

Distance to Retirement and Older Workers' Employment: The Case For Delaying the Retirement Age

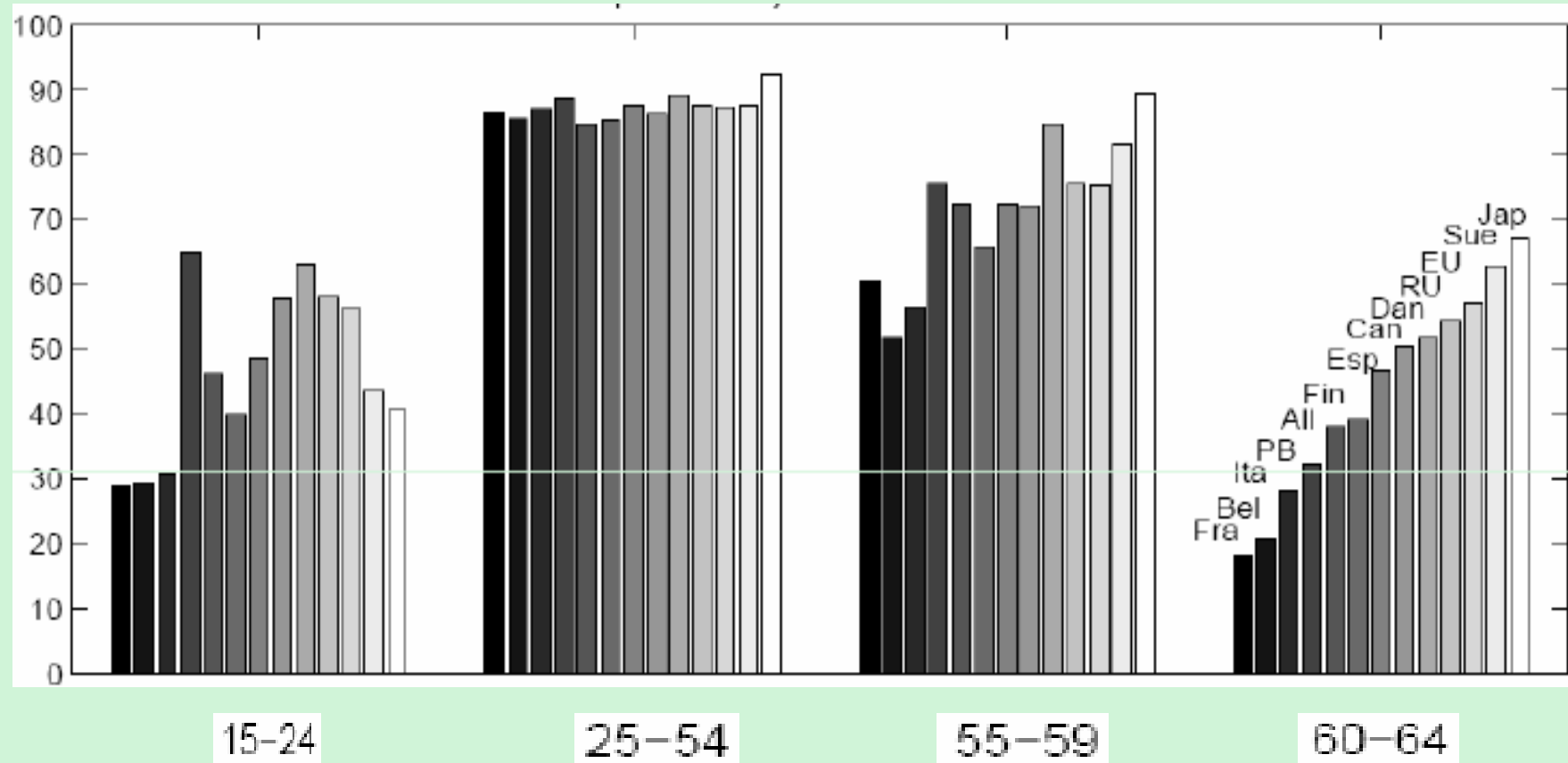
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Employment rates over the life cycle (2006, OECD) only male population



Employment rates differ only at the extremities of the life cycle: younger and older workers' employment is particularly weak in some countries (same ranking)

The distance to retirement effect

We propose an additional explanation of older workers' low employment, very intuitive, but quite innovative, reversing the policy recommendations.

