

Did You Realize your Preferences for Early Retirement? Insights on the Agency-Within-Structure Mechanism across Welfare Regimes

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Did you realize your preferences for early retirement?

Insights on the agency-within-structure mechanism across welfare regimes

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Abstract

According to the individualization of the life-course hypothesis, a largest set of institutionalized options available should facilitate individuals in realizing their preferences for the timing of life-course transitions. This study contributes to the literature by considering differences by gender and education (and their interaction) in the ability to fulfil preferences for early retirement across welfare states. We use longitudinal data from the SHARE survey as it includes information on preferences for early retirement expressed *before* actual retirement: we therefore avoid biases driven by the assessment of preferences for the timing of retirement *after* it occurred. We estimate discrete time regression models and find that positive preferences for early retirement are associated with an actual anticipation of retirement with respect to the statutory age. Although the size of the effect is small, it remains statistically significant even after models are adjusted for a number of potential confounding factors. However, no differences by gender and education (or their interaction) exist in the strength of the correspondence between preferences and behaviour. Finally, these results do not vary across welfare regimes. This evidence suggests that the timing of the transition to retirement is only marginally shaped by preferences and it is still strongly institutionalized, being a by-product of “agency-within-structure” mechanisms rather than an individualized process.

Keywords: *early retirement, retirement preferences, gender, education, life-course.*

Acknowledgments

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1. Introduction

In several European countries, early retirement policies have been widely adopted since the 1980s to support economic restructuring and to cope with the rise of unemployment and labour market uncertainty (Blossfeld *et al.* 2006). However, a growing imbalance between workers and retired people, the resulting pressure on social security system sustainability, as well as the economic instability affecting many European social security systems, have increased the need for extensive changes in early retirement legislation. Policy measures aimed at stopping and possibly reversing early retirement trends differ according to the national context (Ebbinghaus 2006). The trends have tended to adjust to the traditional characteristics of the labour market, the production regime, and the welfare system.

Pension schemes leave more or less room for individual choices on the timing of retirement typically by setting different incentives and eligibility criteria for early retirement for specific categories of workers. In fact, labour market regulation and social protection systems generate a set of financial and non-monetary opportunities and constraints that may influence individual behaviours. Accordingly, analysing how different social groups can realize their preferences for the timing of retirement within the pension schemes' opportunity structure is crucial for the understanding of inequality in retirement outcomes.

This paper makes two contributions. First, we estimate the association between the probability of realization of early retirement preferences and gender and education (as well as the interaction between the two) in 14 European countries across five welfare regimes. Gender and education shape both labour market participation and retirement behaviour (e.g., Fasang 2010; Radl 2013): from a social stratification perspective, if the ability to fulfil preferences differs across social groups, this would hint at one potential mechanisms for the reproduction of labour market inequalities in later life transitions. Moreover, the strength of the association between preferences and factual behaviours may vary across welfare systems.

Most of the existing literature is based on a retrospective assessment of preferences for timing of retirement, i.e. *after* retirement actually occurred (Hershey and Henkens 2013). However, this leads to unprecise estimations because individuals might adjust their preferences after retirement to cognitively adapt them to the available options during the retirement opportunity window. Therefore, as for our second contribution, we account for preferences for early retirement expressed *before* actual retirement by using data from the longitudinal *Survey of Health, Ageing and Retirement in Europe* (SHARE).

2. Background and previous research

Pull and push factors of timing of retirement

The debate on the determinants of timing of (early) retirement focuses mostly on the well-known dualism between *pull* and *push* factors (Kohli and Rein 1991; Radl 2013). The approach emphasizing the *pull* factors draw the attention to incentives available in the pension and social security systems. The economics' literature stresses the importance of individuals' assessment of future streams of wages and pension payments from public and private sources for the timing of the retirement. Thus, older workers would choose an optimal retirement date that maximizes their future expected utility. Old-age pension systems that offer early retirement options without (or with only small) actuarial reduction provide major incentives to older workers to stop working because the expected income stream from benefits out-weights the gains from continue to work. Since the 1970s in many Western countries pension schemes have made early exit before the age of 65 available for those workers with long contribution records (Ebbinghaus and Hofäcker 2013). In addition to public (or private) and occupational pension programs, other welfare state measures (for example unemployment or invalidity benefits) contributed to make the early exit a favourable pathway for those older workers without the minimum age and contribution requirements (Guillemard and Van Gunsteren 1991).

Push factors underline, instead, the role of restrictions embedded in the socio-economic context. A focal factor that pushes workers towards retirement is the employment sector. Classical manufacturing industries were more negatively affected by labour markets restructuring and they shrunk all over Europe. Older employees are more at risk of entering early retirement than employees in growing economic sectors, such as the services (Buchholz et al. 2006). In fact, larger firms responded to the "crisis of mass production" (Castells 2000) by changing their organizational structure: downsizing and outsourcing led to staff reduction and relocation of work to outside supplier networks (Hofäcker 2010). Older employees were more likely to be pushed out of work, because they received, on average, comparatively higher wages and their re-training was less profitable.

Labour-market status itself is another crucial *push* factor: self-employed have a very low likelihood of leaving the labour market early because they run their own business and they have not access to early exit pathways, typically designed for dependent workers (Blondal and Scarpetta 1998). Concerning the work context, the literature underlines the positive influence of workers' job satisfaction in postponing retirement, even if the effect is weak (Reitzes et al. 1998; Mein et al. 2000; Kubicek et al. 2010).

Next to the labour market structure and the organization, the empirical findings demonstrate that specific individual characteristics push individuals to retire. First, the

health status (particularly disability) is an important driver of labour market participation (Börsch-Supan *et al.* 2009). It is a well-established finding that individuals with health issues in their pre-retirement years are more likely to retire early than those in good health (Topa *et al.* 2009; Wang and Shultz 2010). Additionally, being responsible for caring for other household's members (Szinovacz and Deviney 2000) and having a retired partner anticipate the timing of retirement as couples 'coordinate' their retirement transition (Blondal and Scarpetta 1998; Drobnič 2002).

Among individual characteristics, educational level is one of the most crucial factors in determining differences in the timing labour-market exit. Workers with less human capital generally hold low-quality jobs, receive low-pay, and have little autonomy and recognition. These reasons are at the basis for positive preferences for early retirement, even if this is penalizing in terms of pension contributions and savings to ensure an adequate old-age income. Low-educated workers can therefore take advantage of the opportunities offered by the institutional contexts to reduce the redundancy of less employable (and older) workers by means of alternative early-exit options. Some studies in the medical field, for example, found no statistically significant association between educational level and early retirement through traditional early-exit options, but a positive and significant association between low education and alternative opportunities of early exit related to unemployment or health status (Robroek *et al.* 2015). Furthermore, as demonstrated by Visser and colleagues (2016), educational differences in early retirement persist also after controlling for employment characteristics.

