

The evolution of job tenure in Europe

1995-2019

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Job tenure

- The idea of a “job for life” was part of European citizens’ collective imaginary in the second half of the 20th century.
- However, there is a growing sense among the European population that the fundamental changes in the labor markets broke the implicit contract of the long-term commitment between the employers and workers resulting in a loss of stable jobs.
- New technologies and global competition may require both employers and employees to be more flexible. Firms will need to be more agile to adjust to fast-evolving demands for new products and services, while workers will have to adapt to frequent transitions between jobs.
- This paper aims to document the evolution of job tenure in Europe between 1995 and 2019 using the EU-LFS. The preliminary analysis accounts for the role played by individual and country characteristics, and will explore possible drivers of the observed changes.

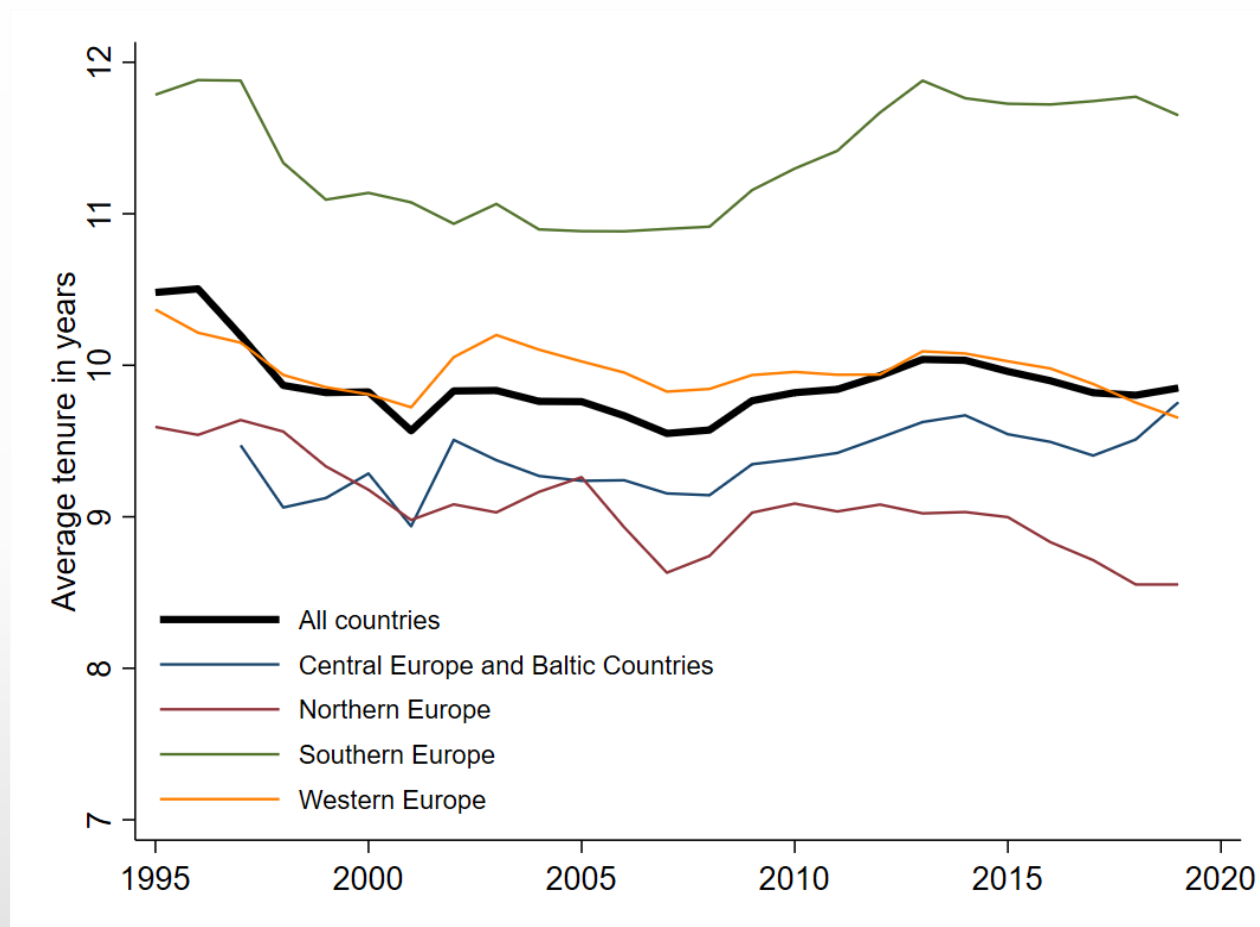
Outline

1. Basic descriptive statistics.
2. Group analysis: age-period-cohort decomposition with a focus on birth cohorts.
3. Individual level analysis – to control for compositional changes in groups.
4. Preliminary results and next steps.

