Predicting labor force participation of the older population

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Very brief summary

- Aim: predicting labor force participation of the older population in the United States
- Method
  - Exploit panel data (HRS)
  - Use retention rates & retirement hazards
  - Use subjective probabilities of working full-time past age 62 (P62s) or 65
  - A comparison with actual behavior (CPS data)
- Main conclusion

  By making used of the P62s (and P65s) it is possible to predict the increase in LFP at older ages over the past two decades. This provides some confidence in the predicted continuing increase in LFP at older ages for the next 10-15 years (based on HRS 2010 / P62s/P65s).

Comment 1

I would appreciate definitions of retirement (not working, I presume) and labor force participation

- Example, LFP Current Population Survey includes unemployed persons and excludes persons on disability (I presume), while the reported HRS LF retention rate is affected by increased unemployment during the great recession (suggesting LFP / HRS is employment).

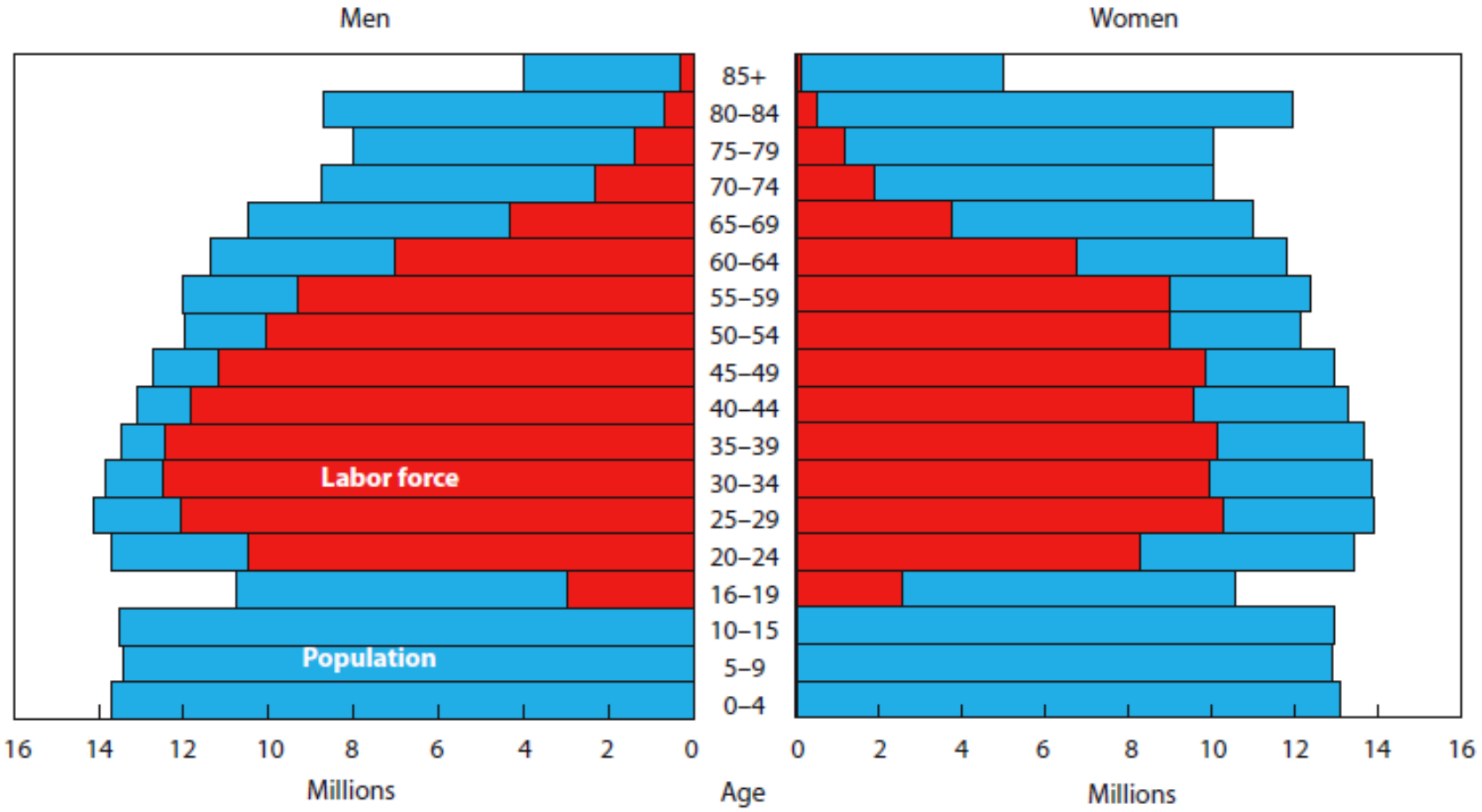
Comment 2
Motivation for using P62

- Clarify perhaps that using P62 (the subjective probability of working past age 62) makes it possible to take policy reforms into account that affect the younger cohorts and have not affected the older cohorts. This makes it possible to have different retirement hazards at ages 60-65 that are otherwise difficult to identify/predict.
- Or take into account better (or worse) health of the younger cohorts compared to the older cohorts.

Comment 3

- It is mentioned there are few projections of trend lines that have instilled confidence but it is not shown that the approach of this paper leads to better or worse predictions than those available. Or more accurate predictions (standard errors?)
- A comparison with alternative LFP (future) predictions would be appreciated. For instance the projections of the Bureau of Labor Statistics (if those are used by policymakers).

6. Population and labor force, projected 2050



SOURCE: U.S. Bureau of Labor Statistics.

Comment 4

- One advantage of using individual level data is that one can look at heterogeneity.
- Some groups of workers may be of particular interest to policymakers.
- Related to the explanations for the predicted increase in LFP provides at the end of the paper.

Method

- $P(LF_{t+2}|LF_t)=\lambda_{ca}$ single year cohort specific LF retention rates (non-parametric).
- Data: Cohorts 1937 – 1941, age range from 51-55 in 1992 to 71-75 in 2012
- Re-entry $P(LF_{t+2}|NLF_t)$'s are taken into account (single year cohort specific).
