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**Identifying the Effects of Migration and Remittances on Parental Health:
Evidence from Left-Behind Elders in China**

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Identifying the Effects of Migration and Remittances on Parental Health: Evidence from Left-Behind Elders in China

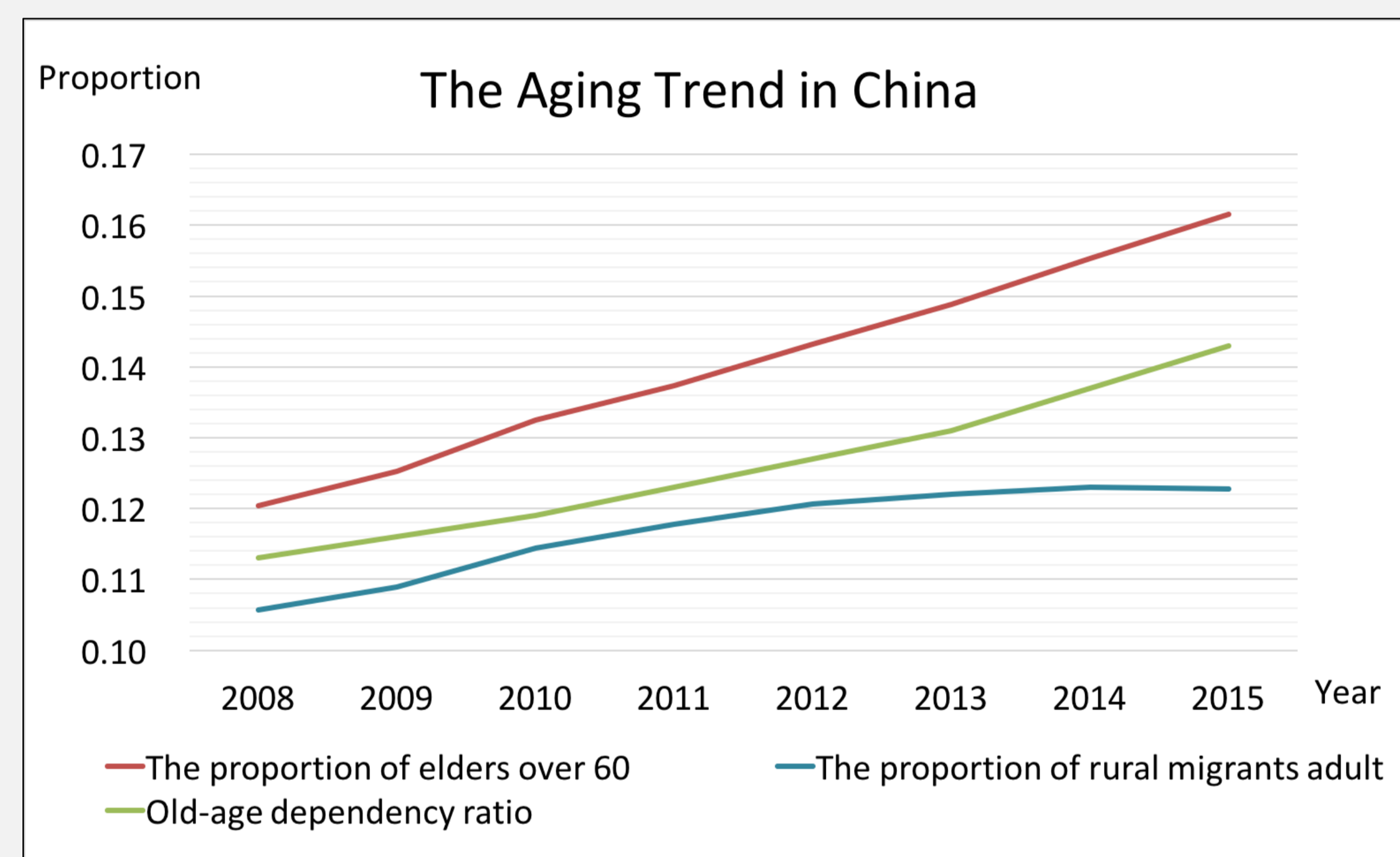


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Background

- Aging and massive migrant labor in rural China → Challenge traditional family support pattern
- How do migrant adult children affect the well-being of the left-behind parents in rural areas ?



