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The Interplay of Work-Family Trajectories and Welfare Provisions in (In)Voluntary Retirement

A Cross-National Comparison of 28 European Countries

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Abstract

This study takes a comparative life course perspective on retirement voluntariness across Europe. Combining theories on cumulative (dis)advantage and the welfare state, it examines the relationship between people's work-family trajectories before age 50 and retirement voluntariness based on the reasons of labor market exit from age 50 onward and whether this relationship is conditional on the generosity of a country's level of welfare benefits. To this end, individual life history data from the Survey of Health, Ageing and Retirement in Europe (SHARE) are enriched with time-varying country data on social spending and uniquely matched to the timeline of people's work-family trajectories. In line with the cumulative (dis)advantage notion, our results show that people who deviate from the most common trajectory of full-time employment and marriage with children in either the work (by having been predominantly part-time employed, non-employed or self-employed) or family domain (through a divorce or childlessness) are less likely to retire voluntarily and more likely to do so involuntarily. More generous welfare states offset the accumulation of disadvantages for people whose work-family trajectories are characterized by part-time employment, as with higher levels of social spending, their chances of voluntary retirement improve relatively. However, people with a trajectory that predominantly features non-employment show an even lower likelihood of voluntary retirement in countries that spend more on social welfare benefits, probably because they are not well-covered in contribution-based social security schemes. We further observed pronounced gender differences in how work-family trajectories relate to voluntary and involuntary retirement, depending on the degree of social spending. The findings broaden our understanding of inequality in retirement voluntariness, indicating that accumulated disadvantages restrict people's agency in navigating their retirement transition. The welfare state either buffers or exacerbates this accumulation of disadvantages, which is determined by how people's work-family trajectories look like.

Keywords: work, family, retirement, life course, welfare state

Introduction

In today's aging Western world, ever more people retire. Most people do so when they become eligible for a public pension, which generally requires them to reach a certain age (Mäcken et al., 2022). Yet, not everyone follows this conventional path to retirement; they enter retirement through a different door. Some are able to retire at their preferred age, for instance, to enjoy life or spend time with their family (Radl, 2013; Steiber & Kohli, 2017). Others must retire before their desired age or even before the state pension age because they are ill or made redundant (Ebbinghaus & Radl, 2015; Visser et al., 2016). That is, some retire voluntarily, others exit involuntarily. Voluntary retirees often fare well after retiring, whereas involuntary retirees more often experience financial, psychological and social problems, as they leave the workforce prematurely, not being well-prepared for post-retirement life (Barbosa et al., 2016). The reasons for people's retirement inform us about social inequality in old age and therefore it is important to understand what determines retirement voluntariness.

Retirement voluntariness has been defined in various ways in previous studies. Works either took a direct approach by asking people whether they retired voluntarily or involuntarily (Denton et al., 2013; Dorn & Sousa-Poza, 2010; Szinovacz & Davey, 2005), or conceptualized it indirectly by regarding retirement voluntariness as the gap between a preferred and realized retirement age (Ebbinghaus & Radl, 2015; Steiber & Kohli, 2017). Different from these two strategies, a more frequent manner to assess retirement voluntariness is to look at a person's main reasons for retirement. For example, retiring due to poor health is considered an involuntary retirement reason, while retiring to enjoy leisure time is regarded as a voluntary retirement motivation (Hofäcker et al., 2016; Hyde & Dingemans, 2017; Mäcken et al., 2022; Madero-Cabib & Kaeser, 2016; Radl, 2013; Radl & Himmelreicher, 2015). Here, we follow this latter approach.

Regardless of how researchers defined retirement voluntariness, studies found that it is socially stratified, with men, the low-educated and those in lower occupational classes being more likely to retire involuntarily (see Stiemke & Hess, 2022, for a review). Despite these well-established findings, our knowledge of explanations of retirement voluntariness is still limited because previous research exclusively focused on single events at a specific moment in a person's life to explain retirement voluntariness. However, retirement is not an isolated event. It is a process rooted in the accumulation of experiences across multiple domains over a person's life course (Damman, 2017). For instance, someone can start in a prestigious job and form a family, but then become unemployed and divorced and remain so for a long period, which increases the

risk of involuntary retirement (Madero-Cabib et al., 2016; Visser et al., 2016). Another person may attain a low educational degree, but not come across any major disruptions in work or family life, maintaining good health and having adequate financial resources, which facilitates a voluntary retirement transition (Barbosa et al., 2016; Fisher et al., 2016). In sum, although singular events certainly matter, life course trajectories consisting of multiple events cover a broader array of factors that help us better explicate who is able to retire voluntarily and who is vulnerable to facing involuntary retirement.

Few studies scrutinized the role that life course trajectories play in retirement voluntariness. Visser et al. (2016) demonstrated that work trajectories that are more volatile and deviate from continuous full-time employment decrease the likelihood of voluntary retirement and increase that of involuntary retirement. Similarly, Trentini (2021) showed that people with stable employment careers are more likely to retire voluntarily. Yet, both studies focused on a single country and solely examined work trajectories, neglecting that work and family experiences are closely intertwined over the life course and jointly influence people's reasons for retirement (Madero-Cabib & Fasang, 2016; Madero-Cabib et al., 2016). We argue that addressing work-family trajectories provides a holistic and long-term approach, capturing processes of cumulative advantages and disadvantages over a person's lifespan (DiPrete & Eirich, 2006). It reflects patterns of stability and change in people's work and family life, often surrounding critical life events, such as job loss, disability, marriage and childbirth, which can either enhance or hinder one's ability to gain resources decisive for voluntary retirement (Wang et al., 2011). As far as we know, our study is the first to relate work-family trajectories to retirement voluntariness.

As such, our study is also the first effort to do this in a cross-national setting, aiming to elucidate whether and why inequality in retirement voluntariness between people with diverging work-family trajectories depends on the country context. The welfare state is particularly likely to matter in this regard. Social policies generally aim to improve the welfare of individuals who encounter disadvantages during their life, such as unemployment, disability and limited access to housing, childcare or healthcare (Esping-Andersen, 1999). This is often achieved through in-cash and in-kind benefits, including monetary transfers, social rights and services. By providing these benefits, a country's welfare state plays an active role in protecting individuals from disadvantages and offsetting their consequences (Sieber et al., 2020). Since disadvantages happen in the course of a person's life and welfare benefits are targeted at each stage of life, the state has the potential to interrupt the accumulation of disadvantages (Diewald, 2016), and thus

mitigate social inequalities (Leisering, 2004). However, countries differ in how generous they are in distributing welfare benefits (Scruggs & Ramalho Tafoya, 2022), so the extent to which they mitigate social inequalities likely differs.

In the current study, we apply this notion of welfare state generosity to shed light on how retirement voluntariness results from the interaction between a person's work-family trajectory and a country's welfare generosity. We argue that people who have similar work-family trajectories, but live in distinct countries, may diverge in their opportunities and constraints to exert agency over their retirement transition, as countries provide different degrees of social protection against disadvantages that emerge over their life course. In testing this argument, we present a unique empirical contribution to the retirement literature from an institutional life course approach. Research from an institutional life course approach (Kohli, 2007; Mayer, 2005) that has examined how country characteristics moderate the relationship between the life course and retirement has commonly relied on cross-sectional country data that pertain to a specific point in time far removed from the part of the life course that was observed (Bennett & Möhring, 2015; Dingemans et al., 2017). However, institutional arrangements at the time people went through their life course likely play a role and, arguably, an even more important role in determining what the influence of that life course trajectory will be. Therefore, we use longitudinal data on welfare state generosity and match those data to the period of people's work-family trajectory, providing a strict test of the institutional life course approach as we think it was originally intended.

Our contributions are made possible by the Survey of Health, Ageing and Retirement in Europe (SHARE). SHARE provides life history data to answer our first research question: *To what extent are work-family trajectories associated with retirement voluntariness?* To answer this question, we take six previously identified types of work-family trajectories from age 15 to 49 from Firat et al. (2023), which is the most comprehensive measurement of the work-family trajectories of European older adults to date. For retirement voluntariness, we embrace the most prevalent approach and use the self-reported reasons for retirement to determine whether a person retired voluntarily or involuntarily. Following Radl (2014), we distinguish a third category, called conventional retirement, which refers to receiving public pension benefits. We enriched the individual SHARE data with country time-series data on their social spending from the OECD and Eurostat to answer our second research question: *To what extent does the association between work-family trajectories and retirement voluntariness depend on welfare state generosity?* To measure welfare state generosity, we use a composite measure of social

spending that captures a wide range of policy areas across 28 European countries over about four decades, corresponding and matched to the period in which the majority of the respondents lived their work-family trajectories.

Theory and Hypotheses

We study retirement voluntariness from a life course perspective. A core idea of this perspective is that the transition from one state to another cannot be understood in isolation (Elder et al., 2003). To understand a transition, experiences in the past need to be considered, as events earlier in a person's life have implications for events later in life. The sequence of experiences across multiple stages of life (e.g., from childhood to adulthood) make up personal trajectories that differ between individuals depending on the timing, duration and order of events. Trajectories not only develop across multiple stages of life, but also across multiple domains of life, as reflected in Krüger et al.'s (2001) master status hypothesis and Elder's (1985) concept of the differentiated life course, proposing that life courses are mainly divided by the intersection of work and family roles.

To explore the joint development of work and family roles over the life course and examine the consequences for later life, including retirement outcomes, scholars have paid growing attention to work-family trajectories. This attention has generated a rich literature on the description of work-family trajectories (see Han & Mortimer, 2023; Machů et al., 2022, for a review), but most prior studies suffer from a lack of coverage (either men or women only, a limited amount of countries, a short lifespan and/or a narrow range of work and family states). In a recent study, Firat et al. (2023) addressed these issues and provided the most elaborate measurement of work-family trajectories yet. The authors used data from SHARE on nearly 80,000 older adults across 28 European countries, revealing six typical work-family trajectories from early to midlife (ages 15-49).

In the current study, we make use of those six trajectories. By far the most common trajectory was characterized by continuous full-time employment in the work domain and being in a stable marriage with children in the family domain. The other five trajectories represented deviations from this common trajectory in either the work or family domain. One trajectory combined long-term full-time work with singlehood or childlessness. Another combined it with mostly divorce and some widowhood. The remaining three trajectories involved part-time employment, self-employment and non-employment over large parts of the life course, all in conjunction with having a stable relationship and the presence of children. Although a trajectory

featuring non-traditional arrangements in both the work and family domain (e.g., non-employed and divorced) is also possible theoretically, it was not observed in the study by Firat et al. (2023). Such a trajectory is not commonly observed in the literature either (Han & Mortimer, 2023; Machů et al., 2022). Hence, we do not consider it in this study.

In deriving our hypotheses, we adopt the agency within structure model of the life course perspective (Settersten & Gannon, 2005). This model aims to understand how individuals act within the conditions of their social setting. It blends constructivist and contextualist views on the life course. On the one hand, it acknowledges that people exercise agency and construct their life course by making choices. On the other hand, it regards life transitions as processes embedded in a context or structure, such as time and place. However, it does not explain how this interactive process unfolds over time. To explain how characteristics of social settings (countries' welfare state generosity) interact with individual lives (work-family trajectories), we apply an institutional life course approach (Kohli, 2007; Mayer, 2005). We do so by synthesizing cumulative (dis)advantage and welfare state theories. Figure 1 depicts our conceptual framework.

[Figure 1]

Individual Level: Cumulative (Dis)advantage

The cumulative (dis)advantage mechanism states that (dis)advantages accumulate in a path-dependent way, meaning that earlier (dis)advantages create later (dis)advantages (DiPrete & Eirich, 2006). For example, a spell of unemployment has scarring effects, meaning that unemployment at some point in a person's life predicts unemployment at a later time and also future earnings. This process is accelerated through the resources coming or going with this lived experience, such as the depreciation of human capital during unemployment. When a person experiences an advantageous event, they gain resources from it, while a disadvantageous event may lead to a loss of resources or impede their accumulation. This in turn sustains or suppresses people's agency, causing the accumulation of more (dis)advantages.

We use this mechanism of cumulative (dis)advantage to argue that distinct types of work-family trajectories confer varying levels of resources, which shape social inequality in retirement voluntariness. To specify this argument, we refer to prior research suggesting that work and family trajectories are dynamically connected in such a way that they entail resources that reinforce or offset the accumulation of (dis)advantages over time (Fasang & Mayer, 2020). Although our empirical analysis does not provide a test of this causal process, we apply it to

make the link between work-family trajectories and retirement voluntariness theoretically plausible.

As mentioned, we consider six types of work-family trajectories. The work-family trajectory that is likely most advantageous for retirement voluntariness is the one characterized by continuous full-time employment combined with having a stable relationship and children. Although work-family conflict and stress surely occur in this trajectory, it is expected to still be advantageous because enduring stability brings about multiple resources. First, it provides more financial security, as working full-time continuously and being in a stable relationship means more household income, wealth accumulation and, ultimately, pension entitlements (Halpern-Manners et al., 2015). Second, it may enhance one's health because having a job, a spouse and kids promotes resources that generally inhibit life strain and elevate physical functioning (Van Hedel et al., 2016). Third, it improves mental well-being by providing meaning and value through the fulfillment of multiple social roles (Lacey et al., 2016). All these advantages boost people's agency in later life, helping them retire through voluntary paths instead of involuntary ones and before becoming eligible for public pension.

