infrequently. For older person C, one of their three adult children contacted with C very frequently and the other two contacted with C very infrequently. As shown in Table 6.7, other conditions being the same, the odds ratio of expecting public pensions rather than family support as the most reliable source for B was 0.72 times higher than the odds ratio for A, and for C the odds ratio was 0.44 times higher than the odds ratio for A.

These scenarios help to demonstrate that given the total number of adult children, the more children lived very close to or very far from the older parent (in the same community or in different province), or the more children had higher incomes (¥ 20,000 and above), or the more frequently children and older parents contacted with each other, the more likely for older people to expect support from children rather than public pensions as the most reliable source for old-age security.

Last but far from the least is the trend spanning the three waves of study from 2011 to 2015. Both models in Table 6.5 reveal that there has been a steady decrease in the odds ratio of expecting support from adult children as the most reliable source for old-age security. Instead, an increasing number of older people were turning to other sources, not only public pensions, but also savings and commercial pensions (not all statistically significant though). The decreasing trend in the expectation of relying on family support in old age might reflect older people's appreciation of the possible challenges faced by Chinese families in securing their old age such as the changing family structure, the increasing financial strains on younger generation, the conflicting cultural norms and expectations on the ways to achieve old-age security between the two generations.

In this part, the emphasis of family dependence has been put on the expectations from older people themselves of the most reliable source for old-age security. However, to fully understand the degree to which older people are financially dependent on family support, it is equally important to investigate the significance of actual private transfers received by older people from their adult children.

6.2 Private transfers from adult children: the objective aspect of dependence

This section examines the objective aspect of family dependence, which is manifested in the private transfers received by older people as a proportion to their total incomes. Table 6.8 – 6.10 show the average proportion that actual private transfers account for the total incomes among older people with different hukou types, pensions participation status, and income levels. Table 6.8 shows that overall, older people were heavily dependent on family support, as actual private transfers from adult children contributed to almost half (49.85%) of their total incomes. For urban hukou holders, around one third of total incomes came from adult children, while for rural hukou holders, private transfers accounted for a little more than half of the incomes. Table 6.9 shows large disparities in the proportions of private transfers to total incomes among older people with different public pension status. For recipients of GIP or EEBP, private transfers from adult children only accounted for around one fifth of their total incomes. For recipients of the new pension schemes (i.e., URSP/NRSP), half of total incomes were from adult children. For older people who were not in any public pension schemes,

60% of total incomes came from private transfers.

Table 6.8 Private transfers as a proportion to total incomes by hukou type

Private transfers as a	Total	Urban	Rural
proportion to total incomes (%)	49.85	33.14	54.46
t-test: Ho: mean (Urban) = mean (Ru	ral)		<i>Pr</i> = 0.0000
	Data source: CHARLS 2011		2011, 2013 and 2015

Table 6.9 Private transfers as a proportion to total incomes by public pension schemes

Private transfers as	Public pension schemes			
a proportion to	None	GIP	EEBP	NRSP/URSP
total incomes (%)	60.37	22.69	17.99	50.87
F-test: Ho: mean (None) = mean (GIP) = mean (EEBP) = mean (NRSP/URSP) Pr = 0.0				
		Data	source: CHARLS 20	011, 2013 and 2015

Table 6.10 Private transfers as a proportion to total incomes by income level

Private transfers as	Income level			
a proportion to	Lowest quarter	2 nd quarter	3 rd quarter	Highest quarter
total incomes (%)	56.25	52.21	60.54	33.18

F-test: Ho: mean (lowest quarter) = mean (2^{na} quarter) = mean (3^{ra} quarter) = mean (highest level) Pr = 0.0000

Data source: CHARLS 2011, 2013 and 2015

Table 6.10 shows that there were only small differences in the proportion of actual private transfers to total incomes among older people at different income levels, except for the best-off older people who were much less dependent on transfers from adult children. One direct explanation is that older people who have more financial resources are less likely in need of family support. This explanation is underpinned by the altruism motive of intergenerational transfers (e.g. see Becker, 1974), as additional financial transfers to those older parents would not lead to proportionate increase in the child's wellbeing (or, utility). Another explanation could be that the absolute number of private transfers did not decline but became relatively less significant once the total incomes of older people were at a higher level. In this case, the exchange motive of intergenerational transfers (e.g. see Cox, 1987) seems to be appropriate, as adult children might provide more support to older parents in the

expectation of receiving some support back.

The next part moves forward to the regression analysis on the proportion of actual private transfers to the total incomes of older people. Table 6.11 shows the estimations from the pooled cross-sectional model and the fixed-effect model.

Table 6.11 Regression on private transfers received by older people as a proportion to their total incomes

Private transfers received by older people, as a proportion to total incomes (%)					
	Pooled Model	Fixed-effect Model			
Urban hukou	4.057	-3.860			
	(3.045)	(6.173)			
Pension schemes (ref. Not in any public pension	n schemes)				
GIP	-16.803***	-9.598*			
	(3.763)	(5.276)			
EEBP	-27.984***	-18.894***			
	(2.960)	(5.495)			
NRSP/URSP	-7.298***	-8.572***			
	(1.000)	(1.142)			
Pension schemes *urban hukou (ref. Not in any public pension * Rural hukou)					
GIP*urban hukou	-18.890***	-22.586***			
	(5.214)	(6.319)			
EEBP*urban hukou	-6.769	-15.949**			
	(4.286)	(6.344)			
URSP*urban hukou	-12.269***	-15.232***			
	(4.413)	(4.041)			
Income level (ref. Incomes at the lowest quarter	er)				
Incomes at the 2 nd quarter	-5.494**	-3.905			
	(2.718)	(2.789)			
Incomes at the 3 rd quarter	-1.902	-4.314			
	(2.724)	(2.806)			
Incomes at the highest quarter	-18.669***	-21.112***			
	(3.003)	(2.962)			
Age	0.306***	0.132			
	(0.074)	(0.384)			
Female	7.040***	13.054			
	(0.965)	(8.116)			
Education background (ref. Illiterate)					
Less than primary school	-0.349	-3.666			

	(1.125)	(3.452)
Primary school	1.698	-3.164
	(1.201)	(4.596)
Secondary school	4.749***	-4.322
	(1.476)	(6.812)
High school	7.200**	0.154
	(2.819)	(11.917)
Marital status of respondent (ref. Married an	nd living with spouse)	
Married but temporarily living alone	5.476	-0.890
	(3.452)	(2.945)
Widowed/separated/divorced	-1.396	-4.957**
	(1.060)	(2.465)
Self-assessed health (ref. Very good)		
Good	1.208	-2.853
	(1.736)	(2.122)
Fair	1.539	-1.714
	(1.504)	(1.949)
Poor	0.474	-2.131
	(1.548)	(2.161)
Province by economic development level (re	f. High level)	
Middle-level	-1.821*	omitted
	(1.067)	
Low-level	-2.649**	omitted
	(1.133)	
N. of children	4.950***	4.062***
	(0.310)	(1.002)
Co-residence	-2.434*	-2.372**
	(1.395)	(1.150)
Married children	4.387***	2.883
	(1.674)	(2.595)
Proximity to adult children (ref. Same comm	unity)	
Same city	-1.388	-2.759
	(1.789)	(1.969)
Same province	3.950**	4.412**
	(1.669)	(2.239)
Different province	13.053***	4.346*
	(1.576)	(2.262)
Incomes of children (ref. Incomes lower than	n ¥ 10,000)	
¥ 10,000 to ¥ 20,000	-0.921	4.209**
	(1.455)	(1.771)
¥ 20,000 to ¥ 50,000	2.715**	3.591**
	(1.273)	(1.508)

¥ 50,000 and above	8.222***	8.914***
	(1.558)	(2.086)
Frequency of contact (ref. Very frequent)		
Frequent	-2.511**	-1.381
	(1.262)	(1.760)
Infrequent	-31.186***	-13.103***
	(2.942)	(4.508)
Very infrequent	-9.213***	-2.241
	(1.548)	(2.035)
2013	-8.120***	4.930***
	(1.454)	(1.509)
2015	-0.118	13.425***
	(1.319)	(1.982)
Constant	21.404***	31.103
	(5.989)	(26.594)
Observations	11,586	11,711
R-squared	0.273	0.158
Number of id		7,376
Robust standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		
Pooled Model: Pooled cross-sectional OLS regr	ession model	
Fixed-effect Model: Fixed-effect regression mo	del	
F test ²⁰ that all u_i = 0: F (7375, 4301) =	1.54	Prob > F = 0.0000
Hausman Test ²¹ : Ho: difference in coeffici	ents not systematic	Prob > chi2 = 0.0000
	Data source: Cl	HARLS 2011, 2013 and 2015

Both the pooled model and the fixed-effect model in Table 6.11 have shown that the proportion of private transfers to total incomes was significantly decreased by the participation of public pension schemes. It also shows the size of the reduction in the proportion varied across different pension

²⁰ The null hypothesis that there were no unobserved effects specific to individual respondents was rejected at the 99.99% significance level. It indicates that compared with pooled OLS regression, the unobserved-effect model is more appropriate. However, as discussed in the previous chapter, fixed-effect models cannot be used to estimate the effects of time-invariant variables. Therefore, the pooled regression model will be retained to better understand the impacts of factors that were constant over time.

²¹ The null hypothesis that the unobserved effects are not related to explanatory variables was rejected at the 99.99% significance level. It indicates that between the fixed-effect model and random-effect model, the former is more efficient. The random-effect model is not included in this chapter.

schemes. Although hukou type itself was not statistically significant in pooled or fixed-effect models, it affected the proportion of private transfers to total incomes by moderating the strength of impacts of pension schemes. The interaction terms between hukou type and participation of public pension in both of the models imply that the impacts of public pensions not only varied to pension schemes but also differed between urban older people and rural older people. Table 6.12 summarises the estimated effects of public pensions after taking into consideration of the interaction effects between public pensions and hukou type.

Table 6.12 The effects of public pensions on the proportion of private transfers to total incomes (%) by pension scheme and hukou type

		Not in any public pension scheme	GIP	EEBP	NRSP/URSP
Pooled Model	Rural	0 (baseline)	-16.80	-27.98	-7.30
	Urban	0 (baseline)	-35.69	-27.98	-19.57
Fixed-effect Model	Rural	0 (baseline)	-9.60	-18.89	-8.57
	Urban	0 (baseline)	-32.18	-34.84	-23.80

As shown in Table 6.12, taking the fixed-effect model as an example, for rural hukou holders, the participation in GIP decreased the proportion of private transfers to total incomes by 9.60%, the participation in EEBP decreased the proportion by 18.89%, and the participation in NRSP decreased the proportion by 8.57%. For urban older people, however, the impacts are enlarged: being in GIP decreased the proportion by 32.18%, being in EEBP decreased the proportion by 34.84%, and being in URSP decreased the proportion by 23.80%.

The different effects of public pensions shown in Table 6.12 could be attributed to the different levels of pension benefits. A higher level of pension benefits could decrease the proportion of private transfers to total incomes in two ways: by "crowding out" the amount private support (in absolute term) or increasing the total incomes of older people (in relative term). As explained in Chapter 2, the levels of pension benefits can be partly determined by local average wage rates, financial capacity of

local governments, or both. In general, pension benefits in urban areas might be higher than rural areas, and employees' pension benefits (i.e., GIP and EEBP benefits) are much higher than residents' pension benefits (i.e., NRSP and URSP benefits).

When holding other variables the same, both models showed very limited impact of income levels on the proportion of private transfers from adult children to older people's total incomes. The exception being older people whose incomes were at the highest quarter: the proportion of private transfers to total incomes among the best-off older people was around 20.96% lower than the proportion among older people in the worst-off quarter. The fact that having more financial resources decreased the relative importance of family support can be explained in two ways. The first possibility is based on the altruism motive where adult children reduced private transfers as their older parents had fewer needs of financial support. The other explanation focuses on the "financial importance" of private transfers, as private transfers from adult children might be less significant in financial terms but more of symbolic value to older people with higher incomes.

Turning to other control variables in Table 6.11, factors such as age, gender and education level, and province of residence are constant over time, therefore cannot be estimated by the fixed-effect model. The pooled model showed that, the proportion of private transfers to total incomes increased by 3.06% for being 10-years older. The proportion is 7.04% higher for older women than that of older man. Older people with higher education tended to have 4.75%-7.20% higher proportion of private transfers. The proportion of private transfers to total incomes also increased with the economic development level of the provinces where older people reside. Moreover, the fixed-effect model showed that when older people turning from married to widowed, separated, or divorced, the private transfers as a proportion to total incomes would be decreased by 4.96%.

For every additional adult child, the proportion of private transfers to total incomes increases by 4.06%. Living together with at least one adult child slightly decreased the proportion of private transfers to older people's incomes by 2.37%. Given the number of children, more of them lived in moderate and far proximity (i.e. different cities or provinces from older people), or more of them had

higher incomes, or more of them contact older people very frequently, the higher was the proportion of private transfers to total incomes (see Table 6.13 for a more detailed demonstration of the child-related coefficients in Table 6.11).

		Same community	Different provinces	Private transfer/total incomes (0-100)	
Scenario 1:	А	3		P1	
Proximity	В		3	P1 + 4.35	
	С	1	2	P1 + 2.90	
		Lower than	More than 50,000	Drivete transfer (tetal incomes (0.100)	
Scenario 2: Incomes		¥ 10,000	wore than 50,000	Private transfer/ total incomes (0-100)	
	А	3		P2	
	В		3	P2 + 8.91	
	С	1	2	P2 + 5.94	
		Very frequent	Infrequent	Private transfer/total incomes (0-100)	
Scenario 3:	А	3		РЗ	
Frequency of contact	В		3	P3 – 13.10	
	С	1	2	P3 – 8.74	

Table 6.13 An illustration of the effects of child-related variables on the proportion of private transfers received by older people to their total incomes

Notes: A, B, and C represent three older people who each have three adult children. The numbers in each cell of the first two columns represent the number of the child(ren) who fall into that category. For instance, In Scenario 1, older people A has three children who live within the same community as A; B has three children who live in different provinces from B; whiles C has 1 child live within the same community as C and 2 live in different provinces from C. In each scenario, the proportion for older people A is seen as the reference person for comparisons (P1, P2, and P3).

The last set of year variables measured the trends over time. From 2011 to 2013, the average proportion of private transfers to total incomes increased by 4.93%, and from 2013 to 2015, the average proportion of private transfers to total incomes increased by 8.50%. As the outcome variable measured the relative proportion instead of the absolute number of private transfers, the possibility that the increase was caused by the changes in consumer price index could be ruled out. Therefore, compared to other sources of incomes, family transfers from adult children became more important over time, and the importance was increasing at a growing speed.

6.3 Findings and discussion

This chapter aims to answer the first core research question: what is the impact of public pensions on financial dependence on family support among Chinese older people? Prior studies have agreed on the profoundly entrenched role of Chinese family in supporting for older people, which is not only manifested in Confucian culture but also institutionalised by social policy arrangements (e.g. see Jones, 1993; Chiu and Wong, 2005; Croll, 2006; Saunders, 2006; Ochiai, 2009; Izuhara, 2010; Chen, Liu and Mair, 2011; Li and Shin, 2013; Abrahamson, 2017). However, in existing literature there is a lack of empirical evidence to identify the impacts of certain social factors, such as hukou, public pensions, or socioeconomic characteristics of older people and their families, on the degree of family dependence among Chinese older people. It is especially imperative given the heterogeneity of Chinese older people and their families in the rapidly changing society. In this sense, the present study helps to shed light on the complex picture of older people's family dependence in the Chinese society.

This study takes both subjective aspect (older people's expectations) and objective aspect (actual private transfers received by older people) of family dependence into consideration. Some of the existing studies have attempted to explore the beliefs in, attitudes towards, or expectations of the roles of family in securing old age through the framework of Chinese culture and social norms (Chiu and Wong, 2005; Saunders, 2006; Izuhara, 2010; Abrahamson, 2017; Zhang, 2019). A few others have also attempted to estimate the objective aspect of financial dependence by looking at the actual support and transfers flowed across generations within Chinese families (Kwon, 1999; Lau, 2013). However, few of them have taken both subjective and objective aspects of family dependence into analysis framework, let alone to discuss the implications of the possible consistency of or conflicts between what is expected and what is actually experienced by older people regarding the means to achieve financial security in retirement. Such discussions, however, are especially crucial to understand the dynamic roles of family and intergenerational relations in times of the changing pension policy arrangements in China.

Based on the recent national representative data (CHARLS 2011, 2013 and 2015), this study has confirmed the significant urban-rural differences in both subjective and objective aspects of financial dependence on family support. Consistent with previous findings (e.g. Liu, Liu and Huang, 2016; Zhu and Walker, 2018), the evidence confirms that, ceteris paribus, rural older people were significantly more dependent on their families for financial support compared with their urban counterparts. The differences in the odds ratios of expecting family support instead of public pensions as the most reliable source for old-age security could be as great as 9 times between urban and rural hukou holders. It is also the case regarding the proportion of actual private transfers to older people's total incomes, as the proportion for rural hukou holders of any public pension schemes is between 15% to 23% higher than their urban counterparts.

Another influential factor is public pension status, which includes two aspects: whether older people participated in any public pension scheme, and if so, which public pension scheme they were enrolled in. By taking advantages of both between-group (pooled regression) and within-group (fixed-effect regression) comparisons, this chapter not only shows the differences in the degree of family dependence between older recipients of public pensions and their non-recipient peers, but also showed the average impact of the shift in older people's pension status on their expectations and the actual support they received. Not surprisingly, as suggested by previous literature, older people who were receiving public pensions were less dependent on family support: state pensions were more likely to be expected and acting as the main income source in their retirement. The further contribution of this study is to provide empirical evidence which shows that the way in which older people achieve financial security depends on the different public pension schemes they participate.

Between non-recipients and recipients of the two employees' pension schemes (i.e., GIP and EEBP), this study showed huge differences in both subjective and objective aspects of family dependence. The differences, especially in expectations, became less dramatic when comparing non-recipients with recipients of the new resident pension schemes (i.e., NRSP and URSP). Even after taking into consideration unobserved effects and turning to within-group fixed-effect estimations, the study still showed that the impacts of public pensions on family dependence were significantly determined by the specific pension schemes they participated in.

For example, the participation in the employees' pension scheme (either GIP or EEBP) would greatly weaken older people's dependence on family support in both aspects. They became 3.08-3.70 times more likely to expect to depend on state rather than family in old age, and received 9.60%-34.84% fewer transfers from adult children. Whereas the participation in the new pension schemes would only increase the odds of expecting to rely on state rather than family in old age by 1.97 times, but the actual transfers from adult children as a proportion to total incomes would drop by 8.57%-23.80%. This means that the participation in the new pension schemes (NRSP/URSP) did not weaken older people's expectation of family support as effectively as the two existing employee pension schemes (GIP and EEBP) did, but it did reduce the actual transfers from adult children.

From the one hand, the limited impact of the new pension schemes on older people's expectations highlights the continuing importance of social norms and culture that requires Chinese families to sustain their function to protect the older members. If the latter resembles a strong pull force, there is simultaneously a weak pull force from the state and governments to gain trust and faith in their new pension arrangement from the long marginalised rural and urban older residents. Unlike their peers who were receiving employees' pensions, the recipients of the new pensions mainly consisted of older residents who live in rural areas, who devoted most time to caring family members, and who worked in the informal sector. Effectively this means that this segment of the population was already in more precarious conditions before retirement and therefore faced with higher risks of poverty in old age. They could also be considered as less exposed to the cultural impacts of modernisation and more actively involved in the family-centred informal social support arrangement. Therefore, family support might be the most reliable, if not the only available, source for old-age security in the absence of public pensions, even though the function of family to provide adequate support for older people has been challenged by the changes in the demographic and family structure as well as the shifts in the intergenerational relations.

On the other hand, although the new pensions aimed to provide those older people with an alternative to family support by expanding the public pension coverage, the initiative was limited in its ability partly because of the low level of pension benefits. In 2013, the average new pensions received by urban and rural older residents was only \pm 127 (ca. \pm 13) per month, far lower than \pm 2543 (ca. \pm 253) for public sector and \pm 1814 (ca. \pm 180) for private sector (calculation based on the CHARLS 2013, in Zhu and Walker 2018). To effectively reduce the degree of financial dependence on family support and provide older people with formal social protection, bridging the coverage gaps is merely the first step, which should be closely followed by the reduction of the huge differences in pension benefits (for a similar argument see Cai and Du 2015).

Admittedly, the differences in benefit levels across pension schemes have exposed the enlarged inequality, unfairness, and fragmentation in the new public pension arrangement. Moreover, the interactions between hukou type and different pension schemes means that even within the same public pension scheme, urban and rural recipients were affected in different ways. For instance, in terms of the objective aspect of family dependence, hukou type itself had hardly any direct influence on the proportion of private transfers to total incomes. Instead, it affected the degree of financial dependence by moderating the sizes of the impacts of different pension schemes. In general, the participation in any public pension schemes would lead to a lower proportion of actual private transfers to total incomes regardless urban or rural hukou, but within any public pension scheme the impact was much greater on urban older recipients than their rural counterparts, as shown in Table 6.12. When it comes to older people's expectation of relying on family support, it was observed that rural recipients of public pensions were more likely to switch from relying on family to relying on the state, as compared to their urban counterparts. For instance, rural recipients of the new pensions were slightly more likely (0.6 times higher) to rely on the state pensions than rural non-recipients, while urban recipients of the new pensions were slightly less likely (0.18 times lower) to rely on the state pensions than urban non-recipients. One possible explanation for the finding that the new pensions failed to alter urban recipients' expectations of relying on family support might lie in that the benefits level of the new pensions was too low to secure the livelihood in urban areas, especially compared to

what their peers gained from employees' pension schemes. However, it is still at the early stage to fully examine the impacts of new pensions, and a further analysis of later waves of the CHARLS might be helpful to provide a clearer picture of the impacts of the new pensions on urban hukou holders.

Urban recipients of the new pensions represent the very group of older people who were experiencing such inconsistency. For them, the expectations of family support were not effectively shifted to the state, but the actual private transfers they received from adult children, as a proportion to their total incomes, has dropped. The participation in the new pension scheme for urban residents might be taken as a signal of shifted responsibility of old-age security from the family sphere to the public sphere. However, because of the low level of URSP benefits, the expectation of family support remains stable.

The present study shows that the interactions between hukou type and public pension participation further creates inequality not only between urban and rural older people but also across different pension schemes. The inequality in the state-provided formal old age support has contributed to the differences in the degree of financial dependence on family support from both subjective and objective aspects, which could be then passed down to younger generations through the informal family support system. In other words, the intra-generational inequality caused by the unfair and fragmented public pension system could be possibly reproduced by the inter-generational redistribution and mobilisation of resources in the sphere of family.

Apart from the factors of hukou type and public pensions, older people with more financial resources (whose incomes were at the highest quarter) were less likely to expect family as the most reliable source for old-age security. They also have a lower proportion of private transfers incomes. The low proportion of private transfers from adult children might be explained in either absolute or relative term. The low proportion in absolute term might be because that they receive fewer support as they are less in need of private transfers. The low proportion in relative term might be when the absolute amount of family support remained unchanged but the proportion was shrinking when the total incomes increased. In the latter case, the private transfers from adult children to their well-off older

parents carried with them symbolic meaning. In this case, family support moves beyond the aim of protecting older family members from poverty, but also reflects the emotional connection, filial piety, and reciprocity.

This study also contributes to the understanding of intergenerational relations by engaging itself in the discussion of the inter-related dimensions of the interactions between parents and adult children (Bengtson and Schrader, 1982; Bengtson and Roberts, 1991). It shows that the number of adult children and their income levels have significantly affected older people's expectations of family support and the proportion of private transfers to total incomes. One possible explanation is that the more adult children older people have, the more sources of family support available to older people and the lighter financial burden for each child. The impact of adult children's incomes on both aspects of family dependence indicates that the intergenerational relations and the ways in which older people seek old-age security were partly shaped by the resources they owned.

Based on a comparative study of intergenerational relations in European societies, Kohli et al. (2005) argue that the geographic proximity and frequent contact between generations are conducive to family exchange and support. This study, though set in a different context, support Kohli et al's argument by providing the empirical evidence that the more frequently older parents and their adult children contacted each other, the more financially dependent they were on family support in both subjective and objective aspects. It implies that a more frequent contact helps to bridge the gap and intensify the family support between two generations.

However, what is less straightforward and more unique to Chinese families is the impact of proximity of residence between older people and their adult children. It was found in the study that geographic separation (living in different cities or provinces) led to a slightly higher private transfers from adult children. A strong explanation is the massive migration of younger generation for better employment opportunity, which, as cited in Guo et al (2009, p.1085) is "reshaping the face of China". It is especially the case in rural areas, where younger labour force migrate out to more developed cities or provinces and send money back to their left-behind rural older parents (Guo, Chi and Silverstein,

2012; Huang, 2018). Such family strategies are profoundly changing the intergenerational relationships in Chinese families.

In the present study, the three waves of survey (CHARLS 2011-2015) spanning the piloting and early expanding phrases of the new pension schemes have shown a clear trend: older people were increasingly less expecting family to provide support for old age, yet the private transfers they received as a proportion to total incomes remained growing. Family remained to serve the vital role to protect its older members, even though older people themselves became expecting less from adult children and turning to more diversified sources for financial security.

The findings from this study make several contributions to the understanding of the ways in which older people in China achieve financial security under the context of new pension arrangements and changing intergenerational relations. First, by investigating the impacts of hukou, public pensions, and other socioeconomic characteristics of older people and their families, this study provides an insight into the complex and dynamic picture of family dependence among Chinese older people. The different impacts of public pensions on family dependence between urban and rural older people indicate an enlarging inequality, which would possibly be passed on to next generation through intergenerational support. The new pensions, aimed to relieve the financial pressure on individual families, seemed to have limited effects due to the low level of benefits. However, since it was still at the early stage, further research would be needed to fully examine the impacts of the new pensions.

Second, by comparing older people's expectations and the received private transfers, this study highlights both subjective and objective aspects of family dependence. The consistency of or conflict between the impacts on the two aspects of dependence helps to shed light on the situations of older people. For example, the conflict between the higher expectations of family support and the fewer private transfers as a proportion to total incomes among urban recipients of the new pensions and older people who were widowed, separated, or divorced may reflect the unmet financial needs of older people and potential intergenerational conflict between them and their adult children.

Last but equally important, this study reveals the complexity and dynamics in intergenerational relations in Chinese families by looking at the links among different dimensions of the relationships, such as the expectations, the exchange of support, family structure and size, geographic proximity and frequency of contacts.

The next chapter will take a closer look at the complex interplays between public transfers and different forms of intergenerational family support.

7. The crowding-out/in effect of public pensions

Chapter 6 examined the impact of public pensions on the degree to which older Chinese are financially dependent on family support. It was found that public pensions not only affected older people's expectations of family support but also affected the proportion of actual private transfers older people received to their total incomes. This chapter will further investigate the complex interplay between public pensions and different forms of intergenerational support within the family sphere.

Previous literature, especially the "crowding-out" debates (e.g. Cox, Hansen and Jimenez, 2004; Cox and Jimenez, 1992; Amuedo-Dorantes and Juarez, 2013; Jensen, 2004), tends to frame such intergenerational reallocation and redistribution of resources as one-way, single-formed support, that is, child-to-parent upward monetary transfers. This chapter aims to provide an insight into the complex interplays between public pensions and family support where older people are not only seen as *recipients* but also as *providers* of support. Moreover, not only *financial transfers* but also grandparental *childcare support* will be examined in this study, in order to capture different forms of support that has been allocated, organised and exchanged across generations. Furthermore, to better understand the complex impact of public pensions on older people and their families, this study explores not only the *intensive margin* (the change in the amount of support caused by public pensions) but also the *extensive margin* (the change in the incidence of support caused by public pensions) of the impacts.

The chapter starts with an investigation of the potential "crowding-out" effect of public transfers on upward private transfers. It then goes to investigate the impacts of public pensions on downwards private transfers where older people acted as the "provider" rather than the "recipient". Next, the focus of enquiry moves from financial support to care support by examining the grandparental childcare support provided by older Chinese. The chapter concludes with a summary and discussion of the findings and implications.

7.1 Public pensions and upward generational private transfers

This section investigates the potential interplay between public pensions and upward private transfers received by older people. Table 7.1 - 7.2 display the incidence of upward private transfers by hukou type and public pension participation status. In each table, a Chi-squared test was processed to examine the possible association between the incidence of upward private transfers and hukou type/pension status of older people.

As shown in Table 7.1, the majority of older Chinese (71.71%) received upward private transfers from their adult children, which empirically confirms the prevalence of intergenerational old-age support among in Chinese families. Table 7.1 also shows a statistically significant difference in the incidence of receiving upward private transfers between urban and rural older people. Compared to their urban peers (59.62%), more rural older people (75.48%) were receiving upward private transfers from their adult children.

Table 7.1 Association between the incidence of receiving upward private transfers and hukou type among older people

Whathar alder		Total ²²	Rural	Urban
people received upward private transfers	Yes	10188	8174	2014
		(71.71%)	(75.48%)	(59.62%)
	No	4020	2656	1364
		(28.29%)	(24.52%)	(40.38%)

Pearson chi2(1) = 319.0132

First row has *frequencies* and second row has *column percentages* in parentheses

Data source: CHARLS 2011, 2013 and 2015

Pr = 0.000

The incidence of receiving upward private transfers was also varied to public pension participation status of older people, as shown in Table 7.2. Among older people who did not participate in any public pension schemes, 66.16% of them received upward private transfers from their adult children.

²² The size of subsample for analyses of private transfers with logarithmic pension incomes as the key explanatory variable (8836) was smaller than the subsample with public pension participation status as the key explanatory variable (14208). Unless specified, analyses were conducted based on the latter.
Upward private transfers were most prevalent among older recipients of the new pensions for residents (NRSP/URSP), with 81.63% of them received financial support from adult children. Recipients of the two long-established public pension schemes (i.e. GIP and EEBP), however, were least likely to receive upward private transfers (only 58.13% and 54.44% of them, respectively).

Table 7.2 Association between the incidence of older people receiving upward private transfers and public pension participation status

		Not in any	Recipients of	Recipients of	Recipients of
Whether older		public pensions	GIP	EEBP	NRSP/URSP
people received	Vac	3113	558	914	5603
upward private	tes	(66.16%)	(58.13%)	(54.44%)	(81.63)
transfers	No	1592	402	765	1261
Ν	NO	(33.84%)	(41.88%)	(45.56%)	(18.37%)

Pearson chi2(3) = 738.4160

Pr = 0.000

First row has *frequencies* and second row has *column percentages* in parentheses

Data source: CHARLS 2011, 2013 and 2015

Besides, Table 7.1 and 7.2 also show that in every subgroup more than half of older people were receiving upward private transfers. It, again, confirms the prevalence of child-to-parent private transfers among Chinese older people regardless of hukou type and pension status.

Table 7.3 moves from the incidence of upward private transfers to the amount of upward private transfers received by older people. Table 7.3 consists of three sets of correlation tests: a t-test to examine the possible association between the logarithmic amount of upward private transfers received by older people and their hukou type, an F-test to examine the possible association between the logarithmic amount of upward private transfers received by older people and their pension participation status, and lastly a Pearson's correlation test to examine the possible association between the logarithmic amount of upward private transfers received by older people and their pension participation status, and lastly a Pearson's correlation test to examine the possible association between the logarithmic amount of upward private transfers received by older people and their pension incomes.

