Demographic Origins of the Decline in Labor's Share

Glover and Short

BIS "*Macro models and micro data*" Conference

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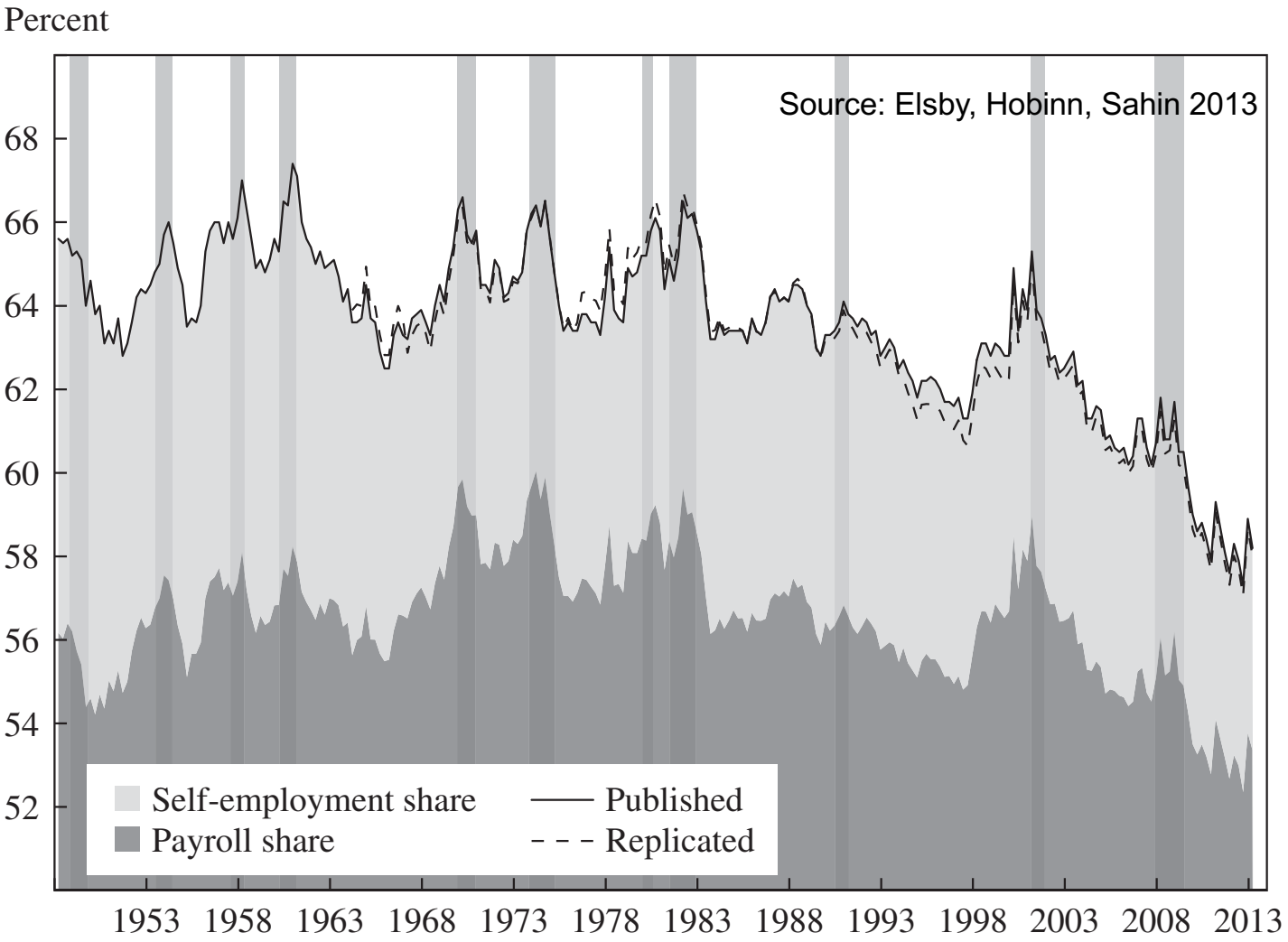
Context and motivation

Figure 1. Labor Share, Payroll Share, and Replicated Labor Share in U.S. Nonfarm Business Sector, 1948-2013



Context and motivation

Many theories have been proposed

- **Capital** replaces labor: Eden/Gaggl (2018), Acemoglu/Restrepo (2017, 2018), Karabarbounis/Neiman (2014)
  - Capital and labor are complements: Oberfield/Raval (2014)
- **Housing** is behind rising capital share: Rognlie (2015)
- **Intangibles** become more important: Eisfeldt/Falato/Zhang (2018)
- **Composition/concentration**: Autor et al. (2018), Kehrig/Vincent (2018)
- **Markups** rose: Barkai (2017), Eeckhout/De Loeker/Unger (2018), Grullon et al. (2016), Baqaee/Farhi (2018), Neiman/Vavra (2018)
- **Globalization**: Elsby et al. (2013)
- **Taxation** matters: Kaymak/Schott (2018)
- Etc.