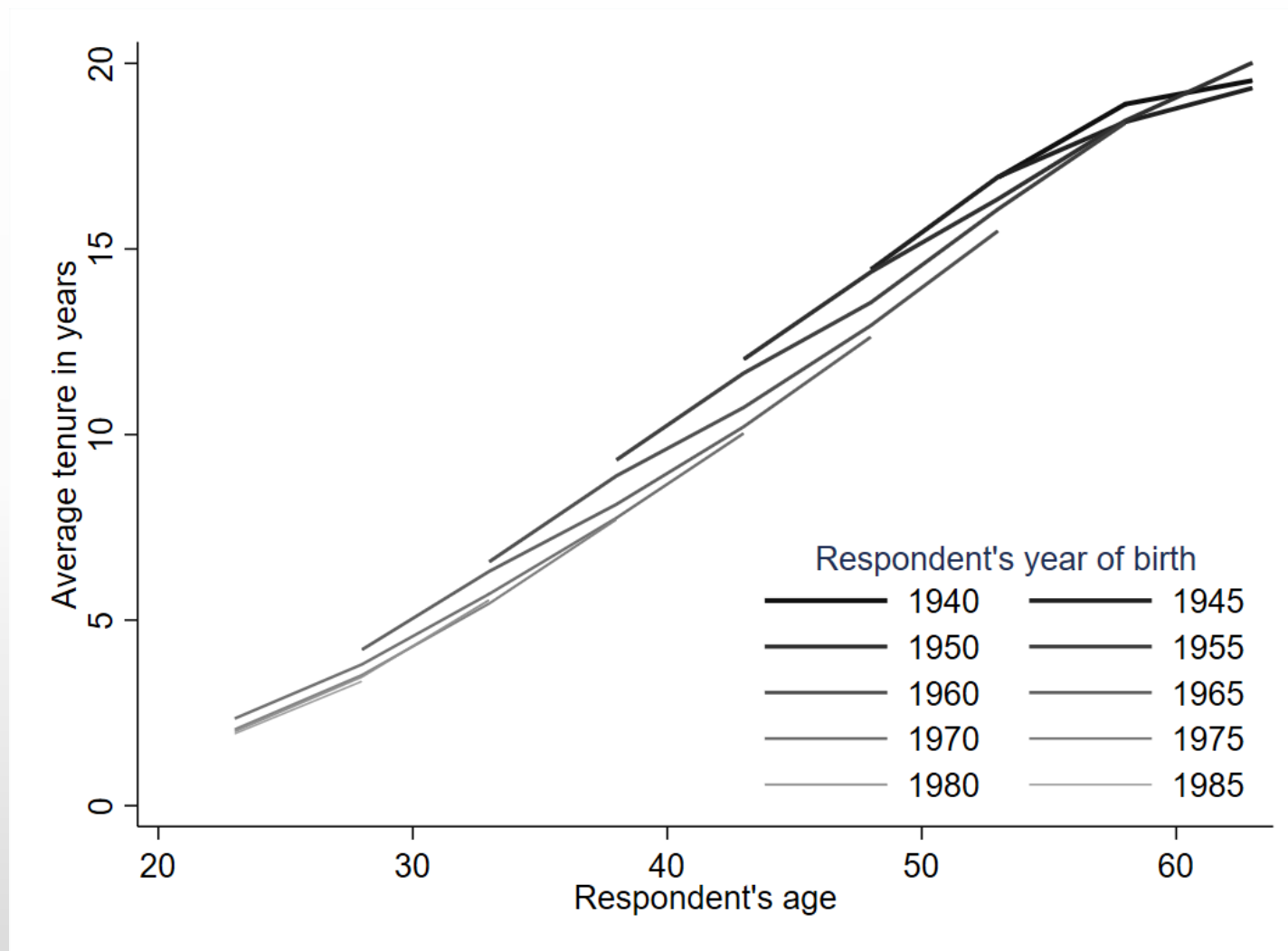
Data

- EU-LFS: annual labor force survey covering EU+EEA countries (29 countries in total).
- Time period covered is 1995 to 2019 – most countries since 1995, but a few enter the sample in 1998, 2000 and 2002.
- Age is codified in 5-year age groups – this is a restriction for the empirical analysis as it precludes from having 1-year birth cohorts.