Any deviations from the nuclear family may curb the accumulation of advantages despite being continuously full-time employed. When people get divorced or enter widowhood, they generally face a drop in life satisfaction, physical well-being, family income and wealth (Comolli et al., 2021; Halpern-Manners et al., 2015; Van Hedel et al., 2016). Singlehood or childlessness is expected to pose similar constraints. Those who stay single or who have a partner yet remain childless often display lower financial and social well-being (Comolli et al., 2021; Van Hedel et al., 2016). So, a non-traditional family arrangement may impede a person's opportunities to receive (non-material) support, even if they have a full-time work career. As a result, individuals with a trajectory characterized by full-time employment and a non-traditional family arrangement, that is, divorce, widowhood, singlehood or childlessness, are expected to be less likely to be able to retire voluntarily and more likely to retire involuntarily than conventionally relative to full-time employed people with a stable family.

Being part of a nuclear family is, however, not necessarily advantageous if it is combined with long-lasting weak labor market attachment. When people are employed part-time or out of the labor force for a large part of their lives, they accrue less pension savings and wealth, while being more susceptible to poorer well-being (Comolli et al., 2021; Halpern-Manners et al., 2015). This implies that being part-time or non-employed for a longer time limits people's means in determining how they retire, despite an enduring traditional family structure. Hence,

they might be less likely to retire voluntarily and more likely to retire involuntarily than conventionally.

As for the long-term self-employed with a traditional family, they are generally eligible for a public pension but commonly excluded from occupational pensions. They must use private savings for retirement, but usually do not save enough (Conen & Schippers, 2019). This means that they have fewer financial options for retiring voluntarily before becoming eligible for a public pension, making them less likely to retire voluntarily than conventionally relative to those continuously employed full-time. At the same time, the self-employed often report poorer health because of work-family tensions (Bettac & Probst, 2021). This can lead to the expectation that the self-employed run an increased risk of retiring involuntarily. Yet, it is well-known that the self-employed have longer working lives than regular employees (Visser et al., 2016), implying that some keep working involuntarily before retiring (Steiber & Kohli, 2017), though others are attached to the business they once started and do not want to give up. It is thus more likely that self-employed people work until at least the state pension age, even though they might face health issues. Thus, instead of an increased risk of involuntary retirement, they are expected to have a lower likelihood of retiring involuntarily versus conventionally.

Country Level: Welfare State Generosity

The cumulative (dis)advantage mechanism helps explain why individual work-family trajectories are related to retirement voluntariness. Yet, it is a micro-level explanation, while people undergo work-family trajectories within certain institutional structures. Institutions may govern the prospects of individuals through social policies (Kohli, 2007; Mayer, 2005). Since social policies differ between countries and within countries over time, individuals with similar work-family trajectories may also differ in their reasons for retirement, depending on the country and specific time they experienced this work-family trajectory. We will argue that the generosity of welfare benefits has implications for the accumulation of (dis)advantages in work-family trajectories and, as a result, for inequality in retirement voluntariness.

To explain why, we turn to the concepts of 'decommodification' and 'defamilization' (Esping-Andersen, 1999). Both concepts refer to reducing people's reliance on the market and the family through social security and assistance programs. These programs cover contributory or insurance-based (pension, sickness and unemployment) benefits and non-contributory or need-based (childcare, healthcare and housing) benefits. Governments that spend comparatively more on such benefits ensure a certain standard of living for citizens who are confronted with

adversity during their life course (Diewald, 2016). These benefits serve as safety nets when a person experiences a disadvantage, like a disability, joblessness or a lack of income to pay the rent. Additionally, welfare benefits also serve as a buffer (Scherger, 2024). For example, illness may be avoided thanks to good healthcare with easier access to preventive measures, old-age poverty can be tackled by generous state pensions, or the (opportunity) costs of parenting can be minimized through the provision of formal childcare (Bonthuis, 2023). Therefore, social inequality is generally less pronounced in more generous welfare states because the accumulation of disadvantages is alleviated by social policies (Sieber et al., 2020).

Generous welfare states can thus reduce inequality in retirement voluntariness between people with diverging work-family trajectories. They are able to do this through the 'risk management' function of social policies, which helps individuals establish continuity between different life stages and domains (Leisering, 2004). This continuity is established by absorbing the impacts of disadvantageous episodes during the life course through generous welfare benefits. Generous welfare benefits are likely helpful for any type of work-family trajectory relative to the continuous combination of full-time work and a nuclear family. The reason is that deviation from the latter trajectory more often leaves people vulnerable to accumulating disadvantages, as explained before (Dannefer, 2020). Yet, if these people go through such disadvantages in a country and period where welfare benefits are provided generously, they have more opportunities to maintain or regain their resources through the support of the welfare state (Scherger, 2024). In sum, people can break a cycle of cumulative disadvantage with welfare benefits. Consequently, their agency over the retirement transition is increased, which in turn increases the chance of voluntary retirement and decreases that of involuntary retirement relative to conventional retirement.

Self-employed people deserve special attention when it comes to welfare benefits. They typically have access to non-insurance-based schemes that are provided irrespective of employment type, such as child allowances, housing benefits, healthcare or public pensions. The self-employed are usually not supported by insurance-based schemes for disability and unemployment and are (mostly) excluded from occupational pensions (Conen & Schippers, 2019). At best, they have optional participation in these insurance schemes, but they rarely take part for financial reasons (Spasova et al., 2019). This means that self-employed persons sometimes have to deplete their own resources to handle adversities, whereas employees are often protected to a larger extent. Therefore, the level of social protection in a country is expected to matter less for individuals in the self-employment trajectory.

Hypotheses

Compared to people with trajectories of predominantly full-time work with a traditional family, we expect that people with trajectories of mostly full-time employment with a non-traditional family and of mostly non-employment or part-time employment with a traditional family are less likely to retire voluntarily (H1a) and more likely to retire involuntarily (H1b) than conventionally. People with trajectories of mostly self-employment with a traditional family are less likely to retire both voluntarily and involuntarily (H1c) than conventionally.

Furthermore, we expect that the more generous a welfare state, the smaller the hypothesized differences between people with trajectories of predominantly full-time work with a traditional family and people with trajectories of mostly full-time work with a non-traditional family and of non-employment or part-time employment with a traditional family in the likelihood of retiring voluntary (H2a) and involuntary (H2b) compared to conventionally.

Additionally, we explore whether the testing of these hypotheses plays out differently for men and women, as welfare state policies (Leitner, 2010), work-family trajectories (Fasang & Aisenbrey, 2021) and pathways to retirement (Madero-Cabib et al., 2023) are gendered. For example, we know that women are overrepresented in trajectories characterized by part-time and non-employment. This would imply that the findings regarding these trajectories mainly apply to women. However, some men also follow such trajectories. The question is whether the consequences of being in part-time or non-employment for retirement voluntariness are different for men and women and whether the role of the welfare state in changing these consequences varies by gender. The answers to such questions have so far remained unclear. Therefore, although theorizing about these gender differences falls beyond the scope of this study, we undertake an explorative analysis of gender differences.

Methods

Data

We used data from SHARE (Börsch-Supan et al., 2013). SHARE employs probabilistic sampling and face-to-face personal interviewing to collect representative data on adults aged 50 and older across European countries. Waves 1, 2, 4, 5, 6, 7, 8 and 9 administered prospective surveys that were designed as a panel study and included refreshment samples. Wave 3 was a retrospective survey using a life history calendar, which helps older adults recall past events

more accurately (Schröder, 2011). This retrospective survey, known as SHARELIFE, was fielded again in wave 7 in all countries, also in those that did not participate in wave 3.

For our study, we merged the retrospective and prospective survey data. Information on work-family trajectories was available in the retrospective surveys. Therefore, we started by selecting people who participated in a retrospective survey (wave 3 or 7). To link these people's work-family trajectory to retirement voluntariness, these people needed to have participated in at least one prospective survey as well, as details regarding retirement voluntariness were available only in the prospective surveys. From the prospective surveys, we obviously had to select respondents who were retired. Because work-family trajectories spanned ages 15-49, we selected those who retired at the age of 50 and above.

After these initial selections, our sample consisted of 55,491 respondents. This sample involved individuals with work-family trajectory information from ages 15 to 49 and who retired between ages 50 and 90. As it was a selective group of people who worked beyond the state pension age, we excluded retirees leaving the workforce after age 70 (1.38%). This age was chosen as a cut-off since it was the age by which almost everybody was retired and because it was the maximum age for pension eligibility in the observation window across the countries we examined. This cut-off also minimized the time gap between the measurement of the work-family trajectories and retirement transition. The mean retirement age of our sample was about 60, meaning that, on average, there was a 10-year gap between a person's work-family trajectory and retirement transition. Finally, we excluded respondents with missing values on retirement voluntariness (10.87%), which was missing for several reasons, such as not knowing the answer, refusing to answer or simply not answering. Our final analytical sample comprised 48,775 people in 28 European countries.

Measurements

Dependent Variables

We conceptualized retirement as the exit from the workforce and considered a person retired when that person self-reported retirement to be their current job situation (cf. Radl, 2013; Trentini, 2021). If so, they were asked about the reason for retiring. The reason for retiring was asked in the wave in which people reported their current job situation as retired for the first time, meaning that it concerned the first transition to retirement. Consistent with previous research that implemented an indirect approach to measure retirement voluntariness based on the reason for retiring (e.g., Hofäcker et al., 2016; Mäcken et al., 2022), we used the ten

available reasons to distinguish between conventional, voluntary and involuntary retirement, as shown in Table 1.

[Table 1]

Most respondents selected one reason for retiring, but some (8.92%) provided multiple reasons. In case of multiple reasons, we adopted the approach of other researchers (e.g., Hyde & Dingemans, 2017; Radl, 2013) and prioritized involuntary reasons the most, assuming that if people mentioned negative reasons alongside other reasons, other reasons might be post-hoc justifications to rationalize the fact that they were forced to exit the workforce. We prioritized the conventional reason the least, as retiring for voluntary reasons reflects a more active choice and agentic transition than reaching eligibility for a public pension.

Additionally, we regarded those whose current job situation was permanently sick/disabled or unemployed as retired (cf. Radl, 2013; Radl & Himmelreicher, 2015), but only if they were in that situation for at least two subsequent years until the last observation. We coded them as involuntarily-retired because they were outside the labor market in an unwanted situation, and they were so already for a long while. In our sample, this was the case for 1.17% of respondents, of which the sick/disabled (0.75%) were so for, on average, almost 8 years, and the unemployed (0.42%) were jobless for almost 7 years previous to the last observation. This suggests that they will likely not return to employment.

We created two dependent variables. Whereas one dependent variable with three categories is more intuitive, we had to create two dependent variables because multinomial models did not converge when we added random coefficients for the work-family trajectories, which is necessary to obtain reliable estimates in cross-level interactions (see Heisig & Schaeffer, 2019). It was however possible to include random coefficients in models with two dependent variables. The first dependent variable represented the voluntary versus conventional retirement contrast, and the second represented the contrast between involuntary and conventional retirement. While most previous studies treated conventional retirement as part of voluntary retirement, we followed Radl (2014) and treated it as a separate category and even the reference category, as it is conceptually distinct from voluntary retirement and represents the dominant reason for retiring.

As can be seen in Table 2, voluntary retirees were similar to conventional retirees in terms of the timing of retirement. Most of the voluntary and conventional retirees retired between the ages of 60 and 65, with a mean around 61. However, most of the involuntary retirees retired

before 61. On average, involuntary retirees retired about 2.5 years earlier than both conventional and involuntary retirees, corroborating the idea that they leave the workforce prematurely.

[Table 2]

Independent Variables

We took work-family trajectories from a previous study that used SHARELIFE data to provide one of the most comprehensive work-family trajectories to date (Firat et al., 2023). SHARELIFE data allow for reconstructing the employment, partnership and parenthood experiences of individuals for each year of their life. Using this data, Firat et al. (2023) reconstructed the pre-retirement work and family experiences from age 15 to 49. At a given age, respondents could be in only one work state and only one family state. Work states included full-time employed, part-time employed, self-employed, unemployed, sick/disabled and non-employed (e.g., housekeeping). Family states included single, partnered and unpartnered – each with and without children. Single indicated unmarried or non-cohabiting, partnered meant married or cohabiting, and unpartnered denoted separated, divorced or widowed. Children covered both biological and adopted children.

After arranging the data, Firat et al. (2023) analyzed it with multichannel sequence and cluster analysis (see Liao et al., 2022). First, they calculated the degree of dissimilarity between each respondent's sequence of work and family state according to their timing, duration and order. For this, they employed the optimal matching metric with a cost matrix that accounted for varying transition costs, such as the transition from full-time employment to unemployment being more costly than to part-time employment. Then, they clustered the matrix of pairwise dissimilarities through Ward hierarchical clustering, such that similar sequences were sorted into homogeneous groups. To determine the number of clusters, they examined multiple indices, including the Average Silhouette Width, Hubert's Gamma Somers' D and the Point Biserial Correlation, which suggested six clusters. In this article, we used these six clusters as work-family trajectories. We treated the full-time employed partnered parent trajectory as the reference category, as it was the most common trajectory, generally also representing the most resource-rich work-family trajectory. The trajectories are described in Table 3.