As shown in Table 7.3, the mean value of the logarithmic upward private transfers received by older

people annually from their adult children was 7.775 (ca. ± 2380 , or $\pm 270^{23}$), but the amount was significantly related to their hukou type, pension participation status and logarithmic pension incomes. For older people with urban hukou, the average logarithmic upward private transfers they received was 8.077 (ca. ± 3220 , or ± 365), but for rural older people it was only 7.701 (ca. ± 2211 , or ± 251). The difference was even greater when turning to the comparisons across pension schemes. Table 7.3 shows that the mean value of logarithmic upward private transfers received by older recipients of GIP and EEBP were 8.213 and 8.156, respectively (ca. ± 3689 and ca. ± 3484 , or ± 419 and ± 395), but it was much smaller for older people without any public pensions (7.621, ca. ± 2041 , or ± 232), or older recipients of NRSP/URSP (7.755, ca. ± 2333 , or ± 265).

	Total	Ur	ban	Rural	
	(n=10188)	(n=2	2014)	(n=8174)	
	7.775	8.0	077	7.701	
	t-test: Ho: mean (Uri	ban) = mean (Rural)		<i>Pr</i> = 0.0000	
		Public per	ision schemes		
Logarithmic	None	GIP	EEBP	NRSP/URSP	
private transfers	(n=3113)	(n=558)	(n=914)	(n=5603)	
received by older	7.621	8.213	8.156	7.755	
adjusted based	F-test: Ho: mean (No (NRSP/URSP)	Pr = 0.0000			
on 2015 price)	Logarithmic pension incomes (n=6517 ²⁴)				
	0.122				
	Pearson's correlation	n test: Ho: ρ = 0		<i>Pr</i> = 0.0000	
			Data source: CHARL	S 2011, 2013 and 2015	

Table 7.3 Associations between logarithmic private transfers received by older people and their hukou type and public pensions

In order to determine the sources of the differences in private transfers across pension schemes,

²³ For reference, in 2015 the average Minimum Living Standard was \pm 5400 per year for urban residents and \pm 3182 per year for rural residents (Ministry of Civil Affairs, 2015).

²⁴ The subsample used in the Pearson's correlation test in the table was the one using logarithmic pension incomes as the key explanatory variable, where 6517 out of 8836 older respondents received upward private transfers.

further post hoc comparisons in Table 7.4 illustrate that, among the six pairs of comparisons across four types of participation status (not in any public pension schemes, participated in GIP, participated in EEBP, and last, participated in NRSP/URSP), all but one were significant different in the logarithmic amount of upward private transfers. The exception was between older recipients of the two established pension schemes for employees (GIP and EEBP), where evidence failed to identify statistical significance in the difference. It displays a clear stratification of upward private transfers based on older people's pension participation status, where recipients of GIP and EEBP received most private transfers, much higher than recipients of NRSP/URSP, and older people without any public pensions received least private transfers from adult children.

Table 7.4 Post hoc comparison of logarithmic private transfers received by older people (log) by pension participation status (using Bonferroni test)

(Row mean – column mean)	None	GIP	EEBP
	0.591		
GIP	(0.000)		
	0.535	-0.056	
EEDP	(0.000)	(1.000)	
	0.134	-0.457	-0.402
NNJF/UNJF	(0.000)	(0.000)	(0.000)

First row shows the *difference in mean* and second row shows the *p-value* in parentheses. Data source: CHARLS 2011, 2013 and 2015

In addition to participation status, Table 7.3 also shows a significant positive correlation (although a very weak one) between logarithmic pension incomes and logarithmic private transfers received by older people. The findings from Table 7.3 seem to indicate that older recipients of better public pensions from the state (GIP and EEBP, or simply with higher pension incomes) also received more private transfers from their families. However, such relationships could be spurious without considering other important factors. To separate the impact of public pensions from those confounding factors, variables such as socioeconomic status of both generations were controlled in the following regression models (as shown in Table 7.5).

Table 7.5 displays the results of two sets of Heckman two-step selection models with random-effect.

As explained in Chapter 5, the primary reason for the application of two-step selection model is to reduce potential selection bias. As reported in the bottom of Table 7.5, selection was an issue as the correlation terms (i.e. *corr(e.receive,e.amount)* and *corr(receive[id],amount[id])*, as indicated in shaded boxes in Table 7.5) in both models were significant. Furthermore, taking Model 1 as an example, the estimate of correlation for the selection model is -0.210, which means that unobserved individual-level factors that increase the probability of receiving upward private transfers tend to decrease the amount of upward private transfers. On the contrary, the estimate of correlation of random effects is 0.532, which means that unobserved observation-level (time-varying) factors that increase the probability of receiving upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers tend to increase the amount of upward private transfers. With the help of Heckman two-step selection models, these selection bias could be minimised.

Table 7.5 Heckman two-step selection panel model estimating the impacts of public pensions on upward private transfers received by older people

Upward private transfers received by older people (logarithmic)					
	Mod	el 7.1	Mod	el 7.2	
	Pension statu	ıs on received	Pension incon	nes on received	
	tran	sfers	tran	sfers	
	(1)	(2)	(1)	(2)	
	Adjusted	Selection	Adjusted	Selection	
	Equation	Equation	Equation	Equation	
Urban hukou	0.127*	-0.216***	0.367	-0.337	
	(0.069)	(0.072)	(0.351)	(0.386)	
Pension schemes (ref. Not in any public pension schemes)					
GIP	0.169	-0.012			
	(0.138)	(0.154)			
EEBP	0.143	-0.311**			
	(0.139)	(0.134)			
NRSP/URSP	0.117***	0.157***			
	(0.034)	(0.039)			
Pension schemes *urban hukou (ref. No	ot in any public pe	ension * Rural hu	ıkou)		
GIP*urban hukou	-0.168	-0.122			
	(0.162)	(0.175)			
EEBP*urban hukou	-0.043	0.147			
	(0.156)	(0.150)			

Upward private transfers received by older people (logarithmic)

URSP*urban hukou	-0.206**	-0.080		
	(0.105)	(0.119)		
Pension incomes(log)			-0.010	-0.140***
			(0.029)	(0.032)
Pension incomes(log) *urban hukou			-0.031	0.019
			(0.041)	(0.044)
Pre-transfer Incomes level (ref. incomes a	at the lowest qu	arter)		
Incomes at the 2 nd quarter	-0.057	0.121***	-0.051	0.173**
	(0.037)	(0.044)	(0.065)	(0.079)
Incomes at the 3 rd quarter	-0.149***	0.072*	-0.157**	0.157**
	(0.038)	(0.043)	(0.067)	(0.079)
Incomes at the highest quarter	0.018	-0.054	-0.005	0.047
	(0.050)	(0.053)	(0.079)	(0.087)
Age		0.007***		0.007*
		(0.003)		(0.004)
Female	0.117***	0.190***	0.134***	0.185***
	(0.033)	(0.036)	(0.039)	(0.046)
Education background (ref. Illiterate)				
Less than primary school	0.056	0.071	0.056	0.053
	(0.041)	(0.046)	(0.050)	(0.062)
Primary school	0.085**	0.098**	0.114**	0.121*
	(0.042)	(0.046)	(0.050)	(0.062)
Secondary school	0.279***	0.012	0.301***	0.043
	(0.053)	(0.057)	(0.063)	(0.075)
High school	0.411***	-0.098	0.472***	0.043
	(0.073)	(0.072)	(0.082)	(0.088)
Marital status of respondent (ref. Married	d and living with	n spouse)		
Married but temporarily living alone	-0.069	0.073	-0.034	-0.004
	(0.074)	(0.083)	(0.095)	(0.115)
Widowed/separated/divorced	-0.171***	-0.040	-0.216***	-0.030
	(0.034)	(0.039)	(0.040)	(0.051)
Self-assessed health (ref. Very good)				
Good	0.003	0.060	0.010	0.062
	(0.059)	(0.067)	(0.073)	(0.089)
Fair	-0.044	0.107*	-0.080	0.059
	(0.051)	(0.058)	(0.062)	(0.076)
Poor	-0.080	0.085	-0.130**	0.010
	(0.054)	(0.060)	(0.065)	(0.080)
Province by economic development level	(ref. High level)			
Middle-level	-0.209***	0.015	-0.196***	0.049
	(0.039)	(0.041)	(0.047)	(0.054)
Low-level	-0.130***	0.054	-0.084*	0.086

	(0.038)	(0.041)	(0.046)	(0.054)
N. of children	0.201***	0.290***	0.190***	0.282***
	(0.011)	(0.013)	(0.013)	(0.018)
Co-residence	-0.109***	-0.185***	-0.002	-0.186***
	(0.034)	(0.037)	(0.043)	(0.051)
Married children	0.099	0.321***	0.045	0.367***
	(0.061)	(0.060)	(0.076)	(0.079)
Proximity to adult children (ref. Same con	mmunity)			
Same city	-0.135**	-0.058	0.002	-0.044
	(0.058)	(0.055)	(0.073)	(0.073)
Same province	0.094	0.446***	0.128*	0.535***
	(0.060)	(0.061)	(0.073)	(0.079)
Different province	0.579***	0.491***	0.622***	0.576***
	(0.059)	(0.063)	(0.073)	(0.084)
Incomes of children (ref. Incomes lower t	han ¥ 10,000)			
¥ 10,000 to ¥ 20,000	-0.028	-0.005	-0.089	0.012
	(0.049)	(0.051)	(0.062)	(0.070)
¥ 20,000 to ¥ 50,000	0.308***	0.241***	0.278***	0.178***
	(0.041)	(0.045)	(0.050)	(0.059)
¥ 50,000 and above	0.891***	0.207***	0.878***	0.277***
	(0.054)	(0.060)	(0.064)	(0.076)
Frequency of contact (ref. Very frequent))			
Frequent	-0.299***	0.096*	-0.246***	0.013
	(0.045)	(0.054)	(0.054)	(0.070)
Infrequent	-0.856***	-1.753***	-0.784***	-1.878***
	(0.135)	(0.117)	(0.168)	(0.157)
Very infrequent	-0.671***	-0.370***	-0.713***	-0.521***
	(0.055)	(0.054)	(0.070)	(0.075)
2013	-0.198***	0.698***	-0.304***	0.893***
	(0.042)	(0.043)	(0.060)	(0.060)
2015	0.148***	1.118***	0.002	1.292***
	(0.045)	(0.046)	(0.063)	(0.067)
var(e.amount) ²⁵	1.16	3***	1.05	5***
		029)	(0.0)39)
corr(e.receive,e.amount) ²⁶	-0.21	L O ***	-0.22	9***
	(0.0	056)	(0.0)73)
var(amount[id])	0.58	9***	0.59	8***
	(0.0	033)	(0.0)45)

²⁵ An estimate of the variance of the observation-level error for amount of upward private transfers (StataCorp, 2019, p.216)

²⁶ An estimate of its correlation with the observation-level error for the selection model (ibid).

var(receive[id]) ²⁷	0.396***		0.409***	
	(0.0	049)	(0.0)77)
corr(receive[id],amount[id]) ²⁸	0.53	2***	0.66	0***
	(0.061)		(0.090)	
Constant	6.918***	-1.920***	7.245***	-0.961***
	(0.123)	(0.197)	(0.256)	(0.352)
Observations	14,	207	8,8	336
Selected	10	188	65	17
Non-selected	40	19	23	19
Number of id	8,1	152	6,0)57

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Both models in Table 7.5 show that public pensions, either manifested as different pension schemes or logarithmic pension incomes, had significant impacts on the probability of receiving upward private transfers from adult children. Model 7.1 shows that, compared with older people who were not in any public pensions, EEBP decreased the probability of receiving upward private transfers by 0.311 in its z-score, but the new pensions (i.e. NRSP/URSP) increased the probability of receiving upward private transfers by 0.157 in its z-score. Model 7.2, however, shows a general negative impact of pension incomes on the incidence of upward private transfers. For example, a 20% increase in pension incomes reduce the probability of receiving upward private transfers by 0.01 (= -0.140 * log (1+20%)) in its z-score. The slight difference between Model 7.1 and Model 7.2 implies that the occurrence and amount of upward private transfers were more sensitive to specific pension schemes than merely the amount of pension incomes.

Model 7.1 also shows the significant impact of the new pensions on the amount of upward private transfers. On the condition that upward private transfers happened, among rural residents, NRSP increased the amount of private transfers by 12.41% (= exp (0.117) -1). But among urban residents, URSP decreased the amount of private transfers by 8.51% (= exp (0.117-0.206) – 1 = exp (-0.089) -1). Neither of the two established pension schemes (i.e. GIP and EEBP) show significant difference in

²⁷ An estimate of the variance of the random effects (ibid).

²⁸ An estimate of the correlation of the random effects (ibid).

their impacts between urban and rural recipients. Nevertheless, hukou itself not only had a significant impact on the incidence of receiving upward private transfers but also on the amount: compared with their rural peers, the probability of receiving upward private transfers for urban hukou holder was 0.216 lower in its z-score, but when it happened, they receive 13.54% (= exp (0.127) -1) more private transfers than their counterpart.

The evidence shows a mix of "crowding-out" and "crowding-in" effects of public pensions. In general, the probability of receiving upward private transfers decreased with pension incomes, but if looking across pension schemes, such "crowding-out" of incidence was only found in EEBP. The new pensions, however, actually "crowded in" the incidence of upward private transfers. Moreover, the new pensions also "crowded in" the amount of upward private transfers for rural recipients, but "crowded out" the amount for urban recipients.

In addition to public pensions and hukou type, the two models in Table 7.5 also provided rich information about other demographic and socioeconomic factors that influenced the probability and the amount of upward private transfers. Estimations from Model 7.1 and Model 7.2 are in general consistent in terms of direction and magnitude. Taking Model 7.1 as an example, one of the most influential factors is the position of older people in income distribution. Compared with older people at the lowest or highest income quarter, older people with incomes higher than first but lower than third quartiles are more likely to receive upward private transfers (the probability increased by 0.072 - 0.121 in its z-score), but when it happened, the amount of upward private transfers received by them was fewer than their counterparts (13.84% (= exp(-0.149 - 1)) fewer for older people at the 3rd income quarter).

The probability of upward private transfers also increased with the age of older people. Being ten-year older increased the probability of receiving upward private transfers by 0.07 in its z-score. This could be associated with increasing costs in older age. Gender differences are found to be significant. The probability of receiving upward private transfers for older women was 0.190 higher in its z-score, and on average they received 12.41% more private transfers than their male peers. Education in general

played a positive role in the receipt of upward private transfers. Older people who had achieved primary schooling were more likely to receive upward private transfers, with 0.098 higher in its zscore. The more education they received, the more private transfers they would receive. For example, older people who had completed high school education or above received 50.83% more private transfers than those who did not finish primary school. Older people who were widowed, separated, or divorced received 15.72% fewer transfers than married older people. Regional difference in the amount of upward private transfers were also statistically significant: older people who reside in less developed provinces received 12.19%-18.86% fewer private transfers than their peers in developed provinces. Self-assessed health condition of older people, however, had no impact on the amount of upward private transfers. For them, care resources might be in more urgent need than monetary transfers.

The impacts of child-related variables in Table 7.5 were also worth examining. Both probability and amount of upward private transfers increased with the number of adult children. For each additional adult child, the probability of receiving private transfers increased by 0.290 in its z-score, and the amount of transfers increased by 22.26%. Living with at least one adult child decreased the probability of receiving private transfers by 0.185 in its z-score, and the number of received upward private transfers would also be 10.33% lower. Adult children being married increased the probability of upward private transfers. For example, the probability of receiving upward private transfers for older people whose children were all married was 0.321 higher in its z-score compared to their peers whose adult children are not married.

A greater geographic distance between older people and their adult children did not necessarily lead to a lower probability or fewer upward private transfers. On the contrary, it is found that in geographically dispersed intergenerational family both the probability and number of upward private transfers were significantly higher. For example, compared to older people who live within the same city as their adult children, older people whose children were all living in different cities or provinces from themselves were more likely to receive upward private transfers (0.446 to 0.491 higher in its zscore), and when it happened, they received 14.45% to 104.21% more private transfers. Both the probability and amount of upward private transfers received by older people increase with the incomes of their adult children. For example, compared with older people whose children all had annual incomes below \pm 20,000 as the reference group, older people whose children all had annual incomes between \pm 20,000 and \pm 50,000 had a higher probability of receiving upward private transfers (0.241 higher in its z-score), and when they did, they provided 36.07% higher transfers. Infrequent contact between older people and their adult children led to a lower probability and a fewer amount of private transfers. For example, compared to older people who contacted with all of their adult children very frequently, the probability of receiving upward private transfers by those who had very infrequent contact with their adult children is 0.370 lower in its z-score , and when it did happen, they received 48.88% fewer private transfers.

Last but equally important in Table 7.5 was the change in both probability and amount of upward private transfers over the years between 2011 and 2015. Older people became more likely to receive upward private transfers: the probability increased by 0.698 in its z-score from 2011 to 2013 and increased by 0.42 in its z-score from 2013 to 2015. The average amount of transfers first dropped by 17.96% from 2011 to 2013, and then rebounded by 41.34% from 2013 to 2015.

The results in this section so far have examined the upward private transfers, where older people were viewed as the "recipient" of the support from their adult children. However, previous literature (e.g. Izuhara and Forrest, 2013a) has indicated that older people can also be seen as the "provider" in the intergenerational exchange of resources. The next section, therefore, moves on to examine the impact of public pension on downward private transfers, where older people were seen as the "provider" and their adult children as the "recipient".

7.2 Public pensions and downward generational private transfers

Access to public pensions improved the economic situation of older people, and such economic empowerment might also have an influence on intergenerational support by enabling Chinese parents to (continue to) be the "provider" even in their old age. This section will investigate the possible impacts of public pensions on downward private transfers between the older and younger generations in China.

Table 7.6 and Table 7.7 show the associations between the incidence of older people providing downward private transfers and their hukou type and public pension participation status. In each table, a Chi-squared test was presented to show the statistical significance of the correlation between the incidence of upward private transfers and hukou type/pension status of older people. Table 7.6 shows that 30.26% of older people provided downward private transfers to their adult children. There was a statistically significant urban-rural difference. On average, 26.93% of rural older people provided downward private transfers to the younger generations, while 40.97% of urban older people provided downward private transfers.

Table 7.6 Association between the incidence of providing downward private transfers and hukou type among older people

14/bether elder		Total	Rural	Urban
neonle provided	Vee	4300	2916	1384
downward privato	res	(30.26%)	(26.93%)	(40.97%)
transfers	Ne	9908	7914	1994
	NO	(69.74%)	(73.07%)	(59.03%)
Pearson chi2(1) = 240.6902 Pr = 0.000			Pr = 0.000	

Pearson chi2(1) = 240.6902

First row has *frequencies* and second row has *column percentages* in parentheses

Data source: CHARLS 2011, 2013 and 2015

The difference in the incidence of downward private transfers also existed across four types of pension participation status, as shown in Table 7.7. The provision of downward private transfers was most prevalent among older recipients of the two long-established employees' pensions (45% of GIP recipients & 42.41% of EEBP recipients provided private transfers to the younger generations, respectively). Followed by older recipients of the new pensions for residents (NRSP/URSP), 30.42% of them provided downward private transfers. The provision of downward private transfers was least common among older people who were not in any public pension schemes, but still nearly a quarter (22.70%) of them provided private transfers to their children.

Table 7.7 Association between the incidence of older people providing downward private transfers and

public pension participation status

		Not in any	Recipients of	Recipients of	Recipients of
Whether older		public pensions	GIP	EEBP	NRSP/URSP
people provided	Vee	1068	432	712	2088
downward private	res	(22.70%)	(45.00%)	(42.41%)	(30.42%)
transfers	Nia	3637	528	967	4776
	NO	(77.30%)	(55.00%)	(57.59%)	(69.58%)
Pearson $chi^2(3) = 343$	3.7146			Pr	= 0.000

Pearson chi2(3) = 343.7146

First row has frequencies and second row has column percentages in parentheses Data source: CHARLS 2011, 2013 and 2015

Table 7.8 - 7.9 move from the incidence of downward private transfers to the amount of downward private transfers provided by Chinese older people. Table 7.8 displays three sets of correlation tests: a t-test to examine the possible association between the logarithmic amount of downward private transfers provided by older people and their hukou type, an F-test to examine the possible association between the logarithmic amount of downward private transfers provided by older people and their pension participation status, and lastly a Pearson's correlation test to examine the possible association between the logarithmic amount of downward private transfers provided by older people and their pension incomes.

As shown in Table 7.8, the mean value of logarithmic downward private transfers provided by older people annually to their adult children was 7.067 (ca. ¥ 1173, or £133). However, the mean value varied to hukou type, public pension participation status, and pension incomes of older people. The average logarithmic downward private transfers provided by urban older people was 8.005 (ca. \pm 2996, or £340), while for their rural peers it was only 6.623 (ca. \pm 752, or £85).

The difference in the mean value of logarithmic transfers was further enlarged by different pension participation status among older people. As shown in Table 7.8, among the four types of pension participation status, recipients of GIP provided highest logarithmic downward private transfers (8.281, ca. \ddagger 3948, or £448), even higher than recipients of EEBP (7.942, ca. \ddagger 2813, or £319). The difference in amount of transfers between older recipients of the two established pensions difference was statistically significant according to the post hoc comparisons in Table 7.9, and both on average

provided more transfers than the other two subgroups. The average logarithmic downward private transfers provided by older non-recipients was 6.749 (ca. \pm 853, or £97), and for recipients of NRSP/URSP the average logarithmic transfers provided by them was 6.681 (ca. \pm 797, or £90).

	Total	Ur	ban	Rural	
	(n=4300)	(n=1	(n=1384)		
	7.067	8.0	005	6.623	
	t-test: Ho: mean (Urbo	an) = mean (Rural)		<i>Pr</i> = 0.0000	
		Public per	nsion schemes		
Logarithmic	None	GIP	EEBP	NRSP/URSP	
private transfers	(n=1068)	(n=432)	(n=712)	(n=2088)	
provided by older	6.749	8.281	7.942	6.681	
adjusted based	F-test: Ho: mean (None) = mean (GIP) = mean (EEBP) = mean Pr = 0				
on 2015 price)	(NRSP/URSP)				
	Logarithmic pension incomes (n=2959 ²⁷)				
	0.412				
	Pearson's correlation	test: Ho: ρ = 0		<i>Pr</i> = 0.0000	
			Data source: CHARL	S 2011, 2013 and 2015	

Table 7.8 Associations between logarithmic private transfers provided by older people and their hukou type and public pensions

Post hoc comparisons in Table 7.9 shows that the difference between older non-recipients and older recipients of NRSP/URSP was not statistically significant (p-value was 1.00). It presents a clear stratification of downward private transfers based on the pension schemes that older people participated, where former employees in public sectors (GIP) provided most transfers to their adult children, followed by former employees in private sectors (EEBP), and recipients of the new pensions for residents (NRSP/URSP) and non-recipients provided least private transfers to their adult children.

²⁹ The subsample used in the Pearson's correlation test in the table was the one using logarithmic pension incomes as the key explanatory variable, where 2959 out of 8836 older respondents provided downward private transfers.

Table 7.9 Post hoc comparison of logarithmic private transfers provided by older people (log) by pension participation status (using Bonferroni test)

(Row mean – column mean)	None	GIP	EEBP
CID	1.533		
GIP	(0.000)		
EEDD	1.194	-0.339	
EEDP	(0.000)	(0.002)	
	-0.067	-1.600	-1.261
NRSP/URSP	(1.000)	(0.000)	(0.000)

First row shows the *difference in mean* and second row shows the *p-value* in parentheses. Data source: CHARLS 2011, 2013 and 2015

Table 7.8 also shows that there was a significant moderate positive correlation between the amount of downward private transfers provided by older people and the amount of public pension incomes they received. The findings from Table 7.8 and Table 7.9 imply that public pensions effectively "crowded in" downward private transfers across the two generations.

To further capture the complex relationships between public pensions received by older people and private transfers provided by older people, Table 7.10. presents the regression models with Heckman two-step selection correction and random-effect to estimate the impacts of public pensions on both occurrence and amount of downward private transfers. Similar to the analytical approach presented in previous section, two sets of models used pension participation status (Model 7.3) and logarithmic pension incomes (Model 7.4), respectively, as the key explanatory variables. In each set of models, the selection equation (Equation 2) estimated the probability of occurrence of downward private transfers, and the adjusted equation (Equation 1) estimated the logarithmic amount of downward private transfers with correction for possible sample selection bias.

As reported in Table 7.10, both correlation terms (*corr(provide[id],amount[id],* an estimate of correlation of random effects) was statistically significant (indicated in shaded box in Table 7.10), which means that endogenous sample selection was an issue and should be adjusted. For example, the estimate of correlation for the selection model is -0.256, which means that unobserved individual-level factors that increase the probability of providing downward private transfers tend to decrease the

amount of downward private transfers; while the estimate of the correlation of the random effects is 0.336, which means that unobserved observation-level (time-varying) factors that increase the probability of providing downward private transfers tend to increase the amount of downward private transfers.

Table 7.10 Heckman two-step selection panel model estimating the impacts of public pensions on downward private transfers provided by older people

Downward private transfers provided b	y older people (logarithmic)		
	Мо	del 7.3	Mod	el 7.4
	Pension stat	us on provided	Pension incom	es on provided
	trai	nsfers	tran	sfers
	(1)	(2)	(1)	(2)
	Adjusted	Selection	Adjusted	Selection
	Equation	Equation	Equation	Equation
Urban hukou	0.649***	0.120*	-0.052	0.267
	(0.127)	(0.064)	(0.593)	(0.321)
Pension schemes (ref. Not in any public	pension scheme	es)		
GIP	0.337	0.072		
	(0.252)	(0.131)		
EEBP	0.234	0.237**		
	(0.214)	(0.118)		
NRSP/URSP	-0.028	0.037		
	(0.072)	(0.035)		
Pension schemes *urban hukou (ref. No	ot in any public p	ension * Rural h	ukou)	
GIP*urban hukou	-0.220	0.141		
	(0.284)	(0.151)		
EEBP*urban hukou	-0.320	-0.081		
	(0.242)	(0.132)		
URSP*urban hukou	0.000	-0.056		
	(0.193)	(0.100)		
Pension incomes(log)			0.106**	0.060**
			(0.049)	(0.027)
Pension incomes(log) *urban hukou			0.041	-0.024
			(0.067)	(0.037)
Pre-transfer incomes level (ref. incomes	at the lowest q	uarter)		
Incomes at the 2 nd quarter	-0.122	0.010	-0.077	0.095
	(0.082)	(0.039)	(0.144)	(0.070)
Incomes at the 3 rd quarter	-0.063	0.159***	-0.049	0.240***
	(0.084)	(0.039)	(0.148)	(0.071)

Incomes at the highest quarter	0.378***	0.239***	0.305*	0.332***
	(0.094)	(0.046)	(0.160)	(0.077)
Age		-0.016***		-0.018***
		(0.002)		(0.003)
Female	-0.027	0.044	-0.009	0.023
	(0.059)	(0.030)	(0.069)	(0.038)
Education background (ref. Illiterate)				
Less than primary school	-0.006	0.069*	-0.041	0.069
	(0.079)	(0.039)	(0.097)	(0.050)
Primary school	0.162**	0.093**	0.197**	0.112**
	(0.079)	(0.039)	(0.095)	(0.049)
Secondary school	0.274***	0.111**	0.299***	0.152**
	(0.093)	(0.048)	(0.112)	(0.060)
High school	0.622***	0.209***	0.571***	0.282***
	(0.115)	(0.061)	(0.135)	(0.074)
Marital status of respondent (ref. Marrie	d and living wi	th spouse)		
Married but temporarily living alone	0.021	0.111	0.073	0.134
	(0.130)	(0.070)	(0.160)	(0.093)
Widowed/separated/divorced	-0.154**	-0.200***	-0.177**	-0.159***
	(0.073)	(0.033)	(0.083)	(0.041)
Self-assessed health (ref. Very good)				
Good	-0.254**	-0.009	-0.271**	-0.013
	(0.107)	(0.057)	(0.129)	(0.072)
Fair	-0.230**	-0.022	-0.271**	-0.018
	(0.090)	(0.048)	(0.109)	(0.062)
Poor	-0.249**	-0.177***	-0.289**	-0.174***
	(0.100)	(0.051)	(0.120)	(0.065)
Province by economic development level	(ref. High leve	I)		
Middle-level	-0.013	0.108***	0.012	0.107**
	(0.070)	(0.035)	(0.084)	(0.044)
Low-level	-0.116	0.128***	-0.095	0.135***
	(0.071)	(0.035)	(0.085)	(0.044)
N. of children	-0.027	0.051***	-0.043*	0.066***
	(0.019)	(0.010)	(0.023)	(0.013)
Co-residence	-0.038	-0.063*	0.078	-0.047
	(0.068)	(0.033)	(0.083)	(0.043)
Married children	-0.287***	-0.059	-0.389***	-0.059
	(0.107)	(0.053)	(0.129)	(0.068)
Proximity to adult children (ref. Same co	mmunity)			
Same city	-0.019	0.021	0.066	-0.013
	(0.112)	(0.051)	(0.137)	(0.066)
Same province	0.065	0.291***	0.139	0.308***

	(0.112)	(0.052)	(0.134)	(0.066)		
Different province	0.171	0.170***	0.177	0.189***		
	(0.111)	(0.053)	(0.134)	(0.068)		
Incomes of children (ref. Incomes lower than ¥ 10,000)						
¥ 10,000 to ¥ 20,000	-0.178*	-0.005	-0.226*	0.019		
	(0.100)	(0.047)	(0.120)	(0.061)		
¥ 20,000 to ¥ 50,000	0.237***	0.193***	0.128	0.173***		
	(0.082)	(0.038)	(0.097)	(0.049)		
¥ 50,000 and above	0.619***	0.227***	0.511***	0.192***		
	(0.097)	(0.049)	(0.112)	(0.061)		
Frequency of contact (ref. Very frequent)						
Frequent	-0.333***	-0.004	-0.283***	0.033		
	(0.083)	(0.043)	(0.099)	(0.055)		
Infrequent	-0.396	-1.049***	-0.225	-0.930***		
	(0.322)	(0.116)	(0.367)	(0.148)		
Very infrequent	-0.372***	-0.375***	-0.397**	-0.424***		
	(0.129)	(0.052)	(0.162)	(0.068)		
2013	-0.003	0.500***	-0.158	0.485***		
	(0.102)	(0.039)	(0.123)	(0.051)		
2015	0.390***	0.490***	0.140	0.367***		
	(0.100)	(0.039)	(0.113)	(0.051)		
var(e.amount)	1.99	94***	2.050	5***		
	. (0.	129)	(0.1	72)		
corr(e.provide,e.amount)	-0.256* -0.311*		1**			
	(0.133)		(0.1	52)		
var(amount [id])	0.609*** 0.477***		7***			
	(0.	096)	(0.1	20)		
var(provide[id])	0.17	77***	0.232	2***		
	(0.030)		(0.0	47)		
corr(provide[id],amount[id])	0.336**		0.32	78*		
	(0.141)		(0.1	98)		
Constant	7.284***	-0.294*	6.900***	-0.639**		
	(0.371)	(0.168)	(0.617)	(0.296)		
Observations	14	,207	8.8	36		
Selected	4	300	29	2959		
Non-selected	9907		5877			
Number of id	8,	152	6,057			

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results in Table 7.10 shows a positive, but limited impact of public pensions on the probability of

older people providing downward private transfers to their children. By pension schemes (as estimated by Model 7.3 in Table 6.10), only EEBP increased the probability of providing downward private transfers by 0.237 in its z-score. The impact of other public pension schemes (i.e. GIP, NRSP/URSP) was statistically insignificant. By pension incomes (as estimated by Model 7.4 in Table 7.10), for example, a 20% increase in pension incomes only increased the probability of providing downward private transfers by 0.005 (= $0.060*\log(1+20\%)$) in its z-score. On the intensive margin (i.e. the impact on the amount of downward private transfers), only Model 7.4 detects a significant, but minor impact of public pensions: a 20% increase in pension incomes led to 1.95% (= $(1+20\%)^0.106-1$) higher downward private transfers provided by older people. To sum, the results show a very weak crowding-in effect of public pensions on downward private transfers on both extensive and intensive margins, except for EEBP, which significantly increase the likelihood of its recipients providing downward private transfers to their adult children.