The evolution of average job tenure



Age profile of job tenure, by cohort

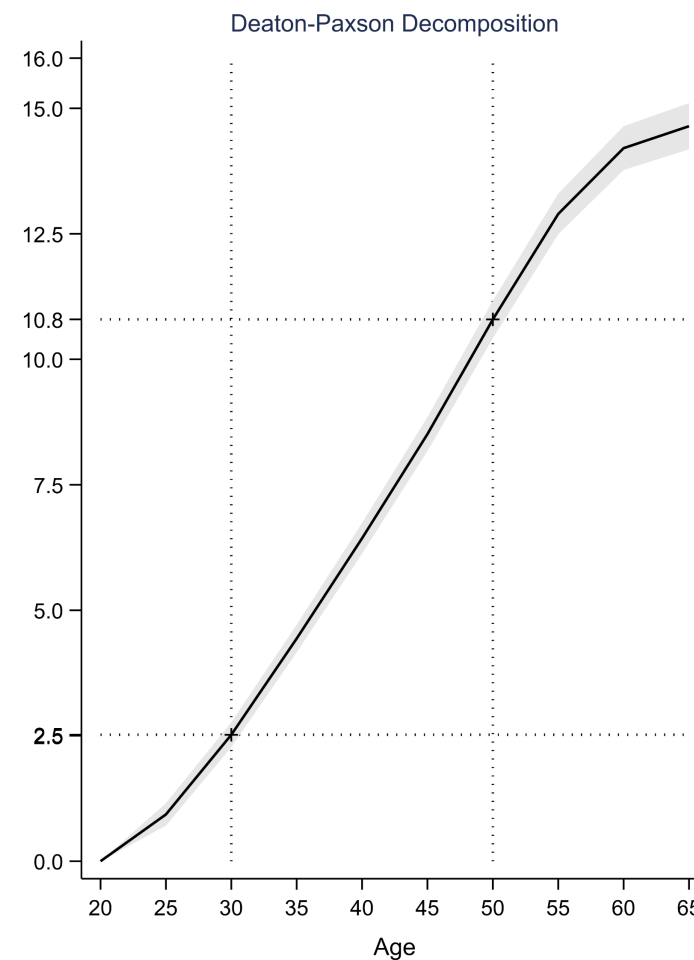
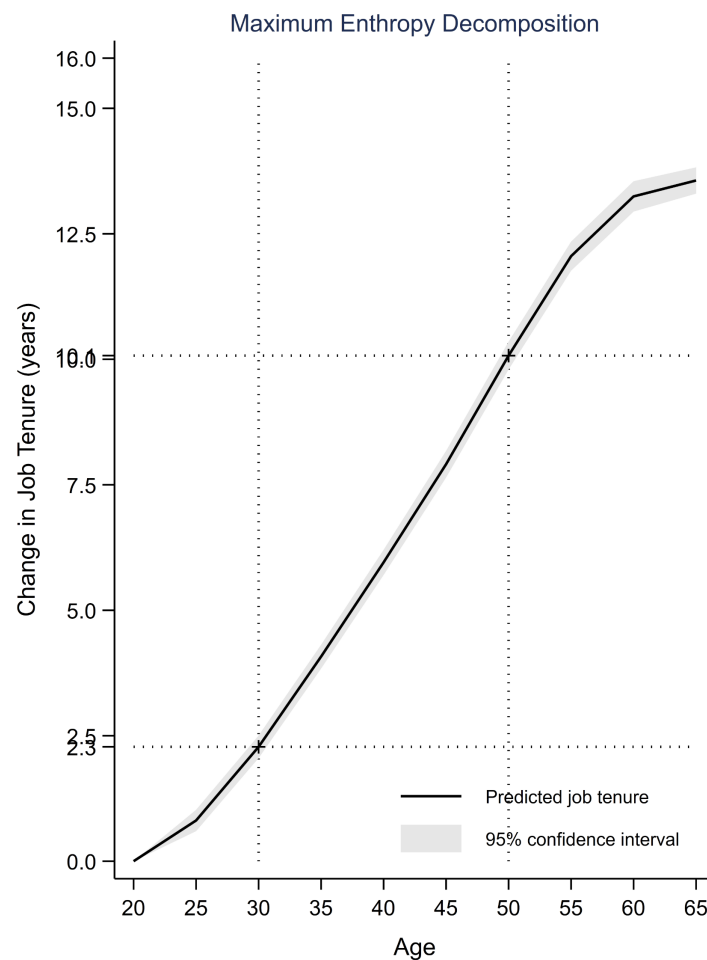