[Table 3]

Moderator Variables

To assess the generosity of a country's welfare state, we used the Social Expenditure (SOCX) database from OECD (2019). This database offers statistics on social spending in OECD countries from 1980 to 2021. However, as it is limited to OECD countries, data was unavailable for non-OECD countries in our data: Bulgaria, Croatia, Cyprus, Malta and Romania. For these countries, we relied on the European System of Integrated Social Protection Statistics (ESSPROS) database developed by Eurostat (2022). ESSPROS provides information on social spending in European countries from 1990 to 2021. As explained in the SOCX manual (OECD, 2019), SOCX and ESSPROS are compatible, encompassing the same policy areas with a similar methodology. In fact, correlations between the data from the two sources for the jointly covered countries and periods were relatively high, ranging from r = .81 to r = .94. Therefore, we used SOCX data for 23 OECD countries and ESSPROS data for five non-OECD countries, enabling a cross-national comparison of social spending across 28 European countries.

Specifically, we used a cumulative measure covering all policy areas, containing old age, survivors, disability, health, family, unemployment, housing and social exclusion. The unit of measurement was the percentage of gross domestic product (GDP), and the data came in time-series format as annual values. To capture how the generosity of a welfare state influences individual lives at a certain time in a certain country, we linked annual benefit values to the years of our respondents' work-family trajectories. Because the work-family trajectories spanned ages 15-49, we needed welfare state values to cover 35 years for each person. This was unfeasible for everybody, as some people went through their work-family trajectories before SOCX and ESSPROS data started. For a few respondents, we achieved a full match with the work-family trajectory years (.01%). For others, we had a partial match of 1-34 years (75.65%) or no match at all (24.34%). In case of a full or partial match, we computed the mean of benefit values across the matching years. When there was no match, we used the value in the year closest to the last year of the work-family trajectory. Luckily, country-specific values remained relatively stable over time (see Figure 2), so this approach enabled us to explore the impact of welfare state generosity even if direct data linkage was not possible. The computed scores across countries are given in the Appendix, where higher scores show higher welfare state generosity.

[Figure 2]

Control Variables

We controlled for gender, educational level and birth cohort. Gender was a binary variable: female and male. Educational level indicated the highest degree based on the International Standard Classification of Education (ISCED) 1997, which distinguishes between seven levels ranging from *0 = pre-primary education* to *6 = second stage of tertiary education*. We condensed these levels into three groups to identify low-educated (levels 0-2), moderate-educated (levels 3-4) and high-educated (levels 5-6) individuals. The birth cohort variable classified people into four groups by birth year: pre-1940, 1940-1945, 1946-1950 and post-1950.

We did not control for variables that mediate the relationship between work-family trajectories and retirement voluntariness, such as financial, psychological and social resources, because we were interested in the total effect of the trajectories. Another reason to refrain from adding mediators is that they would leave less room for cross-level interactions. Table 4 shows descriptive statistics of all variables.

[Table 4]

Analysis

We conducted multilevel regression analyses to handle the hierarchical structure of the data with individuals nested in countries. Because logistic regression models are more sensitive to omitted variables, often provide hard-to-interpret estimates, and coefficients are difficult to compare across models, we employed linear probability models, as recommended by Mood (2010). In estimating these models, we used the restricted maximum likelihood (REML) procedure to fit the models, as it performs better in producing unbiased estimates of variance components than the maximum likelihood (ML) function (Verbeke & Molenberghs, 2009).

We ran separate models for our two dependent variables, using the *mixed* command in Stata. First, we estimated a null model to compute the intraclass correlation. Next, we added the work-family trajectories with the control variables (Model 1) to test H1. Then, we estimated random coefficients for the trajectories (Model 2) to establish variation in the influence of the work-family trajectories across countries. Finally, we included cross-level interactions between the work-family trajectories and social spending to test H2.

Results

Starting with descriptive findings, we found that conventional retirement was the most common path to retirement in 23 countries, ranging from 56% in Germany to 88% in Greece. In five

countries, voluntary retirement emerged as the predominant route: the Netherlands (53%), Sweden (51%), Denmark (48%), France (48%) and Ireland (42%). Except for Ireland, these countries have generous welfare systems, which likely facilitate voluntary retirement more among their citizens. In Ireland, however, the prevalence of voluntary retirement might signal a lack of desirability or feasibility in accessing public pensions. This can be inferred from Figure 3, showing that Ireland was also the country with the highest proportion of involuntary retirement. This suggests that many Irish people did not want to, or could not work until becoming eligible for public pensions.

Conversely, most Eastern Europeans worked until becoming eligible for public pensions. In Bulgaria, Romania, Poland, Lithuania, Latvia, Slovenia and Slovakia, voluntary retirement rates were below 10%, while involuntary retirement rates were below 16%. This demonstrates an inclination among Eastern Europeans to delay retirement until the public pension eligibility, possibly to avoid reductions in (pension) income due to earlier or premature retirement. Overall, these descriptive findings confirm that retirement voluntariness varies cross-nationally.

[Figure 3]

Multilevel models also established that retirement voluntariness varies cross-nationally, as the country variance components were statistically significant. The intraclass correlation was .21 for voluntary (versus conventional) retirement and .09 for involuntary (versus conventional) retirement. This justifies multilevel analyses because it means that 21% and 9% of the total variance in voluntary and involuntary retirement is attributed to differences between countries. It also suggests that the reasons for involuntary retirement are more similar across countries than those for voluntary retirement.

The results of the multilevel analyses are presented in Tables 5 and 6. Model 1 revealed that indeed work-family trajectories predicted retirement voluntariness. Parents in a stable relationship who were part-time employed, non-employed or self-employed for most of their lives were less likely to retire voluntarily than full-time employed partners who had children by a margin of 3.6%, 7.2% and 6.1% points, respectively. Continuously full-time working singles or childless couples as well as unpartnered people with children were about 2-3% points more likely to retire involuntarily compared to those in a full-time work and traditional family configuration. People with a traditional family arrangement who were mostly non-employed or self-employed over the course of their lives were 2.5% and 4.9% points less likely than their full-time employed counterparts to retire involuntarily.

[Table 5]

[Table 6]

These results indicate that deviating from full-time employment and a traditional family structure generally brings about less voluntary and more involuntary retirement, as expected in H1a and H1b. Also supporting H1c, self-employed partnered parents were less inclined to retire voluntarily and involuntarily relative to cohabiting or married parents in full-time employment, likely because they had to wait until qualifying for a public pension, which is often the only available source of pension income for them. Surprisingly, non-employed individuals exhibited a similar trend as the self-employed, showing lower likelihoods of retiring for voluntary and involuntary reasons, probably because they, too, had to wait for the public pension option.

Concerning the control variables, women were approximately 1-2% points less likely to retire voluntarily and involuntarily than men. This reflects a tendency for women to retire more frequently upon reaching eligibility for public pensions. Compared to the high-educated, individuals with lower levels of education, whether low or moderate, were less likely to retire voluntarily and more likely to retire involuntarily, with greater disparities observed for the low-educated (~6% points). As for birth cohort differences, all three groups who were born after 1940 had higher likelihoods of voluntary and involuntary retirement than those born before 1940. Yet, the effects were larger for the youngest cohort (2.9% points for voluntary retirement and 6.8% points for involuntary retirement), signaling that retiring through public pension eligibility has become less 'conventional' over time.

Model 2 included random coefficients for the work-family trajectories. These were statistically significant for virtually all work-family trajectories, with country characteristics being plausible candidates to explain some of the variation between countries in the coefficients. Random coefficients for the trajectories that have a non-traditional family arrangement were nearly zero despite being statistically significant, and the one for singles or childless couples on voluntary retirement was not statistically significant. This points out that these work-family trajectories have similar consequences across countries, at least for people's retirement voluntariness.

We added the cross-level interaction terms in Model 3 and found two significant interactions between a work-family trajectory and social spending on voluntary retirement. These interactions are plotted in Figure 4. The plot at the top illustrates how married or cohabiting parents who were working part-time for large parts of their lives differ from those who were primarily in full-time employment across levels of social spending. We observe that they differ

from each other, with part-timers being less likely to retire voluntarily when social spending falls below 25% of GDP. These differences are statistically significant since the 95% confidence intervals do not include zero. Importantly, the differences decrease from 12.4% to 3.4% points with increases in social spending. When social spending reaches 30% of GDP, there remains a 1.1% point difference, which is not statistically significant. This means that generous welfare states, such as Sweden, Belgium and Austria, reduce inequality in voluntary retirement for part-time employed partnered parents, aligning them more closely with their full-time counterparts, consistent with H2a.

[Figure 4]

The plot at the bottom of Figure 4 shows a picture that contradicts H2a. In this plot, we see the differences between people who were predominantly non-employed throughout the life course and those who were mostly full-time employed while retaining a stable relationship and having children. Again, these differences are about voluntary retirement, which are statistically significant when social spending is above 20% of GDP. To our surprise, the differences increase as social spending rises. Specifically, the differences go up from 8.6% points when social spending is at 20% of GDP, to 20% points when social spending is at 30% of GDP. This suggests that the gap in voluntary retirement between non-employed and full-time employed individuals with a traditional family constellation is widened as a welfare state becomes more generous. Although this is counterintuitive, it is plausibly because the non-employed are less entitled to welfare benefits, such as unemployment, disability and pension benefits, due to their weaker attachment to the workforce.

Regarding involuntary retirement, we observed no interaction between the generosity of social spending and any of the work-family trajectories. Hence, we reject H2b, although it was anticipated that the generosity of the welfare state would not matter much for self-employed persons, as they usually have to take care of social security themselves, being ineligible for or taking less advantage of many welfare benefits.

Additional Analyses

Gender Differences

To elucidate potential gender differences, we ran the analyses separately for men and women, which largely yielded five differences. First, full-time employed dads who stayed divorced for a long time did not differ in involuntary retirement from dads who maintained a life-long

marriage while being full-time employed. However, divorced mothers were more likely to retire involuntarily compared to married mothers, although they both usually had full-time jobs.

Second, single or childless women with full-time employment were more likely to retire voluntarily than full-time working moms, whereas no such discrepancy was observed among men. Among men, the single or childless were more prone to involuntary retirement relative to those having a stable relationship involving children, despite both working full-time over the life course. However, there was no difference in involuntary retirement between single or childless women with full-time jobs and married moms with full-time jobs.

Third, married fathers who mostly worked part-time were less likely to retire voluntarily than married fathers who were continuously in full-time employment. Yet, part-time working married mothers did not differ from full-time working married mothers in terms of voluntary retirement. Fourth, non-working fathers were more inclined to retire involuntarily than full-time working fathers, while housewives were less likely to experience involuntary retirement in contrast to full-time working mothers.

Finally, although we found no interaction regarding involuntary retirement in the entire sample or the male sample, we found an interaction in the female sample. When social spending was at 5% of GDP, part-time employed mothers with a husband were more likely to retire involuntarily than their counterparts who were consistently full-time employed. On the contrary, when social spending was at 30% of GDP, they were less likely to retire involuntarily. This suggests that generous welfare states mitigate inequality in involuntary retirement between women who showed weaker versus stronger attachment to the labor market while having a traditional family arrangement.

All in all, these analyses suggested that it was worthwhile to split the sample by gender, as it led to more nuanced and sometimes different or even opposite conclusions in some regards. The tables and figures concerning these gender-split analyses are available in the Appendix.

Robustness Checks

To check the robustness of the results, we ran six analyses. First, we decreased the cut-off age for retirement from 70 to 65, which is the typical state pension age across Europe. The results virtually remained unchanged. Second, we canceled the prioritization of retirement reasons and performed the analyses for respondents who selected only one reason, which delivered an additional difference that supported our conclusions. The interaction concerning the part-time

employed trajectory on voluntary retirement was not significant anymore. However, it was significant on involuntary retirement, such that part-timers benefitted from a generous welfare state to reduce their propensity for retiring involuntarily. Third, we removed respondents who were coded as involuntary retirees because of being sick/disabled and unemployed for at least two years. This did not affect our results, except that the effect of the full-time employed single or childless trajectory on involuntary retirement became non-significant. Fourth, we employed ML rather than REML to fit models and obtained the same results. Fifth, we were able to conduct a multinomial model without random coefficients for the work-family trajectories, leading to the same conclusions as in Model 1. Sixth, instead of averaging values across matching years of a person's work-family trajectory and a country's welfare state generosity, we used maximum and minimum values over time. The results with the maximum value replicated our findings, but there were some differences when using the minimum values. Specifically, we found two interactions on involuntary retirement, which corroborated our findings and expectations. When social spending was low (5% of GDP), part-time and non-employed people were more likely to retire involuntarily than full-time employed people, together with having a traditional family structure. However, this likelihood was reversed when social spending was high (25% of GDP). These robustness checks indicated that the results largely were independent of our analytical decisions.

In addition to these robustness checks, we also tested our models on the involuntary versus voluntary contrast for the sake of a complete comparison between all types of retirement voluntariness. Again, we estimated these models in the entire sample as well as male and female samples separately. The results were largely along the same lines as the current results. The tables and figures detailing these results can be seen in the Appendix.

