Progressive Pension and Optimal Tax Progressivity

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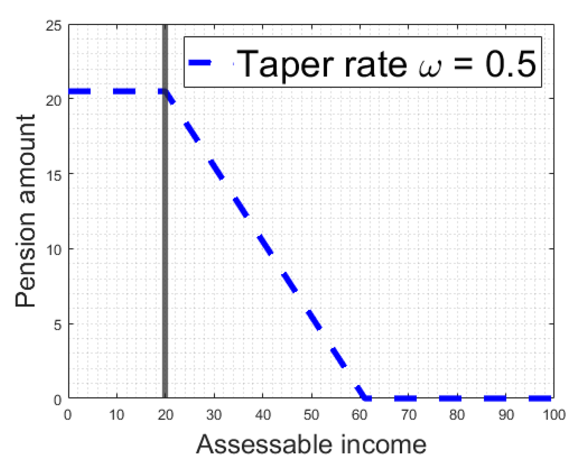
What are the implications of progressive pension for designing an optimal progressive income tax code?

1. Australia: An ideal laboratory for this question

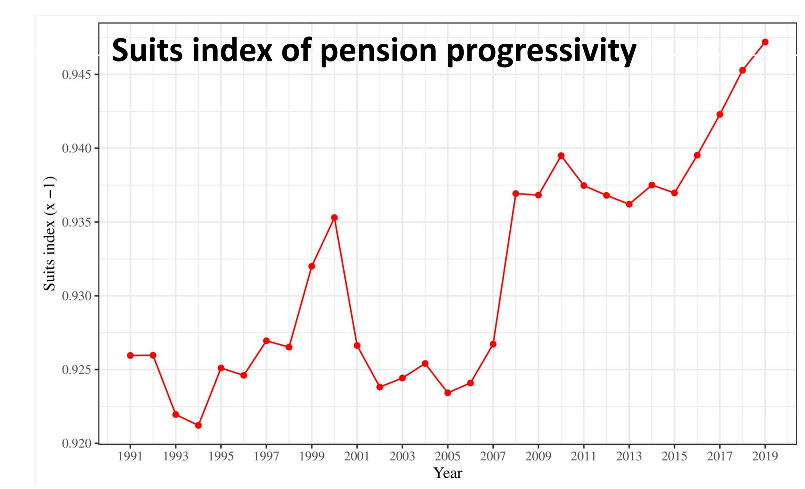
Both tax and pension progressivity rose sharply over the past 3 decades

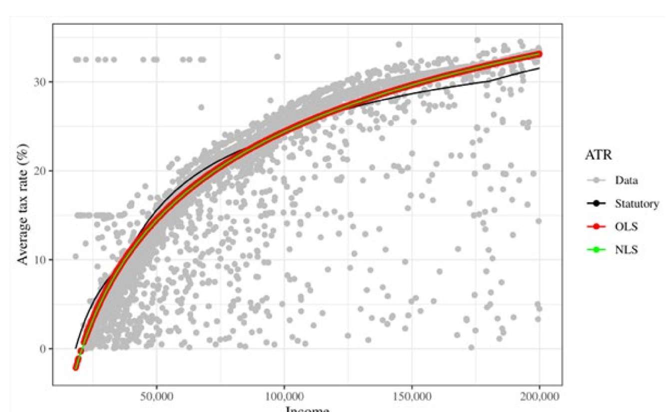


Progressive age pension:

- Means-tested, targeted towards the poor (65 years and above)
- Financed directly by income tax (no separate social security tax).
- ω controls progressivity.
  - $\downarrow \omega$ makes pensions less progressive. $\omega = 0 \rightarrow$ universal coverage.

