

How Caring for Grandchildren and Elderly Parents Affects Labor Force Participation of Middle-Aged People in China

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Introduction

China has been an ageing society since new millennium. In 2014, there were 212 million Chinese aged sixty and older, which accounted for 15.5% of the total population. Meanwhile, there were 239 million children aged 0 to fifteen, which account for 17.5% of the total population.¹ But the current social security system of China is not perfect, family has been the main source of support for Chinese elderly. In addition, families are the main care providers of childcare (Shang and Wu 2011). Thus, mid-aged men and women may be sandwiched, they have to take the burden of supporting both children and aging parents. According to China's traditional culture, women often play the role of care providers.

We aim to use the Chinese Health and Retirement Longitudinal Survey (CHARLS) to examine the relationship between labor supply and family support for children and elderly parents. Female caregivers are more likely to have a negative experience in the labor force than their male counterparts (Lee and Tang 2013). Most China caring research focus on women's labor supply and the effect of one generation (Jiang and Zhao 2009; Wang and Dong 2010; Liu et al. 2010). The basic questions that we address are the following: (1) How caring for multiple generations affects labor force participation of middle-aged people in China? (2) Whether the effects of taking care of children and parents on women are different with their male counterparts? (3) Whether the caring effect on rural people are different with their urban counterparts?

Since the causal mechanism is unclear, we try to use IV method to give a clear causal explanation. Our results have implications for the design of public policies on caring. Government need to provide more formal care and more subsidies to decrease the cost of obtaining formal care, these could help to release caregivers from caregiving burden to undertake more labour market work. One potential

¹ Source: the Statistical Communiqué of the People's Republic of China on the 2013 National Economic and Social Development.

policy is flexible work arrangement options, this may help caregivers balance care and work, but this policy need to meet the needs of government, employers and caregivers. In addition, a policy such as portability of different cities' health insurance that allow more parents-in-law and parents to accompany adult children and provide needed support for mid-aged womens employment.

Previous Literature

About China research, Jiang and Zhao (2009) use 2005 CLHLS data, they indicate that caring for aging parents has an negative effect on adult children's labor force participation and working time. Wang and Dong (2010) use data from four state-designated impoverished counties, they show that taking care of children has an negative effect on women participating non-agriculture work. Liu et al. (2010) use CHNS data and find that caring for parents-in-law decrease women's non-agriculture working time. Maurer-Fazio et al. (2011) use Chinese population census data, they find that living with parent/parent-in-law or old person increases prime-age women's likelihood of working, but the presence of preschool-aged children decreases it.

For western countries, Van Houtven et al. (2013) use longitudinal data from HRS, they find that informal care decrease the likelihood of working. Particularly, for female care providers who remain working, they find evidence that those women reduce their working time and get a lower wage than non-caregivers. Lee and Tang (2013) also use HRS data, they find that women caregivers is less likely to be in the labor force than non-caregivers, but caregiving roles do not affect men's labor force participation.

Jacobs et al. (2014) use Canadian 2007 General Social Survey to examine whether providing different intensities of informal care (hours of weekly care) is significantly associated with people's retirement status. They find high intensity caregivers are more likely to be out of the labor force.

Wiemers et al. (2014) use HRS data to examine the effect of transfers of time, money, and coresidence on people's working status. They find that for women, providing time to children or parents decreases the probability of labor force participation. For men, providing time to children increases the probability of being retired but providing time to parents has no effect on labor supply. For both sexes, giving money to children or parents increases working hours.

Data and Methods

The China Health and Longitudinal Study (CHARLS) is a nationally representative longitudinal survey of the elderly population in China, based on a sample of households with members aged 45 and above. The respondents of CHARLS will be followed every other year. The national baseline survey of CHARLS was conducted in 2011-2012, it covers 150 counties/districts, 450 villages/urban communities, randomly chosen across China. 28 provinces in mainland of China, excluding Hainan, Ningxia and Tibet, are represented in the data. Sample size is 17,708 individuals in 10,257 households.

The dependent variable is labor force participation. Respondents were asked about their current job status. We recoded it as 1 being in the labor force and 0 being out of the labor force. Those in the labor force included people engaging in agricultural work, working for pay, self-employed or doing family business, unemployed and looking for a job. The retired is classified as being out of the labor force. The interested independent variable is caregiving. We construct two dummy variables, caregiver for parents or parents-in-law (1=yes, 0=no); caregiver for children (1=yes, 0=no). Other independent variables include age, educational level, self-reported health, expenditure per capita, marital status. We restrict our sample to people aged 45-59 and exclude people who never worked in their life, thus our sample includes 3,536 males and 4,307 females. Table 1 details the mean, standard deviation and coding scheme of the variables used in this study.

The main methodological challenge faced when analysing the relationship between child/elderly care and labour behaviour is that child/elderly care is usually endogenous to the process determining labour outcomes. For example, unemployed people may take the burden of caring. Moreover, people with weak ability are more likely to be care providers since the opportunity cost of their time is lower. Since our endogenous variables are discrete, ordinary IV-probit method can not get consistent estimator. We are currently working on special regressor and IV method to handle this endogenous problem. Since some couple come from the same household and thus reported the same household expenditure and providing care for the same dependents. This might violate the assumption of independence among variables and therefore, our analysis is performed separately by gender.

