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Effects of Social Activities on Labor Participation Among Middle-aged and Older Adults in China

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Abstract: As China's population is aging, encouraging middle-aged and older adults to participate in the labor force is of practical significance in alleviating the problems of declining labor supply and rising social burden brought about by population aging. In previous studies on labor participation of the middle-aged and the elderly, scholars have explored factors affecting labor participation of the middle-aged and the elderly in China based on personal characteristics, family factors, social factors, and other perspectives. However, the impact of social participation, which may take various forms, on labor participation of the elderly has been neglected. This paper empirically explores the impact of social participation on labor participation of middle-aged and older adults using data from the 2018 China Health and Retirement Longitudinal Study (CHARLS). Based on OLS regression analyses, the results show that social participation is negatively associated with the number of hours worked per year, at the same time, helping others increases the labor supply time. This paper further proposes suggestions on how to balance time allocated to social participation and to labor participation as well as how to promote labor participation of the middle-aged and the elderly.

Keywords: Social activities, Labor participation, China

1. Introduction

Population aging is a worldwide social phenomenon. According to data from the World Health Organization, an aging society is defined as a population aged 65 and above, which accounts for over 7% of the total population. By this definition, China has begun to enter an aging society. China's seventh population census in 2020 showed that 13.5 percent of the total population was over 65 years of age, an increase of 5.44 percentage points compared with 2010 [1]. It is predicted that the proportion of elderly people aged 65 and above will exceed 15% and 20% in 2027 and 2035, respectively, and will exceed 25% in 2050 [2]. The increase in the aging population brings many problems, including the decreasing number of people of working age, leading to a decline in the number of workers. According to the latest census, the ratio of the population aged 15-59 has decreased by 6.79 percentage points compared to 2010 [1]. Aging poses a significant challenge to the development of society. Therefore, the full participation of older persons in all aspects of society is essential.

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In fact, many forms and types of social activities for middle-aged and older adults [3]. For example: leisure and entertainment, volunteer services, sports and fitness and education. Although middle-aged and older adults are already involved in volunteerism and community activities to varying degrees, they already take up some of the social functions separated from the government in the society. But there is still much room for further exploration [4]. It has been suggested that human resources of middle-aged and elderly people should be fully utilized to reduce the retirement burden of individuals, families, and society and to improve the labor shortage to some extent [5]. However, labor participation of middle-aged and older people also faces many difficulties. Firstly, their physical strength and health decline as they grow older. Secondly, as social functions of middle-aged and older people fade out gradually, they will cut down some of their social relationships and reduce the size and strength of their social networks [6]. The narrowing of social circles will limit information exchange and learning channels of middle-aged and older people, which makes it difficult for them to adapt to new technological changes [7]. Current job training opportunities for middle-aged and older adults are inadequate, coupled with the lack of relevant legal policies and social prejudice against middle-aged and older adults' employment, negatively affecting middle-aged and older adults' labor force participation.

The linkage between labor and social participation for middle-aged and elderly people should be explored, as it may provide important policy implications. Although existing studies in other countries have found a positive association between labor and social participation [8], but still have some study argues that current social participation for middle-aged and elderly Chinese people focus mainly on leisure and health and does not necessarily involve job-specific systematic and specific education and training activities, and therefore it may not substantially increase employment middle-aged and elderly people. Nevertheless, social participation can bring many benefits to older adults, such as being an effective way of improving physical status and facilitating social connections, which contribute to a better life satisfaction [9] [10].

This paper uses 2018 data from the China Health and Retirement Longitudinal Study to explore the impact of social participation on labor participation of middle-aged and elderly people in China, providing a basis for how to promote their labor participation. The focus lies with individuals aged above 45 years old, including middle-aged and elderly individuals in the sample allows for a more thorough investigation of how social participation changes over a lifetime. Studies have argued that activities largely influence various behavioral decisions and social activities after retirement in mid-life [11].

2. Data and Methodology

2.1. Data source

This study uses a nationally representative sample, drawn from the 2018 China Health and Retirement Longitudinal Survey (CHARLS). The survey includes people aged 45 and older and includes household circumstances, financial assets, community characteristics, in addition to the individual characteristics of the population surveyed.