Finally, the gender dimension of early retirement has to be considered. Two stylized facts suggest why early retirement has been mostly a "male phenomenon". First, gender-differentiated pension schemes set up lower statutory age for women in several countries. Therefore, women retired by definition at a younger age (on average) compare to men, who, in turn, might opt for early retirement because of the configuration of the *push* and *pull* factors described above. Second, because women's employment careers are more likely to have been interrupted for childrearing, they may have not have contributed for a sufficient number of years to be eligible for early retirement. The few existing empirical works on women show that they are indeed more likely to retire at an earlier age than men do. Women are often younger than their spouses, meaning that—as discussed above—their preference for early retirement could be related to their willingness to retire at the same time as their partner (Dahl *et al.* 2003). Additionally, changes in women's labour market participation has not directly translated into changes in gender roles within the family (Pienta 2003) so that gendered preferences towards work and family commitments/obligations persist (Madero-Cabib *et al.* 2016; Radl 2013).

Preferences for timing of retirement and actual retirement behaviour

Like other life-course transitions, the one from active life to retirement can be seen as a complex process that occurs over a span of time (Abbott 2009). This process consists of

reflections and decisions concerning the timing and the type of retirement (Solem *et al.* 2016). The economic approach of *revealed preference* assumes behaviour to reflect retirement preferences unambiguously (Lumsdaine and Mitchell 1999): analysing factual retirement is therefore considered to be sufficient to understand preferences. This approach has been criticized because it relies on an extreme individual voluntarism and it overlooks the potential adaptation of preferences and decisions to the set of (institutional and life-course-related) opportunities and constraints in which they are embedded. Some evidence shows, indeed, that retirement decisions come along with hesitations and doubts, and that individuals frequently change decisions close to the time of actual retirement (e.g., Ekerdt *et al.* 2001). Therefore, on the one hand, preferences cannot be analysed separately from factual behaviours, and on the other hand behaviours might not directly and unambiguously reflect initial preferences.

According to the rational choice theory, workers directly influence the retirement process through a subjective evaluation of (pre)retirement prospects. Assuming that preferences are “structured, standing, rankable dispositions to choose certain states of affairs rather than others that in turn imply dispositions to act in one way rather than another under specified conditions” (Lukes 2004, p. 157), retirement preferences should be understood as an independent factor that contributes to the decision-making process, operating in addition to other factors - such as financial opportunities and economic constraints. However, the motivation for (early) retirement has to be seen as more than a simple economic judgment. In fact, individuals can exercise their agency and remain at work even if early retirement would be economically favourable, for example, because of strong identification with one’s job. Additionally, workers might want to retire early due to personal preferences for leisure time/care responsibilities, even in the presence of adverse financial incentives (Higgs *et al.* 2003).

Some research exists on the determinants of preferences and individual attitudes towards retirement. Most of these studies rely on questions on preferences asked at the time of retirement or several years after retirement: such time-lag increases the probability of correspondence between attitudes and actual behaviour because of potential *ex-post* adaptations of preferences (retrospectively surveyed) to behaviours (Nicolaisen *et al.* 2012; Soidre 2005; Wahrendorf *et al.* 2013). Hofäcker (2015) demonstrates that educational level represents a strong factor in planning retirement. Less educated workers prefer early retirement compared to more qualified ones. Moreover, educational effects appear to be less pronounced for women.

Finally, several studies consider *expectations* on the timing of retirements using a perspective longitudinal design (Dwyer and Hu 2000; Anderson *et al.* 1986), while evidence on the consistency between preferences and actual behaviours adopting this analytical strategy remains scarce. Interestingly, the few available studies show that retirement preferences have a positive effect on timing of retirement and that older people are more accurate in the matching between retirement preferences and retirement age because individuals are more likely to report positive preferences when they are close to a retirement decision (Örestig *et al.* 2013). Moreover, as people approach retirement age, they have a clearer knowledge of how personal characteristics (e.g. pension contributions, available exit windows, and prospects of retirement wealth)

will change in response to their actual situation (Soidre 2005). Furthermore, the correlation between retirement intentions and retirement behaviour seems to be moderated by some selected individual characteristics, such as education and health (Solem *et al.* 2016).

Preferences for timing of retirement and actual retirement behaviour across welfare regimes

Similarly to other policies connected to specific life-course stages, retirement policies provide individuals with an institutional framework of opportunities and constraints that can encourage them either to retire at a specific time or to stay in the labour market (Leisering 2003). The strength of the regulatory power of the institutional framework contributes to the degree of institutionalization of the retirement process: however, the same level of institutionalization can eventually result in different degrees of individualization of retirement trajectories (Brückner and Mayer 2005) depending on whether more differentiated or rather limited options for retirement are allowed at different points during the active life. The greater the control individuals have over their own retirement process, the more the retirement process is individualized (or de-standardized).

Previous research has demonstrated that the retirement timing is the result of the interplay between individual agency and resources as well as structural institutional factors. Individual attitudes toward work and retirement could be seen as the results of how the institutional context (labour market conditions, production systems, pension schemes, and policy reforms) influences and shapes workers' expectations, intentions, and preferences (Esser 2005).

As mentioned above, the existing literature on retirement distinguishes between *pull* and *push* factors. More recently scholars highlighted the presence of *stay* factors at the institutional level (Ebbinghaus and Hofäcker 2013). While both *pull* and *push* factors are typical of the widespread early-exit culture in many European countries since the 1980s, in the recent decades the “active ageing” approach has tried to enhance older workers employability to facilitate their permanence in the labour force. In other words, the welfare state might foster *stay* options by supporting job-search through a wide range of activities, such as direct job creation, targeted counselling, and lifelong learning programs. These interventions may enhance individual qualifications and thus improve older workers' employability (Jepsen *et al.* 2002). Alongside these positive factors, policies aimed at reducing opportunities and incentives to early exit were implemented in several countries, resulting in an increase of need to stay in labour market in order to improve own financial situation. Hofäcker and Radl (2016) defined this set of institutional features as *need* factors.

The extent to which each national context implements specific policies aimed at promoting long employment careers or labour force reduction determines different settings of the structure of opportunities available for older workers. Relying on what

suggested by Buchholz and colleagues (2006), we identify two ideal-typical strategies of managing older workforce. First, *employment exit strategies* followed by countries that responded to economic and labour market changes and older workers' redundancy by offering options for early retirement, even with welfare programs (typically unemployment or disability benefits). Second, *employment maintenance strategies* followed by countries that either actively supported employment at older ages through active labour market policies and re-training interventions, or implemented reforms to deregulate the labour markets and restricted access to early-exit pathways. Previous research demonstrated how these two strategies shape late careers differently across national contexts (Hofäcker and Pollnerova 2006) and across welfare regimes (Esping-Andersen 1999): in liberal countries early retirement play a moderated role; conservative and mediterranean regimes register high rates of early exit; post-socialist countries present a less stable situation with an initial high use of early exit and a subsequent need for older workers to remain in the labour market due to scarce pension benefits.