Urban older people were more likely to provide downward private transfers (0.12 higher in its z-score), and when they provided, the amount was on average 91.36% (= exp (0.651) -1) higher than their rural counterparts. The interaction terms between hukou type and public pensions/logarithmic pension incomes are not statistically significant, indicating that in spite of the urban-rural difference in both occurrence and amount of downward private transfers, urban and rural older were experiencing the "crowding-in" effect of public pensions in similar ways.

It, then, leaves more room for the exploration of the impact of control variables in Table 7.10. Income level of older people was among the most influential ones. The better-off half were more likely to provide downward private transfers, the probability being 0.159–0.239 higher in its z-score than their peers whose incomes were below the median value. But only older people in the highest quarter provided more transfers, the amount being 45.93% higher than the lower three quarters. The probability of providing downward private transfers decreased with age. For example, being ten-year older decreased the probability by 0.16 in its z-score. Gender of the respondent was found statistically insignificant in determining the probability or amount of downward private transfers. Both probability and amount of downward private transfers increased with education level of older people: for

example, compared with their illiterate peers, the probability for those who had completed high school education was 0.209 higher in its z-score, and when they provided downward private transfers, the amount was 86.26% higher.

Widowed, separated, or divorced older people were less likely to provide downward private transfers (the probability was 0.200 lower in its z-score), and even if they did, the amount was 14.27% fewer than married older people. Compared to their peers in very good, good, or fair health condition, older people in poor health were less likely to provide downward private transfers, the probability being 0.177 lower in its z-score. But only older people in very good health condition provided significantly more downward transfers: 20.55% –22.43% higher than their peers in good, fair, or poor health condition. The probability of older people providing downward private transfers decreased with the economic development level of the provinces they reside. Compared with their peers in developed provinces, the z-score of the probability of providing downward private transfers was 0.108 higher for older people living in semi-developed provinces and 0.128 higher for older people living in least developed provinces. Regional disparity in the amount of private transfers, however, was not found significant, indicating similar levels of downward intergenerational financial support across provinces.

Child-related factors were also playing a vital role in determining the occurrence and amount of downward private transfers. Having each additional adult child increased the probability of providing downward private transfers by 0.051 in its z-score. Living together with at least one adult child decreased the probability of providing downward private transfers by 0.063 in its z-score. The amount of downward private transfers decreased with adult children being married. For example, older people whose children were all married provided 24.95% fewer downward transfers than their peers whose children were all unmarried. The farther away one lived from their adult children, the higher the likelihood of providing downward private transfers. For example, the probability of providing downward private transfers was 0.291 higher in its z-score for older people who live in different cities from all adult children than their peers who live in the same city with all adult children.

It was also interesting that in most cases the probability and amount of downward private transfers

provided by older people increased with financial resources owned by their adult children. Taking older people whose children all had annual incomes below \pm 10,000 as the reference group, for example, older people whose children all had annual incomes over \pm 50,000 had a higher probability to provide downward private transfers (0.227 higher in its z-score), and when they did, they provided 85.71% higher transfers to their adult children. The exception is the income range \pm 10,000 – 20,000. Older people who have more children in this group would provide fewer transfers. For example, with the same reference group, older people whose children all had annual incomes between \pm 10,000 – 20,000 – 20,000 would provide 16.31% fewer private transfers to their adult children. It was not surprising that frequent contact between generations led to more downward private transfers provided by older people. For example, compared to older people who contacted with all of their adult children very frequently, older people who contacted with all of their adult children very infrequently had a lower probability of providing downward private transfers (0.375 lower in its z-score), and when it did happen, they received 31.06% fewer private transfers.

From 2011 to 2015, older people became more likely to provide downward private transfers. The probability increased by 0.50 in its z-score from 2011 to 2013, but went down a bit by 0.01 from 2013 to 2015. Over the years between 2013 and 2015, the amount of downward private transfers provided by older increased by 47.70%. The increase in the amount between 2011 and 2013, however, was not statistically significant.

The results in this section indicate that public pension, particular the EEBP scheme, "crowded in" the occurrence of downward private transfers provided by older people, but the impact on the amount of transfers was limited. It also shows that other important factors, such as older people's hukou type, marital status, income level, and the interactions between the two generations, were influencing both occurrence and amount of downward private transfers. Financial transfer between generations, however, reflects only on one aspect of intergenerational exchange of resources. Care, on the other hand, is also an important form of informal intergenerational support provided by Chinese families. Thus, the next section of this chapter continues to examine the impact of public pensions on childcare provided by older people.

7.3 Public pensions and grandparental childcare

This section examines the impact of public pensions on grandparental childcare support provided by older people. It is worth noting that not all families were in need of childcare support. For example, it won't be necessary to investigate families for childcare if there was no child to look after. Failure to exclude older respondent whose grandchildren were already beyond school age would underestimate the occurrence and average hours of grandparental childcare. For this reason, older people who did not have any grandchild aged below 16 were removed from the sample (similar practice can be found, for example, in Hank and Buber, 2009). As a result, 4262 older respondents were removed, which accounted for 30% of the subsamples used in this chapter. The remaining 9946 older respondents all had at least one grandchild within the age range that requires some form of care (for convenience, older people in this section refers to those who had at least one grandchild aged below 16).

Table 7.11 Association between the participation in grandparental childcare and hukou type among older people

		Total	Rural	Urban
Whether older	Vee	3826	2917	909
people provided	tes	(38.47%)	(37.61%)	(41.51%)
childcare	Nia	6120	4839	1281
	NO	(61.53%)	(62.39%)	(58.49%)
Pearson $chi2(1) = 10$).959			Pr = 0.001

Pearson chi2(1) = 10.959

First row has frequencies and second row has column percentages in parentheses

Data source: CHARLS 2011, 2013 and 2015

Table	7.12	Association	between	the	participation	in	grandparental	childcare	and	public	pension
partic	ipatio	n status of o	lder peopl	le							

		Not in any	Recipients of	Recipients of	Recipients of
14/bathay alday		public pensions	GIP	EEBP	NRSP/URSP
whether older	Vaa	1144	248	451	1983
people provided	res	(36.63%)	(38.87%)	(41.22%)	(38.95%)
chilacare	Na	1979	390	643	3108
	INO	(63.37%)	(61.13%)	(58.78%)	(61.05%)
Pearson chi2(3) = 8.	5088				Pr = 0.037

Pearson chi2(3) = 8.5088

First row has *frequencies* and second row has *column percentages* in parentheses

Data source: CHARLS 2011, 2013 and 2015

Table 7.11 and Table 7.12 show the associations between older people's participation in grandparental childcare and their hukou type and public pension participation status. On average, 38.47% of older people provided grandparental childcare. As shown in the tables, the occurrence of older people providing grandparental childcare varied to their hukou type and pension participation status. Urban older people (41.51%) were slightly more likely to take care of their grandchild(ren) than their rural peers (37.61%). Older recipients of public pension schemes, both the established ones for employees (38.87% of GIP recipients and 41.22% of EEBP recipients, respectively) and the new ones for residents (38.95% of NRSP/URSP recipients) were also more likely to participate in grandparental childcare than their non-recipient peers (36.63%). Both Chi-squared tests were statistically significant at 95% confidence level (p < 0.05).

Table 7.13 moves to the associations between the logarithmic hours of grandparental childcare provided by older people and their hukou type and public pensions.

The average logarithmic hours of childcare support was 6.96 (around 1054 hours) per year per older people. Table 7.13 also shows that the average logarithmic childcare hours were statistically different between urban and rural older people, where urban older people (6.845, around 939 hours) provided fewer hours childcare than their rural peers (6.995, around 1091 hours). The difference in average logarithmic childcare hours among older people with different pension participation status, however, was not significant at 95% confidence level (p > 0.05). The correlation between logarithmic pension incomes and logarithmic childcare hours, as shown in Table 7.13, was also very weak.

	Total	Urb	an	Rural
	(n=3826)	(n=9	09)	(n=2917)
	6.960	6.8	45	6.995
Logarithmic	t-test: Ho: mean (Urb	<i>Pr</i> = 0.0160		
provided by				
older people	None	GIP	EEBP	NRSP/URSP
F 2 -F	(n=1144)	(n=248)	(n=451)	(n=1983)

Table 7.13 Associations between logarithmic childcare hours provided by older people and their hukou type and public pensions

6.876	6.872	6.912	7.029
F-test: Ho: mean (No (NRSP/URSP)	ne) = mean (GIP) = me	an (EEBP) = mean	Pr = 0.0538
	Logarithmic p	ension incomes	
	-0.0465 ((n=2421 ³⁰)	
Pearson's correlation	n test: Ho: ρ = 0		<i>Pr</i> = 0.0222
		Data source: CHARL	5 2011 2012 and 2015

Data source: CHARLS 2011, 2013 and 2015

Given the results in Table 7.13 that the amount of grandparental childcare (i.e. how many hours did older people spend taking care of grandchildren) was very weakly, if not insignificantly, associated with public pensions, the following analysis would take a step back to examine merely the extensive margin of grandparental childcare (i.e. whether or not older people participated in childcare).

Table 7.14 presents the regression result of a Probit model with random-effect estimation (Model 7.5), where the probability of older people providing grandparental childcare support was examined by using pension participation status as the key explanatory variable. The model included the same control variables as in previous Heckman selection models for the sake of comparisons. At the bottom of Table 7.16, a Likelihood-ratio test was carried out to examine if the panel-level variance component is unimportant (i.e. whether rho is zero). The test shows that rho is significantly different from zero (p-value < 0.001), indicating that the panel estimator is more efficient than the pooled estimator.

Table 7.14 Probit regression model with random-effect estimating the impact of public pensions on probability of older people providing grandparental childcare support

	Pension status on probability of
	providing childcare
	Model 7.5
Urban hukou	0.865*
	(0.517)

Probability of older people providing grandparental childcare support

³⁰ The subsample used in the Pearson's correlation test in the table was the one using logarithmic pension incomes as the key explanatory variable, where 2421 out of 6205 older respondents provided grandparental childcare.

Pension schemes (ref. Not in any public pension schemes)	
GIP	0.447
	(0.883)
EEBP	0.032
	(0.735)
NRSP/URSP	0.013
	(0.201)
Pension schemes *urban hukou (ref. Not in any public pension	* Rural hukou)
GIP*urban hukou	0.100
	(1.026)
EEBP*urban hukou	0.519
	(0.866)
URSP*urban hukou	0.063
	(0.657)
Pre-transfer incomes level (ref. incomes at the lowest quarter)	
Incomes at the 2 nd quarter	0.092
	(0.227)
Incomes at the 3 rd quarter	-0.102
	(0.237)
Incomes at the highest quarter	-0.039
	(0.287)
Age	-0.389***
Age	- 0.389*** (0.028)
Age Female	- 0.389*** (0.028) 1.363***
Age Female	- 0.389*** (0.028) 1.363*** (0.327)
Age Female Education background (ref. Illiterate)	- 0.389*** (0.028) 1.363*** (0.327)
Age Female Education background (ref. Illiterate) Less than primary school	-0.389*** (0.028) 1.363*** (0.327) 0.280
Age Female Education background (ref. Illiterate) Less than primary school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387)
Age Female Education background (ref. Illiterate) Less than primary school Primary school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329
Age Female Education background (ref. Illiterate) Less than primary school Primary school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) se)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous Married but temporarily living alone	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) se) -0.260
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous Married but temporarily living alone	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) 5e) -0.260 (0.453)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous Married but temporarily living alone Widowed/separated/divorced	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) se) -0.260 (0.453) -0.757**
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous Married but temporarily living alone Widowed/separated/divorced	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) 5e) -0.260 (0.453) -0.757** (0.322)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous Married but temporarily living alone Widowed/separated/divorced Self-assessed health (ref. Very good)	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) 5e) -0.260 (0.453) -0.757** (0.322)
Age Female Education background (ref. Illiterate) Less than primary school Primary school Secondary school High school Marital status of respondent (ref. Married and living with spous Married but temporarily living alone Widowed/separated/divorced Self-assessed health (ref. Very good) Good	-0.389*** (0.028) 1.363*** (0.327) 0.280 (0.387) 0.329 (0.367) -0.497 (0.491) -0.304 (0.680) se) -0.260 (0.453) -0.757** (0.322) 0.089

Fair	0.145
	(0.333)
Poor	0.037
	(0.363)
Province by economic development level (ref. High level)	
Middle-level	-0.690*
	(0.379)
Low-level	1.920***
	(0.383)
N. of children	-0.406***
	(0.110)
Co-residence	0.369*
	(0.195)
Married children	0.067
	(0.394)
Proximity to adult children (ref. Same community)	
Same city	-0.699**
	(0.328)
Same province	-0.698**
	(0.355)
Different province	-0.550
	(0.353)
Incomes of children (ref. Incomes lower than ¥ 10,000)	
¥ 10,000 to ¥ 20,000	0.153
	(0.291)
¥ 20,000 to ¥ 50,000	0.490**
	(0.240)
¥ 50,000 and above	0.455
	(0.323)
Frequency of contact (ref. Very frequent)	
Frequent	-0.460
	(0.281)
Infrequent	-0.900
	(0.867)
Very infrequent	-1.137***
	(0.369)
2013	1.077***
	(0.214)
2015	1.841***
	(0.228)
Insig2u	4.301***
	(0.049)

Constant	22.531***
	(1.803)
Observations	9,945
Number of id	5,834
Pseudo R2	0.0387
Standard errors in parentheses	

*** p<0.01, ** p<0.05, * p<0.1

Model 5: LR test of rho=0: chibar2(01) = 4639.10 Prob >= chibar2 = 0.000 Data source: CHARLS 2011, 2013 and 2015

Contrary to the result of Chi-square test in Table 7.12, the random-effect Probit regression model (Model 7.5) in Table 7.14 fail to find significant impact of public pensions on the probability of older people providing grandparental childcare. There are two possible explanations. The Chi-square test in Table 7.12 was based on pooled data, where each observation was seen as an individual case. While the estimation of Model 7.5 was based on panel data with random effect, where unobserved individual-specific effects have been taken into consideration. Model A1 and A2 in Appendix 2 show random-effect and pooled Probit regression estimations with pension status being the only explanatory variable. Both EEBP and NRSP/URSP are significant in pooled model (Model A2 in Appendix 2), but after taking unobserved individual-specific effects into consideration (Model A1 in Appendix 2), only EEBP is significant and the impact of NRSP/URSP becomes statistically insignificant.

The second possible explanation is after controlling other important factor(s), the impact of public pensions becomes insignificant. The remaining models in Appendix 2 show that after controlling the year of survey, public pensions become insignificant in the random-effect estimation (Model C1), and in pooled estimation, public pensions become insignificant after controlling both hukou type and the year of survey (Model D2). This means that, taking random-effect estimation as an example, the difference in the probability of providing grandparental childcare between recipients of EEBP and others becomes insignificant once the comparisons are made among the same cohort. In other words, the difference was at least partly caused by comparing recipients of EEBP and others from different survey years.

Back to Model 7.5 in Table 7.14, it is shown that factors related to demographics of older people and intergenerational interactions played more important roles in determining whether or not older people were involved in childcare support. For instance, ceteris paribus, urban hukou holders were more likely to provide grandparental childcare support to their adult children, with the probability being 0.865 higher in its z-score. Being 5-year older decreased the probability of providing grandparental childcare by 1.95 (= -0.389*5) in its z-score. Older women had higher probability to take care of grandchild(ren) than older men (the average z-score was 1.363 higher for older women). Older people who were widowed, separated, or divorced were less likely to provide grandparental childcare (the probability decreased by 0.757 in its z-score). Older people in semi-developed provinces were least likely to provide grandparental childcare (0.690 lower z-score than those in developed provinces), but the probability was highest among older people in underdeveloped provinces (1.920 higher z-score than those in developed provinces).

A rather counter-intuitive finding is that the probability of older people providing grandparental childcare decreased with the total number of adult children they had. For each additional adult child, the probability decreased by 0.406 in its z-score. One possible explanation would be that childcare support could be provided by siblings rather than older parents. Another possibility was that older people would have to provide childcare support to all adult children to achieve "fairness" among them, which decreased the likelihood for older people with many adult children. Living with at least one adult child increased the probability of providing grandparental childcare support by 0.369 in its z-score. Moreover, living within the same community with non-co-residing adult children or having frequent contact between the generations significantly increased the probability of grandparental childcare than older people who live in different cities or provinces from all of their children. Older people who had a very frequent contact with all of their adult children were more likely to provide grandparental childcare support (1.137 higher in its z-score) than older people who had a very infrequent contact with all of their adult children were more likely to provide grandparental childcare with all of their adult children.

Besides, incomes of adult children also affected the probability of grandparental childcare, but only in the range between 20,000 and 50,000 per year. For example, compared to older people whose children all had incomes below 20,000 or over 50,000, the probability would be 0.490 higher in its z-score for older people whose children all had incomes between 20,000 and 50,000. It indicates that grandparental childcare is more frequent and probably more important for younger generations whose had middle incomes than their peers at the lower or higher end of income distributions.

Lastly, the results show a continuous increase in the probability of older people providing grandparental childcare over the years between 2011 and 2015. From 2011 to 2013, the probability increased by 1,077 in its z-score, and from 2013 to 2015, it remained growing by 0.764 (= 1.841 - 1.077) in its z-score.

The results in Table 7.14 show little impact of public pensions on the probability of older people providing grandparental childcare. Instead, factors related to the interactions between older people and their adult children were more influential. It is also worth noting that the model in Table 7.14 could only explain a small portion of variance in the sample (as Pseudo R2 was only 0.0387), which means the decision of whether or not providing grandparental childcare is therefore also significantly shaped by other important factors that this model failed to capture. Public pensions, however, were not among those influential factors.

7.4. Findings and discussion

This chapter seeks to reveal the potential complex interactions between public pension transfers and private intergenerational support in Chinese families. Specifically, it investigates the following four questions: 1) What were the impacts that public pensions had on upward private financial transfers received by older people? 2) What were the impacts that public pensions had on downward private financial transfers provided by older people? 3) What were the impacts that public pensions had on grandparental childcare provided by older people? and last but equally important, 4) If there were any aforesaid impacts, were urban recipients and rural recipients of public pensions affected differently?

These questions are vital to the understandings of the dynamic relationships not only between the working-age and older generations but also between the state and family in relation to their roles in welfare provision in China. By exploring the flow of resources across generations in the private sphere, the above questions help to offer a new insight into the debate around generational equity especially in a rapidly ageing society. By investigating the responses of Chinese families to the shifting social policy arrangement, these questions help to shed light on the motives and strategies that family, as a socio-economic actor, adopts to mobilise and allocate the resources to protect its members. Besides, setting in the context of a middle-income country with entrenched cultural influences of Confucianism, the study of the interplays between public transfers and private support in China adds to the less discussed "crowding-out/in" debate in developing countries and emerging economies (as suggested by Cox and Jimenez, 1992; Cox, Hansen and Jimenez, 2004). Moreover, these questions not merely view older people as the recipient of intergenerational support, but also investigate how they (continue to) provide different types of intergenerational support (i.e. financial transfers and childcare support), which provides useful insights into the understanding of the wellbeing of Chinese older people.

The present study first identifies the overall prevalence of intergenerational support in Chinese families: around 30% – 70% older people were involved in some sort of support transfers, depending on the direction (i.e. child-to-parent upward or parent-to-child downward) and form (i.e. financial transfers or childcare support). The results show that there was an asymmetry pattern where older people were in general at the beneficial end in intergenerational transfers: the majority of older people (71.71%) were receiving upward private financial transfer, while close to one third of older people (30.26%) were providing downward financial transfers to their adult children. Specifically, far more rural older residents were recipients (75.48%) rather than providers (26.93%) of intergenerational financial transfers. While the pattern for urban older residents tended to be less asymmetry: 59.62% of them received upward financial transfers and 40.97% of them provided downward financial transfers. Meanwhile, for those who were involved in intergenerational support, on average urban older residents significantly received and provided more financial transfers than their rural peers. Compared

to financial transfers, the provision of grandparental childcare support was slightly more common for both rural and urban older people (37.61% and 41.51% of them were involved in grandparental childcare, respectively), and when it happened, the hours they spent on childcare were less significantly different. The evidence on one hand shows urban-rural difference in intergenerational financial transfers which might be explained by the lack of public pensions and the farther-reaching influence of Chinese cultural norms (e.g. filial piety requires adult children to provide for older parents) in rural China. On the other, it indicates that older people owned more time resources than financial resources which were available for transfer across generations.

A series regression analyses in previous sections show mixed evidence of "crowding-out" and "crowding-in" effects of public pensions. In general, a higher public pension income led to a decrease in the probability of older people receiving upward financial transfers from their adult children, but an increase in both likelihood and amount of downward financial transfers that older people provided to their descendants. The size of the impact, however, is at a limited scale. For example, a 20%-increase in public pension incomes would lower the probability of receiving upward private transfers by 0.01, while the probability of providing downward financial transfers increased by 0.005 and the amount of downward private transfers increased by 1.95%. Similar evidence on the co-existence of "crowding-out" of upward private transfers and "crowding-in" of downward private transfers can also be found in Europe (Reil-Held, 2006; Deindl and Brandt, 2011).

Although pension income is a useful tool to observe the interactions between public transfers and private transfers in China (e.g. see Chen et al., 2017), it is less effective to capture the systematic difference across pension schemes designed for different subgroups of older people. In this sense, the study also examines the impact that each of the current public pension schemes (i.e. Government and Institution Pensions, Enterprise Employee Basic Pension, New Rural Social Pension/Urban Residents Social Pension) had on intergenerational transfers. The results show that the established pension scheme for employees in private sector (i.e. EEBP) significantly reduced the probability (0.311 lower in its z-score) of receiving upward private transfers from adult children, while increased the probability (0.237 higher in its z-score) of providing downward transfers to their adult children. The

impact of GIP, the other established pension scheme for employees in public sector, was found statistically insignificant.

The two new pension schemes (i.e. NRSP & URSP), on the other hand, show a different picture. It is found that the participation in the two new pension schemes had significantly increase the likelihood of receiving upward financial transfers (0.157 higher in its z-score). This finding is interesting because it shows that the access to the new public pensions, instead of substituting family support to older people, but actually complementing it by "crowding in" the incidence of child-to-parent financial transfers. However, this outcome is contrary to a recent study by Nikolov and Adelman (Nikolov and Adelman, 2019). Using different econometric tools but with the same dataset (the CHARLS 2011 & 2013), they find a significant decrease in the likelihood of older recipients of NRSP receiving upward private transfers. One possible reason for the different findings might be that the present study additionally included more recent wave of the survey data (the CHARLS 2015), which allows for observations when the new pension scheme further roll out and therefore takes into consideration the potential time-lag between the scheme first introduced and generating an effect.

Moreover, the study identifies a significant urban-rural variation in the direction of the impact of the new pensions on the intensive margin of upward private transfers. It is found that for rural older residents, the participation in the new pension (NRSP) increased the amount of private transfers by 12.41%, but for their urban peers, the participation in the new pension (URSP) led to a decrease in the amount of private transfers by 8.51%. In other words, the new pensions crowded in the amount of upward private transfers received by rural residents but crowded out the amount of upward private transfers received by rural residents.

The above evidence confirmed the co-existence of crowding-out and crowding-in effects of public pensions. On one hand, the established public pensions, EEBP in particular, substituted child-to-parent upward financial transfers at the extensive margin. This is in line with some of the earlier evidence from both developing countries, such as Peru (Cox and Jimenez, 1992), South Africa (Jensen, 2004), and Mexico (Amuedo-Dorantes and Juarez, 2013), as well as developed countries, such as Germany

(Reil-Held, 2006) and European countries (Deindl and Brandt, 2011). One strong explanation for such impact of public pensions comes from the assumption of altruism motive of private transfers (Becker, 1974; Becker and Barro, 1988), as often cited and discussed in the above literature.

However, the story becomes complicated if the crowding-in of the incidence of upward private transfers, which was caused by the new pensions for urban and rural residents (i.e. NRSP&URSP), was taken into consideration. One explanation is that family could be more willing to play an active role in protecting its older members once the state began to share the responsibility rather than assuming it as merely the normal and legal duty of other family members. The family of those long-excluded older residents might have been expected to provide more resources to older members in the absence of state pensions. Public pensions, apart from being an additional source of financial support, can also been perceived as a signal of the state intervening in old-age poverty and protecting the wellbeing of older people, which might encourage the adult children to fulfill their moral and legal obligations in supporting for older parents. Another possible explanation is that as a result of the inadequacy of the new pension benefits, private transfers were provided by adult children as a complement source of incomes in order for older parents to achieve financial security. This finding adds supportive evidence to the "mixed responsibility" explanation on the relationship between formal and informal support (Künemund and Rein, 1999; Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005).

The crowding-in effect of public pensions was also found on parent-to-child downward financial transfers, but only statistically significant for EEBP recipients. Public transfers to older people have improved their economic situation and empowered them by enabling older people to sustain their active role in intergenerational support. It implies that the public resources to support older people were, at least partly, channelled back to younger generations through private transfers, as suggested by Kohli (1999). This would also be a positive response to the debate around generational equity (e.g. see Williamson, McNamara and Howling, 2003 for more about generational euqity). Although Reil-Held (2006) worries that, from the economic perspective, such backflow of resources could be an inefficient detour system because public pension contributions increase labour fringe costs and

therefore may slow down the economic growth. The implications of the crowding-in impact on downward private transfers could be more than simply a circulation of resources but a reflection of a mechanism for the redistribution of resources within the Chinese family in response to the changing policy arrangements, especially if other forms of support between the two generations were taken into consideration as well.

Although the study moves beyond the scope of inquiry from financial resources to grandparental care support, the regression analysis shows little evidence of crowding-out or crowding-in effect of public pensions. It suggests that other socio-economic factors, rather than public pensions, were playing more important roles in shaping the decisions related to whether to provide grandparental childcare and/or how much care support one could provide.

Apart from public pensions, the influences of some socioeconomic factors are also worth discussing. Intergenerational private transfers are highly associated with the financial resources that each generation has, but such relationship is not simply linear. For example, older people with incomes between 25th and 75th percentiles were more likely to receive upward private transfers than their peers in the lowest or highest income quarters, which indicates that the decision of providing upward financial transfers may not depend on the needs of older parents. In addition to its functional meaning (e.g. see Daly, 2017; Summers, 2018), the money transferred from adult child to older parent and the behaviour itself may carry with symbolic meanings: the compliance of legal requirements and the exemption from moral condemnations especially when one is not staying with their older parents.

Meanwhile, the probability of older parents providing downward private transfers not only increased with their incomes but also increased with the incomes of adult children. It, again, indicates that money is not merely transferred for the purpose of meeting the needs of recipients. In this case, the continuing financial transfers from older people to adult children, even if the latter have good incomes, might be partly explained by the rapid growth of housing price. Housing-related support to adult children is found to be a common practice among urban Chinese parents (e.g. see Li and Shin, 2013), which creates an increasing dependence of adult children on family support (e.g. see Izuhara

and Forrest, 2013a). It is also suggested that the housing-related support from older parents can be interpreted as an strategic investment in good intergenerational relationship, from which older people are in the expectation of (or exchange for) better care support arrangement (Zhong and Li, 2017). Moreover, from the power perspective (Daly, 2017; Zhong and Li, 2017), the continuing financial support from older parents to adult children could also be possibly understood as a continuing control over adult children and the key aspects of their lives, which might be an alternative way to secure informal old-age care support especially in a society where the obedience element of filial piety declines.

Intergenerational support is also found highly gendered. In addition to having a higher probability of providing childcare support, women were more likely to receive upward private transfers and when they did, they received more money than men. It can be possibly explained by the relatively lower economic status of women: even in the same income class or the same public pension scheme, women could be more likely at the lower end because of the inequality in labour market such as fewer employment opportunities and pay gap (e.g. see Saunders and Lujun, 2006; Zhu and Walker, 2018). Such inequality might be therefore compensated by private transfers from adult children. But on the other hand, it could also be a compensation (or an exchange) for the time and effort that a grandmother spent on childcare support.

Another possible explanation involves the gender role in within-household distribution. Women are more likely to be responsible for day-to-day spending, especially in households with low incomes or consisting of older people (Bennett, 2013). It is also found that women tend to spend money in the way to improve the welfare of the household, which has been an initial reason for some women-targeted social security benefits such as Mexico's conditional cash transfer benefit programme PROGRESA (e.g. Duflo, 2012; Jenson and Nagels, 2018). This study shows that, within family sphere, women are also preferred as the recipient in informal intergenerational transfers.

Regional variation in intergenerational support is statistically significant. Older people in developed provinces received most upward private transfers, which might be explained by a higher price level.

But they were least likely to provide downward private transfers than their peers in underdeveloped or semi-developed provinces. One possible reason is that compared to older people in developed areas, older people in less developed provinces might have less faith in the improvement of their own welfare and therefore invest money on younger generations to achieve upward social mobility. In the least developed provinces, older parents may tend to mobilise all possible resources to support adult children, and, as shown in Section 6.3, grandparental childcare is the most common and available form of resource.

Adult children being married increased both probability and amount of providing upward private transfers to older parents, but it decreased the amount of downward transfers from older parents. This might reflect the common perceived watershed in the responsibility of taking care of family members: only when adult children get married and settle down, the responsibility of providing for family starts to be shifted from the shoulder of the older to the younger.

The "competing obligations" (Deindl and Brandt, 2011, p.657), which indicates a negative relationship between the number of children and intergenerational help, was not found in the Chinese context. Having more adult children led to a higher probability of receiving and/or providing financial transfers and a greater amount of upward transfers they would receive. The exception was the probability of older people providing grandparental childcare, which decreased with the number of adult children. As discussed in 7.3, grandparental childcare might be impeded by the difficulty in achieving fairness among adult children. Geographic proximity was also an important determinant: both upward and downward financial transfers were more likely to occur when the two generations live in far distance (e.g. different cities or provinces), but grandparental childcare would be less manageable beyond "one soup distance" (as mentioned in Zhong and Li, 2017, p.176). Middle- and high-income adult children were more likely to provide and/or receive private transfers, and when it occurred, the amount of transfers was often higher. But only older parents of the middle-income were more likely to provide childcare support. It might be explained by the preference of high-income family for high-quality childcare services from the private sector.