2.2. Measures

2.2.1. Dependent variable

The dependent variable is the number of hours worked per year, which is continuous. In the CHARLS work module, there are 3 levels of questions for labor participation: (1) “How many months did you work in self-employed agricultural work/ employed/ non-farm self-employed and unpaid work for family business in the past year?” (2) “How many days a week did you work on average in the past

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year?"; and (3) "How many hours did you work per day on average in the past year?". Here, we used the following formula to obtain the total annual labor hours for each job: the number of months × 4 × days per week × hours per day for each type of labor (4 is the average number of weeks per month, which is calculated as follows: 365 ÷ 12 ÷ 7 ≈ 4 and do logarithmic treatment [12].

2.2.2. Explanatory variable

The main explanatory variable is social participation, which is measured in four ways. First, it is measured as a binary variable, equal to 0 if the respondents did not perform any social activities in the past month and equal to 1 if they performed at least one of the following activities in the past month: interacted with friend; played Ma-Jong, chess, cards, or went to community club; provided help to non-resident family members, friends, or neighbors; went to a sport, social, or other kind of club; took part in a community-related organization; did voluntary or charity work; cared for a non-resident sick or disabled adult; attended an educational or training course; invested in stocks; used the Internet.

The second measure is a set of binary variables signifying various types of social participation. Specifically, the above social activities are divided into three categories. The first category refers to leisure activities and consists of the following activities: interacted with friend; played Ma-Jong, chess, cards, or went to community club; went to a sport, social, or other kind of club; took part in a community-related organization. It takes the value of 1 if the respondents performed at least one of these activities and 0 otherwise. The second category, which is similarly turned into a binary variable, refers to provision of help and includes the following activities: provided help to non-resident family members, friends, or neighbors; did voluntary or charity work; cared for a non-resident sick or disabled adult. The final category refers to knowledge acquisition and includes the following activities: attended an educational or training course; invested in stocks; used the Internet.

The third measure is a continuous variable. It indicates the number of social activities carried out on the basis of the same survey question.

The final measure is social activeness, which is defined as a dummy variable in this study. It is defined as:

$$C = \sum_{i=1}^{N=11} (A_i \times F_i) \quad (1)$$

where C represents social activeness, Ai represents social activities (referring to above question with 11 social activities), and Fi indicates the frequency of each social activity. The variable A is labeled as a dichotomous variable, while the variable F is derived from the follow-up question: "In the past month, how often did you do the activities you just mentioned? About every day, about every week, or infrequently?". For each activity, F takes the value of 1 if the activity was infrequently performed, 2 if it, was performed weekly, and 3 if it was performed daily [13]. To convert the social activeness scores into a dummy variable, people with scores greater than 2 are classified as a high activity person and are assigned the value of 1. Individuals scoring less than or equal to 2 are classified as a low activity person and they are given the value of 0.

2.3. Model

The other measure of labor force participation is the number of hours worked per year, which is a continuous variable. An ordinary least squares model can be used to analyze the linear relationship between the dependent variable and the independent variables. The model can be written as follows.

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$$work_i = \beta_0 + \beta_1 social\ participation_i + \beta_2 X_i + \varepsilon_i \quad (2)$$

Where, $work_i$ as an explanatory variable, represents the number of hours worked by individual i per year. $social\ participation_i$ as a core explanatory variable reflects the social participation of individual i, including whether he/she participates in social activities, the social activeness, the number of items of social participation, and the different types of social participation, X_i denotes other control variables, and ε_i is a random error term.

3. Empirical Analysis

Table 1 reports OLS results regarding the effects of social participation on the number of hours worked per year of middle-aged and older adults. Column (1) shows the effect of social participation on the number of hours worked per year and shows that social participation reduces the number of hours worked per year by 0.26 %. Column (2) examines the effect of social activeness on the number of hours worked per year. It is clear that social activeness has a significant negative effect on the number of hours worked per year; the more socially active middle-aged and older adults are, the more likely they are to reduce the number of hours worked per year. Column (3) examines the effect of different types of social participation. It can be seen that leisure activities show a significant negative correlation to the number of hours worked per year. Helping others is also statistically significant, although its effect is positive. Learning-related activities, on the other hand, are negatively associated with the number of hours worked per year and their effects are not significant. Column (4) examines the effect of the number of social engagements, and it can be concluded that the number of social engagements shows a significant negative effect on hours worked per year.