In sum, the institutional context shapes individual preferences for the timing of retirement and how such preferences are realized (that is, the actual behaviour): this occurs because of the different available opportunities of an early exit for different categories of older workers (Kohli and Rein 1991). Hofäcker (2005) demonstrates that preferences for early retirement are higher in central and Southern Europe than in Nordic and liberal countries, while more cross-national variations are found in Eastern Europe. This association between institutional setting and individual preferences is strong for both men and women. However, we do not know if such preferences are realized (that is, the actual behaviour) to a different extent in different institutional contexts.

3. Research questions

Despite the aforementioned widespread early-exit culture in many European countries, there is a surprising lack of research on the role of individual preferences on (early)retirement transitions for non-English speaking countries (Beehr and Bennett 2007). Consequently, this study adopts an explorative approach in order to shed light on the understudied relationship between preferences for early retirement and actual behaviour of older workers.

Because many countries in recent years are implementing reforms aimed at prolonging active life and restricting the pathways of access to early retirement, it becomes important to evaluate also how preferences for early retirement match with actual older workers' behaviour. Many of the implemented pension and welfare reforms assume that individuals make rational decisions based on economic and non-economic cost-benefit considerations, but empirical research has shown that rational decision-making processes are less commonly applied than are theoretically assumed (Kahneman 2011). As stated by Örestig and colleagues (2013) and Solem and colleagues (2016), retirement preferences and their correspondence to actual behaviour

are influenced by opportunity structure. Social inequality on different levels generates differences in preferences. Thus, we concentrate our attention on education and gender, two dimensions particularly relevant in light of recent changes in the labour market and in production systems. Our first research question concerns how these two dimensions contribute in stratifying preferences for early retirement.

Less educated workers with basic qualifications are increasingly redundant and for this reason they are often pushed towards retirement, whereas high skilled workers become more and more requested and thus they could be restrained by employers independently by their preferences. Previous research has demonstrated that lower educated workers prefer to retire earlier than more educated ones.

Moreover, so far, analyses of early retirement have mainly focused on male workers because of the weak presence of women among the older cohorts (Beckstette *et al.* 2006; Visser *et al.* 2016). In recent decades the scenario has been changing due to increasing women's participation and attachment to the labour market. Furthermore, as mentioned, women might opt for retiring earlier than men due to mechanisms related to "couple retirement" and caring responsibilities. For these reasons our second research question concerns the investigation of the association between preferences for early retirement and actual behaviour, and whether this association varies by gender and education.¹

The few previous studies that dealt with these issues concentrated on only one country or assumed similar cross-country effect. National institutional frameworks implemented different intervention strategies aimed at managing older workforce skill obsolescence and labour market structural changes. Thus, we adopt an approach that take into account that opportunity structure, and consequently individual agency, could vary across cluster of countries characterized by similar policy intervention in labour market, pension schemes, and welfare programs. Our third research question focuses on institutional influences on the relationship between preferences for early retirement and actual exit from work.

4. Data and methods

Data

We use the *Survey of Health, Ageing and Retirement in Europe* (SHARE),² a longitudinal survey of the population aged 50 or older that collected information on an initial sample of 44,610 individuals in wave I for the 14 countries considered here (see below). SHARE contains information on employment history, living arrangement, and living conditions among the older population (Börsch-Supan 2017; Börsch-Supan *et al.*

¹ As for clarification: in our multivariate analyses we address the main effect of gender on retirement behaviour as a function of retirement preferences, but not the effect of gender on preferences. The latter aspect is explored as a descriptive result (see Figure 1) and relevant confounders are controlled for in the models.

² See <http://www.share-project.org> for a full list of funding institutions. Release 7.0.0.

2013). Most importantly, SHARE includes questions on preferences for early retirement for working individuals collected at the first interview.

We pooled the samples from 14 countries classified according to five welfare regimes: Continental (Germany, Austria, France, Belgium), Social-democratic (Sweden Denmark Netherland), Liberal (Ireland and Switzerland), Southern (Italy, Spain, Greece), and Eastern (Czech Republic and Poland). We selected a subsample of individuals aged between 50 and 65 years old who were not retired or unemployed at the time of the first interview in waves I or II. The restriction to these two waves was necessary to identify early retirement precisely: only for respondents in these waves who also participated in wave III (SHARELIFE) it is possible to establish early retirement in an accurate way, thanks to the presence of variables regarding the statutory retirement age for each national context. This is not the case for those who entered the survey in the following waves—and therefore did not participated in wave III. However, we did include observations from wave IV-VII for individuals who answered the SHARELIFE questionnaires and entered the survey in wave 1 and 2 to extend the observational window along which factual early-retirement could have occurred. In this specific case we consider the statutory age reported in SHARELIFE as a limit to identify early retirement. This data structure represents a crucial advantage compared to most of the existing literature that considers retrospective assessment of preferences, i.e. the question about (previous) preferences was asked after (early) retirement eventually happened (Hershey and Henkens 2013).

After the leastwise deletion of observations with missing values on the covariates included in the models, our final sample includes 28,138 person-year observations³ nested in 7,356 individuals (4,438 who entered in wave I and 3,110 in wave II). Table A1 in the appendix reports the sample size by country. The average number of observations per individual is 2.6.⁴

Variables

The main independent variable is the preference for early retirement at time t (yes or no).⁵ The following models estimate the probability of early retirement as a function of preferences and gender, and then preferences and education (primary, lower secondary, upper secondary, or tertiary education) separately by gender. Fixed-effects for welfare regime and for the percentage of the GDP spent for pensions at the

³ Ability to make ends meet: 212 person-year missing values; satisfaction with the main job: 5 person-year missing values; number of years worked: 546 person-year missing values.

⁴ The age-span selected for the analyses reflects substantive considerations. The minimum *statutory age for retirement* between 2000 and 2010 in Europe ranged between 55 and 67 so that might have been reasonable to restrict the observational window to this age group (MISSOC 2012). However, between 2000 and 2010 the minimum *statutory age for early retirement* ranged between 52 and 67, so that we extended the observation period to maximise the probability to capture preferences' assessment at an earlier age. Nevertheless, we run all the analyses on a restricted sample of individuals who were 55 to 65 years old at the moment of the first interview as a robustness check. The results largely correspond to those presented here for the age 50-65 sample.

