# STATE PENSION AND FAMILY SUPPORT IN AGEING CHINA

Alternative or Complementary?

by

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#### Abstract

The ageing population in China is becoming an increasingly serious issue, and family support, which is the most traditional mode of elderly care in China, has been severely challenged. Thus, the state pension has played a more important role in the Chinese pension system than before. Based on the CLHLS (Chinese Longitudinal Healthy Longevity Survey) data of China in 2012, the Logistic model, linear regression model and mediation model are used to empirically analyze the impact of state pension on the family support. The research found that the state pension replaced the traditional family support to a certain extent. And there are some differences between the elderly who live in urban and rural areas. For urban elderly, state pension not only weakens the children's spiritual comfort to the elderly but also squeezes out the children's economic support for the elderly. For the rural elderly, state pension only has a positive effect on the elderly receiving daily life care, but no significant effect on spiritual comfort and economic support. The research conclusion of the study has some policy implications. It's important to coordinate the relationship between the state pension and traditional family support in order to make them complement and integrate, and effectively solve the pension dilemma of the ageing China.

Key Words: State pension, Family support, Ageing population, China

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### 1. Introduction

#### 1.1. Background

The ageing population is an increasing median age in the population of a region due to declining fertility rates and/or rising life expectancy. As the most populous developing country in the world, China has rapidly entered the ageing society without the full coverage of the elderly pension. The United Nations (2010) had predicted that from 2011 to 2040, the proportion of China's population aged 60 and over will grow at an average annual rate of 16.55%. In 2040, the proportion of the population aged 60 and above will reach about 28%. In these thirty years, China began to fully enter the ageing society. By 2050, the proportion of elderly people aged 60 and over will exceed 30%, and the society will enter a stage of deep ageing (Chen et al, 2012).

Compared with the developed countries in the west, the ageing problem facing in China is serious. The ageing problem in China not only shows its distinctive characteristics of rapid growth and large scale but also leads to such problems as the miniaturization of family size and the nuclear family structure. The emergence and development of these current situations are challenging the traditional family support. In China, "bringing up children and relying on children to take care of the elderly" is a traditional mode of elderly care, which is usually called the family support (Zhang, 2014), or Xiao (filial piety). Family support is one of the important ways of income redistribution in China. The study by Lei and others (2012) finds that transfer payments for adult children are the main source of income for the rural elderly in China, and a significant proportion of elderly parents receive intergenerational transfers from their children (Lei et al, 2012). Liu (2007) found out that with the Chinese tradition of raising children in a family, due to the one-child policy led to family size miniaturization and core, the number of children in a family will decrease with the rising cost of raising children. Zhou (2009) and Liang (2010) came to the same conclusion that the ageing population in China and other social conditions (such as small family size) have a deep influence on the traditional family support which showed in the following three respects:

relatively high dependency ratio in the elderly, the heavy burden on children's support and the lack of family care resources for the elderly.

Therefore, the state pension is becoming more and more vital. Countries with a relatively complete international pension system usually adopt a three-pillar pension model. Among them, the first pillar is the state pension, in which the state provides the most basic living guarantee for the participants. The second pillar is the employment-based pension. The state provides certain tax incentives to encourage everyone to work. The employer matches a certain proportion of funds. At the same time, these funds are preserved and value-added through investment, which complements the pension. The third pillar is a private pension that individuals voluntarily participate in. In China, the pension system has undergone a process from cities to rural areas and from workers to residents. At present, three main pension systems have been formed in China as follow (Dong & Wang, 2016): 1. Basic pension insurance system which covers the people in urban and rural areas (the first pillar), it includes the insurance for urban workers and the insurance for urban and rural residents. 2. Enterprise employee pension insurance (the second pillar) and 3. Commercial pension insurance (the third pillar). Compared with urban areas, the rural pension problem in China is more severe and urgent. This is because, on the one hand, young people are more likely to migrate from rural to urban areas during the process of rapid urbanization, which leads to a serious problem of ageing population in rural areas (National Bureau of Statistics of China, 2010). On the other hand, the construction of the rural pension system is backward, which makes it more difficult for rural residents to get old with full coverage of pension. In response to the rural pension problem, the State Council Of China decided to pilot a new rural pension system throughout the country in 2009. The new rural pension system is a major measure for the Chinese government to establish a state pension system covering urban and rural areas, and undertakes a series of important policy tasks such as providing the support for all the rural elderly residents.

Compared with the traditional family support, the state pension is different with the characteristics of long-term, stable, maximizing the sharing of pension risks, and providing safe and reliable pension expectations. Xu (2011) pointed out that the strong involvement of public goods will affect the role of family support, leading to the decline of family support status in China. Apart from that, he even found out that there is a crowding out effect between public goods and family support. In contrast, Hu and others (2012) believe that state pension has a significant educational effect on family support. It forced the elderly who receive the state pension to drive their children to recognize the importance of taking care of the elderly and thus increasing their children's provision of pension resources for the elderly.