As shown in Table 1, The OLS regression yielded results that social participation, social activeness, leisure activities and the number of social activities is negatively correlated with labor participation and the number of hours worked per year. The likely reason is that social participation crowds out labor participation, and since both things require a large investment of time, participation in social activity may therefore lead to reduction of labor participation time [14]. Helping others' activities is positively associated with the number of hours worked per year, possibly because helping others fosters broader social connections and facilitates access to social networks related to labor participation, thereby increasing opportunities for labor participation [15].

Table 1: OLS regressions of number of hours worked

Variables	Dependent variable: Hours worked			
	(1)	(2)	(3)	(4)
social participation	-0.260***			
	(0.048)			
social activeness		-0.388***		
		(0.050)		
leisure activities			-0.491***	
			(0.048)	
help others			0.582***	
			(0.060)	
learning activities			-0.021	
			(0.070)	
number of social activities				-0.074***
				(0.020)

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Table 1: (continued).

age	-0.136***	-0.136***	-0.132***	-0.136***
	(0.003)	(0.003)	(0.003)	(0.003)
gender	1.256***	1.247***	1.235***	1.259***
	(0.048)	(0.048)	(0.048)	(0.048)
marital status	0.529***	0.510***	0.531***	0.537***
	(0.078)	(0.078)	(0.078)	(0.078)
middle school	-0.363***	-0.352***	-0.360***	-0.365***
	(0.058)	(0.058)	(0.058)	(0.058)
high school	-0.287***	-0.249***	-0.315***	-0.283***
	(0.080)	(0.081)	(0.082)	(0.081)
bachelor's degree and above	0.145	0.207	0.118	0.177
	(0.156)	(0.156)	(0.158)	(0.157)
urban residence	-1.814***	-1.798***	-1.809***	-1.813***
	(0.063)	(0.063)	(0.064)	(0.063)
health	-0.879***	-0.885***	-0.876***	-0.876***
	(0.060)	(0.060)	(0.059)	(0.060)
depression	0.087	0.080	0.074	0.088*
	(0.053)	(0.053)	(0.053)	(0.053)
chronic disease	-0.287***	-0.294***	-0.297***	-0.291***
	(0.057)	(0.057)	(0.057)	(0.057)
household assets	0.023***	0.024***	0.022***	0.022***
	(0.008)	(0.008)	(0.008)	(0.008)
transfer from children	-0.008	-0.009	-0.007	-0.008
	(0.008)	(0.008)	(0.008)	(0.008)
transfer to children	0.033***	0.033***	0.030***	0.032***
	(0.008)	(0.008)	(0.008)	(0.008)
grandparenting	-0.440***	-0.444***	-0.440***	-0.444***
	(0.048)	(0.047)	(0.047)	(0.048)
health insurance	0.155	0.149	0.170	0.155
	(0.154)	(0.154)	(0.155)	(0.154)
pension	0.282***	0.288***	0.279***	0.286***
	(0.082)	(0.082)	(0.082)	(0.082)
communist party	-0.172**	-0.162**	-0.189**	-0.166**
	(0.081)	(0.081)	(0.081)	(0.081)
constant	12.189***	12.205***	11.987***	12.118***
	(0.256)	(0.254)	(0.258)	(0.256)
N	15729	15729	15729	15729
R2	0.265	0.266	0.271	0.264

Notes: (1) *, **, *** = 10%, 5% and 1% level of significance
(2) Robust standard errors in parentheses.

4. Conclusion

This paper analyzes the impact of social participation on labor participation of middle-aged and older adults over 45 years old in China, using data from the 2018 China Health and Retirement Longitudinal Survey (CHARLS) based on OLS regression models. The main conclusions from the study include:(1)

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Social participation, social activeness, learning activities, and the number of social activities reduce the probability that middle-aged and older adults will reduce their annual labor supply time. (2) At the same time, helping others increases the labor supply time. On the whole, social participation of the middle-aged and the elderly likely reduces the motivation for them to participate in the labor force. This paper makes suggestions on how to balance social participation and labor force participation, as well as how to increase labor force participation of the middle-aged and the elderly.