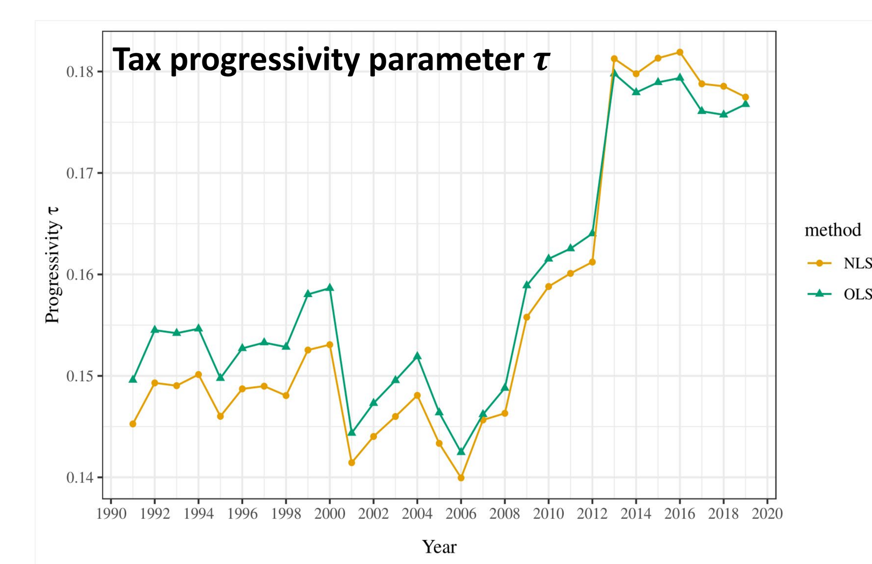
Pension: $P(y_{j \geq jp}) = p^{max} - \omega(y - \bar{y})$





Progressive income tax:

- Both labour and capital income taxed jointly under single tax code.
- Good approximation using parametric tax function (OLS and NLS estimates shown in figure on the left).
- Average tax rate $t(y) = 1 - \lambda y^{-\tau}$
  - $\downarrow \tau$ makes tax less progressive. $\tau = 0 \rightarrow$ flat tax.



Data: Australian Longitudinal Information Files (ALIFE), Longitudinal data of Australian income tax returns. .1991-2019 (0.8-1.1 million obs per year)

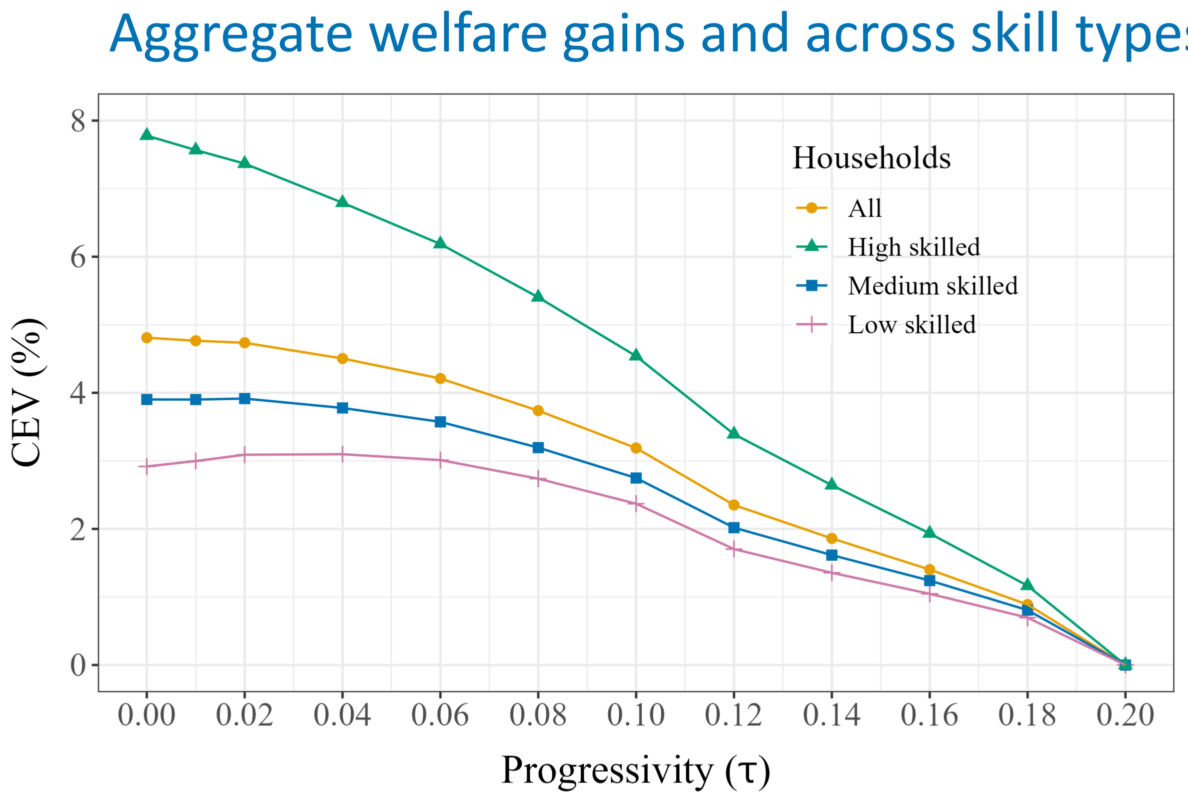
2. Analysis: Optimal level of tax progressivity τ and pension progressivity ω