#### 1.2. Research Goals and Research Questions

It can be seen that the effect of state pension on the family support has not yet been reached in the field of academic research. In particular, China, a country with an ageing population, still needs scientific methods and data research. Apart from that, two aspects of conceptual understanding not addressed by the above research are as follows: On the one hand, the previous studies mainly focused on the analysis of the impact of state pension on the economic support behavior. However, the family support not only includes economic support but also the other two functions: spiritual comfort and daily life care (Mu, 2015). The implementation of state pension may influence the three functions of family pension directly or indirectly. As the three key dimensions of family support, daily life care, spiritual comfort, and economic support will be addressed into the three hypothesizes which are to be tested, and the alternative role or the complementary role that the state pension is playing will be addressed. On the other hand, although the literature has been concerned about the impact of state pension on family support in rural areas in China, the pension for the elderly in rural and urban areas in China are heterogeneous, which have not received sufficient attention in previous studies. To get a clear view of the situation and to achieve the aforementioned goals, the following research question is formulated,

# To what extent does the state pension influence the traditional family support in ageing China?

To answer this research question, three sub-questions are formulated. The first sub-question is formulated to find out how does state pension influence family support. The second sub-question focuses on the influence of state pension on the family support between urban and rural areas. And the last sub-question puts an emphasis on the residential style as an influencing factor, trying to find out how living with children influence a person receiving the family support. Summarized the sub-questions are as follow:

- 1. How does a person having a state pension influence their receipts of a family support?
- 2. To what extent there is a difference in this between urban and rural areas?
- 3. To what extent does residential style influence the relationship between a person receiving the state pension and family support?

#### **1.3.** Academic and Practical Relevance

The research has both theoretical and practical contributions. The research enriches the existing literature of the effect of state pension on the family support as well as the theories of residential style plays mediation effect on the relationship between the state pension and family support (Hu et al., 2012; Liu, 2014). Furthermore, this research tested the urban-rural differences in the relationship between the state pension and family support, which has never been addressed before.

In practice, the research findings aim to find out how the state pension influence the traditional way (family support) of the elderly care in China. Furthermore, the research findings have some guiding significance on the policy-making process. It shows the results that in order to better taking care of the elderly in China, it's necessary to coordinate the relationship between the state pension and family support. Furthermore, it promotes the awareness of the changing role of state pension and the importance of the family support both in rural and urban areas.

#### 1.4. Research Outline

In order to answer the research questions, the following steps will be performed in the next sections. The second chapter provides a comprehensive overview regarding the existing research on the relationship between the state pension and family support. Meanwhile, the hypotheses will be formulated based on the research goal and found literature in the same chapter. Chapter three reviews the design of the research, measurements of variables and different models to test the hypotheses. Then the fourth chapter describes the results of this study. The last chapter concludes the research based on the main findings, discuss the limitation of the current research, indicate academic and practical implication, and give recommendations on future research.

#### 2. Theoretical Framework

The ageing population in China is becoming an increasingly serious issue, and family support, which is the most traditional mode of elderly care in China, has been severely challenged by the industrialization and urbanization in China. Thus, the state pension has become more and more important to play the role in the Chinese pension system. And the state pension influences the role of family support differently according to the geographic difference because of the development differences in the urban and rural areas. Residential styles, as an influencing factor, may also have an effect on the elderly receiving family support.

#### 2.1. Family Support

Family support is an informal institutional arrangement. It includes the following three functions: economic support, daily life care and spiritual comfort (Mu, 2015). Among the three functions, economic support is the most important and fundamental one because it is the economic basis of the other two aspects. China's traditional family type is mainly based on the core family and supplemented by the main family, which is conducive to the support of the elderly. Therefore, family support is a long-term legacy of Chinese history. Fei (1985) used the "feedback model" to summarize the elderly care model in China. That is to say, parents have the obligation to nurture their children, and the children must also return parents' parenting support when they grow up, which is a filial piety tradition in Chinese society. As a result, "more children and more blessings" and "bringing up children and relying on children to take care of the elderly" have emerged in everyday life in China. Behind this elderly care model, there is a complete set of social systems, organizational operating mechanisms, and strong support for social culture. Family support is an important part of the clan system and culture (Zhang, 2014). Due to the sameness of the patriarchal family and patriarchal politics in the traditional society, family support and its implied cultural significance and operational logic are also linked to the national system and become the whole socially recognized norms. That is, the patriarchal system, the filial piety culture, and the family model of the traditional society provide a good cultural foundation and social support for the traditional family support.

Family support as one of the important ways of pension, its function and status have been highly recognized. In the 1980s, United Nation World Assembly on Ageing considered that family support played an important role in the elderly care system in Asia. The family support has adapted to the traditional Chinese economic foundation, ethical and moral requirements. And it has become an important part of people's ethical and moral concepts (Zhang, 2014). Yao (2001) believes that family support is not only the way for children to support the elderly, but also an important foundation for the survival and development of the Chinese society as a cultural heritage. Mu (2015) pointed out that family support, as the oldest, most important and basic way

of the elderly care, is the cultural heritage of all mankind. As a concept inherited from one generation to another, the concept of family support possesses strong plasticity for the elderly living in the traditional and modern transformation societal nodes (Tian et al., 2014).

Zhang (2014) and Chen (2014) focused on economic support function of the family support. However, the family support not only includes economic support but also the other two functions: spiritual comfort and daily life care (Mu, 2015). As the three key dimensions of family support, daily life care, spiritual comfort and economic support will be addressed into the three hypotheses which are to be tested.

#### 2.2. State Pension

However, as the Chinese society changes from traditional to modern, the social family structure model has also undergone profound changes. And the closely linked family support methods are also facing enormous challenges and impacts (Li, 2001). For the most elderly people, although the family support is still the preferred way, it is influenced by the pension risk in some degree due to modernization, industrialization, urbanization, ageing and low childbirth rate.