First, given the differences between the middle-aged, the elderly and young people in terms of their knowledge and physical fitness, the government can support enterprises to set up jobs suitable for the middle-aged and the elderly based on their situations and needs. Implementing a "flexible work system" for the middle-aged and the elderly and adopting forms of home-based offices and telecommunications that assist work-from-home arrangements are some examples of a flexible work system. This can bring economic benefits to society without putting too much pressure on the middle-aged and the elderly, allowing them to apply what they have learnt to productive use and to allocate their own time according to their own needs, while safeguarding their needs for their own personal development and social relationships. And building a comprehensive job-seeking platform is necessary to increase labor participation opportunities. Employment service centers specifically for the middle-aged and the elderly should be set up to broaden information channels for labor participation so that middle-aged and older adults who are inclined to enter the labor market can more easily obtain recruitment information and find suitable jobs.

References

[1] *National Bureau of Statistics of China (2021). Main data from the seventh national population census. Retrieved fr-om: https://www.stats.gov.cn/sj/zxfb/202302/t20230203_1901080.html?eqid=e3cb78be00042c6500000003646b55e3.*

[2] *OECD (n.d.). The silver and white economy: the Chinese demographic challenge. Retrieved from: https://www.oecd.org/employment/leed/OECD-China-report-Final.pdf.*

[3] *Wang, Yulong. (2023). A study of social activities and their influence on Chinese older adults (Doctoral dissertation, Jilin University).*

[4] *Li, Jing & Luo, Xiaohui. (2022). Research on the development of human resources for the elderly in the context of China's aging society. Open Learning Research (04), 1-8. doi: 10.19605/j.cnki.kfxxyj.2022.04.001.*

[5] *Tong, Yufen & Yuhang Liao. (2020). The development of China's elderly manpower resources under the wave of silver hair. Journal of China Institute of Labor Relations (02), 27-36.*

[6] *Li, Xiaochen. (2021). Research on Social Activities of the Elderly and Their Spatial Optimisation under the Perspective of Social Networks (Master's thesis, Harbin Institute of Technology). https://kns.cnki.net/KCMS/detail/detail.aspx? dbname =CMFD 202201&filename=1021901697.nh*

[7] *Chen, Xueli. (2015). On the Internet and the Continued Socialisation of the Elderly. Journalism (17), 4-8. doi:10.15897 /j.cnki.cn51-1046/g2.2015.17.002.*

[8] *Aguilera, M. B. (2002). The impact of social capital on labor force participation: Evidence from the 2000 Social Capital Benchmark Survey. Social science quarterly, 83(3), 853-874.*

[9] *Yang, Xue & Wang, Yulong. (2020). Quantitative analysis of the impact of social activities on the health status of the elderly population. Journal of Population (03), 66-77. doi:10.16405/j.cnki.1004-129X.2020.03.006.*

[10] *Du, Wenjing. (2020). Research on the impact of personal social capital construction on older people's participation in volunteering (Master's thesis, Southwest Finance and Economics). https://kns.cnki.net/KCMS/detail/detail.aspx?dbname= CMFD202201&filename=1020373706.nh*

[11] *Morrow-Howell, N., Putnam, M., Lee, Y. S., Greenfield, J. C., Inoue, M., & Chen, H. (2014). An investigation of activity profiles of older adults. Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 69(5), 809-821.*

[12] *Chang, Qian, Zhao, Minjuan, & Jian, Zhide. (2019). The impact of intergenerational family economic transfers on labour supply of rural older adults. Southern Population, 34(5), 24-35.*

[13] *Yang, Xue & Wang, Yulong. (2020). Quantitative analysis of the impact of social activities on the health status of the elderly population. Journal of Population (03), 66-77. doi:10.16405/j.cnki.1004-129X.2020.03.006.*

DOI: 10.54254/2754-1169/75/20241581

[14] *Burr, J. A., Mutchler, J. E., & Caro, F. G. (2007). Productive activity clusters among middle-aged and older adults: Intersecting forms and time commitments. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 62(4), S267-S275.*

[15] *Unger, L. S. (1991). Altruism as a motivation to volunteer. Journal of economic psychology, 12(1), 71-100.*