

Retirement age from economic perspective: an overview of the issue

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Filip Chybalski

Lodz University of Technology, Department of Management

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Agenda

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Goal

- To find a good theoretical framework for further empirical studies on retirement age in a cross-country perspective. Such studies may serve for identifying the main determinants of the effective retirement age (and answer **the question if statutory retirement age is its main driver**)

Motivation

- A very difficult public debate about the retirement age, e.g. in Poland where the government decided to restore a lower and differentiated (across genders) retirement age (from 67 for both genders to 65/60).
- *People live longer and stay healthy longer, so they should work longer.* Is it really so obvious? What does the theory say about this?

Microeconomic perspective (1)

- **Retirement age is a subject of a pension decision** (the borderline between two phases: accumulation and decumulation).
- Pension wealth (future value of pension contributions):

$$PW_{nc} = \sum_{t=1}^{t_R-t_L} S(1+r)^{(t_R-t_L)-t} = S \frac{(1+r)^{t_R-t_L} - 1}{r}$$

- This means people have to decide how to smooth consumption which means actually how to distribute consumption over the life cycle through saving, including the decision about **when to start consuming savings?**
- **In many cases the effective retirement age may be the easiest variable to be controlled by an agent**, especially at near-retirement age (when it is too late for saving sufficiently and to benefit from interest rate).

Microeconomic perspective (2)

- **Theories of consumption are crucial for understanding the role of retirement age from an agent's perspective.**
- LCH/PIH (Modigliani & Brumberg 1957, Ando & Modigliani 1963, Friedman 1957) based on the Fisher's intertemporal choice (1930): people smooth consumption, perceive their incomes in the long run, interest rate matters since if it is positive, future consumption may cost less (Mankiw 2009).
- Incomes fluctuates over the life cycle since people retire (about age 65). An agent formulates some expectations about incomes after retirement and, therefore, decides to save (Mankiw 2009).

Microeconomic perspective (3)

- Empirical verification of LCH/PIH: **pension savings are underestimated. Thus, a *homo economicus* turns out to be less *economicus*, more *sapiens*** (compare to: Bańbuła 2006).
- If people are not as rational (*homo economicus*) in terms of saving for retirement as one could expect, why to assume that they are rational as for the decision about when to retire (pensionable age)? If voluntary saving are not a perfect substitute for obligatory savings, **why to assume that an autonomic decision about when to retire could be a good substitute for pensionable age?**
- Replacement rate as a function of retirement age:

$$r_{rep}(t_R) = S \frac{(1+r)^{t_R-t_L} - 1}{1 - (1+r)^{-(t_D-t_R)}}$$

Macroeconomic perspective – GDP division

- Pension system as a tool for GDP division between generations (Góra 2003, Barr & Diamond 2006). **Retirement age determines the borderline between these generations.**
- **The choice between labour (wage) and retirement (leisure) on the micro level is crucial for GDP and its division (today and tomorrow).** A pensionable age (or minimal retirement age) is what constraints this choice from an agent's perspective.

Pension system and labour market: a trade-off (1)

- **Final salary pension schemes** and: (1) decision about when to retire (which periods of work determine mostly the future pension benefits, what is the motivation to be promoted at near-retirement age?) or (2) youth's motivation to work determined by the relation salary-pension benefit (Barr & Diamond 2006, 2014).
- Pensions systems and firms' behaviour: **pensions as altruism** (Logue 1979), **pensions as deferred pay or contingent claims – a driver of long-term loyalty to employer** (Blake 2006).
- **Competition between the young and the old on the labour market** (is there perfect substitution between them? The theory and empirical studies suggest it is not). Arguments:

Pension system and labour market: a trade-off (2)

- The relation „a good employer - a good employee” builds **an informal contract that motivates both sides to continue it beyond the retirement age**. It depends on the worker’s productivity and substitution possibilities.
- **Substitution may not be so easy, since both employees and employers are not homogeneous** (matching models: Diamond 1989, Pissarides 1985, Mortensen 1986, Blanchard & Diamond 1989). Older people are rather replaced by other experienced workers (vacancy chain, Blum et al. 1997).

Pension system and labour market: a trade-off (3)

- Early retirement (the idea of *worksharing*) aiming at reducing unemployment does not work. Young people work for lower wages, however their trainings cost. So, the young may cost actually not less than older workers (Kapteyn et al. 2004).
- Early retirement reducing the labour force may stimulate inflation through wage pressure (wage-push inflation).
- **Early retirement changes the proportion between generations** (workers and pensioners). This may have **obvious political consequences** (political promise to support the growing population of pensioners, e.g. an increase in benefits).
- **Age-productivity profiles are differentiated across professions.** Age may be a good predictor of unemployment among older people, however only in case of low-skilled people (Roger & Wasmer 2011).
- **Wage-productivity profiles suggest that in the later phases of working life employee earn more than it results from their productivity.** Lower earnings in the earlier phases of professional life caused by employer's investment in human capital (cost shared between employers and employees) are then compensated for the employees (returns on human capital). **That is why the retirement of older workers may be beneficial for employers (to avoid paying higher wages too long)** (Boeri & Ours 2001).

Conclusions/Questions for empirical studies

- Taking all groups (employers, employees, retirees) into account, as well as different perspectives (micro and macro), **retirement age seems not to be a stimulant variable (the-greater-the-better) but rather a variable with the optimal value.**
Argument: productivity-wage profiles (However, this conclusion does not support lowering the retirement age in Poland).
- **Older people continuing working beyond retirement age do not block vacancies for young people.** The problem is more complex (matching models, vacancy chain).
- Motivation for further empirical studies: **The question how to encourage people to work longer is very up-to-date. Is the statutory retirement age crucial for keeping older people economically active?** If not, what are other drivers of effective retirement age?

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