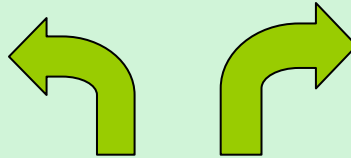
The short distance to the retirement age could play in itself a key role in accounting for the low employment rate of older individuals before the retirement age ("a distance effect")

postponing the age of retirement is likely to increase the employment rate of older workers.

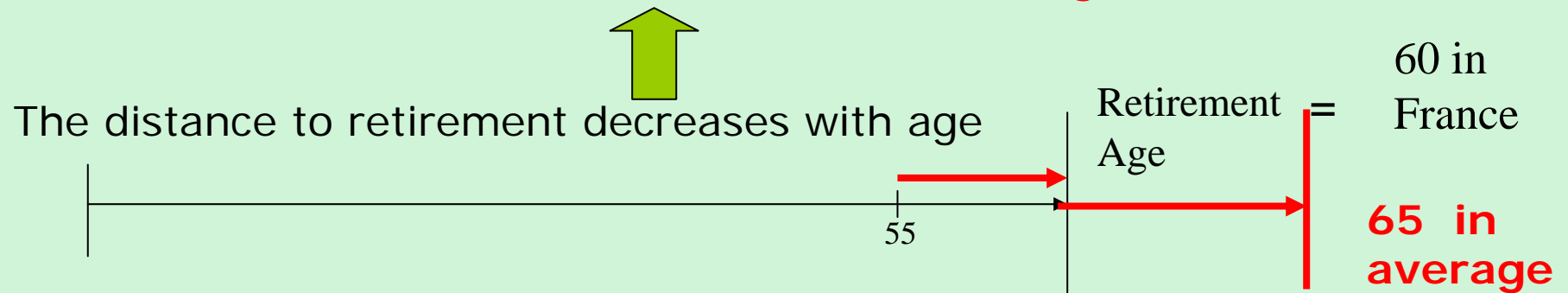
...on labor demand and labor supply

Less hirings and more firings from firms

Less search effort from unemployed workers



The retirement age determines the employment duration and thus the return of any investments (in presence of search costs) in the labor market before this age



We observe a strong decrease in the employment rate just before the retirement age in all countries: it is not the biological age (its absolute level) that matters in explaining the employment rate of older workers, but what can be called the social age (the age relative to the retirement age).

The presentation outline

1. some empirical evidence at the individual level that the distance from retirement affects the probability to be employed.
2. a theoretical model to identify key mechanisms : unemployed older workers prefer waiting for their close retirement age to come, without searching for a new job.
3. a quantitative evaluation of the distance effect by using a calibrated version of the model. Strong interaction with generous unemployment benefits.
4. a quantitative evaluation of a reform introducing more incentives to delay retirement age.