Firstly, the traditional family structure has undergone profound changes in recent decades. The miniaturization of households and the survey data of the Chinese National Bureau of Statistics show that the average household size has declined from 4.57 persons per household in 1982 to 3.02 persons per household in 2017. An important consequence of the simplification of the family structure is that the care relationship between different generations is weakened and the family support resources tend to shrink, which weakens the function of the traditional family support gradually. At the same time, In the process of industrialization, Goodger (1999) believes that children acquiring more advanced production technologies and have significantly higher income leads to the decline of children's dependence on their parents. Therefore, parents' status and

authority are influenced in the family. Meanwhile, children's economic support is declining. Apart from that, with the change in the mode of production and the transfer of large numbers of surplus labor to the cities, the economic foundation of the family has also been changed. This has led to a series of consequences: the gradual decline of the patriarchy and the growing trend towards individualization of the family. The connection between the family and the clan is greatly weakened, the family ethical center shifts, the traditional authority of the elderly is lost, and the sense of supporting the elderly among the young people is reduced. Guan (2010) and Liu (2004) indicated the similar views as well. They believe most parents are willing to take all of their care of their children, while the children are increasingly reluctant to assume the responsibility of providing economic support to the elderly. Whyte (2004) believes that the emphasis on individual values in urban culture will gradually diminish the concept of collective family value.

Therefore, it is becoming more and more difficult for the family support to provide the function of economic support, daily life care and spiritual comfort for the elderly. As a result, the function of family support has gradually changed, and seeking the state pension for the elderly is an alternative to the current plight of the family support. Last decade, the Chinese government has implemented some systems to complete the state pension in elderly care, like the *Basic Insurance for Urban Employees, Urban and Rural Residents' Insurance*, to make sure everyone in China receives the pension.

In addition, Hu and others (2012) analyzed the impact of the state pension on the economic support of children on the elderly. The result shows that state pension has a crowding-in effect on economic support of children and the elderly obtaining state pension will generally increase their children's economy support level. On the contrary, it is considered that the implementation of state pensions (such as the new pension on rural areas in China) has a significant crowding-out effect on family intergenerational economic support while improving the welfare of the elderly (Liu et al., 2012). Chen (2013) and Zeng (2013) used the data of Health Effects of the Elderly in China Factor Tracking Survey and found that when the elderly receive 1 more Yuan (Chinese

currency) on average from the state pension, the intergenerational support from their children will be reduced 0.808 Yuan. Therefore, the state pension played a crowding-out effect on the family support. Zhang (2014) and Chen (2014) also prove that state pension has some degree of substitution to the traditional family support.

**Hypothesis 1:** The elderly receiving state pension leads to receiving less economic support from their children.

Compared with the family support, the state pension provides formal support in the pension system, which in turn has a significant impact on pension for the elderly. Although the state pension mainly provides economic support, it may also affect the daily life care and spiritual comfort to some degree. Cai and others (2006) considered that children increased intergenerational transfer payments to their parents, because the poor pension system led to the poverty of the elderly. Based on China's micro-data, Lei and others (2012) analyzed the current situation of family intergenerational transfer payment in the current context of the improvement of China's state pension system. And they found that there is a significant negative correlation between the transfer of family funds and their parents' pensions in China.

Hu (2012) and Zhao (2012) found that the children generally hold a supportive attitude towards public goods (such as elderly insurance) and thus relieve their pressure on the elderly. Therefore, children usually consider that it's not necessary to provide daily life care or spiritual comfort when the elderly are receiving the state pension (Cheng, 2014).

**Hypothesis 2:** The elderly receiving state pension leads to receiving less daily life care from their children.

**Hypothesis 3:** The elderly receiving state pension leads to receiving less spiritual comfort from their children.

#### 2.3. Urban-rural Differences

Meanwhile, there is a significant difference between urban and rural areas in China regarding the degree of ageing, family support and the receipts of the state pension. On the one hand, due to the acceleration of industrialization and urbanization, more and more rural laborers have left their original homes and land. It not only leads to the ageing population getting more serious in rural areas, but also leads to the incensement of social distance between the two groups, which results in the isolation of a large number of elderly people in rural areas from their children (Hu, 2013). Thus, for the people in rural areas, children cannot provide the elderly with daily life care and spiritual comfort. On the other hand, compared with rural areas, the social changes in cities are more rapid. And the western culture erodes the ethical foundation of family support for the elderly - filial piety (Yang, 2016). Apart from that, compared with the state pension in the rural areas, state pension in urban areas has the characteristics of the high level of protection and wide coverage which make the family support less important in the elderly pension system in China.

**Hypothesis 4:** The relation of how the elderly receiving state pension influence the receipts of the family support is strong in urban areas, while it's relatively weak in rural areas.

#### 2.4. Residential Influences

Apart from the direct effect on the three functions of the family support, the state pension may have an indirect effect on the spiritual comfort and the daily life care by affecting the residential styles of the elderly (Liu, 2014). Liu (2014) thinks residential style plays a mediation effect as figure 1 shows below, which will be used as a mediation model in the analysis part as well.





He and others (2010) found that in the process of urbanization, migrant workers have a significant negative impact on the daily life care of the nest-empty elderly. Jensen and others (2004) found that elderly people who receive state pension tend to live separately from their children and the probability of living alone or going to nursing homes is rising. However, studies by Jensen and Keller (2004) found that in some developing countries like China, the implementation of the state pension did not cause the rising possibility of the elderly living alone. Instead, it attracted relatively poor children living with relatively wealthy parents, increasing the probability of the elderly living style of the elderly may have multiple consequences. It cannot be denied that the residential style is closely linked with the spiritual comfort and daily life care of the elderly. Cheng (2013) found that the new rural insurance in China has increased the possibility of the elderly who receive the insurance living separately from their children, and reduced dependence of the elderly on their children in terms of economic resources and daily life care.