General equilibrium OLG model:

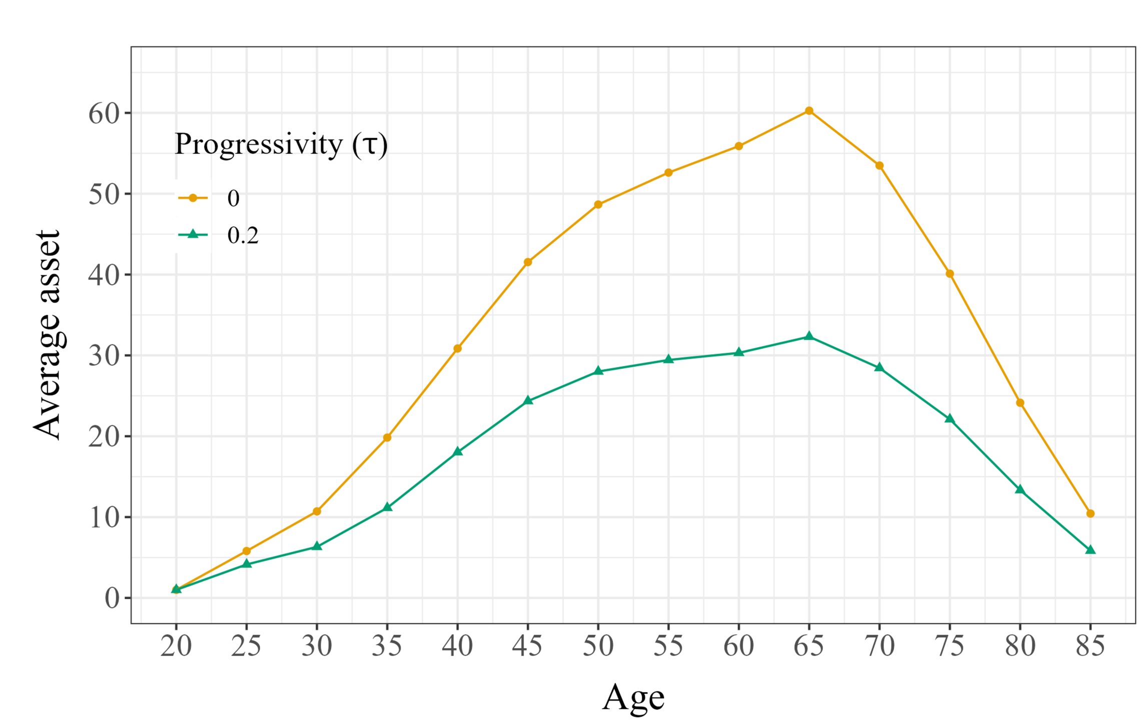
Heterogeneous households (low, medium and high skilled) who face uninsurable labour productivity risk (Bewley 1986, Huggett 1993, Aiyagari 1994). Representative firm and government (good approximation of the Australian tax and transfer system). Balanced growth path, stationary demographics, small open economy.