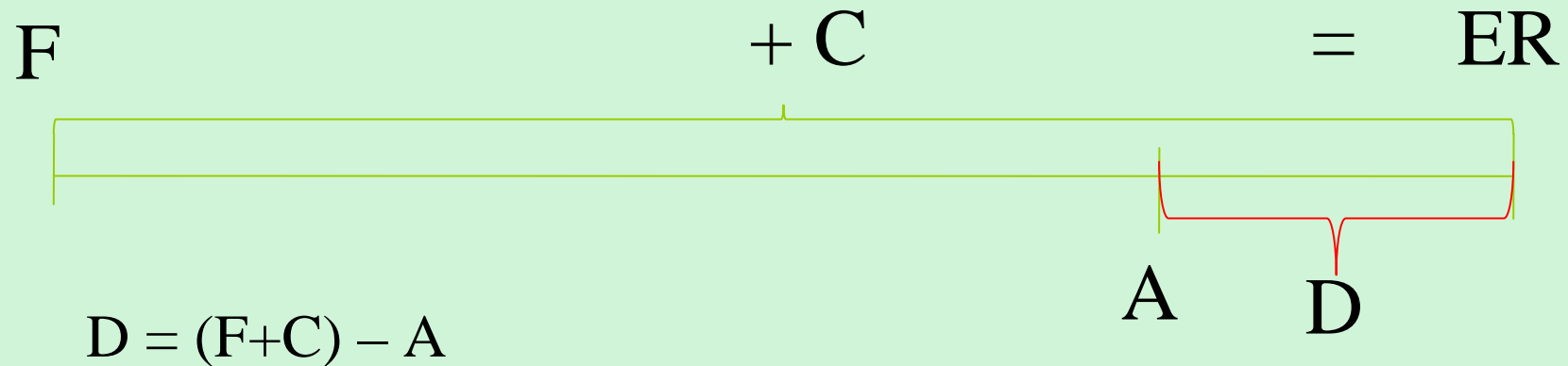
Logit Models

We estimate on French data logit models that measure how the distance to the retirement age affects the chance of being employed before this age.

1. The estimate is based on 13 successive waves of the LFS (from 1990 to 2002).
2. We control for key determinants of the employment probability : age, age squared, marital status, number of children, size of city, sector, citizenship and occupational group,...
+ Age dummies after 50 to control for older worker characteristics, especially more generous unemployment benefits.

How to compute the distance to retirement?

Problem : the expected retirement age is unknown
→ the full pension age corresponds to the retirement age for more than 90% of the French population (no pension adjustments) . It is determined by adding the required number of contributive years (C) to the age at first job (F)



Where does the heterogeneity come from?

$$D_i = (F_i + C_i) - A_i$$

At a given age A_i , there are two sources of heterogeneity in the distance to retirement:

- There is some heterogeneity in the age at first job F_i .
- The 1993 SS reform has introduced some heterogeneity in the required number of contributive years C_i

Exploiting the heterogeneity in F_i

The distance to retirement is linked to the work experience

$$D_i = (F_i + C_i) - A_i = -(A_i - F_i) + C_i = -E_i + C_i$$

A positive effect of the distance on the probability on being employed could actually be due to a negative influence of experience, ie. the distance from entry into the labor market

We take advantage of the French Social Security system which implies that experience and distance to retirement are not necessarily linked for individuals who are constrained by the 60 or 65 bounds.

$$R_i = \text{Max}(60, F_i + C_i) \text{ if } R_i < 65 \text{ otherwise } R_i = 65$$

on each constrained sub-population (the "60" and the "65"), at a given age, experience does not convey any information on the distance to retirement.

Distance to exit rather than distance from entry

These two constrained sub-populations allow us to identify the respective role of the distance to retirement and of the experience

The distance to retirement affects significantly the probability of being employed (but not the experience...)

For a worker aged 59 (aged 56), if the distance to the retirement age is increased by one year, this raises the employment odds by 31% (by 10%).

Interaction with generous unemployment benefit

Heterogeneity in C_i

The gradual implementation of the 1993 reform implies that the additional contributing year depends on the cohort.

The required number of contributive quarters amounts to 150 quarters for individuals born in 1933 or earlier, while the 1934 generation needs to contribute 151 quarters to Social Security, the 1935 generation 152 quarters and so on, and individuals born in 1943 or later, 160 quarters.

In addition, there are individuals in our sample who are not affected by the reform. This offers a double variation that gives the opportunity to identify the effect of the increase in the distance to retirement due to the reform by using difference-in-difference estimation

This distance to retirement does matter

Individuals who experience an exogenous increase in their distance to retirement have a higher probability of being employed at 59 years old.