**Hypothesis 5:** The elderly who live with their children tend to receive more daily life care and spiritual comfort than the elderly live without their children.

## 3. Methods

The focus of the study is on how the state pension influences the family support in the following three functions: daily life care, spiritual comfort and economic support. Deriving from the theory, the first three hypotheses regarding these relationships and the direction of association are

formulated. Apart from that, another two hypotheses are formulated regarding the differences of geographic and residential styles. A cross-sectional research design will be used to measure the relationships from 2008 to 2012.

#### 3.1. Strategy and Design

The unit of analysis is the elderly population of China, whereas the unit of observation is a sample of Chinese elderly. The standards of the Chinese Longitudinal Healthy Longevity Survey for a suitable sample comply with the needs of the present study. The data will be gathered from the CLHLS (Chinese Longitudinal Healthy Longevity Survey), wave 2008 - 2012. The family support will be divided into three dimensions: daily life care, spiritual comfort and economic support. For the purpose of the study, the independent variable is whether the respondents have the state pension. A construct of the three dimensions of family support– daily life care, spiritual comfort and economic support by children– are created as dependent variables. To test the different effect between rural and urban areas, the elderly in urban and rural areas are modeled separately during data analysis to test for differences in the role of the same variables in the different groups. And in order to test the residential style as an influencing factor, the mediation model will be used and mediation effect analysis will be performed based on the same independent and dependent variables.

#### 3.2. Case Selection

The baseline survey of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) was conducted in 1998, followed by 2000, 2002, 2005, 2008, and 2012. The CLHLS baseline survey and follow-up survey covers 23 of 31 Chinese provinces. The sample contains about half of the counties (cities, districts) in these provinces, aged 65-110 years old. The total population of the covered area was 985 million in the 1998 baseline survey. By 2010, the total population was 1.156 billion, accounting for 85% of the total national population. It has a wide geographical representation and a large sample of nature. The data used in this study is based on the follow-up survey data in 2012, which focuses on the economic and non-economic benefits of the Chinese elderly, the economic activities, family relationships and family dynamics, population migration, and health of the elderly. After eliminating the samples lacking relevant variables, the final sample size is 6785, including 535 urban samples and 6250 rural samples, 2877 males and 3908 females.

#### 3.3. Operationalization

In several studies, the importance of institutional support was addressed as a part of the state pension, but the available dataset did not offer any insights into this. Considering its value in other studies on pension system, it seems useful to include institutional support (like the relevant policies) in further research. Apart from that, there are many controversies about how to define family support. However, the most important part for clarifying family support is to figure out the intergenerational relationships.

The research is focused on the influence of the state pension on the traditional family support. The independent variable is whether the respondents have the state pension. The corresponding question in the questionnaire is "Do you participate in state pension?" According to the responses, the positive reply is "1" and the negative answer is "0". A construct of the three dimensions of family support – daily life care, spiritual comfort and economic support by children – will be created as three dependent variables. In the questionnaire, "When you are sick, who usually takes care of you?" will be defined as daily life care. In this question, it will be defined as "1" if the answer is "children", other answers will be defined as "0". "To whom do you usually talk most frequently in daily life? ", "To whom do you talk first when you need to tell something of your thoughts?" and "Who do you ask first for help when you have problems/difficulties?" the three issues will be merged into spiritual comfort. It will be defined as "1" if one of the answers is "children", otherwise it will be defined as "0". "How much money (including cash and value of materials) did you get last year from your children" will be defined as economic support. The

question "who do you live with" is regarded as the mediator variable (the residential style). The answer "living with children" is defined as "1", and "living without children" is defined as "2".

#### 3.4. Data Analysis

For my first sub-question: How does a person having a state pension influence their receipts of a family support? The Logistic model will be used to analyze the data. The Logistic model uses a logistic function to model a binary dependent variable, where the two values are labeled "0" and "1". In this model, it seeks to identify and examine the relationship between classification results (Y) and several indicator variables (X), seeing how the coefficients can be estimated from data. In the dependent variable, "spiritual comfort" and "daily life care" are binary variables. Therefore, the non-linear model will be used to analyze it, which is as follows:

$$P = \frac{exp + (a_0 + \sum_{i=0}^{k} a_i x_i)}{1 + \exp(a_0 + \sum_{i=0}^{k} a_i x_i)}$$

Among them, P represents the probability that the spiritual comfort or daily life care provided by children,  $x_i$  represents the independent variable that affects the probability of occurrence,  $a_i$  represents the response coefficient of the independent variable to probability, and  $a_0$  represents the error, that is, other factors that influence the dependent variable.

It is important to point out that the economic support of the children to the elderly is a continuous variable, so the linear regression model is used for statistical estimation. The regression equation is as follows:

$$Y_i = \beta_0 + \beta_1 D_i + \beta_2 X_i + \mu_i$$

 $Y_i$  means economic support,  $D_i$  is a dummy variable. If the elderly have the state pension,  $D_i=1$ , otherwise Di=0;  $X_i$  indicates other control variables.  $\mu_i$  is the disturbance term.