Discussion

It remained unclear from previous studies how interconnected work and family trajectories spanning a major part of people's pre-retirement life course jointly influence retirement voluntariness. It was (therefore) also unknown whether the impact of work-family trajectories differs across countries according to their welfare provisions. The present study addressed these knowledge gaps, being the first study to examine the relationship between life course trajectories and retirement voluntariness across multiple life domains in a cross-national setting. We matched time-series data on countries' generosity of social spending to the period of people's work-family trajectories, creating a unique opportunity to test to what extent inequality in retirement voluntariness between people with advantageous and disadvantageous work-

family trajectories is exacerbated or buffered in European countries that offer more generous welfare benefits.

Our first research question was about the extent to which work-family trajectories were associated with retirement voluntariness. Unlike prior research that almost exclusively studied single life events in a specific life stage or multiple life events in a single life course domain, we studied entire work-family trajectories from age 15 to 49. This holistic approach proved fruitful. Our conclusion is that deviations from full-time employment throughout the life course together with a stable relationship and children contribute to social inequality in retirement voluntariness. Importantly, we found differences between people with varying work-family trajectories over and above common social stratification indicators like gender and educational level, which highlights how consequential cumulative work-family trajectories are. According to the cumulative disadvantage mechanism, such deviations make people more vulnerable to experiencing adversities, including less financial security, health and well-being. These disadvantages likely become more pressing over time and ultimately minimize people's resources and agency over why they retire. Yet, our results showed that those who were mostly self-employed or non-employed during their lives form an exception when it comes to them being less likely to retire involuntarily. It might well be that the self-employed keep working until the public pension eligibility not because they have the resources and agency to do so, but because they simply cannot afford to retire before they become eligible for a public pension. Similarly, the non-employed have to wait for public pension eligibility to retire, as they have a short history of employment and are not well-covered in disability or unemployment pension schemes, which depend on employment duration.

Our second research question concerned the extent to which the association between people's work-family trajectories and retirement voluntariness was dependent on the generosity of a country's welfare system. We conclude that welfare state generosity plays an important moderating role but in different ways. On the one hand, people who usually had part-time jobs over their life course while having a partner and children improved their chances of voluntary retirement when their country spent more on social policies. This suggests that more spending on social policies helps reduce social inequality in retirement voluntariness by buffering life course disadvantages. On the other hand, individuals who were out of the labor force for large parts of their lives were less likely to retire voluntarily, and this likelihood was even much lower in countries that provided more generous social protection. We think this can be attributed to the structure of welfare systems. Welfare systems, including pension, unemployment and

sickness benefits, are generally contribution-based, and non-employed people have low (or no) contributions, as they are in paid work only briefly during their life course. Thus, a generous welfare state does not interrupt the accumulation of disadvantages for them. Consequently, they cannot retire easily for voluntary reasons and have to wait until their public pension age.

Our findings also highlighted gender differences. While divorce did not affect the retirement voluntariness of full-time employed fathers, it negatively impacted that of full-time employed mothers, likely because divorce is especially costly for women's financial, physical and psychological well-being (Arber, 2004; Comolli et al., 2021). For men in full-time employment, singlehood or childlessness has more consequences. Single or childless women with full-time careers were more likely to retire voluntarily than married mothers with similar careers, whereas men in similar situations were susceptible to involuntary retirement. This implies that single or childless men miss the potential benefits of marriage or fatherhood for their income, health and social resources (McDonald, 2020; Ploubidis et al., 2015). Yet, marriage or fatherhood is not a panacea for men. Married fathers with a history of part-time and non-employment were less likely to retire voluntarily and more likely to retire involuntarily compared to full-timers. Married mothers with a similar work history, however, did not differ from married mothers in full-time employment. This result reflects the male breadwinner-female homemaker norm, which prioritizes men's workforce participation over women's, with divergent influences on men's and women's lives (Schröder, 2020). Notably, our findings underscored the role of policies in mitigating inequality in retirement voluntariness for part-time employed mothers, who were less likely to retire involuntarily in countries with generous policies. This means that generous welfare provisions buffer the life course vulnerabilities of women with weaker labor market attachment.

Our contributions should be evaluated in light of certain limitations. One limitation concerns our measurement of retirement voluntariness. We created a broad indicator of retirement voluntariness distinguishing between voluntary, involuntary and conventional retirement (Radl, 2014). However, like previous studies, we used an indirect measure of voluntariness based on retirement reasons, and we do not exactly know how respondents perceived their transition to retirement. For example, someone may have retired because of an illness and yet perceived it as a voluntary exit, perhaps feeling that retirement was a relief. An alternative is to measure retirement reasons as well as perceptions of voluntariness to scrutinize the extent to which they overlap or contradict (Ebbinghaus and Radl, 2015), but SHARE does not cover the latter. Another limitation pertains to unobserved factors that may also contribute to our understanding

of retirement voluntariness. Although we presented a comprehensive picture of retirement voluntariness across Europe, there were many things we could not do. To name a few, future research may consider partners' trajectories at the household level, or sector at the organizational level. Maybe someone had a disadvantageous work trajectory, but retired voluntarily thanks to the advantageous work trajectory of the partner. Or maybe someone was continuously full-time employed and in a stable marriage, but retired involuntarily because that person got permanently sick due to working in a physically demanding job in the construction or industrial sector.

Despite these limitations, we advanced our knowledge about retirement voluntariness. Adopting a comparative life course approach, we showed how people's work-family trajectories are associated with retirement voluntariness, conditional on a country's generosity of social spending. Our findings highlighted difficulties for people who deviate from a traditional life course in either the work or family domain to achieve voluntary retirement and avoid involuntary retirement. Furthermore, for some groups, such as those who are in part-time employment for most of their lives, this might be counterbalanced by more generous spending on welfare benefits. Against the background of aging populations and ever-changing work and family lives, we invite future studies to further explore the country conditions under which inequality in retirement voluntariness between people who accumulate advantages and those who accumulate disadvantages over the life course is reduced.

References

Arber, S. (2004). Gender, marital status, and ageing: Linking material, health, and social resources. *Journal of Aging Studies*, *18*(1), 91–108. https://doi.org/10.1016/j.jaging.2003.09.007

Barbosa, L. M., Monteiro, B., & Murta, S. G. (2016). Retirement adjustment predictors-A systematic review. *Work, Aging and Retirement*, *2*(2), 262–280. https://doi.org/10.1093/workar/waw008

Bennett, J., & Möhring, K. (2015). Cumulative (dis)advantage? The impact of labour market policies on late career employment from a life course perspective. *Journal of Social Policy*, *44*(2), 213–233. https://doi.org/10.1017/S0047279414000816

Bettac, E. L., & Probst, T. M. (2021). Work–family conflict, sleep, and health: A comparison of traditional and self-employed workers. *International Journal of Manpower*, *42*(2), 240–259. https://doi.org/10.1108/IJM-02-2019-0106

Bonthuis, B. (2023). Pension spending efficiency. In A. Afonso, J. T. Jalles, & A. Venâncio (Eds.), *Handbook on public sector efficiency* (pp. 177–196). Edward Elgar Publishing.

Börsch-Supan, A., Brandt, M., Hunkler, C., Kneip, T., Korbmacher, J., Malter, F., Schaan, B., Stuck, S., & Zuber, S. (2013). Data resource profile: The Survey of Health, Ageing and Retirement in Europe (SHARE). *International Journal of Epidemiology*, *42*(4), 992–1001. https://doi.org/10.1093/ije/dyt088

Comolli, C. L., Bernardi, L., & Voorpostel, M. (2021). Joint family and work trajectories and multidimensional wellbeing. *European Journal of Population*. https://doi.org/10.1007/s10680-021-09583-3

Conen, W., & Schippers, J. (2019). *Self-employment as precarious work: A European Perspective*. Edward Elgar.

Damman, M. (2017). Understanding retirement processes: The role of life histories. In E. Parry & J. McCarthy (Eds.), *The Palgrave handbook of age diversity and work* (pp. 263–291). Springer.

Dannefer, D. (2020). Systemic and reflexive: Foundations of cumulative dis/advantage and life-course processes. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *75*(6), 1249–1263. https://doi.org/10.1093/geronb/gby118

Denton, M., Plenderleith, J., & Chowhan, J. (2013). Health and disability as determinants for involuntary retirement of people with disabilities. *Canadian Journal on Aging*, *32*(2), 159–172. https://doi.org/10.1017/S0714980813000202

Diewald, M. (2016). Life course risks and welfare states' risk management. In M. J. Shanahan, J. T. Mortimer, & M. K. Johnson (Eds.), *Handbook of the life course. Volume II* (pp. 677–687). Springer.

Dingemans, E., Henkens, K., & van Solinge, H. (2017). Working retirees in Europe: Individual and societal determinants. *Work, Employment and Society*, *31*(6), 972–991. https://doi.org/10.1177/0950017016664677

DiPrete, T. A., & Eirich, G. M. (2006). Cumulative advantage as a mechanism for inequality: A review of theoretical and empirical developments. *Annual Review of Sociology*, *32*, 271–297. https://doi.org/10.1146/annurev.soc.32.061604.123127

Dorn, D., & Sousa-Poza, A. (2010). "Voluntary" and "involuntary" early retirement: An international analysis. *Applied Economics*, *42*(4), 427–438. https://doi.org/10.1080/00036840701663277

Ebbinghaus, B., & Radl, J. (2015). Pushed out prematurely? Comparing objectively forced exits and subjective assessments of involuntary retirement across Europe. *Research in Social Stratification and Mobility*, *41*, 115–130. https://doi.org/10.1016/j.rssm.2015.04.001

Elder, G. H. (1985). Perspectives on the life course. In G. H. Elder (Ed.), *Life course dynamics: Trajectories and transitions, 1968–1980* (pp. 23–49). Cornell University Press.

Elder, G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 3–19). Plenum Press.

Esping-Andersen, G. (1999). *Social foundations of postindustrial economies*. Oxford University Press.

Eurostat. (2022). *European system of integrated social protection statistics — ESSPROS: Manual and user guidelines 2022 edition*.

Fasang, A. E., & Aisenbrey, S. (2021). Uncovering social stratification: Intersectional inequalities in work and family life courses by gender and race. *Social Forces*. https://doi.org/10.1093/sf/soab151

Fasang, A. E., & Mayer, K. U. (2020). Life course and social inequality. In J. Falkingham, M. Evandru, & A. Vlachatoni (Eds.), *Handbook of demographic change and the life course* (pp. 22–37). Edward Elgar.

Firat, M., Visser, M., & Kraaykamp, G. (2023). Work-family trajectories across Europe: Differences between social groups and welfare regimes. *Frontiers in Sociology*, *8*, Article 1100700. https://doi.org/10.3389/fsoc.2023.1100700

Fisher, G. G., Chaffee, D. S., & Sonnega, A. (2016). Retirement timing: A review and recommendations for future research. *Work, Aging and Retirement*, *2*(2), 230–261. https://doi.org/10.1093/workar/waw001

Halpern-Manners, A., Warren, J. R., Raymo, J. M., & Adam Nicholson, D. (2015). The impact of work and family life histories on economic well-being at older ages. *Social Forces*, *93*(4), 1369–1396. https://doi.org/10.1093/sf/sov005

Han, X., & Mortimer, J. T. (2023). Dynamic work trajectories and their interplay with family over the life course. *Frontiers in Sociology*, *8*(Article 1096109). https://doi.org/10.3389/fsoc.2023.1096109

Heisig, J. P., & Schaeffer, M. (2019). Why you should always include a random slope for the lower-level variable involved in a cross-level interaction. *European Sociological Review*, *35*(2), 258–279. https://doi.org/10.1093/esr/jcy053

Hofäcker, D., Schröder, H., Li, Y., & Flynn, M. (2016). Trends and determinants of work-retirement transitions under changing institutional conditions: Germany, England and Japan compared. *Journal of Social Policy*, *45*(1), 39–64. https://doi.org/10.1017/S004727941500046X

Hyde, M., & Dingemans, E. (2017). Hidden in plain sight? Does stricter employment protection legislation lead to an increased risk of hidden unemployment in later life? *Work, Aging*

and Retirement, *3*(3), 231–242. https://doi.org/10.1093/workar/wax013

Kohli, M. (2007). The Institutionalization of the life course: Looking back to look ahead. *Research in Human Development*, *4*(3–4), 253–271. https://doi.org/10.1080/15427600701663122

Krüger, H., Levy, R., Kruger, H., & Levy, R. (2001). Linking life courses, work, and the family: Theorizing a not so visible nexus between women and men. *Canadian Journal of Sociology*, *26*(2), 145. https://doi.org/10.2307/3341676

Lacey, R., Stafford, M., Sacker, A., & McMunn, A. (2016). Work-family life courses and subjective wellbeing in the MRC National Survey of Health and Development (the 1946 British birth cohort study). *Journal of Population Ageing*, *9*(1–2), 69–89. https://doi.org/10.1007/s12062-015-9126-y

Leisering, L. (2004). Government and the life course. In Jeylan T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 205–225). Kluwer.