This chapter shows that crowding-out and crowding-in effects could be co-exist and, as Künemund and Rein (1999) suggest, occurred in different situations. Qualitative studies, for example in-depth interviews, would be useful to further explore what situations they are and how public pensions yield different impact under certain situations. Although the study attempts to include non-material aspect of intergenerational support, it only examines downward grandparental childcare due to the lack of appropriate data. Should such dataset be available, an examination of practical help and care support from adult children to older parents would made valuable contribution to fully understanding the interaction between intergenerational support and public pensions, especially the division of the labour of support between the state and the family.
Part III

8. Qualitative methods

Part II (Chapter 5, 6, and 7) examines the interactions between public pensions and intergenerational family support from quantitative approaches. As stated earlier in Chapter 4, the third research question aims to understand how Chinese older people, with different public pension status, negotiate with their adult child(ren) about intergenerational support to achieve old-age security. Specifically, the aim of the study includes the following aspects:

- To map the intergenerational support arrangement within Chinese families.
- To understand the relationship between child-to-parent upward support and a wider set of intergenerational support.
- To investigate the negotiation process in relation to securing old age via intergenerational support arrangement.
- To explore the role of family as a socio-economic actor in protecting older people.
- To provide a dynamic account of the situations where formal public pensions and informal private support interact.

From Chapter 8, the thesis moves to Part III, where a collection of qualitative techniques is used to gain in-depth understanding of the arrangement and negotiation of intergenerational support in Chinese families. This chapter focuses on the specific qualitative research methods applied in the study. It starts with an explanation of using interviews as the main data collection technique. Then it introduces and discusses thematic analysis and its application. The chapter concludes with a reflection of ethical considerations and reflexivity.

8.1 In-depth interviews

Research data were collected via *one-to-one*, *semi-structured*, *telephone* interviews with Chinese older people from January 2021 to May 2021. As a special form of conversation (e.g. 'conversation with a purpose' as mentioned in Burgess, 1984, p.102), qualitative interview allows the researcher to

use interactional dialogues (Brinkmann, 2013) to explore the lived experience of older people about the arrangement and negotiation of intergenerational support. The interaction process helps to create meanings and understandings (Mason, 2017). By talking interactively with older people, the researcher can obtain everyday knowledge of the arrangement and the process of negotiation via older people's account and interpretation. These everyday interpretations help to unpack the immediate generative mechanisms behind the social phenomena of intergenerational old-age support in China (for everyday knowledge and immediate mechanisms, see Danermark, Ekstrom and Jakobsen, 2005).

The choice of one-to-one individual interviews rather than focus groups is based on the following considerations. First, the study intends to understand the ways in which and the circumstance where intergenerational old-age support is arranged and negotiated, therefore in-depth understandings of individual experiences are more appropriate than group discussions, where the collective sense-making of phenomena or the construction of meanings tend to be the focus (e.g. Bryman, 2016). Second, family support is a relatively personal topic and therefore requires more confidentiality and trust, whereas focus group may generate less rich information because of the potential concerns about exposure to other peers. Third, prospective participants can be geographically dispersed and bringing them together can be less feasible and bring more risks to both the researcher and the participants especially given the outbreak of the Coronavirus (COVID-19) at the time when the interviews were carried out.

The study used semi-structure telephone interviews to collect information, Ideally a face-to-face interview approach would have been used to better collect non-verbal information (e.g. the body language, the facial expressions, and the atmosphere) and build rapport relationship between the researcher and participants (Brinkmann, 2013). However, given the worldwide outbreak of the Covid-19 pandemic at the time of the study being carried out and the potential ethical issues (will be discussed in more detail in 8.3 Ethical Consideration), the interviews were conducted via telephone calls.

The semi-structured design on one hand allows for flexibility and leeway for the researcher to explore

and follow up in more depth compared to structured interviews, and on the other hand, it gives researcher a greater say in concentrating the conversation on topics related and important to the research compared to unstructured interviews (Brinkmann, 2013; Bryman, 2016). A topic guide (see Appendix 3) was developed based on the research aims and refined after a pilot interview. It outlines high-level topics and possible questions and probes that might be asked under each topic. The topic guide aims to serve as a tool to facilitate the interviews with both consistency as well as flexibility.

Participants were recruited from Baoji (宝鸡), a prefecture-level city in western Shaanxi province (as shown in Figure 8.1). Baoji is the second largest city in Shaanxi province with more than three million residents by the end of 2020 (Shaanxi Statistics Office, 2021). In Baoji, 57% of the population are urban hukou holders and 43% are rural hukou holder, and residents aged 60 or older account for 22.66% of the total population (Shaanxi Statistics Office, 2021). In 2008, Baoji became one of the earliest pilot cities of the New Rural Social Pension (NRSP) project, as put in previous literature, signals "the new grand transformation" in China's pension system (Liu and Sun, 2016, p.20). At the time the interviews were conducted, the flat-rate NRSP/ Urban Resident Social Pension (URSP) benefits were ¥ 148 (ca. £16) per month³¹, plus a monthly ¥ 50 (ca. £5.50) subsidisation for older people aged 70 and above.

³¹ Source: http://www.baojinews.com/local/p/351285.html. The official statistics of the average Enterprise Employee Basic Pension (EEBP) or Government and Institution Pension (GIP) benefits, however, are unavailable.



There are specific inclusion criteria for prospective participants. In order to take part in the research, participants must be: 1) aged 60 or older, 2) Chinese or self-identified as Chinese, 3) in physical and mental condition that allows for verbal communication, 4) receiving or used to be receiving any kind of support (e.g., financial, care, practical, emotional) from adult child(ren) and/or grandchild(ren).

The study used purposive sampling strategies to identify prospective participants. Purposive sampling is a sampling method that aims to establish "a good correspondence" between research questions and participants (Bryman, 2016, p.458). The goal of sampling in this study is not to be statistically representative, but to be representative in relation of the experience, knowledge, and practice of the phenomenon (Flick, 2007). In this sense, two dimensions (i.e., hukou type and public pension status) were taken into consideration for comparisons. Specifically, participants should include both urban hukou holders and rural hukou holders, and also include older people who did not receive any public pensions and older people enrolled in different public pension schemes, namely, Government and

Institute Pension (GIP), Enterprise Employee Basic Pension (EEBP), Urban Resident Social Pension (URSP), and New Rural Social Pension (NRSP)³².

Participants were recruited through advertisements (see Appendix 4). Pre-recorded video which introduces the research project and includes the contact information of the researcher was posted on online social media. Advertisements for participants recruitment was also distributed both online and offline to mitigate the potential impact of digital exclusion among older population. For instance, with the help of local residents and social workers, advertisements and information sheet (see Appendix 5) of the research project were posted in local community activity centres.

In total, 18 prospective participants have come into contact after they saw the recruitment advertisement either from local community activity centres or online posts, and 14 of them have

³² The last two pension schemes (i.e., URSP & NRSP) were replaced by the Urban and Rural Resident Social Pension as a unified pension scheme in 2015. For the sake of consistency with previous chapters, the following chapters keep using URSP and NRSP.

participated in the interviews with informed consent (see Appendix 6 for an anonymised profile of participants). Among the 14 participants, 11 of them are women and 3 of them are men; 10 of them hold rural hukou and 4 of them hold urban hukou; there was 1 recipient for each of the long-established pension schemes (i.e. GIP and EEBP), 9 recipients of NRSP, 2 recipients of URSP, and 1 respondent not in any public pension scheme; 5 participants aged between 60 and 69, 7 participants aged between 70 and 79, and 2 participants aged above 80 (as shown in Figure 8.2).

Figure 8.2 Gender, public pension, hukou type, and age range of participants.



The interviews were audio-recorded (with informed consent) and later transcribed anonymously into text materials by the researcher herself to increase the accuracy of transcriptions and to be more familiar with data for later analysis. Computer-assisted qualitative data analysis software, Nvivo (version 12) was used to facilitate thematic analysis.

8.2 Thematic analysis

Thematic analysis is believed as a "poorly demarcated, rarely acknowledged, yet widely used qualitative analytic method" by some researchers (Braun and Clarke, 2006, p.77), while others might see it as a process or research tool that facilities the analysis of qualitative materials (e.g. Boyatzis, 1998; Ryan and Bernard, 2003). This study is consistent with previous literature that deems thematic analysis to be a research method in its own right (Braun and Clarke, 2006; Nowell et al., 2017) and applies thematic analysis to understand how intergenerational support is arranged and negotiated in China.

Thematic analysis, in essence, involves identifying, analysing, reporting, and interpreting themes in the data (Braun and Clarke, 2006). Theme is a unit of meaning (Guest, MacQueen and Namey, 2011). In their influential work on thematic analysis, Braun and Clarke write: "A theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set" (2006, p.82). Theme is also considered to provide conceptual linkages to expression, codes, or text segments (Ryan and Bernard, 2003). The identification and development of themes is an iterative and reflective process (Nowell et al., 2017), which requires substantial work and an active role of researchers. Therefore, it is argued that the notion that themes can be captured or noticed, or that themes are emerged from the data, is misleading, as it implies that themes "reside in the data" and "pre-exist the analytic and interpretive efforts of the researcher"(Braun and Clarke, 2006, 2016; Ely et al., 1997). In fact, as Ely et al. put in their book, "if themes 'reside' anywhere, they reside in our heads from our thinking about our data and creating links as we understand them" (Ely et al., 1997). Themes can be developed at different levels (Guest, MacQueen and Namey, 2011), and can be as broad or as focused as necessary (Ryan and Bernard, 2003). Sometimes it is also possible to have contrary or complementary themes, or themes that situated within larger themes (Guest, MacQueen and Namey, 2011).

Moreover, themes can be generated inductively or deductively (Attride-Stirling, 2001; Ryan and Bernard, 2003; Braun and Clarke, 2006; Fereday and Muir-Cochrane, 2006; Guest, MacQueen and

Namey, 2011; Nowell et al., 2017). On one hand, patterns, codes, and themes can be identified and developed inductively from the textual data without reference to pre-existing theories or coding framework, as in the data-driven or bottom-up approaches (Boyatzis, 1998). On the other hand, the prior theoretical understanding, analytic interest, or the research question can provide a template of codebook, which can be applied to organise the themes for subsequent interpretation, as in the analyst-driven or top-down approaches (Crabtree, 1999; Ryan and Bernard, 2003). In this study, a hybrid approach of inductive and deductive coding and theme development is applied in the thematic network analysis process.

Thematic network analysis is a special approach to thematic analysis. Compared to thematic analysis in general, thematic network approach improves the systematisation and presentation of data analysis via web-like illustration of themes (Attride-Stirling, 2001). Three layers of themes are developed: basic theme, organising theme, and global theme. **Basic theme** is the lowest layer of theme derived from textual data in an inductive manner. Basic theme can be a statement of belief or a summary of patterns, but to understand the meaning of basic theme, one needs to refer to the context or other basic themes (Attride-Stirling, 2001). **Organising theme** is the middle-layer of theme summarised from a group of basic themes with enhanced meaning and significance (Attride-Stirling, 2001). Since organising theme summarises the meaning and significance of a cluster of basic themes, it is more abstract and can better reflect the text (Attride-Stirling, 2001). **Global theme** is the highest layer of theme summarised from a group of organising themes. Global themes together present an argument or a position about the research topics, and reflect the text as a whole (Attride-Stirling, 2001).

A thematic network consists of the three layers of themes, where centred around each global themes are organising themes, and centred around each organising theme are basic themes. It is worth noting that although the thematic network is presented at different layers and each layers have different level of abstraction of meaning, the emphasis of this approach is not on the hierarchy of the themes but on the interconnectivity throughout the network (Attride-Stirling, 2001).

The analysis follows a five-step procedure adapted from Attride-Stirling (2001). It is worth noting that

although the five-step procedure seems to be linear, the analysis process, in fact, involves moving back and forth.

The first step is coding the material. In this step, a coding framework is developed with reference to the research questions, pre-established topics, and recurrent issues in the interviews. For instance, as the study aims to understand how intergenerational support is arranged and negotiated, the coding framework, therefore, needs to include the arrangement of support and the negotiation process. Moreover, based on the agency-structure relationship that has been discussed earlier in the adoption of critical realism position of this study, the coding framework needs to include both social structural factors and individual behaviours. Although applying the framework to the coding process shows the deductive aspect of thematic analysis, the coding process itself involves much inductive work. When coding the materials, textual data are dissected into meaningful segments and labelled with codes. For instance, when interviewees talked about how they have emphasised the importance of filial values during their parentings, a code "filial parenting" would be assigned to the text segments. Sometimes in the interviews, such a way of parenting can be explicitly or implicitly linked to an expectation that their adult children would fulfil filial responsibilities and provide for older parents when the interviewees are in need, therefore the text segments might also be assigned with the code "expectation". This narrative also touches the long-term negotiation of support between two generations, thus a code "negotiations between generations" was assigned.

The second step is *identifying themes*. In this step, themes are abstracted from coded text segments to reflect the underlying patterns. Themes are also refined to be both specific enough so that themes are not repetitive and at the same time broad enough so that themes capture a set of meanings of the text segments. For example, the codes "filial parenting", "expectation", and other codes such as "tradition", "social norms" were grouped together for shared underlying emphasis on cultural norms and expectations. Therefore, a theme "Cultural norms and expectations" was derived from these codes.

The third step is constructing the network. In this step, themes are arranged into three layers. Basic

themes are selected and then grouped into organising themes. Organising themes under the same wider theme are grouped together to generate the global theme. The thematic network is then further refined in this step. For example, the basic theme "Cultural norms and expectations", along with other basic themes such as "Support is exchanged to secure future" was grouped under a wider organising theme "Negotiation strategies", as cultural influences and exchange behaviours were, among others, strategies that both generations adopted to negotiate intergenerational support. Furthermore, those strategies were applied in the negotiation with family members. Thus, the organising theme "Negotiation strategies" were put under the global theme "Negotiations within family". This process was repeated until a thematic network was constructed and refined.

The fourth step is *describing and exploring the thematic networks*. This step involves bring together the data and thematic network by returning to the transcriptions and describing the network with text segments. The network is explored further for underling patterns in the text.

The fifth step is *interpreting and integrating*. Thematic network itself cannot answer the research questions without interpretation. In this sense, the key findings from each thematic network are integrated to answer the research questions.

8.3 Ethical consideration

The study went through three rounds of ethical reviews by the Departmental Ethics Committee (DEC) before being carried out. The major ethical consideration that has been discussed in the review process includes the concerns over the initial proposal of using WeChat as a platform to conduct video/audio interviews (Lawrence, 2020). Feedback from the DEC underlined that WeChat was not among the University's accepted platforms for online data collection (the accepted platforms are Zoom and Google Meet, neither of which can be accessed from China) and therefore telephone interviews were suggested.

Although the feedback was highly respected and appreciated, telephone interviews can be rather

tricky in this case. Apart from the well-established disadvantages of telephone interviews such as shorter interview length, more brief answers, less depth of meaning that can be conveyed due to lack of visual cues (Irvine, 2011), telephone interviews via overseas phone call are highly likely to be perceived by Chinese older people as telecom fraud. Since 2019, China has launched a nationwide campaign to crack down on telecom fraud (Xinhua, 2019). As many telecom fraud groups are located overseas, Chinese residents, especially older people, are suggested to be alert to the potential risks of telecom fraud by overseas phone numbers. Under this situation, it would be difficult for the researcher to reach out to prospective participants, and even more difficult to build rapport³³.

Acknowledging the difficulties of telephone interviews, the researcher also made it clear in the revised application that WeChat has been widely accepted and trusted among Chinese residents and that the interviews would not involve sensitive information. The researcher also provided information on the Private Policy of WeChat such as data storage and encryption policy as reassurance. However, the DEC have not been convinced that WeChat is a secure platform and indicated that the Data Protection Officer would be unlikely to approve it even if the researcher submitted a Data Protection Impact Assessment for them to review.

As a result, the reference to data collection through WeChat video/audio call was removed from the final application (see Appendix 7 for ethical review application form) and replaced with telephone interviews, as required by the DEC. After obtaining the ethics approval, the researcher then took a research leave and travelled to China (but not the field site as face-to-face research activities were suspended by the DEC) and applied for a domestic telephone number so that all interviews were carried out through domestic telephone calls.

³³ Moreover, evidence from China shows that the risk of experiencing fraud are also related to financial literacy, attitudes towards social security, and regional development levels (Wei, Peng and Wu, 2021). As the study particularly aims to include older people who are or used to be excluded from formal public pension coverage and therefore in vulnerable financial situations, it can be expected that some prospective participants might be hesitant to get in touch or agree to participate if the interview is carried out over the phone.

Another ethical concern conveyed by the DEC is the use of personal network in the recruitment of participants. The DEC believed it is not usual to recruit through personal networks for such a study and prospective participants might be under pressure to participate due to personal connections. To address this issue, the researcher made it clear in the revised application that personal networks would be only used to gain access to local activity centres or online forums for older residents as the researcher cannot travel to these locations in person. It was also underlined that only the name and affiliation of the researcher would be stated in recruitment advertisement. Neither the relationship between the researcher and personal connections would be revealed nor would the personal connections who post the information be involved in recruiting participants directly.

In addition to the concerns that have been raised and discussed during the ethical review application process, earlier research practice in China implies that some participants, especially older Chinese, may give their consents without properly reading the consent form and/or information sheet (Fang, 2020). Therefore, to make sure participants being fully informed, prospective participants who made contact would receive an e-copy of the information sheet as well as a link to the pre-recorded video of the content of the information sheet. For prospective participants who had limited access to internet, the researcher had read the information sheet to them over the phone. Moreover, the interviews only started after the researcher reading the consent form to participants and obtaining the audio-recorded consent from participants.

Anonymity and confidentiality are also highly valued in this study. Participants were assured that the information they disclosed to the researcher will not be shared with the third party, especially not with their family members or carers 34. As required by the cultural and social norms, calling older people by their names is viewed as disrespectful. Therefore, names of participants are not recorded in this study. Instead, each interviewee will be assigned a participant ID. Moreover, it is also promised that

³⁴ Unless when the information that participants disclose suggests that the participant, or another person, is at risk of harm, confidentiality will be broken to safeguard (see Appendix 7, Box 23). No such information has been disclosed in the interviews of this study.

all identifiable information such as the occupations and places of residence (of older participants and/or their adult children) would be removed by the researcher. The encrypted recording device, audio files, as well as all documents that contain participants' information are stored on the secure University of York file server and later will be archived securely on the University of York's Research Database. More discussions on ethical considerations and preventive practices can be found in Appendix 7.

8.4 Reflexivity

Reflexivity is often used as a form of "quality control" in qualitative study (Berger, 2015: 219). It involves being aware of the researcher's cultural and social context and reflecting on their location in time and social space (Bryman, 2016). By acknowledging and discussing the potential impact of these factors on the research, transparency is increased, and the potential bias emerged from the construction of knowledge between the researcher and the participants is minimised. In this section, I will first discuss my identity and characteristics as the researcher. I will then reflect on how these characteristics, which can make me either an "insider" or "outsider", influenced the process of knowledge generation.

I was a young, single Chinese woman in my late 20s when the study was conducted. Growing up as an only child in a small town, Baoji is my parents' hometown where they spent the first two decades of their lives before moving to another province and having me. Due to this, I have a good understanding of the Baoji dialect and accent, but I cannot speak the dialect and have minimal accent. These characteristics make me both an insider and outsider.

My similar cultural background and familiarity with local customs and norms made me an insider in the study. This was beneficial in recruiting participants and building rapport during the interviews. The transcription and analysis of the interviews was also easier because I was familiar with local slang and expressions specific to the area. However, I was also viewed as not being "insider" enough because I do not speak the local dialect and used a non-Baoji cell phone number to contact

prospective participants. One prospective participant contacted me after seeing my recruitment advertisement but was hesitant to continue talking to me after discovering that I couldn't speak the local dialect and was not based in Baoji. As a result, they declined to learn more about or participate in the study.

The risks of being an "insider" include the assumption of my "familiarity with participants' reality", which may lead to participants "withholding obvious information" (Berger, 2015: 224). This was taken into account at an early stage of the interviews and mitigated to the best of my ability. For instance, when asked about intergenerational support arrangement, some participants only referred to the support from or to their sons and left out their daughters in their narratives. The implied assumption was that I would know that daughters are excluded from intergenerational support from their natal families. To mitigate this, I made sure to ask participants about their support arrangements with their daughter, which yielded valuable insights into gendered patterns (more discussions can be found in Chapter 9).

At the same time, I was also an outsider due to being a member of a different generation both at the familial level (of a similar age to their child or grandchild) and at the societal level (as part of the Post-90s or Millennial generation). However, this dynamic empowered the participants in the interviews, as age brings seniority and authority in Confucian culture, and as a younger Chinese, I was expected to show respect to my participants and their authority (as discussed in Chapter 2.3). Furthermore, being of a similar age to their child or grandchild meant that I was seen as "ignorant" to their experiences, putting them in the expert (also described in Berger, 2015) or educator position to share their understanding and experiences.

My gender also played a role in the data collection and analysis process. As a daughter and only child, I was more sensitive to the different expectations and support arrangement between sons and daughters. I was also surprised and intrigued by some of the negative comments towards daughters-inlaw. This enabled me to delve deeper into the potential reasons or experiences from the perspectives of the participants, which then led to the identification of themes related to the prioritisation of resources and unrealised expectations (more discussions can be found in Chapter 9.2).

9. Arrangement and negotiation of intergenerational support

9.1 Introduction

Chapter 6 and Chapter 7 have examined the statistical relationships between public pensions and intergenerational support. This chapter will further explore how intergenerational support is arranged within Chinese families and how these arrangements were negotiated between generations. Thematic analysis of in-depth semi-structured interviews with 14 older Chinese from Baoji (a prefecture-level city in western Shaanxi province) was used to capture the patterns and to understand the negotiation process of intergenerational support arrangement.

The chapter first reports and discusses the main findings around the three themes, namely, intergenerational support arrangement patterns, negotiations within the family sphere, and negotiations outside the family sphere. It also includes a summary of the findings and the interconnections among these themes.

Figure 9.1 shows a word cloud consisting of the 50 most frequent words that have been mentioned by participants in the interviews. Among those words, for example, "money" (appeared 646 times), "grandchild" (203 times), and "support" (175 times) were most frequently referred to by interviewees. How are these words connected and situated in the intergenerational support arrangements and negotiations? A contextual understanding will be provided in the following parts of this chapter.

Figure 9.1 The 50 most frequent words mentioned by participants in the interviews.



Source: Word frequency inquiry of 14 interview transcriptions generated by Nvivo 12.

9.2 Support arrangement patterns

From the interviews, it is shown that intergenerational support is not only dynamic but also heterogeneous. The following figure (Figure 9.2) helps to illustrate how family support flows across generations from a life-course view. In this figure, two typical cases were selected to illustrate the difference in support arrangements: an urban worker and a rural resident. Four life stages (as shown on the top of Figure 9.2) were identified according to older people's roles within and outside the family sphere, their needs of support, and their capability of providing support. It is worth noting that Figure 9.2 aims to be illustrative (based on the interviews) rather than generalisable and that the age range is created to be more of indicative rather than categorical. As shown in Figure 9.2, the four phases are:

Working-age phase (20s-60s). Both urban worker and rural residents at this phase were active in the labour market or agricultural production. Therefore, the main income source is labour income. Both of them provided financial support to their children (denoted by the "F" in the downward green arrow in Figure 9.2).

Grandparent phase (60s-70s). When one became a grandparent, they entered this phase. They would also consider or be required to exit the labour market or agricultural production activities at this phase (will be discussed later). Therefore, the main income source outside family is public pensions. In addition to continued financial support, both urban and rural older people would also provide grandparental childcare support to their adult children (denoted by the "CC" in the downward green arrow in Figure 9.2). On top of that, the rural grandparent would expect to live with their adult children (denoted by the "R" in the upward red arrow in Figure 9.2), and such living arrangement allows for older people's practical support with house chores (denoted by the "P" in the downward green arrow in Figure 9.2). Meanwhile, in older people's narratives, the practical support with house chores provided by them is also seen as a form of resources to exchange for or secure the co-residence living arrangement. Besides, rural older people would also receive occasional financial support from their adult children (denoted by the "F" in the upward red arrow in Figure 9.2).

Transitional phase (70s – 80s). People at this phase started to transform from the principal (grandchild) caregivers to the potential recipients of old-age care support. Mutual independence between two generations began to take form in the family of the urban retiree. On the contrary, financial support continued to play a role in rural families, in both upward and downward directions.

Care-required phase (80s and above). When older people became somewhat limited in their capability of performing daily activities or require special care due to chronic illness, they entered this phase. Instead of relying on family, the urban retiree has employed a full-time caregiver from the labour market, whose payment comes from the retirees' pension incomes. The rural resident, however, holds the expectation that their adult children would take the responsibility of providing support and daily care (denoted by the "DC" in the upward red arrow in Figure 9.2) until the end of their life.

As shown in Figure 9.2, intergenerational support arrangement is in constant flux. It changes according to the needs and situations of both older and younger generations and varied from phase to phase. Besides, the diversity in support arrangements is not only related to the urban-rural divide but also reflects the consequences of unequal access to public pensions and other social services.

Figure 9.2 Intergenerational arrangement in life-course route map based on interviews.



Source: interviews conducted by the researcher. Researcher's own.

To explore the patterns in more depth, a set of stratified themes around the patterns of intergenerational support arrangement were identified from the interviews. As shown in Figure 9.3, four organising themes consisting of nine basic themes are derived from the interview transcriptions



Figure 9.3 Thematic network around the global theme "support arrangement patterns"

Multifaceted support across three generations. This organising theme focuses on the multifaceted forms and directions of support where multiple generations have been involved. It is found that not only support can be in different forms (e.g. financial, practical, co-residence, and care, as shown in Figure 9.2), but different forms of support also interconnect with each other. A most common pattern is the close connection between the occurrence of child-to-parent support and visits to older parents. For example, one of the interviewees talked about visiting arrangements and how visits made her feel relieved:

Source: interviews conducted by the researcher. Researcher's own.

"He (the eldest son) lives in town, not far from where I live... Every time he comes back to see me, he asks me if I need money. Sometimes, he just gives me one hundred or two... So do my daughters. They often come back and always bring me food. My youngest son lives in another province. But he normally comes back to see me and stays for a couple of days over the Chinese New Year... I am satisfied — I know they are thinking of me, unlike some other families, where the children hardly visit their parents for many years. My children are having filial hearts."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

It shows that in addition to creating the opportunities to discuss the potential unmet needs and negotiate support arrangements, visits to older parents also carry symbolic meaning. It is a test for filial piety of the child and an examination of filial parenting education of the older. In this sense, visits bring out both financial support and emotional relief for older people.

Beyond (older)parent-(adult)child support relations, the interviews show that different forms of support flow upward and downward across *three* generations. For instance, the skipped-generational support, where support directly flows between the grandparent generation and the grandchild generation (Arrondel and Masson, 2006; Chen, Liu and Mair, 2011; Shi, 2017) is also identified in the interviews. Many interviewees provided the skipped-generational financial support to their grandchildren for education purposes, which reflects the whole family's expectation of upward social mobility. In certain cases, in addition to providing general childcare support, older people might also provide long-term care. For example, the following interviewee has a grandson who is born with paralysis, she said:

"I have been looking after him (the grandson) for twenty years. He can't eat or get dressed by himself. He needs to be fed by someone. My son and daughter-in-law (his parents) need to go out to work—they still have a whole family to support. That makes me the only one who can take care of him: feed him, shower him, and get him dressed."

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

Need-based support arrangement. This organising theme examines how intergenerational support is arranged based on the needs of both sides. One of the most common purposes of intergenerational support is to meet regular needs such as purchasing daily necessities (include medicines for chronic illness) and ritual expenditures. For example, the following interviewees talked about how they managed Chinese New Year and other ritual events with intergenerational support.

"My eldest son gave me \neq 1000, his brother gave me \neq 2000, so that I could manage this Chinese New Year. You know, I had to visit relatives, host guests, and prepare food and such. The money had to be in place."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

"For example, when we have a big opera show³⁵ in our village, there might be relatives coming from other villages to watch the show. Then I will need to prepare food for them. In this case, I will ask my son for some money. I would say, 'Either you give me some money and I will use it to buy food and treat relatives, or you can buy meat and vegetables and bring them back.' My daughters will also come back to help me to cook. That's a big event."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

³⁵ Chang da xi, a kind of folk custom most common in Northern rural China, where troupes will sing traditional Chinese operas on a stage in a village to celebrate. It usually occurs after wheat being reaped or during the Chinese New Year. Villagers will get together to enjoy the show. Sometimes people from other villages will also join the local village audience to enjoy the show and celebrate. It has become a ritual and social event.

In other cases, intergenerational support can also be arranged when family members have emergencies or unexpected situations, such as sudden illnesses or business failure. For example,

"There was a time when I was so sick that I needed to be admitted in hospital, which would cost me at least a few thousand yuan. In that case I had to tell my children. How else could I get so much money [to cover the hospital charges]?"

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

Co-residence of the older and younger generations is a special form of intergenerational support, which is more commonly observed among rural interviewees. The interviews show that co-residence can be flexibly arranged based on the needs of both sides. For example, the following interviewee talked about how she decides whether to return to Beijing to co-reside with her son's family.

"I was in Beijing [to take care of my grandson] for the past two years. ... I had to come back this October to arrange my late mom's funeral. My daughter-in-law isn't working for the time being, but she plans to find a job after the Chinese New Year. If she successfully finds a job and needs me to take care of my grandson at some point after the Chinese New Year, then I will go back to Beijing and live together with them."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

The following is another example, where co-residence is arranged when the interviewee was in need of care or housing support.

"Once I was heavily sick, and I need someone to look after me for a while. But there was no one. My son and daughter-in-law were in town. So he (son) took me to his house so that my daughter-in-law could take care of me. I stayed for a month... When I felt better, I left and returned home... There was a winter when it snowed for days. My house was so freezing that all the pipes were frozen. Snows were accumulated so high. My son worried about me living alone in that house, so he took me to his place. I lived together with them for some time."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

The above examples show that the form and content of intergenerational support is largely determined by the needs of both sides. Given that the needs of both sides are constantly changing according to their life stages, specific situations, and available resources, intergenerational support should therefore be understood from a dynamic perspective.

Urban-rural differences. This organising theme focuses on unequal access to public pensions and other social services and different arrangements and norms for old-age support between urban and rural older people. As presented in Figure 9.2, urban retirees might be able to remain financially independent from child-to-parent support in old age, while rural older people tend to be, to a greater or lesser extent, dependent on intergenerational support. For example, both of the following interviewees are urban recipients of the long-established public pensions (i.e., GIP & EEBP). According to them, the adequate pension level allows them to live independently from family support.

"[When my adult children offer to give me money,] I don't accept it. I don't need their money. If they bring me some food, I might eat it. But if they want to give me money, I won't accept it. I have nearly \neq 5000 pensions. Employing a carer costs, like, no more than \neq 2000. I still got \neq 3000 left, which is enough to cover my daily expenditure. Filial children they are, always come back to see me. They don't need me to take care of them now, and I don't need them to take care of me, either. I can manage myself. They only need to come and see me. That's what really makes me happy." Interviewee 1, 81 years old, urban hukou, recipient of GIP

"We are financially independent. My wife and I have good pensions. We don't need any money from my children... Honestly, even if they do give me money, I have nowhere to spend. The money is of no use... In total my wife and I have \pm 6000 pensions. We only spend, like, one thousand or two on food, clothes, and such. You see, actually I still have some money left to save or invest."