Age-period-cohort decomposition

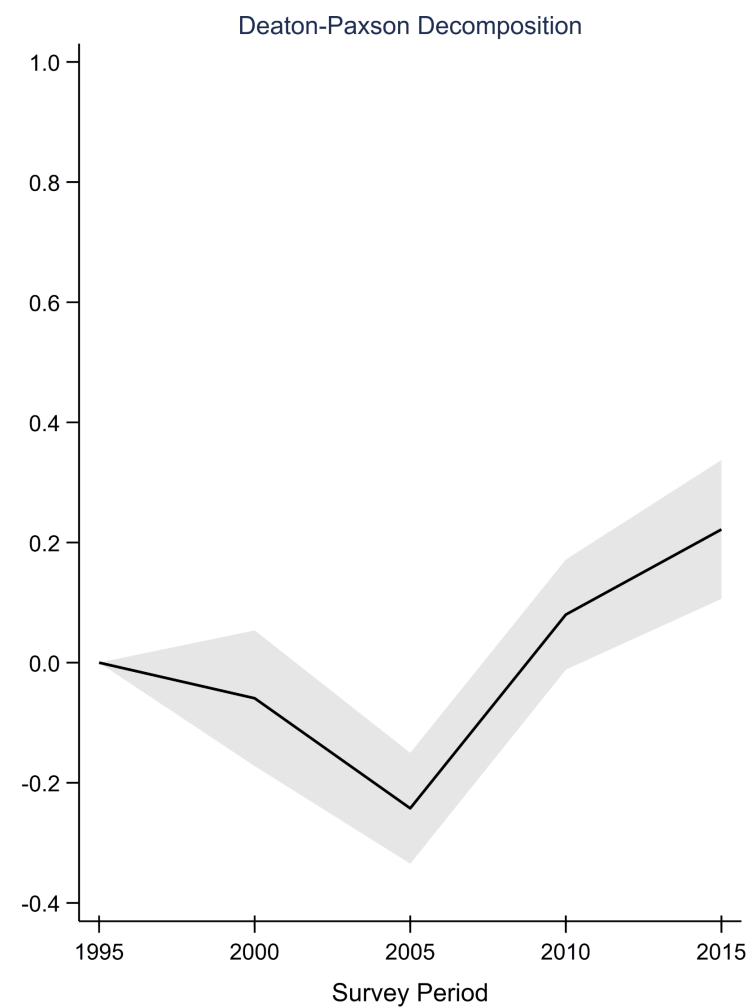
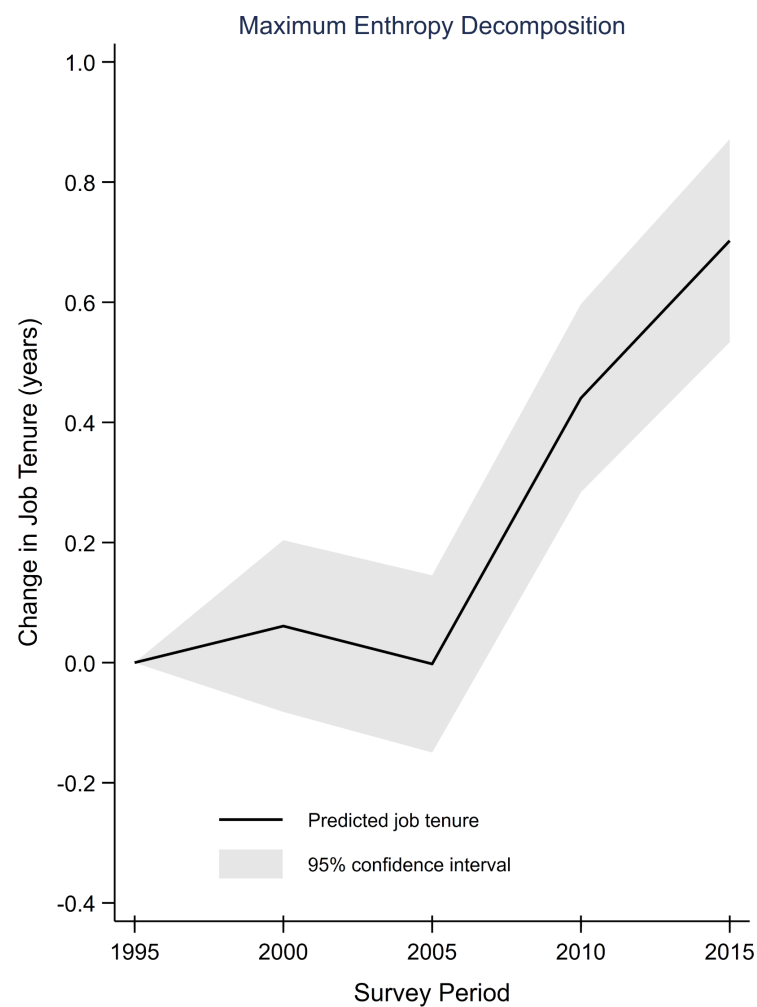
$$T_{apc} = \sum_{k=1}^K \alpha_k A_k + \sum_{l=1}^L \pi_l P_l + \sum_{m=1}^M \gamma_m C_m + \varepsilon_{apc}$$