Leitner, S. (2010). Germany outpaces Austria in childcare policy: The historical contingencies of 'conservative' childcare policy. *Journal of European Social Policy*, *20*(5), 456–467. https://doi.org/10.1177/0958928710380482

Liao, T. F., Bolano, D., Brzinsky-fay, C., Cornwell, B., Eva, A., Helske, S., Piccarreta, R., Raab, M., Ritschard, G., Struffolino, E., & Studer, M. (2022). Sequence analysis: Its past , present, and future. *Social Science Research*. https://doi.org/10.1016/j.ssresearch.2022.102772

Machů, V., Arends, I., Veldman, K., & Bültmann, U. (2022). Work-family trajectories and health: A systematic review. *Advances in Life Course Research*, *52*, 100466. https://doi.org/10.1016/j.alcr.2022.100466

Mäcken, J., Präg, P., Hess, M., & Ellwardt, L. E. A. (2022). Educational inequalities in labor market exit of older workers in 15 European countries. *Journal of Social Policy*, *51*(2), 435–459. https://doi.org/10.1017/S0047279421000258

Madero-Cabib, I., & Fasang, A. E. (2016). Gendered work–family life courses and financial well-being in retirement. *Advances in Life Course Research*, *27*, 43–60. https://doi.org/10.1016/j.alcr.2015.11.003

Madero-Cabib, I., Gauthier, J. A., & Le Goff, J. M. (2016). The influence of interlocked employment-family trajectories on retirement timing. *Work, Aging and Retirement*, *2*(1), 38–53. https://doi.org/10.1093/workar/wav023

Madero-Cabib, I., & Kaeser, L. (2016). How voluntary is the active ageing life? A life-course study on the determinants of extending careers. *European Journal of Ageing*, *13*(1), 25–37. https://doi.org/10.1007/s10433-015-0355-y

Madero-Cabib, I., Le Feuvre, N., & König, S. (2023). Gendered retirement pathways across lifecourse regimes. *Ageing and Society*, *43*, 2394–2423. https://doi.org/10.1017/S0144686X21001781

Mayer, K. U. (2005). Life courses and life chances in a comparative perspective. In S. Svallfors (Ed.), *Analyzing inequality: life chances and social mobility in comparative perspective* (pp. 17–55). Stanford University Press.

McDonald, P. (2020). The male marriage premium: Selection, productivity, or employer

preferences? *Journal of Marriage and Family*, *82*(5), 1553–1570. https://doi.org/10.1111/jomf.12683

Mood, C. (2010). Logistic regression: Why we cannot do what we think we can do, and what we can do about it. *European Sociological Review*, *26*(1), 67–82. https://doi.org/10.1093/esr/jcp006

OECD. (2019). *The OECD SOCX manual 2019 edition: A guide to the OECD social expenditure database*.

Ploubidis, G. B., Silverwood, R. J., DeStavola, B., & Grundy, E. (2015). Life-course partnership status and biomarkers in midlife: Evidence from the 1958 British birth cohort. *American Journal of Public Health*, *105*(8), 1596–1603. https://doi.org/10.2105/AJPH.2015.302644

Radl, J. (2013). Labour market exit and social stratification in Western Europe: The effects of social class and gender on the timing of retirement. *European Sociological Review*, *29*(3), 654–668. https://doi.org/10.1093/esr/jcs045

Radl, J. (2014). *Retirement timing and social stratification: A comparative study of labor market exit and age norms in Western Europe*. Versita.

Radl, J., & Himmelreicher, R. K. (2015). The influence of marital status and spousal employment on retirement behavior in Germany and Spain. *Research on Aging*, *37*(4), 361–387. https://doi.org/10.1177/0164027514536403

Scherger, S. (2024). Social policies and the life course – a complex relationship re-visited. *Zeitschrift Für Sozialreform*, *70*(1), 7–29. https://doi.org/10.1515/zsr-2023-0014

Schröder, M. (2011). *Retrospective data collection in the Survey of Health, Ageing and Retirement in Europe: SHARELIFE Methodology*. Mannheim Research Institute for the Economics of Ageing.

Schröder, M. (2020). Men lose life satisfaction with fewer hours in employment: Mothers do not profit from longer employment—Evidence from eight panels. *Social Indicators Research*, *152*(1), 317–334. https://doi.org/10.1007/s11205-020-02433-5

Scruggs, L. A., & Ramalho Tafoya, G. (2022). Fifty years of welfare state generosity. *Social Policy and Administration*, *56*(5), 791–807. https://doi.org/10.1111/spol.12804

Settersten, R. A., & Gannon, L. (2005). Structure, agency, and the space between: On the challenges and contradictions of a blended view of the life course. In R. Levy, P. Ghisletta, J.-M. Le Goff, D. Spini, & E. Widmer (Eds.), *Towards an interdisciplinary perspective on the life course* (pp. 35–56). Elsevier.

Sieber, S., Cheval, B., Orsholits, D., van der Linden, B. W. A., Guessous, I., Gabriel, R., Kliegel, M., von Arx, M., Kelly-Irving, M., Aartsen, M. J., Boisgontier, M. P., Courvoisier, D., Burton-Jeangros, C., & Cullati, S. (2020). Do welfare regimes moderate cumulative dis/advantages over the life course? Cross-national evidence from longitudinal share data. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *75*(6), 1312–1325. https://doi.org/10.1093/geronb/gbaa036

Spasova, S., Bouget, D., Ghailani, D., & Vanhercke, B. (2019). Self-employment and social protection: Understanding variations between welfare regimes. *Journal of Poverty and Social Justice*, *27*(2), 157–175. https://doi.org/10.1332/175982719x15538492348045

Steiber, N., & Kohli, M. (2017). You can't always get what you want: Actual and preferred ages of retirement in Europe. *Ageing and Society*, *37*(2), 352–385. https://doi.org/10.1017/S0144686X15001130

Stiemke, P., & Hess, M. (2022). Determinants of (in-)voluntary retirement: A systematic literature review. *Journal of European Social Policy*, *32*(3), 348–358. https://doi.org/10.1177/09589287221089465

Szinovacz, M. E., & Davey, A. (2005). Predictors of perceptions of involuntary retirement. *The Gerontologist*, *45*(1), 36–47. https://doi.org/10.1093/geront/45.1.36

Trentini, M. (2021). Retirement timing in Italy: Rising age and the advantages of a stable working career. *Ageing and Society*, *41*(8), 1878–1896. https://doi.org/10.1017/S0144686X20000148

Van Hedel, K., Mejía-Guevara, I., Avendaño, M., Sabbath, E. L., Berkman, L. F., Mackenbach, J. P., & van Lenthe, F. J. (2016). Work–family trajectories and the higher cardiovascular risk of American women relative to women in 13 European countries. *American Journal of Public Health*, *106*(8), 1449–1456. https://doi.org/10.2105/AJPH.2016.303264

Verbeke, G., & Molenberghs, G. (2009). *Linear mixed models for longitudinal data*. Springer.

Visser, M., Gesthuizen, M., Kraaykamp, G., & Wolbers, M. H. J. (2016). Inequality among older workers in the Netherlands: A life course and social stratification perspective on early retirement. *European Sociological Review*, *32*(3), 370–382. https://doi.org/10.1093/esr/jcw013

Wang, M., Henkens, K., & van Solinge, H. (2011). Retirement adjustment: A review of theoretical and empirical advancements. *American Psychologist*, *66*(3), 204–213. https://doi.org/10.1037/a0022414

Table 1

Reasons for retiring coded as conventional, voluntary and involuntary retirement.

Conventional	**Voluntary**	**Involuntary**
- became eligible for a public pension	- was offered an early retirement option with special incentives/bonus - became eligible for a private occupational pension - enjoy life - spend more time with family - became eligible for a private pension - retire at the same time as spouse/partner	- own ill health - ill health of a relative/friend - made redundant

Source: SHARE waves 1, 2, 4, 5, 6, 7, 8 and 9.

Table 2

Retirement age across retirement voluntariness.

	Retirement voluntariness		
	Conventional (n = 31,425)	Voluntary (n = 10,162)	Involuntary (n = 7,188)
Retirement age	%	%	%
50	1.43	1.47	7.48
51	.98	1.15	3.27
52	1.22	1.37	3.09
53	1.45	1.57	3.69
54	2.12	1.81	4.05
55	6.37	5.23	7.00
56	3.86	3.62	6.05
57	4.16	4.25	5.72
58	4.65	5.08	6.19
59	4.32	4.44	4.77
60	15.74	16.29	13.27
61	7.44	8.34	6.82
62	6.66	8.74	5.70
63	7.11	8.41	6.01
64	6.00	6.02	3.71
65	15.85	11.83	5.98
66	4.54	3.57	1.47
67	2.22	2.36	1.41
68	.94	1.25	.70
69	.55	.76	.49
70	.60	.96	.50
Missing	1.78	1.48	2.63
M	60.79	60.74	58.38
SD	4.16	4.11	4.74

$M_{conventional}$ - $M_{voluntary}$ = .05, t = 1.03, p > .05.
$M_{conventional}$ - $M_{involuntary}$ = 2.41, t = 42.66, p < .001.
$M_{voluntary}$ - $M_{involuntary}$ = 2.36, t = 34.64, p < .001.
Source: SHARE waves 1-9.

Table 3

Six types of work-family trajectories (from age 15 to 49).

Label	Description
Full-time worker, partnered parent	Individuals who have a continuous full-time employment career and a stable relationship with children over their life course. Full-time employment becomes dominant after age 20 and partnership with parenthood becomes dominant from age 30 onwards. On average, they spend about 29 years in full-time employment and 23 years in a relationship involving children.
Full-time worker, unpartnered parent	Individuals who have a continuous full-time employment career, with an average of 28 years in full-time employment, and experience a family dissolution (mostly divorce) involving children. The divorce takes place from the mid-30s onwards, meaning that they stay divorced for nearly 13 years.
Full-time worker, single or childless couple	Individuals who have a continuous full-time employment career as of age 20, with an average of 29 years in full-time employment. They do not form a traditional family over their life course. They either stay single from age 15 to 49 or remain childless when they have a partner in their 30s.
Part-time worker, partnered parent	Individuals who usually work part-time for an average of 23 years and have a stable relationship with children over their life course. They often work full-time until their early 30s and switch to part-time employment after family formation from thereafter. Family formation occurs later compared to non-employed partnered parents by approximately 2 years.
Non-worker, partnered parent	Individuals who do not work for most of their lives (for about 26 years in non-employment) and have a stable relationship of roughly 23 years including children. Some individuals work full-time before age 30, but they exit the workforce after marriage and/or childbirth from age 30 onwards.
Self-employed, partnered parent	Individuals who are self-employed for a large part of their lives (about 28 years) from age 15 to 49 and have a stable relationship and children. Family formation happens at older ages than the previous types of work-family trajectories by roughly 2 years.

Source: SHARE waves 3 and 7 (SHARELIFE).

Table 4

Descriptive statistics (N = 48,775).

Individual level	%		
Retirement voluntariness			
Conventional	64.43		
Voluntary	20.83		
Involuntary	14.74		
Work-family trajectories			
Full-time worker, partnered parent	61.61		
Full-time worker, unpartnered parent	4.79		
Full-time worker, single or childless couple	10.56		
Part-time worker, partnered parent	5.09		
Non-worker, partnered parent	10.01		
Self-employed, partnered parent	7.93		
Gender			
Female	51.80		
Male	48.20		
Educational level			
Low-educated	38.25		
Moderate-educated	40.48		
High-educated	21.27		
Birth cohort			
Pre-1940	28.07		
1940-1945	21.20		
1946-1950	21.34		
Post-1950	29.39		
Country level		*M*	*SD*
Social spending (% of GDP)		19.00	4.67

Source: SHARE waves 1-9, OECD, and Eurostat.

Table 5

Multilevel regression analysis of voluntary versus conventional retirement (N = 41,587).

	Model 1		Model 2		Model 3	
	B	*SE*	*B*	*SE*	*B*	*SE*
Individual level						
Work-family trajectories						
Full-time worker, partnered parent	Ref.		Ref.		Ref.	
Full-time worker, unpartnered parent	-.015	.009	-.018	.009	.041	.038
Full-time worker, single or childless couple	.005	.006	.004	.006	-.002	.026
Part-time worker, partnered parent	-.036***	.009	-.049***	.012	-.147**	.049
Non-worker, partnered parent	-.072***	.007	-.062*	.027	.145*	.060
Self-employed, partnered parent	-.061***	.007	-.071***	.019	-.082	.056
Female	-.009*	.004	-.007	.004	-.007	.004
Educational level						
Low-educated	-.056***	.006	-.056***	.005	-.056***	.005
Moderate-educated	-.025***	.005	-.022***	.005	-.022***	.005
High-educated	Ref.		Ref.		Ref.	
Birth cohort						
Pre-1940	Ref.		Ref.		Ref.	
1940-1945	.025***	.006	.022***	.006	.023***	.006
1946-1950	.017**	.006	.014*	.006	.014*	.006
Post-1950	.029***	.006	.025***	.006	.026***	.006
Country level						
Social spending	-.005***	.001	-.004***	.001	-.003**	.001
Cross-level interactions						
Social spending						
X Full-time worker, partnered parent					Ref.	
X Full-time worker, unpartnered parent					-.003	.002
X Full-time worker, single or childless couple					.000	.001
X Part-time worker, partnered parent					.005*	.002
X Non-worker, partnered parent					-.012***	.003
X Self-employed, partnered parent					.001	.003
Intercept	.353***	.045	.338***	.047	.324***	.047
Variance components						
Individual-level variance	.147*	.001	.146*	.001	.146*	.001
Country-level variance	.045*	.012	.051*	.014	.051*	.014
Slope variance						
Full-time worker, partnered parent			Ref.		Ref.	
Full-time worker, unpartnered parent			.000*	.000	.000*	.000
Full-time worker, single or childless couple			.000	.000	.000	.000
Part-time worker, partnered parent			.001*	.001	.000*	.001
Non-worker, partnered parent			.017*	.005	.015*	.004
Self-employed, partnered parent			.007*	.002	.006*	.002

*p < .05, **p < .01, ***p < .001.