⁵ The variable used is *ep036_mod* from EasySHARE (Gruber *et al.* 2014) that reports the answers to the question "Thinking about your present job, would you like to retire as early as you can from this job?".

country-level measured at the year of the first interview are included in all models (data from Eurostat 2005-2008, see Table A1). Country-level characteristics can indeed moderate the effects of context factors at the workplace level on individual preferences (Hofäcker 2015). For example, it can be assumed that unions can only exercise their protective power where their collective bargaining power is high. Similarly, considering unemployment or the economic situation in general, preferences for early retirement may differ depending on the prevalence of unemployment or the strength of a crisis for specific categories of workers in certain sectors of production. As robustness checks, we include fixed-effects for welfare regime and pension spending separately. Further, we tested for the country-fixed-effects alone.⁶

Finally, several covariates were included in the models to adjust for possible confounding effects: employment status (employee in the private sector, civil servant, or self-employed); number of years worked; satisfaction with the main job⁷ (yes or no); ability to make ends meet⁸ (fairly easily, with some difficulty, or with great difficulty); living with a partner (yes or no); care responsibilities⁹ (yes or no); self-reported health (continuous scale 1-5); age and age-squared; year; time-logged. All controls are measured in correspondence of the first observations. The distribution of all variables is displayed in Table 1. The number of observations for the interaction between preferences and actual behaviour by gender and education is displayed in Figure A2 in the Appendix.

Methods

We perform a set of discrete-time event history analysis by estimating logistic regression models for the probability of experiencing early retirement at time $t+n$. All models include clustered standard errors to account for multiple observations per individuals (Yamaguchi 1991; Jenkins 1995). The *statutory age for early retirement* depends on each country's retirement regulations: the generated dataset "SHARE Job Episodes Panel" includes a variable that accounts for the age-specific threshold at which early retirement might have been possible for each individual by country based on MISSOC and OECD data (Antonova *et al.* 2014; Brugiavini *et al.* 2019).¹⁰ Both main and interaction effects will be expressed as average partial effects differences in linear predicted probabilities (Long and Freese 2014).

⁶ As a further robustness check we run separate models by welfare regimes including interactions between gender and preferences for early retirement and adjusting for country fixed-effects. Results are highly consistent with those presented here.

⁷ Results on the relationship between job satisfaction and employment behaviour are mixed: Kosloski *et al.* (2001) and Reitzes *et al.* (1998) found positive effects on retirement planning, while Adams (1999) and Taylor and Shore (1995) reported no effect of individual job satisfaction on the decision to retire.

⁸ Income would have been a better proxy for economic resources available in the household, but unfortunately this information is missing on a high number of cases for several countries.

⁹ It was suggested that the timing of retirement is influenced—more for women than for men—by the presence of (grand)children or other adults to care for (e.g., Dentinger and Clarkberg 2002). This might be relevant in contexts characterized by a very low coverage of both day-care for children and home/residential facilities for older people. The variable "care responsibilities" accounts for whether the respondents has given support to a sick or disabled adult, or to other persons outside the household during the months before the interview.

¹⁰ The variable used is *ret_age*, see http://www.share-project.org/fileadmin/pdf_documentation/SHARE_Job_Episodes_Panel_Release_6-0-0.pdf

Table 1: Distribution of the variables of interest at the first observation

	% – mean
<i>Gender</i>	
Men	59.6
Women	40.4
<i>Education</i>	
Primary	12.4
Lower secondary	14.4
Upper secondary	43.3
Tertiary	29.9
<i>Preference for early-retirement</i>	
No	49.7
Yes	50.3
<i>Early-retired*</i>	
No	92
Yes	8
<i>Employment status</i>	
Employee	66.4
Civil servant	15.5
Self-employee	18.1
	36.3
<i>Number of year in employment</i>	(s.d.=6.8)
<i>Living with a partner</i>	
No	20.6
Yes	79.4
<i>Self-reported health</i>	2.6 (s.d.=1)
<i>Satisfaction with job</i>	
No	8.9
Yes	91.1
<i>Care responsibilities</i>	
No	72.8
Yes	27.2
<i>Make ends meet</i>	
Fairly easily	65.4
With some difficulties	26.8
With great difficulties	7.8
	54.4
<i>Age</i>	(s.d.=3.5)
<hr/>	
<i>Person-year observation</i>	28,138
<i>Individuals</i>	7,356
<hr/>	
<i>Average numer of episodes per individual</i>	2.6 (s.d.=1.3)

Source: SHARE, waves I-VII. (*) measured at the last available observation. Weighted estimates.

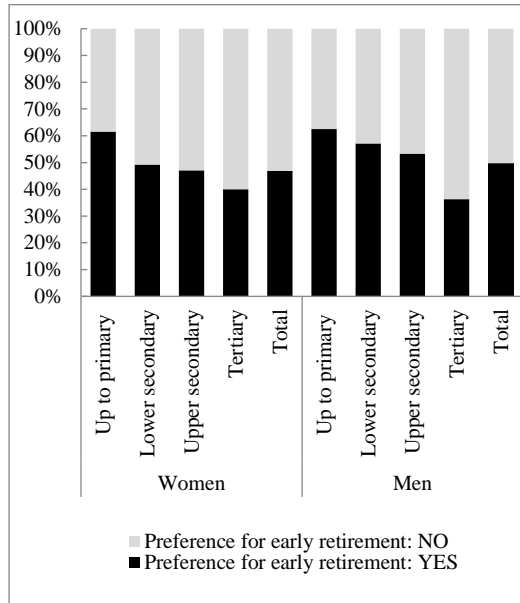
5. Results

Preferences for early retirement

Figure 1 shows descriptive results for the distribution of preferences towards early retirement among the individuals 50 to 65 year-old in our sample. No gender differences emerge: around 50 per cent of men and women in the sample expressed a positive preference for early retirement. As discussed above, this evidence can result from different mechanisms: on the one hand, women might respond to family

commitments and caregiving responsibilities with retirement more likely than men would do, and therefore being more favourable to early retirement. On the other hand, men are more frequently engaged in highly (physically) demanding jobs and therefore wish for an early exit from the labour market.

Figure 1: Preference for early retirement (ER) by gender across educational levels.



Source: SHARE, waves I-VII. Weighted estimates.