Interviewee 5, 72 years old, urban hukou, recipient of EEBP

Another urban interviewee who is a recipient of the new pensions (URSP) also shows the tendency of financial independence from children's support, although such independence relies on her husband's access to GIP benefits:

"In most cases, I didn't accept their (adult children's) money. My husband has good pensions (GIP), then why should I need support from my children?"

Interviewee 10, 67 years old, urban hukou, recipient of URSP

On the other hand, rural interviewees often talked about their reluctance to financially rely on adult children in old age, while they have no other way but to do so in the lack of adequate pensions and affordable healthcare services. Moreover, rural interviewees were discontent with the difference in pension benefits levels, which is often interpreted by rural older people as a denial of their equal contribution to society. For example,

"The (urban-rural) difference (in pension benefits) is massive! If they (urban people) receive $\neq 300$ per month and we receive $\neq 200$ per month, then it should be okay - after all living cost is higher in urban areas. But

now they have thousands of yuan, and we only have a bit more than one hundred yuan. What we have is nothing if compared to them."

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

"Life is really difficult for the rural older...We are not like urban people who have enough pensions. They can at least meet their basic needs and secure their lives in old age. We cannot. We rural people have to count on our children. When we say, 'raise a son to secure old-age' (yang er fang lao), we mean it. This idea is so heavily rooted, mainly because we have no pensions."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

"You know what? The governments should really increase the pensions in rural areas - they should give us, like, ¥ 400 [every month]. Urban pensions could wait [to be raised], they should really subsidise rural people first...We had farmed the land for a whole life. We also made contributions to society when we were young."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

According to the interviewees, the difference in intergenerational support arrangements between urban and rural families are then to a large extent explained by the differentiated access to public pensions and other social services.

Gendered intergenerational support. This organising theme focuses on the gender pattern in intergenerational support arrangements. Figure 9.4 illustrates how intergenerational support is arranged differently between a son and a daughter, taking rural interviewees as an example.

Before adult children get married, both the daughter and the son received financial support from their

parents (denoted by the "F" in the downward green arrow at the very left of Figure 9.4). However, the support was highly skewed to the son (denoted by the blue figure in the upper stream of Figure 9.4). So that the son's prospect of getting married and having children, or the son's "marriageability" as described by Eklund (2018), can be increased. It is due to the expectation that being a homeowner is the precondition for a man to marry a wife and that the husband's parents bear the responsibility to provide housing-related financial support (denoted by the "H" in the downward green arrow in the upper stream of Figure 9.4).

After the son's marriage, older people would continue to provide financial support to the son and his new nuclear family. Furthermore, once the son has a child, older people would also provide grandparental childcare support. But such support, along with practical support on house chores, is often deemed by older people as a favour to daughter-in-law specifically (denoted by the pink figure in the upper stream of Figure 9.4), which is in a sense also a reflection of the gendered view of older people on the division of caring and house chores. As a return, the son and daughter-in-law are expected to provide financial support and co-residence living arrangement to older parents. Such expectation grows with age, especially when older people are no longer capable of taking care of themselves. During this process, implicitly or explicitly, daughters-in-law are, again, expected to perform the duties of daily care.

On the other side, the daughter (as shown in the lower stream of Figure 9.4) is expected to be treated by the natal family as a part-outsider once getting married: compared to her brother, the daughter (denoted by the pink figure in the lower stream of Figure 9.4) will only receive negligible financial and/or childcare support from older parents. Accordingly, daughters are not assumed or expected to take the responsibility of taking care of their parents.

Following is an example where the daughter was excluded from receiving extensive support from her parents, meanwhile, she was also exempted from the obligations of supporting her own parents.

"I didn't help my daughter with childcare. Her parents-in-law were responsible for that. It is just the tradition. When my daughter got married, she became one of their (her partner's) family members. Her responsibility lies in her parents-in-law. I don't count on my daughters, either."

Interviewee 9, female, 79 years old, rural hukou, recipient of NRSP

But in practice, as mentioned by many interviewees, daughters not only provide more emotional and practical support such as frequent visits and help with house chores. Sometimes, together with their partner (denoted by the blue figure in the lower stream of Figure 9.4), daughters might also provide financial support to older parents. In a few cases, older people would provide limited financial aid to their daughters as well.

Figure 9.4 Intergenerational support arrangement from a gendered aspect based on interviews.



Source: interviews conducted by the researcher. Researcher's own.

For example, the following interviewee has two sons and a daughter. He provided two sons with housing-related support, which is in total more than ¥ 300,000. He has also been providing grandparental childcare support to both sons. But he never helped his daughter with childcare, nor did he provide any housing-related financial support to her. When he talked about his daughter, he said:

"The meat and vegetables I eat, clothes and shoes I wear, they are all bought by my daughter. When my wife went into hospital, when I went to see a doctor, it was my daughter and son-in-law who paid for it. When I was busy with reaping wheat, my son-in-law came to see me and gave me a few hundred yuan before he left. He said I might need money for reaping wheat. I didn't want the money, but he just left it on the table and went away. [long sigh] Sometimes I think I am relying too much on my daughter. My daughter and son-in-law are taking care of everything. If I ever need anything, all I have to do is just mention it, and they would always buy it for me. They would come back every two or three weeks, always get me some daily necessities. Even my sons couldn't treat me better."

Interviewee 7, male, 65 years old, rural hukou, recipient of NRSP

Another example is the following interviewee:

"I didn't help my daughters with childcare. Neither of them (received any childcare support from me). I couldn't. I had to take care of my son's daughter. I was too busy then. Both of my daughters have managed to bring up their children without my help. [sigh] You see, I am spending her [the eldest daughter's] money, but I never helped her with childcare."

Interviewee 12, female, 74 years old, rural hukou, recipient of NRSP

Moreover, such gendered expectation of support arrangement (as shown in the dotted box in the upper stream of Figure 4) might lead to a "bad daughter-in-law" narrative. In the interviews, one of the most

often mentioned sources of intergenerational tensions arise from the unrealised expectations on sons and, especially, their partners. In some interviewees' narratives, daughters-in-law have been even portrayed as a major hindrance for them to receive support from sons. For example,

"My eldest daughter-in-law always wants to hold money tight. She wants to keep an eye on all the money that my son earns...Sometimes he would work for extra hours to make some extra money, so that he could give me some support, you know, behind his wife's back."

Interviewee 2, female, 69 years old, rural hukou, recipient of NRSP

"No matter how much you provided for your children, once he is married, it is hard to say [whether he would take good care of you]."

Interviewee 7, male, 65 years old, rural hukou, recipient of NRSP

"Actually, when people get older, their sons might take this responsibility [to look after older parents], but the daughters-in-law wouldn't be willing to. Afterall they are not by blood...In some extreme cases, when the family is so poor, the daughter-in-law would rather wish her parents-in-law to die as soon as possible, so that they don't have the burden. The worse off they are, the more hatred [towards the older]."

Interviewee 9, female, 79 years old, rural hukou, recipient of NRSP

Such narratives and tensions are not only caused by the conflict between the expected and actual support arrangement but also sharpened by economic constraints where the key disagreement lies in the prioritisation of limited resources.

What has not been captured or discussed in Figure 9.4 is the gender pattern among the older generation. Although the previous chapter (Chapter 7.3) suggests that older women are more likely to provide grandparental childcare than older men, this pattern has not been observed in the interviews.

When referring to grandparental childcare support, respondents often said that both them and their partners provided such help.

It is also worth noting that although rural families were taken as an example to demonstrate the gendered intergenerational support arrangements, this pattern also exist in urban families. For instance, the interviews with urban hukou holders also show that more financial and/or childcare support had been provided to adult sons than adult daughters, and that daughters-in-law were believed as the default provider for practical support. Even so, urban families presented less and fewer gender-related tension and conflicts. One possible explanation is that older people with urban hukou are more likely to be independent of financial and/or care support from adult children (as shown in Figure 9.2), and therefore the need and expectation of (gendered) intergenerational support is less intensive and fewer in volume. Whereas in rural families the continuous inter-dependence on intergenerational support of both older and younger generations might have perpetuated and amplified the gender difference in such support arrangement.

9.3 Negotiations within family

This global theme explores the negotiation and decision-making of intergenerational support within the family sphere. As shown in Figure 9.5, it consists of five organising themes which discuss older people's attitudes towards negotiation, the suppressed need under current arrangements, how older people justify for the need of intergenerational support, what strategies they have been using in the negotiation process, and how the cross-generational consensus of family being a primary socioeconomic unit underpins the rationale for those support arrangements.



Figure 9.5 Thematic network around the global theme "negotiations within family"

Source: interviews conducted by the researcher. Researcher's own.

Ambivalent attitudes towards negotiation. Older people in the interviews have shown ambivalent attitudes towards the negotiation for family support. They tend to deny the existence or necessity of negotiations by, for instance, claiming that they did not discuss the support arrangement with adult children, or they would just take whatever their adult children are willing to offer:

"We didn't [discuss]. It was them (sons) who wanted to hire a carer for me. I didn't ask for it. They insisted so I agreed."

Interviewee 1, 81 years old, urban hukou, recipient of GIP

"They are filial children. My relationship with my children is good. We never have words with each other about money. I never ask them for money. They always offer to give me money even if I don't really want to accept it."

Interviewee 4, 70 years old, rural hukou, recipient of NRSP

"I never ask them for money. If they offer to give me money, then I will take it. I would be in an easier circumstance then."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

Negotiation in their narratives is then a negative signal for disharmony, the failure of filial parenting, being a needy parent, or the existence of unmet needs, which is a potential violation of the longentrenched ethical value and behaviour code that harmony in family is most valued. The ideal picture, according to the narratives of almost all interviewees, is that adult children take the initiatives to offer support, whether they accept it or not, as it demonstrates good relationships and filial behaviours.

Moreover, some interviewees claimed that negotiation is not needed, at least not for now. They might have adequate incomes and/or good health so that additional support from adult children is not required. But they also acknowledged that negotiation could be necessary in the future when longterm care is needed. For example,

"There is no need for negotiations, not for now. I don't count on them. I can manage myself. But it's hard to say in the future when I am too old to look after myself."

Interviewee 7, 65 years old, rural hukou, recipient of NRSP

"We are not at that point yet. We don't have to negotiate about who's doing what. I am in good health now and I can take good care of myself. When it gets to that point, they (adult children) will surely have to discuss among themselves about how to manage it."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP "I told them (adult children): 'I don't need your money now. But when I get older, when I fall ill, you will give me money and look after me.""

Interviewee 10, 67 years old, urban hukou, recipient of URSP
At the same time, older people in the interviews have shown a strong apprehension of the financial pressures on the younger generation, for example:

"I don't want to ask (adult children) for help. They have children to support, mortgages to repay. My eldest grandson is getting married this year. It will cost (the eldest son) a fortune. My youngest son and daughterin-law are street vendors, and they are supporting two college students. They are exhausted."

Interviewee 13, 76 years old, rural hukou, recipient of NRSP

"Everyone has their own burden. Never tell your children how difficult your situation is. Never! One has to take good care of oneself."

Interviewee 12, 74 years old, rural hukou, recipient of NRSP

Such awareness of and worry over the financial pressures on adult children leads to a strong feeling of being a "burden/trouble" or being "useless" among older people, for example:

"My daughters have their own difficulties. I don't want to add to their burden (by asking for help) ... I have no way but to live with my youngest daughter now. I feel useless. If I have money, I might be able to help her. But now, instead of helping her, I have to stay at her place. I am just a burden to her."

Interviewee 2, 69 years old, rural hukou, recipient of NRSP

"They (adult children) don't have much money themselves. And now they have to support me, a sick old woman. I am dragging down my children."

Interviewee 13, 76 years old, rural hukou, recipient of NRSP "If they come back with few earnings that day, I wouldn't say a word about my illness. You don't want to be their trouble, do you?"

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

Although family support is institutionalised in China's old-age support arrangements, the above feelings make it difficult for older people to seek help from adult children in practice. However, without adequate public pensions or other income sources, older people have to either suppress their needs and make adaptions to their living standards; or, given that family is still playing as the "only available resort" (Walker and Wong, 2005) in the lack of formal support, older people have to make justifications for their need of support from adult children. The following two global themes will illustrate the situations in more detail.

Suppressed need. The interviews show that intergenerational support is often only sought for the purpose of meeting very essential needs such as food and medicines. In the lack of material resources, social needs such as participation in social interactions are considered by older people as less important and therefore often be suppressed.

"My children give me money, even then I won't go to attend weddings or funerals in my village. I can't afford a gift or a red envelope. I don't have the extra money for that. I need to live."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

Furthermore, the continuous and long-term lack of resources leads to the downward adaptive preference, where older people gradually, and often unconsciously, get used to the suppressed need and social exclusion. For example,

"In most cases, I must endure the pain (caused by illness). I wouldn't tell my son that I might need to see a doctor – that would cost too much. I just manage to restrain myself until it is unbearable. Go to see a doctor every time I feel a little bit uncomfortable? Never!" Interviewee 14, 74 years old, rural hukou, recipient of NRSP

"I just make do with whatever I have. I am old, why do I need to dress so well? I don't go to temple fairs anymore, either. I am not going anywhere. I just stay at home and help my daughter-in-law with house chores."

Interviewee 13, 76 years old, rural hukou, recipient of NRSP

Justify for the need of support. In the interviews, older people often felt the need to justify their request for support from their adult children, despite their reluctance. This aligns with the mixed feelings and attitudes towards negotiating support. As discussed earlier, the housing-related financial support to adult sons often leads to the depletion of the savings of the older, which justifies the reliance on sons in later life stages. For example:

"My husband and I have spent almost all our savings helping my eldest son buy his house when he was married. We didn't have much left for later life. But we have our sons."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

Besides, interviewees also justify their reliance on support from adult children by referring to the exclusion from labour market and the lack of access to labour incomes. For example:

"One has to take good care of oneself. But I am too old to work. Should there be any job for me, I would definitely take it. I was a hard-working farmer in the past. I was as good as anyone else. It's just...I am too old now and no one wants to hire me."

Interviewee 12, 74 years old, rural hukou, recipient of NRSP

"People in their 50s or 60s might still be able to find some temporary jobs somewhere. Once they turn 70s, they can't. No employer would like to hire anyone as old as me. I have no way to make money. What can I do? Only (to depend on) my sons."

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

Negotiation strategies. This organising theme explores the strategies that older people and their adult children apply in the negotiation of intergenerational support arrangements.

The longest-term strategy that both sides often apply unconsciously is the constantly and gradually infused cultural and social norms and expectations. Adult children are expected to behave in accordance with filial piety, which is not only acting as a 'golden standard' of being a good child but also mentioned across interviewees as a determinant of a good life in retirement. The content and scope of filial piety, in this context, refers to the extensive and interconnected dimensions of intergenerational relations (for intergenerational solidarity model, see Bengtson and Schrader, 1982), including frequent interactions such as visits or phone calls, evident respects for and affections to the older, excessive initiatives to offer support, and strong commitments to caring obligations.

An example of the application of this strategy in practice is through parenting education:

"We have a good family education in traditional values. My parents had taught me to respect and love the old since I was a child. I continued this tradition. Filial education is very important in my family... Because my parents educated me in this way, I treat them very well. I was a filial son myself - taking good care of my mum. They (adult children) have seen it for themselves. They saw how I treated their grandma, so they wouldn't treat me badly. I was educating them by words and deeds, wasn't I?"

Interviewee 1, 81 years old, urban hukou, recipient of GIP

On the other side, social norms also require older people to provide housing-related support and childcare support for adult children, particularly for sons (as discussed earlier), for example:

"If they (son and daughter-in-law) need you to be there [to take care of the

grandchild], as a parent you have to. Surely you couldn't refuse...For us older people, it is our role and duty to take good care of them, even it means suffering a little. It is okay."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

"It is a matter of course for us to help with childcare... It is a parental obligation to spend on son's marriage and housing. I didn't think much about it."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

Support is also perceived by older people as an exchange for future support. Older people provide support throughout their lifetime for their children, with an expectation that adult children would take care of them in future when they are in need. For example,

"You have to help [with childcare]. Otherwise, when you get older, they won't take care of you. They would say you didn't take care of their children either. It's just how it is."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

"If I don't count on my children, who else can I count on? I take good care of them and bring them up so that I can count on them one day."

Interviewee 10, 67 years old, urban hukou, recipient of URSP

But such strategies does not always work out. For example, an interviewee was co-residing with her youngest son and daughter-in-law. The young couple was having financial difficulties themselves as recipients of social assistance (*dibao*). They can hardly provide any support to their older mother. Tensions around money often arose in the family, so the interviewee decided to move out from her son's place and live with her daughter for the time being.

"I was thinking this all the time. When I was young, I had such a high expectation that I worked really hard to support my children. I have had a poor life. I wished my children to be better off... It turns out no one could be counted on when I am too old to work. No one. When I talked about this to my friends, they said, you can't count on anyone, all you children are broke."

Interviewee 2, 69 years old, rural hukou, recipient of NRSP

When communicating the potential need for intergenerational support, an implicit and indirect manner of expression is often adopted. The potential need is expressed via complaints or tentative enquiries while the other side would understand tacitly and take the initiative to offer to help. An interviewee talked about how her daughter implicit asked for support with grandchildren's tuition fees via complaints.

"She (daughter) complained about children going to school. She said she was worried because she couldn't scratch together the tuition fees. I heard it, understood, and took some money that I have saved to support her."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

In addition, to protect the pride of the side who is in need of support, it also creates an opportunity for the other side to take the initiative to offer help, which, again, conforms to the ideal picture of a harmonious family. But this strategy is built on an established consensus that intergenerational support could, and in most cases, would be in place if required. Therefore, the extent and content of support need to be considered in a subtle way to avoid a dilemma for both sides. For example,

"Sometimes I might need money to go to fairs. I would ask my son [for money], not much, dozens of yuan, and he usually gives me the money. For example, I would say I need to go to a fair. Then he would ask how much I need, and I would say \neq 30. He would give me \neq 50. I don't ask too much."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

Family as a socioeconomic unit. Intergenerational support is negotiated and mobilised based on the cross-generational consensus that family is a primary socioeconomic unit. This organising theme explores how older people understand the role of family in support arrangements. Older people in the interviews believe that the responsibility of care and support lies in family, and that family should play the role in protecting its members. For example,

"Everyone has their family, right? Everyone should be cared for by their family members. That's how the society works."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

When care support is in need, family members are always considered as the best choice rather than a paid caregiver, who is deemed as less reliable and only be considered when family members are not available. When an interviewee talked about the employment of a paid caregiver, he would make an additional explanation:

"[After the heart surgery] my sons worried about me living alone. But they can't come to my place every night, can they? They have their own business. They need to go to work. So they decided to hire this carer for me."

Interviewee 1, 81 years old, urban hukou, recipient of GIP

Another interviewee talked about how she decided to help her son to look after the grandchild rather than let them employ a nanny.

"At the time of the little one (grandchild) being around one year old, they (son and daughter-in-law) asked me if I would like to take care of the child, or, if it was not doable, did they need to find a nanny. Both needed to work and couldn't look after their child. So, I said, 'OK, bring the little one to me.' I mean, if you find a nanny, you don't know their background. You can't see if they are reliable. Afterall they are outsiders of the family. Besides I am perfectly capable of doing that. I am their granny. I brought up four children myself when I was young. So, I said to them don't waste money on that. I could do it."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

The consensus that family is a primary socioeconomic unit provides an underlying rationale for the redistribution of financial resources within the family sphere. For example, older people in the interviews often refer to themselves as a "temporary money keeper", by which they mean that the money that they cannot spend will belong to their children eventually.

"Sometimes I won't spend all the money they (adult children) give me. So, I would buy stuffs for the little ones (grandchildren), food, jumpers, toys, and such. The money that I cannot use in the end is all theirs anyway. We are old. What is left in ours is ultimately theirs."

Interviewee 4, 70 years old, rural hukou, recipient of NRSP

"Even if they did give me money and I accepted, I am just a temporary money keeper. I can't spend them all. It is all theirs in the end."

Interviewee 1, 81 years old, urban hukou, recipient of GIP

"What's the point if they give me money? Where do I need to spend? After I die, they will have all my money anyway."

Interviewee 5, 72 years old, urban hukou, recipient of EEBP

"My husband and I always give some pocket money to our grandchildren. They (adult children) know it. They asked us to stop. We said, 'what's so wrong with giving the little ones some money? It is all yours eventually." The following two examples show how family resources were reallocated and mobilised through the intergenerational support network to meet the need of its members:

"Her (the eldest daughter) children need to go to school. Sometimes she couldn't even scratch together the tuition fees. So I need to save as much as possible. The money that my sons give me, I always spend carefully, so that I can save, say, two or three hundred yuan and give it to my eldest daughter. So that her children can go to school. As a parent, of course I want all my children to do well. If one of them is better off, I can ask for a little more money; and if anyone has difficulties, then I can give them a bit of help."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

"[My youngest daughter has a] child to support, medicines to take, she often found herself in difficult situations. If I happen to have ± 50 or ± 100 , I will give it to her. I didn't have money myself. Her elder sister and brother give me money and if I can save a hundred or two, I might be able to help her out."

Interviewee 12, 74 years old, rural hukou, recipient of NRSP

Family resources are mobilised and reallocated through upward and downward support networks across generations, where older people are playing a vital role in the redistribution process within the family and the protection of family members from risks.

In addition to being a primary unit of financial resources, family is also seen as a primary unit for social resources such as values, face, and social interactions. That explains why adult children share the responsibility to contribute, either financially or practically, to hosting guests and relatives and such. Moreover, family share a social face. For example, one of the interviewees complained that her co-residing son didn't give her money and that they had quarrels because of that. She said:

"They (the youngest son and daughter-in-law) don't want to take care of me now. But they also don't want to take the moral blame. He said to me that 'You tell others that it is you who don't want to live with us. It is you who want to live alone.' I said, 'I won't say anything to anyone.'"

Interviewee 2, 69 years old, rural hukou, recipient of NRSP

The interviewee also talked about how she was afraid of participating in social activities because she doesn't want others to know what happened to her and her family. The social cost of disobedience of cultural norms is therefore shared by both sides.

"My son suggests me to go out and dance with my peer neighbours. I don't have the mood to go. I am afraid that the neighbours would know my situation, you know, what happened in my family. They all have a good life. I don't want them to laugh at me."

Interviewee 2, 69 years old, rural hukou, recipient of NRSP

9.4 Negotiations outside family

This global theme explores how decisions about intergenerational support arrangements are shaped by factors outside the family sphere. As shown in Figure 9.6, four organising themes focus on public pensions, healthcare service, labour market, and the state will be discussed.



Figure 9.6 Thematic network around the global theme "negotiations outside family"

Source: interviews conducted by the researcher. Researcher's own.

Public pensions. Formal public pensions are essential for the improvement the economic situations of older people. Recipients of the long-established pensions (i.e. GIP or EEBP) can achieve financial independence in old age and afford to employ a paid caregiver if needed. Besides, the formal pension benefits are at least partly channelled back to the younger generations via downward informal intergenerational support such as spending on grandchildren or support for financially constrained adult children. For recipients of the new pensions, the access to formal pension support not only indicates the recognition of older people's contribution to society by the state but also, to a greater or lesser extent, reduces financial dependence on adult children and creates room for exercising their autonomy. For example,

"As I said, older people would rather sacrifice their own wellbeing than increase the burden on adult children. If I didn't have any pensions, I would need to ask for money from my children when I had to. But in most cases, it might just end up with me saying nothing and enduring the pain. I hate asking for money."

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

But the extent of such economic autonomy enabled by the new pensions might be limited when, for example, older people treated them as "pin money" or supplementary income source rather than the replacement of family support. For instance:

"At least the state is paying me some money every month. If I run out of the money my children give me, I can take out some from my pension account. Then it will be easier for me. I can spend them however I like. They (adult children) won't ask. That's my own money."

Interviewee 12, 74 years old, rural hukou, recipient of NRSP

In this sense, although the new pensions have improved the economic situation of older people, family support remains as the primary source of old-age support. One reason is that support across generations often carries with it symbolic meanings such as the cultural norms and social expectations of filial piety, as discussed earlier. Another reason that is often cited by older people in the interviews is the inadequacy of the new pension benefits. For example,

"They (adult children) know that I have pensions, but they still give me money. They know the pension benefit is far from enough."

Interviewee 10, 67 years old, urban hukou, recipient of URSP

Interviewees also implied that financial pressures on both generations were at least slightly lifted by public pensions, which increases family solidarity and reduces the potential conflicts over financial resources. For example,

"Now that the state gives me $\neq 200$ every month, my children won't feel stressed out. They know at least I have some sort of security. They still send

me money, but they feel less anxious about it."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

"If I really need support, they (adult children) will help. But you know, they will be unhappy. As I said, they don't have much money themselves. I don't want to make them unhappy (by asking for support). The thing is that you got to have some money yourself, and with those pensions, the situation is a bit better."

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

In this light, public pensions, especially the new pensions for those who have long relied on family to achieve old-age security, not only carries with financial values but also emotional values, which then improves the intergenerational relations and furthermore facilitates the negotiation of support arrangement.

Healthcare services. Older people in the interviews claimed that the costs of seeing a doctor and getting tests in hospital far exceed the new pension benefits, which, in consequence, lead to the continuous need of financial support from adult children, for example:

"How much (pension benefits) can I get? $\neq 2000$ per year at most, not even close to our healthcare expenditure. You see, my partner has to be admitted to hospital once a year. That would cost us $\neq 6000$, out-of-pocket. Yes, the healthcare insurance might reimburse half of it, but that still means nearly $\neq 3000$. How could she possibly be able to pay for her healthcare without support from our sons?"

Interviewee 7, 65 years old, rural hukou, recipient of NRSP

"It is of course better with pension benefits. But to be honest, it is not even enough to buy my medicines, let alone to see a doctor." In the case of illness, older people may have different reactions. The most common and immediate reaction is to endure uncomfortable symptoms until it starts to influence daily activities such as childcare or practical support provided by the older. For example,

"She (the interviewee's wife) has had a severe slipped disc in her back for years...Now that we are taking care of the girls (granddaughters), she needs to do the laundry for the girls, and sometimes she might even need to hold them in the arms. That caused great pain in her back. Not until then did she finally agree to go see a doctor."

Interviewee 7, 65 years old, rural hukou, recipient of NRSP

Another reaction is to take up economical or conservative treatments so that symptoms might be temporarily relieved to a limited extent and that extra financial support from adult children may not be required.

"The doctor suggests me to have an operation. I said no, I didn't want to. My sons are worried about money right now. How could I add their burden by letting them pay my medical bills? I thought taking medicines is just fine."

Interviewee 13, 76 years old, rural hukou, recipient of NRSP

The lack of access to affordable healthcare services not only consumes the new pension benefits for older people but also increase financial pressures on the working-age through the intergenerational support network. In the worst-case scenario, older people might refuse to receive appropriate diagnosis or treatment to avoid the situation of seeking support from adult children.

External caregivers. The underdevelopment and lack of trust in the care industry for both childcare and old-age care are closely related to the family-oriented care support arrangement. Previous themes

have explored the cultural emphasis on filial piety and the social expectation of caring responsibility on adult children, which often leads to the reluctance of employing paid caregivers from the labour market or care home facilities as caring for family members demonstrates harmony and solidarity within the family. This organising theme looks at factors beyond culture norms and expectations and focuses on the lack of trust and the unaffordability of care services outside family sphere.

For instance, the following interviewee saw an advertisement on a care home the other day, but when he visited the site, he found that the care home was empty, and the facilities seemed to be low quality. He commented:

"My current carer at home (the one he hired from labour market) is a young person. We don't speak the same language. But if there is a care home for older fellows, that would be different. I can play Chinese chess and mah-jong with them or go for a walk and talk about things that we are interested. But you know what, there is no reliable care home for us. It's all about government subsidies. They are just building those facilities so that they can get subsidies from the county government and the provincial government."

Interviewee 1, 81 years old, urban hukou, recipient of GIP

Although the above interviewee showed the intention to find a care home and are financially enabled by his generous pension incomes, he was worried about the quality of the care home. On the other hand, apart from the lack of trust, employing a caregiver from outside family is an unaffordable option for financially disadvantaged families. For instance:

"When the day comes [that I cannot take care of myself], I will count on my children. I can't afford to get myself a (paid) carer. My pension incomes cannot even cover one tenth of the costs (of employing a carer from the market)."

Interviewee 12, 74 years old, rural hukou, recipient of NRSP

Labour market. Women and older people's labour participation is among the areas where negotiations, especially the negotiations about care arrangements, often take place. As suggested in the interviews, without older people's provision of childcare support, adult members of the family, in particular the woman, cannot participate in labour market. Women's labour participation is therefore not only a decision concerning the nuclear family but also largely dependent on the intergenerational support relations in the extended family. For example,

"My daughter-in-law isn't working for the time being, but she plans to find a job after the Chinese New Year. If she successfully finds a job and needs me to take care of my grandson at some point after the Chinese New Year, then I will go back to Beijing and live together with them."

Interviewee 6, 63 years old, rural hukou, recipient of NRSP

"They (the eldest son and his wife) asked one of us to go there and help with looking after the youngest one (granddaughter), who just turned one year old at that time. My daughter-in-law couldn't manage it while she was working as a full-time schoolteacher. My wife went there and helped for a few months. She returned when the school was closed for holidays. Now my daughter-in-law needs to go back to work again, but my wife doesn't want to go there (to help with childcare). I thought we could take the little one back with us and look after her, but they (son and daughter-in-law) didn't agree. They wanted to keep the girl around them. But she (daughter-in-law) couldn't leave her job, could she? So I went there and took my grandchild back with me."

Interviewee 7, 65 years old, rural hukou, recipient of NRSP

Although the gendered childcare arrangement undermines women's labour participation in many

ways, the interviews show that the provision of grandparental childcare support has been offered as a solution to this dilemma, for example,

"I told them that I can take care of the child so that both my son and daughter-in-law could do their work."

Interviewee 10, 67 years old, urban hukou, recipient of URSP

From the viewpoints of older people, the choice to remain in or leave the formal or informal labour market is also closely related to their adult children's need for childcare support. For example, older people might take advantage of the early retirement policy so that childcare support can be provided.

"I took early retirement to take care of my grandchild. At that time, we had this policy that allowed you to leave the work before the retirement age, and still got, like, 95% of the wages until formal retirement. So once I had my first grandchild, I left my work so that I could take care of the little one."

Interviewee 1, 81 years old, urban hukou, recipient of GIP

In rural areas where the informal labour market prevails, it is also possible for older people to interrupt their engagement in the informal labour market if childcare support is required.

"I have been called by some mates, actually, for a few temporary jobs. I said: 'No. Sorry. Have to take care of my granddaughters'".

Interviewee 7, 65 years old, rural hukou, recipient of NRSP

"You see, actually I am still able to work. If he (the son) doesn't ask me to [continue to] take care of his son, then I will go out to find something to do. Not big money, but at least a little protection. But if he asks me [to take care of the grandchild], then I can't earn the money, then he should give me some pin money and take the responsibility of my daily expenses." In the interviews, older people also mentioned that the precarious employment of their adult children not only increase the financial insecurity for the younger generation but also make it more difficult for them to ask for help. For example,

"In rural families like us, if children can't find a secured job, then the life for older people won't be easy, too. For example, today he (the son) can earn \neq 50, tomorrow might be nothing. How could I ask for his support under that circumstance? If only at least one of my children has a secured job and stable income, I might be able to ask for their support. But it's not the case in my family."

