

Does Retirement Affect Residency Model?

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Abstract

This paper explores the impact of retirement on individual's residency model based on the data from the China Health and Retirement Longitudinal Study (CHARLS) of 2013 and 2015. The results show that retirement significantly reduces the probability of individual's sharing co-residence with their children, and the male individuals are more affected. China has entered an aging society, the welfare of the elderly has received widespread attention, and children should pay more attention to the elderly so that they can live happily in their old age.

Keywords

Retirement, Co-Residence, CHARLS

1. Introduction

By 2000, people aged over 60 and 65 were 10% and 7% of the population in China respectively (China Statistical Yearbook, 2001), indicating that China had entered an aging society, and the proportion of the elderly had increased year by year. By the end of 2017, people aged over 60 had exceeded to 241 million, accounting for 17.3% of the total population, people aged over 65 had a population of more than 158 million, accounting for 11.4% of the total population, higher than the international "aging society" standard; both aging population and the elderly dependency ratio are increasing year by year (**Table 1**).

Since China had entered an aging society in 2000, the size and proportion of the elderly population have grown at a relatively rapid rate, and their residency model has received more and more attention. Based on the data of the China Health and Retirement Longitudinal Study (CHARLS), this paper analyzes the impact of retirement on the individual's residency model of the elderly, what's more, the impact from the perspective of overall and different genders will be conducted, and it explores ways to improve their lives and welfare of the elderly.

Table 1. Aging population and the elderly dependency ratio.

Year	Aged over 60 (%)	Aged over 65 (%)	The elderly dependency ratio (%)
2000	10.2	7.0	9.9
2010	13.3	8.9	11.9
2011	13.7	9.1	12.3
2012	14.3	9.4	12.7
2013	14.9	9.7	13.1
2014	15.5	10.1	13.7
2015	16.1	10.5	14.3
2016	16.7	10.8	15
2017	17.3	11.4	-

Source of data: China Statistical Yearbook 2017.

For ease of analysis, this paper defines retirement as an activity which requires a retirement procedure. Based on the data from CHARLS of 2013 and 2015, individuals aged 45 to 75 who have retired or may retire later are selected as the study subjects; this paper investigates the influence of retirement on residency model of the elderly.

2. Literature Review

There are many factors that influence the residency model of the elderly. The probability of individual's sharing co-residence with their children will increase with the increasing of individual's age based on the Japanese micro-survey data in 1986 [1]. The individuals aged between 65 with 75 are more likely to sharing co-residence with their children than the individuals aged over 75 years old [2]. There are gender differences in the probability of individual's sharing co-residence with their children. The male individuals are more likely to sharing co-residence with their children than the female individuals [2] [3]. Marital status has a great impact on individual's residency model. Individuals are more likely to sharing co-residence with their children when they do not have a spouse [4]. The higher the level of education is, the lower the probability of sharing co-residence with their children is and the level of education is considered as a symbol of the individual's social status [5]. However, it is found that the educational background has little effect on the probability of individual's sharing co-residence with their children [1]. The elderly with good economic Condition are less likely to share co-residence with their children, and the individuals who have the ownership of their houses are more likely to live apart from their children [6]. The better the self-rated health status of the elderly is, the less likely they are to share co-residence with their children [5]. The poorer the self-care ability of the elderly is, the more likely they are to share co-residence with their children [7]. Children are generally considered to be able to take good care of their parents' lives, the bigger the number of children is, the more likely they are to

share co-residence with their children [8]. The elderly without children are more likely to live alone [9].

There are three main aspects of research on retirement. The first is the influence of retirement on consumption. It is confirmed that retirement led to a decline in food consumption of urban residents in China [10]. The second is the effect of retirement on the well-being of the elderly. Retirement has significantly increased the sense of happiness of the residents based on the CHARLS survey data [11]. The third is the impact of retirement on health. Retirement at the normal retirement age has a significant negative impact on health condition among the male individuals based on the 1% national sample survey of 2005, no effect for female individuals, and early retirement has no effect on health condition of both male and female individuals [12]. Retirement has a negative impact on self-rated health condition based on the data from the CHARLS, and the individuals with low level of education are more likely to be influenced [13].

There are few existing literatures that specifically study the impact of retirement on residency model. This paper examines the influence on the individual's residency model from the angle of retirement.

3. Empirical Analysis

3.1. Data and Variables

The data used in this paper comes from CHARLS of 2013 and 2015. The main survey individuals of CHARLS are aged over 45. The survey mainly includes personal basic information, medical services and medical insurance, health status, family structure and financial support, basic community conditions, job, retirement, and pensions. The survey covers 150 districts and counties across China, and then draws 3 village-level units (or communities) from each district and county to a total of 450 villages (or communities). Based on the types of accounts shown in the survey, this paper deleted the agricultural accounts and the accounts which used to be agricultural accounts in the past years. Considering that most of the elderly aged over 75 may have very different characteristics, the sample of the elderly aged over 75 is deleted. At last, the sample is consist of non-agricultural residents aged 45 to 75.