- Tenure as a linear function of age, period and cohort effects.
- EU-LFS collects age information in 5-year intervals. We have 11 age intervals, 5 survey year intervals, and 15 birth cohorts.
- Linear APC models don't allow for identification of all parameters. Deaton and Paxson (1994) imposes orthogonality conditions on period effects for identification of age and cohort effects.
- An alternative, **less restrictive**, approach is using a maximum entropy estimator, which generates a distribution of estimates that satisfy the linearity condition and produces the expected value of the parameters corresponding to the maximum entropy probability distribution.

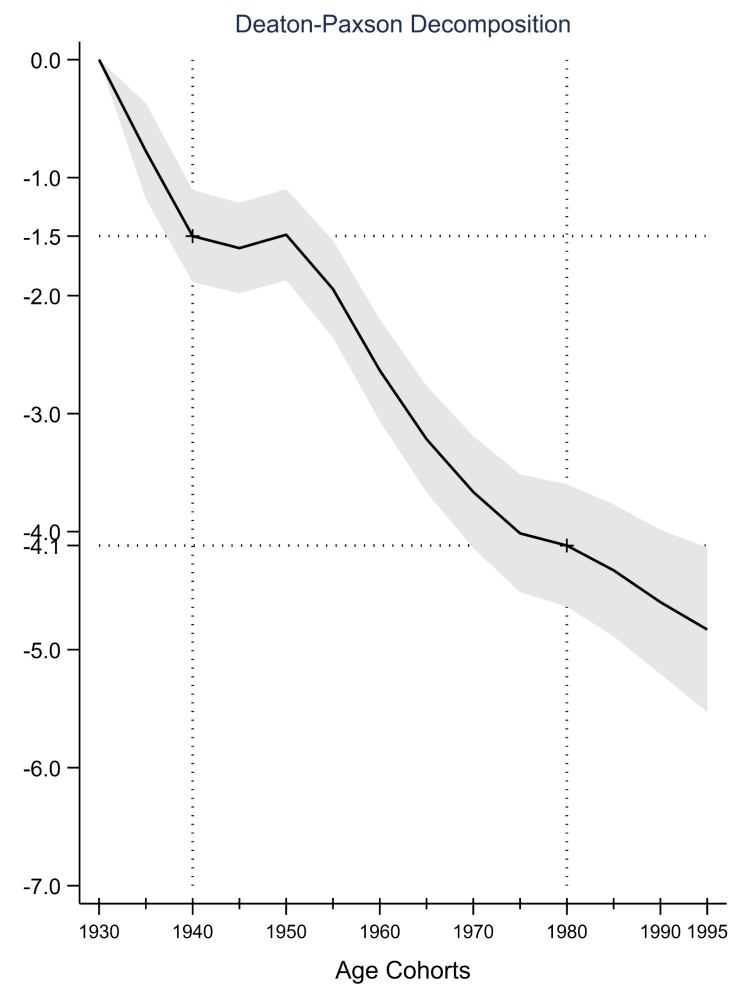
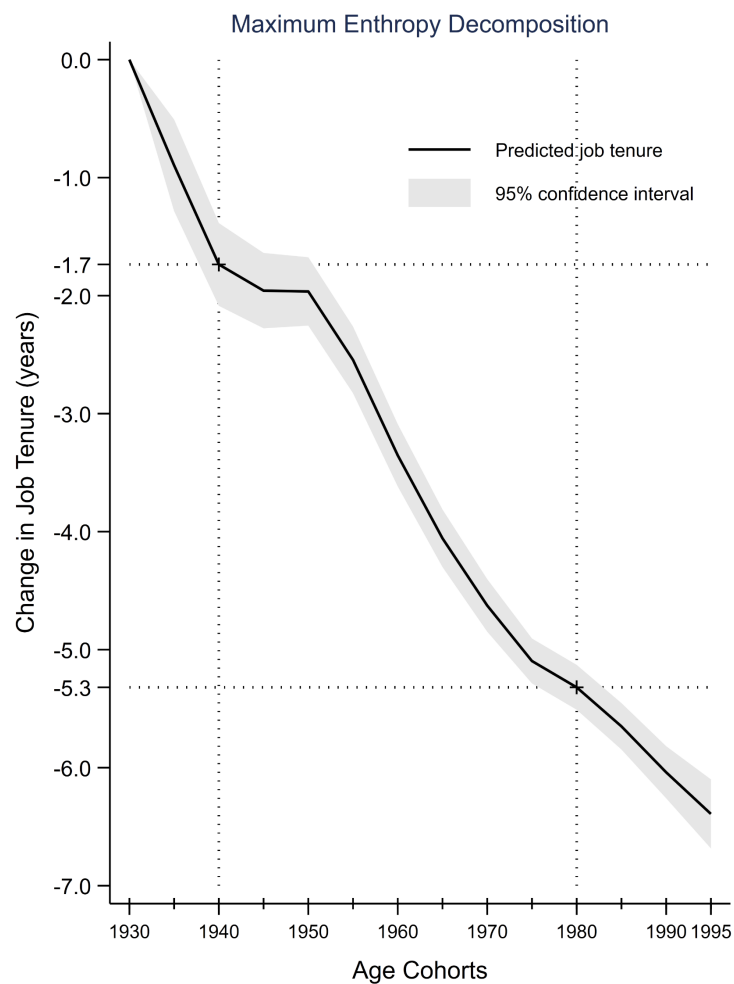
APC decomposition: age profile