For my second sub-question: To what extent there is a difference in this between urban and rural areas? The main focus is on the performance of state pensions between the urban and rural areas on children who economically support the elderly. So the elderly in urban and rural areas are modeled separately during data analysis to test for differences in the role of the same variables in different groups.

For my last sub-question: To what extent does residential style influence the relationship between a person receiving the state pension and family support? The mediation model is used here to find out and explain the mechanism or process that underlies an observed relationship between an independent variable and a dependent variable through the mediator variable. In this model, it proposes that the independent variable influences the mediator variable, which in turn influences the dependent variable. The functions of family support to be tested here are daily life care and spiritual comfort. In order to test the mediation effect of the state pension on the two functions of the family support, residential style is used as a mediator variable to analyze it.

#### Figure 2. Mediation relationship to test



In this research, a three-step approach will be used to test the mediation effect, in which several regression analyses are conducted and significance of the coefficients is examined at each step (Baron & Kenny, 1986). The Step 1 is to conduct a simple regression analysis with X predicting Y to test for path c alone (Figure 2),  $Y = B_0 + B_1X + e$ . The Step 2 is to conduct a simple regression analysis with X predicting M to test for path a,  $M = B_0 + B_1X + e$ . The Step 3 is to conduct a

multiple regression analysis with X and M predicting Y to test path b and c',  $Y = B_0 + B_1X + B_2M + e$ . In the first two steps, if one or more of these relationships are non-significant, it can be concluded that mediation is not possible (MacKinnon, Fairchild, & Fritz, 2007). If there are significant relationships from Steps 1 through 2, one proceeds to Step 3. In the Step 3 model, some form of mediation is supported if the effect of M (path b) remains significant after controlling for X. If X is no longer significant when M is controlled (path c'), the finding supports full mediation. If X is still significant (i.e., both X and M both significantly predict Y), the finding supports partial mediation.

In terms of controlling variables, the respondents' individual characteristics, economic conditions and the type of area should be taken into account. Individual characteristics include gender, age, education, marriage, health status and living style. Economic conditions include occupation types. Regional characteristics are divided into eastern, western and central (National Bureau of Statistics of China, 2015). In the analysis, significant differences should be tested first.

## 4. Analysis

In summary, the first three hypotheses of the research show the direct effect, and the fourth hypothesis uses the same test by separating the data of urban and rural elderly. The expected relationships between the main variables under investigation are presented in Figure 3. While the last hypothesis shows the indirect effect which the residential style plays as a mediator variable (which shows in figure 2 above). In this chapter, the statistical analyses will be presented.

#### Figure 3. Hypotheses on the direct effect



# 4.1. Descriptive Statistics

The first step is conducting univariate analysis in the form of descriptive statistics which describes all the variables of the research (state pension, daily life care, spiritual comfort, economic support and residential style) and the characteristics of respondents.

Variable		Definition	Rural	Urban	Sig.
			sample	sample	
Independent	State pension	0=No	76.77	77.94	,000
Variable		1=Yes	23.23	22.06	
Dependent	Spiritual comfort	0=No	26.38	26.73	,004
Variable		1=Yes	73.62	73.27	
	Daily life care	0=No	28.96	33.64	,000
		1=Yes	71.04	66.36	

Table 1. Descriptive statistics variables	(percentage or mean value)
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	Economic support	continuous	3448.89	4408.40	,029
		variable			
Mediator	Residential style	1= living with	81.40	86.10	
Variable		children	18.60	13.90	,115
		2= living without			
		children			

In total, there are 6785 valid responses that have been collected. The descriptive statistics are listed in Table 1. As for family support, in the rural elderly sample, 73.62% of respondents receive the spiritual comfort from their children, 71.04% of the respondents' children provide daily life care, and the respondents received an average of 3448.89 yuan per year from their children. The corresponding proportions or mean values for the elderly in urban areas are 73.27%, 66.36% and 4408.40 yuan respectively. In terms of the state pension, 23.2% of the rural elderly receive the state pension while 22.06% of the urban elderly receive it. There are significant differences between rural elderly and urban elderly both in family support and state pension (Sig<0.05). For residential style, there is no significant difference between rural elderly and urban elderly, with 81.4% of rural elderly living with their children and 86.1% of urban elderly living with their children.

In terms of control variables, the individual characteristics, economic conditions, and regional types of the respondents should also be considered. Individual characteristics include gender, age, education, marriage, and health status. Economic conditions include occupation types. And regional characteristics are divided into eastern, western, and central (National Bureau of Statistics of China, 2015). The definition and statistical description of each variable are shown in Table 2.

Variable	Definition	Rural sample	Urban sample	Sig.
Sex	0=female	57,6	57,4	,8360
	1=male	42,4	42,6	
Age	continuous variable	85,83	86,31	,7902
Education (year)	continuous variable	1,87	3,95	,0000
Marriage	0=widowed, divorced or	60,62	60,25	,8102
	unmarried			
	1=married (partner is alive)	38,29	38,55	
Health status	0=unhealthy	17,60	17,12	,0996
(self-assessment)	1=so so	38,11	36,50	
	2=healthy	44,29	46,38	
Occupation	0= professional or technical	3,14	11,91	,0000
	personnel			
	(doctors/teachers,			
	governmental, institutional			
	or managerial personnel)			
	1=staff (service	5,56	22,58	
	worker/industrial			
	worker/self-employer)			
	2=farmer (agriculture,	83,69	54,09	
	forestry, animal husbandry,			
	fishery)			
	3=others	7,61	11,42	
Region	0=western	18,9	19,88	,1314
	1=central	22,98	18,52	
	2=eastern	58,12	61,60	