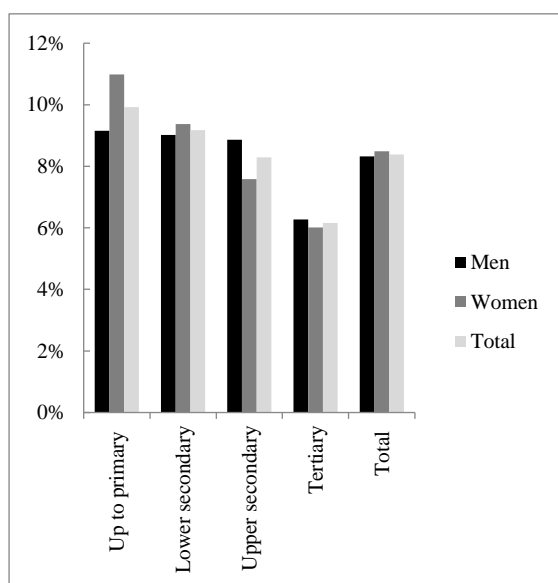
Results in Figure 1 highlight a negative association between the highest educational level attained and preference for early retirement. On average, only 40 per cent of individual with a tertiary educational degree express positive preference; while up to 60 per cent for those with primary education do so. As discussed above, education represents a crucial factor with respect to the probability of an early-exit from work, because early retirement regulations targeted mainly low-skilled workers. These descriptive findings might indicate that low-skilled workers are more likely to adapt their preferences to the existing regulation that indeed targeted them for early-exit options.

The steepness of the educational gradient, however, slightly differs by gender. For women, the data show a larger difference between those with primary education and the others (60 per cent vs. 45-50 per cent). In contrast, low and medium educated men express similar positive preferences for early retirement (between 55 and 60 per cent), while only approximately 35 per cent of tertiary educated do so.

Interestingly, tertiary educated women are slightly more frequently in favour of early retirement compare to tertiary educated men, while the opposite is true for individual with lower and upper secondary education. Despite the increasing number

of women holding a tertiary degree and, in general, the growing female labour market participation over the last decades, women's attitudes towards employment (and retirement) might be still strongly shaped by the persistent gender gap in the labour market (and especially in higher prestige and control positions). Moreover, women are likely to be overrepresented in the public sector, for which early retirement options were widely available during the '80s and could have therefore influence the formation of preferences.

Figure 2: Prevalence of early retirement (ER) by gender across educational levels.



Source: SHARE, waves I-VII. Weighted estimates.

Figure 2 shows the prevalence of early retirement by gender across educational levels. Overall, along the observation window, around 8 per cent of women and men in our sample retired earlier than the statutory age. A clear-cut educational gradient exists: the higher the educational level, the lower the share of workers who experienced an early-exit. The educational gradient for men seems to mimic the trend of preferences displayed in Figure 1 more closely compared to women. Women with a primary education certificate have retired earlier than the statutory age to a greater extent compared to women with higher educational levels (12 per cent vs. 7 per cent on average). Low educated men show instead early-exit rates similar to those holding a low and upper secondary education certificate (approximately 8 per cent). The lowest rate concerns men with a tertiary degree (6 per cent).

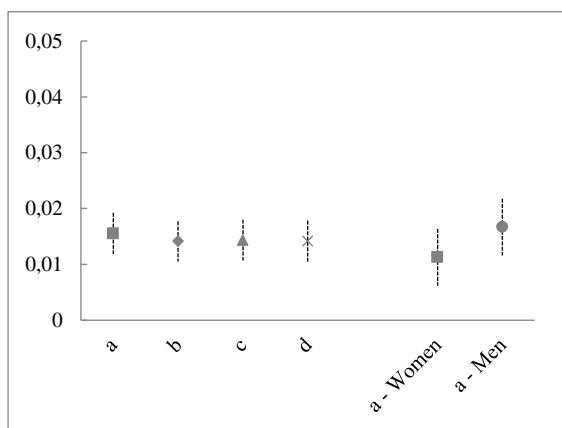
Modelling preferences for early retirement and factual retirement behaviour

In this section we present results from multivariate analyses for the probability of early

retirement at time $t+n$ given the preferences for it at time t adjusting for potential confounders and compositional effects.¹¹

Figure 3 shows the average partial effect of having expressed positive preferences for early-retirement on the probability of factual early retirement. The estimate from the model adjusted for welfare regime and pension expenditure as percentage of the GDP (model a) returns a 1.4 percent increase in the probability of factual early retirement for those who expressed positive preferences of it. This result holds true for alternative specification of the models: adjusting only for pension expenditure as percentage of the GDP (model b), only for welfare regime (model c), or country fixed-effects (model d). Figure 3 also accounts for the interaction between preferences for early-retirement and gender as it shows the average partial effects for the interaction between preferences and gender. Positive preferences for early retirement are associated with a higher probability of actual early retirement for both men and women (+1.7 and +1.1 percentage points respectively). However, differences between genders are not statistically significant.

Figure 3: Discrete-time event history analysis on the probability of early retirement: Average partial effect of positive preference for early retirement in the whole sample and by gender (a-Women and a-Men)



Source: SHARE, waves I-VII. Different symbols refer to different model specifications. Model a: FE welfare regimes + pension exp. as % GDP; Model b: pension exp. as % GDP; Model c: FE welfare regimes; Model d: FE country. Estimates for “a-Women” and “a-Men” are from models with the same specification as model a. 95% confidence intervals. The full model is displayed in Table A3.1 and A3.2 in the Appendix.

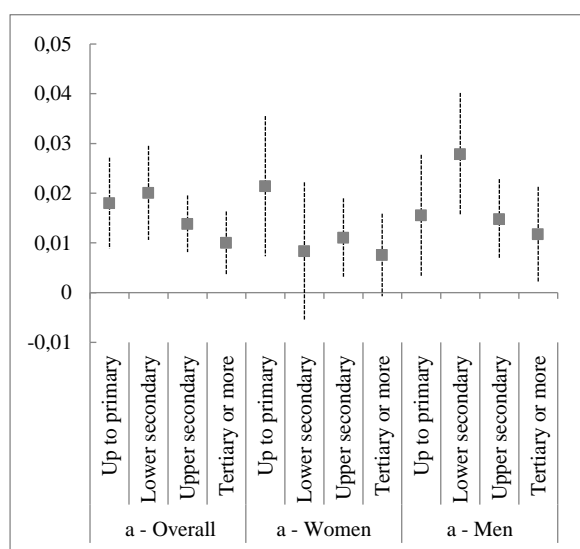
The estimate for the interaction between preferences and education are reported in Figure 4. Across educational levels, all individuals retire earlier when they have positive preferences for it. This pattern is displayed by both women and men, with minor deviations (models are estimated with the same specification as model a in

¹¹ We acknowledge that some of the observations in the person-year sample refer to the period of the economic downturn following the crisis of 2008. However, in some of the countries, the onset of the economic crisis was delayed compared to others, and many macro-economic indicators started to worsen from 2010 on (OECD 2015). The effects of the economic crisis on retirement behaviour have been studied only in terms of anticipation/expectations—rather than preferences—in the Netherlands, Ireland, and in the US (Bissonnette and van Soest 2010; Barrett and Mosca 2013; Szinovacz *et al.* 2014). This research offers mixed results on the effects of education and not conclusive evidence on the overall effect of negative economic cycle on retirement expectation.

