"Growing Pain" in China's Social Security

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Overview

- Extremely important issue

- Novel channel, interesting facts and quantitative results …

- My comments:
  - Evidence on "wage compression"
  - Rapid human capital growth
  - Identification and quantitative implications
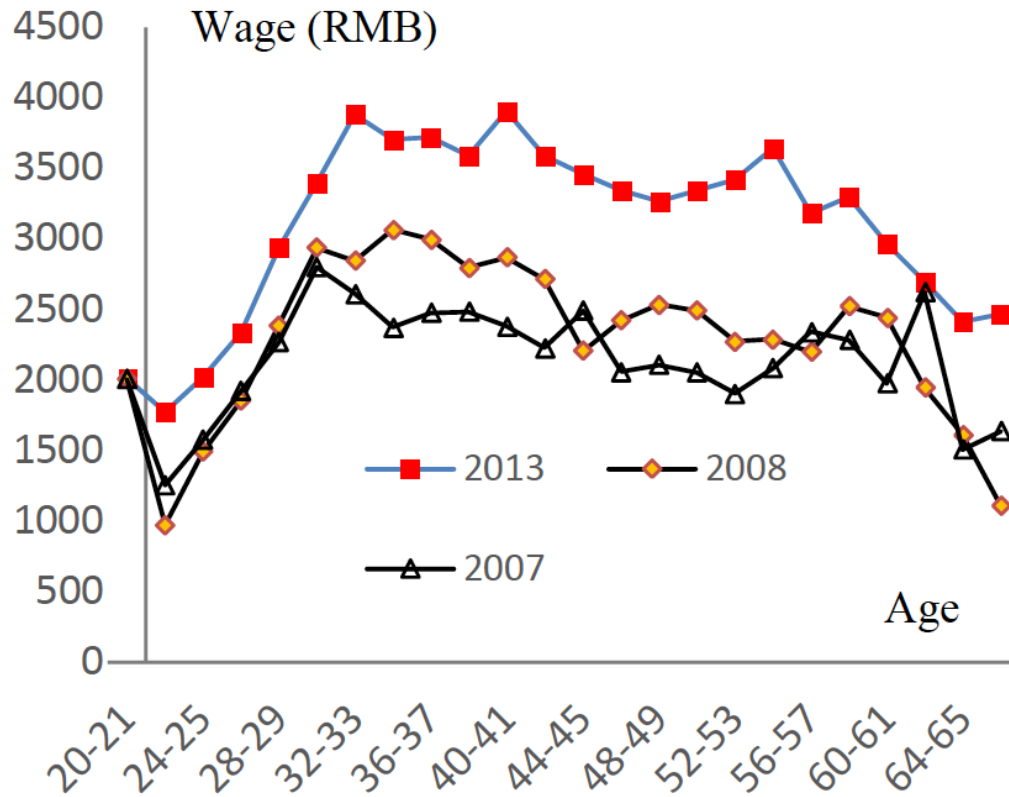
Age-Wage Profiles