Table 2. Descriptive statistics of control variables (percentage or mean value)

For other variables, there are some differences between rural and urban elderly as well. In terms of individual characteristics, the proportion of males in rural areas is 42.4%, which in urban areas is 42.6%. The average age of rural elderly is 85.83, and it's 86.31 in urban areas. 38.29% of the rural elderly whose partner is alive, while the proportion of which is 38.99 in urban areas. The average year of education for rural elderly is 1.87 years, while the average year of education for urban elderly is 3.85 years. In terms of health status, 17.60% of rural elderly think they are not healthy, 17.20% of urban elderly think the same. The proportion of rural elderly according to the three types of occupation are 3.14%, 5.56% and 83.69%, which of urban elderly are 11.91%, 22.58% and 54.09% respectively. In addition, the proportion of rural respondents belonging to the central region and eastern region are 22.98%, 58.12% separately, while which of urban elderly are 18.52% and 61.60% respectively. In terms of education, health status and occupation, there are significant differences between rural and urban elderly (Sig<0.1). Therefore, it's necessary to put the above control variables into the following test.

#### 4.2. The influence of state pension on economic support

Giles and others (2012) have pointed out that the transfer payment of adult children is the main source of life for the elderly in China. A large proportion of elderly parents receive intergenerational transfer payments from their children. This behavior is regarded as the economic support function of the children in fulfilling the family support. However, if the state pension is effective, then the advancement of state pension will inevitably reduce the dependence of the elderly on the intergenerational transfer payments of the children, and then replace the economic support function of the family support. Therefore, the following method uses the linear regression model to analyze the impact of state pension on the behavior of children supporting the elderly in the economy. See Table 3 for results.

	Full sample		Rural sampl	е	Urban samp	ole
Variables	b	Sig.	b	Sig.	b	Sig.
State pension	-363,656	,047	-291,427	,459	-1063,531	,027
Education	-2,489	,958	-6,939	,884	-4,549	,954
Health status	108.035	,617	219,274	,332	-1338,059	,069
Occupation	429,669	,284	531,672	,249	329,437	,698

Table 3. The influence of state pension on economic support

In the full sample model, the state pension is significant at the 5% statistical level, and the regression coefficient is negative, which means the state pension is significantly negatively correlated with the children's economic support for the elderly. In other words, state pensions have a crowding out effect on the economic support for the elderly, which demonstrates **hypothesis 1 is supported**. The elderly who receive state pension are more likely to receive less economic support. The results are similar to which of Barro and Becker's. The increase in the parent's pension results in a reduction in children's transfer payments to their parents (Barro & Becker, 1974). The reason may be that state pension provides material economic support for the elderly, and it has certain effectiveness in supplementing and even replacing the economic support function of family support.

From the perspective of the sub-sample model, state pension has different effects on the economic support of the elderly in rural and urban areas. For the urban elderly, there is a significant negative correlation between the state pension and the economic support of the children (p=0.027<0.05). The elderly with state pension receive less economic support from their children, that is, state pension has squeezed out the children's economic support for the elderly. However, for the rural elderly, state pension has not changed the child's economic support behavior (p=0.459>0.05). The result indicates that the elderly receiving the state pension strongly influence the receipts of the economic support in urban areas. Therefore **hypothesis 4 is partially supported.** The possible reason is that the implementation of the state pension is different in

urban and rural areas. In urban areas, the Urban Employee Insurance and the Urban Residents' Elderly Insurance are implemented, while in rural areas, the elderly only enjoy the New Rural Elderly Insurance. It shows relative high pension benefits for urban elderly, which may strongly influence the elderly receiving the economic support from their children. Under the realistic background that China's public services have not been able to achieve the equalization between urban and rural areas, it will inevitably lead to significant differences between the two. For the control variables, all the variables don't have significant differences on the economic support.

### 4.3. The influence of state pension on daily life care

Table 4 shows the impact of state pension on daily life care, which also uses the Logistic regression model. In the full sample model, it's found that state pension has a significant impact on daily life care (Sig=0<0.05). The elderly who receive the state pension are less likely (b=-0,381) to receive the daily life care from their children compared with those without state pension, which means **hypothesis 2 is supported**. In other words, the elderly receiving state pension leads to receiving less daily life care from their children.

		Full sam	ple	Rural sam	ple	Urban sa	mple
Variables		b	Sig.	b	Sig.	b	Sig.
State pension		-,381	,000	-,348	,000	111	,612
Education		,163	,000	,155	,000	,029	,098
Health status	So so	-,225	,009	-,243	,007	,012	,969
(0=unhealthy)	Healthy	-,110	,190	-,103	,-238	-,237	,444
Occupation	Туре 0	,265	,332	,110	,777	1,486	,052
(0=others)	Type 1	-,231	,239	-,126	,688	1,081	,106
	Type 2	-,285	,109	-,547	,069	,162	,809

Table 4. The influence of state p	pension on daily	/ life care
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In the sub-sample model, state pension has no significant effect on whether urban elderly people receive daily life care (Sig=0.612>0.05), but a significant impact on what rural elderly people receive it (Sig=0<0.05). Compared with the elderly without receiving the state pension, the rural elderly who receive the state pension have a lower probability (34.8%) of getting daily life care from their children. The results indicate that the elderly receiving state pension strongly influences the receipts of the daily life care from children in rural areas, while the relation is relatively weak in urban areas. Therefore, **hypothesis 4 is partial rejected**.