For variance components, * indicates that a 95% confidence interval does not include 0.

Source: SHARE waves 1-9, OECD, and Eurostat.

Table 6

Multilevel regression analysis of involuntary versus conventional retirement (N = 38,613).

	Model 1		Model 2		Model 3	
	B	*SE*	*B*	*SE*	*B*	*SE*
Individual level						
Work-family trajectories						
Full-time worker, partnered parent	Ref.		Ref.		Ref.	
Full-time worker, unpartnered parent	.027**	.009	.026*	.010	-.035	.043
Full-time worker, single or childless couple	.018**	.007	.017*	.008	-.017	.031
Part-time worker, partnered parent	-.009	.010	.002	.016	.111	.067
Non-worker, partnered parent	-.025***	.007	.009	.023	.008	.057
Self-employed, partnered parent	-.049***	.007	-.066***	.016	-.015	.052
Female	-.018***	.004	-.016***	.004	-.016***	.004
Educational level						
Low-educated	.064***	.006	.064***	.006	.064***	.006
Moderate-educated	.034***	.005	.036***	.005	.036***	.005
High-educated	Ref.		Ref.		Ref.	
Birth cohort						
Pre-1940	Ref.		Ref.		Ref.	
1940-1945	.015*	.006	.015*	.006	.015*	.006
1946-1950	.021**	.006	.019**	.006	.020**	.006
Post-1950	.068***	.006	.066***	.006	.066***	.006
Country level						
Social spending	-.004***	.001	-.004**	.001	-.004**	.001
Cross-level interactions						
Social spending						
X Full-time worker, partnered parent					Ref.	Ref.
X Full-time worker, unpartnered parent					.003	.002
X Full-time worker, single or childless couple					.002	.002
X Part-time worker, partnered parent					-.006	.003
X Non-worker, partnered parent					.000	.003
X Self-employed, partnered parent					-.003	.003
Intercept	.220***	.031	.207***	.032	.201***	.033
Variance components						
Individual-level variance	.141*	.001	.140*	.001	.140*	.001
Country-level variance	.018*	.005	.019*	.005	.019*	.005
Slope variance						
Full-time worker, partnered parent			Ref.		Ref.	
Full-time worker, unpartnered parent			.000*	.001	.000*	.001
Full-time worker, single or childless couple			.000*	.000	.000*	.000
Part-time worker, partnered parent			.002*	.002	.002*	.002
Non-worker, partnered parent			.012*	.004	.012*	.004
Self-employed, partnered parent			.004*	.002	.004*	.002

*p < .05, **p < .01, ***p < .001.

For variance components, * indicates that a 95% confidence interval does not include 0.

Source: SHARE waves 1-9, OECD, and Eurostat.

Figure 1. Conceptual framework.

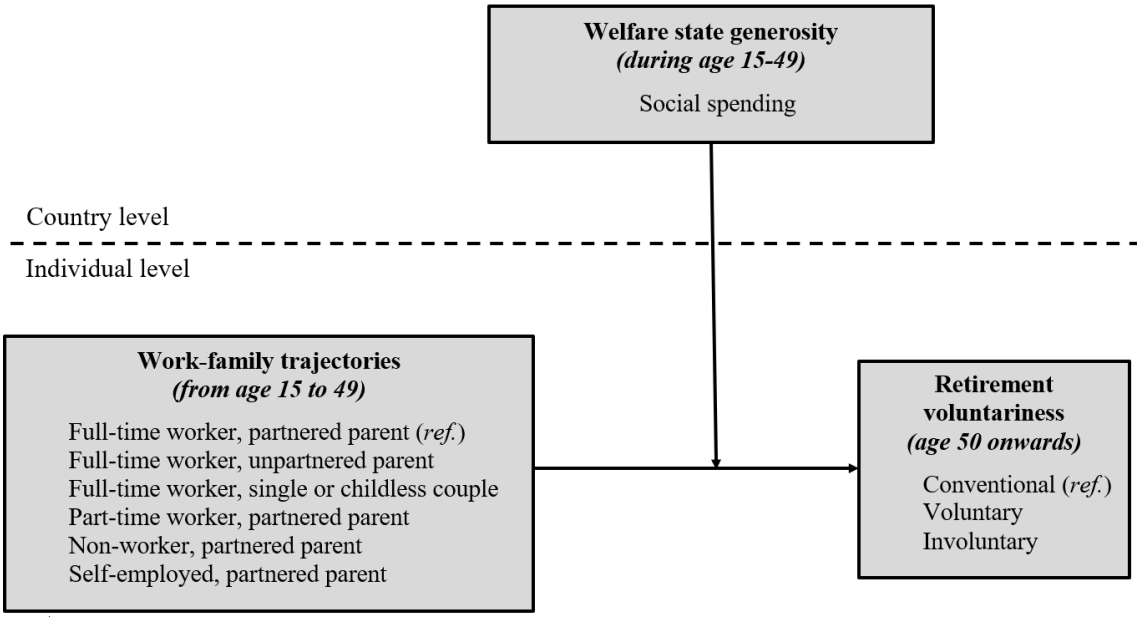


Figure 2. Social spending across European countries from 1980 to 2016.

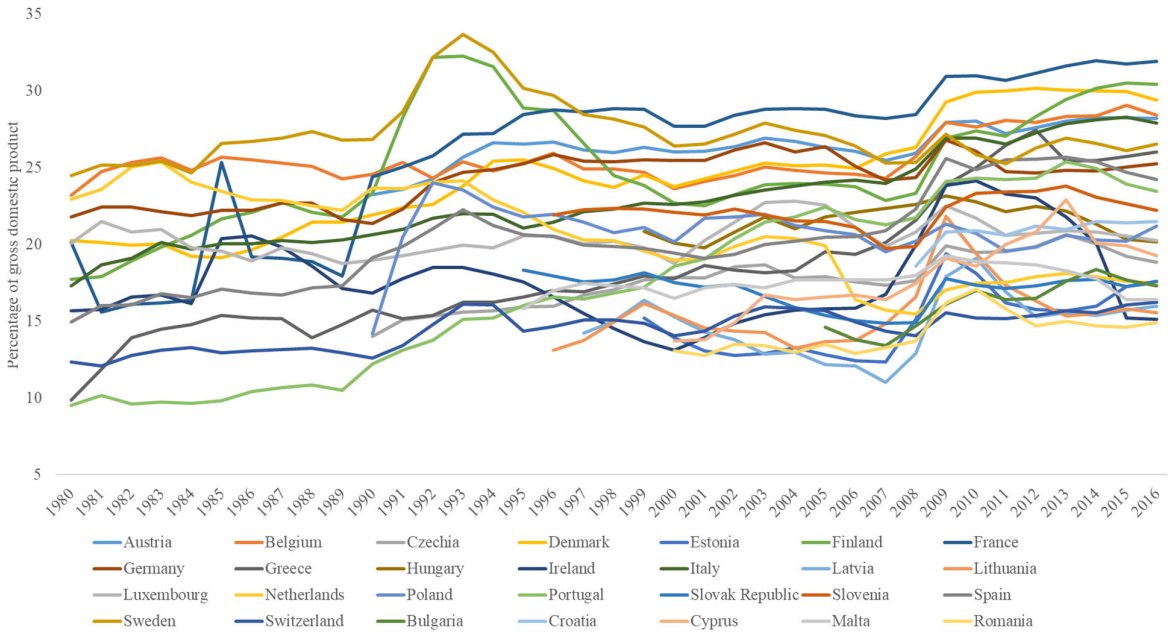


Figure 3. Retirement voluntariness across European countries.

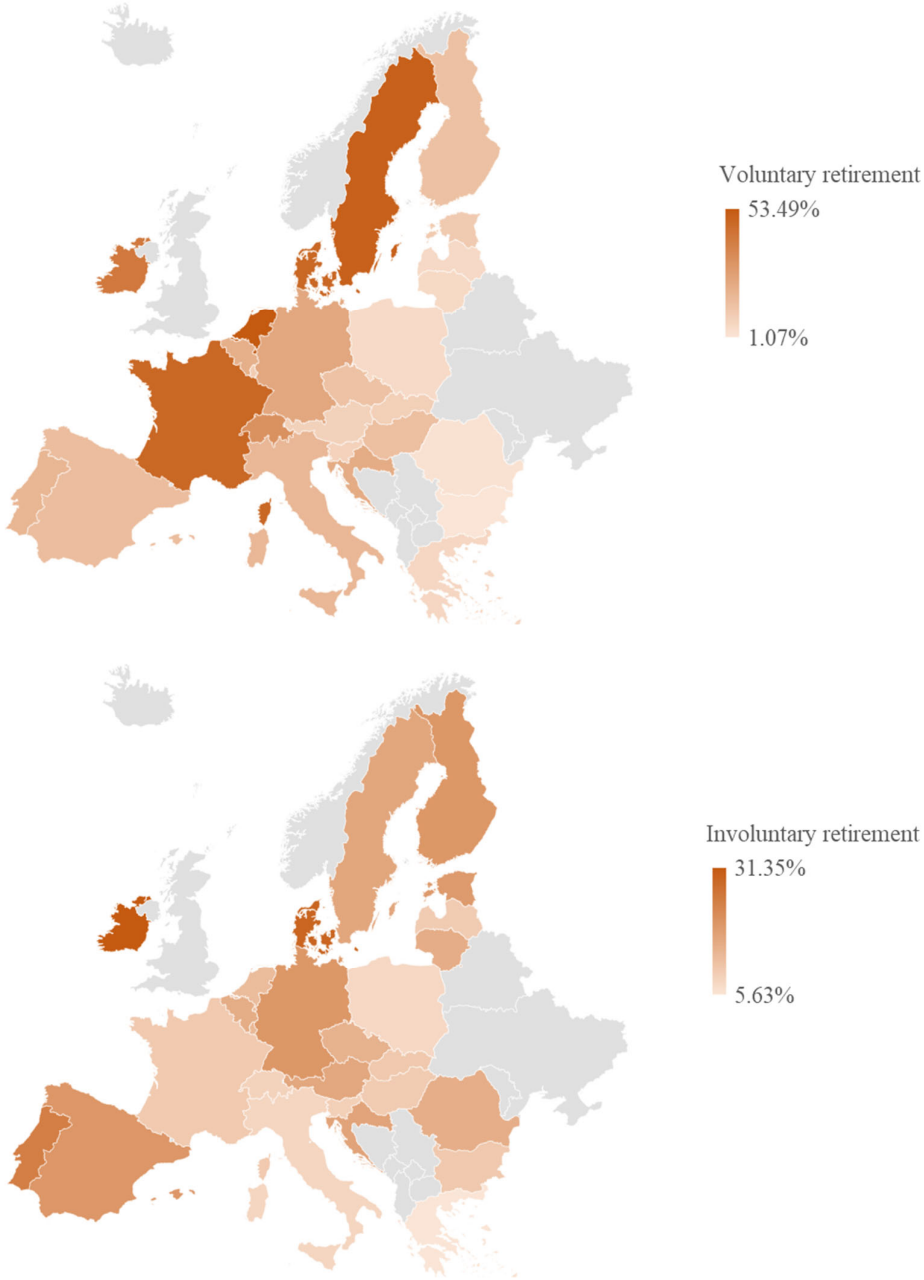
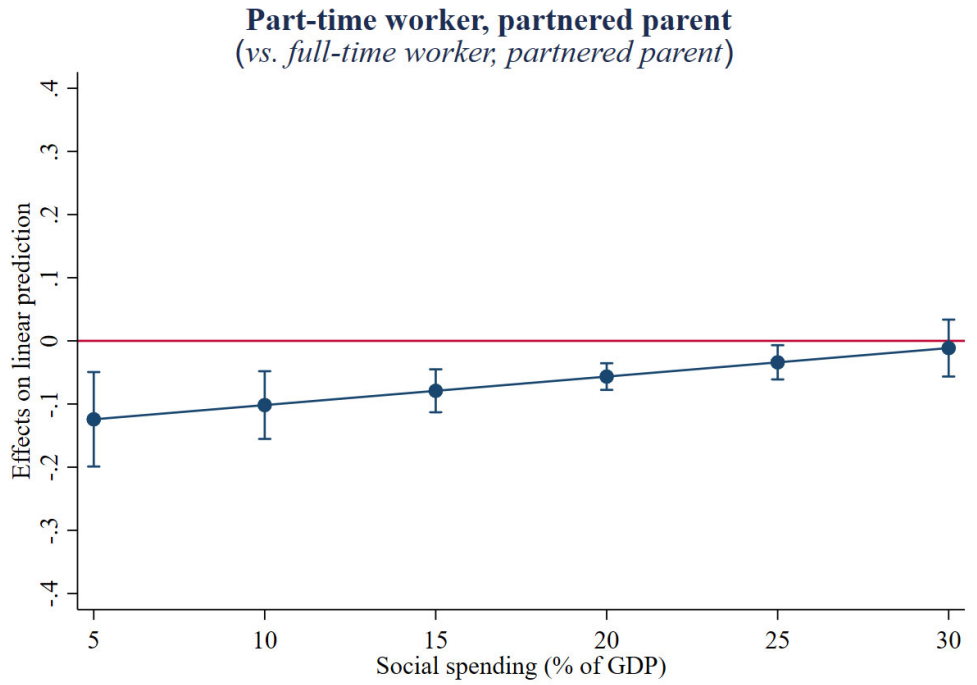
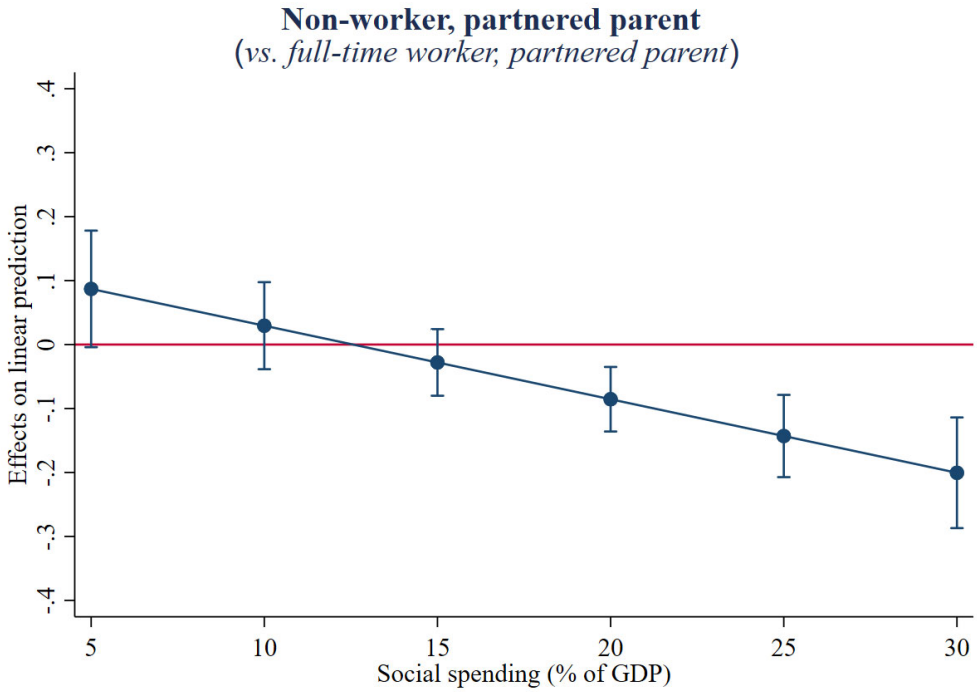