Objectives

- Estimate two opposite effects of labor loss driven by the migration and remittances of adult children on the health of left-behind elderly parents through tightening or relaxing market constraints in China's rural areas.

Theoretical basis

$$\frac{dH^c}{?} = \underbrace{\frac{\partial H^c}{\partial T_1} c_M}_{\text{Labor loss effect(-)}} dM + \underbrace{\frac{\partial H^c}{\partial T_1} c_R}_{\text{Remittance effect(+)}} dR \quad (1)$$

- M —migration children ; R —remittances
- $T_1 = C(M, R)$ —liquidity constraint; H^c —elder's health
- The sign of migration effect on the elder's health (H^c) depends on whether the positive effect of remittances (R) can compensate for the negative effect from the loss of family labor (M).

Data

- China health and retirement longitudinal study (CHARLS).
- The total sample consist of 8173 elders and covers 25 provinces and municipalities.

Model

- A recursive simultaneous equation system (SEM) was constructed to identify the effects of migration from two channels:

$$\begin{cases} H = \beta_0 + \beta_1 M + \beta_2 R + \beta_3 Z_H + \varepsilon_H & (2) \\ R = \alpha_0 + \alpha_1 M + \alpha_2 Z_R + \varepsilon_R & (3) \\ M = \gamma_0 + \gamma_1 Z_M + \varepsilon_M & (4) \end{cases}$$

- H - elder's health; M - migration children
- R - remittances; Z_H, Z_R, Z_M -control variables

Econometric issues

- Reciprocal causation between M, R and H .
 - IV for (4): the proportion of households who have migrant adults in the same village; the number of local factories.
 - IV for (3): the proportion of remittance among migrants in the same village; whether this household attend weddings/funerals hosted by relatives/neighbors.
- High correlation between error terms ($\varepsilon_H, \varepsilon_M, \varepsilon_R$).
 - Use 3SLS method.

Results

Explanatory variables	Dependent variables: Physical health			
	(1)	(2)	(3)	(4)
	Physical action	Having migrants children	Physical action	Number of migrants
<i>Migration effects:</i>				
Having migrants children dummy		1.3318*** (0.3289)		
Number of migrants			0.5612*** (0.1635)	
<i>Control variables:</i>				
.....
Observations	8137	8137	8137	8137

Explanatory variables	Dependent variable: Physical health			
	OLS (1)	3SLS		
	Physical action	Physical action	Remittances	Number of migrants
<i>Migration effects:</i>				
Number of migrants	0.0489* (0.0252)	-1.9556*** (0.3896)	1.2860*** (0.2360)	
Remittances in thousands yuan	-0.0042 (0.0053)	0.6504*** (0.1025)		
<i>Control variables:</i>				
Dummy variable for receiving wedding or funeral invitations			0.2118* (0.1228)	
Proportion of remitting among migrants in the resident			0.1399 (0.4866)	
Proportion of migration in the resident village(%)				0.7202*** (0.0744)
Number of local factory				-0.0066** (0.0014)
.....
Observations	8137	8137	8137	8137

Explanatory variables	Dependent variables: Physical health				
	Liquidity constraint thresholds				Poverty line
	Liquid asset values in thousands yuan				\$1.9/day
	(1)	(2)	(3)	(4)	(5)
	20	50	80	100	
<i>Migration effects:</i>					
Number of migrants	-2.3364** (0.9552)	-1.9924*** (0.7356)	-1.7011*** (0.5408)	-1.7079*** (0.5434)	-1.9386*** (0.6599)
Remittances in thousands yuan	0.9471** (0.3840)	0.7572*** (0.2694)	0.5921*** (0.1786)	0.5952*** (0.1799)	0.7672*** (0.2552)
Remittances in thousands yuan × high value of liquid assets dummy	-0.8573** (0.3472)	-0.7072*** (0.2517)	-0.4159*** (0.1423)	-0.4303*** (0.1459)	
Remittances in thousands yuan × above poverty line dummy					-0.6910*** (0.2287)
<i>Control variables:</i>					
.....
Observations	8137	8137	8137	8137	8137

Conclusions

- The loss of labor to migration has a significantly negative effect on the health of left-behind elders, but remittances from migrants can compensate for it.
- Liquidity constraint is an essential condition to make remittances functional so as to compensate for the adverse effect of migration on the health of the left-behind elders.
- Overall, left-behind elderly parents benefit from migrant children both physically and mentally.