Interviewee 14, 74 years old, rural hukou, recipient of NRSP

State responsibility. The final theme is older people's perception of the state's responsibility. Although many of them acknowledged in the interviews that the new pensions are insufficient, they still defend the state's actions. They even mention the ageing population and the tax burden on the younger generation as reason for this. For example,

"It is a good time now. The state treats us older people very well. But you can't just rely on the state. How can the state afford a big raise in pension benefits? There are so many farmers in this country. Young people work very hard and pay the tax. That's where the money (public pensions) comes from. They (young people) need to support their children and parents, and themselves as well."

Interviewee 12, 74 years old, rural hukou, recipient of NRSP

The above interviewee mentioned the two levels of intergenerational support: the micro-level that happens within family sphere via private transfers, and the macro-level that happens at the societal level via public pension transfers. Her preference of familial support over state support indicates a

clear state-family boundary perceived by older people.

Even with the new pensions, older people in the interviews did not expect the shift of responsibility of old-age support from family to the state (as shown in Chapter 5). Instead, they consider such support as a supplementary source of income in addition to family support arrangement, and that family remains the acting safety net in their old age. For example,

"Everyone has their families. The state can't take care of everyone-- that's what their families should do."

Interviewee 9, 79 years old, rural hukou, recipient of NRSP

"The state is taking good care of me, and the children are also taking good care of me. But if anything really happens, I will surely count on my sons."

Interviewee 13, 76 years old, rural hukou, recipient of NRSP

9.5 Findings and discussion

The qualitative interviews aim to explore how intergenerational support is arranged and negotiated in Chinese families. Three themes were presented that respectively focuses on the patterns identified in the support arrangement, the attitudes, beliefs, behaviours, and applied strategies in the negotiation of support within the family sphere, and the interactions with and responses to macro-level factors and structural constraints outside the family sphere.

Figure 9.7 shows the interconnections among the three global themes and illustrates the dynamic process of negotiations. On one hand, the patterns of intergenerational support arrangement are shaped not only by the negotiations between the older and the younger within the family, but also by factors outside family sphere (as shown by the two upward arrows pointed to the theme "Support arrangement patterns" in Figure 9.7). For example, adult children continue to provide for older parents even if public pensions are in place. Such arrangement might be jointly shaped by, for instance, the consensus on family responsibility and the requirement of cultural norms, as well as the inadequacy of

the new pension benefits and the unaffordability of health care services.

On the other, the intergenerational support arrangements enable both generations to exercise their agencies to negotiate within and outside family to acquire support and meet their needs (as shown by the two downward arrows pointed to the theme "Negotiations within family" and the theme "Negotiations outside family" in Figure 9.7). For example, the skipped-generational childcare arrangement that involves older people as main caregivers can be understood as an exchange for or a means to secure future old-age support. It can also be interpreted as a collective response by both generations to the existing disadvantages in the labour market faced by the working-age women.

Moreover, the social and policy context outside family sphere may influence the ways in which family members negotiate with each other, and the process and results of the negotiations, in turn, have an impact on the family's response to the socioeconomic circumstances that happened in the public sphere (as shown by the double-headed arrow between the theme "Negotiations within family" and the theme "Negotiations outside family" in Figure 9.7). For example, public pensions as a supplementary source of old-age support financially empower older people and enable the exchange of resources across three generations. Such solidarity within families then boosts the confidence and sense of security of older people when faced with limited access to the paid labour market or the expensive healthcare services.

Figure 9.7 The interconnected global themes



Source: interviews conducted by the researcher. Researcher's own.

Findings from the interviews have highlighted the role of Chinese families in both social production and social reproduction. It also demonstrates how such role is achieved via the negotiation of intergenerational support arrangements and being gendered (Roumpakis, 2020) in this process. Lacking affordable and quality care services options from the market, the extensive childcare support and practical support with household chores provided by older members in the extended family makes it possible for their adult children to participate in productive activities, especially for women if considering the deeply-rooted gendered division of care and housework in Chinese families. In families where the members are geographically dispersed (for instance, families of migrant workers), intergenerational support arrangements can also be negotiated and tailored over spatial distance so that the young couples can take part in the paid labour market. From the stories shared by interviewees, one of the frequent practice of those arrangements has been, for instance, the malleable role of grandparents as "the reserve workforce in the domestic sphere" (Gu, 2021, p.17). In this way, the responsibilities and costs of social reproduction is in fact transferred to older members in the extended family (Papadopoulos and Roumpakis, 2019) via the intergenerational support network.

Moreover, it also reflects that the resources, both in terms of financial resources and/or care resources, are mobilised at the family level and redistributed intergenerationally so that the collective welfare

can be enhanced. For instance, the financial transfers from some adult children to their older parents might be occasionally partly channelled back to support other adult children when the latter were in need. Those arrangements and the negotiation process corroborate the idea that family as a socioeconomic actor copes with structural constraints and maximises the interests and wellbeing of its members via exercising its agency (Huang, 2011; Cong and Silverstein, 2012; Daly and Kelly, 2015; Huang, 2018; Papadopoulos and Roumpakis, 2019; Gu, 2021). In this view, family is seen as a "corporate group" (Cong and Silverstein, 2012, p.427) or a "strategic coordinator" (Papadopoulos and Roumpakis, 2019, p.245) that makes "familial rational choice" (Huang, 2011, p.485) and strategical decisions (Laslett and Brenner, 1989) through long-term arrangements and ongoing negotiations within and outside the family sphere.

One of the examples of family exercising its agency to cope with constraints and protect its members is the (re)negotiation and (re)interpretation of intergenerational contract. For a long time, at the core of the Chinese intergenerational contract has been the filial piety and related obligations and expectations such as the unconditional provision for and obedience to older parents (e.g. Shi, 2009). The interviews, in line with the findings from previous literature (e.g. Teo et al., 2003; Croll, 2006; Izuhara, 2010; Chen, Liu and Mair, 2011; Izuhara and Forrest, 2013a; Abrahamson, 2017; Zhong and Li, 2017; Huang, 2018; Gu, 2021), suggest that new filial practices and patterns have emerged, negotiated, and accepted by both generations. For instance, instead of older parents being dependent on adult children, the findings reveal a mutual interdependence where housing-related financial support and childcare support provided by older people has become an essential element of a reciprocal intergenerational support arrangement. It on one hand reflects the influences of social structural factors such as changing family structure and booming housing market. On the other hand, it demonstrates the efforts of Chinese families to adjust for those changes and seek for the improvement of familial wellbeing by pooling together resources.

The (re)negotiation and (re)interpretation of intergenerational contract is also reflected in the gender aspect, in particular, in the changing relationship between (married) daughters and their older parents in natal families. The traditional patrilineality and patrilocality embedded in the Chinese filial piety indicates that daughters become outsiders of their natal families upon marriage (Croll, 2001; Shi, 2009; Eklund, 2018). The manifestations include, among many others, that married daughters are excluded from the extensive intergenerational support arrangements from their natal families and simultaneously exempted from the obligations and duties of caring and providing for their natal parents. The interviews, however, identify a changing pattern where older people in fact received both tangible and intangible support from their married daughters. It is found that daughters are more likely to provide emotional support and practical support, more caring, and visiting and contacting more frequently than sons. If conditions permit, daughters also voluntarily share the financial responsibility of providing for their older parents. Meanwhile, older people provide occasional support to their married daughters as well.

At the same time, for older people with better pension incomes, the emphasis of filial practices has been shifted from financial and long-term care support to emotional bonding. Frequent visits and contacts are demonstrated and interpreted by both urban and rural interviewees as filial behaviours. Even for older people who need to financially rely on support from adult children, frequent visits and contacts create room for them to bring up their needs and negotiate the support arrangements. Moreover, the reinterpretation of filial piety and the renegotiation of intergenerational contract between the two generations have created a new framework that enables (married) daughters to perform filial piety (Shi, 2009). As a result, the belongingness of married daughters to their natal families can be also regained due to the changing notion of filial piety and shifting expectations on intergenerational support. These findings are consistent with previous observations that daughters are playing an equally, if not more, important role in taking care of their older parents (e.g. Shi, 2009; Xie and Zhu, 2009; Hu, 2017; Eklund, 2018; Huang, 2018). An explanation for this change is the decline in parental power and patriarchal authority brought about by the market economy, accompanied by the improvement of women's economic status (e.g. Shi, 2009; Gu, 2021).

The expectation of bequest is often cited as one of the motives of intergenerational support (e.g. Kohli and Künemund, 2003). However, the interviews show a different picture. For older people with limited resources, the accumulated wealth might be already depleted before entering their later life stage by the housing-related support to their adult sons. For older people with adequate pensions, inheritance is often used by them as an excuse for turning down adult children's offer to support, as put by an interviewee: "I am just a temporary money keeper". In both cases, the bargaining power of older people in the negotiation of intergenerational support arrangements does not stem from their control of financial resources, and support from adult children to older parents is not motivated by the bequest of the older. Instead, it could be interpreted as a new form of intergenerational contract where consensus, trust, and solidarity among family members play a vital role.

The extensive and long-term intergenerational support network within Chinese families, the highlyvalued norms and consensus shared by family members, and the emotional bonds across generations discussed above refer to the solidarity of China's intergenerational relations. However, the interviews also reveal the other side of intergenerational relations, that is, the conflicts or the potential for conflicts between generations that arise from, for instance, unmet needs or unrealised expectations. Such contradictions, also known as intergenerational ambivalence, have been widely discussed in previous family literature (Lüscher and Pillemer, 1998; Lüscher, 2002; Bengtson et al., 2002; Connidis and McMullin, 2002; Lüscher and Hoff, 2013; Connidis, 2015) and empirical studies on intergenerational relations (Teo et al., 2003; Izuhara, 2004, 2010; Lin and Yi, 2013; Daly and Kelly, 2015).

Findings from the interviews have illustrated the potential of intergenerational ambivalence as a bridging concept that links micro, meso, and macro level of analysis (as suggested in Connidis, 2015). For example, one of the reoccurring sources of ambivalence among rural families comes from the dependence vs. autonomy of older people. Although support from adult children demonstrates successful parenting and good behaviours in accordance with filial piety as well as care and love between generations, the fact that rural people "have no choice but to" rely on their adult children due to lack of resources in old age often leads to negative feelings, such as guilt ("being a burden"), self-loathing ("being useless"), or anxiety/insecurity. Those feelings in turn prevent them from seeking support from adult children and lead to unmet needs. Thus, the wish to see an increase in public pensions so that they could achieve a certain extent of financial autonomy is also common. In

contrast, enabled by secured access to adequate public pensions, urban retirees and their families managed to maintain a balance between financial interdependence and emotional closeness. The above examples demonstrate the psychological ambivalence that is experienced by older people (at the individual level), the expected, but not always realised, role of Chinese families in protecting its older members by mobilising and redistributing resources (at the familial level), and the potential risks caused by the lack of adequate public pensions after retirement (at the structural level). It also shows how individuals and families attempt to exercise their agencies to manage and negotiate the intergenerational ambivalence.

Intergenerational ambivalence might also arise from conflicting norms and expectations on, for instance, gender roles. The interviews show that women are expected to fulfil the responsibilities related to the role of "daughter-in-law" while (used to be) excluded from receiving the support from natal parents and performing the filial duties related to the role of "daughter". Such gendered intergenerational support arrangement contains the potential for conflicts. The negotiation of gendered support arrangement, then, may provide room for both generations to mitigate the potential conflicts, or, as discussed earlier, even reshape the intergenerational contract and endow new connotations to filial piety practice. From this aspect, the negotiation of intergenerational support not only can be understood as the process in which both generations make sense of and manage those ambivalences by exerting their agencies under structural constraints, but such process also contains the potential for changes at the structural level(Connidis and McMullin, 2002; Connidis, 2015).

The negotiation strategies that individuals adopt in managing intergenerational ambivalence largely depend on the resources they own and the opportunities they have, and those who have fewer resources and options tend to resolve ambivalence by accepting it (Connidis and McMullin, 2002; Connidis, 2015). For instance, although cultural and social norms have stipulated the framework of intergenerational support, without available financial resources, rural older people might have limited bargaining power to negotiate with adult children about specific support arrangements but to anchor their hope on children's obedience to the cultural and social norms and expectations. However, not only the binding force of norms and moral obligations is declining from a longitudinal aspect, as

mentioned in previous literature as the "eroded" filial piety (e.g. Croll, 2006; Zhong and Li, 2017), but also that the social cost of disobedience of such codes and norms need to be shared by both adult children and older parents, as family is both a primary unit of financial resources and a primary unit for social resources such as values, faces, and social interactions. Therefore, as shown in the interviews, in the absence of adequate public pensions, the rural interviewees chose to supress their needs and developed downward adaptive preference. In this sense, the access to adequate and fullycovered public pensions can financially empowered older individuals and therefore provide new opportunities to resolve intergenerational ambivalence.

This study aims to complement previous quantitative work by exploring the arrangement and negotiation of intergenerational support. It provides an in-depth understanding of the situations and circumstances where support is arranged and negotiated. Furthermore, it not only illustrates how older people exercise their agencies to negotiate within and outside family for old-age support but also illustrates how family as a socioeconomic actor protects its members by exerting the familial agency. From this point of view, the study values depth of understanding over generalisability. In fact, given the scopes of the research aim and limited resources, the interviews only include older people who had or have an intergenerational support network and explores how they arrange and negotiate such support. Therefore, older people who have no intergenerational support network, such as unmarried and/or childless older people, are not discussed in this study.

Part IV

10. Discussion

Chapter 10 and Chapter 11 constitute the last part of the thesis (Part IV), which brings together the analyses and implications of this study. Chapter 10 draws together the insights from the previous quantitative and qualitative empirical chapters and reflects on the contributions made by the presented mixed-method study.

10.1 Back to the research questions

From an intergenerational perspective, this study seeks to understand how Chinese older people secure old age after the recent expansion of public pension coverage. It focuses on the interplay between the two levels of intergenerational support relationships, namely, the public pension arrangements at the macro level and the family support between adult children and their older parents at the micro level. Centred around the research aim, the preceding empirical chapters are organised as follows. Chapter 6 examined the degree to which Chinese older people are financially dependent on family support and focused on the impact of public pensions on older Chinese's family dependence. Chapter 7 further investigated the interactions by examining the potential "crowding-out" effects of public pensions on both upward and downward intergenerational family support. Chapter 9 explored in more depth how the intergenerational support is arranged and negotiated by older Chinese and their families under the current public pension arrangement.

10.1.1 Family dependence

To answer the first research question, "What is the impact of public pensions on family dependence among Chinese older people?", Chapter 6 examined both subjective (expectations of family support) and objective (the proportion of private transfers to total incomes) aspects of family dependence. From the analysis of three waves of the CHARLS data, it was shown that financial dependence on family support is strongly prevalent and intense among Chinese older people, especially among rural hukou holders and older people who were excluded from the established public pension schemes. The established public pension schemes for employees, namely, GIP and EEBP, are significantly related to a lower level of family dependence from both subject and objective aspects. Interestingly, the analysis showed that the newly introduced pension schemes for rural and urban residents (NRSP and URSP) have failed to transfer the financial dependence as effectively from family to the state, especially in terms of the expectations of relying on family support. Further regression analyses confirmed that under the same conditions, the effects of the new pensions on the reduction of family dependence are smaller or even reversed. Moreover, by examining the moderating effects of hukou type, it was also found that the effects of public pensions differ between urban and rural hukou holders. Rural recipients of public pensions are slightly more likely to alter their expectations from relying on the family to relying on the state, even though the importance of private transfers holds relatively stable if compared to their counterparts (i.e., the drop in the proportion of private transfers to their total incomes is smaller for rural recipients).

The results indicated that family remains the primary and fundamental source of financial support for most older people even under the new pension arrangements. The limited impact of the new pensions on the financial dependence of family support might be explained by the inadequacy of the pension benefits on the one hand (for example, see Liu, Liu and Huang, 2016; Zhu and Walker, 2018; Chen, Walker and Hong, 2018). On the other hand, it might also reflect the complexity and dynamics in China's intergenerational support arrangements that have been shaped not only by policy and structural factors but also by the agency of the two generations. Findings from Chapter 7 and Chapter 9 might help to provide further insights into these aspects of intergenerational support relationships.

10.1.2 The "crowding-out/in" effects

Chapter 7 answered the second research question, "Does public pension crowd out family support?". In Chapter 7, older people were simultaneously seen as both recipients and providers of intergenerational support as earlier "crowding-out" literature tends to neglect the agency and initiative of older people in intergenerational support networks (Arrondel et al., 2006; Reil-Held, 2006; Deindl and Brandt, 2011). Moreover, it expanded the scope of the inquiry by incorporating not only financial support (i.e., private transfers) but also care support (i.e., grandparental childcare) between generations to reflect the multifaceted aspects of intergenerational support relationships. This question was approached in a quantitative fashion by applying Heckman two-step selection models (as applied in previous studies including Cox, 1987; Reil-Held, 2006) to analyse the statistical relationships between the receipt/amount of public pensions and the change in intergenerational support.

It was found in Chapter 7 that the "crowding-out" and "crowding-in" effects co-exist, indicating that public pensions do not necessarily weaken intergenerational support, instead, in some cases, they might strengthen the support network. Specifically, the probability of receiving child-to-parent upward private transfers decreased with public pension incomes, but if examined by different pension schemes, such a "crowding-out" effect on the incidence was only found significant for the EEBP scheme. The new pensions (i.e., NRSP/URSP), however, not only "crowd in" the incidence of upward private transfers, but also increase the amount of financial support received by older people with rural hukou (while decrease the amount of financial support received by their urban counterparts). The "crowding-in" effects are also evident in the parent-to-child downward private transfers, where both probability and amount of private transfer support increase with pension incomes. But again, such "crowding-in" effect on the incidence of downward private transfers is only significant for the EEBP scheme. Whereas for grandparental childcare support, the evidence shows neither "crowding-out" nor "crowding-in" effects. Instead, the probability of older people providing childcare support is more dependent on other socio-demographic factors such as gender and geographic proximity to adult children.

By engaging with the "crowding-out/in" debates, Chapter 7 provided further insights into the interplay between public pensions and intergenerational support networks in Chinese families. The findings echo with Chapter 6 in that intergenerational support remains resilient under the new pension arrangements. Moreover, the "crowding-in" of downward private transfers, on the one hand, confirms the argument made by Kohli (1999) that public resources can be channelled to younger generations via the interplay between public pensions and private intergenerational support, providing insights into the debates around generational equity (for instance, see Williamson, McNamara and Howling, 2003; Kohli, 2005; Lau, 2013). On the other, it demonstrates that intergenerational family acts as a

socio-economic unit where resources are mobilised and reallocated (Papadopoulos and Roumpakis, 2017, 2019). In addition, the co-existence of the "crowding-out" and "crowding-in" effects reflects the co-existence of different support motives (Künemund and Rein, 1999; Arrondel et al., 2006; Brandt and Deindl, 2013; Peng et al., 2021). The acknowledgement and understanding of the situations, contexts, and process where family may react differently are then of significance to comprehend both the interplay between the family and the state support and also the ways in which older Chinese secure their old age.

10.1.3 The two levels of agency

Chapter 9 answered the third research question, "How do Chinese older people arrange and negotiate for family support in the context of the changing family structure and the new public pension arrangements?". Unlike Chapter 6 and Chapter 7, Chapter 9 adopted a qualitative approach where the lived experience of 14 older people with different public pension statuses and hukou types in Baoji city was explored via in-depth semi-structured telephone interviews. Findings from the thematic analysis of the interviews highlighted the intertwined two levels of agency, that is, the agency at the individual level and the agency at the familial level, and their interactions with wider structural factors in the arrangement and negotiation of intergenerational support.

Based on an outline of the multifaceted family support across three generations from a life-course perspective, the interviews have revealed the patterns of support arrangements, which include being needs-based, highly gendered, and urban-rural divided. The forms, intensity/amount, and directions of intergenerational support are partly but largely shaped by the needs of both generations, which on the one hand reflect the agency of older people as well as their adult children in the negotiation both within and outside the family sphere. On the other hand, it demonstrates the ways in which family as a socio-economic actor exercises its agency to mobilise and reallocate resources to meet the needs of its members. The gendered arrangements expose the tensions and conflicts in norms, expectations, and needs of support, whilst also foster the potential for both generations to reinterpret and make sense of the new norms of intergenerational contract and filial piety.

In the process of the negotiation of intergenerational support, older people are experiencing, making sense, and adapting/responding to the ambivalence at the individual, institutional, and structural levels (for the three levels of intergenerational ambivalence, see, for instance, Connidis and McMullin, 2002; Connidis, 2015). The negotiation with adult children for intergenerational support is often implicitly stigmatised by older people themselves as it is attached to dependency. That said, the lack of access to (adequate) public financial and/or care support means that older people have to either suppress their needs or to justify and adopt a series of strategies to meet their needs of intergenerational support. For instance, the cultural norms and expectations require adult children to actively take the responsibility for supporting their older people to continue to provide housing-related and childcare support to adult children. The continuous downward support on one hand justifies the needs of older people in their later life stage as their savings might have been depleted by it. On the other, it is interpreted by some older people as the exchange or a way to securing for future support in old age.

At the centre of the negotiation of intergenerational support, either within or outside the family sphere, is the cross-generational consensus that family is a primary socio-economic actor (similar arguments can be found, for instance, in Huang, 2011; Cong and Silverstein, 2012; Daly and Kelly, 2015; Huang, 2018; Papadopoulos and Roumpakis, 2019; Gu, 2021; Guo and Zhang, 2021). Within the family sphere, resources are mobilised and redistributed via the intergenerational support network so that risks from outside the family can be managed, absorbed, or mitigated. The grandparental childcare arrangement, sometimes along with the (temporary) relocation of older people, is an example of the agency and resilience of intergenerational families in addressing the conflicts between the dual roles of the Chinese family in social production and social reproduction. This is especially evident in intergenerational families with migrant workers.

10.1.4 Mixed approaches to an integrated answer

This presented mixed-method study explored the current issues of intergenerational support

relationships from different aspects. Instead of seeing them as separate elements, each component provides unique but complementary insights into the understanding of how older Chinese secure old age under the current public pension arrangements. Chapter 6 highlighted the continuous importance of intergenerational family support even after the recent expansion of public pension coverage, which is not only reflected in older people's expectations but also in the actual proportion of private transfers to their total incomes. Chapter 7 added to the understanding of the complex interplay between public pensions and intergenerational support by revealing the co-existence of "crowding-out" and "crowding-in" effects. Although the two quantitative chapters help to identify the generalisable patterns and associated characteristics of the interplay between the macro-level (i.e., public pension arrangements) and the micro-level (i.e., family support) intergenerational support, they are limited in capturing the process and/or the situations where both older people and their families exercise their agencies and respond to the institutional and structural factors which are in constant flux.

In this sense, Chapter 9 provided valuable insights into the "black box" (Pahl, 1989, p.4) of intrafamily mobilisation and redistribution of resources from an intergenerational perspective while simultaneously demonstrating the merit of viewing (intergenerational) family as a socio-economic actor and examining the familial agency. For instance, it helps to explain the absence of the expected "crowding-out" effect of the new pensions, as the "crowding-out" hypothesis is largely built on the economic analysis of rational choice and utility of individuals. This tends to neglect the collective agency and utility of intergenerational family. Moreover, the in-depth interviews also highlight the symbolic and cultural value of intergenerational support, which can be hardly captured by the quantitative analyses of private transfers.

Apart from complementing each other, findings from the qualitative chapter confirm and triangulate the conclusions drawn from the quantitative chapters and vice versa. For instance, one of the shared themes across the three analytical chapters is the inadequacy in the new pension benefits that at least partly leads to the continuous financial dependence on intergenerational family support. All three chapters have portrayed the different arrangements of intergenerational support between urban families and rural families, reflecting the long-trenched urban-rural divide in both policy arrangements and cultural and social norms. Some socio-demographic characteristics, such as the geographic proximity between older people and their adult children are also highlighted from both quantitative and qualitative aspects. For instance, Chapter 6 found a slightly higher level of financial dependence on family support among older people who live in different cities or provinces from their adult children. Chapter 7 further confirmed that both upward and downward financial transfers, while not grandparental childcare support, are more likely to occur in geographically dispersed intergenerational families. The findings were triangulated by the interviews in Chapter 9, where the adaptation and management of geographic distance in intergenerational support arrangements of Chinese families, especially families with domestic migrants, are explored in depth.

Although the triangulation of the findings from different research components are emphasised as one of the most important features of the presented mixed-method study, it is acknowledged that conflicting or inconsistent findings might have emerged from different analytical chapters. For instance, the analysis from Chapter 7 indicated that, ceteris paribus, older women are more likely to provide grandparental childcare support to their adult children compared to older men. This finding is in line with the extensive literature on the gendered care roles in intergenerational support arrangements both in the Chinese context and the Western context (for example, see Qi, 2018; Hank and Buber, 2009). However, such patterns were not observed from the interviews. Both women and men participants of the study claim that they, either by themselves or with their partner, have been involved in the grandparental childcare support at some point, and there was no obvious labour division observed. One of the men participants had to leave the interview earlier because he needed to do the laundry for his granddaughter. One possible explanation for the conflicting findings might be the different samples that the conclusions are drawn from. Chapter 7 was based on statistical analyses on large-scale, nationwide representative datasets, which underlines the representativeness of the population. Whereas Chapter 9 was based on a much smaller sample in a typical city, where the representativeness is more related to the phenomenon (Flick, 2007) of intergenerational support arrangement and negotiation rather than from a statistical perspective.

This section summarises the research findings and elaborates how these findings answer the research

questions and meet the research aim from different but integrated approaches. The next section continues to demonstrate the contributions of the study from the empirical, methodological, analytical, and theoretical aspects.

10.2 Thesis contributions

The present study aims to contribute to knowledge fourfold. The following sections will identify and specify the contributions to knowledge from the empirical, methodological, analytical, and theoretical aspects. It is worth noting that although the contributions are presented and discussed in separate sections, the four aspects of contributions to knowledge are interlinked. Next, it starts with the empirical contributions.

10.2.1 Empirical contributions

The findings in this study have extended the empirical knowledge of the intergenerational support in Chinese families in four ways: firstly, by examining the interplay between public pensions and intergenerational support; secondly, by engaging with the "crowding-out" debates and providing evidence from a society where comprehensive public pensions are absent and family support prevails; thirdly, by updating the limited evidence by including more recent data; and finally, by collecting and analysing primary interview data in the city where the new public pension schemes were first initiated.

Before this study, the majority of prior research either attempted to portray and/or examine the changing patterns of intergenerational relationships in Chinese families (e.g., see Guo, Chi and Silverstein, 2012; Izuhara and Forrest, 2013b; Zhong and Li, 2017; Chen and Jordan, 2018; Guo et al., 2020; Zhou, Kan and He, 2021), or focused solely on policy development or the redistributive impact of public pensions (e.g., see Cai et al., 2012; Liu, Liu and Huang, 2016; Li et al., 2018; Zhu and Walker, 2018). Studies from both perspectives have established the primary role of family and/or intergenerational support in old-age support arrangements. However, given the recent expansion in public pension coverage, there is surprisingly little evidence on the potential impact of the new

pension schemes on the intergenerational relationships in China. This research is among the few studies that investigate the ways in which family support reacts to and interacts with the policy changes in the public pension arrangements.

Although globally there is a wide range of literature focusing on the potential interplay between public pensions and family support (Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005; Arrondel et al., 2006; Reil-Held, 2006; Deindl and Brandt, 2011; Brandt and Deindl, 2013), little evidence has been found under the Chinese context where a fully-covered public pension systems is still in progress and family support continues to be in the primary place. This study adds to the growing body of research on the "crowding-out" debates and the motives of intergenerational support.

A few recent exceptions that attempt to capture the impact of public pensions on intergenerational family support, such as the studies conducted by Ko and Mohring (2021), Nikolov and Adelman (2019), Chen and his colleagues (2018), and Chen and his colleagues (2017), are either based on provincial-level data or slightly outdated survey data (i.e., data collected before 2013). This study contributes to the current literature as it incorporates a more recent wave of the nationwide representative CHARLS data (i.e., CHARLS 2015³⁶), allowing for the potential time lag between the initial introduction and rapid expansion of the new pension schemes (between 2009 and 2012, as mentioned in Chapter 2.4) and the potential adaptations and changes in the intergenerational support arrangements within Chinese families.

Moreover, the study contributes to the depth of empirical knowledge of China's intergenerational relationships by collecting and analysing the primary qualitative interview data in Baoji. As introduced earlier in Chapter 2 and Chapter 8, Baoji is not merely among the first pilot cities of the new pensions but also the birthplace of the "prototype" of the NRSP scheme. The in-depth interviews of 14 Baoji residents with different pension statuses, hukou types, family structure, and other demographic characteristics, therefore, add to the existing evidence on the arrangement and

³⁶ By the time of the thesis, the most recent wave of CHARLS data (i.e., CHARLS 2018, Wave 4) has been released on 23rd September 2020.
negotiation of intergenerational support from the perspectives, understanding, and interpretations of older people themselves.

10.2.2 Methodological contributions

One of the most important keywords of the present study is its mixed-method research design. This study is one of the first attempts to comprehensively examine the interactions between China's public pensions and intergenerational family support using a mixed-method approach. It engages with a wider range of methodological literature than just quantitative or qualitative research and focuses on integrating both quantitative and qualitative techniques into a single study. Therefore, the first methodological contribution of the study lies in the demonstrations of the potential merits of mixedmethod research design. In addition to complementing and triangulating findings from each component (as discussed earlier in Chapter 10.1.4), the multi-strategy approach at the beginning of the research design stage helps to expand the breadth and range of the enquiry. For instance, co-residence did not emerge as an influential factor in previous studies on the relationships between public pensions and intergenerational family support arrangement (e.g., see Chen et al., 2017). The variable was therefore not included in the quantitative models at first. However, in the in-depth interviews with Chinese older people, co-residence with the younger generation(s) was found as a special form of flexible living arrangements that can be arranged to meet the needs of both older people and their adult children. In this sense, the quantitative models were revised and updated with the inclusion of co-residence with at least one adult child as a control variable (for the full list of variables see Chapter 5)³⁷. It also proves that social science research in the real world is a non-linear process.

By applying a mixed-method research design, the study also contributes to the growing body of research that challenges the methodological myths that qualitative and qualitative methods are

³⁷ Although co-residence was found to be a statistically significant control variable in some of the estimations of family dependence and crowding-out effects, the inclusion of the variable leads to no (substantial) changes to the directions or the sizes of the main statistical relationships between public pensions and intergenerational family support.

incompatible and that such incompatibility represents two paradigms shaped by the agency-structure sociological dichotomies (e.g., see Giddens, 1993; Hay, 2002; Danermark, Ekstrom and Jakobsen, 2005; Fincham et al., 2011; Zachariadis, Scott and Barrett, 2013). As elaborated in Chapter 4, the methodology of the present mixed-method research is informed and built on critical realism. This study illustrates and contributes to the application of critical realism in social policy research. For instance, findings from this study highlight the methodological considerations of the dynamic relationships of agency and structure. It not only examines the ways in which individual agency is impinged by structural factors (e.g., the extent to which older people's expectations of relying on family support are shaped by the new public pension arrangements and urban-rural divides) but also appreciates the reactions and agencies of individual and their families to reproduce or transform the structure (e.g., the negotiation of support arrangement both within and outside the family sphere). This approach to the agency-structure relationships transcends the dual paradigms of structuralism and intentionalism (e.g., see Giddens 1993 for the structuration theory; see Archer et al. 2013 for the critical realism). Moreover, this study moves beyond merely seeing agency and structure as interrelated and intertwined concepts but also attempts to capture the "dialectical interplay" between agency and structure over time (Hay, 2002, p.122). For instance, the reinterpretation of the new Chinese filial piety of both generations, on the one hand, can be understood as reactions to the changes in family and demographic structure as well as economic context, and on the other, it is among the many reasons for the new norms and arrangements of family support between generations.