Figure 3). For what women are concerned, in fact, positive preferences for early retirement seem to anticipate significantly the exit from the labour forces only for those who hold up to a primary education and upper-secondary qualification. Interestingly, the highest difference in actual early retirement behaviour as a function of their preferences is found between primary educated workers (+2.1 percentage points). This can be explained by the structural (pushing-out) opportunities made available to them in several national contexts, so that they could have used preferential channels to realise their preferences.

The positive and statistically significant association of preference for early exit also among highest educated male workers is somehow unexpected. We argue that it could be explained by the aforementioned spread of the early-exit culture even among those workers usually more attached to the labour market, with strong financial position and less concerned by policies for labour force reduction.

Figure 4: Discrete-time event history analysis on the probability of early retirement: Average partial effect of positive preference for early retirement by education (a-Overall) and by the gender-education interaction (a-Women and a-Men)



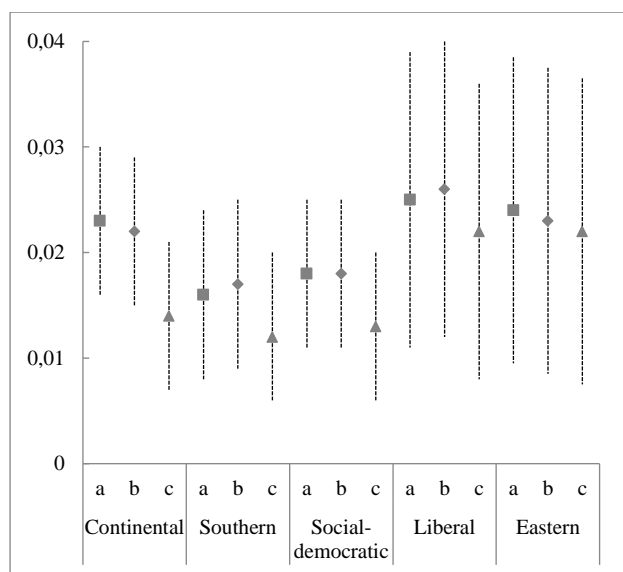
Source: SHARE, waves I-VII. 95% confidence intervals. Models' specification as for Model a in Figure 3: FE welfare regimes + pension exp. as % GDP The full model is displayed in Table A3.1 and A3.2 in the Appendix.

We explore further if the average partial effect of preferences on the probability of early retirement hides some heterogeneities across welfare regimes. To this purpose, we estimated the average partial effect of early retirement for the interaction between preferences and welfare regime (models a, Figure 5). In all regimes, a positive preference for early retirement is related to anticipation in the factual exit from the labour force: the increase in the probability is higher in for the clusters of Continental, Liberal, and Eastern regimes (between +2.2 and +2.6 percentage points) compared to Southern and Social-democratic clusters (+1.7 and +1.8 percentage points respectively). However, the confidence intervals overlap across welfare regimes.

These estimates are from a baseline model adjusted for a restricted number of variables. In successive models, we adjust for pension expenditure as percentage of the GDP at the macro-level (models b, Figure 5) and all other micro-level variables (models c, Figure 5) as outlined in the data and methods section. This last model has the merit of accounting for compositional effects at the country level. Overall, the results from the three models return highly consistent results. This evidence confirms what hypothesized (but not tested, strictly speaking) by Steiber and Kohli (2017), namely that because most countries have introduced reforms to restrict access to early retirement options, it is possible to assume similar trends across countries.

In an additional set of results not presented here but available upon request, no differences across welfare regimes for the interaction between preferences and (i) gender, (ii) education, (iii) gender and education emerge. The estimates for these interactions correspond to those presented in Figure 3 and 4.

Figure 5: Discrete-time event history analysis on the probability of early retirement: Average partial effect of preference for early retirement by welfare regime



Note: Different symbols refer to different model specifications. Models a: FE welfare regime; Models b: FE welfare regime + pension exp. as % GDP; Models c: FE welfare regime + pension exp. as % GDP (fully adjusted). Source: SHARE, waves I-VII. 95% confidence intervals. All models include: preference for early retirement, gender, education, age, age-squared, time, and time-logged. The fully adjusted model includes all variables as outlined in the data and methods. The full model is displayed in Table A4 in the Appendix.

6. Concluding remarks

The discussion around the individualization *versus* institutionalization of retirement trajectories is far from being of academic interest only: in fact, against a scenario in which older European workers who approach retirement prefer to exit the labour market before the national statutory age (Esser 2005; Hofäcker 2015), policy design need to understand the role of individual agency within the institutional constrains. If

the goal is to reverse the early retirement trends effectively, policies should take into account that norms vary across socio-economic groups that tend to adapt their preferences and attitudes to the available opportunity structure. Early retirement behaviour can be conceptualized as the outcome of increasing individualization of the life-courses. Within this framework, a strong association between preferences for early retirement and factual behaviours signifies high degrees of individualization (and therefore possibly differentiation) of retirement trajectories. Most importantly, in a social stratification perspective, if the ability to realize these preferences differs across social groups and across welfare states, studying preferences and factual behaviours together enable to shed light on forms of inequality that emerge as consequence of the progressive individualization of life-courses.

This paper makes a novel contribution to the debate by advancing the literature in two respects. First, we show that positive preferences for early retirement anticipate the actual timing of exiting the labour market. These results hold true not just after adjusting the estimated for a number of potential confounders that are supposed to drive specific sets of institutionalized opportunities to retire, but also once we accounted for differences across countries and welfare regimes. Therefore we extend previous research that found a positive effect of preferences on behaviours for single countries (for example Örestig and colleagues [2013] for Sweden) or did not explore potential heterogeneities of this association across welfare regimes.

Specifically, the results show that preferences have a positive impact regardless of educational levels. This could mean that the culture of early retirement is widely spread among workers, regardless of the factors that traditionally stratify the labour market. Moreover, we did not find significant differences in the probability of early retirement for the interaction between gender and preferences. Hence, it seems that both male and female older workers' preferences act in the same way in influencing the timing of labour market exit. This result is in line with previous research that does not find remarkable gender differences in retirement preferences (Hofäcker 2015) and in preferences outcomes (Steiber and Kohli 2017). Despite a stronger female presence in paid work, women highly attached to the labour market are over-represented in our sample of older workers. Future research needs to consider more recent cohorts of female older workers in order to explore this issue. Finally, we do not find remarkable differences between regimes, confirming what was supposed previously by Steiber and Kohli (2017), namely that, since most countries have introduced reforms to restrict access to early retirement programs and to prolong working careers, it is possible to assume similar trends across countries.

As a matter of fact, the size of the effects of preferences is very small as compared with other key factors traditionally analysed in literature on retirement. This could reflect the fact that individual retirement is still embedded in the institutional structure despite scholars theorizing the growing individualization of life course. These findings speak in favour of an “agency-within-structure” mechanism with respect to the transition to retirement intended more as a differentiated process in which some traditional stratification elements still continuing have important impact (Settersten and Gannon 2005).