For the control variables, there are some differences. For rural elderly, there is a significant positive relationship between the education degree and the receipts of the daily life care. That is, the more education one person gets, the more daily life care he/she receives from his/her children. For the urban elderly, the education doesn't have the significant effect. The health status has a significant effect on rural elderly. Compared with unhealthy elderly, the elderly who think themselves are between healthy and unhealthy receiving less daily care.

#### 4.4. The influence of state pension on spiritual comfort

Family support not only has the utilitarian performance of resource exchange, but also has the emotionality with family and altruism as the core. Therefore, according to the Logistic regression model, the influence of state pension on spiritual comfort is analyzed and the results are shown below (Table 5).

		Full sam	ple	Rural sa	mple	Urban sa	ample
Variables		b	Sig.	b	Sig.	b	Sig.
State pension		-,270	,000	,025	,914	-,29	,000
Education		-,149	,000	-,133	,000	-,022	,174
Health status	So so	,146	,091	-,066	,176	,092	,778
(0=unhealthy)	Healthy	,086	,323	-,122	,467	,338	,295
Occupation	Туре 0	-,267	,329	-,159	<i>,</i> 678	-1,038	,143
(0=others)	Type 1	,233	,234	-,595	,057	-,228	,709
	Type 2	-,285	,109	-,757	,011	,445	,467

#### Table 5. The influence of state pension on spiritual comfort

In the full sample model, state pension has a significant negative influence on spiritual comfort (Sig=0<0.05). The elderly who receive state pension tend to receive less spiritual comfort than the elderly without receiving state pension (B=-0.027). The probability of the elderly who receive state pension that receive the spiritual comfort from their children is 27% less than the elderly without receiving the state pension. The results show **hypothesis 3 is supported.** In other words, the elderly receiving state pension leads to receiving less spiritual comfort from their children. It shows the same result as what Cheng (2013) found.

From the perspective of the sub-sample model, state pension has different effects on the spiritual comfort of the elderly who live in urban and rural areas. For the elderly living in rural areas, it's found that although the regression coefficient of the state pension is positive (B=0.025), but it is not statistically significant (Sig=0.914>0.05). It indicates that state pension does not have a significant impact on spiritual comfort in rural areas. However, state pension weakens the children's spiritual comfort to the elderly in the urban areas (B=-0.29). Therefore, the results indicate that **hypothesis 4 is partially supported**. The possible reason is that the quality of state pension provided in the urban and rural areas is different. The state pension for urban elderly not only provides financial support, but also many services such as housekeeping services and etc.

Therefore, the urban elderly who receive the state pension tend to receive less spiritual comfort from their children.

Control variables also have the different effect on the elderly living in urban and rural areas. The degree of education is significantly negatively correlated with the spiritual comfort of the rural elderly (B=-0.133, Sig=0<0.05). Specifically, the higher the level of education, the lower the probability that the rural elderly receive spiritual comfort. For the urban elderly, the degree of education has no significant effect on whether the urban elderly receive spiritual comfort. In the rural sample, the elderly who are farmers have the lower probability (75.7%) to receive the spiritual comfort than others, while the occupation types don't have a significant effect on urban elderly receiving the spiritual comfort.

#### 4.5. The influence of the residential style

In the above research, it was found that state pension has an influence on the three functions of family support to a certain degree. The purpose of the state pension is to protect the basic needs of the elderly and provide them with a stable and reliable source of life. From this point of view, it is not difficult to understand why state pension has squeezed out the economic support from children. However, the results of the study show that state pension also has an important impact on spiritual comfort and daily life care. In the previous analysis, it's believed that the residential styles may affect the relationship between the state pension and family support (spiritual comfort and daily life care) indirectly. Therefore, in order to test the last hypothesis, residential style is selected as the influencing factor to test the hypothesis regarding the mediation effect between the state pension and the family support (spiritual comfort and daily life care).

	coeff	sig	
Step 1 (path c)	-,083	,000	
Step 2 (path a)	-,010	,043	
Step 3 (path b)	,104	,000	
(path c')	-,082	,000	

The mediation effect between the state pension and residential style on family support has been inspected by the regression analysis. As illustrated in Table 6, in Step 1 of the mediation model, the regression of state pension on daily life care ignoring the mediator, is significant, b=-,083, p=,000. Step 2 indicates that the regression of state pension on the mediator (residential style) is also significant, where b=-,010, p=,043<,05. Step 3 demonstrates the mediator, after controlling for the state pension, remains significant, b=,104, p=,000. And the state pension is still significant when the mediator (residential style) is controlled, b=-,082, p=,000. A summary of the findings on the mediation test has been presented in Figure 4. Through this test, the coefficient from c to c' has hardly changed (from-,083 to ,082) because of the small effect of path a (-,01), which demonstrates that the residential style partially mediate the relationship between the elderly receiving state pension and family support (daily life care). And the elderly who live without children tend to receive more daily life care from their children.