- Figure 13 tells us that the cohort differences are in what happens after age 60. Important figure, since P62 is used to capture cohort differences.

Method

- A cox proportional hazard rate model is used to adjust the transition rates, so each rate is adjusted with the same factor.
- The average P62 in 1992 is equal to 48.3% and is compared with the simulated LFP at ages 62-63 of 47.7% in the years 2003/04 (based on the above λ_{ca}'s). An adjustment factor of 0.984 will make sure that the simulated LFP at 62 is equal to the average P62s.

Method: Main assumption

It is assumed that 51-55 year old workers in 1992 predict on average correctly their LFP at age 62 (the P62s).

Is this a reasonable assumption? Why not empirically test this assumption?

Method validation

Empirical evidence is presented that on average the predicted LFP rates are close to those from the CPS.

Method: forecasting

- As an example I take the 1939 cohort; age 53 in 1992, 62 in 2001, and age 73 in 2012. Their retention rates $P(LF_{t+2}|LF_t)=\lambda_{ca}$'s are used for predictions.
- HRS 2010
- P62s are observed for, say, 53 year old persons (in 2010).
- Based on the above λ_{ca}'s , LFP is simulated when these persons are 62. And again an adjustment factor is calculated and turns out to be 0.895. With this adjustment factor the predicted LFP at age 62 (in 2019) is exactly equal to the average P62 (response in 2010).

Method: forecasting

Assumptions:

1. workers predict on average correctly their LFP at age 62 (or age 65).
2. the age profile of 53 year old persons in 2010 is the same as the age profile of 53 year old persons in 1992 (there is only a proportional factor that makes the difference). All cohort differences are controlled for by the P62s (thought the adjustment factor).

Method: forecasting

- Do the age profiles differ much across cohorts?
- A slightly more formal model can perhaps shed light on some of the explanations provided in the paper of the increase in LFP at older ages such as that people expect Social Security benefits to be less generous in the future (a question in HRS) or the decline in defined-benefit pensions.
- It would be interesting to see to what extent P62 captures heterogeneity in the LF retention rate. How well does it predict for various subgroups?
- It could be interesting to empirical show what the predictive power of P62 is. Since you assume a Cox proportional hazard model anyway, one might as well estimate it. I simplify considerably:

$P(LF_{t+2} | LF_t) =$

$\lambda_a (\beta_1 P62 + \beta_2 P65 + \beta_3 DB + \beta 5 health + \beta_4 ESSgenerosity + etc\ldots)$