As a second contribution, our analyses accounted for the association between preferences for early retirement expressed *before* retirement and individuals' actual behaviour: the use of high quality longitudinal prospective data was crucial to avoid biased results driven by *ex post* adjustment of preferences. Our results advocate for the need to go beyond the revealed preferences approach and identify discrepancy between individual preferences and factual behaviour: together with more traditional individual and institutional factors, preferences have to be taken into account to study the transition to retirement.

We acknowledge some limitations to the present study. Unfortunately, preferences are collected only at one point in time; therefore we might miss the effect of changes in preferences over time that can affect retirement behaviour later on. Moreover, preferences as well as behaviours might be susceptible to changes in the pension legislation at the country level that can pertain to specific subgroups of workers along our observational window: unfortunately, small country-sample sizes limited our ability to account for this aspect. Ideally, future research should take into account how changes in institutional configurations are intertwined with individual preferences towards retirement for different groups along complete employment trajectories (and therefore retirement pathways): this will allow for a better understanding of the dynamics of de-standardization/individualization of the retirement process.

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Appendix

Table A1 Distribution of the analytical sample and the percentage of gross domestic product (GDP) spent on pensions by country.

		<i>Percentage of gross domestic product (GDP) spent on pensions (**)</i>						
		(**)						
<i>Regime</i>	<i>Country</i>	<i>Individuals (*)</i>	<i>Person-year obs. (*)</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
<i>Continental</i>	Austria	719	146	13.8	13.6	13.5	13.2	13.4
	Belgium	2,231	553	10.8	10.8	10.7	10.4	11
	France	1,510	387	12.8	13	13.1	13.1	13.3
	Germany	1,699	447	13	12.9	12.5	12	12
<i>Social-democratic</i>	Denmark	2,729	675	10.7	10.7	10.4	11.7	11.7
	Netherlands	1,645	453	11.9	11.6	11.5	11.4	11.2
	Sweden	613	281	11.3	11.5	11.1	10.8	11.3
<i>Liberal</i>	Ireland	3,070	865	5.3	5.4	5.5	5.6	6.4
	Switzerland	408	195	11.7	11.7	11.2	11.0	10.8
<i>Southern</i>	Greece	3,000	706	11.3	12	11.9	12.3	13.1
	Italy	3,145	752	14	14.1	14	14	14.3
	Spain	1,077	439	8.9	8.8	8.7	9	9.2
<i>Eastern</i>	Czech-Republic	3,633	767	7.6	7.7	7.6	7.6	7.8
	Poland	2,659	690	13.1	12.6	12.4	11.5	11.5
<i>Total</i>		<i>28,138</i>	<i>7,356</i>					

Source: (*) SHARE, waves I-VII. Authors' calculations. (**) Eurostat: European System of integrated Social Protection Statistics

<https://ec.europa.eu/eurostat/web/employment-and-social-inclusion-indicators/social-protection-and-inclusion/pension>. Retrieved 29.05.19.

Table A2. Analytical sample of individuals who early-retired by preference for early-retirement, gender and education

		<i>Men</i>		<i>Women</i>	
		<i>Preference</i>		<i>Preference</i>	
		<i>for early retirement</i>		<i>for early retirement</i>	
		<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>
<i>Education</i>	<i>Primary</i>	17	48	10	34
	<i>Lower secondary</i>	20	59	26	35
	<i>Upper secondary</i>	56	102	42	58
	<i>Tertiary</i>	64	51	43	51

Source: SHARE, waves I-VII.

Table A3.1 Discrete-time event history analysis on the probability of early retirement. Odds ratios and standard errors (s.e.) for main effects, linear predicted probabilities and standard errors (s.e.) for interaction effects (models a1-a4)

	(a1)	(a2)	(a3)	(a4)
	OR [s.e.]	OR [s.e.]	OR [s.e.]	OR [s.e.]
<i>ER=yes</i>	1.863***	1.876***	1.859***	1.986***
	[0.151]	[0.152]	[0.149]	[0.164]
<i>Women</i>	0.809**	0.809**	0.825**	0.865
	[0.072]	[0.072]	[0.073]	[0.077]
<i>Education (ref. Primary)</i>				
Lower secondary	1.337**	1.325*	1.363**	1.262
	[0.194]	[0.193]	[0.197]	[0.188]
Upper secondary	1.154	1.180	1.190	1.065
	[0.150]	[0.154]	[0.155]	[0.143]
Tertiary	0.943	0.951	0.989	0.865
	[0.131]	[0.132]	[0.136]	[0.123]
<i>Employment status (ref. Employee)</i>				
Civil servant	1.375***	1.387***	1.363***	1.250**
	[0.138]	[0.139]	[0.133]	[0.126]
Self-employee	0.451***	0.455***	0.435***	0.427***
	[0.063]	[0.063]	[0.059]	[0.060]
<i>Number of year in employment</i>	0.970***	0.969***	0.973***	0.970***
	[0.006]	[0.006]	[0.006]	[0.006]
<i>Satisfaction with job (yes)</i>	0.866	0.868	0.866	0.885
	[0.116]	[0.117]	[0.116]	[0.118]
<i>Care responsibilities (yes)</i>	1.029	1.022	1.051	1.063
	[0.086]	[0.086]	[0.087]	[0.089]
<i>Living with a partner (yes)</i>	1.246*	1.243*	1.247*	1.199
	[0.141]	[0.141]	[0.141]	[0.136]
<i>Make ends meet (ref. Fairly easily)</i>				
With some difficulties	1.156	1.163	1.131	1.136
	[0.114]	[0.114]	[0.106]	[0.112]
With great difficulties	0.964	0.992	0.938	0.939
	[0.171]	[0.175]	[0.162]	[0.170]
<i>Self-reported health</i>	0.460***	0.459***	0.456***	0.452***

	[0.032]	[0.031]	[0.032]	[0.031]
<i>% GDP spent on pensions</i>	x		x	
<i>FE welfare regime</i>	x	x		
<i>FE countries</i>				x
ER=no, men				
ER=no, women				
ER=yes, men				
ER=yes, women				
ER=no, primary education				
ER=no, lower secondary				
ER=no, upper secondary				
ER=no, tertiary				
ER=yes, primary education				
ER=yes, lower secondary				
ER=yes, upper secondary				
ER=yes, tertiary				
<i>Age</i>	x	x	x	x
<i>Age-squared</i>	x	x	x	x
<i>Year</i>	x	x	x	x
<i>Log-time</i>	x	x	x	x
<i>Time</i>	x	x	x	x
<i>N</i>	28,137	28,137	28,137	28,137