Figure 4. Average marginal effects of work-family trajectories on voluntary versus conventional retirement by welfare state generosity, with 95% confidence intervals.





Appendix

Table A1

Work-family trajectories and welfare state generosity across European countries.

		Work-family trajectories						Welfare state generosity	
		Full-time worker, partnered parent	Full-time worker, unpartnered parent	Full-time worker, single or childless couple	Part-time worker, partnered parent	Non-worker, partnered parent	Self-employed, partnered parent	Social spending (% of GDP)	
	N	*%*	*%*	*%*	*%*	*%*	*%*	*M*	*SD*
Austria	2,589	50.44	6.76	12.13	7.92	12.13	10.62	23.84	1.35
Belgium	3,575	54.77	5.09	13.82	6.77	12.22	7.33	24.71	.57
Bulgaria	656	78.35	4.73	11.89	.61	2.90	1.52	14.58	.20
Croatia	1,268	74.37	4.50	7.97	.63	9.62	2.92	18.65	.27
Cyprus	526	58.75	1.71	3.99	.57	25.86	9.13	13.99	.66
Czechia	3,651	80.03	8.38	6.90	2.05	1.31	1.31	15.17	.99
Denmark	2,197	56.08	4.60	9.60	12.20	8.92	8.60	21.12	.97
Estonia	2,815	75.56	8.21	11.23	2.10	1.67	1.24	14.87	.64
Finland	863	67.90	6.26	10.31	2.78	4.52	8.23	22.98	1.88
France	3,041	53.37	5.79	10.56	5.46	15.42	9.40	21.10	2.30
Germany	2,966	59.10	3.44	10.05	10.15	12.58	4.69	22.75	.70
Greece	1,829	41.99	1.97	12.08	.77	13.78	29.41	13.83	1.91
Hungary	1,005	78.91	5.47	8.76	.70	4.48	1.69	20.80	.22
Ireland	185	51.89	2.16	14.59	2.70	19.46	9.19	16.86	.92
Italy	2,917	56.15	1.75	10.90	2.61	13.64	14.95	19.83	1.13
Latvia	624	74.84	10.10	11.38	1.44	1.60	.64	14.39	.38
Lithuania	936	74.57	9.83	9.29	2.03	2.99	1.28	13.72	.70
Luxembourg	715	55.38	4.48	14.69	6.71	12.31	6.43	20.08	.24
Malta	394	50.51	.00	28.43	2.54	10.15	8.38	16.58	.60
Poland	2,847	63.68	4.36	5.27	1.55	9.27	15.88	19.17	3.06
Portugal	696	65.95	1.72	10.06	1.44	12.64	8.19	12.05	1.65
Romania	888	71.73	3.94	6.87	1.35	14.75	1.35	13.18	.22
Slovakia	710	78.45	2.82	11.83	.42	4.65	1.83	17.65	.51
Slovenia	2,542	77.50	4.13	9.95	.28	6.06	2.08	13.82	6.84
Spain	2,511	56.87	1.15	11.79	1.59	13.38	15.21	17.15	1.35
Sweden	2,745	59.34	5.68	10.75	11.84	6.78	5.61	26.48	1.27
Switzerland	1,880	37.87	3.35	14.15	16.06	19.89	8.67	13.26	.61
The Netherlands	1,204	43.02	2.91	12.71	16.36	18.36	6.64	23.29	.52

Source: SHARE waves 3 and 7 (SHARELIFE), OECD, and Eurostat.

Table A2

Multilevel regression analysis of voluntary versus conventional retirement among men (N = 19,979) and women (N = 21,608).

	Men						Women					
	Model 1		**Model 2**		**Model 3**		**Model 1**		**Model 2**		**Model 3**	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Individual level												
Work-family trajectories												
Full-time worker, partnered parent	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Full-time worker, unpartnered parent	-.034	.017	-.030	.022	.089	.091	-.005	.011	-.008	.011	.002	0.045
Full-time worker, single or childless couple	-.004	.009	-.004	.009	.015	.036	.020*	.009	.019	.010	-.023	0.040
Part-time worker, partnered parent	-.066*	.027	-.068*	.027	-.245*	.117	.000	.010	-.020	.011	-.086	0.062
Non-worker, partnered parent	-.068**	.024	-.078**	.030	.233*	.095	-.054***	.008	-.050	.026	.141*	0.063
Self-employed, partnered parent	-.061***	.009	-.076***	.019	-.104	.066	-.050***	.012	-.056*	.024	-.020	0.078
Educational level												
Low-educated	-.057***	.008	-.057***	.008	-.057***	.008	-.057***	.008	-.055***	.008	-.055***	0.008
Moderate-educated	-.017*	.007	-.015*	.007	-.016*	.007	-.032***	.007	-.028***	.007	-.027***	0.007
High-educated	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Birth cohort												
Pre-1940	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
1940-1945	.025**	.008	.024**	.008	.024**	.008	.026**	.008	.022**	.008	.024**	0.008
1946-1950	.008	.009	.008	.009	.007	.009	.028**	.008	.020*	.008	.022**	0.008
Post-1950	.025**	.009	.025**	.009	.024**	.009	.034***	.009	.027**	.009	.029**	0.009
Country level												
Social spending	-.003	.002	-.003	.002	-.002	.002	-.007***	.001	-.006***	.001	-.005**	0.002
Cross-level interactions												
Social spending												
X Full-time worker, partnered parent					Ref.						Ref.	
X Full-time worker, unpartnered parent					-.006	.005					-.001	.002
X Full-time worker, single or childless couple					-.001	.002					.002	.002
X Part-time worker, partnered parent					.009	.006					.003	.003
X Non-worker, partnered parent					-.016**	.005					-.011**	.003
X Self-employed, partnered parent					.001	.003					-.002	.004
Intercept	.307***	.050	.305***	.051	.297	.051	.372***	.046	.354***	.049	.333***	.050
Variance components												
Individual-level variance	.150*	.002	.150*	.002	.150*	.002	.143*	.001	.141*	.001	.141*	.001
Country-level variance	.049*	.014	.051*	.014	.051*	.014	.041*	.011	.049*	.014	.048*	.013
Slope variance												
Full-time worker, partnered parent			Ref.		Ref.				Ref.		Ref.	
Full-time worker, unpartnered parent			.004*	.003	.004*	.003			.000	.000	.000	.000
Full-time worker, single or childless couple			.000*	.000	.000*	.000			.000*	.001	.000*	.001
Part-time worker, partnered parent			.000	.000	.000	.000			.000*	.001	.001*	.001
Non-worker, partnered parent			.005*	.005	.000*	.000			.015*	.005	.013*	.004
Self-employed, partnered parent			.005*	.002	.005*	.002			.009*	.004	.009*	.004

*p < .05, **p < .01, ***p < .001.

For variance components, * indicates that a 95% confidence interval does not include 0.

Source: SHARE waves 1-9, OECD, and Eurostat.

Table A3

Multilevel regression analysis of involuntary versus conventional retirement among men (N = 18,255) and women (N = 20,358).

	Men						Women					
	Model 1		**Model 2**		**Model 3**		**Model 1**		**Model 2**		**Model 3**	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Individual level												
Work-family trajectories												
Full-time worker, partnered parent	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Full-time worker, unpartnered parent	.032	.017	.035	.023	-.074	.095	.025*	.011	.024*	.011	.001	.044
Full-time worker, single or childless couple	.021*	.009	.021*	.009	-.027	.038	.013	.010	.014	.012	.004	.047
Part-time worker, partnered parent	-.042	.028	-.043	.029	-.046	.129	-.001	.011	.000	.016	.145*	.066
Non-worker, partnered parent	.058*	.023	.059*	.024	.132	.092	-.031***	.008	.002	.023	.047	.061
Self-employed, partnered parent	-.050***	.010	-.063**	.018	-.043	.065	-.043***	.012	-.062***	.017	.018	.065
Educational level												
Low-educated	.081***	.008	.081***	.008	.080***	.008	.051***	.008	.050***	.008	.050***	.008
Moderate-educated	.044***	.008	.045***	.008	.045***	.008	.026**	.008	.028***	.008	.029***	.008
High-educated	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Birth cohort												
Pre-1940	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
1940-1945	.011	.008	.012	.008	.012	.008	.016*	.008	.015	.008	.016*	.008
1946-1950	.011	.009	.011	.009	.011	.009	.026**	.008	.023**	.008	.025**	.009
Post-1950	.068***	.009	.068***	.009	.068***	.009	.064***	.009	.058***	.009	.060***	.009
Country level												
Social spending	-.003*	.002	-.003*	.002	-.003*	.002	-.004**	.001	-.003*	.001	-.002	.002
Cross-level interactions												
Social spending												
X Full-time worker, partnered parent					Ref.						Ref.	
X Full-time worker, unpartnered parent					.006	.005					.001	.002
X Full-time worker, single or childless couple					.002	.002					.001	.002
X Part-time worker, partnered parent					.000	.007					-.007*	.003
X Non-worker, partnered parent					-.004	.005					-.002	.003
X Self-employed, partnered parent					-.001	.003					-.004	.003
Intercept	.191***	.036	.191***	.037	.194***	.037	.215***	.036	.196***	.037	.185	.038
Variance components												
Individual-level variance	.145*	.002	.144*	.002	.144*	.002	.138*	.001	.136*	.001	.136*	.001
Country-level variance	.016*	.005	.017*	.005	.017*	.005	.019*	.006	.020*	.006	.020*	.006
Slope variance												
Full-time worker, partnered parent			Ref.		Ref.				Ref.		Ref.	
Full-time worker, unpartnered parent			.005*	.003	.005*	.003			.000*	.000	.000*	.000
Full-time worker, single or childless couple			.000	.000	.000	.000			.001*	.001	.001*	.001
Part-time worker, partnered parent			.001*	.005	.002*	.006			.002*	.002	.001*	.001
Non-worker, partnered parent			.001*	.004	.001*	.004			.012*	.005	.011*	.005
Self-employed, partnered parent			.005*	.002	.005*	.002			.002*	.002	.002*	.002

*p < .05, **p < .01, ***p < .001.

For variance components, * indicates that a 95% confidence interval does not include 0.

Source: SHARE waves 1-9, OECD, and Eurostat.

Table A4

Multilevel regression analysis of involuntary versus voluntary retirement (N = 17,350).