More precisely, whatever the experience level, the higher the number of additional contributing quarters (exogenously) introduced by the 1993 reform, the higher the probability of being employed.

A job search model

- A job search model is a natural candidate to a global approach to older workers employment, provided life cycle features are taken into account.
- Following here Castaneda, Diaz-Gimenez and Rios-Rull [1998] or Ljungqvist and Sargent [2002], agents age stochastically.
- We discard saving decisions in order to keep the model tractable.
- The probability of being laid off at the beginning of the period is $\lambda \in [0, 1]$.

Job search and retirement decision

- a modified version of McCall [1970]'s model where unemployed workers choose their search intensity according to their distance to retirement and the level of unemployment benefits.
- Workers choose their retirement age according to the level of the pension and the degree of actuarial fairness.

The job search effort falls when retirement is imminent

The expected return of job search is given by the increase in the probability of getting a wage offer times the expected surplus of employment (relative to the unemployment value).

When the retirement age is coming, the job surplus narrows as employed and unemployed workers face the same expected value in the near future : the value of being retired.

Calibration: policy parameters

The unemployment benefits for middle-aged workers are calibrated in order to match the observed average replacement rate of 37 (Blanchard and Wolfers (2000))

Given the legislation in the early nineties, we add a premium of 11.5% on the unemployment benefit for workers older than 55.

We calibrate the pension level in order to match the observed replacement rate. Moreover, in our benchmark calibration, we consider an actuarially-unfair Social Security scheme as was the case until the 2003 reform in France. No pension adjustment is taken into account in the case of delayed retirement.

Calibration: other parameters

We estimate on the French Labor Force Survey the wage distribution parameters and the separation rates for each age group.

We choose to calibrate the parameter characterizing the job search effort in order to replicate the elasticity of unemployment duration to the unemployment benefit.

Model assessment

Table 5: Employment rates

Age groups	C_1	C_2	C_3	C_4	C_5
Age in years	20-29	30-49	50-54	55-59	60-64
1. Data	0.830	0.883	0.847	0.559	0.024
2. Benchmark model	0.827	0.867	0.874	0.549	0

We replicate quite well the decline in the employment rate before the retirement age.

What is the relative contribution of the short distance to retirement, the higher generosity of the unemployment benefits and the higher separation rate?

No pure distance effect, but strong interactions

Some counterfactual experiments

1. giving the same high unemployment benefits to all the workers : the employment rates decrease at all ages but much more for older workers close to retirement age
2. giving the same low unemployment benefits to all the workers : the employment rate of the older workers is now similar to the other age groups : strong interaction between high unemployment benefits and the short distance to retirement
3. The conclusion goes in the same direction concerning the separation rate, but to a lesser extent.

Delaying the retirement age

We implement an actuarially-fair adjustment pensions scheme. The pension increases if workers choose to retire at age 65.

TAB. 5 – Incentive schemes and employment rates

Age groups	C_1	C_2	C_3	C_4	C_5
Age in years	20-29	30-49	50-54	55-59	60-64
1. Benchmark	0.828	0.867	0.874	0.549	0
2. Retirement Policy	0.830	0.867	0.874	0.714	0.201

The double dividend

incentive schemes not only encourage individuals to keep their jobs after the early retirement age, but also make job offers more attractive to unemployed people before this age because the distance to retirement increases. The employment rate of age group C_4 goes up from 55% to 71%, despite the high non-employment benefits and separation rates.