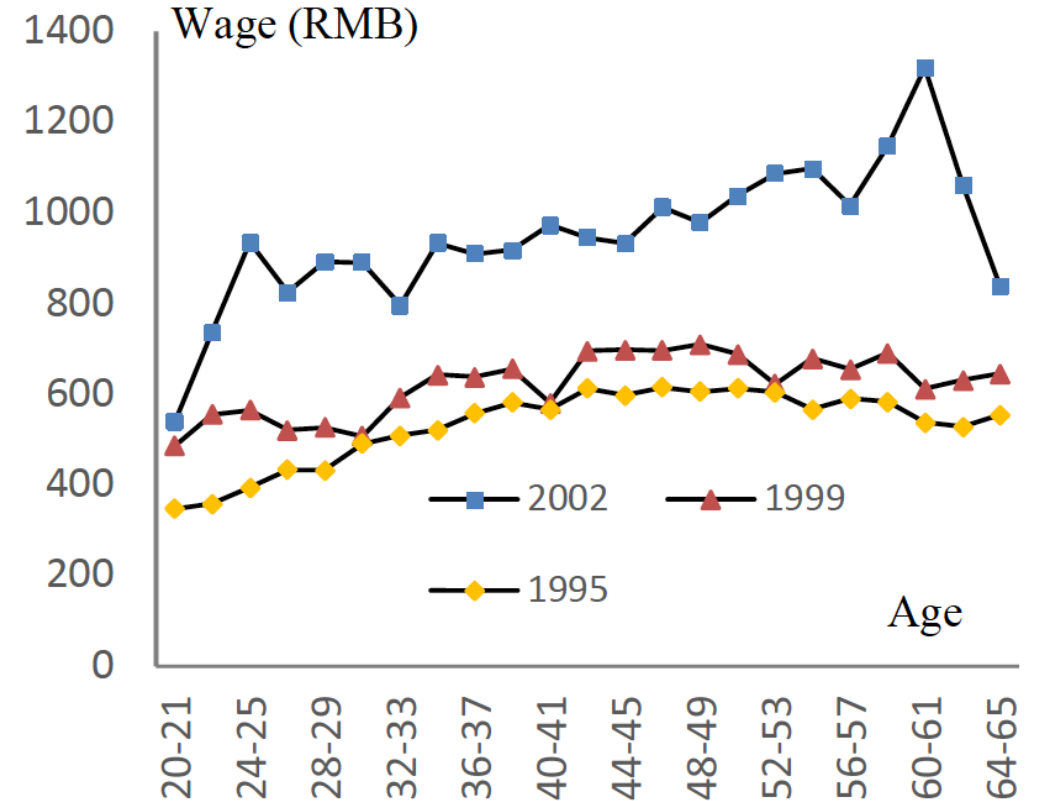Figure 5-A Wage-Age Profile after 2007

Figure 5-B Wage-Age Profile before 2002
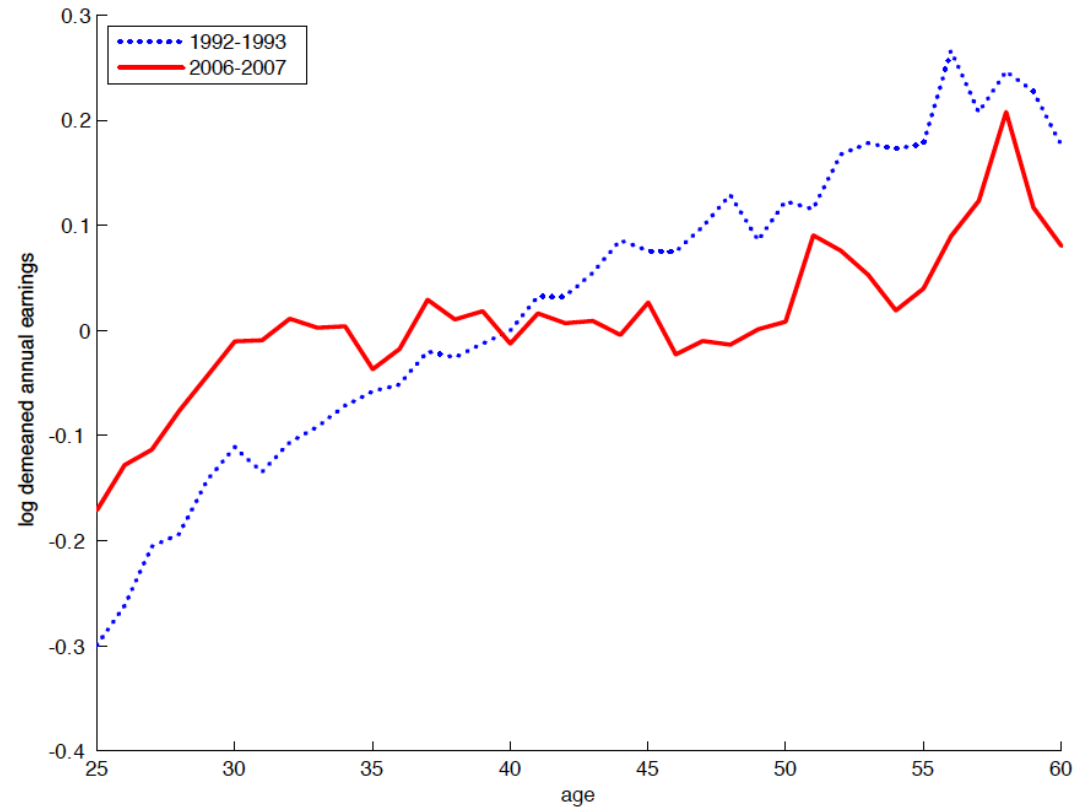
CFPS vs. CHIPS (Urban Household Survey)