Whether the individuals share co-residence with their children is the independent variable of this paper, and it is a dummy variable. According to the CHARLS questionnaire, if the respondent has at least one child who lives at home, the individual will be entitled to share co-residence with their children, and the value of the independent variable takes 1, otherwise, the value takes 0. Considering that children still attending school do not have significant support for the elderly, the resident information of adult children without attending school in the questionnaire is used to determine the residency model of the elderly.

The core dependent variable retirement is a dummy variable. If the respondent answers "yes" to either of the questions "Whether or not you handled your

retirement procedures (including early retirement)” and “If you have gone through retirement”, it means that the individual has retired, and the value is 1; otherwise it is not retired, and the value is 0. The results of literature studies have shown that whether the elderly sharing co-residence with their children is also affected by other factors such as age, gender, marital status, education level, number of children alive, and number of deceased children. Therefore, these characteristics will be introduced in the analysis of this paper to control their potential influence. The age statistics are calculated according to the questionnaire provided by the respondent’s birth date; set the gender as a dummy variable, the value of the male takes 1, and the female takes 0; the marital status is also set as a dummy variable, the value of those who has a spouse (married or cohabiting) will take 1, and no spouse (married but separated, divorced, widowed or unmarried) takes 0. The level of education is measured by the highest degree which the individual has obtained. The higher the level of education, the bigger the value; the number of children alive and the number of deceased children are counted based on the children’s information. In addition, other factors which reflect individual’s characteristics such as house ownership, assets, health condition, and self-care ability may also affect the residency model. When the house is owned by a family member, the value takes 1; otherwise, it is 0; assets refers to the cash amount and bank deposit status of the elderly which takes a logarithmic conduction; according to the questionnaire survey results, the better of the health condition is, the bigger of the value is. The better of the self-care ability is, the smaller of the value is. Descriptive statistics are shown in **Table 2**.

3.2. Econometric Model

This paper analyzes the impact of retirement on individual’s residency model based on the following equation.

$$y_{it} = \beta_0 + \beta_1 \cdot \text{Retirement}_{it} + \alpha \cdot Z_{it} + \gamma_{year} + \gamma_{province} + \varepsilon_{it} \quad (1)$$

y_{it} is the independent variable of this paper. It indicates whether the individuals share co-residence with their children after retirement. When $y_{it} = 1$, it means that they share co-residence with their children. When $y_{it} = 0$, it indicates that they do not share co-residence with their children. $\text{Retirement}_{it} = 1$ indicates that they have retired. $\text{Retirement}_{it} = 0$ means that there is no retirement, and then the coefficient β_1 represents the impact of retirement on the probability of individual’s sharing co-residence with their children. Z_{it} is a control variable vector used to control the influence of the factors such as age, gender, education, health, and asset status. α is the coefficient vector.

Considering that the sample is panel data, the fixed-effect model is used to control the influence of time and regional factors on the estimation results. γ_{year} represents the annual fixed effects, used to control the impact of the undetected variables that do not change with the individuals but change over time; $\gamma_{province}$ represents the fixed effects of province to control the possible impact of different

Table 2. Descriptive statistics.

Variable	2013			2015			Total		
	Count	Mean	Variance	Count	Mean	Variance	Count	Mean	Variance
Co-residence	2682	0.450	0.498	3123	0.451	0.498	5805	0.451	0.498
Retirement	2642	0.435	0.496	2927	0.398	0.490	5569	0.416	0.493
Age	2682	65.578	4.238	3123	65.720	4.154	5805	65.654	4.193
Gender	2681	0.490	0.500	3123	0.481	0.500	5804	0.485	0.500
Education	2680	3.688	2.071	2977	3.697	2.062	5657	3.693	2.066
Marriage	2680	0.859	0.348	3065	0.866	0.340	5745	0.863	0.344
Assets	2328	6.971	3.113	2815	7.276	3.133	5143	7.138	3.127
Health condition	2661	1.987	0.694	2910	1.980	0.666	5571	1.983	0.680
Number of children alive	2682	2.792	1.309	3123	2.636	1.289	5805	2.708	1.301
Number of deceased children	2682	0.085	0.313	3123	0.133	0.458	5805	0.111	0.398
Self-care ability	2652	6.564	1.867	3032	6.568	1.714	5684	6.566	1.787
House ownership	2567	0.880	0.325	2955	0.855	0.352	5522	0.866	0.340

Source of data: CHARLS of 2013 and 2015.

provinces. ε_{it} represents the random error term used to control the effects of other factors not included in the model.

4. Empirical Results

The entire sample is examined based on regression Equation (1). The regression results are shown in **Table 3**. From column (1) in **Table 3**, it can be seen that without adding any control variables and without controlling the annual fixed effects and the fixed effects of the province, retirement reduces the probability of individual's sharing co-residence with their children by 11.8%, the result is significant at 1% level of significance; From column (2), it is shown that under the condition of adding the control variables but without controlling the annual fixed effects and the fixed effects of the province, retirement reduces the probability of individual's sharing co-residence with their children by 7.9%, the result is significant at 1% level of significance; From column (3), it is shown that under the condition of adding control variables and controlling annual fixed effects and fixed effects of the province, retirement reduces the probability of individual's sharing co-residence with their children by 6.9%, the result is significant at 1% level of significance. It follows that retirement will significantly reduce the probability of individual's sharing co-residence with their children.