Table 7 shows the results of how the residential style influences the relationship between the state pension and spiritual comfort. In Step 1 of the mediation model, the regression of state pension on spiritual comfort is significant, b=-,071, p=,000. Step 2 indicates that the regression of state pension on the mediator (residential style) is also significant, b=-,010, p=,043<,05. Step 3 demonstrates the mediator, after controlling for the state pension, remains significant, b=,120, p=,000. And the state pension is still significant when the mediator (residential style) is controlled, b=-,070, p=,000. A summary of the findings on the mediation test has been presented in Figure 5. Through this test, the coefficient from c to c' (from -,071 to ,070) has hardly changed because of the small effect of path a (-,01), which demonstrates that the residential style partially mediates the relationship between the elderly receiving state pension and family support (spiritual comfort). And the elderly who live without children tend to receive more spiritual comfort from their children.

	coeff	sig	
Step 1 (path c)	-,071	,000	
Step 2 (path a)	-,010	,043	
Step 3 (path b)	,120	,000	
(path c')	-,070	,000	

#### Table 7. Mediation effect analysis: Spiritual comfort

#### Figure 5: Summary of mediation effect: spiritual comfort



To conclude, residential style partially mediates the relationship between the elderly receiving the state pension and the family support (spiritual comfort and daily life care). And it shows in the figures that the elderly who live without children tend to receive more daily life care and spiritual comfort from their children. Therefore, **hypothesis 5 is rejected**.

# 5. Conclusion and Discussion

The following chapter covers the discussion and conclusion of the thesis. The discussion of the main findings regarding the research questions will be outlined first. Subsequently, the academic and practical contribution of the research will be discussed where a guideline on how to deal with the relationship between the state pension and family support both in urban and rural areas in ageing China will be presented based on research findings. The last section of this chapter focused on the limitations of the current research as well as some suggestions for future research.

#### 5.1. Conclusion

The ageing population problem in China is becoming a serious issue. The traditional family support has been severely challenged, and the state pension is becoming increasingly important. It is particularly vital to clarify the relationship between the state pension and traditional family support. Based on the data of Chinese Longitudinal Healthy Longevity Survey (CLHLS) in 2012, Logistic model, linear regression model and mediation model are used to test the influence of the state pension on family support. And according to the three functions, the family support is divided into three dimensions: daily life care, spiritual comfort and economic support. The results are found as follow:

State pension has replaced the traditional family support to a certain extent in China, it has a negative effect on the daily life care, spiritual comfort and economic support. Meanwhile, there

are also some urban-rural differences. For the urban elderly, state pension not only weakens the children's spiritual comfort to the elderly, but also squeezes out the children's economic support for the elderly. For the rural elderly, state pension only has a negative effect on the elderly receiving daily life care, but no significant effect both on spiritual comfort and economic support. In general, state pension mainly provides the economic sources for the elderly, but the research finds that state pension has an important impact on the spiritual comfort of urban elderly and the daily life care of the elderly in rural areas. Based on the above conclusions, this research further explores the residential style has a mediation effect of the state pension on the spiritual comfort and daily life care. In other words, whether the elderly receive the state pension influences the residential styles, which in turn influences the receipts of the family support. The results show that the elderly who live without their children tend to receive more family support from their children.

In fact, state pension, as an important model of elderly care system in China, has the characteristics of long-term stability and stability (Mu, 2015). It can not only share the risk of the elderly care, but also make up for the lack of the family support in certain functions in order to achieve benign complementarity with family support. Although the family unit is a platform for the elderly receiving daily life care and spiritual comfort from their children, the choice of the residential styles for the elderly in China is diversified. Thus, it increases the possibility of state pension taking the replacement of family support both in the function of daily life care and spiritual comfort. Of course, in essence, the state pension has not fundamentally shaken the family support of the elderly in China. This may because of the inertia of the original traditional pension arrangements, but it is more likely that it is difficult to completely replace the children's support with the current national pension system in China. Therefore, it can be forecasted that in the long period of time, the elderly in China will mainly rely on the family support for the elderly in China not only depends on China's financial affordability but also the reform of pension policy.

#### 5.2. Academic and Practical Implication

Academically, this research contributes to the theory on the existing theory on the effect of state pension on the family support as well as the literature of residential style plays mediation effect on the relationship between state pension and family support (Hu et al., 2012; Liu, 2014). Furthermore, this research tests the urban-rural differences in the relationship between the state pension and family support, which has never been addressed before.

In practice, this research can aid in creating a guideline on how to deal with the relationship between the state pension and family support both in urban and rural areas in ageing China. At present, the economy and society in China are undergoing rapid changes. Many problems have arisen in the process of the social transformation. Especially with the acceleration of the ageing process of the population, the problem of the elderly care has become increasingly prominent. And the pressure on family support has increased, which makes the traditional family support model unbearable. State pensions are embedded in today's society as a formal pension model, which complements the family support while replacing some of the functions of it. However, the state pension is not a substitute for family support, but a complement at this stage. Under this situation, the state pension policies should be improved to expand the basic coverage of state pension, and reduce the burden of family support for the elderly. In short, while improving state pension, it's important to coordinate the relationship between the state pension and the family support in order to effectively solve the pension dilemma of the ageing China.

#### 5.3. Limitation and Future Research

There are several limitations of the current study that can be investigated further for future research. First of all, the research has been only focused on the Chinese case, hence, the differences among other countries (i.e. Asian countries) in terms of ageing problems have not been investigated. Thus, the comparative analysis on Chinese case and other Asian cases

regarding this topic may discover distinct results in the future. Secondly, the data of Chinese Longitudinal Healthy Longevity Survey (CLHLS) was collected in 2012. During the six years, there might be some differences regarding the existing situation, like the coverage of the state pension, the level of the family support for the elderly and etc. Therefore, future research can find some up-to-date data to better do the quantitative analysis.

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