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Conclusion

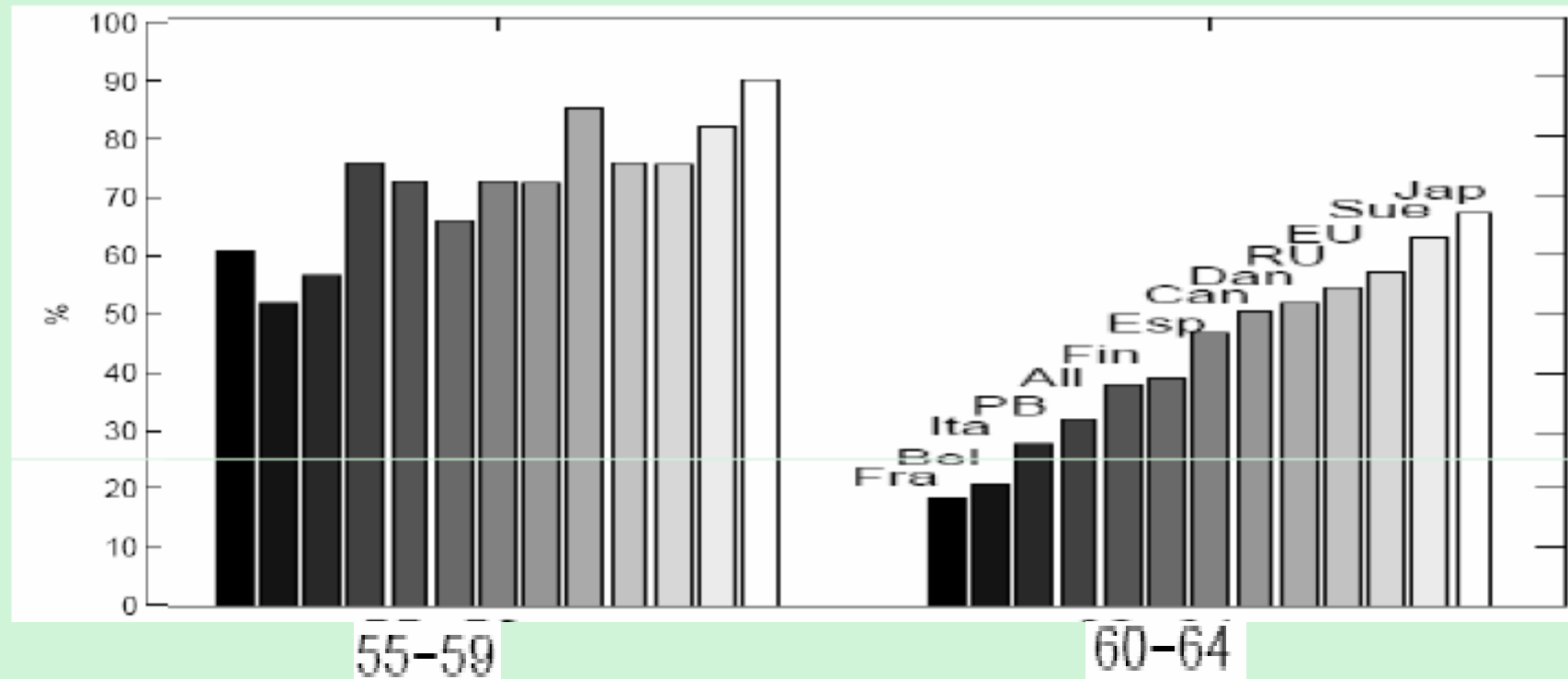
- Individual data show that the distance from retirement matters.
- A job search can easily explain this effect provided the retirement decision is taken into account
- This must be taken into consideration for any SS reforms.

Extension

- Extensions to labor demand could strengthen the distance effect : firms prefer to recruit younger workers when vacancy costs are present, and they also prefer to fire older workers in case of bad events. The Mortensen-Pissarides model in a life cycle setting delivers a decreasing employment rate with age.

See Cheron, Hairault and Langot (2008),
IZA Working Paper

The paper focus on older workers



60-64 group : differences in retirement age

55-59 group : what is the cause of the low performance of some countries ? Same ranking...

The usual causality and policy recommendation

There are some intrinsic factors at the origin of the weakness of older workers' employment before 60 :

- the labor demand for older workers is dampened by (relatively) high wages, (relatively) low productivity, age discrimination,...

Delaying the retirement age may be criticized in this context of job scarcity for older workers

- the labor supply is cut by generous assistance programs specifically designed for older workers.