Preliminary Findings

According to Table 2, we find that conditional on socioeconomic and demographic characteristics, taking care for grandchildren has a negative effect on mid-aged

people's labor supply, particularly it has more negative effect on women than men. Caring for parent has no significant effect on men's labor supply, but it has significant positive effect on women's supply. Since women are more likely to take the whole burden of caring for children, when elderly parent live with them and help them to take care of children, they may have additional time to work. It need more deeply thinking. Age, poor health and expenditure all have negative effect on mid-aged people's labor supply. Married people and people with rural hukou are more likely to take part in work. According to Table 3, caring grandchild have negative effect on rural hukou and urban hukou women, but caring parent only has significantly positive effect on rural hukou women. According to Table 4, caring parent has no significantly on rural hukou and urban hukou men, but caring grandchild has significantly negative effect on urban hukou men. When we use instrument variables approach to handle endogenous problem, we can find a causal explanation of the effect of caring for parents and grandchildren on labor supply.

References

- Jacobs, J. C., Laporte, A., Van Houtven, C. H., and Coyte, P. C. (2014).** "Caregiving intensity and retirement status in Canada." *Social Science & Medicine*, 102: 74–82.
- Jiang, C. and Zhao, X. (2009).** "A Study on the Opportunity cost of the Care for China's Old People." *Management World*, (10): 80–87. (Chinese)
- Lee, Y. and Tang, F. (2013).** "More Caregiving, Less Working Caregiving Roles and Gender Difference." *Journal of Applied Gerontology*.
- Liu, L., Dong, X., Chen, G., and Zheng, X. (2010).** "The Impact of Parental Care on the Labor Time Allocation of Married Women in Rural China." *World Economic Papers*, (05): 1–15. (Chinese)
- Maurer-Fazio, M., Connelly, R., Chen, L., and Tang, L. (2011).** "Child-care, Eldercare, and Labor Force Participation of Married Women in Urban China, 1982-2000." *Journal of Human Resources*, 46(2): 261–294.
- Nguyen, H. T. and Connelly, L. B. (2014).** "The effect of unpaid caregiving intensity on labour force participation: Results from a multinomial endogenous treatment model." *Social Science & Medicine*, 100: 115–122.
- Shang, X. and Wu, X. (2011).** "The care regime in China: elder and child care." *Journal of Comparative Social Welfare*, 27(2): 123–131.

Van Houtven, C. H., Coe, N. B., and Skira, M. M. (2013). “The effect of informal care on work and wages.” *Journal of Health Economics*, 32(1): 240–252.

Wang, H. and Dong, X. (2010). “Childcare Provision and Women’s Participation in Off-Farm Employment: Evidence from China’s Low-Income Rural Areas.” *Population and Development*, (03): 60–68. (Chinese)

Wiemers, E., Coe, Park, S., and Bianchi, S. (2014). “The Effect of Support to Multiple Generations on Labor Supply in Late Middle Age.” URL <http://paa2014.princeton.edu/uploads/142874>.

Tables

Table 1: Descriptive Statistics

Variables	Male (n=3,536)	Female (n=4,307)	Coding Scheme
LFP	.90 (.301)	.76 (.425)	0(no),1(yes)
Care parent	.18 (.388)	.18 (.388)	0(no),1(yes)
Care grandchild	.26 (.437)	.36 (.479)	0(no),1(yes)
Age	52.30 (4.342)	51.99 (4.438)	45 to 59
Education	3.58 (1.213)	2.69 (1.460)	1 to 6 (illiterate to college and above)
Poor health	.19 (.389)	.24 (.429)	0(no),1(yes)
ln(expenditure)	8.67 (.827)	8.63 (.819)	expenditure per capita
Married	.96 (.207)	.94 (.236)	0(otherwise), 1(have alive spouse)
Hukou	.79 (.410)	.80 (.400)	0(city non-agricultural), 1(otherwise)

Table 2: Regression Results

	Male	Female
Care parent	0.080 (0.083)	0.175*** (0.061)
Care grandchild	-0.175** (0.074)	-0.262*** (0.051)
Age	-0.037*** (0.008)	-0.053*** (0.006)
Education	0.046 (0.030)	-0.033* (0.020)
Poor health	-0.642*** (0.071)	-0.356*** (0.053)
ln(expenditure)	-0.168*** (0.042)	-0.164*** (0.032)
Married	0.366*** (0.129)	0.174* (0.091)
Hukou	0.747*** (0.078)	0.905*** (0.064)
Observations	3,536	4,307

1. Control variables for province dummies have been included in all regressions but are not reported.

2. robust standard errors in parenthesis.

3. *, ** and *** denote statistical significance at the 10%, 5% and 1% levels.

Table 3: Results of Women, by Hukou

	Rural Hukou	Urban Hukou
Care parent	0.267*** (0.077)	-0.011 (0.113)
Care grandchild	-0.267*** (0.059)	-0.261** (0.116)
Age	-0.038*** (0.007)	-0.108*** (0.012)
Education	-0.036 (0.023)	-0.052 (0.041)
Poor health	-0.400*** (0.058)	-0.230* (0.134)
ln(expenditure)	-0.224*** (0.038)	0.073 (0.069)
Married	0.227** (0.111)	0.115 (0.166)
Observations	3,445	860

1. Control variables for province dummies have been included in all regressions but are not reported.
2. robust standard errors in parenthesis.
3. *, ** and *** denote statistical significance at the 10%, 5% and 1% levels.

Table 4: Results of Men, by Hukou

	Rural Hukou	Urban Hukou
Care parent	0.113 (0.107)	0.060 (0.135)
Care grandchild	-0.111 (0.088)	-0.309** (0.153)
Age	-0.018* (0.010)	-0.079*** (0.014)
Education	0.024 (0.037)	0.109* (0.057)
Poor health	-0.713*** (0.083)	-0.523*** (0.152)
ln(expenditure)	-0.149*** (0.050)	-0.206*** (0.078)
Married	0.421*** (0.156)	0.535** (0.234)
Observations	2,778	755

1. Control variables for province dummies have been included in all regressions but are not reported.

2. robust standard errors in parenthesis.

3. *, ** and *** denote statistical significance at the 10%, 5% and 1% levels.