Figure 3: Cross-Sectional Age-Earnings Profiles. The dotted and solid lines refer to the cross-sectional age-earnings profiles averaged over 1992-1993 and 2006-2007 (weighted by the number of observations in each age cell), respectively. The log demeaned earnings are computed as the log earnings minus the log average earnings.
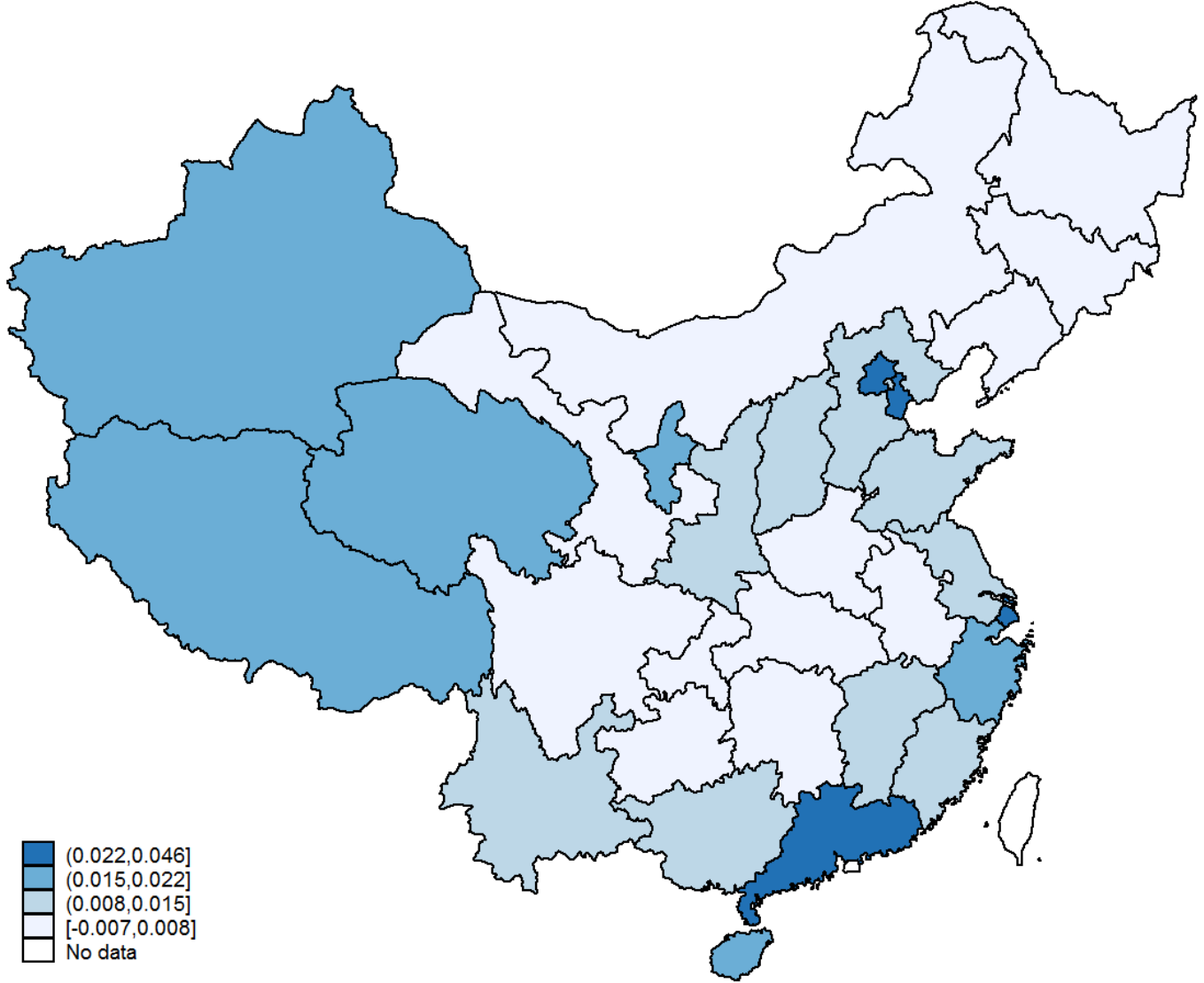
Demand- vs. Supply-Side Story

- Low labor supply of the old: w_t^o is too low (high human capital growth + high labor substitutability)
  - But why LPR for the old and the SOE share are negatively correlated?