	Model 1		Model 2		Model 3	
	B	*SE*	*B*	*SE*	*B*	*SE*
Individual level						
Work-family trajectories						
Full-time worker, partnered parent	Ref.		Ref.		Ref.	
Full-time worker, unpartnered parent	.060***	.016	.061***	.016	-.081	.074
Full-time worker, single or childless couple	.022	.011	.021	.011	.019	.051
Part-time worker, partnered parent	.026	.015	.037	.019	.299**	.107
Non-worker, partnered parent	.038**	.014	.054*	.027	-.130	.090
Self-employed, partnered parent	.013	.015	.010	.023	.148	.096
Female	-.004	.008	-.003	.008	-.003	.008
Educational level						
Low-educated	.162***	.010	.163***	.010	.162***	.010
Moderate-educated	.075***	.009	.076***	.009	.075***	.009
High-educated	Ref.		Ref.		Ref.	
Birth cohort						
Pre-1940	Ref.		Ref.		Ref.	
1940-1945	-.031**	.010	-.031**	.010	-.031**	.010
1946-1950	-.027*	.012	-.027*	.012	-.026*	.012
Post-1950	.028*	.012	.028*	.012	.029*	.012
Country level						
Social spending	.007**	.003	.007**	.003	.006*	.003
Cross-level interactions						
Social spending						
X Full-time worker, partnered parent					Ref.	
X Full-time worker, unpartnered parent					.007*	.004
X Full-time worker, single or childless couple					.000	.003
X Part-time worker, partnered parent					-.012*	.005
X Non-worker, partnered parent					.010*	.005
X Self-employed, partnered parent					-.007	.005
Intercept	.283***	.056	.278***	.057	.291***	.058
Variance components						
Individual-level variance	.211*	.002	.210*	.002	.210*	.002
Country-level variance	.036*	.010	.036*	.010	.036*	.010
Slope variance						
Full-time worker, partnered parent			Ref.		Ref.	
Full-time worker, unpartnered parent			.000	.000	.000	.000
Full-time worker, single or childless couple			.000*	.000	.000*	.000
Part-time worker, partnered parent			.001*	.002	.003*	.003
Non-worker, partnered parent			.012*	.005	.013*	.006
Self-employed, partnered parent			.005*	.003	.004*	.003

*p < .05, **p < .01, ***p < .001.

For variance components, * indicates that a 95% confidence interval does not include 0.

Source: SHARE waves 1-9, OECD, and Eurostat.

Table A5

Multilevel regression analysis of involuntary versus voluntary retirement among men (N = 8,782) and women (N = 8,568).

	Men						Women					
	Model 1		**Model 2**		**Model 3**		**Model 1**		**Model 2**		**Model 3**	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Individual level												
Work-family trajectories												
Full-time worker, partnered parent	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Full-time worker, unpartnered parent	.079**	.028	.079**	.029	-.101	.143	.047*	.020	.049*	.020	-.012	.091
Full-time worker, single or childless couple	.032*	.015	.032*	.015	-.011	.067	.000	.018	-.004	.018	.041	.080
Part-time worker, partnered parent	.013	.047	.013	.047	.339	.242	.001	.017	.020	.025	.320*	.127
Non-worker, partnered parent	.174***	.043	.174***	.043	-.062	.185	.014	.016	.035	.029	-.095	.101
Self-employed, partnered parent	.017	.019	.017	.021	.183	.103	.006	.025	-.018	.039	.048	.156
Educational level												
Low-educated	.170***	.014	.170***	.014	.169***	.014	.158***	.015	.158***	.014	.158***	.014
Moderate-educated	.069***	.013	.069***	.013	.069***	.013	.082***	.014	.085***	.014	.084***	.014
High-educated	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Birth cohort												
Pre-1940	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
1940-1945	-.032*	.014	-.032*	.014	-.031*	.014	-.033*	.015	-.035*	.015	-.035*	.015
1946-1950	-.020	.016	-.020	.016	-.019	.016	-.034*	.017	-.035*	.017	-.033*	.017
Post-1950	.043**	.016	.043**	.016	.044**	.016	.020	.017	.017	.017	.019	.017
Country level												
Social spending	.002	.004	.002	.004	.002	.004	.007*	.003	.008*	.003	.007*	.004
Cross-level interactions												
Social spending												
X Full-time worker, partnered parent					Ref.						Ref.	
X Full-time worker, unpartnered parent					.009	.007					.003	.004
X Full-time worker, single or childless couple					.002	.003					-.002	.004
X Part-time worker, partnered parent					-.015	.011					-.014*	.006
X Non-worker, partnered parent					.013	.010					.007	.005
X Self-employed, partnered parent					-.008	.005					-.003	.008
Intercept	.369***	.071	.370***	.071	.371***	.072	.274***	.067	.257***	.068	.267***	.072
Variance components												
Individual-level variance	.204*	.003	.204*	.003	.204*	.003	.218*	.003	.216*	.003	.216*	.003
Country-level variance	.036*	.011	.036*	.011	.037*	.011	.032*	.010	.032*	.010	.032*	.010
Slope variance												
Full-time worker, partnered parent			Ref.		Ref.				Ref.		Ref.	
Full-time worker, unpartnered parent			.000*	.004	.002*	.005			.000*	.000	.000*	.000
Full-time worker, single or childless couple			.000	.000	.000	.000			.000*	.000	.000	.000
Part-time worker, partnered parent			.000	.000	.000	.000			.004*	.004	.005*	.005
Non-worker, partnered parent			.000	.000	.000	.000			.013*	.006	.016*	.007
Self-employed, partnered parent			.001*	.002	.001*	.002			.014*	.009	.015*	.010

*p < .05, **p < .01, ***p < .001.

For variance components, * indicates that a 95% confidence interval does not include 0.

Source: SHARE waves 1-9, OECD, and Eurostat.

Figure A1. Average marginal effects of work-family trajectories on retirement voluntariness among men and women by welfare state generosity, with 95% confidence intervals.

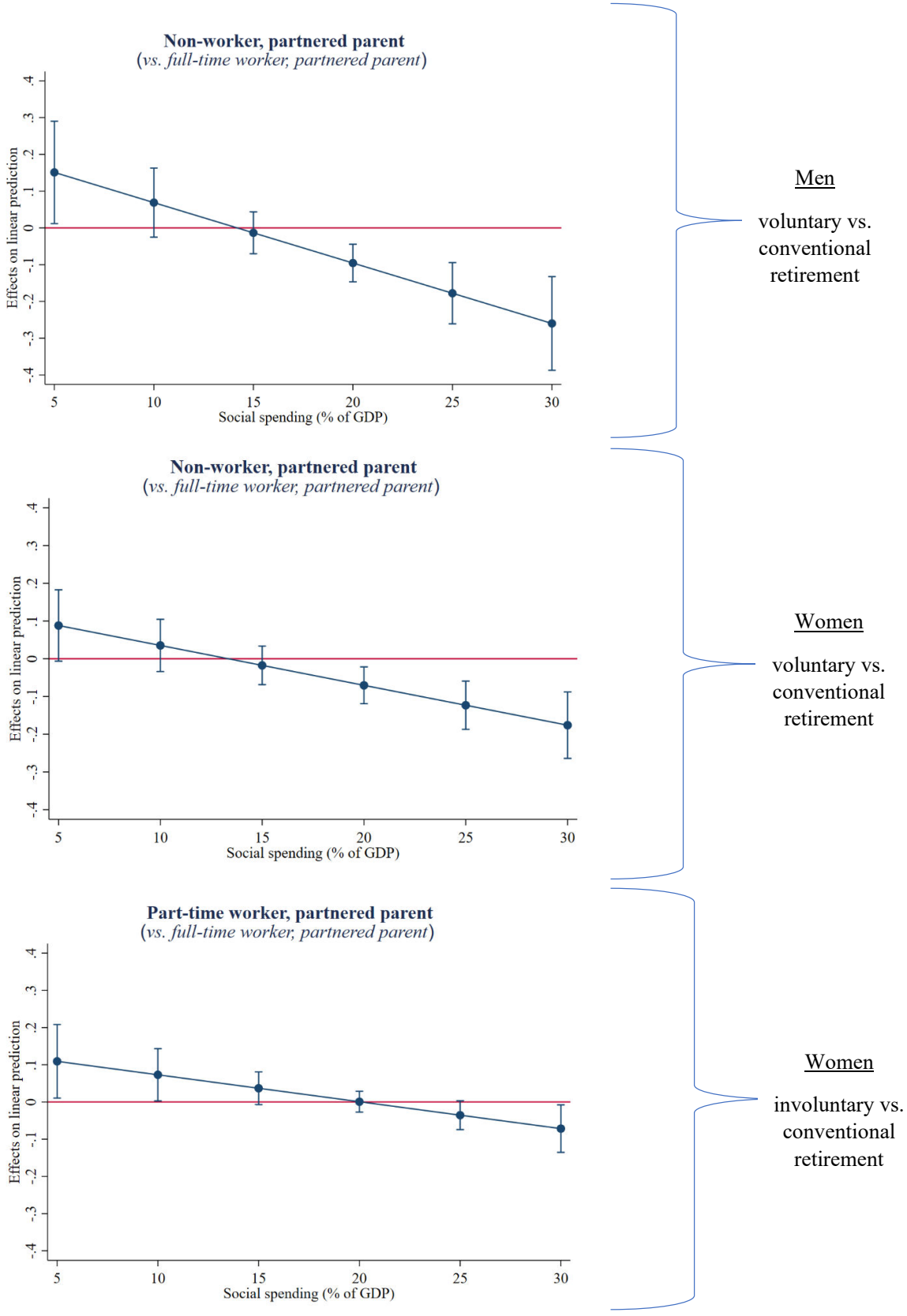


Figure A2. Average marginal effects of work-family trajectories on involuntary versus voluntary retirement by welfare state generosity, with 95% confidence intervals.

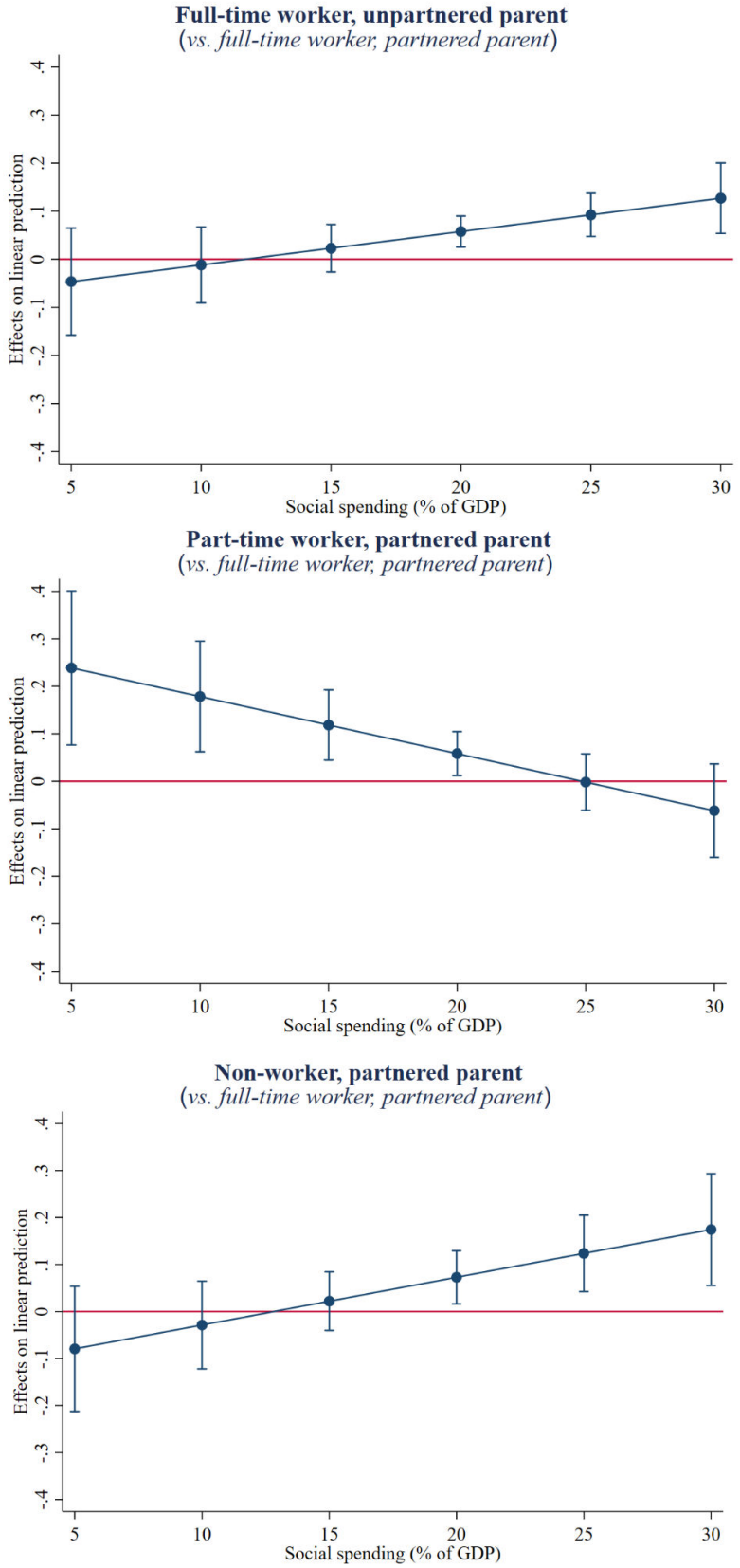


Figure A3. Average marginal effects of work-family trajectories on involuntary versus voluntary retirement among women by welfare state generosity, with 95% confidence intervals.