

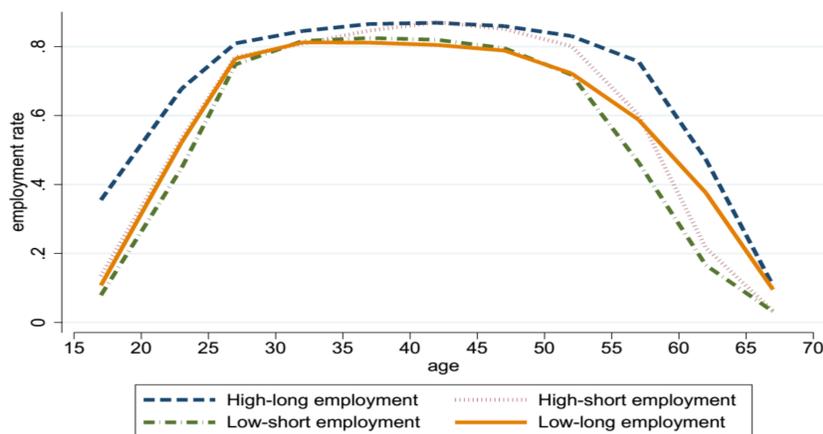
# PRODUCTIVITY, EMPLOYMENT AND AGEING

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We jointly investigate the age-productivity and age-employment profiles in each of the 28 European Countries using the microdata from harmonized Survey of Income and Living Conditions (SILC 2004-2009) in order to address the question whether the drop of productivity causes the retirement decisions. Based on the employment rates and the age of leaving labour market, we propose four clusters of European countries. Comparing the age-productivity profiles, calculated with non-parametric and semi-parametric methods, we find that the least productive workers leave labour market earliest especially in countries with short working life.

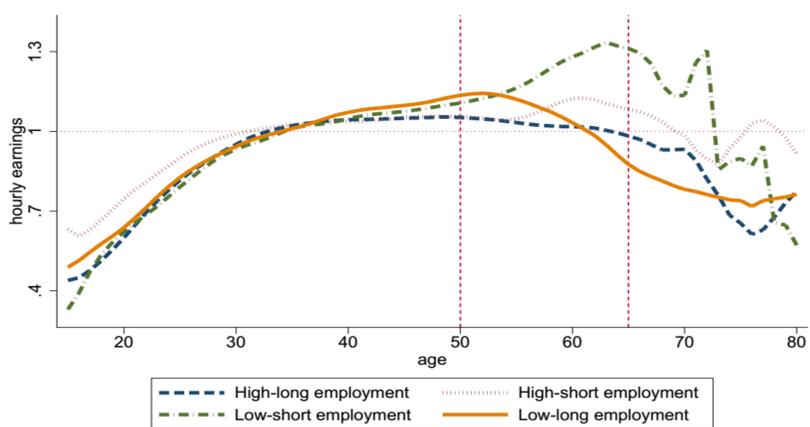
## 1. AVERAGE EMPLOYMENT RATES IN 4 CLUSTERS



Employment patterns by age differ in European countries in two dimensions: **employment rates** at prime age and average **employment length**.

4 clusters: high employment rate and long employment, high employment rate but short employment, low employment rate but short employment, low employment rate and short employment.

## 3. PRODUCTIVITY PROFILES IN CLUSTERS



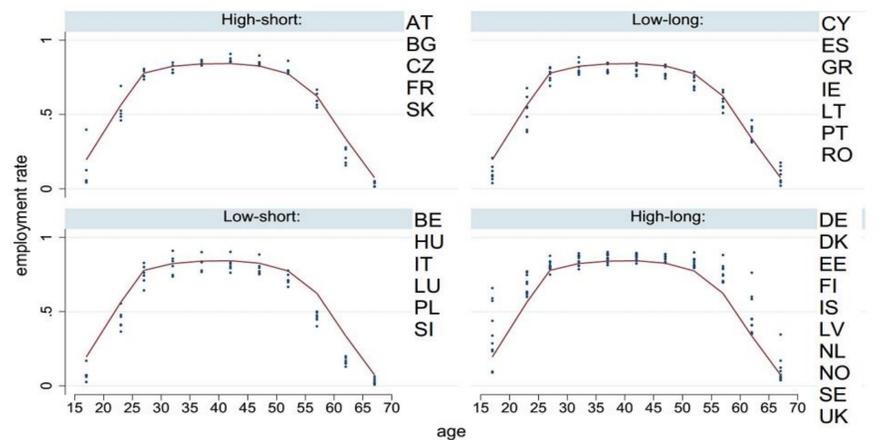
Low and short employment countries show jumps and drops in productivity with age.

Low-short employment countries show greatest jump after the age of 50.

## 5. KEY FINDINGS

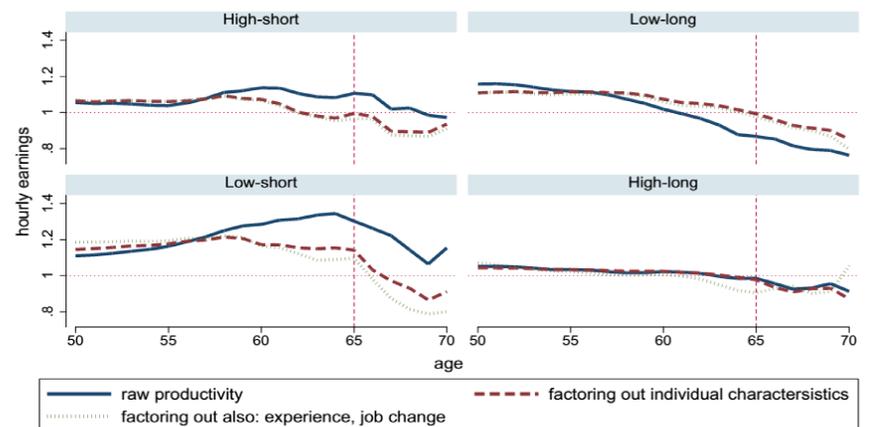
- ✓ Drop of productivity with age can hardly be observed in EU, signalling that the substitution among different skills with age enables to sustain productivity.
- ✓ Leaving labour market is highly selective in countries with short employment pattern.
- ✓ Factoring out personal and job-specific characteristics flattens the age-profile of productivity.
- ✓ Employment profiles are related to retirement system parameter: official retirement age and replacement rate.

## 2. EMPLOYMENT PROFILES: COUNTRY-SPECIFIC AGAINST AVERAGE IN THE WHOLE SAMPLE



Classification of the countries does not follow the most common Esping-Andersen or Beveridge/Bismarckian welfare regimes.

## 4. PRODUCTIVITY PROFILES AFTER FILTERING OUT SOCIO-ECONOMIC AND JOB SPECIFIC CHARACTERISTICS



Age-productivity profiles flatten when individual and job related characteristics are factored out with semi-parametric regression.

The flattening is opposite in low-short and low-long clusters.

## 6. POLICY IMPLICATIONS

- ✓ Rise in employment among older age groups should be most pronounced among low-productive, low-paid workers. The aggregate effect on GDP of rising employment among older workers could be smaller than expected.
- ✓ Rise in statutory retirement age should affect longer work of the least productive workers.
- ✓ The productivity drop with age does not seem to be the binding constraint for prolonging working life in the Eastern European countries.