This paper

- Links two strong structural trends: fall in labor share vs. ageing
- Seems like a natural link to investigate
  - Trends line up quite well
  - Ageing and LS decline are global phenomena
- Personally, I find it very appealing and I want to believe!
  - A pure structural mechanism
  - Does not rely on endogenous margins: prices, concentration, etc.
  - Supply-side story that does not focus on goods, but labor instead

Intuition

- Basic example (C-D, young and old) is very intuitive
- Age-dependent wedges: $w_{a,t} = \frac{1}{\omega_a} MPN_{a,t}$
- LS is an average of wedges, w/ effective labor supply as weights

$$LS_t = \frac{E_t}{Y_t} = \alpha \left[\frac{1}{\omega_{young}} \frac{z_{young,t} n_{young,t}}{\sum z_{i,t} n_{i,t}} + \frac{1}{\omega_{old}} \frac{z_{old,t} n_{old,t}}{\sum z_{i,t} n_{i,t}} \right]$$

- Notes:
  1. This is ultimately a composition story
  2. Wedges are time-invariant; firm concentration theories are about increases in ω

Intuition

- Rewrite as relationship between LS, earning shares and wedges

$$LS_t = \frac{E_t}{Y_t} = \frac{\alpha}{\omega_{young} + (\omega_{old} - \omega_{young})\frac{E_{old,t}}{E_t}}$$

- Empirical strategy: Exploit within-sector ΔLS^{-1} and $\Delta E_{old,t}/E_t$ to implicitly recover ω_{young} and $\omega_{old} - \omega_{young}$

$$\Delta LS_{s,t}^{-1} = \beta_0 + \beta_1 \Delta EAGE_{s,t} + \psi_t + \phi_s + \eta_{s,t}$$

- Note that…
  - …α and ω_a are not separately identified;
  - …higher $E_{old,t}/E_t$ can be driven by relative supplies or productivities

Empirics - a few comments

$$\Delta LS_{s,t}^{-1} = \beta_0 + \beta_1 \Delta EAGE_{s,t} + \psi_t + \phi_s + \eta_{s,t}$$

$$> 0$$

1. Was expecting more reduced-form evidence to start with
   - Evolution of EAGE across sectors
   - Correlation between ΔLS vs.$\Delta E_{old}/E$ across sectors

2. Why not a few controls?
   - Capital intensity, measures of offshoring, concentration, etc.

3. How stable/significant are the coefficient estimates over time?

4. Maybe there's a more natural order for the paper?
   - Basic evidence $\Longrightarrow$ Regressions/robustness $\Longrightarrow$ Interpretation under old/young model (composition) $\Longrightarrow$ Microfoundations

Age profile of earnings wedges

$$LS_t = \frac{\alpha}{\omega_{young} + \left(\omega_{old} - \omega_{young}\right)\frac{E_{old,t}}{E_t}}$$

- As $E_{old,t}/E_t$ rises , labor share falls **<u>if</u>** $\omega_{old} - \omega_{young} > 0$
  - workers get (more) exploited/screwed as they age

