# Defined Contribution Wealth Inequality: Role of Earnings Shocks, Portfolio Choice, and Employer Contributions
# and
# Earnings Volatility and 401(k) Contributions

Teresa Ghilarducci, Joelle Saad-Lessler and Gayle Reznik

*Discussion by Gonzalo Paz-Pardo (University College London)*

# Summary

- **Objective**: study the determinants of the evolution of defined contribution (DC) retirement wealth (by earnings group and by change in earnings).
- **Data**: Survey of Income and Program Participation (SIPP), linked to Social Security Administration (SSA) administrative records from 2009 and 2012.
- **Empirical strategy**: regress changes in retirement wealth on demographic and economic indicators.
- **Result**: DC wealth is more affected by earnings shocks, portfolio choice and employer contributions for workers in the bottom of the earnings distribution than it is for the earnings-richest.
- **Result 2** : DC wealth is affected differently for those workers whose earnings fell than for those whose earnings rose.

# Determinants of DC wealth accumulation

- Studying the determinants of contributions to pension funds is extremely important from a policy-making perspective.
- The role of inertia has been thoroughly studied.
- Previous literature has found that large shocks to earnings (including unemployment spells) affect retirement savings.
- This paper contributes nicely to this literature by studying whether these effects are asymmetric for different types of workers.

# Comment 1: Interpretation

- The fact that workers that experience earnings declines save less in their DC accounts is rational behaviour (period of lower income, but also could be adaptation to lower expected lifetime income).
- In order to extrapolate that they have become more risk averse or less willing to invest in illiquid assets, we need to observe in the data that they are investing in more liquid assets.
- A good way of interpreting this is looking at savings of individuals who, because of their sector and location, perceive their future earnings to be riskier, but then don't suffer any change.

# Comment 2: exogeneity of earnings changes

- The paper emphasizes that individuals whose earnings grew or fell are very similar in terms of covariates, and includes a fixed effect to account for stable individual differences over time.
- However, it is likely that there are unobservables or factors not considered in the regression which are potentially correlated with the probability of job loss or earnings decrease.
- It would be nice to see are detailed list of controls (geographical? sectorial?).

# Comment 3: mechanical effect of contribution.

- Maybe it is all about inertia and either:
  - The change in contribution rates is mechanical and generated by changes in the denominator.
  - The change in contribution rates is caused by individuals who change jobs and enter a new employer-provided plan with different characteristics.
- The first concern is addressed in a robustness check.
- The second concern should be addressed more clearly (it is relevant for interpretation). E.g., by looking at workers who change firms.

# Comment 4: Earnings groups

- Earnings are divided into three groups (bottom 55 percent, middle 33 percent, top 12 percent).
- Is this robust to grouping? It would be more natural to study coefficients e.g. by decile/quartile.
- What role does age play? If earnings groups are not computed conditional on age, we are to some extent comparing older to younger individuals.
  - Indeed the age difference between both groups is statistically significant.
  - Difficult for interpretation, as young(er) people might care less about their DC account.
  - Addressed in robustness check but questions remain - estimate for top 10% in the 25-49 group is similar to estimate for the bottom 55% in ages 50-61, which somehow reinforces the point.
  - In other words, interesting to study the age dimension as well!

# Comment 5: Empirical strategy

- Effects for the top 10% are more imprecisely estimated than effects for the bottom 55%.
- This follows naturally from two facts:
  - Smaller sample size of top 10%.
  - Use of IV instead of OLS only for the top sample due to concerns about measurement error in self-reporting of employer contributions.
- Notice all effects for the bottom 55% (except for being white, education and lifetime earnings) are within 1 standard deviation of the results for the top earners.
  - Also, some effects that should be mechanical (changes in employer contribution rates) are not significant for top 10%.
- It would be interesting to perform a formal test of equality of coefficients between lower/higher earners.
- Quantile regression?

# Other points

- Variables like time spent unemployed, education, etc. are interesting per se more than as indicators of risk tolerance and portfolio choices.
- Similarly, effect for whites is difficult to attribute only to portfolio allocation - there are many other unobservables it can be correlated with.
- Linear effect of weeks spent unemployed is hard to justify - probably differentiating between people who are unemployed for a couple of weeks vs long term unemployed will be more illustrative (ideally, set of dummies for different durations, but sample size limitations).
- Some variables (e.g. lifetime earnings) convey different information for older and younger individuals in the sample.