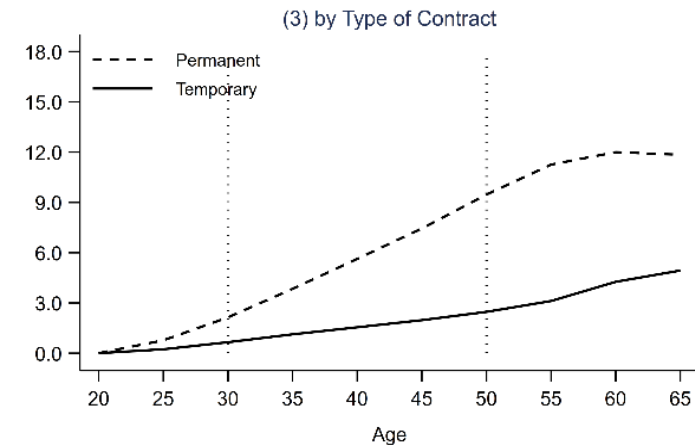
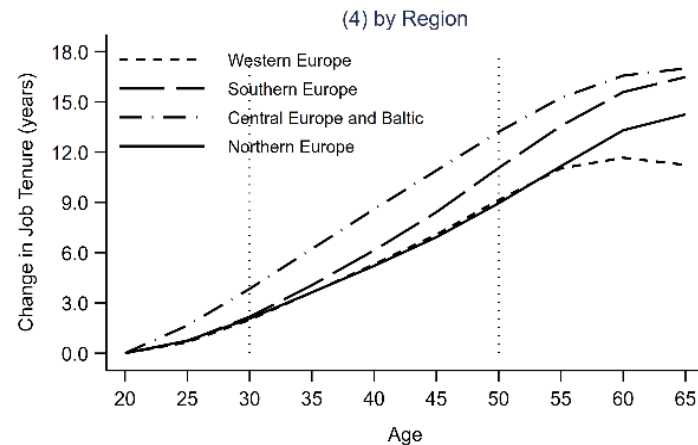
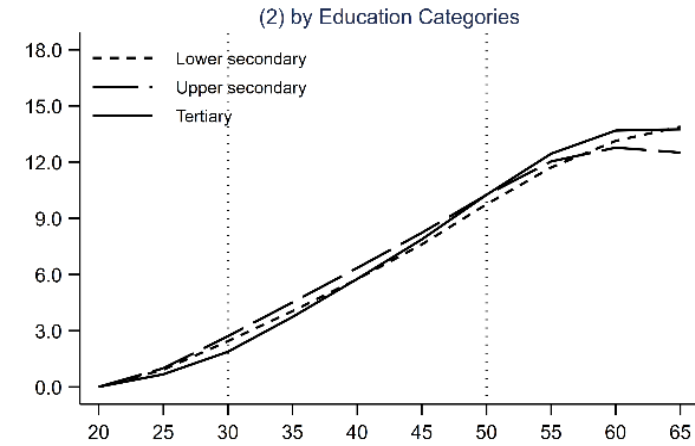
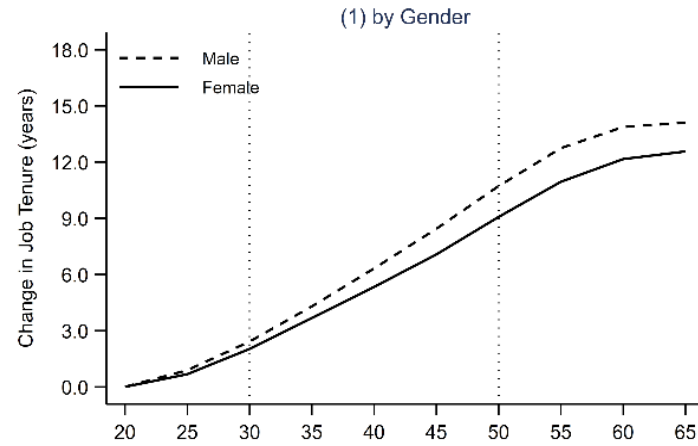
APC decomposition: time period profile