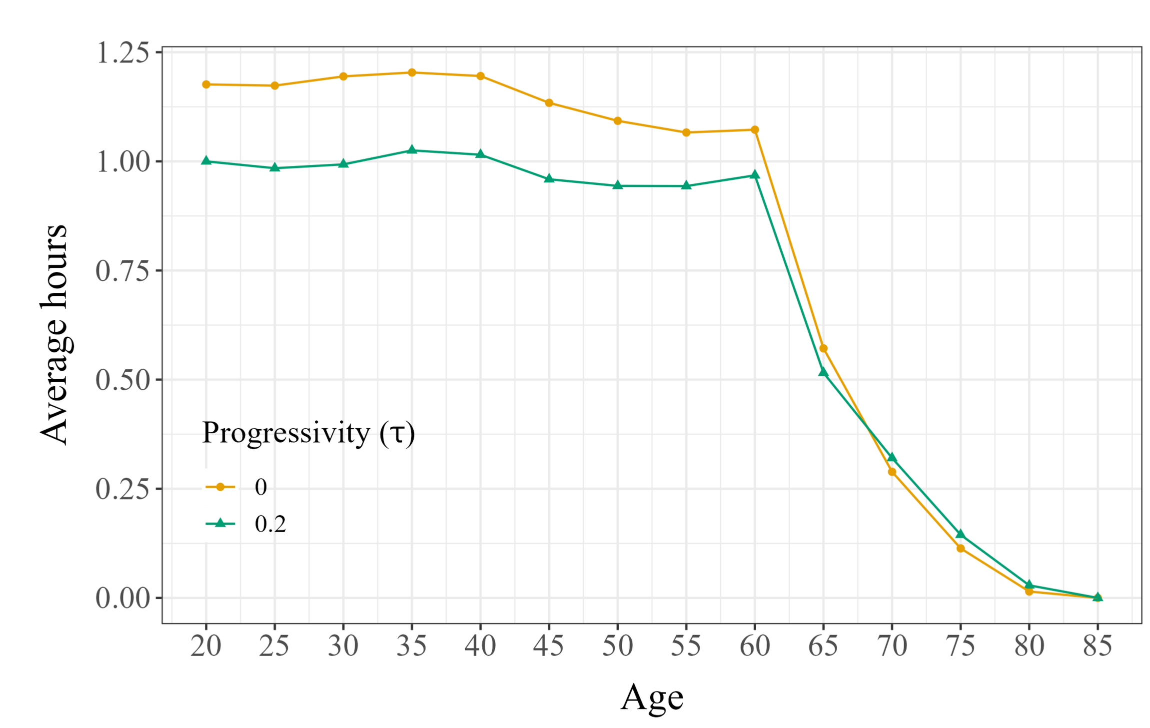
3. Reducing tax progressivity leads to welfare and efficiency gains irrespective of pension progressivity

Aggregate welfare gains and across skill types



2. Efficiency gains over the lifecycle

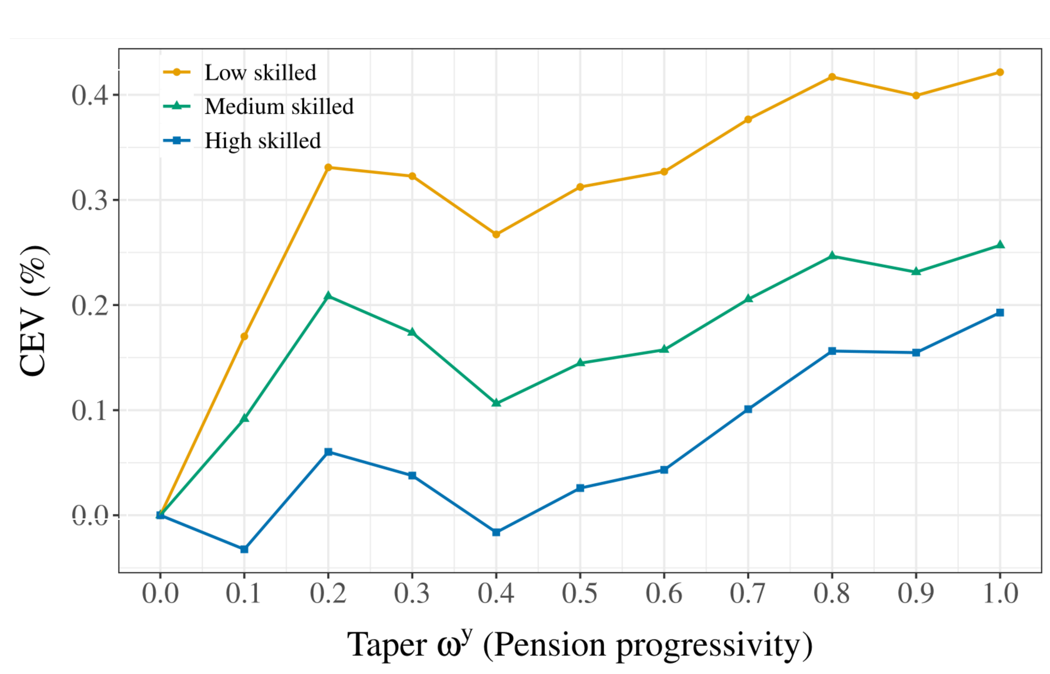




This is because of significant positive incentive effects on labour and savings throughout the lifecycle. These in turn lead to less reliance on age-pension. Only those who have very low levels of labour productivity throughout life need social security in old-age.

4. There is a negative relationship between tax progressivity and optimal pension progressivity

With proportional income tax…. Welfare gains from increasing pension progressivity



When income tax is highly progressive…. Welfare losses from increasing pension progressivity

Conclusion: Improve efficiency via reducing tax progressivity, address redistribution and social insurance via more progressive pensions (and other transfers).

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