Moreover, the study contributes to the understanding of the application and development of both quantitative and qualitative research techniques. For instance, by utilising the longitudinal information, the quantitative component of this study is among a few recent attempts to apply Heckman two-step selection models to panel data (e.g., see Garcia-Rodriguez, Romero-Merino and Santamaria-Mariscal, 2021; Nguyen et al., 2021; Ngan et al., 2021). By taking into account both selection bias (i.e., Heckman two-step selection models) and unobserved effects (i.e., panel data models), this study adds to the ongoing methodological discussions on the reduction of potential endogeneity bias.

The qualitative interviews with older Chinese during the Covid-19 pandemic, on the other hand, add to the attempts of exploring alternative ways of collecting in-depth information when face-to-face or video call contact was not possible. For instance, the accessible pre-recorded online video which provides information of the research (and the researcher) helps to recruit prospective participants and build rapport in the absence of in-person contact. The study also demonstrates the potential of thematic network (Attride-Stirling, 2001) as a practical tool to organise and present the thematic analysis of qualitative data.

10.2.3 Analytical contributions

The main analytical contribution of this study is the attempt to bridge the two levels of intergenerational relationships. By examining the interactions between public pensions and family support, the present study links the macro-level intergenerational support in the social policy sphere and the micro-level intergenerational support in the family sphere and brings them together as a unified framework (similar analytical strategies can be found, for instance, in Kohli, 2005; Motel-Klingebiel, Tesch-Roemer and Von Kondratowitz, 2005; Ochiai, 2009; Izuhara, 2010). The analysis of the mobilisation, reallocation and redistribution of resources between two generations within the family via the private support network, for instance, sheds light on the debates on the macro-level intergenerational relationships such as generational equity. Findings from this study highlight the importance of taking into consideration the potential channelling back of public resources to the younger generations in the analysis of public pensions.

The present study also contributes to the understanding of the two levels of agencies as an important analytical framework (e.g., see Daly, 2020a). In this study, both the agency of older individuals and the collective agency of their families are analysed and explored with an intention to bring together the two-level of agencies in the analysis of arrangement and negotiation of intergenerational support both within and outside the family sphere. While the analysis of individual agency is far from uncommon in social policy studies, the analysis of familial agency in protecting its members and maximising the wellbeing of the family as a whole (Papadopoulos and Roumpakis, 2017, 2019)

provides new insights into the understanding of the mixed economy of welfare. This study contributes to the analytical view of seeing family as a socio-economic actor by exploring its collective agency in response to the changing pension arrangements in China. It also aims to expand the application of this analytical view by examining the mobilisation and transfers of different forms of resources between two or more generations in Chinese families.

10.2.4 Theoretical contributions

This study, at its best, attempts to make contributions to family and intergenerational theories. Findings from this study not only demonstrate the multidimensionality of intergenerational solidarity (Bengtson and Schrader, 1982; Bengtson and Roberts, 1991) but also highlight the interrelationship of the different dimensions of intergenerational solidarity. For instance, previously it has been established that a higher level of familial norms is associated with greater affections between generations, and the latter is related to strong intergenerational associations (Bengtson and Roberts, 1991). This study contributes to the theoretical view on the relationship between the intergenerational exchange dynamics and family norms and expectations, as suggested by Bengtson and Roberts (1991) in their effort to revise and develop the formal theory of intergenerational solidarity. The empirical analysis of the two aspects of intergenerational solidarity in Chinese families proves that a stronger commitment and/or expectation to the fulfilment of familial obligations (normative solidarity) is highly associated with prevalent and intensive intergenerational exchange behaviours (functional solidarity) at both familial and societal levels. Moreover, the study also identifies a more flexible relationship between geographic proximity (structural solidarity) and exchange relationships. The geographic disperse of the two generations, instead of weakening intergenerational support, in fact, fosters a new form of intergenerational support arrangement, which can be seen as a response to the changing socio-economic context. This can be on one hand explained by a higher level of normative solidarity, on the other it also shows the resilience of intergenerational solidarity.

Furthermore, the present study demonstrates the potential of intergenerational ambivalence as a bridging concept to facilitate multilevel analysis (Connidis and McMullin, 2002; Connidis, 2015). The

study explores the ambivalence that is embedded in social structure, created by institutional arrangements, and experienced by older individual themselves. By exploring the negotiations both within and outside the family sphere, the study sheds light on the ways in which older people make sense, manage, react, reproduce, or reform the micro, meso, and macro level of intergenerational ambivalence. It provides an example of linking individual and familial agency to the structured and institutional inequality and social policy arrangements, which helps to extend the scope of intergenerational ambivalence theory.

Admittedly the thesis can hardly achieve the so called "ultimate goal" of social research from the perspectives of critical realists (McEvoy and Richards, 2006, p.69), which is to develop deeper levels of explanations and reveal underlying generative mechanisms (Danermark, Ekstrom and Jakobsen, 2005; McEvoy and Richards, 2006). However, the application of both extensive (quantitative) and intensive (qualitative) approaches in this study helps to, at least, provide important insights into the empirical manifestations of the mechanism of intergenerational support and how the support mechanism works in a concrete situation. For instance, the extensive approach identifies the systematic differences and patterns in intergenerational support arrangements and provides clues to the generative mechanisms of the interactions between public pensions and family support. On the other hand, the intensive approach reveals the dynamic and complex relationships between generations, and between family and the state and within this specific context contributes to the exposure of the generative mechanism of intergenerational support within Chinese families. Moreover, the analytical frameworks adopted in this study — bridging together the public pension arrangements and family support, comparing and contrasting the subjective and objective aspects of family dependence, and seeing family as a socio-economic actor and exploring its collective agency — provide a novel frame of interpretation of intergenerational support relationships. The reinterpretation and re-contextualisation of the interactions between intergenerational families and public pension regulations show the potential of exposing fragments of the causal mechanism(s) in operation and therefore contributes to a better understanding of intergenerational relationships.

This chapter has reviewed the potential contributions of this study. In the next Chapter, the thesis

concludes with a summary of the study and discusses the limitations of the present study and suggests possible future research directions.

11. Conclusion

This final chapter of the thesis aims to sum up the study, examine its policy implication, and discusses the limitations and possible future research directions.

11.1 Summary of the thesis

This thesis focused on the two levels of intergenerational support relationships, namely, public pension policies at the macro level, and family support at the micro level. The study is contextualised in China where the society is undergoing a series of demographic, economic, cultural, and policy changes (see Chapter 2). Old-age support arrangements emerge as an imperative issue, as the number of older people is rapidly increasing whilst the traditional family support network is faced with a series of challenges. Meanwhile, the Confucian culture and Chinese filial piety, as the codes of conduct for both generations, is shaping the interactions between generations but also being reinterpreted by older people and their families during the process. With the recent pension reforms which aim to establish a fully-covered public pension system in China, there are few studies attempting to understand how Chinese older people obtain old-age support and achieve financial security via informal family support network and/or formal public pension provisions (see Chapter 3).

Informed by previous literature on intergenerational relationship and family theories (see Chapter 3), the presented mixed-method study (see Chapter 4, 5, and 8) adopted an analytical framework that brings together older people's expectations and support behaviours; the upward child-to-parent private transfers and downward parent-to-child private transfers; financial and care support; the solidarity and ambivalence experiences of both generations, and finally, the individual agency of older people and the broader collective agency of the Chinese family.

Results from the analyses (see Chapter 6, 7, and 9) on one hand revealed the limited impact of the new pensions (i.e., NRSP/URSP) on current intergenerational support arrangement compared to the impact of the established pension schemes (i.e., GIP and EEBP). On the other, they highlighted the continuous role of Chinese family as a socio-economic actor in mobilising and redistributing

resources to meet the needs of its members. The study sheds new light on the understanding of intergenerational relationships by bridging two levels of analyses and exploring how older people and their family adjust, react to, and potentially reshape the structural changes.

11.2 Policy implications

This mixed-method study has shown that the new public pension schemes (NRSP/URSP) do not necessarily weaken intergenerational family support in China. Instead, they have financially empowered older individuals and strengthened intergenerational solidarity by reducing the potential for tension and conflicts over financial resources. This provides empirical evidence for policy makers to support further development and expansion of China's public pension system.

However, both quantitative and qualitative analyses reveal the inadequacy of the new pension benefits, resulting in limited financial security and perpetuating older people's continuous reliance on family support. In addition, the interviews with older individuals in the Baoji area also highlight the importance of affordable healthcare services in later life. Older people's financial wellbeing will remain at a low level if most of the new pension benefits are to be spent on healthcare.

Institutionalised childcare support for children under school age would also benefit both young parents and older people. Although some older people may find grandparental childcare rewarding, liberating them from such by-default responsibility will create room for different forms of social and economic participation and improve their multidimensional wellbeing.

11.3 Limitations and future research directions

It is important to acknowledge and consider the limitations of the present study so that the findings and conclusions can be interpreted appropriately and cautiously. The study is subject to at least four main limitations which are discussed below.

A major analytical limitation is that the study only considers older Chinese in intergenerational families, which means the support networks of childless older Chinese are not well examined in the

present study. Childless older Chinese include older people who have no children (whether in any partnership relationship or not) and older people who have lost their children (Fang, 2020). So far, there is little evidence on how childless older Chinese secure their old age, except for a recent study indicating that childless older Chinese tend to have fewer support sources and rely on informal support networks such as partners, relatives, and friends (Hsieh and Zhang, 2021). In this sense, future research on the experiences and strategies of the development and/or adjustment of the support networks of childless Chinese could shed more lights on older Chinese's later life stage.

The second and third limitations are related to the quantitative datasets based on which the study is conducted. Chapter 7 intended to include both financial transfers and care support in the analysis of the "crowding-out" effect of public pensions. However, unlike the two-way private transfers, the intergenerational care support is only measured by the length of downward grandparental childcare. This is because in the CHARLS questionnaires older people were only asked to answer the amount of time they spent on taking care of grandchild(ren) but not the amount of care support they received from adult children. Future studies could therefore be developed to examine the associations between public pensions or a wider range of public support and the care support provided by adult children to their older parents.

Another source of data limitation is the measurement of private transfers. In the CHARLS questionnaires, survey questions related to private transfers only considered the in-kind and cash support from non-co-residing adult children, which means the information on private transfers from/to co-residing adult children has been missed from the CHARLS datasets and, therefore, from this study. In this sense, the quantitative component of the study (Chapter 6 and Chapter 7) might suffer from the potential issue of underestimating the impact of public pensions on intergenerational private transfers, especially for those who provide (and/or receive) financial transfers from (and/or to) their co-residing adult children. Nevertheless, findings from the qualitative component (Chapter 9) show that living arrangements tend to be more flexible to adjust to the needs of both generations. Moreover, the implications of co-residence on intergenerational support arrangements may go beyond financial support but also be extended to care and emotional support. Therefore, another possible area of future

research would be an in-depth exploration and investigation of the dynamic relationships among public pensions, living arrangements, and different forms of intergenerational support.

The last limitation to be discussed in this thesis is regarding the samples of both quantitative and qualitative components. Although the study attempts to include more recent waves of the CHARLS data to take into consideration the potential time lag between the introduction of the new pensions and the adjustment in family support arrangements, it is not feasible to include the most recent wave (CHARLS 2018, wave 4) into the analysis under the limited timeframe. Future work including more recent data could be conducted to further examine the longer-term impact on intergenerational support relationships.

The potential sample issues of the qualitative part can be understood as both inherent and practical. The purpose of the qualitative element is concentrated on an in-depth understanding of the process, strategies, and experience of intergenerational support arrangement and negotiation. This has meant that discovering the generalisable patters, and the external validity from a quantitative perspective (generalisability beyond the specific research context) can be an inherent weakness of the study, as the sample size is relatively small and is not representative in terms of demographic structure. The practical limitation of the sample is that not all analytical categories (by public pension status and hukou types) have met the expected number of participants. For instance, among the 14 participants, there are only two URSP recipients and one rural non-recipients. Compared to rural recipients of the new pensions, these two groups are underrepresented. The main reason is the difficulties and challenges in recruiting participants during the Covid-19 pandemic, which has been discussed in more detail in Chapter 8. Future research engaging with these two groups is required to better understand the arrangement and negotiation of intergenerational support in China.

Appendices

Appendix 1 Descriptions of control variables

Detailed information on control variables used in the quantitative components of this study (Based on CHARLS 2011, 2013 and 2015)

Variables	Descriptions	Attributes/Values	Types
	Respondent relate	ed variables	
Income levels (RQ1)	The position of older people's incomes compared to the quartiles of older respondents' incomes calculated for each survey year.	 1: Incomes at the lowest quarter 2: Incomes at the lower-middle (2nd) quarter 3: Incomes at the upper-middle (3rd) quarter 4: Incomes at the highest quarter 	Categorical
Pre-transfer income levels (RQ2)	The position of older people's incomes before private transfers compared to the quartiles of older respondents' incomes before private transfers calculated for each survey year.	 Pre-transfer incomes at the lowest quarter Pre-transfer incomes at the lower-middle (2nd) quarter Pre-transfer incomes at the upper-middle (3rd) quarter Pre-transfer incomes at the highest quarter 	Categorical
Age	The age of older respondent calculated by their birth year.	60 years old and above	Continuous

Gender	Self-reported gender of older respondent.	1: Male	Binary
		2: Female	2
		1: Illiterate	
		2: Not graduate from primary school	
Education level	The education level of older respondent.	3: Up to primary school	Categorical
		4: Secondary school	
		5: High school and above	
		1: Married and living with spouse	
Marital status	The marital status of older respondent.	2: Married but temporarily living alone	Categorical
		3: Widowed/divorce/separated	
		1: Very good	
Loolth condition	Older respondent's self-assessed health	2: Good	Catagorical
Health condition	condition.	3: Fair	Categorical
		4: Poor and very poor	
	Province of older respondent's residence.	1: Developed provinces ³⁹	
Province of residence	Classified into three clusters based on provincial	2: Semi-developed provinces ⁴⁰	Categorical
	GDP and provincial GDP per capita ³⁸ .	3: Least developed provinces ⁴¹	

³⁸ Data from National Bureau of Statistics of China (http://data.stats.gov.cn/english/).

³⁹ Developed provinces include Beijing, Tianjin, Shanghai, Jiangsu, Zhejiang, Guangdong, Fujian, Shandong.

⁴⁰ Semi-developed provinces include Chongqing, Liaoning, Hubei, Inner Mongolia, Jilin, Shaanxi, Hebei, Anhui, Hunan, Heilongjiang, Shanxi.

⁴¹ Least developed provinces include Yunnan, Sichuan, Guangxi, Xinjiang, Jiangxi, Henan, Gansu, Guizhou, Qinghai.

Adult children related variables						
Number of children	Total number of children of older respondent.	0 and above	Continuous			
Co-residence	Co-reside with at least one adult children	0: Not live together with any adult children 1: Live together with at least one adult children	Binary			
Married children (ratio)	The ratio of married children to the total number of children.	Range from 0 to 1 0: None of their children was married 1: All their children were married				
Proximity 1	The ratio of children who live within the same community with older respondent to the total number of children.	Range from 0 to 1 0: None of their children lives within the same community with older respondent 1: All their children live within the same community with older respondent	Continuous ⁴²			
Proximity 2	The ratio of children who live within the same city (but not the same community) with older respondent to the total number of children.	Range from 0 to 1 0: None of their children lives within the same city with older respondent 1: All their children live within the same city with older respondent	Continuous			

⁴² In this study, the variable of proximity is measured by three sets of continuous sub-variables. Proximity for each child is a categorical variable, but here by using the ratio of given category to total number of children, the proximity of all children was taken into consideration. It is the same for the other two variables: children's incomes and frequency of contact.

Proximity 3	The ratio of children who live within the same province (but not the same city) with older respondent to the total number of children.	Range from 0 to 1 0: None of their children lives within the same province with older respondent 1: All their children live within the same province with older respondent	Continuous
Proximity 4	The ratio of children who live in different provinces (including abroad) from their older parent to the total number of children.	Range from 0 to 1 0: None of their children lives in different provinces from the older respondent 1: All their children live in different provinces from the older respondent	Continuous
Children's incomes 1	The ratio of children whose annual incomes are lower than ¥ 10,000 to the total number of children.	Range from 0 to 1 0: None of their children have annual incomes lower than ¥ 10,000 1: All their children have annual incomes lower than ¥ 10,000	Continuous
Children's incomes 2	The ratio of children whose annual incomes are between ¥ 10,000 and ¥ 20,000 to the total number of children.	Range from 0 to 1 0: None of their children have annual incomes between ¥ 10,000 and ¥ 20,000 1: All their children have annual incomes between ¥ 10,000 and ¥ 20,000	Continuous

Children's incomes 3	The ratio of children whose annual incomes are between ¥ 20,000 and ¥ 50,000 to the total number of children.	Range from 0 to 1 0: None of their children have annual incomes between ¥ 20,000 and ¥ 50,000 1: All their children have annual incomes between ¥ 20,000 and ¥ 50,000	Continuous
Children's incomes 4	The ratio of children whose annual incomes are more than ¥ 50,000 to the total number of children.	Range from 0 to 1 0: None of their children have annual incomes more than ¥ 50,000 1: All their children have annual incomes more than ¥ 50,000	Continuous
Frequency of contact 1	The ratio of children who contact the older respondent very frequently (almost every day to once a week) to the total number of children.	Range from 0 to 1 0: None of their children contact them very frequently 1: All their children contact them very frequently	Continuous
Frequency of contact 2	The ratio of children who contact the older respondent frequently (once every two weeks to every three months) to the total number of children.	Range from 0 to 1 0: None of their children contact them frequently 1: All their children contact them frequently	Continuous
Frequency of contact 3	The ratio of children who contact the older respondent infrequently (once or twice every year) to the total number of children.	Range from 0 to 1 0: None of their children contact them infrequently 1: All their children contact them infrequently	Continuous

Frequency of contact 4	The ratio of children who contact the older respondent very infrequently (almost never contacted) to the total number of children.	Range from 0 to 1 0: None of their children contact them very infrequently 1: All their children contact them very infrequently	Continuous
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Pension status on probability of providing childcare								
		Random-ef	fect Model		Pooled Models			
	Model A1 Model B1		Model C1	Model D1	Model A2	Model B2	Model C2	Model D2
	Doncione only	Pensions and	Pensions and	Pensions,	Doncione only	Pensions and	Pensions and	Pensions,
	Perisions only	hukou	year	hukou, and year	Pensions only	hukou	year	hukou, and year
Pension scheme	s (ref. Not in any p	ublic pension scher						
GIP	0.256	0.066	0.243	0.093	0.059	-0.045	0.048	-0.036
	(0.229)	(0.265)	(0.241)	(0.277)	(0.055)	(0.064)	(0.056)	(0.064)
EEBP	0.319*	0.118	0.312	0.152	0.120***	0.011	0.105**	0.017
	(0.187)	(0.233)	(0.197)	(0.243)	(0.045)	(0.056)	(0.045)	(0.056)
NRSP/URSP	0.175	0.196*	0.057	0.080	0.061**	0.075**	0.004	0.018
	(0.115)	(0.118)	(0.129)	(0.132)	(0.029)	(0.029)	(0.031)	(0.031)
Urban hukou		0.325*		0.263		0.145***		0.119***
		(0.197)		(0.208)		(0.045)		(0.045)
2013			0.203	0.191			0.104***	0.098***
			(0.131)	(0.132)			(0.034)	(0.034)
2015			0.352**	0.334**			0.219***	0.210***
			(0.139)	(0.141)			(0.035)	(0.035)
Insig2u	4.554***	4.577***	4.665***	4.670***				
	(0.253)	(0.235)	(0.176)	(0.172)				
Constant	-1.080***	-1.134***	-1.255***	-1.290***	-0.342***	-0.362***	-0.429***	-0.442***
	(0.100)	(0.105)	(0.121)	(0.125)	(0.023)	(0.024)	(0.029)	(0.029)
Observations	9,946	9,946	9,946	9,946	9,946		9,946	9,946
Number of id	5,835	5,835	5,835	5,835				
Pseudo R2	0.0002	0.0003	0.0013	0.0013	0.0006	0.0014	0.0037	0.0043

Appendix 2 Stepwise regressions on grandparental childcare support

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Appendix 3 Topic Guide

Introduction	□ Go through information sheet with the participant.
	 Reassure participant that they will remain anonymous, and
	information will be kept confidential.
	Explain to participant that they can stop interview at any time or
	not answer a specific question.
	 Record verbal consent (if appropriate).
	Ask for permission to record the interview.
Part 1: Background	Family structure:
information (5 mins)	 How many adult children and grandchildren?
	 Living arrangement and household make-up
	Public pension status:
	- Whether or not receive public pensions, if yes, which pension
	scheme and since when?
	Other sources of income:
	- Apart from public pensions and intergenerational support?
Part 2: Arrangement of	Participant as the recipient:
intergenerational support	- What support do you receive from your adult children? (Prompt
(10 mins)	different types such as financial, care, practical support)
	- What does it involve/what is the arrangement of the support?
	(Prompts: by whom? in what way? how often?)
	Participant as the provider:
	- What support do you provide to your adult children? (Prompt:
	different types such as financial, care, practical support)
	- What does it involve/what is the arrangement of the support?
	(Prompts: to whom? in what way? how often?)
Part 3: Negotiation of	(If the following questions sound too vague for participant, then guide
intergenerational support	them to use an example to illustrate: e.g. you mentioned that you receive
(30 mins)	¥ 500 every month from your eldest son, could you please tell me)
	Decision-making process:
	 Who decides the arrangement?
Prompt throughout: Is it	- How were the decisions made? (Prompt: What factors influence
the same process for	the decision, e.g. individual, family, social, cultural factors? Any
upward and downward	alternatives and why did not choose them? If it involved any

support?	bargaining, then how did you achieve an agreement?)	
	 Anyone else involved in the process? If so, what roles do they 	
	play?	
	Change in the arrangement (e.g. in the past 1-5 years?)	
	 What has changed? (Prompt: type of support, frequency, 	
	amount, direction, recipient/provider, ways in which support is	
	delivered)	
	 Why/what happened? (Prompt: events happened at individual 	
	level, family level, social level)	
	 Who proposed the change? 	
	 How did the other party react? 	
	If there is no change, then ask what makes it stable? (Prompt: happy with	
	the arrangement? constraint on resources?)	
	Relationship between upward and downward support	
	 Is it the same process for upward and downward support 	
	arrangement?	
	 How does receiving/not receiving upward support influence the 	
	provision/non-provision of downward support? Or vice versa?	
Part 4: Public pensions	For older recipients of public pensions:	
and intergenerational	 Does having public pensions make any difference in support 	
support (10 mins)	arrangement? (Participant may mention the influence of public	
	pension in Part 3, if so, skip the question)	
	- In general, how do you spend your public pensions? (Follow-up:	
	Is it different from financial transfers from adult children?)	
	For older non-recipients:	
	 Why did not participate in public pension schemes? 	
	 Should you have public pensions, what do you think would 	
	happen to the abovesaid arrangement?	
Part 5: Ending questions	 Note age, gender, disability 	
and further background	 Do you have any questions/ is there anything else you would like 	
information (5 mins)	to add/have I missed anything?	
	- Thank participant for their time.	

Appendix 4 Recruitment advertisement

Interviewees Recruitment for Old-age Research

Hello,

I am Jiaxin Liu, a PhD student from Department of Social Policy and Social Work, University of York. For my research degree I am conducting an interview study on old-age security and family support in China. The title of the study is:

How intergenerational support is arranged to achieve old-age security? The negotiation between Chinese older people and their families.

I am looking to interview older people about:

- The arrangement of support between you and your adult child(ren), including financial support such as giving or receiving money and buying goods, care support, practical support such as housework.
- Your experiences of how the decisions being made about the above support arrangement between you and your adult child(ren).
- How public pensions or the absence of public pensions influence the arrangement of support and the decisions-making process between you and your adult child(ren)?

I am seeking older Chinese people who are aged 60 or above, whose physical and mental health condition allows for communication over the phone, receiving or used to be receiving any kind of support (e.g. financial, care, practical, emotional) from adult child(ren) and/or grandchild(ren), and are willing to talk about their experiences of intergenerational support.

If you are able to find 30-60 minutes spare for me to receive an online/telephone interview, please contact me directly on WeChat at (*number removed*) or on cell phone at (*number removed*). The interview will be strictly confidential and all data about you will be anonymised in the following research activities. All materials will only be use for academic

purpose. After the interview, you will receive ¥ 50 (or equivalent phone credits) as an appreciation for your time.

Please do contact me with any queries about this research project. I have attached the project information for your reference.

Thank you for your time.

Kind regards,

Jiaxin Liu

[Information sheet of the project as an attachment]

[QR codes link to WeChat account of the researcher, electronic copy of Information sheet, and short introduction video of the study posted online]

(The recruitment advertisement was translated into Chinese with conceptually equivalent and accessible language for older people.)

养老研究访谈有偿招募

您好!

我叫刘佳昕,是一名社会政策专业的博士研究生,就读于英国约克大学社会政策与 社会工作学院。我正在开展一项关于我国老年人养老与家庭支持的访谈研究,研究题目 为:《养老与代际支持:以中国老人与家庭的协商为例》。

我希望能够向老年人了解以下问题:

- 您与您的成年子女之间有什么样的支持安排(包括但不限于:金钱或物品等经济 往来、提供照料、帮忙做家务等)?
- 2. 关于以上支持安排, 您是怎样与您的子女进行协商并做出决定的?
- 3. 您的公共养老金(或您没有公共养老金)是如何影响这些支持安排的?

我正在寻找符合以下四项条件的访谈参与者:1)您的年龄已达到 60 岁或超过 60 岁,2)您的身体和精神状况允许通过电话进行言语交流,3)您正在或曾经接受过成年 子女的任何一种形式的支持(例如,经济往来、提供照料、帮做家务等等),4)您愿意 谈论您与您的子女之间的支持安排。

如果您可以抽出 30-60 分钟的时间接受我的网络通话或电话访谈,麻烦您直接与我 联系。您可以扫码(见下页),或搜索微信号(*number removed*)添加我的微信,您 也可以拨打(*number removed*)与我取得联系。访谈将会严格保密,在接下来的研究中,关于您的所有信息将会被匿名化处理。所有材料均仅用于学术目的。在访谈结束后,您将收到人民币 50 元(或 50 元话费)作为酬谢。

如您对此项研究有任何疑问,请随时与我联系。关于研究的更多具体信息,您可 扫码(见下方)查看视频或文字版本的《参与须知》。

感谢您在百忙之中抽空阅读!

祝好! 刘佳昕

[QR codes link to WeChat account of the researcher, electronic copy of Information sheet, and short introduction video of the study] (*QR codes removed*)

Appendix 5 Information sheet

Participant Information Sheet

Research title: How intergenerational support is arranged to achieve old-age security? The negotiation between Chinese older people and their families.

Who is undertaking the study?

I am Jiaxin Liu, a PhD student from Department of Social Policy and Social Work, University of York.

What is the purpose of the study?

The Chinese family is faced with an increasing challenge in providing support for older people: including the decreasing size of younger generations, the migration of family members, and the changing understanding of Chinese culture. It is therefore important to understand how Chinese older people achieve old-age security through family under the new context. This research project aims to give voice to Chinses older people and to understand their experience in arranging and negotiating for support with adult children to achieve old-age security. The study is also in support of my PhD degree in Social Policy and Social Work.

Why have I been invited to take part?

You have been invited to take part as you meet the inclusion criteria for the study: you are aged 60 or above, a Chinese, in physical and mental condition that allows for verbal communication, and receiving or used to be receiving any kind of support from adult child(ren) and/or grandchild(ren).

What does taking part involve?

If you decide to participate, you will be asked to take part in an audio-recorded interview, which is anticipated to last 30-60 minutes. This will be an online/telephone interview. You will need to find a private and quiet place for the interview. Stable broadband/telephone network is desired for technical reasons.

During the interview, you will have the chance to share your experience about the arrangement of support between you and your adult child(ren), including financial support

such as giving or receiving money and buying goods, care support, practical support such as housework; your experiences of how the decisions being made about the above support arrangement between you and your adult child(ren); and how public pensions or the absence of public pensions influence the arrangement of support and the decisions-making process between you and your adult child(ren)?

All recorded interviews will be transcribed by the researcher (Jiaxin Liu) and during that phase all direct and indirect identification will be removed or anonymised. Anonymous extracts of the transcripts will be used in the research outputs.

Do I have to take part?

The participation is based on the principle of free and voluntary. It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw from the study up to 14 days without providing a reason.

What are the benefits and risks of participating?

Benefits

Participants will receive ¥ 50 or equivalent phone credits after the interviews, as an appreciation of the time, energy, and views that you have put into the study. If you choose to receive ¥ 50, the payment will be made in your preferred way: online transfers via WeChat or Alipay. Besides, your participation may help the researcher and the academic community to have a better understanding of the situation of Chinese older people.

Risks

The experience related to the negotiation and arrangement of family support from or to adult children may contain unpleasant memories for some participants. Therefore, you may experience emotional upset in recounting your experience. To mitigate it, throughout the interview process, I will keep in mind your well-being and be sensitive to signs of distress. If at any point you show upset or distress, you will be asked whether you wish to continue. You will have the right to end the interview without providing an explanation.

Will I be identified in any research outputs?

You will not be identified in any research output (i.e. PhD thesis and possible relevant research papers). The information will be treated with strict anonymity and confidentiality. Instead of using your real name, a fake name (pseudonym) will be created by the researcher and will be used in research outputs. Any direct or indirect identification that describes you with sufficient detail to render the participants identifiable will be removed.

How will you keep my data secure? For how long will you keep my data? Will you share my information with anyone else?

As this research is being undertaken at a university in the United Kingdom, the General Data Protection Regulations (GDPR) will apply. These regulations set rules for how all the information that is collected from you will be stored and managed, and what can be done with it.

The interviews will be audio recorded on an encrypted recording device. The recording files will be transferred at the earliest opportunity to and stored on the University of York's secured file server. The audio recordings will be securely deleted at the end of the project. The anonymised transcripts will be archived securely on the University of York's Research Database, which may be shared for future research or teaching purpose with restricted access. My supervisor will have access to the anonymised information for the quality of this study. The information will not be shared with the third party such as your family members. The archived data will be retained for 10 years from the last requested access.

Under the GDPR, you have a general right of access to your data, a right to rectification, erasure, restriction, objection or portability. You also have a right to withdrawal. For this particular study, you have the right to withdraw your data up to two weeks after your interview has taken place.

Who has given approval to conduct the research?

The Social Policy and Social Work Departmental Ethics Committee will review the study and an ethical approval will be granted by them before the research being carried out.

How do I find out more information?

Jiaxin Liu (Researcher), Department of Social Policy and Social Work, University of York, jl2076@york.ac.uk

Dr Antonios Roumpakis (Research Supervisor), Department of Social Policy and Social Work, University of York, antonios.roumpakis@york.ac.uk

How do I make a complaint?