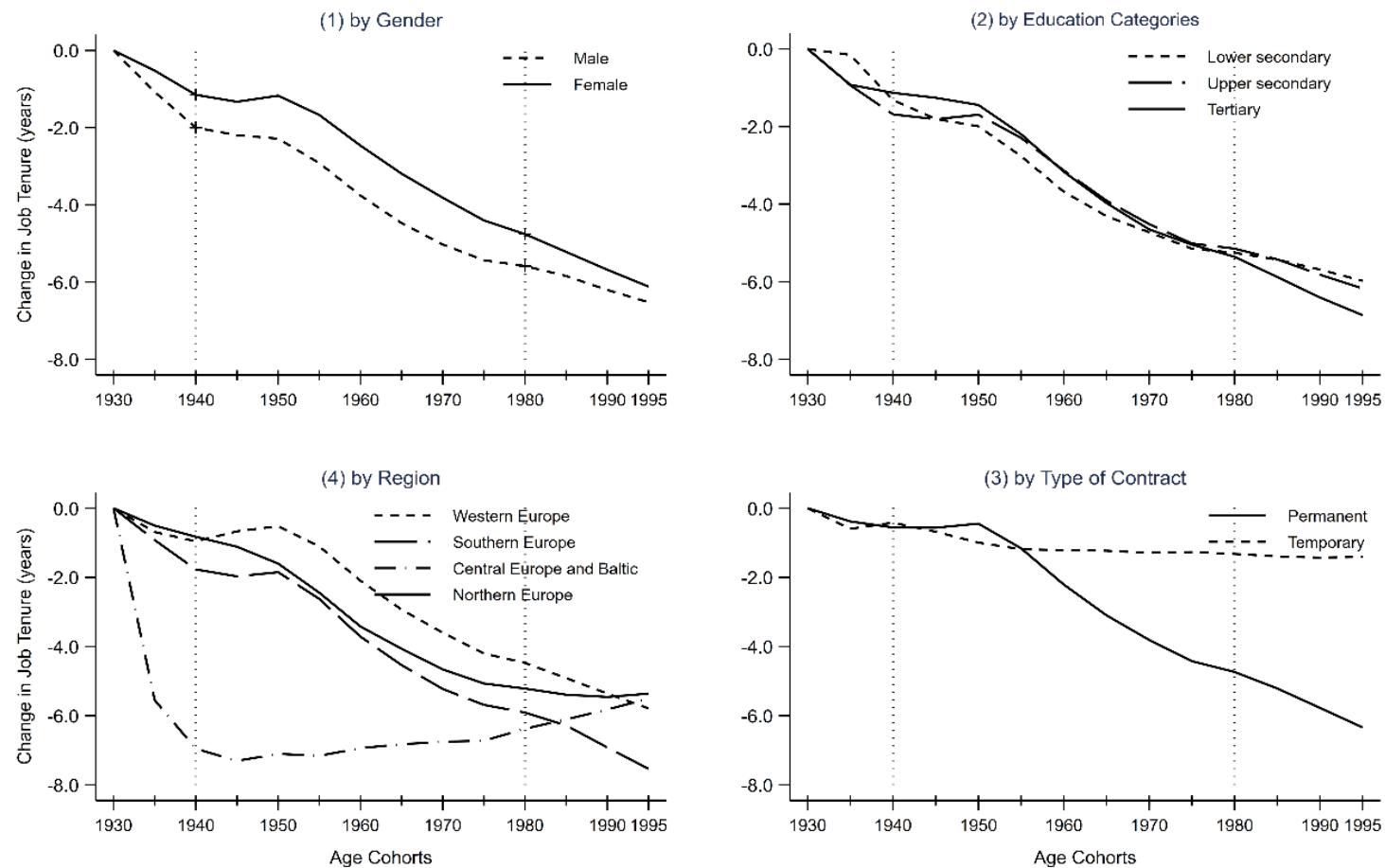
APC decomposition: cohort profile



APC decomposition: age profile, by subgroups



APC decomposition: cohort profile, by subgroups



Modeling individual tenure

$$Prob(T_i < 1) = f \left(\sum_{k=1}^K \alpha_k X_i^k + \sum_{j=1}^J \alpha_j E_i^j + \sum_{c=1}^{29} \gamma_t Country_i + \sum_{t=1995}^{2019} \pi_t Year_i + \varepsilon_{i,t} \right)$$

- We estimate the probability of a person to hold a job for less than a year, for more than 5, and more than 10 years over the time span of our surveys.
- Individual (X) and employment (E) characteristics controlled for: age, gender, education level, household composition, occupation, firm size, sector of activity. Country fixed effects also included.
- The estimation allows to obtain, post-estimation, a value for the marginal effect of each year dummy (25 values in total).
- These yearly marginal effects are regressed on a linear trend, controlling for the business cycle, to assess the presence of a long term trend on the probability of having a given tenure.

Yearly percentage point trends, 1995-2019

Sub-samples	Probability of tenure less than 1 year		Probability of tenure more than 5 years		Probability of tenure more than 10 years	
	Coeff.	Std. Error	Coeff.	Std. Error	Coeff.	Std. Error
Total	0.124	0.018	-0.218	0.046	-0.332	0.040
<i>Gender</i>						
Males	0.105	0.018	-0.200	0.045	-0.325	0.042
Females	0.145	0.017	-0.245	0.048	-0.339	0.040
<i>Education</i>						