Source: SHARE, waves I-VII. ER=yes: positive preference for early retirement; ER=no: negative preference for early retirement. * p<0.05, ** p<0.01, *** p<0.001

Table A3.2 Discrete-time event history analysis on the probability of early retirement. Odds ratios and standard errors (s.e.) for main effects, linear predicted probabilities and standard errors (s.e.) for interaction effects (models b-e)

	(b)	(c)	(d)	(e)
	OR [s.e.]	OR [s.e.]	OR [s.e.]	OR [s.e.]
<i>ER=yes</i>	1.975***	2.523***	3.244**	2.182**
	[0.208]	[0.681]	[1.493]	[0.740]
<i>Women</i>	0.877			
	[0.115]			
<i>Education (ref. Primary)</i>				
Lower secondary	1.332**	1.519	2.487**	1.032
	[0.194]	[0.430]	[1.128]	[0.397]
Upper secondary	1.152	1.489	1.853	1.085
	[0.150]	[0.385]	[0.812]	[0.355]
Tertiary	0.944	1.320	1.940	0.678
	[0.131]	[0.341]	[0.840]	[0.230]
<i>Employment status (ref. Employee)</i>				
Civil servant	1.380***	1.379***	1.498***	1.230
	[0.139]	[0.139]	[0.227]	[0.166]
Self-employee	0.452***	0.463***	0.747	0.323***
	[0.063]	[0.064]	[0.162]	[0.059]
<i>Number of year in employment</i>	0.971***	0.975***	0.987*	0.919***
	[0.006]	[0.005]	[0.008]	[0.011]
<i>Satisfaction with job (yes)</i>	0.861	0.878	0.695*	1.045
	[0.116]	[0.119]	[0.129]	[0.207]
<i>Care responsibilities (yes)</i>	1.028	1.023	0.972	1.094
	[0.086]	[0.086]	[0.124]	[0.123]
<i>Living with a partner (yes)</i>	1.245*	1.301**	1.358*	1.041
	[0.141]	[0.145]	[0.212]	[0.170]
<i>Make ends meet (ref. Fairly easily)</i>				
With some difficulties	1.155	1.156	1.058	1.223
	[0.114]	[0.114]	[0.164]	[0.164]
With great difficulties	0.960	0.980	1.100	0.845
	[0.171]	[0.174]	[0.293]	[0.205]
<i>Self-reported health</i>	0.460***	0.459***	0.438***	0.472***
	[0.032]	[0.032]	[0.053]	[0.040]
% GDP spent on pensions	x	x	x	x
FE welfare regime	x	x	x	x

FE countries				
	Linear probabilities			
ER=no, men	0.019			
	[0.002]			
ER=no, women	0.017			
	[0.002]			
ER=yes, men	0.036			
	[0.002]			
ER=yes, women	0.028			
	[0.002]			
ER=no, primary education	0.013	0.009	0.021	
	[0.003]	[0.004]	[0.006]	
ER=no, lower secondary	0.019	0.022	0.021	
	[0.003]	[0.004]	[0.005]	
ER=no, upper secondary	0.019	0.017	0.022	
	[0.002]	[0.003]	[0.003]	
ER=no, tertiary	0.017	0.017	0.014	
	[0.002]	[0.002]	[0.002]	
ER=yes, primary education	0.031	0.028	0.042	
	[0.004]	[0.005]	[0.007]	
ER=yes, lower secondary	0.041	0.030	0.059	
	[0.004]	[0.006]	[0.007]	
ER=yes, upper secondary	0.034	0.029	0.038	
	[0.002]	[0.003]	[0.003]	
ER=yes, tertiary	0.026	0.025	0.023	
	[0.003]	[0.003]	[0.003]	
Age	x	x	x	x
Age-squared	x	x	x	x
Year	x	x	x	x
Log-time	x	x	x	x
Time	x	x	x	x
<i>N</i>	28,137	28,137	13,133	15,004

Source: SHARE, waves I-VII. ER=yes: positive preference for early retirement; ER=no: negative preference for early retirement. * p<0.05, ** p<0.01, *** p<0.001

Table A4 Discrete-time event history analysis on the probability of early retirement. Odds ratios and standard errors (s.e.) for main effects, linear predicted probabilities and standard errors (s.e.) for the effect of preferences by welfare regime

	(m1)	(m2)	(m3)
	OR [s.e.]	OR [s.e.]	OR [s.e.]
<i>ER=yes</i>	2.055***	2.001***	1.700***
	[0.249]	[0.243]	[0.231]
<i>Welfare regime (ref. Continental)</i>			
Social-democratic	0.721*	0.703**	0.741
	[0.125]	[0.121]	[0.141]
Liberal	0.761**	0.805*	0.869
	[0.094]	[0.102]	[0.124]
Southern	0.251***	0.290***	0.375***
	[0.074]	[0.086]	[0.120]
Eastern	0.337***	0.445**	0.656
	[0.118]	[0.166]	[0.254]
<i>% GDP spent on pensions</i>		x	x
Linear probabilities [s.e.]			
ER=no, Continental	0.022	0.027	0.021
	[0.002]	[0.002]	[0.002]
ER=no, Southern	0.016	0.020	0.016
	[0.002]	[0.003]	[0.002]
ER=no, Social-democratic	0.018	0.021	0.019
	[0.002]	[0.002]	[0.002]
ER=no, Liberal	0.015	0.007	0.008
	[0.003]	[0.002]	[0.002]
ER=no, Eastern	0.018	0.010	0.014
	0.006	[0.003]	[0.005]
ER=yes, Continental	0.041	0.053	0.035
	[0.004]	[0.004]	[0.003]
ER=yes, Southern	0.030	0.037	0.028
	[0.003]	[0.003]	[0.003]
ER=yes, Social-democratic	0.035	0.037	0.031
	[0.003]	[0.003]	[0.003]
ER=yes, Liberal	0.029	0.026	0.031
	[0.006]	[0.005]	[0.006]
ER=yes, Eastern	0.034	0.033	0.044
	[0.010]	[0.006]	[0.010]

<i>Gender</i>	x	x	x
<i>Education</i>	x	x	x
<i>Employment status</i>			x
<i>Number of year in employment</i>			x
<i>Satisfaction with job</i>			x
<i>Care responsibilities</i>			x
<i>Living with a partner</i>			x
<i>Make ends meet</i>			x
<i>Self-reported health</i>			x
<i>Age</i>	x	x	x
<i>Age-squared</i>	x	x	x
<i>Year</i>	x	x	x
<i>Log-time</i>	x	x	x
<i>Time</i>	x	x	x
<i>N</i>	28,673	28,673	28,137

Source: SHARE, waves I-VII. ER=yes: positive preference for early retirement; ER=no: negative preference for early retirement. * p<0.05, ** p<0.01, *** p<0.001