$$w_{a,t} = \frac{1}{\omega_a} MPN_{a,t}$$

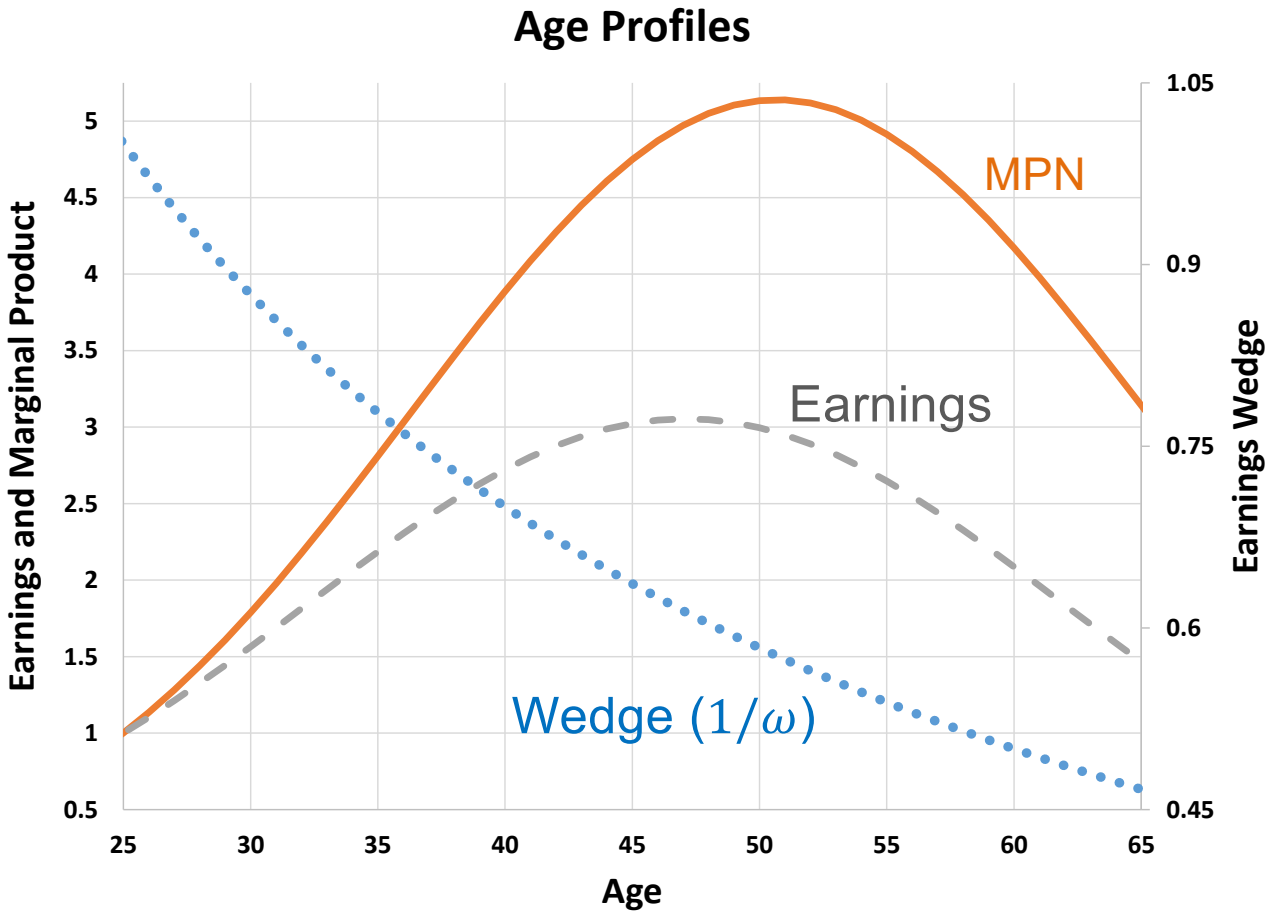
- Declining earnings/MPN profile is crucial…

  …and arises naturally as a by-product of the identification

  ⇒ **Comment**: more outside evidence would be helpful

Age profile of earnings wedges

- How does this profile compare to what is in the literature?



Age profile of earnings wedges

- Large labor literature on wage/productivity profiles

  Hellerstein and Neumark (1999, 2007), Crépon et al. (2003), Haegeland and Klette (1999), Dostie (2016), etc.

- Summaries from survey papers:
  - De Hek and van Vuuren (2010): "Two of the most convincing findings are that firms are reluctant to hire older workers, and that the ***wage profile of workers is not less steep than the productivity profile***."
  - Van Ours and Stoeldraijer (2010): "This suggests that **older workers are relatively overpaid**."
  - Van Biesebroeck (2015): "On the evidence, **young workers appear to be systematically compensated below their productivity level**."

Age profile of earnings wedges

- My take: generally, **older workers are found to be "overpaid"**
  - Wage-age profile is steeper than productivity-age profile
  - In line with a deferred-compensation model à la Lazear (1979)

- But…
  - Roger and Wasmer (2011): could these results be specific to manufacturing and lower-skilled workers?
  - Cardoso et al. (2010): endogeneity issue in lit; "…as prime-age approaches, wage increases lag behind productivity gains."

- One way or another, reconciling with findings from labor literature seems important

Some thoughts about the way forward

- Possibility of exploiting matched **worker-firm data**?
  - Much more power to disentangle from other stories
- Other ways ageing could affect LS?
  - Ex: Ageing, firm creation and **business dynamism**
    - Ouimet and Zarutskie (2014): "an increase in the regional supply of young workers is positively related to the rate of new firm creation"
  - Ex: Age, **consumer loyalty** and markups
- Other "labor composition" dimensions?
  - Arrival of **women in the workplace**: Hellerstein and Neumark (1999) find that w/MPN is lower for women
  - Rise in **educational achievements**: Hellerstein and Neumark (2007) find that "some college" raises w by less than MPN

Wrap-up

- Great intuitive idea
  - Links two strong trends
  - Story of labor share decline that focuses on labor!
- Is this THE culprit for the decline in LS?
  - Ideally, more evidence needed to back the basic mechanism
  - Even if ageing plays a role, could be through other channels
- In the end, we have an embarrassment of riches
  - Many stories, still waiting for the clear smoking gun