Lower secondary	0.093	0.020	-0.242	0.047	-0.345	0.045
Upper secondary	0.114	0.018	-0.202	0.044	-0.324	0.040
Tertiary and above	0.156	0.017	-0.178	0.048	-0.263	0.036
<i>Age groups</i>						
Age 30-40	0.128	0.018	-0.257	0.065	-0.321	0.052
Age 40-50	0.096	0.012	-0.260	0.039	-0.400	0.037
Age 50+	0.069	0.008	-0.171	0.025	-0.237	0.025
<i>Sub-regions</i>						
Western Europe	0.248	0.024	-0.300	0.057	-0.326	0.050
Southern Europe	0.039 ^ψ	0.025	-0.132 ^ψ	0.048	-0.220	0.039
Central Europe	-0.147	0.045	0.132 ^ψ	0.062	-0.044 ^ψ	0.047
Northern Europe	0.198	0.033	-0.439	0.055	-0.454	0.028

The **conditional** probability of having a tenure less than 1 year increased on average 0.124 percentage points per year between 1995 and 2019: 2.98 percentage points in total.

Preliminary results and next steps

- While on average job tenure in Europe has remained stable in the last two decades, this stability masks considerable heterogeneity within the workforce
- Younger birth cohorts are observing, at every point of their life cycle, a shorter job tenure than older cohorts - those born in the 1980s have a job tenure 3.6 years shorter than those born in the 1940s
- Individual level analysis shows that this decline in tenure persists even when changes in the workforce composition are controlled for. Decline is faster for women, high skilled and the young.
- Next step is to understand the drivers of this secular decline in job tenure: technological change, trade integration, changes in labor market regulation?