Based on the regression Equation (1), male and female samples are separately subjected to regression analysis. The results are shown in **Table 4**. From column (2) in **Table 4**, it is shown that under the condition of adding control variables and controlling annual fixed effects and fixed effects of the province, retirement reduces the female individual's probability of sharing co-residence with their

Table 3. Overall regression.

	(1)	(2)	(3)
Retirement	-0.118*** (0.01)	-0.079*** (0.02)	-0.069*** (0.02)
Age		-0.012*** (0.00)	-0.012*** (0.00)
Gender		0.0190 (0.01)	0.0180 (0.01)
Education		-0.0050 (0.00)	-0.0060 (0.00)
Marriage		-0.119*** (0.02)	-0.102*** (0.02)
Assets		-0.010*** (0.00)	-0.012*** (0.00)
Health condition		0.036*** (0.01)	0.037*** (0.01)
Number of children alive		0.011* (0.01)	0.0090 (0.01)
Number of deceased children		0.0150 (0.02)	0.0140 (0.02)
Self-care ability		0.0030 (0.01)	0.0040 (0.01)
House ownership		0.134*** (0.02)	0.135*** (0.02)
Cons	0.504*** (0.01)	1.188*** (0.13)	1.185*** (0.13)
Annual fixed effects	no	no	yes
Fixed effects of province	no	no	yes
N	5569	4801	4801
R ²	0.0140	0.0420	0.0790

Notes: Standard errors in parentheses *p < 0.1, **p < 0.05, ***p < 0.01; Source of data: CHARLS of 2013 and 2015.

children by 6.9%, the result is significant at 1% level of significance; From column (4), it is shown that under the condition of adding control variables and controlling annual fixed effects and fixed effects of the province, retirement reduces the male individual's probability of sharing co-residence with their children by 7.4%, the result is significant at 1% level of significance.

At the same time, this paper also finds that marriage, health condition, and self-care ability can significantly affect the female individual's probability of sharing co-residence with their children, but it has no significant effect on male individuals.

Table 4. The difference caused by gender.

	Female		Male	
	(1)	(2)	(3)	(4)
Retirement	-0.075*** (0.03)	-0.069*** (0.03)	-0.089*** (0.02)	-0.074*** (0.03)
Age	-0.016*** (0.00)	-0.016*** (0.00)	-0.008*** (0.00)	-0.008*** (0.00)
Gender	0.0000 (0.01)	-0.0060 (0.01)	-0.011* (0.01)	-0.010* (0.01)
Education	-0.165*** (0.03)	-0.147*** (0.02)	-0.0050 (0.04)	0.0100 (0.04)
Marriage	-0.011*** (0.00)	-0.011*** (0.00)	-0.009*** (0.00)	-0.012*** (0.00)
Assets	0.052*** (0.02)	0.055*** (0.02)	0.0180 (0.02)	0.0170 (0.02)
Health condition	0.0050 (0.01)	0.0020 (0.01)	0.019** (0.01)	0.017* (0.01)
Number of children alive	0.0000 (0.02)	-0.0020 (0.02)	0.0330 (0.03)	0.0290 (0.03)
Number of deceased children	0.015** (0.01)	0.019*** (0.01)	-0.0100 (0.01)	-0.0120 (0.01)
Self-care ability	0.140*** (0.03)	0.148*** (0.03)	0.119*** (0.03)	0.113*** (0.03)
House ownership	1.401*** (0.18)	1.343*** (0.18)	0.964*** (0.19)	1.017*** (0.19)
Annual fixed effects	no	yes	no	yes
Fixed effects of province	no	yes	no	yes
N	2471	2471	2330	2330
R ²	0.0580	0.103	0.0360	0.0690

Notes: Standard errors in parentheses *p < 0.1, **p < 0.05, ***p < 0.01; Source of data: CHARLS of 2013 and 2015.

5. Conclusions

Based on the data from CHARLS of 2013 and 2015, this paper explores the impact of retirement on individual's residency model. The full-sample regression results show that retirement reduces the probability of individual's sharing co-residence with their children by 6.9%; regression analysis of male and female samples indicates that retirement has a greater impact on male individuals.

China has entered an aging society, how to make the elderly have a happy life in their old age has always been a subject of great concern to the society. It is believed that the elderly should be taken good care of by their children and share co-residence with their children. What's more, this is also traditional virtues in

China. However, the results of this study show that retirement will significantly reduce the probability of individual's sharing co-residence with their children. Faced with this situation, the children should respect the elderly's own life wishes, and take good care of the elderly, so that the elderly can have a happy life in their old age.

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