- Low labor demand for the old: $F'(L_t^o) = w_t^o(1 - \tau_t^o)$, where $\tau_t^o < 0$.
  - The distortion seems more severe in the state sector (assuming some labor reallocation costs).
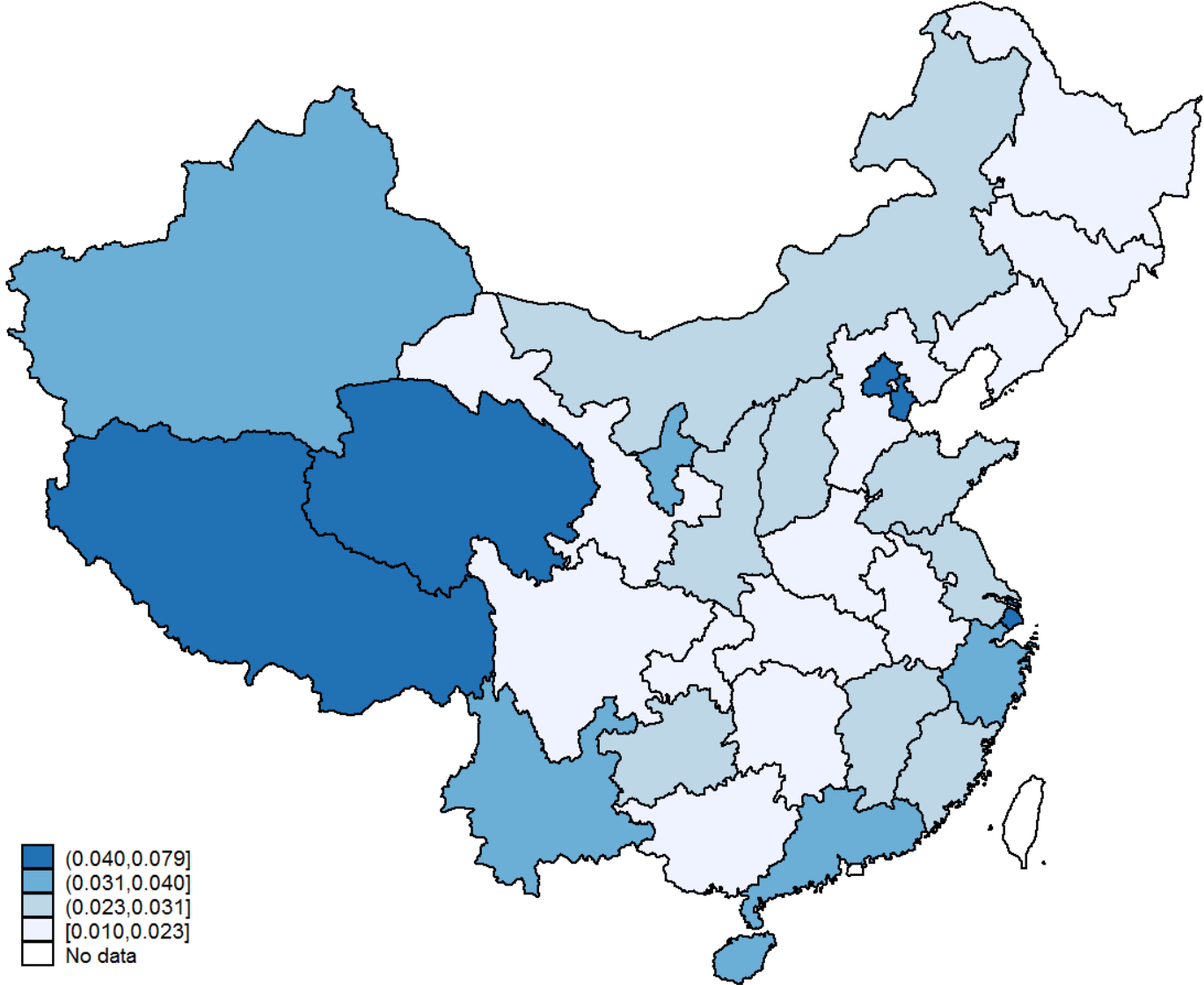 - Wider wage gap for the old between the state and private sector

Human Capital Growth

- Human capital growth 6.13% (from Whalley and Zhao, 2013, using Barro and Lee)

- Our estimate is much lower (Song, Storesletten, Wang and Zilibotti, 2015, using a similar approach)

- Estimating human capital by returns to education also gives low growth rates.

Annualized Labor Growth Rate

(0.022,0.046]
(0.015,0.022]
(0.008,0.015]
[-0.007,0.008]
No data

Annualized Human Capital Growth

(0.040,0.079]
(0.031,0.040]
(0.023,0.031]
[0.010,0.023]
No data

Identifications

- Two roles of γ:

$$\left(H_t L_t^y\right)^\gamma K_t^{1-\gamma} + (H_{t-1} e_t^o L_t^o)^\gamma\, K_t^{1-\gamma}$$

- Separating the labor share and substitutability between young and old:

$$\left(\left(H_t L_t^y\right)^\gamma + (H_{t-1} e_t^o L_t^o)^\gamma\right)^{\frac{\alpha}{\gamma}} K_t^{1-\alpha}$$

- Hard to estimate wage compression for the old from the age-earnings profile (returns to experience, cohort-specific human capital …)

Quantitative Implications

- Social security is determined a planner who cares about the welfare of ***the current cohorts***.

- Suggestions:
  - See how far the model can go in replicating the low labor participation rate for the old and the high actual replacement rate (or the high "in-system" dependency ratio).
  - Explain the low actual contribution rate in a model where young workers can choose their contributions.
  - Simulate the balance of the system.