In the first instance complaints should be directed to my research supervisor (please see above for contact information). If you are still not satisfied, you may approach the Departmental Ethics Committee using the email address: spsw-ethics@york.ac.uk. Thank you very much for taking part in this study!

研究参与须知

研究题目:《养老与代际支持:以中国老人与家庭的协商为例》

谁负责这项研究?

我是此次访谈研究的负责人。我叫刘佳昕,是一名在读博士研究生,来自英国约克大学 社会政策与社会工作学院。

这项研究的目的是什么?

在我国,依靠家庭来实现养老变得更加困难。这一传统的养老安排面临着严峻的挑战, 例如,年轻一代人口数量减少,成年子女外出务工,以及人们对传统文化的理解也在发 生改变。因此,在这样的新形势之下,了解我国老年人如何通过家庭来实现养老就变得 至关重要。此项研究旨在让老年人发声,通过老年人的视角,去理解他们与成年子女安 排和协商家庭支持以实现养老保障的经历。这项研究也是我博士学习的重要部分,它将 会帮助我获得社会政策与社会工作博士学位。

为什么我会被邀请参与这项研究?

您被邀请参与这项研究,是因为您符合以下要求:您的年龄已达到或超过 60 岁;您是 中国人;您的身体和精神状况允许您进行言语交流;您正在或曾经接受过成年(孙)子 女的任何一种形式的支持(包括但不限于,给钱,给东西,帮忙干活,照料,等等)。

如果我参与这项研究,会发生什么?

如果您决定参与这项研究,那么您将需要参加一场时长约为 30-60 分钟的访谈。访谈将 以电话或网络通话的形式进行。访谈过程将被录音。您需要在一个安静的、私密的地方 接受电话访谈,最好有稳定的通信或网络连接,以便保证通话质量。

在访谈过程中,您将会被问及您与您的子女之间的支持安排,例如给子女钱,从子女那 里收到钱,买东西,提供照料,帮做家务等等;您还会被问及您与子女之间的这些支持 安排是如何协商和决定的;您也会被问及公共养老金(或缺失公共养老金)对您与子女 之间的支持安排产生的影响。

访谈录音将由我本人进行文字转录,在转录过程中,任何直接或间接的身份信息都将会 被移除或者匿名化处理。被匿名化后的访谈文字节选可能会出现在之后的研究报告或研 究论文之中。

我是否必须参加这些研究?

研究参与是基于自由自愿的原则之上的。您可以自由决定是否参与此项研究。如果您决 定参与研究,您在访谈结束十四天之内,仍然有权选择退出研究,并且不需要给出任何 退出的理由。

参与研究会有哪些好处和风险?

好处

研究参与者在访谈结束后将收到人民币 50元(或 50元话费充值)作为酬谢,这是对您参与研究所付出的时间、精力以及分享观点的尊重与感谢。如果您选择接收 50元人民币的酬谢,我将会通过微信或支付宝向您进行转账;如果您选择话费充值,我将需要获得您的电话号码以便进行充值。除此之外,您的参与可能会帮助研究者以及学术界进一步理解我国老人的养老现状。

风险

对一些老人来说,与子女协商支持安排的经历可能会包含不愉快的回忆。因此,您可能 会在回忆的过程中经历情绪上的波动。为了减缓对您的影响,我将在访谈过程中始终关 注您的感受,并且密切关注任何可能产生的情感上的痛苦迹象。如果您在任何时候感到 不悦或者痛苦,我会向您询问是否继续进行访谈。您有权结束访谈,并且不需要给出任 何解释。

我会在研究产出中被认出吗?

您将不会在任何研究产出(也即,我的博士论文及相关研究报告或论文)中被认出来。 您的信息将会受到严格的匿名保护。在任何研究产出中,我都不会使用您的真名,而是 采用一个化名(假名)。任何可能直接或间接导致您被认出的信息都将会被我移除。

你如何保证我的信息是安全的?

我的信息你将会保留多久?

你会将我的信息分享给其他人吗?

鉴于此项研究是在英国高校开展的,因此我将遵循欧盟的《通用数据保护条例》(也即, General Data Protection Regulations, GDPR)。这一条例规定了我该如何储存及管理这些 信息、以及我能对这些信息做出何种处理。

我将会通过加密的录音设备对访谈进行音频录制。录音文件将会被转移并储存在约克大 学的安全服务器上。我将在研究结束时安全地删除访谈的音频录音。经过匿名化处理的 访谈录音文字转录将会在约克大学研究数据库中存档,因研究或教学目的,可对此信息 进行有限制的访问。我的博士生导师可能会对匿名化处理过后的信息进行查看,以便保 证此项研究的质量。您在访谈中披露的信息将不会被分享给第三方,例如,我将不会把 您说的内容透露给您的家人。已归档的信息将会被保留十年。

根据《通用数据保护条例》,您有权访问您的信息,您有权更正、消除、限制、反对、

或转移您的数据。您有权退出。具体来说,在此项研究中,您有权在访谈结束后 14 天内选择退出研究。

谁批准你开展此项研究?

在研究开始之前,英国约克大学社会政策与社会工作学院伦理审查委员会对此项研究进行了伦理审查,并批准我开展此项研究。伦理审查编号为 SPSW/P/2020/5。

我如何获得更多信息?

如需获得更多信息,您可以联系:

刘佳昕(研究者本人):英国约克大学社会政策与社会工作学院,电话(number removed),或邮箱 jl2076@york.ac.uk 。

Antonios Roumpakis 博士 (研究者的博士生导师): 英国约克大学社会政策与社会工作 学院, antonios.roumpakis@york.ac.uk 。

如何投诉?

您可联系我的博士生导师进行投诉(联系方式见上)。如您仍然不满,可向学院伦理审查委员会进行投诉,联系方式为: spsw-ethics@york.ac.uk 。

十分感谢您的参与!

Appendix 6 Profiles of interviewees

INTERVIEWEE CODE	GENDER	AGE	Ηυκου	PUBLIC PENSION	CO-RESIDENCE WITH ADULT CHILDREN	MARITAL STATUS	NO. OF ADULT CHILDREN
INTERVIEWEE 1	Male	81	Urban	Government and Institution Pension (GIP)	No, living alone	Widowed	2 sons & 1 daughter
INTERVIEWEE 2	Female	69	Rural	New Rural Social Pension (NRSP)	Yes, living with daughter	Widowed	2 sons & 2 daughters
INTERVIEWEE 3	Female	70	Rural	Not participated in any public pension schemes	Yes, living with son	Widowed	1 son & 1 daughter
INTERVIEWEE 4	Female	70	Rural	New Rural Social Pension (NRSP)	Yes, living with son	Married	3 sons
INTERVIEWEE 5	Male	72	Urban	Enterprise Employee Basic Pension (EEBP)	No, living with partner	Married	1 son & 1 daughter
INTERVIEWEE 6	Female	63	Rural	New Rural Social Pension (NRSP)	No, living alone	Widowed	2 sons & 1 daughter
INTERVIEWEE 7	Male	65	Rural	New Rural Social Pension (NRSP)	No, living with grandchildren	Married	2 sons & 1 daughter
INTERVIEWEE 8	Female	66	Rural	New Rural Social Pension (NRSP)	Yes, living with son	Married	1 son & 3 daughters
INTERVIEWEE 9	Female	79	Rural	New Rural Social Pension (NRSP)	No, living alone	Widowed	2 sons & 2 daughters

INTERVIEWEE	Fomalo	67	Urban	Urban Resident Social	No, living with	Married	1 con & 1 daughter
10	Ternale	07	Orban	Pension (URSP)	partner	Marrieu	I SON & I daughter
INTERVIEWEE	Fomalo	80	Urban	Urban Resident Social	No, living with	Married	2 conc & 1 daughtor
11	Temale	80	Orban	Pension (URSP)	partner	Marrieu	2 Solis & I daughter
INTERVIEWEE	Fomalo	74	Pural	New Rural Social Pension	No, living with	Marriod	1 con & 2 daughtors
12	Temale	74	Nulai	(NRSP)	grandchildren	Marrieu	I SOIT & Z UAUGITETS
INTERVIEWEE	Fomalo	76	Pural	New Rural Social Pension	Voc living with con	Widowod	2 sons & 2
13	Temale	70	Nurai	(NRSP)	ies, inving with som	WIGOWEG	daughters
INTERVIEWEE	Fomalo	74	Pural	New Rural Social Pension	Voc living with con	Widowod	2 conc & 1 daughtor
14	remale	/4	nulai	(NRSP)	ies, inving with som	widowed	2 Sons & I udugitter

Appendix 7 Ethical review application form

SOCIAL POLICY AND SOCIAL WORK DEPARTMENTAL ETHICS COMMITTEE

APPLICATION FOR ETHICAL REVIEW OF RESEARCH

(Introduction and checklist not shown here)

Part 1: Overview of the research

1. Please provide details about the Principal Investigator (lead staff researcher or student).

Name	Jiaxin Liu			
Course (students only)	PhD in Social Policy and Social Work			
Supervisor (students only)	Dr Antonios Roumpakis			
Job title (staff only)				
Email address	jl2076@york.ac.uk			
Telephone	(removed)			
Million de monte de Caldere de la classica de la 20				

2. When do you expect the fieldwork to start and end?

Start Date: 01.01.21 End Date: 01.04.21

 For staff: List any SPSW DEC member who might have a conflict of interest so should not act as reviewers for the project, such as those consulted in the development of the project, or close colleagues. A list of members can be found in the Ethics for Research section of the <u>Yorkshare VLE</u>.

N/A

4. What is the full title of the research project?

How intergenerational support is arranged to achieve old-age security? The negotiation between Chinese older people and their families.

^{5.} Is the research funded? If so, please name the funding body(ies)

No – the PhD study is funded by York Graduate Research School Overseas Research Scholarship, but the present research is not specifically funded by any other funding body.

6. If the research is funded, does the funding source create any ethical concerns and/or actual or perceived conflicts of interest?

See section 4 "Funding" of the University's Code of practice and principles for good ethical governance

N/A

7. What are the research aims?

The main aim of the present research is to understand how Chinese older people, with different public pension status, negotiate with their adult child(ren) about intergenerational support to achieve old-age security. Within this there are several objectives, including:

- To map the intergenerational support arrangement within Chinese families.
- To understand the relationship between child-to-parent upward support and a wider set of intergenerational support.
- To investigate the decision-making process in relation to securing old age via intergenerational support arrangement.
- To explore the role of family as a socio-economic actor to protect older people.
- To provide a dynamic account of the situations where formal public pensions and informal private support interact.

Furthermore, as an essential part of a mixed-method PhD research project which aims to understand the ways in which Chinese older people achieve old-age security, the present study will provide contextual understanding of the decision-making practices from the perspectives of older people themselves, which could hardly be captured by quantitative element of the project.

8. Please summarise the research methods, listing **<u>each</u>** research activity (e.g. focus groups, telephone interviews, online questionnaire etc)

The study will employ qualitative research methods to understand the negotiation between Chinese older people and their families about intergenerational support. Qualitative approach is more appropriate than quantitative one as the context and process of decision-makings and the real experiences of older people are at the core of inquiry.

The data collection method is semi-structured, one-to-one interviews, each is anticipated to last about 30 to 60 minutes. Reasons for the method is given as follow:

- The choice of one-to-one interviews rather than focus groups is based on the following considerations. 1) the study will gain more information about the ways in which intergenerational support is arranged and negotiated from in-depth understanding of individual experiences rather than from group discussions where thinking process or the formation of opinions tend to be the focus; 2) family support is a relatively personal topic and therefore requires more confidentiality and trust, whereas focus group may generate less rich information because of the potential concerns about exposure to other peers; 3) prospective participants can be geographically dispersed and bringing them together will be less feasible and more risky especially given the current Covid-19 situation.
- Semi-structure interviews allow for flexibility and leeway for exploring and following up in more depth compared to structured interviews, and on the other hand gives researcher a great saying in focusing the conversation on topics related and important to the research compared to unstructured interviews.
- Ideally face-to-face interviewing approach would be used to better collect non-verbal information and build rapport relationship. However, given the worldwide outbreak of Covid-19, for the safety of both researcher and participants, interviews will be conducted remotely. Prospective participant will be invited to take part in an online interview via Zoom or telephone interview.

A topic guide (see Box 19, Part 4) covering the key information will be used during the interviewing, with prompts and probes if necessary.

Interviews will be recorded (voice only) on an encrypted recording device and will be transferred at the earliest opportunity to the University of York filestore (see Box 22, Part 5). Recording will be deleted from the encrypted recording device once the transfer completes.

The interviews will be transcribed and anonymised by the researcher.

Nvivo 12, a Computer-assisted qualitative data analysis software, will be used to facilitate thematic network analysis.

9. Please briefly summarise the key ethical issues or risks that you have identified in this research.

Physical risks

Older people may be more easily to become fatigue during or after a long interview. To avoid it, the interviews are designed to last between 30 and 60 minutes. The anticipated length of the interviews will

also be clearly stated in the information sheet in advance. The researcher will make it clear to participants that the interview would be suspended or stopped immediately should participants feel uncomfortable. In the case that an interview is stopped due to the participant requiring to rest, an opportunity will be offered to the participant to complete the interview at a later stage.

Potential pressures to participate due to personal connections

Personal connections will be used to gain access to local activity centres for older residents, as the researcher cannot travel to these locations in person. Local activity centres are often open to the public. Information about the study (recruitment advertisement and information sheet) will be posted in activity centres by personal connections. Only the name of the researcher and her affiliation (i.e. University of York) will be stated in recruitment advertisement and information sheet. Personal connections who post the information in activity centres do not need to reveal their identities and neither will they be involved in recruiting participants directly.

Anonymity and Confidentiality

Some participants may be worried that what s/he said to the researcher will be shared with third party, especially with their family members who provide or receive support and/care. To minimise these concerns, the researcher will make it very clear during the recruitment phases as well as before and upon the interview that the information will be treated with strict confidentiality and anonymity (see Box 22, Part 5).

Socially desirable responses

Another possible risk related to using personal network as a recruitment strategy is that some participants may tend to give socially desirable responses. To limit social desirability bias, the researcher will thoroughly explain and assure anonymity and confidentiality of the study and make it clear that there is no right or wrong answer. The researcher will also ask participants to receive the interviews in private space, to avoid the potential of breach of confidentiality by the presence of others. During the interview, the researcher will also pay attention to the wording and delivering of questions to reduce the possible bias, such as posing indirect questions and asking follow-up or clarification questions.

Informed consent

Earlier research practices in China imply that some participants, especially older Chinese, may sign consent form without properly reading it and/or information sheet. In that case, the participants are not, in effect, informed and therefore the consent should not be considered as valid. To address this issue, in addition to sending participants the text version of information sheet and consent form, the researcher will send a pre-recorded video/audio of the content of information sheet in advance, as an measure to make sure participants being fully informed (see Box 14, Part 3). Besides, the interview will only be started after the researcher reading the consent form to participants and obtaining the audio-recorded consent from participants (see Box 15, Part 3).

Payment incentives

Participants will receive $\underbrace{450}$ (ca. £ 6) or equivalent phone credits at the end of the interview. It is not being funded by any funding body. Payment will be used in this research mainly to show respect for and gratitude to the time, energy, and views that participants have put into the research project. It is a gesture of goodwill rather than a financial incentive as the amount is really. The payment is set at this level to avoid being coercive but also show respect and gratitude for their time and views. Culturally it is also expected that participants, and in particular older people, receive a small gift for their time as a token of appreciation. If the payment is set too high, prospective participants may feel that they have the obligation to take part. They may also feel obligate to give expected responses to interview questions. Furthermore, participants may take part in the research to receive the payment rather than to share the views and experiences of the topics that are important to the study. $\underbrace{450}$ is a moderate amount given the target population being Chinese older people and the expected length of the interview being within an hour.

Part 2: Research participants and activities

10. Please describe the research participants taking part in each activity listed in Q8. *If your study has explicit inclusion / exclusion criteria, please list them.*

The research has specific inclusion criteria. In order to take part in the research, participants must be:

- Aged over 60.
- Chinese or self-identified as Chinese.
- In physical and mental condition that allows for verbal communication (the interview is anticipated to last 30-60 minutes).
- Receiving or used to be receiving any kind of support (e.g. financial, care, practical, emotional) from adult child(ren) and/or grandchild(ren).

11. Approximately how many participants will take part in each activity listed in Q8.

The researcher is aiming to recruit 15-20 participants.

The researcher will recruit 8-10 participants from Baoji, Shaanxi province, a northern city where the New Rural Social Pension was first piloted in 2008. The other 7-10 participants will be recruited from Guangzhou, Guangdong province, a southern city with diverse population and high economic growth.

12. If the research may involve 'vulnerable' populations or children, please describe the ethical challenges that arise and how these will be managed.

By 'vulnerable' we mean anyone disempowered and potentially susceptible to coercion or persuasion. This may include people vulnerable through social context (e.g. homelessness, poverty); through experiences (e.g. of trauma or abuse); through learning difficulties, dementia or mental health needs; or through other factors. Please also provide details of the relevant DBS checks and/or ISA registration that have been undertaken.
The research will involve older Chinese people, a population carries with ambivalence in terms of vulnerability.

On one hand, old-age is considered as a source of vulnerability, as the loss of wage incomes, the need of care, and the deterioration of health may lead to a higher risk of social exclusion and a weakened capability to cope with crises, especially in societies where formal social protection is less developed. From this aspect, participants of this study can be seen as a vulnerable population. One ethical challenge arise from that is the voices of older people themselves are often less heard by the public and policy-makers, and in particular the voices of those who had long been marginalised by institutional social protection (e.g. older people from rural areas). This study, by its nature, is designed to give voice to older people and to understand how informal family support network is organised to protect them. The researcher will also make sure to include participants from both urban areas and rural areas and participants with different public pension status (see Box 13, Part 2).

On the other hand, old-age in the Chinese society is associated with certain privileges. Older people are empowered by the Confucian cultural norm which requires younger population to show obedience to and respect for older people within and beyond family sphere. Taking the cultural dimension into account, the power relationship between the researcher (especially given the fact that the researcher is a young women) and participants can be different from what is expected from similar interviews in Western societies.

13. Please describe how will research participants be identified, and who will be involved in the process?

The study will use purposive sampling strategies to identify prospective participants. Two theoretical dimensions, each with 2-3 categories, will be considered during participants recruitment:

- By *hukou type*: 1) urban hukou, and 2) rural hukou
- By *public pension participation status*: 1) recipients of the two long-established public pensions, i.e.
 Government and Institute Pensions (GIP) or Enterprise Employees Basic Pensions (EEBP), 2)
 recipients of the new public pensions for residents, i.e. Urban Resident Social Pensions (URSP) or
 New Rural Social Pensions (NRSP), and 3) not participate in any public pension scheme.

During the recruitment, the researcher will make sure that each category has at least 4 participants.

Participants will be recruited through three routes:

- 1. Through personal networks.
- 2. Through recruitment advertisements.

- 3. Through the snowball sampling strategy.
- 1. <u>Personal Networks</u>: The researcher will contact family members and friends who have access to local communities and public activity centres in Baoji or Guangzhou, explain the aims and objectives of the research project as well as the requirements for prospective participants. If they agree to facilitate participants recruitment, they will be asked to post the information sheet and recruitment advertisement in communities and/or activity centres. The pre-recorded video/audio which explains the content of the information sheet will also be shared if it is necessary. Anyone who has interest in taking part in this study will contact the researcher directly (contact information of the researcher will be stated in advertisement and information sheet).
- 2. <u>Recruitment Advertisements</u>: the researcher will post and distribute an advertisement for participants recruitment both online and offline. The researcher will post the advertisement in the local online chatroom and information hub (such as WeChat Media Platform, *weixin gongzhonghao*) which can be easily accessed by older users. The researcher will also post the advertisement offline in local community centres, with the help of personal networks. The informational sheet of the research project will also be post as an attachment.
- 3. <u>Snowball Sampling</u>: should there be not enough participants recruited through the first and second routes, the researcher would use snowball sampling strategy to increase the sample size. The researcher will ask participants to put the researcher in touch with those who meet the criteria for participants and would be interested in taking part.

The recruitment advertisement will be translated into Chinese. The translation will be conceptually equivalent and accessible for older people. The content of the advertisement will be as follow:

Interviewees Recruitment for Old-age Research

Hello,

I am Jiaxin Liu, a PhD student from Department of Social Policy and Social Work, University of York. For my research degree I am conducting an interview study on old-age security and family support in China. The title of the study is:

How intergenerational support is arranged to achieve old-age security? The negotiation between Chinese older people and their families.

I am looking to interview older people about:

- The arrangement of support between you and your adult child(ren), including financial support such as giving or receiving money and buying goods, care support, practical support such as housework.

- Your experiences of how the decisions being made about the above support arrangement between you and your adult child(ren).
- How public pensions or the absence of public pensions influence the arrangement of support and the decisions-making process between you and your adult child(ren)?

I am seeking older Chinese people who are aged 60 or above, whose physical and mental health condition allows for communication over the phone, receiving or used to be receiving any kind of support (e.g. financial, care, practical, emotional) from adult child(ren) and/or grandchild(ren), and are willing to talk about their experiences of intergenerational support.

If you are able to find 30-60 minutes spare for me to receive an online/telephone interview, please contact me directly on WeChat at (number) or on cell phone at (number). The interview will be strictly confidential and all data about you will be anonymised in the following research activities. All materials will only be use for academic purpose. After the interview, you will receive \pm 50 (or equivalent phone credits) as an appreciation for your time.

Please do contact me with any queries about this research project. I have attached the project information for your reference.

Thank you for your time.

Kind regards,

Jiaxin Liu

[Information sheet of the project as an attachment]

Part 3: Choosing whether to participate

14. Please describe the process by which prospective participants will receive information about the research, including who will provide information, when and how.

If a different process will be used for different participants or different activities, please describe each separately.

Prospective participants who make contact will receive an e-copy of the information sheet as well as a pre-recorded video/audio of the content of the information sheet. For prospective participants who have limited access to internet, the researcher will send the information sheet through text message or read the information sheet to them, depending on the situation. The text and video/audio versions of information sheet will be provided by the researcher.

Those who make contact will be given the opportunity to ask any questions about the research. If they are willing to take part, then a mutually convenient date and time for interview will be arranged. Upon the one-to-on online/telephone interview, key information, such as that a participant can terminate the interview at any time, and that the interview will be strictly confidential and anonymised, will be reiterated verbally as well.

15. Please describe how prospective participants will give their consent to the research. *If a different process will be used for different participants or different research activities, please describe each separately.*

Consent will be audio-recorded at the start of an interview, with the participant explicitly giving consent to each criterion on the consent form.

The reasons for not obtaining physical consent forms are three-fold:

- First, due to the worldwide outbreak of Covid-19, interviews will be conducted remotely.
 Obtaining a signed copy of consent form will be less feasible in this situation, especially when participants are older people who may have limited access to printing/scan device.
- Second, it is possible that prospective participants have limited capability to read and/or sign (either because of visual impairment or illiteracy).
- Last but equally important, earlier interview practices in China imply that participants might sign the consent form without properly reading it. This can be done out of trust in the researcher but will raise ethical issues.
- 16. If you do *not* envisage providing an information sheet and/or obtaining a signed (or audio recorded) record of consent, please justify and explain the measures taken to compliance with data protection legislation.

N/A

17. If research participants are to receive any payments, reimbursement of expenses or other incentives for taking part in the research, please give details.

At the end of an interview, the participant will receive \pm 50 (ca. £ 6) cash or equivalent phone credits as an appreciation for the time s/he has given to the research. Participants who decide to terminate the interview without giving any reasons will also receive the payment.

Participants will receive the payment in their preferred way: online transfers via **WeChat/Alipay** (not involving collecting sensitive information such as bank details, only WeChat/Alipay number is required to make a transfer), or **equivalent phone credits** (not involving collecting sensitive information such as bank details, only phone number is required to top up credits). WeChat/Alipay is a trusted and common

form of money transfer practised widely in China. No third party will need to know the participate took part in the research.

Earlier evidence shows that offering payment helps to increase response rate. It encourages potential participants to take part in the research. The payment will also show that the time, energy, and views of participants are valued by the researcher.

The payment is set at a moderate level to show respect and gratitude but also avoid ethical risks (see Box 9, Part 1). It is decided based on the length and complexity of the interview, the average price level in China, and the average consumption capacity of targeted population.

Part 4: Research activities

18. Please describe what participation in each research activity involves (e.g. what activities, how often / for how long, with whom, in what setting)?

Participants who consent to take part in the research will receive a one-to-one interview, with the researcher as the interviewer. The interview will be conducted online or via telephone, depending on participant's preference.

This will be a single interview, unless unforeseen circumstances such as the loss of network signal or the participant requesting to suspend the interview, which means the interview has to be conducted in more than one part. The interview is anticipated to last 30-60 minutes.

Participants will be required to receive the online interview at places where are private and quiet, for example their own rooms. It will also be made clear that the interview is about personal experiences and family support relationship, therefore presence of other people is not encouraged.

19. Please provide a summary of the headings you will use in any research instruments eg topic guide / questionnaires.

You should ensure that these headings are included within the Participant Information Sheet

The following topics will be covered in the course of the interview:

- The arrangement of support between you and your adult child(ren), including financial support such as giving or receiving money and buying goods, care support, practical support such as housework.
- Your experiences of how the decisions being made about the above support arrangement between you and your adult child(ren).

- How public pensions or the absence of public pensions influence the arrangement of support and the decisions-making process between you and your adult child(ren)?

This is a broad topic guide with more specific questions being formulated under these headings. The interview will be piloted, and the topics and specific interview questions will be refined again based on the outcome of pilot interviews. Interview questions will be phrased in accessible language for older people taking account also of cultural practices, meanings and language.

20. Do you think research participants may be distressed by their involvement in the research? If so, what action will you take to mitigate these?

The experience related to the negotiation and arrangement of intergenerational support may contain unpleasant memories for some participants. Such experiences of intergenerational conflicts in the course of the negotiation and arrangement of family support, however, is an important part to understand the decision-making practices.

To minimise the possible emotional impact on the participants, the researcher will state in advance in the information sheet that the interview may involve recounting unpleasant experiences. During the interviews, the researcher will remain sensitive to signs of distress, and would ask the participant if s/he wish to continue should any symptoms are observed. Should participants wish to pause or terminate the interview, this will be done immediately.

21. Is any element of the fieldwork taking place outside the UK? If so, you should refer to the University of York <u>'Guidance on conducting research outside the UK</u>' and paragraph 2.13 of the <u>Code of practice and principles for good ethical governance</u> and explain how you will take account of political, social and cultural sensitivities.

The interviews will be conducted remotely, with the researcher being in York and participants being in China.

No ethical approval will be required by other external body in China for this study. There will be no international travel and the researcher will be campus-based.

The researcher is born and raised in China and will keep sensitive to political, social, and cultural factors in the research design phase and the conduction phase. For example, the researcher will be sensitive to interview questions that may show or appear to show direct disapproval of the current government / the Chinese Communist Party. The China's social and cultural norms that require young people to show obedience to and respect for older people will also be taken into consideration, without compromising the critical thinking and independence as a social science researcher.

Appropriate phrasing will be used to show respect. For example, instead of using "ni" (second person pronouns), the researcher will always use "nin" (second person pronouns with respect, often used when speaking to the senior) to refer to the participant. Instead of asking "ni duo da le?" (means "how old are

you"), the researcher will ask "nin gao shou?" (same meaning with "how old are you" but shows respect and implies good wishes for longevity).

Part 5: Data processing and protection

Please note: all applications include a completed Data Management Plan. You should refer to the University's guidance on Research Data Management

22. State any promise you will make to participants about how their data will be used, including in publications and dissemination, for example whether names, job titles, or direct quotations will be used, and state what protection of anonymity you are offering. *Please be aware of your Funder's requirements for data to be made available for reuse. If your funder does not have a policy, the <u>University Research Data Management Policy</u> should be followed. This states: <i>'Where possible, relevant elements of research data must be deposited in an appropriate national or international subject-based repository, according to their policies. Data should be kept by the researcher in an appropriate manner when suitable subject repositories are not available.'*

After participants have completed interviews, they will have the right to withdraw from the study at any point up to and including the 14th day after the interview. "Withdraw" here means that their data will be withdrawn from the study and securely destroyed; their involvement with the research project will end at this point.

Data will be kept secure. The interview will be recorded as an audio file on an encrypted recording device. The file will then be transferred at the earliest opportunity onto the University of York's secure filestore. This will be the only copy. The audio recording will be securely deleted at the end of the study.

All other files related to the person's data will also be stored on the secure University of York file server. The audio recording will be transcribed; at this point, identifiable information relating to the person or other people will be fully anonymised. No names will be used; interviewees will be assigned a participant ID and a pseudonym.

Direct quotations from participants may be used in the final research paper. Should these quotations contain any distinctive phrases or language, they will be paraphrased to ensure that anonymity is maintained. This is made clear in the information sheet provided to participants.

If participants agree to this in the consent form, then anonymised data will be archived for future research. Although audio files will be deleted, anonymised transcripts will be retained for 10 years from the last requested access. Data will be archived securely on the University of York's Research Database, and requests for access (to the anonymised transcripts only) will be managed by the University and the researcher.

23. What will you do if information is disclosed to you that legally requires further action or where further action is advisable?

If the participant discloses something to suggest that the participant, or another person, is at risk of harm, I will have to break confidentiality in order to safeguard. I will discuss this with the participant. I will need to speak to my academic supervisor immediately.

This will be made clear in both the information sheet and the consent form.

- 24. GDPR Declarations (please check box to confirm)
- I have considered whether any <u>personal</u> or <u>special category</u> data being collected is the minimum necessary to answer the research question(s)
- I have considered anonymising or 'pseudonymising' data to mitigate data protection risks.
- I have considered whether I need to consult with the Information Governance Office (e.g. where sharing data with third parties outside the university)
- I have considered whether the study requires a Data Protection Impact Assessment (see <u>here</u>)
- 25. Are there any other specific ethical problems likely to arise with the proposed study? If so, what steps have you taken or will you take to address them?

N/A

(Part 6 Signatures not shown here)

Abbreviations

ca.	Circa, Latin for "approximately"
CHARLS	China Health and Retirement Longitudinal Study
CLHLS	Chinese Longitudinal Healthy Longevity Survey
COVID-19	Coronavirus disease caused by the SARS-CoV-2 virus
CPI	Consumer Price Index
DB	Defined Benefit
DC	Defined Contribution
DEC	Departmental Ethics Committee
Dibao	Minimum Living Standard Guarantee
DiD	Difference-in-differences
e.g.	Exempli gratia, Latin for "for example."
EEBP	Enterprise Employee Basic Pension
ELSA	English Longitudinal Study of Aging
et al.	Et alia, Latin for "and others."
FE	Fixed-effect
FF	Fully Funded
GIP	Government and Institution Pension
i.e.	ld est, Latin for 'that is,'
ibid	Ibidem, Latin for "in the same place."
MLS	Minimum Living Standard
NRSP	New Rural Social Pension
OECD	Organisation for Economic Co-operation and Development
PAYG	Pay-as-you-go
PPS	Probability proportional to size
PSM	Propensity score matching
RE	Random-effect
RQ	Research question
SHARE	Survey of Health, Aging and Retirement in Europe
SOE	State-owned Enterprise
SWP	subjective well-being poverty
URSP	Urban Resident Social Pension

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